**LAND ADJACENT
TO THE A48,
PYLE, BRIDGEND**

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**AGRICULTURAL LAND
CLASSIFICATION**

September 2020

KERNON
COUNTRYSIDE
CONSULTANTS
LIMITED

LAND ADJACENT

TO THE A48,

PYLE, BRIDGEND

_____

AGRICULTURAL LAND

CLASSIFICATION

September 2020

CONTENTS

1 INTRODUCTION

Purpose

1.1 This report sets out the results of a survey to determine the quality of a parcel of land on the southern edge of Pyle.

The Site

1.2 The Site comprises a number of fields in agricultural use. The land extends to 99.6ha. It is shown outlined in red below.

Insert 1: The Site Boundary

This Report

1.3 This report is structured as follows:

i) section 2 examines the planning policy and guidance of relevance to the non-agricultural development of agricultural land;

ii) section 3 describes the considerations of the agricultural land classification (ALC) system;

iii) with the ALC described in section 4.

The Author

1.4 The report has been prepared by Kernon Countryside Consultants Ltd (KCC). KCC is a specialist consultancy advising farmers, developers and local authorities on farm business, diversification and development proposals. We are familiar with many different types of agricultural, horticultural and equine enterprises, and many forms of rural economic diversification, and the planning policy governing such enterprises.

1.5   The ALC survey of part of the site was carried out by a Chartered Scientist (CSci), who is a Fellow (F. I. Soil Sci) of the British Society of Soil Science (BSSS). In addition, this ALC survey has been carried out by a soil scientist who meets the requirements of the BSSS Professional Competency Standard (PCS) scheme for ALC (see BSSS PCS Document 2 '*Agricultural Land Classification of England and Wales*'[1].   The BSSS Professional Competency Scheme is endorsed by, amongst others, the Welsh Government, the Science Council, and the Institute of Environmental Assessment and Management (IEMA)).

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[1] British Society of Soil Science. Professional Competency Scheme Document 2 'Agricultural Land Classification of England and Wales'. Available online @ https://www.soils.org.uk/sites/default/files/events/flyers/ipss-competency-doc2.pdf Last accessed July 2020

2   PLANNING POLICY AND GUIDANCE OF RELEVANCE

Planning Policy Wales

2.1   Planning Policy Wales (Edition 10, December 2018) paragraph 3.54 identifies land of Grades 1, 2 and 3a in the Agricultural Land Classification as the best and most versatile.

2.2   Paragraph 3.55 notes that when considering the search sequence and in development plan policies and development management decisions, considerable weight should be given to protecting such land from development. Such land should only be developed if there is an overriding need for the development and either previously developed land or land in lower grades is not available, or has an environmental value that outweighs the agricultural considerations. If such land does need to be developed, development should be directed to land of the lowest grade.

Welsh Government Guidance

2.3   The Welsh Government has produced a Predictive Agricultural Land Classification (ALC) map. Version 2 was published in 2020. The accompanying guidance, reproduced in **Appendix KCC1**, sets out that where land is shown on the predictive map as potentially of Grades 1, 2 and 3a, an ALC survey is required.

2.4   Where land is shown as 3b, 4 or 5, the flowchart states that survey is not required.

3   CONSIDERATIONS OF THE AGRICULTURAL LAND CLASSIFICATION

The Agricultural Land Classification System

3.1   This assessment is based upon the findings of a study of published information on climate, geology and soil in combination with a soil investigation carried out in accordance with the Ministry of Agriculture, Fisheries and Food (MAFF) [2] '*Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land*', October 1988 (henceforth referred to as the 'the ALC Guidelines').

3.2   The ALC system 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 ALC system divides agricultural land into five grades (Grade 1 'Excellent' to Grade 5 'Very Poor'), with Grade 3 subdivided into Subgrade 3a 'Good' and Subgrade 3b 'Moderate'. Agricultural land classified as Grade 1, 2 and Subgrade 3a falls in the 'best and most category as set out in at paragraph 3.54 of Planning Policy for Wales (2018) and Technical Advice Note 6. Further details of the ALC system and national planning policy implications are set out by the Welsh Government in a guidance note which is available online[3].

The Predictive ALC

3.3   The predictive ALC map 2 for the site is shown below.
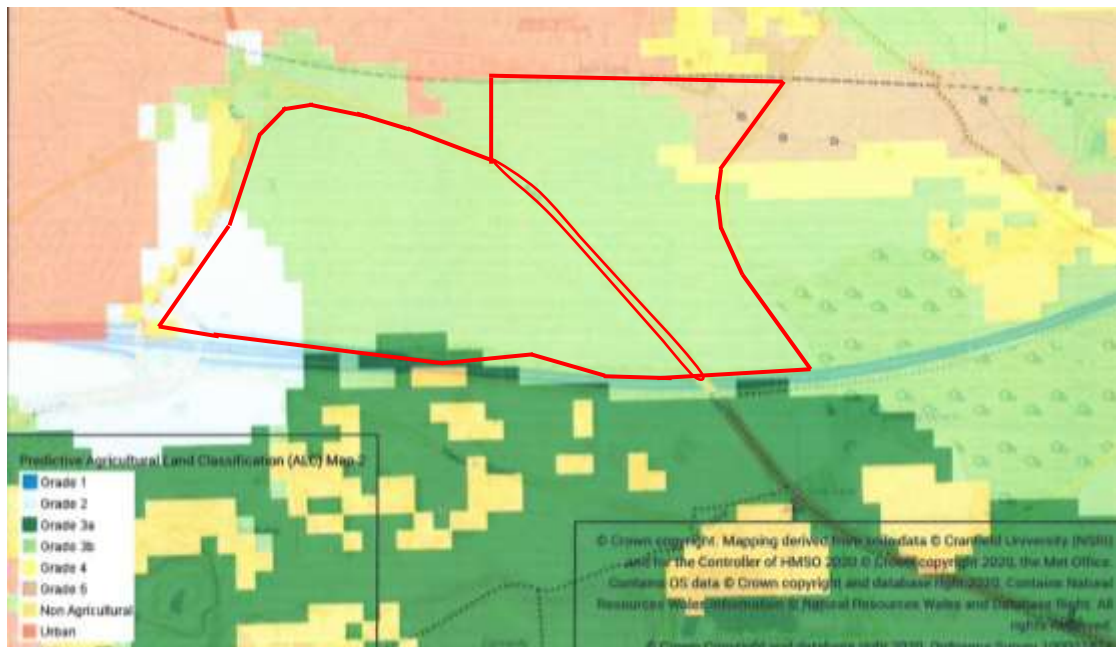
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[2] The Ministry of Agriculture, Fisheries and Food (MAFF) was incorporated within the Department for Environment, Food and Rural Affairs (Defra) in June 2001
[3] Planning Policy and Guidance: National Policy. Available online @ https://gov.wales/planning-policy-and-guidance-national-policy

3.4   The site was shown previously on the predictive map v1 as a mixture of Grades 2, 3a and 5.

3.5   The revised predictive map, based on improvements to the predictions, shows most of the site to comprise subgrade 3b. In the north-eastern corner the land is shown as Grades 4 and 5.

3.6   The south western corner is shown as potentially of Grade 2 "very good" quality, and an area along the southern boundary is shown as potentially of subgrade 3a quality.

Field Survey Required

3.7   Accordingly ALC field survey is required for the part of the site shown as potentially of Grade 2 and subgrade 3a. For the majority of the site, as per the Guidance Note (**Appendix KCC1**), no survey is required.

Agricultural Land Classification

3.8   A detailed ALC survey has therefore been carried over the approximately 14 ha, some of which is shown as potentially Grade 2 and subgrade 3a.

3.9   The work has been carried out by a Chartered Scientist (CSci), who is a Fellow (F. I. Soil Sci) of the Institute of Professional Soil Scientists (IPSS). In addition, this ALC survey has been carried out by a soil scientist who meets the requirements of the British Society of soil Science (BSSS) Professional Competency Standard (PSC) for ALC (see BSSS PCS Document 2 '*Agricultural Land Classification of England and Wales*'[3]). The BSSS PSC scheme is endorsed, amongst others, by the Welsh Government, the Science Council, and the Institute of Environmental Assessment and Management (IEMA).

3.10   This assessment is based upon the findings of a study of published information on climate, geology and soil in combination with a soil investigation carried out in accordance with the Ministry of Agriculture, Fisheries and Food (MAFF) [4] '*Agricultural Land Classification of*

[3] British Society of Soil Science. Professional Competency Scheme Document 2 'Agricultural Land Classification of England and Wales'. Available online @ https://www.soils.org.uk/sites/default/files/events/flyers/ipss-competency-doc2.pdf Last accessed September 2020
[4] The Ministry of Agriculture, Fisheries and Food (MAFF) was incorporated within the Department for Environment, Food and Rural Affairs (Defra) in June 2001
[3] Planning Policy and Guidance: National Policy. Available online @ https://gov.wales/planning-policy-and-guidance-national-policy Last accessed September 2020

England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land', October 1988 (henceforth referred to as the 'the ALC Guidelines').

3.11   A detailed ALC survey was carried out on the 19th August 2020. The survey involved examination of the soil's physical properties at 12 auger-bore locations in the southwest corner of the study area, as shown on **Plan KCC2641/01**. One soil pit (Pit 1) was excavated with a spade to examine certain soil physical properties, such as stone content and subsoil structure, in more detail.

3.12   A sample of topsoil was collected at two locations, i.e. auger bores 3 and 12. The samples were sent to an accredited laboratory for particle size analysis, i.e. the proportions of sand, silt and clay. This is to determine the definitive texture class of the topsoil.

3.13   The sample locations were located using a hand-held Garmin E-Trec Geographic Information System (GIS) to enable the sample locations to be relocated for verification, if necessary.

3.14   The soil profile was examined at each sample location to a maximum depth of approximately 1.2 m by hand with the use of a 5 cm diameter Dutch (Edleman) soil auger. The soil profile at each sample location was described using the '*Soil Survey Field Handbook: Describing and Sampling Soil Profiles*' (Ed. J.M. Hodgson, Cranfield University, 1997). Each soil profile was ascribed a grade following the ALC Guidelines.

3.15   As described in the ALC Guidelines, the main physical factors influencing agricultural land quality are:
- climate;
- site;
- soil; and
- interactive limitations.

3.16   These factors are considered in turn below.

Climate

3.17   Interpolated climate data relevant to the determination of the ALC grade of land at the Site is given in Table 1 below.

Table 1: ALC Climate Data for Pyle, Bridgend

Climate Parameter	Grid Ref: SS828812
Average Altitude (m)	48
Average Annual Rainfall (mm)	1198
Accumulated Temperature above 0˚C (January – June)	1508
Moisture Deficit (mm) Wheat	81
Moisture Deficit (mm) Potatoes	68
Field Capacity Days (FCD)	240
Grade according to climate	2

3.18   With reference to Figure 1 '*Grade according to climate*' on page 6 of the ALC Guidelines, the quality of agricultural land at the Site is limited by climate to Grade 2.

3.19   Due to the average annual rainfall, agricultural land at the Site is predicted to be at field capacity (i.e. near saturation point) for approximately 240 Field Capacity Days (FCD) per year, mainly over the late autumn, winter and early spring. Moisture Deficit (MD) values range between approximately 81mm for wheat, and 68mm for potatoes. The average annual rainfall at Pyle is high, with 1508mm per year. These climate factors, in combination with topsoil texture, cause 'interactive limitations' to agricultural land quality at the Site - namely soil wetness and soil droughtiness (see below).

Site

3.20   The broadly triangular-shaped study area is enclosed by the A48 to the north, by the M4 to the south, and by the A4229 to the west.

3.21   With regard to the ALC Guidelines, agricultural land quality can be limited by one or more of three main site factors as follows:

- gradient;
- micro-relief (i.e. complex change in slope angle over short distances); and
- risk of flooding.

3.22   **Gradient and Micro Relief.** The study area is located on a west to northwest facing slope. The highest point occurs along the south-eastern boundary at an elevation of 80 metres (m) Above Ordnance Datum (AOD). The lowest point is in the northwest at approximately 50 mAOD. The ALC grade is not limited by gradient or micro-relief (i.e. complex changes in slope angle and direction over short distances).

3.23   **Risk of Flooding.** From Natural Resources Wales[5], the land within the ALC study area is not at risk of flooding. The quality of agricultural land is not limited by flood risk, re Table 2 '*Grade according to flood risk in summer*' and Table 3 '*Grade according to flood risk in winter*' of the ALC Guidelines.

Soil

3.24   **Geology/Soil Parent Material.**   From British Geological Survey (BGS) maps at 1:50,000 scale, the western half of the study area is underlain by mudstone in the Mercia Mudstone Group, and the Blue Anchor Formation. The eastern half of the study area is underlain mainly by sandstone in the Penarth Group (marginal Facies).

3.25   The BGS 1:50,000 information indicates the bedrock in the southwestern corner, and along the northern boundary, is covered by a superficial deposit of glacial (Devensian) till (diamicton).

3.26   **Published Information on Soil.**   Soil information is available at a small scale (1:250,000) on the National Soil Map published by the Soil Survey of England and Wales (SSEW) in 1983. This provisional soil map indicates that land within the western half of the study area is covered soils grouped in East Keswick 1 Association, with soils in the Eardiston 2 Association in the eastern half.

3.27   As described by the SSEW, the East Keswick 1 association comprises deep fine loamy brown earths with some wetter soils in drift. It has been mapped in North Yorkshire and Wales on gently undulating land. The well drained East Keswick series, typical brown earths in drift with siliceous stones, occupies approximately two-thirds of the association. The seasonally waterlogged Nercwys series, fine loamy stagnogleyic brown earths, and Arrow series, coarse loamy gleyic brown earths, occupy most of the remainder. The soils are often stony, with hard metamorphic and igneous stones. East Keswick soils are well drained (Wetness Class I), whereas seasonal waterlogging is a feature of lower horizons in Nercwys and Arrow soils. Natural drainage in the Nercwys is hampered by the slowly permeable subsoil.   The land readily absorbs winter rainwater. Available water is adequate for arable crops in normal years in most places, but in Powys drought restricts grass growth in summer.

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[5] https://naturalresources.wales/evidence-and-data/maps/long-term-flood-risk, Natural Resources Wales, 2020. Last accessed September 2020

3.28   The SSEW describe how the Eardiston 2 Association consists predominantly of coarse and fine loamy typical brown earths, in drift derived from Carboniferous and Jurassic shales interbedded with sandstones, on steep valley sides or escarpments. Slopes vary greatly but are generally steeper than 4 degrees, with much land up to 25 degrees or more. The fine loamy East Keswick series, formerly Ambergate series, and the coarse loamy Wick series occur on slopes where the drift is more than 80 cm thick. The Neath series, fine loamy over sandstone, is found on convex upper or middle slopes. The association is very diverse and it is common to find soils of the Anglezarke, Rivington, Brickfield and Bardsey series. Well drained coarse loamy soils dominate this association. East Keswick, Neath and Wick soils are well drained (Wetness Class I). Occasional seasonally waterlogged sites are associated with Bardsey and Heapey soils (Wetness Class III). The soils are absorbent and, despite the steep slopes, there is little winter run-off.

3.29   **Soil Survey.** A detailed soil survey of 12 auger bore locations in the southwestern corner of the study area, carried out on the 19th August 2020, determined soil profiles with brown (Munsell colour 7.5YR 5/3), non-calcareous, stoneless, medium to heavy clay loam topsoil over brown (7.5YR 4/3) heavy clay loam to clay subsoil. Most of the soil profiles had common, distinct ochreous mottles (10YR 5/8) in the topsoil and upper subsoil to a depth 50cm. The upper subsoil (25-50cm) had many black concretions of manganese (Mn). The lower subsoil (50-120cm) had many distinct ochreous mottles (10YR5/8) and common Mn concretions. The profiles did not have a distinct slowly permeable layer (SPL) with regard to the definition of an SPL in Appendix 3 of the ALC Guidelines (1988), but most of the profiles were gleyed within a depth of 40cm below ground level. In a climate area with 240 FCD, these profiles are placed in Wetness Class III following Table 13 of the ALC Guidelines (1988).

3.30   The soil profile at auger bore 1 was located in a localised, very wet area. This area is located on low ground at the bottom of a north-west facing slope.   This area is considered to be a 'receiving site' for groundwater moving downslope. It is vegetated by many soft rushes (Juncuss spp.). This area is in Wetness Class IV-V.

3.31   Some profiles had similar physical characteristics to those described above, except they were gleyed between 40-70cm below ground level. These profiles are placed in Wetness Class II following Table 13 of the ALC Guildelines (1988).

3.32 A log of all the soil profiles recorded on Site is given as **Appendix KCC2**. One soil pit (Pit 1) was excavated with a spade to examine certain soil physical properties, such as subsoil structure, in more detail. A description of the soil pit is given as **Appendix KCC3**.

3.33 In order to substantiate topsoil texture determined during the ALC survey by hand-texturing, two samples of topsoil were collected at auger locations 3 and 12, **Plan KCC2641/01**. The topsoil samples were sent to an accredited laboratory for analysis of particle size distribution (PSD), based on the British Standard Institution particle size grades. The certificate of analysis is provided as **Appendix KCC4**. The findings of the PSD analysis are shown in Table 2 below:

Table 2: Topsoil Texture (re Table 10, ALC Guidelines)

Topsoil Sample Location (Plan KCC2641/01)	% sand 0.063-2.0 mm*	% silt 0.002-0.063 mm	% clay <0.002 mm	ALC Soil Texture Class
3	34	37	29	Heavy Clay Loam
12	39	36	25	Medium Clay Loam

3.34 From the information above, together with the findings of the detailed soil survey (see Soil Profile Log given as **Appendix KCC2**), it has been determined that the quality of agricultural land over the whole Site is limited mainly by an interactive limitation of soil wetness, as described below.

Interactive Limitations

3.35 **Soil Wetness.** From the ALC Guidelines, a soil wetness limitation exists where '*the soil water regime adversely affects plant growth or imposes restrictions on cultivations or grazing by livestock*'. Agricultural land quality is limited by soil wetness as per Table 3 below (based on Table 6 'Grade According to Soil Wetness – Mineral Soils' in the ALC Guidelines):

Table 3: Predicted ALC Grade According to Soil Wetness

Wetness Class	Texture of the Top 25 cm	>225 Field Capacity Days
I	Sandy Loam, Sandy Silt Loam Medium Clay Loam*, Sandy Clay Loam Heavy Silty Clay Loam**, Heavy Clay Loam** Clay, Silty Clay	2 3a 3b 3b
II	Sandy Loam, Sandy Silt Loam Medium Clay Loam*, Sandy Clay Loam Heavy Silty Clay Loam**, Heavy Clay Loam** Clay, Silty Clay	3a 3b 3b 3b
III	Sandy Loam, Sandy Silt Loam Medium Clay Loam*, Sandy Clay Loam Heavy Silty Clay Loam**, Heavy Clay Loam** Clay, Silty Clay	3b 3b 4 4
IV	Sandy Loam, Sandy Silt Loam Medium Clay Loam*, Sandy Clay Loam Heavy Silty Clay Loam**, Heavy Clay Loam** Clay, Silty Clay	3b 3b 4 5
Key * <27% clay; and ** >27% clay		

3.36   In a climate area with 240 FCD (see Table 1), soil profiles in Wetness Class III with medium clay loam topsoil are limited by soil wetness to Subgrade 3b. Where soil profiles in Wetness Class II have heavy clay topsoil, they are limited by soil wetness to Subgrade 3b also.

4 AGRICULTURAL LAND CLASSIFICATION

4.1 The majority of the site is shown as subgrade 3b with areas of Grade 4 and Grade 5.

4.2 On the predictive map the south western corner, and an area along the southern boundary, is shown as potentially Grade 2 and subgrade 3a quality. Those areas have therefore been the subject of the detailed ALC survey described in section 3.

4.3 None of those areas are Grade 2 or 3a. The detailed ALC confirm that the quality of agricultural land within the whole study area is limited by soil wetness to Subgrade 3b. This is because the topsoil ranges from medium to heavy clay loam, and the subsoil is gleyed within 40cm (i.e. Wetness Class III), or between 40-70cm (i.e. Wetness Class II), following Table 13 of the ALC Guidelines.

4.4 The table below shows the ALC for the whole site based on the predictive ALC plus, for the south-western corner surveyed (see **Plan KCC2641/01** for the area covered) the detailed ALC

Table 4: The ALC (Predictive Map Plus Detailed ALC in the South-Western Corner)

ALC Grade	Area (Ha)	Area (% of the Study Area)
Grade 1 (Excellent)	0	0
Grade 2 (Very Good)	0	0
Subgrade 3a (Good) predictive	74.4	75
Subgrade 3b (Moderate) (detailed survey results)	14	14
Grade 4 (Poor) (predictive)	1.5	1
Grade 5 (Very Poor) (predictive)	7.0	2
Farm buildings	1.8	2
Non-agricultural / Other land	0.9	1
Total	**99.6**	**100**

4.5 The combined ALC information is shown on the ALC map at **Plan KCC2641/02**. Areas of woodland and farm buildings have been shown.

5 REFERENCES

BRITISH GEOLOGICAL SURVEY. www.bgsviewer.org.uk

MAFF (1988). Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land.

METEOROLOGICAL OFFICE (1989). Climatological data for Agricultural Land Classification.

APPENDIX KCC1

Welsh Government Guidance Note

(March 2020)

Predictive Agricultural Land Classification Map (Wales)
The Hollington Map

Guidance Note
Version 2.0 - March 2020.

Contents:
1. Introduction
2. Using the Predictive Agricultural Land Classification Map
3. When to Commission a Survey
4. Survey Decision Flowchart
5. Map Creation and Use – Key Points

Llywodraeth Cymru
Welsh Government

How to Determine the Grade of Agricultural Land:

1. Introduction:

Planning Policy Wales (PPW10) paragraph 3.54 and 3.55 outlines national policy towards conserving Wales' Best and Most Versatile (BMV) agricultural land. Further guidance is provided in Technical Advice Note (TAN) 6, including the consultation arrangements with the Welsh Government included at Annex B.

Best and most versatile (BMV) agricultural land is defined in Planning Policy Wales as Grades 1, 2 and 3a. This is excellent to good quality land which is able to best deliver the food and non-food crops.

The Agricultural Land Classification (ALC) provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system. It is the only approved system for grading agricultural land quality in England and Wales.

The Agricultural Land Classification Grade should be determined in order to be able to apply Planning Policy in development management decisions. Wales does not have a national survey programme. To survey the whole of Wales at a detailed level is not a realistic prospect, due to cost and time restraints.

The drive for natural resource management and better evidence provision by the Welsh Government has provided the impetus to produce a Predictive Agricultural Land Classification Map.

The Predictive Agricultural Land Classification Map uses the best available information to predict the Grade of land on national basis. It has been designed to help Local Planning Authorities, Developers, Surveyors and Land Use Managers make informed long term decisions over the use of land in the planning system and to target survey work to the most appropriate locations.

Further detail concerning the Agricultural Land Classification System can be found in the Frequently Asked Questions section of the Welsh Government website.

2. Using the Predictive Agricultural Land Classification Map:

The Predictive Agricultural Land Classification Map is the first step in gathering evidence to inform the user as to whether or not Planning Policy Wales (PPW) paragraph 3.54 and 3.55 should to be taken into account.

KCC2641 ALC Sept 20 Final

1

Predictive Agricultural Land Classification Map (Wales)
The Hollington Map

The Predictive Agricultural Land Classification Map is not intended to replace the need for Agricultural Land Classification survey work. The Map will assist the user in targeting survey work to the most appropriate locations.

It remains the case that the only way to determine the grade of land is by commissioning an agricultural land classification survey. Planning applications and Local Development Plans are expected to be supported by survey evidence where BMV agricultural land is an issue for consideration.

3. When to Commission a Survey:

In spatial assessments and development management decisions the grade of land must be known. The flowchart below sets out the decision process.

Where the Predictive Agricultural Land Classification Map identifies grades 1, 2 or 3a, a survey will be required to determine Grades present and in what proportion.

The Welsh Government has also published existing survey data. Before commissioning a survey, these records should be checked to see if the site(s) in question has already been assessed in detail.

If there is no survey record for the site(s) or part remains un-surveyed, an Agricultural Land Classification survey should be commissioned.

The Land Quality Advisory Service will provide advice on survey requirements and validate agricultural land classification surveys for Local Planning Authorities free of charge. This service allows the Authority to have confidence in the information being presented.

Should any party refuse or neglect to commission a survey, or the survey is not accepted by the Welsh Government, the Predictive Map Grade should be accepted as the best available information.

4. Survey Decision Flowchart:
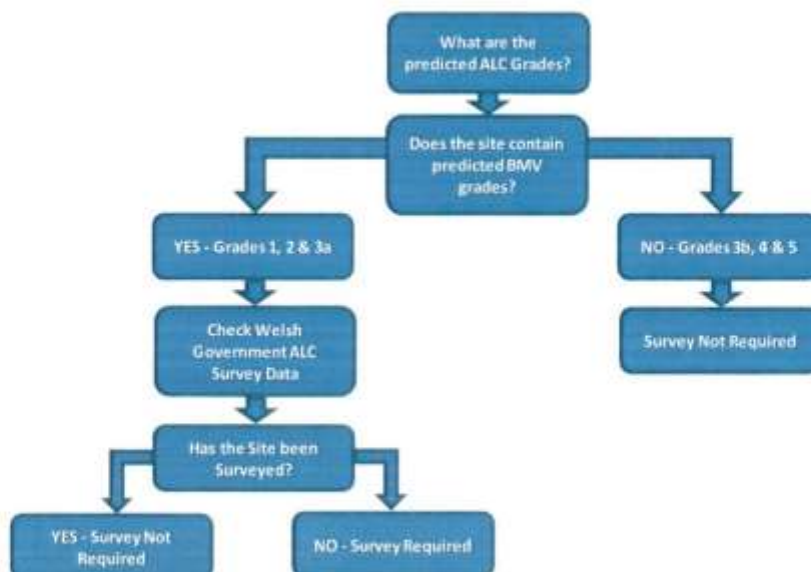
Predictive Agricultural Land Classification Map (Wales)
The Hollington Map

5. **Map Creation and Use – Key Points:**

- The Predictive Agricultural Land Classification Map replaces the Welsh 'Provisional' 1:250,000 Series of maps produced between 1967 and 1974.

- The 'Provisional' 1:250,000 Series maps were withdrawn in Wales on 27th November 2017 and should not to be used to support any planning proposal or as an evidence base for Local Development Plans (LDP)_.

- Should there be any confusion over which Agricultural Land Classification map to use, please contact LQAS@gov.wales for further guidance.

- The Predictive Agricultural Land Classification Map for Wales is based on the principles of the Agricultural Land Classification System of England & Wales, the Revised Guidelines & Criteria for Grading the Quality of Agricultural Land (MAFF 1988).

- Version 2 (released 2020) of the Predictive Agricultural Land Classification (ALC) Map represents the first significant update since its launch in 2017. The developments are focused on 2 specific areas – inclusion of detailed soil series data were available and an updated ALC survey layer.

Soil Data:

Where more detailed mapped soil series information is available, it now replaces the 1:250,000 national soil map (Cranfield University). This represents approximately 50% of Wales' surface area with a focus on lowland areas and parts of the Brecon Beacons. The detailed mapping includes scales of 1:25,000; 1:50,000; and, 1:63,000.

Where more detailed mapping is available, soil series phases have been include for shallow and rocky areas.

Where evidence is available, the properties of some soil series have been amended. This is a result of survey work, auger samples, wetness class changes, surveyor knowledge, and recognised mistakes in the mapping digitisation / transcription process

ALC Survey Layer:

Surveys commissioned, validated and accepted by Welsh Government since 2017 have been added.

The Welsh Government survey layer has been updated for surveys commissioned between 1988 and 2017 following a comprehensive file scanning exercise.

Surveys include those completed by the Welsh Government, the Welsh Office Agricultural Department, ADAS Statutory and commercial organisations. Commercial surveys have only been included when validated by the Welsh Government.

3

Predictive Agricultural Land Classification Map (Wales)
The Hollington Map

- The Predictive Agricultural Land Classification Map has been designed on a 50m raster (gridded squares). Please note the reliability of background data (especially soils) will vary. The map is a *modelled prediction and not definitive*, albeit based on best available data. For each 50m square the following individual criteria were assessed, and the most limited factor assigned:

  Agricultural Land Classification - Climate
  Agricultural Land Classification - Soil Depth
  Agricultural Land Classification - Slope
  Agricultural Land Classification - Soil Wetness
  Agricultural Land Classification - Drought
  Agricultural Land Classification - Stones
  Agricultural Land Classification - Wind Exposure
  Agricultural Land Classification - Other (Surveyor Experience)

- The Predictive Agricultural Land Classification Map does not take into account the following Agricultural Land Classification criteria.
  Flooding
  Pattern Limitation
  Micro-relief
  Frost
  Chemical Limitations

  Expert advice will need to be sought to assess the risk of these factors imposing a long term limitation on a site by site basis.

- The Predictive Agricultural Land Classification Map has **not** been designed for, and the Welsh Government does not approve of, the following uses:

  Valuing agricultural land
  Assigning agricultural rents
  Allocating financial support

- There are significant differences in the distribution of Agricultural Land Classification Grades between the 'Provisional' and 'Predictive' map products. This is because the Provisional Map is based on criteria pre-dating the introduction of the current 'Revised Guidelines and Criteria for Grading the Quality of Agricultural Land'. (MAFF 1988) and the National Soil Map. The 1988 guidelines are well established in planning, so the grading system used is not new.

- In cases where the predicted grade has been revised from that stated on the Provisional Map, and it is felt this has led to a financial disadvantage or otherwise, the Welsh Government accepts no liability. It is long established that the Agricultural Land Classification system forms the basis for advice given by the Welsh Government on land use planning matters; not for any other uses such as the valuation of land.

- The Welsh Government intends to review and update the Predictive ALC Map as better information becomes available.

- Should it be felt the predicted grade for an area does not fairly reflect agricultural land quality, the Welsh Government will only accept an Agricultural Land Classification survey as evidence the Grade should be changed. The

4

Predictive Agricultural Land Classification Map (Wales)
The Hollington Map

Welsh Government shall not be liable for any cost incurred. Changes to the Predictive Map are at the discretion of the Welsh Government. Should the Welsh Government accept the proposed changes, these will follow when the Predictive Map is updated.

- The Predictive Agricultural Land Classification Map is available as a GIS layer showing Grades 1-5. This has been made available under Open Government Licence.

- The Predictive Agricultural Land Classification (ALC) Map is derived from soils data which remain the property of Cranfield University. (Soil data © Cranfield University (NSRI) and for the Controller of HMSO 2019).

- For further information, advice and survey validation, please contact the Land Quality Advice Service:

    Email: LQAS@gov.wales

    Web: Agricultural Land Classification

5

Appendix KCC2

Summary of Auger Point Data

Project Number	Project Name		Parcel
C727	KCC2641 Land adjacent to A48/M4, Pyle, Bridgend		

Date of Survey	Survey Type	Surveyor(s)	Company
19/08/2020	Detailed ALC	RWA	Askew Land and Soil

Weather	Relief	Land use and vegetation
Warm, cloudy, light showers	West to Northwest facing slope	LEY (Ley Grass)

Grid Reference	Postcode	Altitude	Area
SS828812	CF33 4RY	48	61

MAFF prov	MAFF detailed	Flooding
WG Predictive Map 2 - mainly 3b, 2 and 3a in	None	Low Risk

AAR	ATO	MDw	MDp	FCD	Climate grade
1198	1508	81	68	240	2

Bedrock	Superficial deposits
Mudstone; Sandstone in SE	Glacial Till in SW, and along north boundary

Soil association(s) 1:250,000	Detailed soil information
East Keswick 1 Association, with soils in the Eardiston 2 in east	1:63k Bridgend

Revision Number	Date Revised
1	03/09/2020

APPENDIX KCC3

Soil Pit Description

Project	Location		Surveyor(s)	Date	Company
C727	KCC2641 Land adjacent to A48/M4, Pyle, Bridgend		RWA	19-Aug-20	Askew Land and Soil

Pit	WC	Grade	Limitation(s)
1	II	3b	Wetness

Grid Ref			Altitude	Nearest point	Topography			
Square	East	North			Gradient	Aspect	Slope form	Surface
SS	828	813		48 AB3	4°	West	Straight	Level

Notes

No SPL. Gleyed between 40-70cm. Wetness Class II following Table 13 of the ALC Guidelines (1988)

Flora		Weather and conditions			
Cultivation type	Vegetation types	Temp	Sky	Wind	Precipitation
	Ley (ley grassland)	Warm	Cloudy	Slight	Showers

Horizon	Depth		Matrix			Gleying			Mottles			Stone content					Calc	Mn.C	Ped/soil structure				Horizon boundary		Biopores	SPL
	Top	Bttm	Texture	Colour	Munsell	Glry	Colour	Munsell	Form	Colour	Munsell	%	H	Type	S	Type			Dev	Size	Structure	Strength	Distinct	Form	>0.5mm	
1	0	25	HCL	Brown	7.5YR4/3	No			FD	YB	10YR6/8	0					No	No	Mod	Medium	SAB	Firm	Clear	Smooth	>0.5%	No
2	25	50	HCL	Brown	7.5YR5/3	Yes	Brown	7.5YR5/3	CD	YB	10YR6/8	0					No	Yes	Mod	Coarse	SAB	Firm	Clear	Smooth	>0.5%	No
3	50	120	C	Brown	7.5YR5/3	Yes	Brown	7.5YR5/3	MO	YB	10YR6/8	0					No	Yes	Mod	Coarse	Angular	Firm	n/a	n/a	>0.5%	No

Appendix KCC4

Laboratory Analysis

ANALYTICAL REPORT

Report Number	19499-20
Date Received	21-AUG-2020
Date Reported	27-AUG-2020
Project	SOIL
Reference	KCC2641 PYLE
Order Number	

		P248	SARAH KERNON
			KERNON COUNTRYSIDE
			CONSULTANTS LTD
			GREENACRES BARN
			PURTON STOKE
			WILTSHIRE SN5 4LL

Laboratory Reference		SOIL488280	SOIL488281
Sample Reference		AB3	AB12
Determinand	Unit	SOIL	SOIL
Sand 2.00-0.063mm	% w/w	34	39
Silt 0.063-0.002mm	% w/w	37	36
Clay <0.002mm	% w/w	29	25
Textural Class **		HCL	MCL

Notes

Analysis Notes
The sample submitted was of adequate size to complete all analysis requested.
The results as reported relate only to the item(s) submitted for testing.
The results are presented on a dry matter basis unless otherwise stipulated.
This test report shall not be reproduced, except in full, without the written approval of the laboratory.

Document Control
** Please see the attached document for the definition of textural classes.

Reported by

Myles Nicholson

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ADAS (UK) Textural Class Abbreviations

The texture classes are denoted by the following abbreviations:

Class	Code
Sand	S
Loamy sand	LS
Sandy loam	SL
Sandy Silt loam	SZL
Silt loam	ZL
Sandy clay loam	SCL
Clay loam	CL
Silt clay loam	ZCL
Clay	C
Silty clay	ZC
Sandy clay	SC

For the *sand, loamy sand, sandy loam* and *sandy silt loam* classes the predominant size of sand fraction may be indicated by the use of prefixes, thus:

  vf   Very Fine (more than 2/3's of sand less than 0.106 mm)
  f   Fine (more than 2/3's of sand less than 0.212 mm)
  c   Coarse (more than 1/3 of sand greater than 0.6 mm)
  m   Medium (less than 2/3's fine sand and less than 1/3 coarse sand).

The subdivisions of *clay loam* and *silty clay loam classes* according to clay content are indicated as follows:
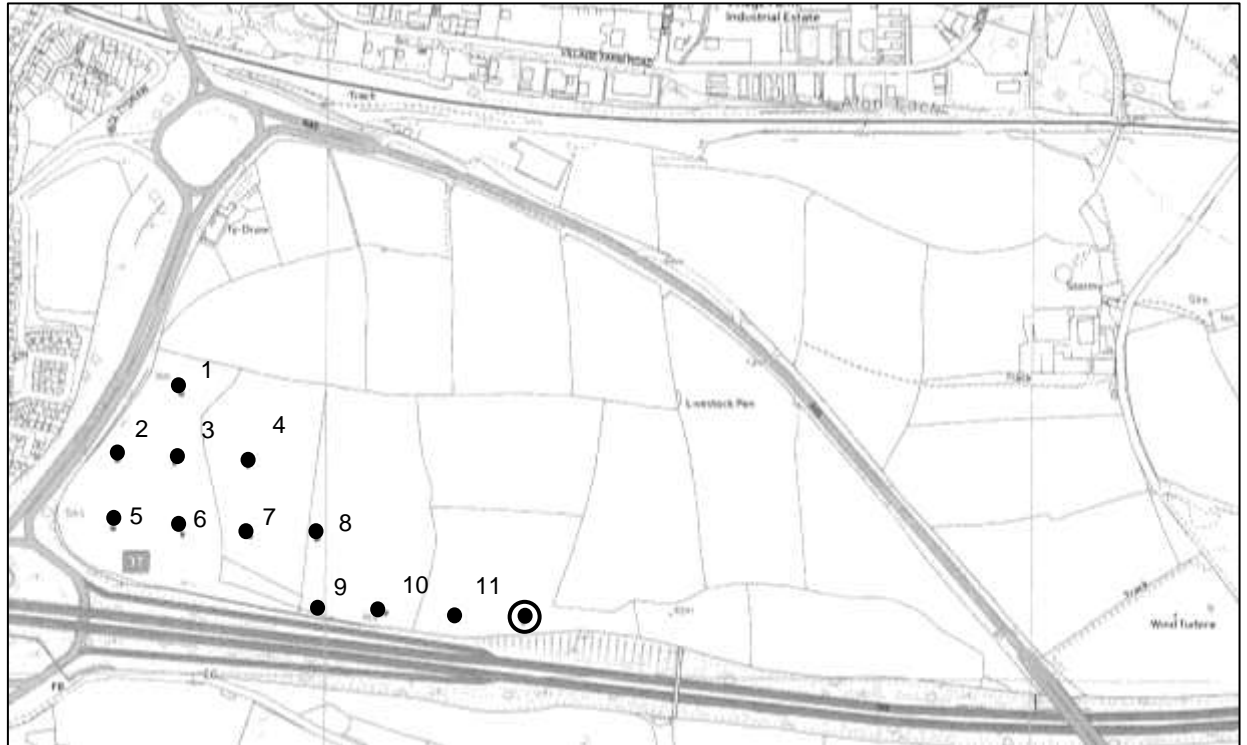
  M   medium (less than 27% clay)
  H   heavy (27-35% clay)

Organic soils i.e. those with an organic matter greater than 10% will be preceded with a letter O.

Peaty soils i.e. those with an organic matter greater than 20% will be preceded with a letter P.

Plan KCC2889/01

Auger Points Plan

KEY		PLAN	**KCC2641/01**	
		TITLE	**Auger Points Plan**	
●	Auger sample location	**SITE**	Pyle, Bridgend	
○	Topsoil sample	**CLIENT**	Geraint John Planning	
		NUMBER	**KCC2641/01 09/20hr**	
		DATE	September 2020	**SCALE** NTS

KERNON COUNTRYSIDE CONSULTANTS LTD
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WILTSHIRE SN5 4LL
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Plan KCC2889/02

Agricultural Land Classification

KCC2641 ALC Sept 20 Draft

KEY		Ha	%	PLAN	KCC2641/02
	Grade 1 (Excellent)			TITLE	Agricultural Land Classification Plan
	Grade 2 (Very Good)			SITE	Land at Pyle
	Grade 3a (Good)			CLIENT	Geraint John Planning
	Grade 3b (Moderate) (predictive)	74.4	75	NUMBER	KCC2641/02 09/20hr
	Grade 3b (Moderate) (detailed survey results)	14.0	14	DATE	September 2020 SCALE NTS
	Grade 4 (Poor) (predictive)	1.5	1		
	Grade 5 (Very poor) (predictive)	7.0	7	**KERNON COUNTRYSIDE CONSULTANTS LTD**	
	Non-agricultural / Other land	0.9	1	**GREENACRES BARN, PURTON STOKE, SWINDON, WILTSHIRE, SN5 4LL**	
	Farm buildings	1.8	2	Tel 01793 771 333 Email: info@kernon.co.uk	
	Not surveyed			This plan is reproduced from the Ordnance Survey under copyright license 100015226	

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