



Agricultural Land Classification Report

**Land at
Dol Y Dintir
Cardigan
West Wales
SA43 1NE**

Undertaken by Davis Meade

Date 17.4 23

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1.0 Summary

**Land at
Dol Y Dinter
Cardigan
West Wales**

was assessed by Barry Meade F.A.A.V on 17th April 2023

There was one single enclosure

The soil – medium clay loam.

Gradient some parts with 15* slopes.

Soil depth 12-14"

Height above sea level 53 meters . No climatic problems.

Grade 4

The lands on inspection total:

Approximately 5.1 acres, 2.1 ha

2.0 Introduction

Davis Meade was instructed by to carry out a land quality assessment of the land shown edged red on maps in Appendices at Dol Y Dintir Cardigan

3.0 Subject

To investigate the designated land grades at land at Dol Y Dinter Cardigan

To advise Wales and West Housing Association of the land classification of the designated land in relation to the potential planning for residential purposes

4.0 The Designated Land

The land consists I enclosure See Appendix for map

5.0 Basic Methodology

Soil samples were taken and examined from trial digs and from topsoil. Investigations showed topsoil depth from approximately from 12" to 14"

A desktop study of existing soils and climatic information was undertaken, followed by fieldwork to study soil and site limitations.

The land was classified using the system outlined in the Ministry of Agriculture, Fisheries and Food (MAFF now DEFRA) publication *Agricultural Land Classification of England and Wales-Revised guidelines and criteria for grading the quality of agricultural land* (October 1988).

This requires that the lowest factor to decide the grade (taking into account soil depth, stoniness, rain fall ,climate , gradient and water logging) is the deciding factor. The main deciding factor was slopes of 15 * , any land with slopes over 11* is Grade 4

6.0 Details of Methodology generally

- 1) The ALC requirement is that whatever any factors show, that it is the lowest factor that creates the grade.
- 2) The 5 main factors are soil depth, stoniness, climate, slope, wetness. There are further factors that can be considered, but they need laboratory analysis mainly to define soil type. Such analysis would only, if appropriate, bring the grade down lower and are not considered in this report.
- 3) An example is marshy land, which although level, or of slope less than 7 degrees (which it would have to be to be grade 1,2 and 3a) but because of its wetness is grade 5 and this field would be Grade 5.
- 4) The parcel is therefore surveyed for the lowest factor and that can sometimes be easy to ascertain say in marshland (excessive wet Grade5) or as in the case of steep hill land (above 18 degrees) as those factors in themselves, sets the grade at 5. There is thus no need to make any further investigations in the block, such as soil depth etc as the lowest Grade has been established.
- 5) Historically fields were internally fenced or partitioned into blocks that produced similar crops i.e., arable, or grazing land. The grazing land was fenced off to prevent stock getting into the arable crops. Arable fields are often (especially internally) partitioned insecurely between each other, but the hedge or fencing sometimes remains from a time when the fields were smaller.
- 6) It is not suggested that the soil of each field is necessarily exactly the same throughout a parcel but it is not unreasonable to regard that as the default position. This point however then needs to be checked.
- 7) Accordingly, some initial digs in the parcel are made and recorded and then the remainder of the field is walked to look for change in soil type upon which further 'digs' are made. Fields with slopes need a dig at top and bottom as well, to check for soil depth. The walk is also used to note the amount and size of stones across the field. The amount of stones does often vary in a parcel especially in arable fields where the stones are usually on or near the surface having been brought up by the cultivation work and further exposed by the weather. Again, the regulations give lower grades depending on stoniness and even they only refer to stones "up to 6cm". Attention is therefore drawn where there are, in some cases stones up to 20cm to 25cm (8-10"). These size stones can cause heavy wear or even damage to machinery and the ALC recognises this as Grade reduction.
- 8) Similarly, a slope any more than 7 degrees eliminates the parcel from being grades 1,2 or 3a and a table of degrees defines lower grades as do the regulations concerning uneven land which machinery cannot easily work on.
- 9) If a Grade 5 factor is not immediately obvious in a parcel, then the lowest of the factors are considered to produce the Grade.

- 10) Soil type/ wetness. Clay soils will hold water and can become waterlogged. The length of time the wetness remains again defines the grade under the wetness factor. Sandy soils dry out and may need irrigation and are specified as eliminated from grades 1,2 o3 3a. Sandy loam is excluded from Grade 1. Enquires are made about waterlogging time where necessary.
- 11) Climate- This is another factor and arable crops do not do so well above about 750/800 feet a.m.s.l, so may downgrade a block for that reason, especially in hilly areas.
- 12) Soil depth, A “dig” involves making a spade hole approximately ½ meter square down to the subsoil, or to uncultivated stoniness, or a half round 18” probe may be use and a sample brought to the surface. The topsoil’s depth is then recorded, and the Grade is limited to the ALC table for soil depth. This depth is often the depth zone within which the field is frequently cultivated but deeper soils may make the grade higher if this aids drainage, but of course other factors may be the dominant factor if lower, to finally define the Grade.
- 13) Finally, a basic cross check of the location is made with “The soils of England and Wales” maps and descriptions. However, these maps are 1:250,000 and do not show individual fields or even farms but usually generally give a idea of soils (not grades) in that location and thus give an idea of the type of farming carried out in the area which can then be crossed checked with the ALC definitions. Samples originally to create these maps were only taken one in every 80 hectares or 190 acres.

7.0 Results

Notes

1. The National Grid numbers (XX XX 5300 etc.) are calculated by reference to the centre of the field. This report is not able to locate the exact centre of a parcel so the number may vary with other references. However, any location reference in the parcel will be unique to that parcel.
- 2 The acreages are estimate only taken from a “Magic “plan measurement.
- 3 . Reference to “level” indicates 7* or less
- 4 Any reference to flooding (opposed to waterlogging) is listed.
- 5.This survey does not include any laboratory examinations of the soil which if carried out may only serve to lower the grade. Thus, only Tables 1 to 5 are considered in making this report.

7.1 The land.

Field	Acreage	National Grid Number
1	5.1	SN 1846 9399
Undulating parcel with up to 15* slopes. Soils medium clay loam, over clay. Soil depth 12 to 14 “, stoneless, Seasonal waterlogging likely.		Grade 4

7.2 Site Limitations The land is of good soil depth , medium clay loam but the lowest factor is the slopes which defines the grade. The soils of England And Wales (see below) only take one sample every 180 acres and this parcel will come under slowly permeable soil and is of clay nature and on inspection was not fine loamy and well drained. . Even so the lowest factor is the slope.

7.3 Conclusion

Based on the above findings and as required by the MAFF Publication where the lowest factor is taken in each case .

7.4 Soils of England and Wales describe the area as

541 J .Denbigh 1 Well drained fine loamy soils over rock. Some soils with slowly permeable sub soils and slight seasonal waterlogging. Shallow soils and some bare rock locally. Dairying and some cereals in lowlands

8.0 Grades Applicable to the Survey.

The MAFF publication specifies: land

Grade 4 - poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Note- More than 50% of the land in England and Wales comes in the Grade 3 category and most of that is **Grade 3b**.

Signed Barry Meade 18/4/23
Barry Meade FAAV
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Appendices

Appendix 1- Description of All grades and sub grades

Appendix 2- Site map of land

Appendix 3- Location Plan

Appendix 4 Original Instruction map

DESCRIPTION OF ALL THE GRADES AND SUBGRADES

Grade 1 - excellent quality agricultural land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 - very good quality agricultural land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

Grade 3 - good to moderate quality agricultural land

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a - good quality agricultural land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b - moderate quality agricultural land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4 - poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 - very poor quality agricultural land

Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

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Cardigan, Sir Ceredigion -



OSGB36

1:2,500



Coords: (219187,247281) Grid Ref:SN19184728

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1:25,000



