AGRICULTURAL LAND CLASSIFICATION AND SOIL RESOURCES TODDERSTAFFE HALL FARM, SINGLETON, NEAR BLACKPOOL

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AGRICULTURAL LAND CLASSIFICATION REPORT FOR TODDERSTAFFE HALL FARM, SINGLETON, NEAR BLACKPOOL

1 SUMMARY

1.1 The Agricultural Land Classification (ALC) Survey for this site shows that the following proportions of ALC grades are present:

Grade/Subgrade	ha	% of site
3a	1.7	14.5
3b	10.0	85.5

1.2 The main limitation to the agricultural use of land in Subgrade 3a is soil wetness.

1.3 The main limitations to the agricultural use of land in Subgrade 3b include flood risk and gradient.

2 INTRODUCTION

2.1 The site was surveyed by the Resource Planning Team in February 1996. An Agricultural Land Classification survey was undertaken according to the guidelines laid down in the "Agricultural Land Classification of England and Wales - Revised Guidelines and Criteria for Grading the Quality of Agricultural Land" (MAFF 1988).

2.2 The 11.7 ha site is situated to the south west of Singleton, east of Blackpool. The land surrounding the site is predominantly in agricultural use. The site is bounded to the south by Main Dyke

2.3 The survey was requested by MAFF in connection with an agricultural land improvement proposal.

2.4 At MAFF Land Use Planning Unit's request this was a detailed grid survey at 1:10000 with a minimum auger boring density of 1 per hectare. The attached map is only accurate at the base map scale and any enlargement would be misleading.

2.5 At the time of the survey the site was under cereal stubble and part had been ploughed.

3 CLIMATE

3.1 The following interpolated data are relevant for the site (SD 368 359) :

Average Annual Rainfall (mm)	914
Accumulated Temperature above 0°C January to June (day °C)	1429

3.2 There is no overall climatic limitation on the site.

3.3 Other relevant data for classifying land include:

Field Capacity Days (days)	205
Moisture Deficit Wheat (mm)	82
Moisture Deficit Potatoes (mm)	68

4 SITE

4.1 Three site factors of gradient, micro relief and flooding are considered when classifying land.

4.2 Gradients of up to 10° limit an area in the north west of the site to Subgrade 3b.

4.3 Micro-relief does not impose any limitation on the agricultural use of the land.

4.4 A flood risk along the Main Dyke limits land to Subgrade 3b.

4.4.1 Long winter flooding occurs over the land running parallel to the Main Dyke for a distance of approximately 100m from the Main Dyke.

4.4.2 Flood risk has been assessed on the basis of information provided by the farmer, Mr Richard Smith, this cannot be substantiated by the NRA, and at the time of survey no evidence of recent flooding was observed.

5 GEOLOGY AND SOILS

5.1 The solid geology of the area is comprised of Kirkham Mudstones - British Geological Survey Sheet 66 - Blackpool, 1 Inch. This is overlain by deposits of peat and glacial sand.

5.2 The underlying geology influences the soils which generally have a clay loam or sandy loam texture across the north and west of the site or a peaty texture over the remainder of the site.

6 AGRICULTURAL LAND CLASSIFICATION

6.1 Subgrade 3a - occupies 1.7 ha (14.5%) of the survey area and is found across the north of the site.

6.1.1 The soil has a clay loam texture over mixed horizons of sandy clay loam, sand and clay textures to depth. Observations of gleying place these soils into Wetness Class III.

6.2.2 The main limitation to the agricultural use of this land is soil wetness.

6.2 Subgrade 3b - occupies 10.0 ha (85.5%) of the site and covers the remaining survey area.

6.2.1 An area in the north west of the site has gradients of 8-10°, which limit the area to Subgrade 3b.

6.2.2 Over the remaining area the soils have a loamy peat texture over peat to depth. These soils are limited in their agricultural use by the risk of flooding.

6.2.2 The main limitations to the agricultural use of this land include gradient and flood risk.

6.3 SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

Grade/Sub-grade	Area in Hectares	% of Survey Area
3a	1.7	14.5
3b	10.0	85.5
Totals	**11.7**	**100.0**

SOIL RESOURCES REPORT FOR TODDERSTAFFE HALL FARM, SINGLETON, NEAR BLACKPOOL

7. INTRODUCTION

7.1 The soils on the site were investigated using a Dutch auger, with borings made on a 100m grid, and by examining soil pits to a depth of 1.20m. Two soil units were identified across the site and these are described below.

8. SOIL UNITS

8.1 Soil unit 1 occupies 8.5 ha (72.7%) of the site. The soils have up to 30cm of loamy peat overlying stoneless peat. A typical profile description is as follows:

0-25 cm — Very dark grey, 10YR 3/1, loamy peat, stoneless; moderately developed, medium to fine subangular blocky, breaking down readily; common, fine, fibrous roots.

25-48 cm — Black 7.5YR 2.5/1 peat, moderately developed, very coarse angular blocky.

48-120 cm — Black 10YR 2/1 humified peat, containing large well preserved fragments of bog oak.

8.2 Soil unit 2 occupies 3.2 ha (27.3%) of the site and is found across the north and west of the site. The soils show very variable depths of glacial sands and clays, but are generally represented by approximately 30 cm of a clay loam topsoil texture overlying horizons of sandy clay loam, clay and sand subsoil textures, which vary significantly in their depths over very short distances. This variation in subsoil textures means separation into further units would be impracticable. A typical profile description is as follows:

0-30 cm — Very dark greyish brown, 10YR 3/2, medium, clay loam; stoneless; moderately developed, medium, sub-angular blocky to granular; common, fine, fibrous roots.

30-40 cm — Greyish brown, 10 YR 5/2, heavy clay loam; common yellowish brown, 10YR 5/6 - 5/8 mottles; moderately developed, coarse subangular blocky; firm; few, fine, fibrous roots.

40-54 cm — Dark grey, 10YR 4/1 to dark greyish brown, 10YR 4/2, sandy clay loam; common, yellowish brown, 10YR 5/6 mottles; moderately developed, coarse, subangular blocky; firm; less than 0.5% macropores.

54-120 cm — Brown, 7.5YR 5/4 to strong brown, 7.5YR 5/6, medium sand; stoneless; moderately developed, coarse, subangular blocky; friable.

8.3 SUMMARY OF SOIL UNIT AREAS

Unit	Area ha	% of Site
1	8.5	72.7
2	3.2	27.3
Totals	11.7	100.0