Methley South OCCS, Methley
Agricultural Land Classification
Validation Survey and
Statement of Physical Characteristics
July 1996

Resource Planning Team
Leeds Statutory Group
ADAS Leeds

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RPT 20048

AGRICULTURAL LAND CLASSIFICATION
STATEMENT OF PHYSICAL CHARACTERISTICS
AND VALIDATION REPORT

METHLEY SOUTH OCCS, METHLEY

1. Introduction

1. This report presents the findings of a validation Agricultural Land Classification (ALC) and Statement of Physical Characteristics (SPC) survey of 29 ha of land at Methley South OCCS, Methley, West Yorkshire. Survey work was carried out in July 1996 by ADAS Statutory to examine and validate the findings of a pre-working report produced by H J Banks & Co.

1.2 Survey work was conducted by the Resource Planning Team of ADAS Statutory Leeds. Land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF 1988). A description of ALC grades and subgrades is given in Appendix I.

1.3 At the time of the survey most of the site was in agricultural use. The west of the site was under cereals, and the far east of the site under permanent grass, and the remainder used for a grasstrack racing circuit.

1.4 A total of thirteen auger borings and two soil pits were conducted on the site to validate the applicants ALC and SPC. The information suggested the applicants ALC map and report is accurate and the SPC map slightly underestimates the amount of subsoil material available. (See section 2 for further details of SPC.) Overall this information should be accepted as a fair and accurate representation of land quality and soil materials available on this site.

2. STATEMENT OF PHYSICAL CHARACTERISTICS REPORT

METHLEY SOUTH OCCS, METHLEY

Two main soil types were found on the site. Descriptions of these soils are given below. Topsoil and subsoils resources are shown on the accompanying maps along with soil thickness and volume information.

2.1 Soil Type 1 - Medium textured over heavy textured, unit T1/S1

This soil type is found over the western half of the site.

2.2 Soil Type 2 - Medium over Heavy textured soils and overburden in places, Unit T2/S2.

3. Soil Resources

3.1 Topsoils

3.1.1 Unit T1

This topsoil has a mean depth of 28.9 cm and is typically medium clay loam and sandy clay loam with a weakly developed medium subangular blocky structure. It is very slightly stony.

3.1.2 Unit T2

This topsoil has a mean depth of 24.4 cm and is typically medium clay loam and sandy clay loam with a weakly developed medium to coarse subangular blocky structure. It is very slightly stony.

3.2 Subsoils

3.2.1 Unit S1

This unit is found below topsoil T1. It is medium to heavy textured, consisting of weakly developed coarse angular blocky sandy clay loams and heavy clay loams, with occasional massively structured clay. Most of these subsoils show evidence of compaction. It is stoneless to very slightly stony. It has a mean depth of 30.7 cm. This is slightly more than found by H J Banks. Although this indicates a larger soil volume than found by H J Banks, this volume should not be taken as definitive, as the ADAS survey was performed at a semi-detailed level. It does however suggest there will be more subsoil available during soil stripping than suggested by the H J Banks survey.

3.2.2 Unit S2

This unit is found below topsoil T2. The H J Banks survey indicates only overburden is present below this topsoil. The ADAS survey did however find some isolated pockets of medium to heavy textured subsoil, indicating there will be some subsoil

material available during soil stripping. Other borings showed overburden directly below this topsoil.

Typical soil profiles for units T1/S1 and T2/S2 are contained in Appendix III.

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Resource Planning Team
Leeds Statutory Centre
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SOURCES OF REFERENCE

Ministry of Agriculture, Fisheries and Food (1988) *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.* MAFF: London.

APPENDIX I

DESCRIPTIONS OF 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 or horticultural crops can usually be grown but on some land of this 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 land.

Grade 3: Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When 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 the 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 severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

APPENDIX II

SOIL WETNESS CLASSIFICATION

Definitions of Soil Wetness Classes

Soil wetness is classified according to the depth and duration of waterlogging in the soil profile. Six soil wetness classes are identified and are defined in the table below.

Wetness Class	Duration of waterlogging[1]
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years.[2]
II	The soil profile is wet within 70 cm depth for 31-90 days in most years **or**, if there is no slowly permeable layer within 80 cm depth, it is wet within 70 cm for more than 90 days, but only wet within 40 cm depth for 30 days in most years.
III	The soil profile is wet within 70 cm depth for 91-180 days in most years **or**, if there is no slowly permeable layer present within 80 cm depth, it is wet within 70 cm for more than 180 days, but only wet within 40 cm depth for between 31-90 days in most years.
IV	The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth for more than 210 days in most years **or**, if there is no slowly permeable layer present within 80 cm depth, it is wet within 40 cm depth for 91-210 days in most years.
V	The soil profile is wet within 40 cm depth for 211-335 days in most years.
VI	The soil profile is wet within 40 cm depth for more than 335 days in most years.

Assessment of Wetness Class

Soils have been allocated to wetness classes by the interpretation of soil profile characteristics and climatic factors using the methodology described in *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988).

[1] The number of days is not necessarily a continuous period.
[2] 'In most years' is defined as more than 10 out of 20 years.

APPENDIX III

SOIL DATA

Soil Profile Description

Unit 1 - **T1/S1**

Location - **Near boring 3**

Land Use - **Cereals**

Aspect - **O°**

Depth cm	
0 - 28	Very dark grey (10YR3/1) unmottled, medium clay loam; very slightly stony with 1% small and medium hard stones; slightly moist; weakly developed coarse subangular blocky structure; friable; >0.5% pores non calcareous; common fine fibrous roots; non calcareous abrupt smooth boundary.
28 - 48	Brown (10YR5/3) sandy clay loam; common diffuse yellowish brown (10YR5/8) mottles; stoneless; very slightly moist; weakly developed medium and coarse angular block structure; firm; few fine fibrous roots; <0.5% pores >0.3 mm; abrupt smooth boundary.
48 - 65	Grey (N51) clay with common diffuse brownish yellow (10YR6/8) mottles; stoneless; dry; massively structured clay; very firm; <0.5% pores >0.5 mm; no roots.

Soil Profile Description

Unit 1 - **T2/S2**

Location - **adjacent to boring 22**

Land Use - **Permanent grass**

Aspect - **O°**

Depth cm	
0 - 30	Very dark grey (10YR3/1) medium clay loam; few diffuse yellowish brown (10YR5/8) mottles; weakly developed coarse subangular blocky structure; friable; stoneless; >0.5% pores >0.5mm; many fine fibrous roots; non calcareous.
30+	Colliery overburden.