AGRICULTURAL LAND CLASSIFICATION

SITES 1, 3 AND 4

HAMBLETON LOCAL PLAN

NORTH YORKSHIRE

AUGUST 1992

AGRICULTURAL LAND CLASSIFICATION

ADAS

Leeds Statutory Group

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MAFF REF:-

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SUMMARY

Land covering a total area of 28 hectares was surveyed on 3 separate sites (Nos. 1, 3 and 4) within the district of Hambleton. 90% of this land is in agricultural production.

The area is covered by post glacial deposits of sand and gravel and lacustrine clay. Soil texture varies between loamy sand and medium clay loam in the topsoil and loamy sand and clay in the subsoil. The light-textured soils are limited to Grade 2, Subgrade 3a or Subgrade 3b by soil droughtiness. Heavier-textured soils consisting of medium clay loam topsoils over heavy clay loam or clay subsoils occur on parts of the Dalton site (Site 1) and are limited to Subgrades 3a and 3b by soil wetness and workability problems. A significant part of the Dalton site still contains parts of the old runway and has been classified as urban.

A summary of soil types, ALC grades and limitations can be found in the appendix.

INTRODUCTION AND SITE CHARACTERISTICS

Survey work was carried out on Sites 1, 3 and 4 within the district of Hambleton on 05/08/92 when soils were examined at points pre-determined by the National Grid. The overall survey density was one or two borings per hectare depending on site size, with additional borings being made, where necessary, to refine grade boundaries and to check soil variability.

All assessments of agricultural land quality were made using the methods described in "Agricultural Land Classification of England and Wales," (MAFF 1988).

Climate

Due to the distances between the sites, separate climatic data were obtained for each site and are recorded within the sections dealing with the individual sites.

Land Use

At the time of the survey the agricultural land at Dalton Airfield (Site 1) was under cereals and peas. The agricultural land at Roxby House (Site 3) was under permanent pasture and that at Leeming Bar (Site 4) consisted of approximately two thirds arable land and one third ley grassland.

Geology and Soils

Mercia Mudstone (formerly Keuper Marl) and Keuper Sandstone underly all 3 sites which are, in turn, overlain by thick drift deposits of post glacial sand and gravel or lacustrine clay. Topsoil textures vary from loamy sand to medium clay loam and sandy clay loam.

Subsoil textures vary from medium sand at Roxby House to clay at Dalton Airfield.

Dalton Airfield (Site 1)

Site 1 is located at Dalton Airfield around National Grid Reference SE420757, 1 km west of Dalton.

The site covers an area of approximatley 12.5 hectares, 80% of which is in agricultural use. At the time of the survey all agricultural land was in arable use. Urban land on the site consists of disused airfield runways.

Geology and Soils

The site is underlain by Mercia Mudstone and covered with deposits of lacustrine clay. The soils are poorly drained (falling in Wetness Class IV) and consist of medium clay loam topsoils overlying clay subsoils.

Climate

Site name:	Dalton Airfield
Grid Reference:	SE420757
Altitude (m):	20
Accumulated Temperature Above 0°C (January - June):	1374
Average Annual Rainfall (mm):	624
Climatic Grade:	1
Field Capacity Days:	144
Moisture Deficit (mm) Wheat:	107
Moisture Deficit (mm) Potatoes:	98

AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:-

Grade/Subgrade	Hectares	Percentage of total Area
3a	4.13	26.7
3b	8.40	54.3
Urban	2.95	19.0
TOTAL	15.48	100

Subgrade 3a

Subgrade 3a land occurs along the western and north western edges of the site. Soils consist of a medium clay loam topsoil over a clay subsoil. Slowly permeable layers generally begin at 45 to 50 cm depth and the soils are imperfectly drained, falling in Wetness Class III. Soil wetness is, therefore, the factor which limits this land to Subgrade 3a.

Subgrade 3b

Subgrade 3b land is found along the eastern and south eastern edges of the site. Soils consist of a medium clay loam topsoil over a slowly permeable subsoil which begins at depths of between 25 and 40 cm from the soil surface. These soils are poorly drained (Wetness Class IV)and soil wetness is the factor limiting this land to Subgrade 3b.

Urban

The urban land on the site consists of the airfield runways and is found along the north-western and north eastern edges of the site, and in a small area in the south east.

Roxby House (Site 3)

Site 3 is located around National Grid Reference SE 527689 and lies ½ km south of the village of Easingwold on the A19.

The site covers an area of approximately 4.6 hectares, almost all of which is in agricultural use. At the time of the survey all agricultural land was under permanent pasture. Land classified as urban includes a building and track in the north east of the site.

Geology and Soils

Keuper Marl underlies the area, which is overlain by thick drift deposits of glacial sand and gravel.

The soils reflect the drift geology with well drained but droughty loamy sands over sands covering the site. Sandy clay was occasionally encountered at depths of greater than 90 cm.

Climate

Site Name:	Roxby House (Site 3)
Grid Reference:	SE529688
Altitude (m):	25
Accumulated Temperature Above 0°C (January - June):	1369
Average Annual rainfall (mm)	638
Climatic Grade:	1
Field Capacity Days:	149
Moisture Deficit (mm) Wheat:	103
Moisture Deficit (mm) Potatoes:	93

AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:-

Grade/Subgrade	Hectares	Percentage of Total Area
3b	4.56	98.5
Urban	0.07	1.5
TOTAL	4.63	100

Subgrade 3b

Subgrade 3b occurs over the whole site with the exception of a small area of urban land. Soils consist of loamy medium sand topsoils over loamy medium sand or medium sand subsoils, with sandy clay occasionally occurring at depths of greater than 90 cm. The soils are well drained with occasional relic mottling in the subsoil. However, the water holding capacity of these soils is low and as the rainfall is comparatively low this means that soil droughtiness limits the land to Subgrade 3b.

Urban

This refers to a small wooden structure located in the north east of the site and a driveway leading to it.

Leeming Bar (Site 4)

Site 4 is located around National Grid Reference SE283904 and lies between the A1 and Leases Road, north west of Leeming Bar.

The site covers approximately 7.7 hectares, all of which is in agricultural use. At the time of survey approximately one third of the site was under ley grass and the remainder was under cereals.

Geology and Soils

Deep sandy drift of glacial origin covers the whole site. The underlying Keuper Sandstone does not occur within one metre of the soil surface. The soils are all light textured and well drained, falling in Wetness Class I.

Climate

Site Name:	Leeming Bar (Site 4)
Grid Reference:	SE283904
Altitude (m):	45
Accumulated Temperature Above 0°C (January - June):	1342 day °C
Average Annual Rainfall (mm):	669
Climatic Grade:	1
Field Capacity Days:	163
Moisture Deficit (mm) Wheat:	102
Moisture Deficit (mm) Potatoes:	91

AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site were as follows:-

Grade/Subgrade	Hectare	Percentage of Total Area
2	~~2.48~~ 5.21	~~32.2~~ 67.8
3a	~~5.21~~ 2.48	~~67.8~~ 32.2
TOTAL	7.69	100

Grade 2

Grade 2 land is found in the south of the site. Soils consist of medium sandy loam to medium clay loam top soils over loamy medium sand to medium sandy loam subsoils. Slight soil droughtiness is the factor limiting this land to Grade 2.

Subgrade 3a

Subgrade 3a land occurs in the north of the site. Soils consist of medium sandy loam topsoils over very slightly to slightly stony loamy medium sand subsoils. Moderate soil droughtiness restricts this land to Subgrade 3a.

APPENDIX 1

SUMMARY OF ALC GRADES ON SITES SURVEYED FOR HAMBLETON LOCAL PLAN

Grade 2

Location	% of Total Site Area	Soil types	Limiting factor
Leeming Bar (Site 4)	~~32.2~~ 67.8	Medium clay loam and sandy loam over loamy sand and sandy loam subsoils.	Droughtiness.

Subgrade 3a

Dalton Airfield (Site 1)	26.7	Imperfectly drained medium clay loam over heavy clay loam or clay.	Soil wetness.
Leeming Bar (Site 4)	~~67.8~~ 32.2	Sandy loam topsoils over slightly stony loamy sand subsoils.	Droughtiness.

Subgrade 3b

Dalton Airfield (Site 1)	54.3	Poorly drained medium or heavy clay loam topsoils overlying clay.	Soil wetness.
Roxby House (Site 3)	98.5	Loamy sand topsoils over loamy sand and sand subsoils.	Droughtiness

Urban

Dalton Airfield (Site 1)	19.0	N.A.	N.A.
Roxby House (Site 3)	1.5	N.A.	N.A.