

AGRICULTURAL LAND CLASSIFICATION
RECONNAISSANCE SURVEY OF THE PARISHES OF
BILTON, PRESTON AND HEDON,
HUMBERSIDE
NOVEMBER 1992

ADAS
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BILTON.ALC/MT

SUMMARY

A reconnaissance A.L.C. survey of the parishes of Bilton, Preston and Hedon was carried out in October 1992. Approximately 3,105 ha. of land was surveyed of which 2,380 ha. was in agricultural use. Of this total, almost 750 ha. falls within Grade 2 where the soils are either light-textured (in which case slight soil droughtiness is the factor limiting A.L.C. grade) or medium to heavy-textured (in which case slight soil wetness and/or soil droughtiness limit the A.L.C. grade of the land). Grade 2 land occurs principally in the north and the east of the area.

There is also approximately 694 ha. of Subgrade 3a land, again principally in the north and east. Soils are typically medium to heavy-textured and the land is restricted to Subgrade 3a by slight soil wetness and workability problems. Subgrade 3b land is widespread and 936 ha. were mapped, mainly in the north and west of the area. Soils are medium or heavy-textured and poorly drained and this land is limited to Subgrade 3b by soil wetness and workability restrictions which are more severe than on the adjoining Subgrade 3 land.

CONTENTS

1. INTRODUCTION AND SITE CHARACTERISTICS
2. AGRICULTURAL LAND CLASSIFICATION GRADES

MAP

1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND WITHIN THE PARISHES OF
BILTON, PRESTON AND HEDON, NORTH HUMBERSIDE

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods.

The three parishes surveyed lie to the east of the city of Hull and cover a total of 3105 ha. The area is located around Grid Reference TA180310 and the centre of the survey area lies approximately 9 Km. ENE of Hull city centre. Survey work was carried out in October 1992 when soils were examined by hand auger borings at 200 m. intervals predetermined by the National Grid. Two soil pits were dug to allow the assessment of subsoil structure and to allow samples to be taken for laboratory analysis. Land quality was assessed using the methods described in "Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land." (MAFF, 1988).

1.2 Land Use and Relief

Approximately 77% of the area surveyed is in agricultural use. Most of this is arable land but there are also significant areas of ley and permanent grassland. The remaining 23% of the area is made up of Urban land (consisting of the villages of Ganstead, Bilton, Preston and Hedon and the industrial areas at Salt End, in the south-west), non-agricultural land (a golf course, nursery and playing fields) and an area of tidal mudflats in the south-west. Altitude varies from 0 m. in the south-west to 15 m. in the north-east. Generally the area is flat to very gently sloping, typically 0 - 2°.

1.3 Climate

Grid Reference	:	TA 180310
Altitude (m)	:	8
Accumulated Temperature above 0°C (January-June)	:	1390 day °C
Average Annual Rainfall (mm)	:	620
Climatic Grade	:	1
Field Capacity Days	:	135
Moisture Deficit (mm) Wheat	:	111
Moisture Deficit (mm) Potatoes	:	103

1.4 Geology, Soils and Drainage

The whole area is underlain by Cretaceous Chalk over which there are thick deposits of marine alluvium (in the south west) and boulder clay (in the north and east). Small areas of glacial sand and gravel also occur in the north and east.

Soil type varies widely across the area. Those formed on the deposits of marine alluvium are heavy-textured (typically heavy clay loam or heavy silty clay loam topsoils overlying clay or silty clay subsoils) and imperfectly or poorly drained, falling in Wetness Classes III or IV. Profiles are sometimes calcareous especially near Hedon. The soils formed on boulder clay vary from well drained (Wetness Class I) to poorly drained (Wetness Class IV), with medium clay loam or sandy clay loam topsoils overlying medium clay loam, sandy clay loam, heavy clay loam or clay subsoils. The deeper subsoils are frequently calcareous and contain small fragments of chalk.

Where deposits of glacial sand occur profiles are well drained (falling in Wetness Class I) and typically consist of sandy loam topsoils overlying sandy loam or loamy sand subsoils.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2	749.95	24.2
3a	693.56	22.3
3b	936.37	30.2
4		
5		
(Sub total)	(2,379.88)	(76.7)
Urban	582.01	18.7
Non Agricultural	87.59	2.8
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water	55.69	1.8
Land not surveyed		
(Sub total)		
	_____	_____
TOTAL	3,105.17	100
	_____	_____

2.1 Grade 2

Grade 2 land occurs principally in the north and east of the area surveyed. Two main soil types occur. The first is a light-textured soil which consists typically of medium sandy loam topsoils overlying medium sandy loam or loamy medium sand subsoils. Profiles are well-drained (Wetness Class I) but slight soil droughtiness limits the land to Grade 2. The second is a medium to heavy-textured soil formed on boulder clay typically consisting of medium clay loam or sandy clay loam topsoils overlying similarly-textured subsoils. Slowly permeable heavy clay loam subsoils occur at depth in places but profiles are generally moderately well drained (falling in Wetness Class II). This land is restricted to Grade 2 by slight soil wetness and in places, soil droughtiness.

2.2 Grade 3a

Land in this subgrade occurs mainly on boulder clay in the north and east of the site. Profiles are generally imperfectly drained (Wetness Class III) but some moderately well drained (Wetness Class II) profiles occur in places. Typically a medium clay loam topsoil (heavy clay loam in places) overlies slowly permeable heavy clay loam or clay subsoil at between 40 cm. and 60cm. depth. This land is, therefore, restricted to Subgrade 3a by soil wetness and workability limitations.

2.3 Subgrade 3b

Subgrade 3b land occurs on marine alluvium in the west and south and on heavy boulder clay and lacustrine clay in the north of the area surveyed. Profiles are imperfectly or poorly drained (Wetness Classes III and IV) and typically consist of medium clay loam, heavy clay loam or heavy silty clay loam topsoils overlying heavy clay loam, heavy silty clay loam, clay or silty clay subsoils. The subsoils are slowly permeable and generally begin at between 30 cm. and 40 cm. depth. The land is, therefore, limited to Subgrade 3b by soil wetness and workability restrictions.

2.4 Urban

This category includes the villages of Ganstead and Bilton (in the north-west of the area) and Preston and Hedon (in the south-east). The area of industrial land at Salt End, in the south-west, is also classified as urban land.

2.5 Non Agricultural

Non agricultural land includes a golf course in the north of the area, a nursery in the centre (lying to the north of the village of Preston) and playing fields at Bilton, Preston and Salt End.

2.6 Open Water

This refers to an area of tidal mudflats in the south west corner of the survey area.

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