AGRICULTURAL LAND CLASSIFICATION

and

STATEMENT OF PHYSICAL CHARACTERISTICS

ELLERHOLME FARM

WROOT, SOUTH YORKSHIRE

ADAS
Leeds Regional Office

Ref: 2FCS 5172
October 1990

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ELLERHOLME FARM, WROOT, SOUTH YORKSHIRE

Introduction

This 12.3 hectare site is located at grid reference SE700035 approximately 12 km west of Doncaster, near the village of Wroot. Soils were examined by hand auger borings to a depth of 120 cm at 14 points predetermined by the National Grid. The density of borings was about one per hectare. In addition two soil profile pits were dug to provide further information on soil characteristics.

Climate and Relief

Salient climatic parameters are as follows:-

Average Annual Rainfall		569
Accumulated Temperature above 0°C (Jan-June)		1419
Field Capacity Days		116
Moisture Deficit (mm)	Wheat	113
	Potatoes	107

These factors impose no overall climatic limitation although light textured soils will be droughty.

The site is level at an altitude of about 3 m aod.

Geology Soils and Drainage

Soils are developed upon a thick deposit of glaciofluvial sandy drift. Previous condition of waterlogging allowed peaty and organic horizons to develop above the sandy deposits. The water table is now controlled by ditches and all the soils are freely drained (soil

wetness class I). Topsoils are usually an organic loamy medium sand or occasionally peaty loam over a stony medium sand subsoil.

Agricultural Land Classification

Grade 2 (3 hectares)

The two areas of grade 2 land both contain stoneless organic loamy medium sand topsoils over a stoneless medium sand subsoil. Although not suffering from a wetness limitation these soils will be droughty.

Subgrade 3a (9.3 hectares)

This area although similar to the Grade 2 land suffers from a number of more significant limitations.

Stoniness, droughtiness and blowing (wind erosion) are all more severe problems than elsewhere on the site preventing this land from being graded higher than subgrade 3a.

Statement of Physical Characteristics

(Soil Properties and Resources)

One soil type was identified on the site. Topsoil and subsoil resources for the site are shown on the accompanying maps along with soil depth and quantity information.

Topsoil

This very light, organic textured unit (T1 on the topsoil resource map) is stoneless to slightly stony. It has a well developed granular structure and abundant fine fibrous roots.

Subsoil

The subsoil (S1) is mostly very stony and classified as very light. It has a loose single grain structure and a few fine fibrous roots. Within this unit is mapped an area of lower stone content.

ELLERHOLME FARM, WROOT

SOIL PROFILE DESCRIPTION

Lane Use: Arable
Slope: 0°

Horizon (cm)	
0-38	(10 YR 2/2) unmottled organic medium sandy loam; slightly stony (11% stones) with common medium rounded sand stones; moist; granular; well developed; many fine fibrous roots; sharp smooth boundary.
38-100	(10 YR 7/2) unmottled medium sand; very stony (45% stones) with abundant small and medium rounded sandstones; dry; loose; poorly developed; common fine fibrous roots.

SCHEDULE OF SOIL AUGER BORINGS

TEXTURE

CS	Coarse sand
FS	Fine sand
MS	Medium sand
LCS	Loamy coarse sand
LFS	Loamy fine sand
LMS	Loamy medium sand
CSL	Coarse sandy loam
FSL	Fine sandy loam
MSL	Medium sandy loam
FSZL	Fine sandy silt loam
CSZL	Coarse sandy silt loam
MSZL	Medium sandy silt loam
MZ	Marine light silts
MZCL	Medium silty clay loam
CZCL	Coarse silty clay loam
FZCL	Fine silty clay loam
SCL	Sandy clay loam
MCL	Medium clay loam
ZL	Silty loam
HCL	Heavy clay loam
HZCL	Heavy silty clay loam
C	Clay
SC	Sandy clay
ZC	Silty clay
O	Prefix 'O' for organic
FP	Fibrous peat
HP	Humose peat
LP	Loamy peat
PL	Peaty loam
PS	Peaty sand
SP	Sandy peat
X	Rock

MOTTLES

O	Ochreous
G	Grey

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	TOPSOIL STONES >6	DEPTH		COLOUR	CaCO3	MOTTLES
001	1	pl			0	35	10YR31		
		ms			35	120	10YR62		
002	1	pl			0	45	10YR31		
		ms			45	120	75YR64		
003	1	olms			0	35	10YR32		
		ms			35	120	10YR72		
004	1	omsl			0	40	10YR31		
		lms			40	120	10YR51		
005	1	olms			0	35	10YR32		
		ms			35	120	10YR52		
006	1	omsl			0	40	10YR31		
		ms			40	120	10YR62		
007	1	omsl			0	60	75YR30		
		lms			60	120	10YR72		
008	1	omsl			0	40	10YR44		
		grvl.ms			40	120	10YR62		
009	1	olms			0	35	10YR31		
		ms			35	120	75YR46		
010	1	olms			0	40	10YR54		
		ms			40	120	10YR64		
011	1	ols			0	35	10YR31		
		ms			35	120	10YR72		
012	1	olms			0	35	10YR55		
		ms			35	120	10YR66		
013	1	omsl			0	35	75RY44		
		ms			35	120	10YR62		

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
014	1	msl			0	40	10YR44		
		lms			40	120	10YR52		