

AGRICULTURAL LAND CLASSIFICATION

THORALDBY, HUTTON RUDBY,
STOKESLEY, NORTH YORKSHIRE

MAFF
Leeds Regional Office

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MAP

1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT,

1.0 Introduction and Site Characteristics

1.1 Location

National Grid Reference:-

NZ 487065

Location Details:-

Adjacent to the River
Leven 5 km west of
Stokesley, N Yorkshire

Site Size:-

69 ha

1.2 Survey Methods

Date Surveyed:-

27 January 1992

Boring Density and Spacing Basis:-

1 boring per ha on a
grid basis pre-
determined by the
National Grid

Sampling Method:-

Hand auger borings

Number of Borings:-

65

All land quality assessments were made 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)".

1.3 Land Use:- Winter cereals above the River valley on both the north and south sides of the River. The valley sides are predominantly commercial and farm woodland whilst the valley bottom consists mainly of permanent pasture. An area of derelict farm buildings occupies some land in the centre of the site.

1.4 Climate and Relief

Average Annual Rainfall (AAR):-	680 mm
Accumulated Temperature above 0°C (January-June):-	1313 day °C
Field Capacity Days:-	175 days
Altitude average:-	60 m a.o.d.
maximum:-	75 m a.o.d.
minimum:-	60 m a.o.d.
Climatic limitation (based on interaction of rainfall and temperature values):-	ALC Grade 2
Relief:-	Relatively flat valley bottom, steep valley sides and gently undulating topography above the river valley.
Slopes (°):-	0 - 30°
Gradient Limitations:-	Yes
Limiting gradient(s):-	11 - 30°
Grade(s)/subgrade(s):-	3b (7-11°) : 5 (18°+)
Occurrence on site:-	On the river valley sides in the central part of the site.

1.5 Geology and Soil

Solid Strata:-	Mercia (keuper) mudstone
Depth of solid rock from surface:-	Greater than 1 metre
Drift types:-	Boulder clay
Thickness of drift and distribution:-	Greater than 1 metre
Soil Types and Distribution:-	Above the River valley in the north and south of the site.
Soil Textures (topsoils and subsoils):-	Medium to heavy textured soils above the river valley, light to medium soils on the valley sides and in the valley bottom.
Soil Series/Associations:- On 1/250000 map:- Identified on site:-	Foggathorpe/Dunkeswick Only on the higher gently undulating land away from the river valley.
Soil Limitations and type:-	On the higher ground: heavy textured topsoils leading to drainage and workability problems.

1.6 Drainage

Soil type and Wetness Class:-

Light textured soils:-
Wetness Classes I & II.
Medium/heavy textured
soils:- Wetness Classes
III & IV.

Drainage Limitations:-

Wetness Class II - slowly permeable layers starting between 75 & 80 cm
Wetness Class III - slowly permeable layers starting between 45 & 75 cm
Wetness Class IV - slowly permeable layers starting at depths of less
than 45 cm

2.0 Agricultural Land Classification Grades

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Agricultural Area</u>	<u>Percentage of Total Area</u>
1			
2	16.9	29	24.5
3a	6.4	11	9.2
3b	34.2	58.5	49.3
4			
5	1.0	1.5	1.4
Non Agricultural	0.8		1.1
Agricultural Buildings	1.5		2.2
Urban	0.1		0.1
Other - Farm Woodland	7.1		10.2
- Comm Woodland	1.4		2.0
- Ercial			
Total	<u>69.4</u>	<u>100</u>	<u>100</u>

Grade 2

Distribution on site:- Within the river meanders along the valley bottom.

Soil Type(s) and Texture(s):- Light to medium textured topsoils, ranging from fine sandy loam to sandy clay loam and medium clay loam over similar textured subsoils.

Depth to Slowly Permeable Layers:- Greater than 75 cm

Wetness and Drainage Class:- Wetness Classes I and II

Stone Percentage and Type:- Stoneless

Grade Limiting Factors:- Slight soil droughtiness and the overall climatic limitation. As far as can be determined flooding is rare and does not impose any additional limitation.

Subgrade 3a

Distribution on site:- One area in the centre of the site, two small areas in the river valley in the west and two similar areas in the east

Soil Type(s) and Texture(s):- Light to medium textured topsoils, typically sandy clay loam or medium clay loam over heavy textured subsoils at depth

Depth to Slowly Permeable Layers:- 45 to 75 cm

Wetness and Drainage Class:- Wetness Class III

Stone Percentage and Type:- 0 - 5% hardstones in topsoils

Grade Limiting Factors:- Slight soil wetness and workability problems caused by slowly permeable subsoil horizon.

Other Limiting Factors:- In the west, microrelief and flood risk also impose a subgrade 3a limitation on an area on the western side of a river meander.

Subgrade 3b

Distribution on site:-

Large areas in the north and south of the site along with smaller strongly sloping areas adjoining the river valley.

Soil Type(s) and Texture(s):-

In the large gently undulating areas in the north and south:- poorly drained boulder clay soils consisting of medium or heavy clay loam topsoils over slowly permeable heavy clay loam or clay subsoils

On the valley sides:- light textured fine sandy loams over similar or lighter subsoils.

Depth to Slowly Permeable Layers:-

Medium/heavy soils:- < 45 cm

Light soils:- none present

Wetness and Drainage Class:-

Medium/heavy soils: poorly drained (Wetness Class IV).

Light soils: well drained (Wetness Class I).

Stone Percentage and Type:-

Medium/heavy - 0-5% hardstones

Light - stoneless

Grade Limiting Factors:-

Medium/heavy - soil wetness and workability problems.

Light - gradient (8-11°) and accessibility problems.

Grade 5

Distribution on site:-

Two small areas on the valley side in the centre of the site.

Grade Limiting Factors:-

Steep gradients of 20 - 30°

Non Agricultural

Type and location of land included:-

Commercial and farm woodland on the sides of the River Leven valley.

Agricultural Buildings

Type and location of building included:-

Large derelict poultry houses in the centre of the site.

Urban

Type of land use included:-

A bungalow in the centre of the site.

Resource Planning Group
Leeds Regional Office
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MAP