

AGRICULTURAL LAND CLASSIFICATION

PARLINGTON ESTATE, GARFORTH, LEEDS

Proposed Inclusion in Local U.D.P.

ADAS  
LEEDS STATUTORY GROUP

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PARLEST.ALC/MT

CONTENTS

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

MAP

1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT, Parlington Estate, Garforth, Leeds  
(Proposed Inclusion of Land in Local  
U.D.P.)

1.0 Introduction and Site Characteristics

1.1 Location

National Grid Reference:- SE 415345

Location Details:- 12 Km east of Leeds City Centre, lying to  
the north of the village of Garforth.

Site Size:- 186 ha.

1.2 Survey Methods:

Date Surveyed:- April 1992

Boring Density and Spacing Basis:- One boring per hectare at 100 m intervals  
predetermined by the National Grid.

Sampling Method:- By hand auger to a maximum depth of 1.00 m.

Number of Borings:- 173

Number of Soil Pits (used for):- Six, to assess soil depth and subsoil  
structure.

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)".

This detailed survey supersedes the previous "1" to one mile" survey of the  
area.

1.3 Land Use:- Principally arable but including small

areas of permanent grazing,  
non-agricultural and urban land and  
agricultural buildings.

#### 1.4 Climate and Relief

Average Annual Rainfall (AAR):- 687 mm

Accumulated Temperature above  
0°C (January - June):- 1335 day °C

Field Capacity Days:- 157 days

Moisture Deficit:-

    wheat:- 97 mm

    potatoes:- 86 mm

Altitude average:- 70 m a.o.d.

    maximum:- 85 m a.o.d.

    minimum:- 57 m a.o.d.

Climatic limitation (based on  
interaction of rainfall and  
temperature values):- None.

Relief:- Generally flat to gently sloping but  
moderately sloping in the north east and in  
an area south of Lake Cottage in the north.

Slopes (°):- 0° - 11°

Gradient Limitations:- Yes.

Limiting gradient(s):- 8° - 11°

Grade(s)/subgrade(s):- Subgrade 3b.

Occurrence on site:- In the north, to the south-west of Lake  
Cottage.

1.5 Geology and Soil

Solid Strata:- Carboniferous Coal Measures in the west and centre, Lower Magnesian Limestone in the east.

Depth of solid rock from surface:- Varies between 30 cm and greater than 100 cm.

Drift types:- None.

Thickness of drift and distribution:-

Soil Types and Distribution:- Light-textured soils formed over sandstone in the west and in a band across the centre of the site. Medium textured soils over limestone in the east. Medium and heavy-textured soils over shale in the central area.

Soil Textures (topsoils and subsoils):-

Textures vary between loamy sand and heavy clay loam in the topsoil and from sand to clay in the subsoil.

On 1/250000 map:-

Rivington I, Dunkeswick, East Keswick 2, Aberford.  
Rivington I, Dale Aberford.

Soil Limitations and type:-

Topsoil texture, depth and droughtiness.

1.6 Drainage

Soil type and Wetness Class:-

General Wetness Class I (well-drained) in the east and west of the site and in a band across the centre. Wetness Classes III and IV (imperfectly and poorly drained) elsewhere.

Drainage and Limitations:-

The presence of slowly permeable layers which start between 35 cm and 80 cm of the soil surface limit much of the land in the centre of the site to Subgrades 3a and 3b.

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 Total Area</u>
1		
2	39.04	20.4
3a	63.29	33.1
3b	81.72	42.8
4		
5	1.03	0.6
Non Agricultural	2.94	1.5
Agricultural Buildings	0.52	0.3
Urban	2.54	1.3
<hr/>		
Totals ( Agricultural Land	185.08	96.9
( Other Land	6.00	3.1
	<hr/>	<hr/>
	191.08	100.0
	<hr/>	<hr/>

Grade 2

Distribution on site:- In five separate areas scattered across the site.

Soil Type(s) and Texture(s):- Light-textured soils in the west (generally sandy loam topsoils overlying loamy sand or sandy loam subsoils) and medium textured soils (medium clay loam topsoils) in the east.

Depth to Slowly Permeable Layers:- No slowly permeable layers occur.

Wetness and Drainage Class:- Generally Wetness Class I (well-drained).

Stone Percentage and Type:- 0 - 5% small to large sandstones (in the west) and limestones (in the east).

Grade Limiting Factors:- Soil droughtiness.

Subgrade 3a

Distribution on site:- In the east and west and in a band across the centre.

Soil Type(s):- Light-textured soils (typically sandy loam



topsoils overlying loamy sand subsoils overlying sandstone) in the west and centre, and medium to heavy textured soils (medium clay loam topsoils over medium clay loam or heavy clay loam) in the east.

Depth to Slowly Permeable Layers:-

Slowly permeable layers are generally absent but where present begin at between 45 cm and 70 cm depth.

Wetness and Drainage Class:-

Generally Wetness Class I (well-drained) but in places Wetness Class III (imperfectly drained).

Stone Percentage and Type:-

0 - 8% sandstones in the west and centre of the site, 3 - 8% limestones in the east.

Grade Limiting Factors:-

Soil droughtiness and soil wetness.

Subgrade 3b

Distribution on site:-

Land in this subgrade covers much of the centre of the site.

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

Generally medium to heavy-textured soils (medium or heavy clay loam topsoils overlying heavy clay loam or clay subsoils) along with two small areas of light-textured soils (sandy loam topsoil and subsoil in the north.

Depth to Slowly Permeable Layers:-

Where they occur slowly permeable layers begin at around 35 cm depth.

Wetness and Drainage Class:-

Generally Wetness Class IV (poorly drained) with small areas of Wetness Class I (well-drained) in the north of the site.

Stone Percentage and Type:-

Soils in this subgrade are generally stoneless, but topsoils may contain 3 - 8% sandstone where sandstone occurs close to the surface.

Grade Limiting Factors:-

Soil wetness, soil droughtiness and gradient.

Grade 5

Distribution on site:-

In the south-east.

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

Medium-textured soils (medium clay loam topsoils) overlying limestone at around 50 cm depth.

Depth to Slowly Permeable Layers:-

No slowly permeable layers occur.

Wetness and Drainage Class:-

Well-drained (Wetness Class I).

Stone Percentage and Type:-

Stoneless in the topsoil but up to 50% limestones in the subsoil, overlying limestone bedrock.

Grade Limiting Factors:-

Microtopography.

Non Agricultural

Type and location of land included:-

A number of small areas of scrub land and farm woodland scattered throughout the site.

Agricultural Buildings

Type and location of building included:-

The farmhouses and out buildings at Manor House in the west of the site and Lily Pit Cottage in the east.

Urban

Type of land use included:-

Barwick Road in the west of the site, farm access roads in the east and Weigh House in the south-east.