

**AGRICULTURAL LAND CLASSIFICATION**

**Bracken Hill Farm, Shotton, Co Durham  
Proposed Industrial Park**

**MAFF  
Leeds Regional Office**

**November 1991  
File Ref: 2FCS 5594  
Project No: 109/90**

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT,

1.0 Introduction and Site Characteristics

1.1 Location

National Grid Reference:-

NZ 405 412

Location Details:-

2½ km S.W of Peterlee

Site Size:-

20 hectares

1.2 Survey Methods

Date Surveyed:-

4th November 1991

Boring Density and Spacing Basis:-

At 100 m intervals on a  
grid pattern  
predetermined by the  
National Grid

Sampling Method:-

By hand auger borings  
to a depth of 1 metre

Number of Borings:-

17

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.

|  |   |
|--|---|
| <b>1.3 Land Use:-</b>  | At the time of survey the site was evenly divided between arable and grassland  |
| <b>1.4 Climate and Relief</b>  |   |
| <b>Average Annual Rainfall (AAR):-</b>   | 703 mm  |
| <b>Accumulated Temperature above 0°C (January-June):-</b>                              | 1243 day °C   |
| <b>Field Capacity Days:-</b>   | 173 days  |
| <b>Altitude average:-</b>  | 110 m a.o.d.  |
| <b>maximum:-</b>   | 127 m a.o.d.  |
| <b>minimum:-</b>   | 100 m a.o.d.  |
| <b>Climatic limitation (based on interaction of rainfall and temperature values):-</b> | Grade 2   |
| <b>Relief:-</b>  | The site slopes gently or moderately from north to south except at the eastern and southern edges where there are steep slopes adjoining the Wapping Burn and Gore Burn valleys |
| <b>Slopes (° ):-</b>   | Generally 0-4° but 14° locally at the eastern and southern edges  |
| <b>Gradient Limitations:-</b>  | yes   |

Limiting gradient(s):- 14°  
Grade(s)/subgrade(s):- Grade 4  
Occurrence on site:- Eastern edge of site  
above Wapping Burn

### 1.5 Geology and Soil

Solid Strata:- Magnesian Limestone  
Depth of solid rock from surface:- More than 1 metre  
Drift types:- Boulder clay  
Thickness of drift  
and distribution:- More than 1 metre over  
almost the whole site  
Soil Types and Distribution:- Heavy clay loam  
topsoils over similar  
subsoils becoming  
slightly lighter  
towards Bracken Hill  
Farm  
Soil Textures (topsoils and subsoils):- Medium sandy loam or  
heavy clay topsoils  
over clay, silty clay  
or heavy clay subsoils  
Soil Series/Associations:- Dunkeswick  
On 1/250000 map:-  
Identified on site:-

**Soil Limitations and type:-**

Soil wetness and workability problems are limiting on the heavier soils in the centre and south

#### **1.6 Drainage**

**Soil type and Wetness Class:-**

Medium/heavy: Wetness Class III  
Heavy: Wetness Class IV

**Drainage Limitations:-**

Slowly permeable subsoils

## 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<br/>Total Area</u> |
|------------------------|-----------------|-------------------------------------|
| 1                      | -               | -                                   |
| 2                      | -               | -                                   |
| 3a                     | 3.84            | 19.4                                |
| 3b                     | 13.13           | 66.2                                |
| 4                      | 1.12            | 5.6                                 |
| 5                      | -               | -                                   |
| Non Agricultural       | 1.35            | 6.8                                 |
| Agricultural Buildings | -               | -                                   |
| Urban                  | 0.4             | 2.0                                 |
| Other                  | -               | -                                   |
|                        | <hr/>           | <hr/>                               |
| Total                  | 19.84           | 100                                 |
|                        | <hr/>           | <hr/>                               |

**Subgrade 3a**

**Distribution on site:-**

The northern area  
around Bracken Hill  
Farm

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

Stony medium or sandy  
clay loam topsoils over  
similar or heavier  
subsoils. Occasional  
sandy horizons

**Depth to Slowly Permeable Layers:-**

50 cm

**Wetness and Drainage Class:-**

Wetness Class III -  
imperfectly drained

**Stone Percentage and Type:-**

0 - 15%

**Grade Limiting Factors:-**

Soil wetness on heavier  
soils and droughtiness  
on stony sandier soils



**Subgrade 3b**

**Distribution on site:-**

The majority of the site

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

Medium and heavy clay loam topsoils over similar or clayey subsoils

**Depth to Slowly Permeable Layers:-**

20 - 30 cm

**Wetness and Drainage Class:-**

Wetness Class IV - poorly drained

**Stone Percentage and Type:-**

Generally stoneless

**Grade Limiting Factors:-**

Soil wetness and workability problems

**Grade 4**

**Distribution on site:-**

The south eastern  
corner of the site

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

Medium clay loam  
topsoils over sandy  
loam subsoils

**Depth to Slowly Permeable Layers:-**

None present

**Wetness and Drainage Class:-**

Freely drained -  
Wetness Class I

**Grade Limiting Factors:-**

Gradients of 14°

**Non Agricultural**

**Type and location of land included:-**

Scrub woodland  
occurring on the steep  
southern edge of the  
site and in the east

**Urban**

**Type of land use included:-**

Public roadway (Shotton  
Lane) on the eastern  
edge of the site

Resource Planning Group  
Leeds Regional Office  
November 1991

MAP