

AGRICULTURAL LAND CLASSIFICATION

GATESHEAD WESTERN (A69) BYPASS

TYNE AND WEAR

CORRIDORS OF INTEREST

MAFF
Leeds Regional Office

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT: LAND AROUND THE TWO ALTERNATIVE PROPOSED ROUTES OF THE GATESHEAD WESTERN BYPASS, GATESHEAD, TYNE AND WEAR

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location

National Grid References:- From NZ283570 in the east to NZ283570 in the west.

Location Details:- The survey areas, consisting of two 100 m wide corridors are located between the main intersection of the A1(M) and A194(M) at Birtley, and the 'Metro Centre' complex just north of Whickam.

1.2 Survey Methods:-

Dates Surveyed:- Between 03/06/92 and 11/06/92.

Boring Density and Spacing Basis:- One boring per hectare at staggered 100 m intervals on corridors 100 m wide.

Sampling Method:- 1 metre using a Dutch auger.

Number of Borings:- 55

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:-	Cereals, permanent pasture, root crops, fallow, ley grass, woodland, and urban land consisting of housing, roads and recreational facilities.
1.4	Climate and Relief:-	
	Average Annual Rainfall (AAR):-	693 mm
	Accumulated Temperature above 0°C (January - June):-	1307 day °C
	Field Capacity Days:-	173 days
	Altitude average:-	50 m a.o.d.
	maximum:-	100 m a.o.d.
	minimum:-	10 m a.o.d.
	Climatic limitation (based on interaction of rainfall and temperature values:-	Grade 2
	Relief:-	Flat to moderate slopes
	Slopes (°):-	01° - 09°
	Gradient Limitations:-	Yes
	Limiting gradient(s):-	8° - 11°
	Grade(s)subgrade(s):-	3b
	Occurrence on site:-	Dunston hill, Edge of main road north of Wickham.

1.5	<p>Geology and Soil</p> <p>Solid Strata:-</p> <p>Depth of solid rock from surface:-</p> <p>Drift types:-</p> <p>Thickness of drift and distribution:-</p> <p>Soil Types and Distribution:-</p> <p>Soil Textures (topsoils and subsoils):-</p> <p>Soil Series/Associations:- On 1/250000 map:- Identified on site:-</p> <p>Soil Limitations and type:-</p>	<p>Carboniferous coal measures consisting of interbedded shales and sandstones.</p> <p>Usually greater than 1 m. Occasionally 40 - 60 cm if drift not present.</p> <p>Mixed glacial till and head deposits.</p> <p>Greater than 1 mn over 80 - 90% of the area.</p> <p>Medium or medium over heavy textured boulder clay soils.</p> <p>Medium clay loams to greater than 80 cm (Brickfield), or medium clay loam over heavy clay loam or clay from 40 - 80 cm (Dunkeswick). Occasionally sandy loam over soft sandstone (Rivington).</p> <p>Brickfield 3, Dunkeswick, Rivington 2 Brickfield 3, Dunkeswick, Rivington 2</p> <p>Mainly soil wetness on Brickfield or Dunkeswick soils, and occasionally droughtiness on the Rivington.</p>
1.6	<p>Drainage</p> <p>Soil type and Wetness Class:-</p> <p>Drainage Limitations:-</p>	<p>Brickfield and Dunkeswick, wetness Class III or IV. Rivington wetness Class 1.</p> <p>Slowly permeable subsoils on Brickfield and Dunkeswick soils.</p>

2.0 AGRICULTURAL LAND CLASSIFICATION GRADES

A. Northern corridor 100 m wide centred on the existing road.

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1	-	
2	-	
3a	9.3	8.9
3b	1.6	1.5
4	-	
5	-	
Non Agricultural	20.0	19.1
Agricultural Buildings	-	
Urban	65.2	62.3
Not Surveyed	8.6	8.2
	<hr/>	<hr/>
	104.7	100
TOTAL	<hr/>	<hr/>

B. Southern corridor 100 m wide.

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2	1.1	1.0
3a	24.1	22.4
3b	27.2	25.3
4	-	
5	-	
Non Agricultural	29.5	27.4
Agricultural Buildings		
Urban	17.2	16.0
Not Surveyed	8.6	7.9
	<hr/>	<hr/>
TOTAL	107.7	100
	<hr/>	<hr/>

Grade 2

Distribution on site:-	Small area adjacent and N of Whickham Hill plantation.
Soil Type(s) and Texture(s):-	Medium clay loam or silty clay loam topsoils over similar subsoils to depth.
Depth to Slowly Permeable Layers:-	Greater than 1 m.
Wetness and Drainage Class:-	Wetness Class 1, well drained.
Stone Percentage and Type:-	None.
Grade Limiting Factors:-	Climate.
Other Limiting Factor(s):-	None.

Subgrade 3a

Distribution on site:-

S.E. of Wickham hill plantation, south of Beggar Bank, north west and south east of Lady Park, and between low Eighton and Dunkirk.

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

Glacial till soils consisting of either deep medium clay loams (> 1 m), or medium clay loam topsoils over heavy clay loam/clay subsoils the latter being slowly permeable.

Depth to Slowly Permeable Layers:-

50 - 60 cm.

Wetness and Drainage Class:-

Wetness Class III, imperfectly drained.

Stone Percentage and Type:

0 - 10% Medium soft sandstone.

Grade Limiting Factors:-

Mainly soil wetness with possible waterlogging in winter. in dry years susceptibility to droughtiness in some cases.

Other Limiting Factor(s):-

None.

Subgrade 3b

Distribution on site:-

All other agricultural land on the two routes Main locations are: South of 'Metro Centre', Dunston Hill, and adjacent to Lady Park

Farm.

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

Medium clay loam topsoils over heavy clay loam or clay subsoils which are slowly permeable. Also some shallow soils with less than 40 cm depth to sandstone.

Depth to Slowly Permeable Layers:-

10 - 60 cm.

Wetness and Drainage Class:-

Mainly wetness Class IV, poorly drained some wetness Class III, imperfectly drained and a few areas of well drained (Wetness Class I) soil over sandstone.

Stone Percentage and Type:-

0 - 10% of medium soft sandstone.

Grade Limiting Factors:-

Mainly soil wetness with some seasonal waterlogging. Occasionally droughtiness on shallower soils.

Other Limiting Factor(s):-

None.

Non Agricultural

Type and location of land included:- Allotment gardens, woodland, playing fields, riding school, horse grazing, newly planted tree areas, plus disused mine workings.

Urban

Type of land use included:- Mainly present roads and infrastructure on the A1, light industry in the Team Valley, part of Dunston Hill hospital, and small areas of housing.

MAP(S)