



Ministry of
Agriculture
Fisheries
and Food

AGRICULTURAL LAND CLASSIFICATION
ABBAY LANDS FARM, WHITBY
NORTH YORKSHIRE
PROPOSED VISITORS CENTRE
MARCH 1994

ADAS
Leeds Statutory Group

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abbey.doc.alc/mp

SUMMARY

An Agricultural Land Classification survey of 7.8 ha of land at Abbey Lands Farm, Whitby was carried out in March 1994 of which 7.5 ha was in agricultural use.

Subgrade 3a land covers a total of 3.8 ha. Profiles are moderately well to imperfectly drained (Wetness Class II and III), with medium clay loam and medium silty clay loam topsoils overlying similar textured subsoils. The ALC grade of the land is limited by moderate soil wetness restrictions.

Subgrade 3b land covers a total of 3.7 ha. Profiles are disturbed and are poorly to imperfectly drained with medium clay loam and medium silty clay loam topsoils overlying similar textured subsoils. Where the soil overlies the Scheduled Ancient Monument to the north of the site, ploughing is not permitted and the soils are shallow and disturbed. The complex micro relief of the area is also a limiting factor. To the west of the site, strongly sloping land is limited to Subgrade 3b by gradients of 8° to 9°.

The remainder of the land on the site consists of Agricultural Buildings, 0.2 ha, and Open Water, 0.1 ha.

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1. AGRICULTURAL LAND CLASSIFICATION

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1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site is located approximately 0.5km north west of Whitby town centre, immediately south of the Abbey ruins. It covers a total of 7.8 ha and is located around Grid Reference NZ905110. Survey work was carried out in March 1994 when soils were examined by hand auger borings at 100m intervals, at locations predetermined by the National Grid. One pit was dug in the land to the south of the track to Abbey Lands Farm. Land quality was assessed 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).

1.2 Land Use and Relief

At the time of survey 96% of the land was in agricultural use. Some of the land was fallow following archaeological excavations. The previous crops were cereals and potatoes. Most of the remaining land was under permanent grassland or cereals, and a small area was taken up by Open Water and Agricultural Buildings.

North of the track to the farm, the land is a Scheduled Ancient Monument on which ploughing is not permitted. The archaeological features give rise to a micro-relief which could limit the use of machinery. Site altitude varies from approximately 35m AOD in the west to 60m AOD in the north-east. The climatic data below do not limit land quality, but the site is situated 0.5km from the coast, and wind exposure and salt burn will impose an overall exposure limitation of Grade 2.

1.3 Climate

Grid Reference	: NZ 905110
Altitude (m)	: 50
Accumulated Temperature above 0°C (January-June)	: 1303 day°C
Average Annual Rainfall (mm)	: 668
Climatic Grade	: 1
Field Capacity Days	: 176
Moisture Deficit (mm) Wheat	: 99
Moisture Deficit (mm) Potatoes	: 89

1.4 Geology, Soils and Drainage

The site is underlain by Jurassic sandstone and limestone, over which lie thick deposits of boulder clay.

To the north of the track to the farm, the soils have been disturbed and are often very shallow where they overlie the Scheduled Ancient Monument. To the south of the track an area has been disturbed by archaeological excavations in the last 6 months. Soils are imperfectly drained (Wetness Class III) over most of the site, with heavy clay loam and silty clay loam topsoils over the ruins. Upper subsoils are medium-textured (medium clay loam) with slowly permeable lower subsoils varying from medium-textured (medium clay loam) to heavy-textured (heavy clay loam and clay).

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2		
3a	3.8	48.7
3b	3.7	47.4
4		
5		
(Sub total)	(7.5)	(96.1)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings	0.2	2.6
Open Water	0.1	1.3
Land not surveyed		
(Sub total)	(0.3)	(3.9)
TOTAL	7.8	100

2.1 Subgrade 3a

Subgrade 3a land lies south of the farm track. Profiles are moderately well to imperfectly drained (falling into Wetness Classes II and III), with medium clay loam and medium silty clay loam topsoils. The upper subsoils are slowly permeable and consist of heavy clay loam or clay, occurring at between 50cm to 85cm depth. The land is restricted to Subgrade 3a by moderate soil wetness limitations.

2.2 Subgrade 3b

Subgrade 3b land occurs in two areas, one to the north of the farm track, and the other to the west of the farm buildings.

The soils north of the track overlie a Scheduled Ancient Monument. They are shallow, very stony and have been disturbed. The complex micro-relief of this area also imposes a restriction on the management of the land, and ploughing is prohibited due to the ruins beneath the surface. These factors all limit the land to Subgrade 3b.

The soils to the west of the farm buildings have medium clay loam and medium silty clay loam topsoils, with medium clay loam upper subsoils. Lower subsoils are clay and are slowly permeable at approximately 60cm depth. Profiles are imperfectly drained (Wetness Class III). This land is restricted to Subgrade 3b by its gradient which is between 8° and 9°.

2.3 Agricultural Buildings

This category includes the farmhouse and farm buildings in the centre of the site.

2.4 Open Water

This category includes the pond in the north east of the site.

MAP