AGRICULTURAL LAND CLASSIFICATION

Junction 40, M1, Wakefield,
West Yorkshire
Proposed Hotel and
Leisure Development

April 1991

lds.a13.jun40.hld

CONTENTS

MAP

Agricultural Land Classification Report: Land at Junction 40, M1, Wakefield.

1. INTRODUCTION AND SITE CHARACTERISTICS

The site is located around national grid reference SE 300 210 north east of Junction 40 on the M1. It covers 38 hectares all of which is in agricultural use.

Survey work was carried out in March 1991 when soils were examined by hand auger borings at 100 metre intervals pre-determined by the National Grid.

All land quality assessments were made using the methods described in the "Revised Guidelines and Criteria for grading the quality of Agricultural Land" (MAFF 1988).

Land Use

All of the site was in arable use at the time of survey.

Climate

Average Annual Rainfall (AAR) is approximately 646 mm. Accumulated temperature above 0°C between January and June (ATO) is 1367 day°C and the land is at field capacity for 156 days a year.

The rainfall and temperature figures for this site indicate that there is no overall climatic restriction on ALC grade. Although there is no overall climatic limitation, moisture deficits of 101 mm for wheat and 91 mm for potatoes indicate a slight drought limitation on the thin soils over fragmented sandstone bed rock, which are common on parts of the site.

Relief

Altitude varies between 50 and 80 mm above Ordnance Datum and relief is undulating. Gradients of up to about 10° in places restrict some parts of the site to subgrade 3b.

Geology and Soils

Soils are formed over Carboniferous shales and sandstones. Most parts of the site are underlain by shales and soils consist mainly of heavy clay loam topsoils over similar or heavier subsoils. These soils are gleyed and slowly permeable below about 30 cm depth and fall within Wetness Class IV.

On the steeper slopes soils are formed on sandstone and consist usually of thin medium clay loam or sandy clay loam topsoils and upper subsoils passing into fragmented sandstone between 30 and 50 cm depth. These soils are well drained, but usually limited by droughtiness.

Agricultural Land Classification

The ALC grades on this site are as follows:

Grade	Hectares	Percentage of Total Area
3a	4.4	12
3b	33.6	88
Total	38 ha	100%

Subgrade 3a

A small area of subgrade 3a land occurs on the highest land near the southern edge of the site. Soils consist of medium clay loam topsoils over similar or heavier subsoils which are slowly permeable between 40 and 70 m depth. Profiles of this type are imperfectly drained

(Wetness Class III) and are limited to subgrade 3a, by slight wetness and workability problems.

Subgrade 3b

The majority of the site falls within this subgrade. The lower lying areas consist of clay loam topsoils over poorly drained (Wetness Class IV) slowly permeable clay subsoils limited to subgrade 3b by wetness and workability problems. The higher strongly sloping areas of subgrade 3b consist of shallow stony soils limited by a combination of gradient and droughtiness.

Resource Planning Group
Leeds Regional Office