STATEMENT OF PHYSICAL CHARACTERISTICS
AND
AGRICULTURAL LAND CLASSIFICATION

Potter Brompton, Ganton
North Yorkshire

Proposed Sand Extraction Site

ADAS
Leeds Regional Office

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CONTENTS

MAPS

STATEMENT OF PHYSICAL CHARACTERISTICS AND AGRICULTURAL LAND CLASSIFICATION ON LAND AT POTTER BROMPTON, GANTON, NORTH YORKSHIRE

1. STATEMENT OF PHYSICAL CHARACTERISTICS

1.1 INTRODUCTION - LOCATION AND SURVEY METHODS

The site is located around National Grid Reference SE 982772 in the Vale of Pickering immediately south of the A64(T) between the villages of Potter Brompton and Ganton, North Yorkshire. The steep escarpment of the Yorkshire Wolds lies a few hundred metres to the south. The site covers an area of approximately 7 ha.

Survey work was carried out in January 1991 when soils were examined by hand auger borings to a depth of 1 metre at 100 metre intervals predetermined by the National Grid. A soil inspection pit was also dug to provide additional information on soil structure and to provide samples for laboratory analysis.

All assessments of land quality 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).

1.2 LAND USE

Except for a small patch of rough grass the whole site is under winter cereals.

1.3 CLIMATE AND RELIEF

Mean Annual Rainfall (AAR) is approximately 711 mm. Accumulated Temperature (ATO) above 0°C between January and June is 1332 day°C and the field capacity period is about 182 days per year. The rainfall and temperature values impose an overall climatic limitation of Grade 2 on all agricultural land in the area. Summer soil moisture of 100 mm for wheat and 89 mm for potatoes indicate that there is likely to be a severe droughtiness limitation on the very light soils which cover the site.

1.4 GEOLOGY

The site is covered by a thick deposit of blown sand containing a few small flint and chalk stones derived from the nearby escarpment of the Yorkshire Wolds. The underlying Lower Cretaceous Speeton Clay does not occur within one metre of the surface.

1.5 SOIL RESOURCES

(Information on soil depths and volumes is given in the accompanying soil resource maps).

There is only one soil type present on the site.

i. Freely drained sandy soil

This consists of loamy medium sand topsoils overlying medium sand subsoils. Sandy loam topsoils occur in a few places at the south western end of the site.

Topsoil Resources

Topsoil resource unit T1 consists of very light very weakly structured material with a mean thickness of 25 cm.

Subsoil Resources

Subsoil resource unit S1 consists of very light loose structureless sand with a mean thickness of 75 cm.

2. SOIL PROFILE DESCRIPTION

Potter Brompton

Freely drained sandy soil (adjoining auger boring No 1)

Weather:- 31.1.91 overcast, slight snow, previous week mainly dry and cold

Land Use:- Arable (winter cereals)

Slope:- 0°

Wetness Class:- 1

Horizons

cm

0-25 Dark brown (10YR 3/3) loamy medium sand; unmottled; very slightly stony with a few small angular flints and rare small subangular chalk stones; moist; very weakly developed medium and fine subangular blocky structure breaking to fine granular; weak medium angular blocky near base of horizon due to cultivation compaction; low packing density except near base of horizon; extremely porous; very weak to loose soil strength; non sticky and non plastic; many fine fibrous roots; non calcareous; abrupt smooth boundary to horizon below.

25-100 Brownish yellow (10YR 6/6) medium sand; unmottled; stoneless; moist; structureless; single grain low packing density; extremely porous; loose; non sticky and non plastic; few fine fibrous roots in upper part of horizon; non calcareous.

3. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on the site are as follows:-

Grade/Subgrade	Area	Percentage of Total Site Area
3b	6.9	97%
Non Agricultural	0.2	3%
Total		100

Subgrade 3b

All of the land in agricultural use falls within this subgrade. Soils consists generally of very slightly stony weakly structured loamy medium sand topsoils overlying loose structureless sand subsoils. Sandy loam topsoils occur only in a few places in the south western corner. Sand topsoils are common in a small disturbed area immediately north of the patch of rough grass. All soils are well drained and fall within Wetness Class I. Droughtiness is a severe limitation across the whole site which is placed within subgrade 3b for this reason.

Non Agricultural

This consists of a small patch of unmanaged rough grass towards the north eastern end of the site. It contains numerous rabbit warrens.

Resource Planning Group
Leeds Regional Office
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