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STATEMENT OF PHYSICAL CHARACTERISTICS
AND
AGRICULTURAL LAND CLASSIFICATION
NOSTERFIELD QUARRY EXTENSION, WEST TANFIELD
NORTH YORKSHIRE
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STATEMENT OF PHYSICAL CHARACTERISTICS AND AGRICULTURAL LAND CLASSIFICATION NOSTERFIELD QUARRY EXTENSION, WEST TANFIELD

SUMMARY

Land to the north of Nosterfield covering a total of 5.5 ha was surveyed in October 1994. All of the agricultural land on the site falls in Subgrade 3b and typically consists of slightly stony medium clay loam or medium sandy loam topsoils overlying very stony loamy sand subsoils. Soil droughtiness is the main limiting factor in this case.

The remainder of the site consists of Urban land (the existing quarry and access roads, covering 0.8 ha and farm buildings (0.1 ha) in the south.

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STATEMENT OF PHYSICAL CHARACTERISTICS AND AGRICULTURAL LAND CLASSIFICATION REPORT ON THE PROPOSED QUARRY EXTENSION AT NOSTERFIELD QUARRY, NORTH YORKSHIRE

1. INTRODUCTION AND STATEMENT OF PHYSICAL CHARACTERISTICS

1.1

The site is located around Grid Reference SE 281 796 and lies 10 km north of the city of Ripon in North Yorkshire. It covers a total of 5.5 ha, of which 84% was in agricultural use at the time of survey. Survey work was carried out in October 1994 when soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Extra borings were made, where necessary, to refine grade boundaries and a soil pit was dug to allow full profile descriptions to be made.

All assessments of agricultural 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 Climate

Grid reference	: SE 281 796
Altitude	: 45
Accumulated Temperature above 0°C (January - June)	: 1347 day °C
Average Annual Rainfall (mm)	: 666
Climatic Grade	: 1
Field Capacity Days	: 168
Moisture Deficit (mm) Wheat	: 102
Moisture Deficit (mm) Potatoes	: 92

1.3 Land Use and Relief

At the time of survey 84% of the site was in agricultural production under permanent grass. The remainder of the site consists of the existing quarry and some farm buildings.

The site is flat to very gently sloping at an average altitude of 45m AOD.

1.4 Geology and Soils

The site is underlain by Magnesian limestone and overlain by deep deposits of glacial sand and gravel.

Over most of the site the soils are light to medium-textured (typically consisting of medium sandy loam or medium clay loam topsoil overlying a sandy loam or loamy sand subsoil) and well drained, falling in Wetness Class I. These soils are slightly to moderately stony with 8-40% small and medium rounded hard stones and sandstones.

1.5 Soil Properties

One main soil type occurs on this site, a description of which is given below. Topsoil and subsoil resources are also shown on the accompanying maps along with soil thickness and volume information.

a) Soil Type 1:- Light to medium textured soil (Unit T1/S1)
(Full Profile Description, Table 1)

This soil, formed on deposits of glacial sand and gravel occurs over most of the site. It is characterised by a slightly stony light to medium-textured topsoil overlying a moderately to very stony light-textured subsoil.

1.6 Soil Resources

(i) Topsoils

Unit T1 occurs over all of the site (except the existing quarry and farm buildings) It is light to medium textured and usually consists of medium sandy loam or medium clay loam. It is very slightly to slightly stony with between 2% and 10% small to large subrounded hard stones in most cases. It has a well developed coarse granular to fine subangular blocky structure and a median depth of 30 cm.

(ii) Subsoils

Unit S1 occurs over all of the site (except the existing quarry and farm buildings) It is light-textured (sandy loam) in most cases although very light-textured (loamy sand) and medium-textured (medium clay loam) horizons are not uncommon. It is typically moderately stony, with around 30% very small to large sub-rounded hard stones. Unit S1 is typically structureless and has a mean depth of 90cm.

2. SOIL PROFILE DESCRIPTIONS

Pit 1 near Boring 3. - Profile typical of units T1/S1

Land Use	Grass
Slope	0°
Weather	Raining

0-29cm	Dark greyish brown (10YR 4/2) sandy clay loam; unmottled; moderately stony (16%) with small to large rounded hard stones; moist; strongly developed fine subangular blocky; friable; many fine fibrous roots; slightly sticky; slightly plastic; non calcareous; abrupt smooth boundary
29-120 cm	Brownish yellow (10YR 6/6) loamy medium sandy; unmottled; very stony (40-50%) with small to large rounded hard stones; moist; structureless; few fine fibrous roots; non sticky; non plastic; non calcareous.

3. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a		
3b	4.6	84
4		
5		
(Sub total)	(4.6)	(84)
Urban	0.8	15
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings	0.1	1
Open Water		
Land not surveyed		
(Sub total)	(0.9)	(16)
TOTAL	5.5	100

3.1 Subgrade 3b

Land in this subgrade covers most of the agricultural land on the site. Typically, medium clay loam or medium sandy loam topsoils overlie sandy loam or loamy sand upper subsoils and loamy sand lower subsoils. Profiles are well-drained (Wetness Class I) but slightly stony to very stony with topsoils containing 2-16% small to large rounded hard stones and subsoils containing 20-45% small to very large rounded hard stones. This land is limited to Subgrade 3b by soil droughtiness and, in places, by topsoil stone content.

3.2 Urban

This comprises the existing quarry site.

3.3 Farm Buildings

These occur in the south of the site.

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File 2FCS 10291

MAPS