

AGRICULTURAL LAND CLASSIFICATION
AND STATEMENT OF PHYSICAL CHARACTERISTICS

STRIPE ROAD, ROSSINGTON, DONCASTER
PROPOSED SAND AND GRAVEL EXTRACTION SITE

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AGRICULTURAL LAND CLASSIFICATION REPORT ON THE PROPOSED SAND AND GRAVEL EXTRACTION SITE AT STRIPE ROAD, ROSSINGTON, DONCASTER

Introduction

The site, which consists of one 16 hectare field at National Grid Reference SK 629968, is located about 1½ km south east of Rossington and is bounded by Stripe Road, Common Lane and the main east coast railway line.

Soils were examined by hand auger borings at 19 locations predetermined by the National Grid. Topsoil stone content was also assessed at each auger boring location and two soil profile pits were dug to examine soil morphology in greater detail, and to collect samples for laboratory analysis.

Climate and Relief

Salient climatic parameters at Rossington are as follows:-

Average Annual Rainfall (mm)	605
Accumulated Temperature Above 0°C (Jan-June)	1398
Field Capacity Days	119
Moisture Deficit wheat (mm)	109
potatoes (mm)	102

These factors indicate that there is no overall climatic limitation although light textured soils will be droughty.

The land is gently undulating at an average altitude of 22 m a.o.d.

Geology, Soils and Drainage

Soils are all formed on superficial glacial and postglacial, fluvioglacial drift deposits of sand and loamy sand. Solid strata do not occur within a metre of the surface. Topsoils consist of loamy sand with many or abundant stones of all sizes over a sand or loamy sand subsoil, again with many or abundant mixed stones. Subsoils are occasionally gleyed but never slowly permeable and all fall within Wetness Class I. Due to the low water holding capacity of these soils droughtiness effects all profiles.

Land Use

The site is currently growing potatoes.

Agricultural Land Classification

Subgrade 3b (13.9 hectares, 87% of total area)

Most of the site is restricted to subgrade 3b by both the moderate topsoil stone content and by droughtiness which is limiting for both wheat and potatoes.

Grade 4 (2.1 hectares, 13% of total area)

Three small localised areas where topsoil stone content (stones between 2 and 6 cm) exceeds 50% are restricted to Grade 4 by an overriding stoniness limitation.

STATEMENT OF PHYSICAL CHARACTERISTICS
(SOIL PROPERTIES AND RESOURCES)

Soils are all derived from sandy textured, glaciofluvial drift. Topsoil and subsoil resources on the site are shown on the accompanying maps, along with depth and volume information.

Sandy Textured Glaciofluvial Drift Derived Soil

This soil varies little across the site except for the stone content of the top and subsoils which ranges from slightly to moderately stony.

Topsoils usually consist of moderately stony loamy medium sand with a weakly developed medium subangular blocky structure. This unit has an optimum depth of 35 cm and corresponds with T1 on the topsoil resources map.

The subsoil contains common or many stones and has a medium sand texture. It tends to have a loose, single grain structure and a few fine fibrous roots. This unit is shown as S1 on the subsoil resources map and has an optimum thickness of 65 cm.

STRIPE ROAD PROPOSED SAND AND GRAVEL EXTRACTION SITE

PIT 1 PROFILE DESCRIPTION

Land Use: Potatoes
Slopes and Aspect: 3° SE
Recent weather: Cool and dry

Horizon
depth (cm)

- 0-33 Dark greyish brown (10YR 4/2); loamy medium sand; slightly stony with common small medium and large rounded stones (mixed lithology); unmottled; very weakly developed medium subangular blocky; very weak soil strength; few fine fibrous roots; gradual even boundary.

- 33-100 Brownish yellow (10YR 6/8); medium sand; with common small, medium and large rounded stones (mixed lithology); few faint strong brown (7.5YR 3/8) mottles; loose single grain; very few fine fibrous roots.