# AGRICULTURAL CLASSIFICATION AND STATEMENT OF PHYSICAL CHARACTERISTICS

**COLLIERS DEAN, NORTHUMBERLAND**

**PROPOSED OPENCAST COAL SITE**

ADAS

LEEDS REGIONAL OFFICE

**REF 2FCS 4178. 2/89**

lds.rpg3.colliers.dean

**CONTENTS**



**MAPS**



**APPENDIX**

# 1. AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT COLLIERS DEAN, NORTHUMBERLAND

## 1.1 INTRODUCTION

The site is located around National Grid Reference **NZ 230 970** about 2½ km west of the village of Widdrington. Adjoining to the east is the present Chevington West open cast coal site. Colliers Dean covers an area 148.6 hectares 48.2% of which is in agricultural use.

Survey work was carried out in early February 1989, when soils were examined by hand auger borings to a depth of one metre. Borings were made at points predetermined by the National Grid at a density of one per hectare. Additional borings were made where necessary to check and refine grade boundaries. Two profile pits were dug to collect data on soil morphology and obtain samples for laboratory analysis.

Land quality assessments were made using the revised guidelines published by MAFF in 1988.

## 1.2 CLIMATE AND RELIEF

Average annual rainfall is approximately 669 mm and the accumulated temperature above $0^{o}C$ (January to June) is $1311^{o}C$. The site is at field capacity for 175 days a year.

These factors indicate the site has an overall climatic limitation of grade 2.

The land is virtually level across the whole site with an average altitude of about 32 m a.o.d.

## 1.3 GEOLOGY SOILS AND DRAINAGE

Drift deposits cover all the whole site and solid strata is not encountered within one metre of the surface. Soil textures reflect the nature of the parent material which is mainly boulder clay. Topsoils

consist typically of heavy clay loam over subsoils of mottled slowly permeable clay.

The average field capacity period in the area of 175 days places boulder clay soils of this type in Wetness Class IV. A small area of land south of Chevington level crossing contains some soils developed on coarse textured drift. Topsoils and subsoils are both sandy and very permeable and fall within Wetness Class I. Because of their light sandy nature these soils are likely to be droughty for wheat.

## 1.4 LAND USE

The site contains three distinct land uses. To the east is part of the existing West Chevington open cast area. Longmoor Plantation and Neds Whin in the south consist of dense scrubby woodlands. The rest of the site forms part of West Chevington farm where land use is a mixture of arable and grassland.

## 1.5 AGRICULTURAL LAND CLASSIFICATION

| GRADE | Area (hectares) | Percentage of Total Agricultural Land Area |
|---|---|---|
| 3a | 3.6 | 5.0 |
| 3b | 65.7 | 91.8 |
| 4 | 2.3 | 3.2 |
| Non Agricultural | 77.0 | - |
| Total | 148.6 | 100 |

### 1.5.1 Subgrade 3a

The small area mapped as 3a contains coarse loamy topsoils over sandy subsoils, occasionally with clay below 80 cm depth. These soils fall within Wetness Class I and are therefore not subject to any soil wetness limitation. Available water calculations, however, suggest that these soils will be moderately droughty for both wheat and potatoes restricting them to no better than subgrade 3a.

### 1.5.2 Subgrade 3b

Most of the agricultural land across the site is graded 3b. Typically topsoils are at heavy clay loam over a mottled, slowly permeable, clayey subsoil. All profiles fall within Wetness Class IV. Land with this combination of topsoil texture and soil wetness class is restricted to a maximum of subgrade 3b in this area.

### 1.5.3 Grade 4

The two small areas of grade four occur in slight depressions which are likely to be wet for prolonged periods of the year. Topsoils are usually of clay over similar subsoils.

### 1.5.4 Non Agricultural

The two areas of dense scrubby woodland (Neds Whin and Longmoor Plantation) are classified as non agricultural. Also included in this category is the area currently being worked for coal.

### Reference

MAFF 1988 Revised guidelines and criteria for grading the quality of agricultural land.

Resource Planning Group
February 1989

## 2.0 COLLIERS DEAN, NORTHUMBERLAND, PROPOSED OPEN CAST COAL SITE. STATEMENT OF PHYSICAL CHARACTERISTICS (SOIL PROPERTIES AND RESOURCES)

Soils on the site are all derived from drift deposits, mainly boulder clay. The topsoil and subsoil resources on the site are shown on the accompanying maps, along with soil depth and volume information.

### 2.1 Boulder Clay Derived Soils

This soil type dominates the site and there is little variation within the unit. The topsoil is usually a dark greyish brown, stoneless, heavy clay loam with a moderately developed coarse angular blocky structure.

The subsoil texture is generally clay. Subsoil matrix colour is brown, becoming dark brown below 45 cm with very many ochreous and grey mottles.

Structure is very coarse prismatic passing to massive below 70 cm. Stone content is less than 1%.

Soils in the woodland areas are similar except for a thinner topsoil.

On the resource map this soil corresponds with topsoil units T1A (farmland) and T1B (woodland) and subsoil units S1A and S1B.

### 2.2 Sandy Drift Derived Soil

A small area containing sandy soils occurs near the railway in the western part of the site. Topsoils in this unit, which is not pure as it also contains some heavier soil, consist mainly of unmottled stoneless medium sandy loam with a moderately developed medium and coarse subangular blocky structure.

The subsoil is a stoneless very pale brown medium sand with many ochreous mottles, and a very weakly developed coarse angular blocky structure. These soils correspond with topsoil unit T2, and subsoil unit S2 on the accompanying maps.

### 2.3.1 Colliers Dean, Soil Profile Description
### Profile Pit A, Boulder Clay Derived Soil

| | |
|---|---|
| Land Use | Grass |
| Slope | $0^{o}$ |

**Horizon (cm)**

**0-25** Dark greyish brown (10YR 4/2) heavy clay loam; few distinct strong brown (7.5YR 4/6) mottles along root channels; stoneless, moist; moderately developed coarse angular blocky structure; high packing density, slightly porous; common fine pores and fissures; moderately firm soil strength; very sticky, very plastic; abundant very fine fibrous roots; non calcareous; abrupt smooth boundary.

**25-100** Brown (10YR 5/3) becoming dark brown (7.5YR 4/2) below 45 cm clay; many prominent medium and large grey (N5) and strong brown (7.5YR 5/8) mottles; very rare subrounded sandstones (absent below 50 cm); moist; weakly developed adherent very coarse prismatic structure becoming massive towards base; high packing density; very slightly porous; common very fine pores and fissures; very firm soil strength very sticky and very plastic; many very fine fibrous roots becoming few below 70 cm; non calcareous.

### 2.3.2 Profile Pit B, Sandy Drift Derived Soil

| | |
|---|---|
| Land Use | Grass |
| Slope | $0^{o}$ |

**Horizon (cm)**

**0-23** Dark greyish brown (10YR 4/2) medium sandy loam; unmottled; stoneless; moist; moderately developed medium and coarse subangular blocky structure; medium packing density; very porous; many fine pores and common fissures; moderately firm slightly compacted; slightly sticky; slightly plastic; many very fine fibrous roots; non calcareous; abrupt wavy boundary.

**23-78** Very pale brown (10YR 7/4) medium sand; many distinct brownish yellow (10YR 6/8) mottles; stoneless; moist; very weakly developed coarse angular blocky structure; medium packing density very porous; few very fine pores and fissures; very weak soil strength; non sticky; non plastic; few very fine fibrous roots; non calcareous abrupt smooth boundary.

**78-100** Greyish brown (10YR 5/2) fine sandy silt loam with fine black (N2) laminations; stoneless; wet (water standing at 92 cm); weakly developed fine and medium platey structure; medium packing density; moderately porous; few fine pores and fissures; moderately weak soil strength; slightly sticky, slightly plastic; no roots; non calcareous.

# SCHEDULE OF SOIL AUGER BORINGS

## TEXTURE

| | |
|---|---|
| FS | Fine sand |
| MS | Medium sand |
| CS | Coarse sand |
| LFS | Loamy fine sand |
| LMS | Loamy medium sand |
| LCS | Loamy coarse sand |
| CSL | Coarse sandy loam |
| MSL | Medium sandy loam |
| FSL | Fine sandy loam |
| FSZL | Fine sandy silt loam |
| MSZL | Medium sandy silt loam |
| CSZL | Coarse sand silt loam |
| ZL | Silt loam |
| MZCL | Medium silty clay loam |
| HZCL | Heavy silty clay loam |
| MCL | Medium clay loam |
| HCL | Heavy clay loam |
| SCL | Sandy clay loam |
| SC | Sandy clay |
| ZC | Silty clay |
| C | Clay |
| P | Peat |
| SP | Sandy peat |
| LP | Loamy peat |
| PL | Peaty loam |
| PS | Peaty sand |
| MZ | Marine light silts |

## MOTTLING

| | |
|---|---|
| Col | Colour |
| Abund | Abundance |
| Cont | Contrast |
| o | Ochreous |
| g | Grey |
| m | Manganese |
| f | Few |
| c | Common |
| m | Many |
| a | Abundant |
| f | Faint |
| d | Distinct |
| p | Prominent |

**COLLIERS DEAN SCHEDULE OF SOIL AUGER BORINGS**

| BORING | | | | MOTTLES | | | | PACK |
|---|---|---|---|---|---|---|---|---|
| NUMBER | DEPTH | TEXTURE | COLOUR | COL | ABUND | CONT | STONY | DENSITY |
| 001 | 0-27 | hcl | 10YR42 | | | | | |
| | 27-60 | c | 10YR54 | OG | C | D | | |
| | 60-100 | zc | 75YR52 | OG | M | P | | |
| 002 | 0-27 | hcl | 10YR42 | OG | F | D | | |
| | 27-45 | hcl | 10YR63 | OG | M | D | | |
| | 45-100 | zc | 75YR | OG | M | P | | |
| 003 | 0-20 | hcl | 10YR42 | | | | | |
| | 20-30 | c | 10YR42 | O | F | D | | |
| | 30-45 | c | 10YR53 | OG | | | | |
| | 45-100 | zc | 75YR52 | OG | M | P | | |
| 004 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-45 | c | 10YR63 | OG | M | | | |
| | 45-100 | zc | 75YR52 | OG | M | P | | |
| 005 | 0-25 | hcl | 10YR42 | | | | | |
| | 25-60 | c | 10YR42 | O | F | | | |
| | 60-100 | zc | 75YR52 | OG | M | P | | |
| 006 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-50 | c | 10YR53 | OG | M | P | | |
| | 50-100 | hcl | 75YR42 | OGM | C | D | | |
| 007 | 0-25 | hcl | 10YR42 | | | | | |
| 008 | 0-25 | hcl | 10YR42 | | | | | |
| | 25-50 | scl | 10YR53 | OG | M | P | | |
| | 50-70 | sl | 10YR53 | OG | M | | | |
| | 70-100 | zc | 7YR52 | | | | | |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 009 | 0-25 | hcl | 10YR42 | | | | | |
| | 25-33 | c | 10YR53 | OG | C | D | | |
| | 33-100 | zc | 75YR62 | OG | M | P | | |
| 010 | 0-25 | mcl | 10YR42 | OG | M | P | | |
| | 25-45 | hcl | 10YR52 | O | F | F | | |
| | 45-100 | c | 75YR42 | OG | M | P | | |
| 011 | 0-40 | mcl | 10YR42 | | | | | |
| | 40-100 | c | 75YR42 | OG | M | P | | |
| 012 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-40 | c | 10YR53 | O | C | F | | |
| | 40-100 | c | 75YR42 | OG | C | D | | |
| 013 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-40 | hcl | 10YR53 | O | F | F | | |
| | 40-100 | c | 75YR42 | OGM | C | D | | |
| 014 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-45 | hcl | 10YR53 | O | C | F | | |
| | 45-100 | c | 75YR42 | OG | C | D | | |
| 015 | 0-25 | hcl | 10YR42 | | | | | |
| | 25-50 | hcl | 10YR54 | OG | C | D | | |
| | 50-100 | zc | 75YR52 | OGM | M | P | | |
| 016 | 0-25 | hcl | 10YR41 | | | | | |
| | 25-100 | zc | 75YR52 | OG | M | P | | |
| 017 | 0-25 | hcl | 10YR42 | | | | | |
| | 25-37 | hcl | 10YR53 | O | C | D | | |
| | 37-100 | zc | 75YR52 | OG | M | P | | |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 018 | 0-25 | hcl | 10YR42 | OG | | P | | |
| | 25-100 | c | 75YR42 | OG | M | D | | |
| 019 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-100 | c | 75YR42 | OG | M | D | | |
| 020 | 0-35 | mcl | 10YR42 | | | | | |
| | 35-100 | c | 75YR40 | OG | C | D | | |
| 021 | NOT SURVEYED | | | | | | | |
| 022 | 0-25 | hcl | 10YR32 | | | | | |
| | 25-40 | c | 10YR53 | OG | C | D | | |
| | 40-100 | zc | 10YR52 | OG | M | P | | |
| 023 | 0-23 | hcl | 10YR32 | O | F | D | | |
| | 23-100 | zc | 10YR52 | | C | D | | |
| 024-027 | NOT SURVEYED | | | | | | | |
| 028 | 0-27 | mcl | 10YR42 | | | | | |
| | 27-40 | hcl | 10YR54 | OG | C | D | | |
| | 40-65 | sl | 10YR53 | OG | C | D | | |
| | 65-100 | zc | 75YR52 | OG | M | P | | |
| 029 | 0-27 | hcl | 10YR41 | | | | | |
| | 27-100 | c | 10YR53 | OG | C | D | | |
| 030 | 0-27 | mcl.hcl | 10YR42 | | | | | |
| | 27-45 | hcl | 10YR54 | OG | F | D | | |
| | 45-100 | c | 10YR52 | OG | M | P | | |

| BORING | | | | MOTTLES | | | | PACK |
|---|---|---|---|---|---|---|---|---|
| NUMBER | DEPTH | TEXTURE | COLOUR | COL | ABUND | CONT | STONY | DENSITY |
| 031 | 0-27 | hcl | 10YR42 | | | | | |
| | 27-40 | cq | 10YR54 | OG | C | D | | |
| | 40-100 | zc | 75YR52 | OG | M | P | | |
| 032-035 | NOT SURVEYED | | | | | | | |
| 036 | 0-30 | hcl | 10YR43 | OG | M | P | | |
| | 30-100 | c | N5 | OG | C | D | | |
| 037 | 0-30 | hcl | 10YR42 | OG | M | P | | |
| | 30-100 | c | N5 | OG | M | P | | |
| 038 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-30 | c | 75YR42 | OG | M | P | | |
| 039 | 0-30 | mcl | 10YR42 | OG | C | P | | |
| | 30-65 | hcl | 10YR51 | OG | M | D | | |
| | 65-100 | c | 75YR42 | OG | M | P | | |
| 040 | 0-30 | mcl | 10YR42 | OG | M | P | | |
| | 30-100 | c | 10YR51 | OG | C | P | | |
| 041 | 0-30 | hcl | 10YR42 | OG | M | P | | |
| | 30-100 | zc | 10YR61 | OG | M | P | | |
| 042 | 0-30 | mcl | 10YR42 | | | | | |
| | 30-50 | hcl | 10YR52 | OG | C | D | | |
| | 50-100 | c | 75YR42 | OG | M | P | | |
| 043 | 0-35 | hcl | 10YR42 | O | G | M | | |
| | 35-55 | hcl | 10YR52 | O | C | D | | |
| | 55-100 | c | 75YR42 | OG | M | D | | |
| 044-046 | NOT SURVEYED | | | | | | | |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 047 | 0-30 | hcl.c | 10YR32 | | | | | |
| | 30-65 | c | 10YR52 | O | C | D | | |
| | 65-100 | c | 10YR53 | O | C | D | | |
| 048 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-100 | c | 75YR44 | G | M | D | | |
| 049 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-30 | hcl | 10YR42 | | | | | |
| | 30-50 | hcl | 10YR53 | OG | C | D | | |
| | 50-100 | c | 75YR44 | G | M | D | | |
| 050 | 0-30 | hcl | 109YR42 | | | | | |
| | 30-55 | c | 75YR44 | OG | C | D | | |
| | 55-100 | c | 75YR44 | G | M | D | | |
| 051 | 0-30 | mcl | 10YR42 | | | | | |
| | 30-70 | lms | 10YR53 | GM | C | F | | |
| | 70-100 | c | 75YR44 | G | C | D | | |
| 052 | 0-28 | mcl | 10YR42 | O | C | F | | |
| | 28-100 | c | 75YR44 | OG | M | D | | |
| 053 | 0-30 | mcl | 10YR42 | O | F | F | | |
| | 30-100 | scl | 10YR62 | O | C | D | | |
| 054 | 0-30 | hcl | 10YR42 | O | C | D | | |
| | 30-100 | c | 75YR42 | OG | M | D | | |
| 055 | 0-30 | hcl | 10YR42 | OG | M | D | | |
| | 30-50 | scl | 10YR52 | OG | C | D | | |
| | 50-100 | c | 75YR42 | O | G | M | | |

056-058 NOT SURVEYED

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 059 | 0-30 | hcl | 10YR32 | | | | | |
| | 30-45 | c | 10YR53 | OG | C | D | | |
| | 45-100 | c | 75YR44 | OG | C | D | | |
| 060 | 0-25 | msl | 10YR42 | | | | | |
| | 25-90 | lms | 10YR54 | OG | C | D | | |
| | 90-100 | lms | 10YR62 | | | | | |
| 061 | 0-25 | hcl.c | 10YR42 | | | | | |
| | 25-100 | c | 75YR52 | G | C | D | | |
| 062 | 0-25 | hcl | 10YR42 | | | | | |
| | 25-100 | c | 75YR42 | G | C | D | | |
| 063 | 0-28 | hcl | 10YR42 | | | | | |
| | 28-50 | c | 10YR53 | OG | C | D | | |
| | 50-100 | c | 75YR42 | G | M | P | | |
| 064 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-45 | hcl | 10YR54 | OG | M | F | | |
| | 45-100 | zc | 10YR53 | OG | C | D | | |
| 065 | 0-30 | hcl | 10YR42 | O | C | F | | |
| | 30-50 | c | 10YR53 | OG | M | P | | |
| | 50-100 | c | 75YR42 | G | C | D | | |
| 066-071 | NOT SURVEYED | | | | | | | |
| 072 | 0-30 | mcl | 10YR42 | | | | | |
| | 30-55 | lms | 10YR63 | OG | C | D | | |
| | 55-80 | lms | 10YR58 | ZG | C | D | | |
| | 80-100 | c | 75YR42 | OGM | C | D | | |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 073 | 0-30 | hcl | 10YR42 | | | | | |
| | 30-50 | hcl | 10YR53 | O | C | F | | |
| | 50-100 | c | 7.5YR42 | OG | C | D | | |
| 074 | 0-25 | hcl | 10YR42 | | | | | |
| | 25-100 | c | 75YR42 | OGM | C | D | | |
| 075 | 0-25 | hcl | 10YR42 | OG | C | D | | |
| | 25-100 | c | 75YR52 | OG | M | P | | |
| 076 | 0-25 | hcl | 10YR32 | OG | M | P | | |
| | 25-100 | c | 75YR42 | OG | C | D | | |
| 077 | 0-25 | hcl | 10YR42 | O | F | F | | |
| | 25-100 | c | 75YR52 | G | M | D | | |
| 078 | 0-30 | hcl | 10YR42 | O | C | F | | |
| | 30-45 | c | 10YR53 | OG | M | D | | |
| | 45-100 | c | 75YR42 | OGM | C | D | | |
| 079-084 | NOT SURVEYED | | | | | | | |
| 085 | 0-30 | fsl | 10YR32 | | | | | |
| | 30-40 | sl | 10YR74 | OG | C | D | | |
| | 40-70 | ms | 10YR68 | O | F | F | | |
| | 70-100 | lms | 10YR54 | O | F | D | | |
| 086 | 0-25 | hcl | 10YR42 | | | | | |
| | 25-35 | hcl | 10YR54 | OG | F | D | | |
| | 35-100 | zc | 10YR63 | OG | M | P | | |
| 087 | 0-27 | zc | 10YR42 | O | F | D | | |
| | 27-100 | zc | 75YR60 | OG | M | P | | |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 088 | 0-27 | hcl | 10YR41 | O | F | D | | |
| | 27-50 | msl | 10YR63 | O | F | D | | |
| | 50-100 | zc | 75YR62 | OG | M | | | |
| 089 | 0-30 | hcl | 10YR42 | OG | M | P | | |
| | 30-100 | c | 75YR52 | OG | M | P | | |
| 090 | 0-30 | hcl | 10YR42 | O | F | F | | |
| | 30-100 | c | 75YR42 | OG | M | P | | |
| 091 | 0-25 | hcl | 10YR42 | O | F | F | | |
| | 35-40 | hcl | 10YR53 | O | F | F | | |
| | 40-55 | c | 10YR53 | OG | M | D | | |
| | 55-100 | c | 75YR42 | OG | M | D | | |
| 092 | 0-25 | zc | 10YR | O | C | F | | |
| | 25-50 | c | 10YR62 | OG | M | P | | |
| | 50-100 | c | 75YR42 | OG | C | D | | |
| 093-097 | NOT SURVEYED | | | | | | | |
| 098 | 0-30 | mcl | 10YR42 | | | | | |
| | 30-40 | lms | 10YR63 | O | F | D | | |
| | 40-60 | ms | 10YR63 | O | F | D | | |
| | 60-80 | msl | 10YR63 | O | F | D | | |
| | 80-100 | lms.ms | 10YR63 | O | F | D | | |
| 099 | 0-25 | c | 10YR42 | O | F | D | | |
| | 25-100 | c | 75YR52 | OG | M | P | | |
| 100 | 0-27 | c | 10YR42 | O | F | D | | |
| | 27-100 | zc | 75YR52 | | M | P | | |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUND | MOTTLES CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 101 | 0-25 | hcl | 10YR32 | O | F | | | |
| | 25-50 | c | 10YR62 | OG | M | P | | |
| | 50-100 | zc | 75YR52 | OG | M | P | | |
| 102 | 0-25 | hcl | 10YR42 | OG | M | P | | |
| | 25-100 | c | 75YR42 | OG | | P | | |
| 103 | 0-12 | dist.hcl | 10YR52 | OG | M | P | | |
| | 12-0 | 0 | NOT RECORDED | OG | M | P | | |
| | 0-100 | cinders | 0 | | | | | |
| 104-110 | NOT SURVEYED | | | | | | | |
| 111 | 0-32 | sl | 10YR41 | OG | C | D | | |
| | 32-60 | sl | 10YR64 | OG | C | D | | |
| | 60-100 | ls | 10YR66 | O | F | F | | |
| 112 | 0-30 | hcl.c | 10YR42 | O | F | D | | |
| | 30-37 | c | 10YR53 | OG | C | D | | |
| | 100-120 | zc | 75YR52 | OG | M | P | | |
| 113 | 0-100 | c | N5 | OG | M | P | | |
| 114 | 0-20 | hcl | 10YR52 | OG | C | D | | |
| | 20-100 | c | 75YR42 | OG | M | P | | |
| 115 | 0-15 | hcl | 10YR52 | O | | D | | |
| | 15-100 | c | N5 | OG | M | P | | |
| 116-122 | NOT SURVEYED | | | | | | | |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL. | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 123 | 0-30 | scl | NOT RECORDED | | | | | |
| | 30-45 | scl | 0 " " | | | | | |
| | 45-60 | c | 0 " " | | | | | |
| | 60-100 | scl | 0 " " | | | | | |
| 124 | 0-32 | hcl | 0 " " | | | | | |
| | 32-100 | c | 0 " " | OG | M | | | |
| 125 | 0-25 | hcl | 0 " " | OG | F | D | | |
| | 25-45 | c | z " " | OG | | P | | |
| | 45-100 | zc | 0 " " | OG | | P | | |
| 126 | 0-15 | c | N4 | OG | C | D | | |
| | 15-100 | c | N5 | OG | M | P | | |
| 127 | 0-20 | hcl | 10YR51 | OG | M | P | | |
| | 20-100 | c | N5 | OG | M | P | | |
| 128 | 0-25 | hcl | NOT RECORDED | OG | C | D | | |
| | 25-100 | c | 10YR61 | OG | C | D | | |
| 129-134 | NOT SURVEYED | | | | | | | |
| 135 | 0-30 | mcl | NOT RECORDED | | | | | |
| | 30-40 | scl | 0 " " | OG | M | D | | |
| | 40-55 | sl | 0 " " | OG | M | P | | |
| 136 | 0-6 | litter | 0 " " | | | | | |
| | 6-45 | c | 0 " " | OG | | P | | |
| | 45-100 | zc | 0 " " | OG | M | P | | |
| 137 | 0-15 | hcl | 0 " " | | | | | |
| | 15-100 | c | 0 " " | OG | M | P | | |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 138 | 0-100 | c | 10YR51 | OG | M | D | | |
| 139 | 0-10 | mcl | 10YR32 | | | | | |
| | 10-90 | mcl | 10YR53 | OG | M | D | | |
| | 90-100 | c | N5 | | | | | |
| 140 | 0-15 | hcl | 10YR52 | | | | | |
| | 15-60 | c | 10YR53 | OG | C | D | | |
| | 60-100 | c | 75YR52 | OG | C | D | | |
| 141 | 0-15 | hcl | 10YR32 | | | | | |
| | 15-60 | c | 10YR53 | OG | M | D | | |
| | 60-100 | c | 75YR52 | OG | C | D | | |
| 142 | 0-15 | c | 10YR32 | | | | | |
| | 15-45 | c | 10YR53 | OG | M | D | | |
| | 45-100 | c | 75YR42 | G | M | D | | |
| 143 | 0-15 | hcl | 10YR32 | | | | | |
| | 15-50 | c | 10YR42 | OG | M | D | | |
| | 50-100 | c | 75YR42 | G | M | D | | |
| | 100-0 | 0 | N5 | | | | | |
| 144 | 0-20 | scl | 10YR42 | | | | | |
| | 20-45 | scl | 10YR53 | OG | M | P | | |
| | 45-100 | c | 75YR42 | G | M | D | | |
| 145 | 0-20 | mcl | 10YR32 | O | C | D | | |
| | 20-55 | hcl | 10YR52 | OG | M | P | | |
| | 55-100 | c | 75YR42 | G | M | D | | |
| 146 | 0-20 | hzcl | 10YR32 | O | C | D | | H |
| | 20-50 | zc | 10YR52 | OG | M | P | | H |
| | 50-100 | c | 75YR42 | G | C | D | | H |

| BORING NUMBER | DEPTH | TEXTURE | COLOUR | MOTTLES COL | ABUND | CONT | STONY | PACK DENSITY |
|---|---|---|---|---|---|---|---|---|
| 147 | 0-15 | hcl | 10YR32 | O | C | F | | |
| | 15-70 | c | 10YR52 | OG | M | P | | H |
| | 70-100 | c | 75YR42 | G | C | D | | H |
| 148 | 0-15 | hcl | 10YR32 | | | | | |
| | 15-50 | c | 10YR53 | OG | M | P | | H |
| | 50-100 | c | 75YR42 | G | M | D | | H |