

A1
Swale Borough Local Plan
Objector Sites Fav 3 & Fav 4,
Land East of Ashford Road,
Faversham

Agricultural Land Classification
November 1996



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Resource Planning Team
Guildford Statutory Group
ADAS Reading

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LUPU Commission 02563

AGRICULTURAL LAND CLASSIFICATION REPORT

SWALE BOROUGH LOCAL PLAN OBJECTOR SITES FAV 3 & FAV 4, LAND EAST OF ASHFORD ROAD, FAVERSHAM, KENT

Introduction

1 This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 16.3 ha of land on the eastern side of Ashford Road on the southern side of Faversham Kent. The survey was carried out during November 1996.

2 The survey was commissioned by the Ministry of Agriculture Fisheries and Food (MAFF) from its Land Use Planning Unit in Reading in connection with the Swale Borough Local Plan. This survey supersedes any previous ALC surveys on this land.

3 The work was conducted under sub contracting arrangements by NA Duncan and Associates and was supervised by members of the Resource Planning Team in the Guildford Statutory Group in ADAS. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF 1988). A description of the ALC grades and subgrades is given in Appendix I.

4 At the time of survey the northern part of the survey area corresponding with the area of site Fav 3 comprised an area of old orchard being grazed by sheep together with two houses and gardens. Most of the remainder of the site was growing winter cereals with a small area at the southern end alongside the M2 motorway which was disturbed and overgrown with scrub vegetation.

Summary

5 The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10,000. It is accurate at this scale but any enlargement would be misleading.

6 The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1.

Table 1 Area of grades and other land

| Grade/Other land | Area (hectares) | % Total site area | % Surveyed Area |
|---------------------|-----------------|-------------------|-----------------|
| 1 | 10.1 | 62.0 | 70.6 |
| 2 | 4.2 | 25.8 | 29.4 |
| Other land | 2.0 | 12.2 | |
| Total surveyed area | | | 100.0 |
| Total site area | | | 100.0 |

7 The fieldwork was conducted at an average density of 1 boring per hectare. A total of 19 borings were described which were backed up by data from 2 soil inspection pits.

8 The northern part of the site has been mapped as Grade 1 excellent quality agricultural land comprising deep free draining silty soils overlying chalk, which will provide adequate moisture reserves to prevent droughting. The land therefore has no or very minor limitations to agricultural use. Over the majority of the southern part of the site good quality agricultural land Subgrade 3a has been mapped. In this area silty soils overlie chalk at moderately shallow depths which results in a moderate droughtiness limitation. The houses and gardens as well as the disturbed overgrown area have been mapped as Other Land.

Factors Influencing ALC Grade

Climate

9 Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

10 The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met Office 1989).

Table 2 Climatic and altitude data

| Factor | Units | Values |
|---------------------------|------------------|------------|
| Grid reference | N/A | TR 016 602 |
| Altitude | m AOD | 25 |
| Accumulated Temperature | day°C (Jan June) | 1470 |
| Average Annual Rainfall | mm | 660 |
| Field Capacity Days | days | 153 |
| Moisture Deficit Wheat | mm | 121 |
| Moisture Deficit Potatoes | mm | 117 |

11 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.

12 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR) as a measure of overall wetness and accumulated temperature (ATO January to June) as a measure of the relative warmth of a locality.

13 The combination of rainfall and temperature at this site mean that under this warm and relatively dry climate soils will require a high available water capacity to avoid a droughtiness limitation.

Site

14 The site comprises a dry valley running from the south to the north though the south of the site is relatively flat and lies at approximately 25 m AOD. Elsewhere the altitude of the site ranges from approximately 30 m AOD on the upper slopes to 20 m AOD in the valley bottom. The gradients of the side slopes range from 2.6° and therefore are not limiting in terms of ALC grading. Across the site there are a number of localised undulations possibly the result of some minor disturbance in the past. These undulations however are not considered to cause any significant limitation to the site and therefore do not warrant any downgrading.

Geology and soils

15 The published geological information for the area (BGS 1974) shows the whole site to be underlain by head brickearth overlying Upper Chalk.

16 There is no detailed soil survey map for the area but the reconnaissance soil map (SSEW 1983) shows much of the site to comprise soils of the Hamble 1 association. These soils are described as Deep well drained often stoneless fine silty soils. Some similar soils affected by groundwater and some fine loamy soils with slowly permeable subsoils and slight seasonal waterlogging. Some shallower soils over chalk. Slight risk of water erosion (SSEW 1983). In the south of the site soils of the Coombe 1 association are shown. These soils are described as Well drained calcareous fine silty soils deep in valley bottoms shallow to chalk on valley sides in places. Slight risk of water erosion (SSEW 1983).

Agricultural Land Classification

17 The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1 page 1.

18 The location of the auger borings and pits is shown on the attached sample location map and the details of the soils data are presented in Appendix III.

Grade 1

19 The majority of the site has been mapped as Grade 1 excellent quality agricultural land and comprises deep silty soils which in parts overlie chalk at depth. A typical soil on the site has a silt loam topsoil overlying a moderately structured yellowish brown medium silty clay loam upper subsoil. Occasionally these pass into similarly textured lower subsoils. However in most profiles these pass into moderately structured heavy silty clay loam lower subsoils at approximately 50-70 cm depth. The soils are virtually stoneless throughout and are well drained (see Appendix II). In the north east of this mapping unit underlying chalk is generally encountered at depths in excess of 80 cm. Available water capacities in these deep silty soils are high and will provide the growing crop with adequate moisture to prevent drought stress. This land therefore has no or very minor limitations to agricultural use and has been included within Grade 1.

Subgrade 3a

20 At the southern end of the site the soils are shallower over the chalk and consequently the reduced rooting depth will result in drought stress to the crops. The soils in this area have a silt loam topsoil. Upper subsoils typically comprise moderately structured yellowish brown medium silty clay loams which are slightly stony (containing 0.8% total chalk stones and flints). Below the upper subsoil is a poorly structured layer of chalk rubble (with approximately 60% total chalk) with interstitial heavy silty clay loam which in turn overlies solid fissured chalk. These soils are well drained (Wetness Class I). A soil pit dug in this area (Pit 1) showed roots penetrating the fissured chalk for approximately 15 cm. The depth to the very chalky material is variable across the area ranging from 45-100 cm depth although there was evidence of significant chalk stones on the surface in small patches alongside Salters Lane on the eastern side of the site. Moisture balance calculations indicate that the soils will be slightly to moderately droughty depending on the depth to the underlying chalk resulting in a Grade 2 or Subgrade 3a classification. However due to the variability in the depth to the chalk the whole area has been mapped as Subgrade 3a.

N A Duncan
for the Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1974) *Sheet No 273 Faversham*
BGS London

Ministry of Agriculture Fisheries and Food (1988) *Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land*
MAFF London

Met Office (1989) *Climatological Data for Agricultural Land Classification*
Met Office Bracknell

Soil Survey of England and Wales (1983) *Sheet 6 Soils of South East England 1 250 000 and accompanying legend*
SSEW Harpenden

Soil Survey of England and Wales (1984) *Soils and their Use in South East England*
SSEW Harpenden

APPENDIX I

DESCRIPTIONS OF THE GRADES AND SUBGRADES

Grade 1 Excellent Quality Agricultural Land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 Very Good Quality Agricultural Land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1 land.

Grade 3 Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a Good Quality Agricultural Land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b Moderate Quality Agricultural Land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4 Poor Quality Agricultural Land

Land with severe limitations which significantly restrict the range of crops and/or the level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

APPENDIX II

SOIL WETNESS CLASSIFICATION

Definitions of Soil Wetness Classes

Soil wetness is classified according to the depth and duration of waterlogging in the soil profile. Six soil wetness classes are identified and are defined in the table below.

| Wetness Class | Duration of waterlogging ¹ |
|---------------|--|
| I | The soil profile is not wet within 70 cm depth for more than 30 days in most years ² |
| II | The soil profile is wet within 70 cm depth for 31-90 days in most years or if there is no slowly permeable layer within 80 cm depth it is wet within 70 cm for more than 90 days but only wet within 40 cm depth for 30 days in most years |
| III | The soil profile is wet within 70 cm depth for 91-180 days in most years or if there is no slowly permeable layer present within 80 cm depth it is wet within 70 cm for more than 180 days but only wet within 40 cm depth for between 31-90 days in most years |
| IV | The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth for more than 210 days in most years or if there is no slowly permeable layer present within 80 cm depth it is wet within 40 cm depth for 91-210 days in most years |
| V | The soil profile is wet within 40 cm depth for 211-335 days in most years |
| VI | The soil profile is wet within 40 cm depth for more than 335 days in most years |

Assessment of Wetness Class

Soils have been allocated to wetness classes by the interpretation of soil profile characteristics and climatic factors using the methodology described in *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land* (MAFF 1988).

¹ The number of days is not necessarily a continuous period

² In most years is defined as more than 10 out of 20 years

APPENDIX III

SOIL DATA

Contents

Sample location map

Soil abbreviations Explanatory Note

Soil Pit Descriptions

Soil boring descriptions (boring and horizon levels)

Database Printout - Horizon Level Information

SOIL PROFILE DESCRIPTIONS EXPLANATORY NOTE

Soil pit and auger boring information collected during ALC fieldwork is held on a computer database. This uses notations and abbreviations as set out below.

Boring Header Information

1 **GRID REF** national 100 km grid square and 8 figure grid reference

2 **USE** Land use at the time of survey. The following abbreviations are used

| | | |
|--------------------------------|--------------------------------|--------------------------|
| ARA Arable | WHT Wheat | BAR Barley |
| CER Cereals | OAT Oats | MZE Maize |
| OSR Oilseed rape | BEN Field Beans | BRA Brassicae |
| POT Potatoes | SBT Sugar Beet | FCD Fodder Crops |
| LIN Linseed | FRT Soft and Top Fruit | FLW Fallow |
| PGR Permanent Pasture | LEY Ley Grass | RGR Rough Grazing |
| SCR Scrub | CFW Coniferous Woodland | |
| DCW Deciduous Wood | | |
| HTH Heathland | BOG Bog or Marsh | FLW Fallow |
| PLO Ploughed | SAS Set aside | OTH Other |
| HRT Horticultural Crops | | |

3 **GRDNT** Gradient as estimated or measured by a hand held optical clinometer

4 **GLEYSPL** Depth in centimetres (cm) to gleying and/or slowly permeable layers

5 **AP (WHEAT/POTS)** Crop adjusted available water capacity

6 **MB (WHEAT/POTS)** Moisture Balance (Crop adjusted AP crop adjusted MD)

7 **DRT** Best grade according to soil droughtiness

8 If any of the following factors are considered significant 'Y' will be entered in the relevant column

| | | |
|------------------------------------|--------------------------|--------------------------------|
| MREL Microrelief limitation | FLOOD Flood risk | EROSN Soil erosion risk |
| EXP Exposure limitation | FROST Frost prone | DIST Disturbed land |
| CHEM Chemical limitation | | |

9 **LIMIT** The main limitation to land quality. The following abbreviations are used

| | | |
|-----------------------------|---------------------------|-------------------------------------|
| OC Overall Climate | AE Aspect | EX Exposure |
| FR Frost Risk | GR Gradient | MR Microrelief |
| FL Flood Risk | TX Topsoil Texture | DP Soil Depth |
| CH Chemical | WE Wetness | WK Workability |
| DR Drought | ER Erosion Risk | WD Soil Wetness/Droughtiness |
| ST Topsoil Stoniness | | |

Soil Pits and Auger Borings

- 1 **TEXTURE** soil texture classes are denoted by the following abbreviations

| | | | | | |
|------------|-----------------|------------|-----------------|------------|--------------------|
| S | Sand | LS | Loamy Sand | SL | Sandy Loam |
| SZL | Sandy Silt Loam | CL | Clay Loam | ZCL | Silty Clay Loam |
| ZL | Silt Loam | SCL | Sandy Clay Loam | C | Clay |
| SC | Sandy Clay | ZC | Silty Clay | OL | Organic Loam |
| P | Peat | SP | Sandy Peat | LP | Loamy Peat |
| PL | Peaty Loam | PS | Peaty Sand | MZ | Marine Light Silts |

For the sand loamy sand sandy loam and sandy silt loam classes the predominant size of sand fraction will be indicated by the use of the following prefixes

| | |
|----------|--|
| F | Fine (more than 66% of the sand less than 0.2mm) |
| M | Medium (less than 66% fine sand and less than 33% coarse sand) |
| C | Coarse (more than 33% of the sand larger than 0.6mm) |

The clay loam and silty clay loam classes will be sub-divided according to the clay content **M** Medium (<27% clay) **H** Heavy (27-35% clay)

- 2 **MOTTLE COL** Mottle colour using Munsell notation
- 3 **MOTTLE ABUN** Mottle abundance expressed as a percentage of the matrix or surface described

F few <2% **C** common 2-20% **M** many 20-40% **VM** very many 40% +

- 4 **MOTTLE CONT** Mottle contrast

F faint indistinct mottles evident only on close inspection
D distinct mottles are readily seen
P prominent mottling is conspicuous and one of the outstanding features of the horizon

- 5 **PED COL** Ped face colour using Munsell notation

- 6 **GLEYS** If the soil horizon is gleyed a **Y** will appear in this column. If slightly gleyed an **S** will appear

- 7 **STONE LITH** Stone Lithology One of the following is used

| | | | |
|-------------|---|-------------|--------------------------------------|
| HR | all hard rocks and stones | SLST | soft oolitic or dolimitic limestone |
| CH | chalk | FSST | soft fine grained sandstone |
| ZR | soft argillaceous or silty rocks | GH | gravel with non porous (hard) stones |
| MSST | soft medium grained sandstone | GS | gravel with porous (soft) stones |
| SI | soft weathered igneous/metamorphic rock | | |

Stone contents (>2cm >6cm and total) are given in percentages (by volume)

SOIL PIT DESCRIPTION

Site Name SWALE BOROUGH LP FAV 3+4 Pit Number 1P

Grid Reference TR01605990 Average Annual Rainfall 660 mm
 Accumulated Temperature 1470 degree days
 Field Capacity Level 133 days
 Land Use Cereals
 Slope and Aspect 06 degrees E

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT STONE | LITH | MOTTLES | STRUCTURE | CONSIST | SUBSTRUCTURE | CALC |
|---------|---------|-----------|-----------|-----------|------|---------|-----------|---------|--------------|------|
| 0- 35 | ZL | 75YR44 00 | 1 | 3 | HR | | | | | |
| 35- 45 | MZCL | 10YR55 45 | 0 | 3 | CH | | MDMSAB | FR | G | Y |
| 45- 60 | HZCL | 10YR55 00 | 0 | 60 | CH | | MASSIV | FM | P | Y |
| 60- 80 | CH | 10YR81 55 | 0 | 0 | | | | | P | |

Wetness Grade 1 Wetness Class I
 Gleying cm
 SPL No SPL

Drought Grade 3A APW 125mm MBW 4 mm
 APP 125mm MBP 8 mm

FINAL ALC GRADE 3A
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name SHALE BOROUGH LP FAV 3+4 Pit Number 2P

Grid Reference TR01506000 Average Annual Rainfall 660 mm
 Accumulated Temperature 1470 degree days
 Field Capacity Level 133 days
 Land Use Cereals
 Slope and Aspect degrees

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT STONE | LITH | MOTTLES | STRUCTURE | CONSIST | SUBSTRUCTURE | CALC |
|---------|---------|-----------|-----------|-----------|------|---------|-----------|---------|--------------|------|
| 0- 34 | ZL | 10YR43 00 | 0 | 0 | | | | | | |
| 34- 70 | MZCL | 75YR45 00 | 0 | 0 | | | MDCSAB | FR | M | |
| 70-120 | HZCL | 75YR56 46 | 0 | 0 | | | MDVCSB | FM | M | |

Wetness Grade 1 Wetness Class I
 Gleying cm
 SPL No SPL

Drought Grade 1 APW 175mm MBW 54 mm
 APP 139mm MBP 22 mm

FINAL ALC GRADE 1
 MAIN LIMITATION

| SAMPLE NO | GRID REF | ASPECT USE | --WETNESS-- | | -WHEAT- | | -POTS- | | M REL | | EROSN | FROST | CHEM | ALC | COMMENTS |
|-----------|------------|------------|-------------|---------|---------|-------|--------|----|-------|----|-------|-------|------|------|--------------|
| | | | GRDNT | GLEYSPL | CLASS | GRADE | AP | MB | AP | MB | DRT | FLOOD | EXP | DIST | |
| 1 | TR01506050 | FRT | | | 1 | 1 | 201 | 80 | 147 | 30 | 1 | | | 1 | |
| 1A | TR01496041 | FRT | | | 1 | 1 | 151 | 30 | 135 | 18 | 1 | | | 1 | S1 gleyed 80 |
| 1P | TR01605990 | CER E | 06 | | 1 | 1 | 125 | 4 | 125 | 8 | 3A | | DR | 3A | |
| 2 | TR01606050 | FRT | | | 1 | 1 | 156 | 35 | 136 | 19 | 1 | | | 1 | |
| 2A | TR01626049 | CER E | 01 | | 1 | 1 | 156 | 35 | 120 | 3 | 2 | | DR | 2 | |
| 2P | TR01506000 | CER | | | 1 | 1 | 175 | 54 | 139 | 22 | 1 | | | 1 | |
| 3 | TR01606040 | FRT | | | 1 | 1 | 147 | 26 | 137 | 20 | 2 | | DR | 2 | |
| 3A | TR01626040 | CER E | 02 | | 1 | 1 | 175 | 54 | 139 | 22 | 1 | | | 1 | |
| 4 | TR01506030 | CER | | | 1 | 1 | 158 | 37 | 137 | 20 | 1 | | | 1 | |
| 5 | TR01606030 | CER E | 05 | | 1 | 1 | 175 | 54 | 139 | 22 | 1 | | | 1 | |
| 6 | TR01706030 | CER W | 02 | | 1 | 1 | 173 | 52 | 138 | 21 | 1 | | | 1 | |
| 7 | TR01506020 | CER E | 01 | | 1 | 1 | 158 | 37 | 138 | 21 | 1 | | | 1 | |
| 8 | TR01606020 | CER E | 04 | | 1 | 1 | 175 | 54 | 139 | 22 | 1 | | | 1 | |
| 9 | TR01506010 | CER E | 01 | | 1 | 1 | 175 | 54 | 139 | 22 | 1 | | | 1 | |
| 10 | TR01606010 | CER E | 03 | | 1 | 1 | 175 | 54 | 139 | 22 | 1 | | | 1 | |
| 11 | TR01506000 | CER | | | 1 | 1 | 175 | 54 | 139 | 22 | 1 | | | 1 | |
| 12 | TR01606000 | CER E | 04 | | 1 | 1 | 125 | 4 | 126 | 9 | 3A | | DR | 3A | |
| 13 | TR01706000 | CER W | 04 | | 1 | 1 | 150 | 29 | 121 | 4 | 2 | | DR | 2 | Almost G1 |
| 14 | TR01605990 | CER E | 06 | | 1 | 1 | 121 | 0 | 127 | 10 | 3A | | DR | 3A | |
| 15 | TR01705990 | CER W | 04 | | 1 | 1 | 128 | 7 | 134 | 17 | 2 | | DR | 2 | |
| 16 | TR01605980 | CER E | 03 | | 1 | 1 | 175 | 54 | 139 | 22 | 1 | | | 1 | |

| SAMPLE | DEPTH | TEXTURE | COLOUR | ----MOTTLES----- | | | PED COL | ----STONES---- | | | STRUCT/ CONSIST | SUBS | | | SPL | CALC |
|--------|---------|---------|-----------|------------------|------|------|------------|----------------|----|----|--------------------|--------|-----|-----|-----|------|
| | | | | COL | ABUN | CONT | | GLY | >2 | >6 | | LITH | TOT | STR | | |
| 1 | 0-30 | z1 | 10YR34 55 | | | | | 0 | 0 | 0 | | | | | | |
| | 30-50 | mzc1 | 10YR54 00 | | | | | 0 | 0 | 0 | | M | | | | |
| | 50-120 | z1 | 10YR64 00 | | | | | 0 | 0 | 0 | | M | | | | Y |
| 1A | 0-30 | z1 | 10YR33 00 | | | | | 0 | 0 | HR | 1 | | | | | |
| | 30-50 | mzc1 | 10YR55 00 | | | | | 0 | 0 | | 0 | | M | | | |
| | 50-80 | mzc1 | 10YR56 00 | | | | | 0 | 0 | HR | 5 | | M | | | |
| | 80-90 | hzc1 | 25Y 46 00 | 10YR66 00 | C | | S | 0 | 0 | HR | 5 | | P | | | |
| | 90-110 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | P | | | |
| 1P | 0-35 | z1 | 75YR44 00 | | | | | 1 | 0 | HR | 3 | | | | | |
| | 35-45 | mzc1 | 10YR55 45 | | | | | 0 | 0 | CH | 3 | MDMSAB | FR | G | | Y |
| | 45-60 | hzc1 | 10YR55 00 | | | | | 0 | 0 | CH | 60 | MASSIV | FM | P | | Y |
| | 60-80 | ch | 10YR81 55 | | | | | 0 | 0 | | 0 | | P | | | |
| 2 | 0-28 | z1 | 10YR34 00 | | | | | 0 | 0 | | 0 | | | | | |
| | 28-55 | mzc1 | 10YR55 00 | | | | | 0 | 0 | | 0 | | M | | | |
| | 55-90 | hzc1 | 75YR56 00 | | | | | 0 | 0 | | 0 | | M | | | |
| | 90-100 | zc | 10YR45 00 | | | | | 0 | 0 | CH | 5 | | P | | | Y |
| | 100-110 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | P | | | |
| 2A | 0-40 | mc1 | 10YR23 00 | | | | | 0 | 0 | HR | 5 | | | | | Y |
| | 40-60 | mzc1 | 10YR54 00 | | | | | 0 | 0 | | 0 | | M | | | Y |
| | 60-120 | hzc1 | 10YR56 00 | | | | | 0 | 0 | | 0 | | M | | | |
| 2P | 0-34 | z1 | 10YR43 00 | | | | | 0 | 0 | | 0 | | | | | |
| | 34-70 | mzc1 | 75YR45 00 | | | | | 0 | 0 | | 0 | MDCSAB | FR | M | | |
| | 70-120 | hzc1 | 75YR56 46 | | | | | 0 | 0 | | 0 | MDVCSB | FM | M | | |
| 3 | 0-30 | z1 | 10YR34 00 | | | | | 0 | 0 | | 0 | | | | | |
| | 30-80 | mzc1 | 10YR55 00 | | | | | 0 | 0 | | 0 | | M | | | |
| | 80-100 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | P | | | |
| 3A | 0-34 | z1 | 10YR43 00 | | | | | 0 | 0 | | 0 | | | | | |
| | 34-80 | mzc1 | 10YR55 00 | | | | | 0 | 0 | | 0 | | M | | | Y |
| | 80-120 | mzc1 | 10YR64 00 | | | | | 0 | 0 | | 0 | | M | | | Y |
| 4 | 0-30 | z1 | 10YR34 00 | | | | | 0 | 0 | | 0 | | | | | |
| | 30-75 | mzc1 | 75YR55 00 | | | | | 0 | 0 | | 0 | | M | | | |
| | 75-95 | hzc1 | 10YR55 00 | | | | | 0 | 0 | HR | 2 | | M | | | |
| | 95-110 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | P | | | |
| 5 | 0-34 | z1 | 10YR34 00 | | | | | 0 | 0 | | 0 | | | | | |
| | 34-55 | mzc1 | 10YR55 00 | | | | | 0 | 0 | | 0 | | M | | | |
| | 55-120 | hzc1 | 10YR56 00 | | | | | 0 | 0 | | 0 | | M | | | |
| 6 | 0-35 | z1 | 10YR33 00 | | | | | 0 | 0 | HR | 2 | | | | | Y |
| | 35-55 | hzc1 | 10YR44 54 | | | | | 0 | 0 | HR | 1 | | M | | | Y |
| | 55-120 | hzc1 | 10YR54 00 | | | | | 0 | 0 | CH | 5 | | M | | | Y |

-----MOTTLES----- PED -----STONES----- STRUCT/ SUBS

| SAMPLE | DEPTH | TEXTURE | COLOUR | -----MOTTLES----- | | | PED | -----STONES----- | | | | STRUCT/ CONSIST | SUBS | | | SPL | CALC |
|--------|---------|---------|-----------|-------------------|------|------|-----|------------------|------|----|----|--------------------|------|-----|-----|-----|------|
| | | | | COL | ABUN | CONT | | COL | GLEY | >2 | >6 | | LITH | TOT | STR | | |
| 7 | 0-32 | z1 | 10YR44 00 | | | | | 0 | 0 | | 0 | | | | | | |
| | 32-75 | mzc1 | 75YR46 55 | | | | | 0 | 0 | | 0 | | | M | | | |
| | 75-90 | hzc1 | 10YR46 56 | | | | | 0 | 0 | HR | 3 | | | M | | | |
| | 90-110 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | | P | | | |
| 8 | 0-34 | z1 | 10YR34 00 | | | | | 0 | 0 | | 0 | | | | | | |
| | 34-65 | mzc1 | 75YR46 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| | 65-120 | hzc1 | 10YR55 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| 9 | 0-35 | z1 | 10YR34 00 | | | | | 0 | 0 | HR | 1 | | | | | | |
| | 35-50 | mzc1 | 10YR46 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| | 50-120 | hzc1 | 10YR55 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| 10 | 0-34 | z1 | 10YR34 00 | | | | | 0 | 0 | | 0 | | | | | | |
| | 34-60 | mzc1 | 75YR46 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| | 60-120 | hzc1 | 10YR56 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| 11 | 0-34 | z1 | 10YR43 00 | | | | | 0 | 0 | | 0 | | | | | | |
| | 34-65 | mzc1 | 75YR45 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| | 65-120 | hzc1 | 75YR56 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| 12 | 0-34 | z1 | 10YR34 00 | | | | | 1 | 0 | HR | 2 | | | | | Y | |
| | 34-50 | hzc1 | 10YR55 00 | | | | | 0 | 0 | HR | 8 | | | M | | Y | |
| | 50-60 | hzc1 | 10YR55 00 | | | | | 0 | 0 | CH | 40 | | | M | | Y | |
| | 60-80 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | | P | | | |
| 13 | 0-34 | mzc1 | 10YR34 00 | | | | | 3 | 0 | HR | 4 | | | | | Y | |
| | 34-60 | mzc1 | 10YR54 00 | | | | | 0 | 0 | HR | 4 | | | M | | Y | |
| | 60-100 | hzc1 | 10YR54 00 | | | | | 0 | 0 | HR | 5 | | | M | | Y | |
| | 100-120 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | | P | | | |
| 14 | 0-34 | z1 | 75YR44 00 | | | | | 1 | 0 | HR | 3 | | | | | | |
| | 34-48 | mzc1 | 10YR55 00 | | | | | 0 | 0 | CH | 5 | | | G | | Y | |
| | 48-70 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | | P | | | |
| 15 | 0-34 | z1 | 10YR34 00 | | | | | 1 | 0 | HR | 4 | | | | | Y | |
| | 34-68 | mzc1 | 10YR54 00 | | | | | 0 | 0 | CH | 5 | | | M | | Y | |
| | 68-80 | ch | 10YR81 00 | | | | | 0 | 0 | | 0 | | | P | | | |
| 16 | 0-34 | z1 | 10YR34 00 | | | | | 0 | 0 | HR | 1 | | | | | | |
| | 34-80 | mzc1 | 75YR56 00 | | | | | 0 | 0 | | 0 | | | M | | | |
| | 80-120 | hzc1 | 75YR55 00 | | | | | 0 | 0 | | 0 | | | M | | | |