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# ARUN DISTRICT LOCAL PLAN REVIEW
## Site 10: Land Between Lake Lane and Railway Line, Barnham, West Sussex
## Agricultural Land Classification
## ALC Map and Report

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Resource Planning Team
Eastern Region
FRCA Reading

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## ARUN DISTRICT LOCAL PLAN REVIEW
## SITE 10:
## LAND BETWEEN LAKE LANE AND RAILWAY LINE, BARNHAM
## WEST SUSSEX

## INTRODUCTION

1. This summary report presents the findings of a detailed Agricultural Land Classification (ALC) survey of approximately 14.5 hectares of land between Lake Lane and the railway line to the east of Barnham, in West Sussex. The survey was carried out during March 1997.

2. The work was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) from its Land Use Planning Unit in Reading, in connection with MAFF's statutory input to the Arun District Local Plan. This survey supersedes any previous ALC information for this land.

3. Prior to 1 April 1997, the work was conducted by members of the Resource Planning Team in the Guildford Statutory Group of ADAS. After this date, the work was completed by the same team as part of the Farming and Rural Conservation Agency (FRCA, Reading). 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 agricultural land on this site was under permanent grass and stubble from a previous maize crop. A small area in the north east of the site is an eucalyptus nursery. Parts of the site are mapped as 'Other Land'; this comprises glasshouses and hard standings. There is also a small area of scrub in the south west of the site.

### 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 overleaf.

7. The fieldwork was conducted at an average density of 1 boring per hectare of agricultural land. A total of 15 borings and 1 soil pit were described.

**Table 1: Area of grades and other land**

| Grade/Other land | Area (hectares) | % surveyed area | % site area |
|---|---|---|---|
| 2 | 8.4 | 100 | 57.9 |
| Other land | 6.1 | - | 42.1 |
| Total surveyed area | 8.4 | 100 | 57.9 |
| Total site area | 14.5 | - | 100 |

8. The agricultural land at this site has been classified as Grade 2 (very good quality), on the basis of slight soil wetness and soil droughtiness limitations. The soils typically comprise medium silty topsoils over similar subsoils. Some of the profiles exhibit signs of a minor soil wetness limitation which may adversely affect plant growth, mechanised operations or stocking. Other profiles have a good reserve of available water for crops. However, the locally dry climate leads to a slight droughtiness limitation. Some of the topsoils are believed to be slightly disturbed by the previous glasshouse land use (eg, inclusions of organic matter in the topsoil).

## 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 | SU 964 045 | SU 968 044 |
| Altitude | m, AOD | 10 | 11 |
| Accumulated Temperature | day°C (Jan-June) | 1537 | 1536 |
| Average Annual Rainfall | mm | 768 | 766 |
| Field Capacity Days | days | 157 | 157 |
| Moisture Deficit, Wheat | mm | 117 | 118 |
| Moisture Deficit, Potatoes | mm | 114 | 114 |
| Overall climatic grade | N/A | Grade 1 | Grade 1 |

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 (AT0, 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 the site can be classified as grade 1 on climatic factors. Due to the moderating effects of the coastal location, the area is mild, with accumulated temperatures and moisture deficits which are comparitively high for south east England.

### Site

14. The site lies at an altitude of 10-11m A.O.D. and is flat with no limitation due to gradient, microrelief or flooding.

### Geology and soils

15. The published geological map sheet covering the area of the site shows it is underlain by brickearth (BGS, 1975). This drift deposit of the Recent and Pleistocene consists of a brown loam of quartz and flint sand and ferruginous clay.

16. A published soil map for the area shows the whole site as the Park Gate soil association (SSEW, 1983). In more detail (SSGB, 1967), the site is mapped as mainly the deep phase of the Park Gate series, with a narrow strip along the western edge, as the shallow phase, over loamy pebbly drift. The deep phase is described as silt loams over silty clay loams and silty clays, which are mottled from the surface. The shallow phase is described as silt loams over silty clay loams and sandy loams, which are mottled from the surface. The soils are described as being seasonally waterlogged (SSGB, 1967).

## 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.

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 II.

### Grade 2

19. This land has been classified as Grade 2 (very good quality) on the basis of slight soil wetness and droughtiness limitations. In most profiles wetness and droughtiness limitations occur together. The profiles typically comprise medium silty clay loam topsoils over similar or heavy silty clay loam subsoils. Silty clay horizons occur at depth in some locations. The topsoils are typically very slightly stony to moderately stony, comprising 2-20% small flints < 2cm in size, with stoneless to slightly stony subsoils (0-15% total stone, <2cm). The profiles are generally mottled at varying depths in the subsoil indicating that there is soil wetness, however not all profiles contain slowly permeable horizons. Where mottling occurs above 40cm depth and there is no slowly permeable layer, the profiles are assigned to Wetness Class II. The gleyed horizons are caused by a slight groundwater problem. Combined with the topsoil textures in this local climate the soils are limited to Wetness Grade 2. In other profiles

Combined with the topsoil textures in this local climate the soils are limited to Wetness Grade 2. In other profiles the gleyed horizons occur below 40cm depth, but a slowly permeable horizon may occur within 70cm depth. Where it occurs, this latter horizon restricts the downward movement of water through the profile and causes a slight wetness limitation. These profiles are assigned to Wetness Class II and are typically described by Pit 1. Locally, combined with the topsoil textures the soils are limited to Wetness Grade 2. Some profiles are freely draining (Wetness Class I). Where it occurs, this wetness limitation reduces the number of days when trafficking by machinery or grazing by animals may occur without damaging the soil, making the land slightly less flexible for agricultural or horticultural production.

20. The slight soil droughtiness limitation within these profiles is caused by the comparatively dry local climate which acts in conjunction with soil characteristics such as soil texture and soil stone content. These determine whether there is sufficient capacity to meet crop needs. On this site, moisture balance calculations indicate the land will be slightly droughty so that plant growth and yield are slightly limited, especially in drier years.

21. On some areas of the site previous use for glasshouses has caused slight disturbance to the topsoil, by the addition of a little humic material. However, this has not caused any limitation for agricultural or horticultural crops.

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## SOURCES OF REFERENCE

British Geological Survey (1975) *Sheet No.* 317, *Chichester; 1:50,000 Series* 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) *Soils of South East England Sheet 6; 1:250,000 Scale.* 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 DATA

Contents:

# 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 | **OTH** | Other |
| **DCW:** | Deciduous woodland | **BOG:** | Bog or marsh | **SAS:** | Set-Aside |
| **HTH:** | Heathland | **HRT:** | Horticultural crops | **PLO:** | Ploughed |

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

4. **GLEY/SPL**: 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 | **ST**: | Topsoil Stoniness |
| **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 |
| **EX**: | Exposure | | | | |

**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. **GLEY**: 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 | **FSST**: | soft, fine grained sandstone |
| **ZR**: | soft, argillaceous, or silty rocks | **CH**: | chalk |
| **MSST**: | soft, medium grained sandstone | **GS**: | gravel with porous (soft) stones |
| **SI**: | soft weathered igneous/metamorphic rock | **GH**: | gravel with non-porous (hard) stones |

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

8. **STRUCT**: the degree of development, size and shape of soil peds are described using the following notation:

| | | | | |
|---|---|---|---|---|
| Degree of development | **WK**: | weakly developed | **MD**: | moderately developed |
| | **ST**: | strongly developed | | |
| Ped size | **F**: | fine | **M**: | medium |
| | **C**: | coarse | | |
| Ped shape | **S**: | single grain | **M**: | massive |
| | **GR**: | granular | **AB**: | angular blocky |
| | **SAB**: | sub-angular blocky | **PR**: | prismatic |
| | **PL**: | platy | | |

9. **CONSIST**: Soil consistence is described using the following notation:

**L**: loose **VF**: very friable **FR**: friable **FM**: firm **VM**: very firm
**EM**: extremely firm **EH**: extremely hard

10. **SUBS STR**: Subsoil structural condition recorded for the purpose of calculating profile droughtiness: **G**: good **M**: moderate **P**: poor

11. **POR**: *Soil porosity. If a soil horizon has less than 0.5% biopores >0.5 mm, a 'Y' will appear in* this column.

12. **IMP**: If the profile is impenetrable to rooting a 'Y' will appear in this column at the appropriate horizon.

13. **SPL**: Slowly permeable layer. If the soil horizon is slowly permeable a 'Y' will appear in this column.

14. **CALC**: If the soil horizon is calcareous, a 'Y' will appear in this column.

15. Other notations:

**APW**: available water capacity (in mm) adjusted for wheat
**APP**: available water capacity (in mm) adjusted for potatoes
**MBW**: moisture balance, wheat
**MBP**: moisture balance, potatoes

SOIL PIT DESCRIPTION

Site Name : ARUN LOCAL PLAN SITE 10 Pit Number : 1P

Grid Reference: SU96500440 Average Annual Rainfall : 768 mm
Accumulated Temperature : 1537 degree days
Field Capacity Level : 157 days
Land Use :
Slope and Aspect : degrees

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | LITH | MOTTLES | STRUCTURE | CONSIST | SUBSTRUCTURE | CALC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0- 38 | MZCL | 10YR43 42 | 0 | 2 | HR | | | | | |
| 38- 54 | HZCL | 10YR63 00 | 0 | 0 | | C | MDVCSB | FR | M | |
| 54- 85 | HZCL | 10YR53 52 | 0 | 0 | | C | MDCAB | FR | M | |
| 85-120 | HZCL | 10YR52 62 | 0 | 0 | | M | WKCSAB | FR | M | |

Wetness Grade : 2 Wetness Class : II
Gleying : 38 cm
SPL : 85 cm

Drought Grade : 1 APW : 161mm MBW : 43 mm
APP : 125mm MBP : 11 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Wetness

| SAMPLE NO. | GRID REF | USE | ASPECT | GRDNT | GLEY | SPL | --WETNESS-- CLASS | GRADE | -WHEAT- AP | MB | -POTS- AP | MB | DRT | M.REL FLOOD | EROSN EXP | FROST DIST | CHEM LIMIT | ALC | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SU96500470 | PGR | | 0 | | | 1 | 1 | 172 | 54 | 116 | 2 | 2 | | | | DR | 2 | Sandy Profile |
| 1P | SU96500440 | STB | | 38 | 85 | | 2 | 2 | 161 | 43 | 125 | 11 | 1 | | | | WE | 2 | Pit100 Aug120 |
| 2 | SU96600470 | PGR | | 50 | 75 | | 2 | 2 | 156 | 38 | 122 | 8 | 2 | | | | WD | 2 | SPL As 1P |
| 3 | SU96450460 | PGR | | 39 | | | 2 | 2 | 159 | 41 | 123 | 9 | 2 | | | | WD | 2 | Q Dist US/S |
| 4 | SU96850465 | ORC | | 0 | | | 2 | 2 | 159 | 41 | 123 | 9 | 2 | | | | WD | 2 | |
| 5 | SU96380450 | PGR | | 55 | | | 1 | 1 | 170 | 52 | 135 | 21 | 1 | | | | | 1 | |
| 6 | SU96450450 | PGR | | 45 | 85 | | 1 | 1 | 162 | 44 | 126 | 12 | 1 | | | | | 1 | |
| 7 | SU96600450 | PGR | | 45 | | | 1 | 1 | 146 | 28 | 110 | -4 | 2 | | | | DR | 2 | Poss Dists |
| 8 | SU96700450 | PGR | | 25 | | | 2 | 2 | 153 | 35 | 117 | 3 | 2 | | | | WD | 2 | |
| 9 | SU96780450 | PGR | | 10 | | | 2 | 1 | 158 | 40 | 123 | 9 | 2 | | | | DR | 2 | Prev Glasshous |
| 10 | SU96300440 | STB | | 45 | 75 | | 2 | 2 | 160 | 42 | 124 | 10 | 1 | | | | WE | 2 | See 1P |
| 11 | SU96400440 | STB | | 45 | 90 | | 1 | 1 | 148 | 30 | 124 | 10 | 2 | | | | DR | 2 | See 1PBorder2 |
| 12 | SU96500440 | STB | | 33 | 75 | | 2 | 2 | 160 | 42 | 124 | 10 | 1 | | | | WD | 2 | See 1P |
| 13 | SU96600440 | STB | | 33 | 75 | | 2 | 2 | 160 | 42 | 124 | 10 | 1 | | | | WD | 2 | See 1P |
| 14 | SU96700440 | STB | | 55 | 65 | | 2 | 2 | 145 | 27 | 123 | 9 | 2 | | | | WE | 2 | |
| 15 | SU96800440 | STB | | 38 | | | 2 | 2 | 159 | 41 | 123 | 9 | 2 | | | | WD | 2 | |

| SAMPLE | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUN | MOTTLES CONT | PED COL. | PED GLEY | STONES >2 | STONES >6 | STONES LITH | STONES TOT | STRUCT/ CONSIST | SUBS STR | SUBS POR | SUBS IMP | SUBS SPL | CALC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0-35 | mcl | 10YR53 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | | | | | | Top 5cm Very Dark |
| | 35-70 | lfs | 10YR63 00 | 10YR56 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 70-120 | fs | 10YR73 63 | 10YR58 00 | M | | | Y | 0 | 0 | | 0 | | M | | | | |
| 1P | 0-38 | mzcl | 10YR43 42 | | | | | | 0 | 0 | HR | 2 | | | | | | Small Flints |
| | 38-54 | hzcl | 10YR63 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | MDVCSB | FR M | | | | BreaktoCSAB GoodPor |
| | 54-85 | hzcl | 10YR53 52 | 10YR58 00 | C | 00MN00 | 00 | Y | 0 | 0 | | 0 | MDCAB | FR M | Y | | | TendingSABLowPor |
| | 85-120 | hzcl | 10YR52 62 | 10YR58 00 | M | 00MN00 | 00 | Y | 0 | 0 | | 0 | WKCSAB | FR M | Y | | Y | Low Por WT 90cm |
| 2 | 0-25 | mzcl | 10YR44 54 | | | | | | 0 | 0 | HR | 2 | | | | | | |
| | 25-50 | mzcl | 10YR54 00 | 10YR56 00 | F | | | | 0 | 0 | HR | 2 | | M | | | | |
| | 50-75 | hzcl | 10YR53 00 | 10YR58 00 | C | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 75-120 | mzcl | 25Y 63 62 | 10YR68 58 | C | 00MN00 | 00 | Y | 0 | 0 | HR | 5 | | M | | | Y | Query SPL |
| 3 | 0-20 | mzcl | 10YR41 42 | | | | | | 0 | 0 | HR | 10 | | | | | | Small Flints |
| | 20-40 | mzcl | 10YR31 43 | | | | | | 0 | 0 | HR | 15 | | M | | | | Poss Dumped Peat |
| | 40-75 | mzcl | 10YR53 52 | 10YR58 00 | C | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 75-120 | mzcl | 10YR63 62 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | Moist Horizon |
| 4 | 0-23 | mzcl | 10YR52 00 | 10YR56 66 | C | | | Y | 0 | 0 | HR | 2 | | | | | | |
| | 23-50 | mzcl | 25Y 64 00 | 10YR68 00 | C | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 50-120 | mzcl | 25Y 62 64 | 10YR68 00 | M | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | | |
| 5 | 0-30 | zl | 10YR43 00 | | | | | | 0 | 0 | HR | 2 | | | | | | |
| | 30-55 | mzcl | 10YR54 00 | | | | | | 0 | 0 | HR | 2 | | M | | | | |
| | 55-100 | mzcl | 10YR53 00 | 10YR56 58 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 100-120 | mzcl | 10YR53 00 | 10YR58 00 | M | 00MN00 | 00 | Y | 0 | 0 | HR | 5 | | M | | | | |
| 6 | 0-35 | mzcl | 10YR43 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 35-45 | mzcl | 10YR43 00 | 10YR56 00 | F | | | | 0 | 0 | | 0 | | M | | | | |
| | 45-65 | mzcl | 10YR53 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 65-85 | mzcl | 10YR62 00 | 10YR58 00 | M | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 85-120 | hzcl | 10YR62 00 | 10YR58 00 | M | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | Y | SPL Like 1P |
| 7 | 0-25 | mzcl | 10YR33 43 | 10YR66 00 | F | | | | 0 | 0 | HR | 20 | | | | | | Small Flints |
| | 25-45 | mzcl | 10YR43 54 | 10YR66 00 | F | | | | 0 | 0 | HR | 15 | | M | | | | |
| | 45-80 | mzcl | 10YR64 00 | 10YR68 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 80-120 | mzcl | 10YR63 64 | 75YR68 00 | M | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | | |
| 8 | 0-25 | mzcl | 10YR32 52 | | | | | | 0 | 0 | HR | 15 | | | | | | Sign OM in T/S |
| | 25-45 | mzcl | 25Y 62 00 | 75YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 45-75 | mzcl | 25Y 61 00 | 10YR68 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 75-120 | mzcl | 25Y 61 00 | 75YR68 00 | M | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | | |
| 9 | 0-10 | ol/omzcl | 10YR21 00 | | | | | | 0 | 0 | HR | 10 | | | | | | Small Flints |
| | 10-30 | mzcl | 10YR53 63 | 10YR56 00 | C | | | Y | 0 | 0 | HR | 15 | | M | | | | |
| | 30-85 | mzcl | 25Y 62 64 | 10YR58 00 | C | 00MN00 | 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 85-120 | mzcl | 25Y 62 64 | 75YR58 00 | M | 00MN00 | 00 | Y | 0 | 0 | HR | 2 | | M | | | | |

| SAMPLE | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUN | MOTTLES CONT | PED COL. | PED GLEY | STONES >2 | STONES >6 | STONES LITH | STONES TOT | STRUCT/ CONSIST | SUBS STR | SUBS POR | SUBS IMP | SUBS SPL | SUBS CALC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 0-32 | mzcl | 10YR42 00 | | | | | | 0 | 0 | HR | 3 | | | | | | |
| | 32-45 | mzcl | 10YR54 00 | 10YR56 00 | F | | | | 0 | 0 | | 0 | | M | | | | |
| | 45-55 | mzcl | 10YR54 64 | 10YR56 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 55-75 | mzcl | 10YR53 63 | 10YR68 00 | M | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 75-120 | hzcl | 10YR64 63 | 10YR58 68 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |
| 11 | 0-28 | mzcl | 10YR33 00 | | | | | | 0 | 0 | HR | 2 | | | | | | |
| | 28-45 | mzcl | 10YR54 00 | 10YR56 00 | F | | | | 0 | 0 | | 0 | | M | | | | Mixed Horizon |
| | 45-55 | mzcl | 10YR53 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 55-90 | hzcl | 10YR53 00 | 10YR58 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 90-120 | hzcl | 10YR53 00 | 10YR58 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | P | | Y | | Moist Horizon |
| 12 | 0-33 | mzcl | 10YR42 00 | | | | | | 0 | 0 | HR | 2 | | | | | | |
| | 33-50 | mzcl | 10YR53 00 | 10YR58 00 | C | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 50-75 | hzcl | 10YR53 64 | 75YR68 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 75-120 | hzcl | 25Y 63 00 | 10YR58 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | Like 1P |
| 13 | 0-33 | mzcl | 10YR43 00 | | | | | | 0 | 0 | HR | 2 | | | | | | |
| | 33-50 | mzcl | 25Y 63 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 50-75 | mzcl | 25Y 63 00 | 10YR58 68 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 75-120 | hzcl | 25Y 64 00 | 75YR58 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | Like 1P |
| 14 | 0-35 | mzcl | 10YR43 00 | | | | | | 0 | 0 | HR | 1 | | | | | | |
| | 35-55 | hzcl | 10YR54 00 | | | | | | 0 | 0 | | 0 | | M | | | | |
| | 55-65 | hzcl | 10YR53 00 | 10YR58 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 65-120 | zc | 10YR63 00 | 10YR58 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | P | | Y | | |
| 15 | 0-25 | mzcl | 10YR43 00 | 10YR56 00 | F | | | | 0 | 0 | HR | 2 | | | | | | |
| | 25-38 | mzcl | 10YR54 00 | 10YR46 00 | F | | | | 0 | 0 | | 0 | | M | | | | |
| | 38-65 | mzcl | 10YR63 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 65-120 | mzcl | 10YR63 72 | 10YR58 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |