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BILLINGSHURST PLANNING STRATEGY
AREA 1
AGRICULTURAL LAND CLASSIFICATION
ALC MAP & REPORT
DECEMBER 1993

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AGRICULTURAL LAND CLASSIFICATION REPORT

## 1.0 Summary

1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality on an area of land north-east of the town of Billingshurst in West Sussex. The work forms part of MAFF's statutory input to the preparation of the Billingshurst Planning Strategy.

1.2 Approximately 76 hectares of land was surveyed in December 1993. The survey was undertaken at a detailed level of approximately one boring per hectare. A total of 66 soil auger borings and 3 soil inspection pits were assessed in accordance with MAFF's revised guidelines and criteria for grading the quality of agricultural land (MAFF, 1988). These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose longterm limitations on its use for agriculture.

1.3 The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group of ADAS.

1.4 At the time of the survey the land use on the site was a mixture of permanent grassland, cereals and cereal stubble.

1.5 The distribution of grades and subgrades is shown on the attached ALC map and the areas are given in the table below. The map has been drawn at a scale of 1:10,000. It is accurate at this scale, but any enlargement would be misleading. This map supersedes any previous survey information for this site.

Table 1 : Distribution of Grades and Subgrades

| Grade | Area (ha) | % of Site | % of Agricultural Area |
|---|---|---|---|
| 2 | 2.9 | 3.8 | 4.7 |
| 3a | 1.8 | 2.4 | 2.9 |
| 3b | 56.7 | 74.2 | 92.4 |
| Non agricultural | 11.7 | 15.3 | 100% (61.4 ha) |
| Urban | 3.0 | 3.9 | |
| Woodland | 0.3 | 0.4 | |
| Total area of site | 76.4 | 100% | |

1.6 Appendix 1 gives a general description of the grades, subgrades and land use categories identified in the survey. The main classes are described in terms of the type of limitation that can occur, the typical cropping range and the expected level and consistency of yield.

1.7 Land on the site has been classified as grades 2, 3a and 3b with soil wetness and droughtiness being the main limitations. The majority of land is classified as Subgrade 3b due to soil wetness. Soils typically comprise medium or heavy clay loam topsoils over poorly structured clay subsoils. As a result the movement of water through these soils is severely impeded and land is poorly drained. A small area of land to the north is classified as Subgrade 3a due to soil wetness. Soils here typically comprise topsoils of heavy clay loam becoming heavier with depth. Water movement through these soils is slightly impeded due to the heavy nature of the soil textures. To the east of the site, a small area of land is classified as Grade 2 due to soil droughtiness. Profiles typically comprise medium clay loam topsoils over heavier textured subsoils containing varying amounts of weathered sandstone, making the lower subsoil quite sandy in some cases. Available water for plant growth is slightly reduced due to the combination of profile stone content, soil textures and climatic factors.

## 2.0 Climate

2.1 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.

2.2 The main parameters used in the assessment of an overall climatic limitation are annual average rainfall, as a measure of overall wetness, and accumulated temperature, as a measure of the relative warmth of a locality.

2.3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met. Office 1989). The details are given in the table below and these show that there is no overall climatic limitation affecting the site.

2.4 No local climatic factors such as exposure or frost risk affect the site. However it should be noted that the local climate is quite wet in a regional context with high rainfall and field capacity days. This will influence the likelihood of soil wetness problems.

Table 2 : Climatic Interpolations

| Grid Reference : | TQ 080 249 | TQ 080 255 | TQ 084 263 |
|---|---|---|---|
| Altitude (m) : | 15 | 15 | 30 |
| Accumulated Temperature (days) : | 1519 | 1519 | 1501 |
| Average Annual Rainfall (mm) : | 794 | 783 | 787 |
| Field Capacity (days) : | 167 | 165 | 165 |
| Moisture Deficit, Wheat (mm) : | 112 | 113 | 111 |
| Moisture Deficit, Potatoes (mm) : | 106 | 108 | 105 |
| Overall Climatic Grade : | 1 | 1 | 1 |

## 3.0 Relief

3.1 The site lies at an altitude of 15-40 metres. The highest point of altitude is to the north with land sloping gently south. Nowhere on the site does relief or gradient affect agricultural land quality.

## 4.0 Geology and Soil

4.1 The relevant geological sheet for the site, Sheet 301 (BGS, 1981) shows the underlying geology to be alternate bands of Cretaceous Weald Clay and Sandstone in Weald Clay with deposits of Recent and Pleistocene River Gravel and Alluvium mapped to the south.

4.2 The published soils information for the area, Sheet 6 (SSEW, 1983) shows the soils on the site to comprise the Wickham 5 association -"Slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils, locally reddish. Some coarse loamy soils with slowly permeable subsoils and slight seasonal waterlogging over sandstone". (SSEW, 1983). A detailed inspection of soils on the site revealed the presence of clay loams over slowly permeable clays. Some better drained profiles with sandy subsoils were also encountered.

## 5.0 Agricultural Land Classification

5.1 Table 1 provides the details of the area measurements for each grade and the distribution of each grade is shown on the attached ALC map.

5.2 The location of the soil observation points are shown on the attached sample point map.

### Grade 2

5.4 A small area of land near the centre of the site is classified as grade 2. Soil profiles typically comprise topsoils of stoneless medium clay loam over upper subsoils of heavy clay loam with 10-15% total fine soft sandstone fragments. Underlying this is heavy clay loam or clay with 20-25% total fine soft sandstone fragments. Profiles are assigned to a wetness class of I, but some do exhibit signs of wetness imperfections in the form of groundwater gleying from 44-45 cm depth in the profile. This is not associated with a slowly permeable layer and the soils are still assigned to wetness class I. The main limitation is slight soil droughtiness due to the interaction of soil textures, structures, moderate stone volumes and climatic factors. As a result profile available water reserves for crop growth are reduced such that a classification of grade 2 is appropriate. This map unit includes a soil pit (Pit 2) which found sandy subsoils thought to be unrepresentative of the mapping unit, though, this too, is limited to grade 2 due to droughtiness.

### Subgrade 3a

5.5 Land of this quality corresponds to a small area to the north, slightly elevated above surrounding fields. Soils comprise topsoils of heavy clay loam over subsoils of heavy silty clay loam or moderately structured medium clay. Profiles show signs of wetness imperfections in the form of gleying above 40 cm depth, probably attributed to fluctuating groundwater levels as in some grade 2 soils but of a more severe nature. Consequently soils are assigned to a wetness class of II and this combined with a heavy topsoil texture and local climatic factors limits land to subgrade 3a due to a moderate wetness/workability limitation. Soils here are sensitive to structural damage from cultivations, trafficking by machinery or grazing by livestock. These risks limit the periods in which the soil is in a suitable condition for cultivation.

### Subgrade 3b

5.6 Moderate quality land is mapped over the majority of the site and typically consists of medium or heavy clay loam topsoils over poorly structured slowly permeable clay subsoils. Profiles are poorly drained with slowly permeable layers from 20-58 cm depth causing gleying above 40 cm and often in the topsoil. As a result soils are assigned to wetness classes III and IV. This in conjunction with medium and heavy topsoils and climatic factors limits land to subgrade 3b due to a significant wetness limitation. The number of days the soils are in a suitable condition for cultivation, trafficking by machinery or grazing by livestock is more severely restricted than that of subgrade 3a land.

5.6 The areas marked as non-agricultural include playing fields, roadside verges and land overgrown with trees and bushes.

5.7 The areas mapped as urban include metalled roads, farm tracks and houses and gardens.

APPENDIX I

DESCRIPTION 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 on the 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.

**Grade 3 : Good To Moderate Quality Agricultural Land**

Land with moderate limitations which affect the choice of crops, 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.

**Sub-grade 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.

**Sub-grade 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 (eg. 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 very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

**Urban**

Built-up or 'hard' uses with relatively little potential for a return to agriculture : housing, industry, commerce, education, transport, religious buildings, cemeteries. Also, hard-surfaced sports facilities, permanent caravan sites and vacant land; all types of derelict land, including mineral workings which are only likely to be reclaimed using derelict land grants.

**Non-agricultural**

'Soft' uses where most of the land could be returned relatively easily to agriculture, including : private parkland, public open spaces, sports fields, allotments and soft-surfaced areas on airports/airfields. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

**Woodland**

Includes commercial and non-commercial woodland.

**Agricultural Buildings**

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses. Temporary structures (eg. polythene tunnels erected for lambing) may be ignored.

**Open Water**

Includes lakes, ponds and rivers as map scale permits.

**Land Not Surveyed**

Agricultural land which has not been surveyed.

Where the land use includes more than one of the above, eg. buildings in large grounds, and where map scale permits, the cover types may be shown separately. Otherwise, the most extensive cover type will be shown.

APPENDIX II

REFERENCES

* BRITISH GEOLOGICAL SURVEY (1981), Sheet No.301, Haslemere, 1:50,000 scale.

* MAFF (1988), Agricultural Land Classification of England And Wales : Revised guidelines and criteria for grading the quality of agricultural land.

* METEOROLOGICAL OFFICE (1989), Climatological Data for Agricultural Land Classification.

* SOIL SURVEY OF ENGLAND AND WALES (1983), Sheet No.6,"Soils of South East England", 1:250,000 scale and accompanying legend.

APPENDIX III

## DEFINITION OF SOIL WETNESS CLASSES

**Wetness Class I**

The soil profile is not wet within 70cm depth for more than 30 days in most years.

**Wetness Class II**

The soil profile is wet within 70cm depth for 31-90 days in most years **or**, if there is no slowly permeable layer within 80cm depth, it is wet within 70cm for more than 90 days, but not wet within 40cm depth for more than 30 days in most years.

**Wetness Class III**

The soil profile is wet within 70cm depth for 91-180 days in most years **or**, if there is no slowly permeable layer within 80cm depth, it is wet within 70cm for more than 180 days, but only wet within 40cm depth for 31-90 days in most years.

**Wetness Class IV**

The soil profile is wet within 70cm depth for more than 180 days but not wet within 40cm depth for more than 210 days in most years **or**, if there is no slowly permeable layer within 80cm depth, it is wet within 40cm depth for 91-210 days in most years.

**Wetness Class V**

The soil profile is wet within 40cm depth for 211-335 days in most years.

**Wetness Class VI**

The soil profile is wet within 40cm depth for more than 335 days in most years.

(The number of days is not necessarily a continuous period. 'In most years' is defined as more than 10 out of 20 years.)

APPENDIX IV

# SOIL PIT AND SOIL BORING DESCRIPTIONS

Contents :

# SOIL PROFILE DESCRIPTIONS : EXPLANATORY NOTE

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

## Boring Header Information

1. GRID REF : national 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 HRT : Horticultural Crops PGR : Permanent Pasture LEY : Ley Grass RGR : Rough Grazing
SCR : Scrub CFW : Coniferous Woodland DCW : Deciduous Woodland HTH : Heathland BOG : Bog or Marsh
FLW : Fallow PLO : Ploughed SAS : Set aside OTH : Other

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

4. GLEY/SPL : Depth in cm to gleying or slowly permeable layers.

5. AP (WHEAT/POTS) : Crop-adjusted available water capacity.

6. MB (WHEAT/POTS) : Moisture Balance.

7. DRT : Best grade according to soil droughtiness.

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

MREL : Microrelief limitation FLOOD : Flood risk EROSN : Soil erosion risk EXP : Exposure limitation FROST : Frost
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 : Soil Erosion Risk WD : Combined 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
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 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

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

6. STONE LITH : One of the following is used.

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

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

7. 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  VC : very coarse

- ped shape  S : single grain  M : massive  GR : granular  AB : angular blocky  SAB : sub-angular blocky  PR : prismatic
PL : platy

8. 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

9. SUBS STR : Subsoil structural condition recorded for the purpose of calculating profile droughtiness.

G : good  M : moderate  P : poor

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

11. IMP : If the profile is impenetrable a 'Y' will appear in this column at the appropiate horizon.

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

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

14. 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 : AREA 1, BILLINGSHURST  Pit Number : 1P

Grid Reference: TQ07842578
Average Annual Rainfall : 787 mm
Accumulated Temperature : 1501 degree days
Field Capacity Level : 165 days
Land Use : Cereals
Slope and Aspect : 01 degrees N

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | MOTTLES | STRUCTURE |
|---|---|---|---|---|---|---|
| 0- 26 | HCL | 25Y 53 00 | 0 | 1 | | |
| 26- 65 | C | 25Y 73 63 | 0 | 0 | M | MDCAB |

Wetness Grade : 3B
Wetness Class : IV
Gleying :026 cm
SPL :026 cm

Drought Grade :
APW : mm MBW : 0 mm
APP : mm MBP : 0 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : AREA 1, BILLINGSHURST  Pit Number : 2P

Grid Reference: TQ08112544
Average Annual Rainfall : 787 mm
Accumulated Temperature : 1501 degree days
Field Capacity Level : 165 days
Land Use : Permanent Grass
Slope and Aspect : degrees

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | MOTTLES | STRUCTURE |
|---|---|---|---|---|---|---|
| 0- 28 | MCL | 10YR44 00 | 0 | 0 | | |
| 28- 44 | MCL | 10YR54 00 | 0 | 0 | | MDCSAB |
| 44- 68 | MCL | 10YR72 00 | 0 | 0 | C | MDCSAB |
| 68- 80 | LMS | 25Y 53 00 | 0 | 0 | C | MDCSAB |
| 80-120 | LMS | 25Y 63 00 | 0 | 0 | C | MDCAB |

Wetness Grade : 1
Wetness Class : I
Gleying :044 cm
SPL : No SPL

Drought Grade : 2
APW : 131mm MBW : 116 mm
APP : 18 mm MBP : 8 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : AREA 1, BILLINGSHURST  Pit Number : 3P

Grid Reference: TQ08032492
Average Annual Rainfall : 787 mm
Accumulated Temperature : 1501 degree days
Field Capacity Level : 165 days
Land Use : Permanent Grass
Slope and Aspect : degrees

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | MOTTLES | STRUCTURE |
|---|---|---|---|---|---|---|
| 0- 36 | HCL | 10YR53 00 | 0 | 0 | C | |
| 36- 70 | C | 25Y 62 00 | 0 | 0 | M | WKCSAB |

Wetness Grade : 3B
Wetness Class : IV
Gleying :0 cm
SPL :036 cm

Drought Grade :
APW : mm MBW : 0 mm
APP : mm MBP : 0 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Wetness

| SAMPLE NO. | GRID REF | USE | ASPECT | GRDNT | GLEY | SPL | --WETNESS-- CLASS | GRADE | -WHEAT- AP | MB | -POTS- AP | MB | M.REL DRT | FLOOD | EROSN EXP | FROST DIST | CHEM LIMIT | ALC | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | TQ08902650 | CER | S | 01 | 029 | 029 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 1P | TQ07842578 | CER | N | 01 | 026 | 026 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | PIT 65 |
| 2 | TQ08602640 | RGR | S | 01 | 0 | 038 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 2P | TQ08112544 | PGR | | | 044 | | 1 | 1 | 131 | 116 | 18 | 8 | 2 | | | | DR | 2 | |
| 3 | TQ08672640 | CER | S | 01 | 027 | 027 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 3P | TQ08032492 | PGR | | | 0 | 036 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 5 | TQ08402630 | RGR | NE | 01 | 0 | 042 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 6 | TQ08502630 | RGR | NE | 01 | 028 | | 2 | 3A | | 0 | | 0 | | | | | WE | 3A | |
| 7 | TQ08202620 | PGR | W | 01 | 0 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 8 | TQ08302620 | PGR | W | 04 | 0 | | 2 | 3A | | 0 | | 0 | | | | | WE | 3A | |
| 9 | TQ08102610 | PGR | N | 01 | 0 | 048 | 3 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 11 | TQ08002600 | PGR | | | 0 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 12 | TQ08102600 | PGR | | | 0 | 050 | 3 | 3A | | 0 | | 0 | | | | | WE | 3A | |
| 13 | TQ08202600 | PGR | | | 0 | 025 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 14 | TQ07802590 | PLO | N | 02 | 035 | 048 | 3 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 15 | TQ07902590 | PLO | N | 02 | 026 | 026 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 16 | TQ08002590 | PLO | N | 02 | 038 | 038 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 17 | TQ08102590 | CER | N | 02 | 035 | 058 | 3 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 18 | TQ08202590 | PGR | N | 02 | 028 | 075 | 2 | 2 | 142 | 29 | 118 | 10 | 2 | | | | WE | 2 | |
| 19 | TQ07702580 | CER | SW | 02 | 025 | 025 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 20 | TQ07802580 | CER | W | 02 | 025 | 025 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 21 | TQ07902580 | CER | N | 03 | 025 | 040 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 22 | TQ08002580 | CER | N | 02 | 0 | 025 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 23 | TQ08102580 | CER | E | 02 | 038 | 038 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 25 | TQ07712574 | CER | SW | 02 | 028 | 035 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 26 | TQ07802574 | CER | SW | 02 | 025 | 038 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 27 | TQ07922572 | CER | SW | 01 | 035 | 042 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 28 | TQ08002570 | CER | SW | 01 | 038 | 042 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 31 | TQ07802560 | PGR | | | 0 | 042 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 32 | TQ07902560 | PGR | SE | 02 | 0 | 045 | 3 | 3A | | 0 | | 0 | | | | | WE | 3A | BDR 3BWE |
| 33 | TQ08002560 | PGR | S | 02 | 028 | 028 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 34 | TQ08102560 | PGR | S | 02 | 0 | 044 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | BDR 3AWE |
| 35 | TQ07802550 | PGR | S | 02 | 0 | 040 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 36 | TQ07902550 | PGR | S | 02 | 0 | 040 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 37 | TQ08002550 | PGR | S | 02 | 0 | 044 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | BDR 3AWE |
| 38 | TQ08102550 | PGR | | | | | 1 | 1 | 132 | 19 | 111 | 3 | 2 | | | | DR | 2 | |
| 39 | TQ08202550 | PGR | E | 05 | 0 | 046 | 3 | 3A | 131 | 18 | 108 | 0 | 2 | | | | WE | 3A | |
| 40 | TQ07802540 | PGR | S | 02 | 0 | 025 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 41 | TQ07902540 | PGR | S | 02 | 0 | 028 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 42 | TQ08002540 | PGR | S | 02 | 0 | 058 | 3 | 3A | | 0 | | 0 | | | | | WE | 3A | |
| 43 | TQ08102540 | PGR | | | | | 1 | 1 | 134 | 21 | 113 | 5 | 2 | | | | DR | 2 | |
| 44 | TQ08202540 | PGR | | | 045 | | 1 | 1 | 144 | 31 | 113 | 5 | 2 | | | | DR | 2 | |

| SAMPLE NO. | GRID REF | USE | ASPECT | GRDNT | GLEY | SPL | --WETNESS-- CLASS | GRADE | -WHEAT- AP | MB | -POTS- AP | MB | M.REL DRT | FLOOD | EROSN EXP | FROST DIST | CHEM LIMIT | ALC | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | TQ07802530 | PGR | W | 02 | 0 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 46 | TQ07902530 | PGR | | | 0 | 045 | 3 | 3A | | 0 | | 0 | | | | | WE | 3A | BDR 3BWE |
| 47 | TQ08002530 | PGR | | | 0 | 035 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 48 | TQ08102530 | PGR | | | 035 | 035 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 49 | TQ08202532 | PGR | | | 020 | 040 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 50 | TQ08302533 | PGR | | | 025 | 035 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 51 | TQ07802520 | PGR | | | 0 | 035 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 52 | TQ07902520 | PGR | | | 030 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 53 | TQ08002520 | PGR | | | 030 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 54 | TQ08102520 | PGR | | | 020 | 020 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 57 | TQ07902510 | PGR | | | 025 | 040 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 58 | TQ08002510 | PGR | | | 025 | 025 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 59 | TQ08102510 | PGR | | | 030 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 61 | TQ07902500 | PGR | | | 035 | 035 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 62 | TQ08002500 | PGR | | | 0 | 035 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 63 | TQ08102500 | PGR | | | 0 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 64 | TQ08002490 | PGR | | | 0 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 65 | TQ08102490 | PGR | | | 020 | 020 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 66 | TQ08302490 | PGR | N | | 0 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 67 | TQ08002480 | PGR | N | 01 | 028 | 028 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 68 | TQ08102480 | PGR | N | 01 | 0 | 028 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 69 | TQ08202480 | PGR | N | | 0 | 038 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 70 | TQ07982468 | PGR | | | 025 | 030 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 71 | TQ08102470 | PGR | N | | 020 | 040 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 72 | TQ08202470 | PGR | N | 01 | 025 | 025 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 73 | TQ08002460 | PGR | | | 035 | 035 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 74 | TQ08002450 | PGR | | | 038 | 038 | 4 | 3B | | 0 | | 0 | | | | | WE | 3B | |

| SAMPLE | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUN | MOTTLES CONT | PED COL. | GLEY | STONES >2 | STONES >6 | STONES LITH | STONES TOT | STRUCT/ CONSIST | SUBS STR | SUBS POR | SUBS IMP | SUBS SPL | SUBS CALC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0-29 | hcl | 10YR54 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 29-60 | c | 10YR64 00 | 75YR56 00 | C | | 10YR73 00 | Y | 0 | 0 | | 0 | | P | | | Y | |
| | 60-80 | c | 10YR63 00 | 75YR58 00 | M | | 10YR71 00 | Y | 0 | 0 | | 0 | | P | | | Y | |
| 1P | 0-26 | hcl | 25Y 53 00 | | | | | | 0 | 0 | HR | 1 | | | | | | |
| | 26-65 | c | 25Y 73 63 | 75YR58 00 | M | | | Y | 0 | 0 | | 0 | MDCAB VM | P | | Y | | Y |
| 2 | 0-30 | mcl | 10YR52 00 | 75YR46 00 | C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-38 | hcl | 10YR63 00 | 75YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 38-70 | c | 10YR63 00 | 75YR58 00 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | | P | | Y | | Y |
| 2P | 0-28 | mcl | 10YR44 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 28-44 | mcl | 10YR54 00 | | | | | | 0 | 0 | | 0 | MDCSAB FR | M | | | | |
| | 44-68 | mcl | 10YR72 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | MDCSAB FR | M | | | | |
| | 68-80 | lms | 25Y 53 00 | 10YR58 61 | C | | | Y | 0 | 0 | | 0 | MDCSAB FR | G | | | | |
| | 80-120 | lms | 25Y 63 00 | 10YR58 61 | C | | | Y | 0 | 0 | | 0 | MDCAB FM | M | | | | |
| 3 | 0-27 | hcl | 10YR43 53 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 27-60 | c | 10YR63 00 | 75YR58 00 | C | | 25 Y72 00 | Y | 0 | 0 | | 0 | | P | | Y | | Y |
| 3P | 0-36 | hcl | 10YR53 00 | 10YR56 00 | C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 36-70 | c | 25Y 62 00 | 75YR56 58 | M | | 00MN00 00 | Y | 0 | 0 | | 0 | WKCSAB FM | P | | Y | | Y |
| 5 | 0-33 | hcl | 10YR52 53 | 75YR46 00 | C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 33-42 | c | 25 Y63 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 42-65 | c | 10YR63 00 | 75YR68 00 | M | | 10YR7? 00 | Y | 0 | 0 | | 0 | | P | | Y | | Y |
| 6 | 0-28 | hcl | 10YR53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 28-120 | c | 25 Y63 73 | 75YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| 7 | 0-30 | mzcl | 25 Y63 00 | 75YR56 00 | C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-65 | zc | 25 Y73 00 | 10YR58 00 | M | | 10YR71 00 | Y | 0 | 0 | | 0 | | P | | Y | | Y |
| 8 | 0-32 | hcl | 10YR53 00 | 10YR58 00 | C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 32-55 | hzcl | 10YR53 54 | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 55-60 | hzcl | 10YR54 53 | 00MN00 00 | C | | | | 0 | 0 | | 0 | | M | | | | |
| | 60-120 | hzcl | 10YR53 00 | 75YR46 00 | C | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |
| 9 | 0-35 | hcl | 25Y 53 00 | 10YR56 00 | C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 35-48 | hcl | 25Y 63 64 | 75YR58 00 | C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 48-70 | c | 25Y 63 00 | 75YR58 00 | M | | | Y | 0 | 0 | | 0 | | P | | Y | | Y |
| 11 | 0-30 | mcl | 25Y 53 00 | 75YR46 00 | C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-60 | c | 25Y 63 71 | 75YR46 00 | M | | | Y | 0 | 0 | | 0 | | P | | Y | | Y |
| 12 | 0-28 | mcl | 25Y 42 00 | 75YR46 00 | C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 28-50 | mcl | 25Y 64 00 | 75YR46 00 | M | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 50-70 | c | 25Y 71 00 | 05YR58 00 | M | | | Y | 0 | 0 | | 0 | | P | | Y | | Y |

| SAMPLE | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUN | MOTTLES CONT | PED COL. | GLEY | STONES >2 | STONES >6 | STONES LITH | STONES TOT | STRUCT/ CONSIST | SUBS STR | SUBS POR | SUBS IMP | SUBS SPL | SUBS CALC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 0-25 | mcl | 25Y 43 00 75YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 25-60 | c | 25Y 63 71 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 14 | 0-35 | hcl | 10YR53 00 | | | | | | 0 | 0 | HR | 1 | | | | | | |
| | 35-48 | c | 10YR63 00 10YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 48-70 | c | 25Y 63 00 10YR58 71 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 15 | 0-26 | mcl | 25Y 53 00 | | | | | | 0 | 0 | HR | 1 | | | | | | |
| | 26-60 | c | 25 Y63 00 75YR46 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 16 | 0-28 | mcl | 25Y 53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 28-38 | hcl | 25Y 43 00 10YR58 00 C | | | | OOMNOO 00 | | 0 | 0 | | 0 | | M | | | | |
| | 38-60 | c | 25Y 63 00 10YR58 72 M | | | | OOMNOO 00 | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 17 | 0-35 | hcl | 25Y 53 00 | | | | | | 0 | 0 | HR | 1 | | | | | | |
| | 35-58 | c | 25Y 53 54 75YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 58-80 | c | 25Y 63 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 18 | 0-28 | mcl | 25Y 53 00 10YR56 00 F | | | | | | 0 | 0 | | 0 | | | | | | |
| | 28-75 | hcl | 25Y 63 64 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 75-120 | c | 25Y 62 63 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 19 | 0-25 | hcl | 25Y 53 00 10YR56 00 F | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-45 | c | 25Y 53 54 75YR56 00 C | | | | OOMNOO 00 | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| | 45-80 | c | 25Y 62 63 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 20 | 0-25 | hcl | 25Y 53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-120 | c | 25Y 63 00 05YR46 00 M | | | | OOMNOO 00 | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 21 | 0-25 | hcl | 25Y 53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-40 | c | 25Y 63 64 75YR56 00 C | | | | OOMNOO 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 40-70 | c | 25Y 63 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 22 | 0-25 | c | 25Y 53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 25-70 | c | 25Y 62 63 75YR56 58 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 23 | 0-30 | hcl | 25Y 53 00 10YR56 00 F | | | | | | 0 | 0 | | 0 | | | | | | |
| | 30-38 | hcl | 25Y 54 00 | | | | OOMNOO 00 | | 0 | 0 | | 0 | | M | | | | |
| | 38-120 | c | 25Y 63 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 25 | 0-28 | hcl | 25Y 53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 28-35 | c | 25Y 63 64 75YR56 00 C | | | | OOMNOO 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 35-80 | c | 25Y 63 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 26 | 0-25 | hcl | 25Y 53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-38 | c | 25Y 63 64 75YR56 00 C | | | | | Y | 0 | 0 | FSST | 5 | | M | | | | |
| | 38-80 | c | 25Y 63 00 75YR58 00 M | | | | | Y | 0 | 0 | FSST | 5 | | P | Y | | Y | |

| SAMPLE | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUN | MOTTLES CONT | PED COL. | GLEY | STONES >2 | STONES >6 | STONES LITH | STONES TOT | STRUCT/ CONSIST | SUBS STR | SUBS POR | SUBS IMP | SUBS SPL | SUBS CALC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 0-25 | hcl | 25Y 53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-35 | c | 25Y 54 00 | | | | 00MN00 00 | | 0 | 0 | | 0 | | M | | | | |
| | 35-42 | c | 25Y 63 00 75YR56 00 C | | | | | Y | 0 | 0 | FSST | 5 | | M | | | | |
| | 42-80 | c | 25Y 62 63 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 28 | 0-25 | hcl | 25Y 53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-38 | c | 25Y 54 00 | | | | 00MN00 00 | | 0 | 0 | | 0 | | M | | | | |
| | 38-42 | c | 25Y 63 00 75YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 42-70 | c | 25Y 63 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 31 | 0-28 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 28-42 | hcl | 10YR53 00 75YR56 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 42-80 | c | 05Y 62 00 75YR56 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 32 | 0-25 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 25-45 | mcl | 25Y 63 00 75YR56 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 45-80 | c | 25Y 62 63 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 33 | 0-28 | hcl | 10YR42 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 28-70 | c | 05Y 72 00 75YR56 00 M | | | | | Y | 0 | 0 | FSST | 2 | | P | Y | | Y | |
| 34 | 0-28 | mcl | 10YR42 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 28-44 | hcl | 25Y 54 00 10YR56 00 F | | | | | | 0 | 0 | | 0 | | M | | | | |
| | 44-80 | c | 05Y 72 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 35 | 0-30 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-40 | hcl | 25Y 64 00 75YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 40-70 | c | 05Y 72 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 36 | 0-28 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 28-40 | hcl | 25Y 64 00 75YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 40-70 | c | 05Y 72 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 37 | 0-30 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-44 | mcl | 25Y 63 00 75YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 44-70 | c | 25Y 62 00 75YR58 00 C | | | | 05YR54 00 | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 38 | 0-30 | mcl | 10YR43 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 30-45 | hcl | 10YR44 00 | | | | | | 0 | 0 | FSST | 10 | | M | | | | |
| | 45-120 | c | 75YR56 00 | | | | | | 0 | 0 | FSST | 20 | | M | | | | |
| 39 | 0-30 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-46 | c | 25Y 64 00 75YR58 00 C | | | | | Y | 0 | 0 | FSST | 15 | | M | | | | |
| | 46-120 | c | 05Y 72 00 05YR46 56 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 40 | 0-25 | hcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 25-70 | c | 05YR54 00 25Y 62 00 C | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |

| SAMPLE | DEPTH | TEXTURE | COLOUR | ----MOTTLES----- COL | ABUN | CONT | PED COL. | GLEY | ----STONES---- >2 | >6 | LITH | TOT | STRUCT/ CONSIST | SUBS STR | POR | IMP | SPL | CALC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 41 | 0-28 | hcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 28-60 | c | 05Y 72 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 42 | 0-28 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 28-45 | mcl | 25Y 54 00 | | | | | | 0 | 0 | | 0 | | M | | | | |
| | 45-58 | hcl | 25Y 64 00 75YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 58-80 | c | 05Y 72 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 43 | 0-28 | mcl | 10YR53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 28-48 | mcl | 10YR43 00 | | | | | | 0 | 0 | | 0 | | M | | | | |
| | 48-120 | c | 10YR56 00 | | | | | | 0 | 0 | FSST | 20 | | M | | | | |
| 44 | 0-28 | mcl | 10YR42 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 28-45 | mcl | 10YR54 00 | | | | | | 0 | 0 | | 0 | | M | | | | |
| | 45-60 | hcl | 25Y 62 00 10YR56 00 C | | | | | Y | 0 | 0 | FSST | 10 | | M | | | | |
| | 60-120 | hcl | 25Y 72 00 10YR56 00 C | | | | | Y | 0 | 0 | FSST | 25 | | M | | | | |
| 45 | 0-30 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-60 | c | 05Y 72 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 46 | 0-28 | mcl | 10YR53 00 10YR56 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 28-45 | hcl | 25Y 64 00 75YR56 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 45-70 | c | 05Y 72 00 75YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 47 | 0-25 | hcl | 10YR53 00 10YR58 61 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 25-35 | c | 10YR53 00 10YR58 61 C | | | | 00MN00 00 | Y | 0 | 0 | | 0 | | M | | | | |
| | 35-70 | c | 10YR63 00 10YR78 71 M | | | | 00MN00 00 | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 48 | 0-25 | mcl | 10YR43 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-35 | hcl | 10YR56 00 10YR58 00 C | | | | | | 0 | 0 | | 0 | | M | | | | |
| | 35-70 | c | 10YR62 00 10YR58 00 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 49 | 0-20 | hcl | 10YR43 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 20-40 | hcl | 10YR52 00 10YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 40-70 | c | 10YR52 00 10YR58 61 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 50 | 0-25 | hcl | 10YR43 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-35 | zc | 10YR42 00 10YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 35-70 | c | 10YR52 00 10YR58 61 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 51 | 0-20 | hcl | 10YR42 00 10YR58 00 C | | | | | Y | 0 | 0 | | 0 | | | | | | |
| | 20-35 | hcl | 10YR53 00 10YR58 00 C | | | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 35-70 | c | 10YR63 00 10YR58 61 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 52 | 0-30 | hcl | 10YR43 00 10YR58 61 C | | | | | | 0 | 0 | | 0 | | | | | | |
| | 30-70 | c | 10YR52 00 10YR58 61 M | | | | 00MN00 00 | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 53 | 0-30 | hcl | 10YR43 00 10YR58 00 C | | | | | | 0 | 0 | | 0 | | | | | | |
| | 30-70 | c | 10YR52 00 10YR58 61 M | | | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |

| SAMPLE | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUN | MOTTLES CONT | PED COL. | GLEY | STONES >2 | STONES >6 | STONES LITH | STONES TOT | STRUCT/ CONSIST | SUBS STR | SUBS POR | SUBS IMP | SUBS SPL | SUBS CALC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 | 0-20 | hcl | 10YR43 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 20-50 | c | 10YR53 00 | 10YR58 | 61 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| | 50-70 | c | 75YR63 00 | 75YR68 | 72 M | | 00MN00 | 00 Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 57 | 0-25 | hcl | 10YR53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-40 | c | 10YR52 00 | 10YR58 | 00 C | | 00MN00 | 00 Y | 0 | 0 | | 0 | | M | | | | |
| | 40-70 | c | 10YR63 00 | 10YR78 | 71 M | | 00MN00 | 00 Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 58 | 0-25 | hcl | 10YR43 00 | 10YR58 | 00 C | | | | 0 | 0 | | 0 | | | | | | |
| | 25-35 | c | 10YR52 00 | 10YR58 | 61 C | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| | 35-70 | c | 10YR51 00 | 10YR78 | 00 M | | 00MN00 | 00 Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 59 | 0-30 | hcl | 10YR43 00 | 10YR58 | 00 C | | | | 0 | 0 | | 0 | | | | | | |
| | 30-70 | c | 10YR63 00 | 10YR78 | 71 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 61 | 0-35 | hcl | 10YR43 00 | 10YR58 | 00 C | | | | 0 | 0 | | 0 | | | | | | |
| | 35-70 | c | 10YR64 00 | 10YR78 | 71 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 62 | 0-35 | hcl | 10YR53 00 | 10YR58 | 00 C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 35-70 | c | 10YR63 00 | 10YR78 | 71 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 63 | 0-30 | hcl | 10YR52 00 | 10YR58 | 61 C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-70 | c | 10YR63 00 | 10YR78 | 71 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 64 | 0-30 | hcl | 10YR52 00 | 10YR58 | 61 C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 30-70 | c | 10YR63 00 | 10YR78 | 71 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 65 | 0-20 | hcl | 10YR43 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 20-70 | c | 10YR42 00 | 10YR58 | 61 C | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 66 | 0-20 | hcl | 25Y 53 00 | 10YR56 | 00 C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 20-30 | c | 25Y 64 00 | 75YR58 | 00 C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 30-60 | c | 25Y 62 63 | 75YR58 | 00 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 67 | 0-28 | hcl | 25Y 53 00 | 75YR58 | 00 F | | | | 0 | 0 | HR | 2 | | | | | | |
| | 28-60 | c | 25Y 63 00 | 75YR58 | 00 M | | | Y | 0 | 0 | HR | 2 | | P | Y | | Y | |
| 68 | 0-28 | hcl | 25Y 53 00 | 75YR58 | 00 C | | | Y | 0 | 0 | HR | 5 | | | | | | |
| | 28-60 | c | 25Y 63 00 | 75YR46 | 00 M | | | Y | 0 | 0 | HR | 2 | | P | Y | | Y | |
| 69 | 0-25 | hcl | 25Y 53 00 | 10YR56 | 00 C | | | Y | 0 | 0 | | 0 | | | | | | |
| | 25-38 | hcl | 25Y 63 00 | 75YR56 | 00 C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 38-70 | c | 25Y 62 00 | 75YR58 | 00 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 70 | 0-25 | hcl | 10YR53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-30 | hcl | 10YR53 00 | 75YR56 | 00 C | | | Y | 0 | 0 | | 0 | | M | | | | |
| | 30-70 | c | 25Y 62 00 | 75YR56 | 00 M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71 | 0-20 | hcl | 10YR43 53 | | | | | | 0 | 0 | HR | 2 | | | | | | |
| | 20-40 | c | 10YR53 00 | 10YR58 00 | C | | 10YR71 00 | Y | 0 | 0 | | 0 | | P | Y | | | |
| | 40-70 | c | 25 Y63 00 | 10YR58 00 | M | | 25 Y72 00 | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 72 | 0-25 | hcl | 25 Y53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 25-65 | c | 25 Y64 00 | 10YR58 00 | M | | 75YR68 00 | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 73 | 0-35 | hcl | 10YR53 00 | | | | | | 0 | 0 | | 0 | | | | | | |
| | 35-70 | c | 25Y 62 63 | 75YR58 00 | M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |
| 74 | 0-38 | hcl | 10YR53 00 | | | | | | 0 | 0 | FSST | 5 | | | | | | |
| | 38-70 | c | 25Y 62 00 | 75YR58 00 | M | | | Y | 0 | 0 | | 0 | | P | Y | | Y | |