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Bognor Regis By-Pass
Reconnaissance Survey
Agricultural Land Classification
Report
March 1994

AGRICULTURAL LAND CLASSIFICATION REPORT

BOGNOR REGIS BY-PASS
RECONNAISSANCE SURVEY

1. Summary

1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to determine the quality of land affected by proposals for the Bognor Regis By-Pass. An Agricultural Land Classification (ALC) survey was carried out during March 1994 on an area of land coincident with the three alternative routes being considered by West Sussex County Council.

1.2 The survey was conducted by members of the Resource Planning Team, Guildford Statutory Group. Most of the area was surveyed at a reconnaissance level of survey with approximately one soil observation every 4 hectares. Some of the land immediately adjacent to Bognor Regis was surveyed at a detailed level of one boring per hectare because, as a separate exercise, it is being considered by Arun District Council in association with the Arun District Local Plan. This land is shown hatched on the attached ALC plan. Three of these four Arun Local Plan areas had been partially or wholly surveyed previously during 1988 and so were not re-surveyed. The attached ALC plan is therefore a composite of 1988 and 1994 survey information.

1.3 The land was graded 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 long term limitations on its use for agriculture.

1.4 The distribution of grades, subgrades and land-uses is shown on the attached ALC map and the areas and extent are given in the table below. The grade boundaries are shown as dotted to indicate a reconnaissance survey, whilst solid lines denote a detailed survey. The map has been drawn at a scale of 1:25,000. It is accurate at this scale, but any enlargement may be misleading. This map supersedes any previous ALC information for the site.

Table 1 : Distribution of Grades and Subgrades

Grade	Area (ha)	% of Agricultural Land
1	204.3	27.5
2	309.6	41.7
3b	228.2	30.8
Total agricultural area	742.1	100
Urban	27.0	
Non-Agricultural	62.3	
Agricultural Buildings	8.0	
Not Surveyed *	27.9	
Total survey area	867.3 ha	

* Some land was not surveyed due to difficulties in obtaining permission to enter onto the land.

1.5 The overlay accompanying the ALC map illustrates the location of each alternative route option relative to the area surveyed, and gives a breakdown of the ALC grades traversed by each route option.

1.6 A general description of the grades and land use categories identified in the survey is provided as an appendix. The grades 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 The area surveyed represents relatively low lying, flat land on the coastal plain of West Sussex. Across much of the area, soils have developed in deposits of brickearth, whilst alluvial deposits flank the major watercourses (or rifes). Deep, well drained silty soils coincide with the brickearth deposits, in contrast to the deep, poorly drained clayey soils which are derived from alluvium. The classification of the land is very much dependent upon this correlation between the geology, topography and soils of the area. Grade 1 and 2, excellent or very good quality land corresponds with deep, freely draining silty soils, which may be slightly restricted in their agricultural use by soil wetness and/or droughtiness. Grade 3b is mapped where poorly drained clayey soils give rise to soil wetness and workability restrictions. This slightly lower lying land may also be flood prone.

2. Climate

2.1 Estimates of climatic variables relevant to the assessment of agricultural land quality were obtained by interpolation from a 5km grid point dataset (Met. Office, 1989) for representative locations in the survey area.

Table 2 : Climatic Interpolations

Grid Reference	SU928029	SU943021	SU960015
Altitude (m)	5	2	2
Accumulated Temperature (degree days, Jan-June)	1544	1547	1547
Average Annual Rainfall (mm)	758	748	740
Field Capacity (days)	155	152	150
Moisture Deficit, Wheat (mm)	119	120	121
Moisture Deficit, Potatoes (mm)	116	117	118
Overall Climatic Grade	1	1	1

2.2 Climatic factors are considered first when classifying land since climate can be overriding in the sense that adverse climatic conditions may restrict land quality irrespective of favourable site and soil conditions. The details in the table above show that there is no overall climatic limitation affecting this site. Part of the area surveyed may be slightly exposed (Met. Office, 1969, unpublished Meteorological Survey of West Sussex and South-East Hampshire) but on site inspection this was not felt to be significant in terms of agricultural land quality.

2.3 However, climatic factors do interact with soil factors to influence soil wetness and droughtiness limitations. At this locality, soil moisture deficits are relatively high, in a national context, as a result of the coastal influence. The likelihood of restrictions associated with soil droughtiness may therefore be enhanced. The boundary between 150 and 151 field capacity days crosses the southern part of the area surveyed. This is important in terms of the assessment of soil wetness, particularly where topsoils are calcareous. At this locality topsoils are generally non-calcareous, so the boundary is less significant, but was considered in the ALC grading of the site.

3. Relief

3.1 The area surveyed occupies relatively flat land on the West Sussex coastal plain. It ranges in altitude from 2-5 metres, with land lying slightly lower adjacent to the main watercourses (or rifes) which dissect the area. None of the land surveyed is restricted in its agricultural potential by relief or gradient. The lower lying parts of the site may be subject to a risk of flooding.

4. Geology and Soil

4.1 The British Geological Survey (1975), Sheet 332, Bognor shows the majority of the area surveyed to be underlain by deposits of brickearth, which in turn overlie Cretaceous Upper Chalk. Alluvial deposits are mapped in conjunction with the major watercorses, ie, Aldingbourne Rife, Ryebank Rife and Lidsey Rife, extending approximately 300-400 metres either side of these large drains.

4.2 The published soils map for the area, (Soil Survey of England and Wales (1967) Sheet SU90), shows a complex pattern of soil series to have developed which closely reflect the underlying geology as described in para. 4.1.
Soils of the Arundel complex, groundwater gleys, have been mapped in association with alluvial deposits. The Hook, Park Gate, and to a lesser extent, Hamble series have been mapped where brickearth deposits occur. The deep phases of each of these series are the most widespread, with smaller units of shallow phase over loamy pebbly drift or shallow phase over calcareous subsoils having been mapped. Hook soils are described as, 'stoneless, occasionally waterlogged, silty brown earths', (SSEW, 1984), whilst Hamble are described similarly but as 'well drained'. Park Gate soils are described as, 'deep stoneless and silty, affected by seasonally high groundwater with mottled subsoils', (SSEW, 1984).

4.3 Detailed examination of the soils in the survey area broadly confirms the distribution of soils as described by the Soil Survey. In general terms deep silty soils which may be affected by slight seasonal waterlogging were found to occur across much of the area. Occasionally, calcareous subsoils were encountered. Deep, heavy textured and poorly drained soils were found on the slightly lower lying land adjacent to the rifes.

5. 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 and inspection pits are shown on the attached sample point map.

Grade 1

5.3 Excellent quality agricultural land has been mapped across about one quarter of the agricultural land surveyed. It has no or very minor limitations to its agricultural use and as such is capable of supporting a very wide range of crops, including the most demanding horticultural crops. Yields will be consistently high. Profiles typically comprise non-calcareous medium silty clay loam, or more usually silt loam topsoils which may contain 0-2% total flints by volume. These overlie silty clay loam subsoils which generally become heavier with depth and may pass to clay or silty clay deep in the profile. Profiles tend to be only very slightly stony (ie, 1-5% total flints), but may become chalky and calcareous in the lower subsoil. The profiles are permeable, but may be affected by slight soil wetness, as indicated by gleying below 40 cm caused by a fluctuating groundwater table. Given the prevailing climate, such a drainage status equates to Wetness Class I. Although the climate is relatively warm and dry at this locality and crop adjusted moisture deficits are therefore high, these deep silty soils have good reserves of available water for plant growth. There is little or no drought risk as a result.

The interaction of these soil characteristics as described above, with climatic factors, gives rise to land which has no or very minor restrictions on its use for agriculture.

Grade 2

5.4 The majority of the agricultural land surveyed has been assigned to this grade, very good quality land. Profiles are essentially similar to those described above in para 5.3, the difference being that soils are slightly heavier and/or more stony. As such the land is affected by minor soil wetness and/or soil droughtiness limitations.

Where minor soil droughtiness affects land quality, topsoils of medium silty clay loam, rather than silt loam, overlie similarly textured upper subsoils, passing to heavy silty clay loam lower subsoils and clay or silty clay at depth. The slightly higher clay content in these profiles, when combined with high moisture deficit values, is sufficient to impart a minor restriction on profile available water. Profiles with calcareous lower subsoils containing 5-30% total chalk stones may also cause the land to be slightly droughty and are therefore included in this mapping unit. Inadequate reserves of profile available water may cause plants to suffer drought stress for all or part of the growing season. Crop yields may be slightly depressed as a result.

Land affected by minor soil wetness comprises deep silty clay loam soils similar to those described above, which commonly pass to clay or silty clay in the lower subsoil. Gleying is evident within 40 cm of the surface but subsoils were not found to be slowly permeable. The slight soil wetness which the gleying reflects is caused by a fluctuating groundwater table. Wetness Class II is thereby appropriate and the flexibility of the land may be slightly restricted.

Despite these slight limitations, this land is capable of supporting a wide range of arable and horticultural crops whose yields are high but more variable than for Grade 1 land.

Subgrade 3b

5.5 Moderate quality land accounts for approximately one third of the agricultural land surveyed. It is associated with alluvial deposits across the slightly lower lying parts of the site, adjacent to the major watercourses.

Profiles typically comprise non-calcareous medium or heavy silty clay loam or heavy clay loam topsoils which may be very slightly stony, (ie, 1-2% total flints by volume) and are commonly gleyed. These overlie prominently gleyed, grey and ochreous clay or silty clay which was found to be of low porosity, coarse structure and slowly permeable. Drainage is therefore severely impeded such that Wetness Class IV, (or occasionally III), is appropriate. The land is affected by significant soil wetness and workability limitations. Crop growth and development will be adversely affected by prolonged soil wetness and the opportunities for cultivations and grazing by livestock will be severely restricted. These heavy, poorly drained soils will be slow to return to a

workable condition after wetting and may be prone to structural damage if worked when too wet.

Information obtained from the National Rivers Authority at Worthing suggests that this slightly lower lying land may also be prone to flooding. If flooding does occur, the heavy nature of the soils will impede natural drainage and cause the land to lie wet for considerable lengths of time, leading to problems with the utilisation of the land. At the time of survey, it was evident that in the recent past, episodes of flooding had caused considerable crop damage and failure and reduced the workability of the land.

ADAS Ref: 4202/50/94
MAFF Ref: EL42/520

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1975), Sheet No. 332, Bognor, 1:50,000 (Drift Edition).

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

Meteorological Office (1969), Meteorological Survey of West Sussex and South-East Hampshire, unpublished.

Meteorological Office (1989), Climatological Data for Agricultural Land Classification.

Soil Survey of England and Wales (1967), Sheet SU90, Bognor Regis, 1:25,000.

Soil Survey of England and Wales (1983), Sheet No.6, Soils of South East England, 1:250,000, and accompanying legend.

Soil Survey of England and Wales (1984), Bulletin No. 15, Soils and their use in South-East England.

Soil Survey of Great Britain (1967), Bulletin No.3, Soils of the West Sussex Coastal Plain.

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 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 (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 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 including: housing, industry, commerce, education, transport, religous buildings, cemetries. 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. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

Woodland

Includes commercial and non-commercial woodland. A distinction may be made as necessary between farm and non-farm 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

FIELD ASSESSMENT OF SOIL WETNESS CLASS

SOIL WETNESS CLASSIFICATION

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.

Definition of Soil Wetness Classes

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.

Soils can be allocated to a wetness class on the basis of quantitative data recorded over a period of many years or by the interpretation of soil profile characteristics, site and climatic factors. Adequate quantitative data will rarely be available for ALC surveys and therefore the interpretative method of field assessment is used to identify soil wetness class in the field. The method adopted here is common to ADAS and the SSLRC.

[1]The number of days specified is not necessarily a continuous period.
[2]'In most years' is defined as more than 10 out of 20 years.

APPENDIX III

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 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. **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	**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. **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	**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).

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

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

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 appropiate 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 : BOGNOR REGIS BY-PASS Pit Number : 1P

Grid Reference: SU95700100
Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 25	MZCL	10YR42 00	0	0		
25- 43	MZCL	10YR64 00	0	0		MDCSAB
43- 63	HZCL	10YR64 00	0	0	C	MDCSAB
63- 95	ZC	10YR63 00	0	0	M	MDCSAB
95-120	ZC	10YR63 00	0	0	M	WKCSAB

Wetness Grade : 1
Wetness Class : I
Gleying :043 cm
SPL :095 cm

Drought Grade : 2
APW : 146mm MBW : 25 mm
APP : 123mm MBP : 5 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : BOGNOR REGIS BY-PASS Pit Number : 2P

Grid Reference: SU96000090
Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Bare Soil
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 30	ZL	10YR42 00	0	2		
30- 36	MZCL	10YR54 00	0	0		MDCSAB
36- 50	HZCL	10YR54 00	0	0	F	MDCSAB
50-120	C	10YR64 00	0	0	C	MDCSAB

Wetness Grade : 1
Wetness Class : I
Gleying :050 cm
SPL : No SPL

Drought Grade : 1
APW : 158mm MBW : 37 mm
APP : 134mm MBP : 16 mm

FINAL ALC GRADE : 1
MAIN LIMITATION :

SOIL PIT DESCRIPTION

Site Name : BOGNOR REGIS BY-PASS Pit Number : 3P

Grid Reference: SU95300170
Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Cereals
Slope and Aspect : 01 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 26	MZCL	10YR42 00	0	2		
26- 58	C	75YR54 56	0	0	F	MDCSAB
58-120	C	10YR64 00	0	0	C	MDCSAB

Wetness Grade : 1
Wetness Class : I
Gleying :058 cm
SPL : No SPL

Drought Grade : 2
APW : 143mm MBW : 22 mm
APP : 119mm MBP : 1 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : BOGNOR REGIS BY-PASS Pit Number : 4P

Grid Reference: SU95900170
Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 25	MZCL	10YR42 00	0	0		
25- 50	MZCL	10YR43 00	0	0		MDCSAB
50- 80	C	10YR44 00	0	0		MDVCSB
80-120	MZCL	10YR74 00	0	0	C	STMSAB

Wetness Grade : 1
Wetness Class : I
Gleying :080 cm
SPL : No SPL

Drought Grade : 2
APW : 162mm MBW : 41 mm
APP : 122mm MBP : 4 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : BOGNOR REGIS BY-PASS Pit Number : 5P

Grid Reference: SU92800180
Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use :
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 23	HCL	25Y 42 00	0	0		
23- 63	C	05GY64 00	0	0	P	MDCPL

Wetness Grade : 3B
Wetness Class : IV
Gleying :023 cm
SPL :023 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 : BOGNOR REGIS BY-PASS Pit Number : 6P

Grid Reference: SU92900190 Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Bare Soil
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 31	MZCL	10YR43 00	3	5		
31- 41	HZCL	10YR54 00	0	5		MCSAB
41- 65	C	10YR54 00	0	5		MCSAB
65-110	C	10YR54 56	0	1		MCSAB
110-120	MCL	10YR64 00	0	10		

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

Drought Grade : 2 APW : 146mm MBW : 25 mm
APP : 117mm MBP : -1 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : BOGNOR REGIS BY-PASS Pit Number : 7P

Grid Reference: SU91700270
Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Bare Soil
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 35	MZCL	10YR42 00	1	3		
35- 55	HZCL	10YR54 00	0	1		MCSAB
55- 92	HZCL	10YR56 00	0	1		MCSAB
92-120	HZCL	10YR62 00	0	5	C	MCSAB

Wetness Grade : 1
Wetness Class : I
Gleying :092 cm
SPL : No SPL

Drought Grade : 2
APW : 159mm MBW : 38 mm
APP : 124mm MBP : 6 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : BOGNOR REGIS BY-PASS Pit Number : 8P

Grid Reference: SU94000170
Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Bare Soil
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 30	ZL	10YR42 00	0	1		
30- 42	MZCL	10YR54 00	0	0	F	MDCSAB
42- 70	MZCL	10YR54 00	0	0	C	MDCSAB
70-115	HZCL	10YR54 00	0	0	C	MDCSAB
115-120	HZCL	10YR64 00	0	0	C	MDCSAB

Wetness Grade : 1
Wetness Class : I
Gleying :042 cm
SPL : No SPL

Drought Grade : 1
APW : 172mm MBW : 52 mm
APP : 136mm MBP : 19 mm

FINAL ALC GRADE : 1
MAIN LIMITATION :

SOIL PIT DESCRIPTION

Site Name : BOGNOR REGIS BY-PASS Pit Number : 9P

Grid Reference: SU94300190
Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Ley
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 28	MZCL	10YR42 00	1	2		
28- 40	MZCL	10YR53 00	0	1	C	MDCSAB
40- 56	HZCL	10YR53 00	0	1	C	MDCSAB
56-120	FSZL	10YR72 00	0	1	M	MDCSAB

Wetness Grade : 2
Wetness Class : II
Gleying :028 cm
SPL : No SPL

Drought Grade : 1
APW : 190mm MBW : 70 mm
APP : 128mm MBP : 11 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : BOGNOR REGIS BY-PASS Pit Number : 10P

Grid Reference: SU92000150 Average Annual Rainfall : 739 mm
Accumulated Temperature : 1546 degree days
Field Capacity Level : 150 days
Land Use : Bare Soil
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 34	ZL	10YR43 00	0	1	F	
34- 46	MZCL	10YR54 00	0	1	F	MDCSAB
46- 62	MZCL	10YR54 00	0	15	C	MDCSAB
62- 82	HCL	10YR54 00	0	1	C	MDCSAB
82-105	HZCL	10YR64 00	0	1	C	MDCSAB
105-120	MCL	10YR64 00	0	1	C	

Wetness Grade : 1 Wetness Class : I
Gleying :082 cm
SPL : No SPL

Drought Grade : 1 APW : 171mm MBW : 51 mm
APP : 134mm MBP : 17 mm

FINAL ALC GRADE : 1
MAIN LIMITATION :

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	M.REL DRT	EROSN FLOOD	FROST EXP	CHEM DIST	ALC LIMIT		COMMENTS
1	SU90700290	CER			0		2	2	157	39	121	6	2				WD	2	
1P	SU95700100	PGR			043	095	1	1	146	25	123	5	2				DR	2	ARUN LP, 12
2	SU90900290	CER			046		1	1	152	34	122	7	2				DR	2	
2P	SU96000090	PLO			050		1	1	158	37	134	16	1					1	ARUN LP, 12
3	SU91100290	CER			055		1	1	150	32	124	9	2				DR	2	SL. GLEY 45+
3P	SU95300170	CER	N	01	058		1	1	143	22	119	1	2				DR	2	NOT SP
4	SU91300290	CER			058		1	1	148	29	124	8	2				DR	2	SL. GLEY 50+
4P	SU95900170	PGR			080		1	1	162	41	122	4	2				DR	2	
5	SU91500290	PLO			0		2	2	161	42	125	9	2				WD	2	
5P	SU92800180	STB			023	023	4	3B		0		0					WE	3B	PIT 63
6	SU91700290	PLO			065		1	1	152	33	125	9	2				DR	2	ALMOST GRADE 1
6P	SU92900190	PLO					1	1	146	25	117	-1	2				DR	2	
7	SU91900290	PLO			0		2	2	151	32	125	10	1				WE	2	
7P	SU91700270	PLO			092		1	1	159	38	124	6	2				DR	2	
8	SU92100290	PLO					1	1	152	33	125	9	2				DR	2	ALMOST GRADE 1
8P	SU94000170	PLO			042		1	1	172	52	136	19	1					1	
9	SU92300290	PLO					1	1	154	35	125	9	2				DR	2	ALMOST GRADE 1
9P	SU94300190	LEY			028		2	2	190	70	128	11	1				WE	2	
10	SU92500290	PLO			036	036	4	3B		0		0					WE	3B	
10P	SU92000150	PLO			082		1	1	171	51	134	17	1					1	SLI GLEY 46
11	SU92700290	PLO			055		1	1	142	23	117	1	2				DR	2	
12	SU92900290	PLO			060		1	1	153	34	122	6	2				DR	2	
13	SU93100290	PLO			030		2	2	145	26	120	4	2				WD	2	
14	SU93300290	CER			045		1	1	145	24	122	4	2				DR	2	
15	SU93500290	CER			068		1	1	152	31	123	5	2				DR	2	
16	SU93670290	CER			065		1	1	152	31	125	7	2				DR	2	ALMOST GRADE 1
17	SU90700370	PLO			055		1	1	149	30	125	10	1					1	BORDER 1/2
18	SU90900270	CER			0		2	2	159	40	125	10	1				WE	2	
19	SU91100270	CER			035		2	2	159	40	123	7	2				WD	2	
20	SU91300270	CER			0		2	2	160	41	124	8	2				WD	2	
21	SU91500270	PLO			0		2	2	151	32	125	9	2				WD	2	
22	SU91700270	PLO			065		1	1	153	34	125	9	2				DR	2	ALMOST GRADE 1
23	SU91900270	PLO			060		1	1	148	29	122	6	2				DR	2	SL. GLEY 38+
24	SU92100270	PLO					1	1	116	-3	124	8	3A				DR	3A	SL. GLEY 45+
25	SU92300270	PLO					1	1	142	23	116	0	2				DR	2	
25A	SU92300260	PLO			038	038	4	3B		0		0					WE	3B	
26	SU92500270	STB			028	028	4	3B		0		0					WE	3B	
27	SU92700270	PLO			035		2	2	154	35	123	7	2				WD	2	
28	SU92900270	PLO			060		1	1	149	30	124	8	2				DR	2	ALMOST GRADE 1
29	SU93100270	PLO			028		2	2	146	27	122	6	2				WD	2	
30	SU93300270	CER			055		1	1	159	38	123	5	2				DR	2	
31	SU93520270	CER			058		1	1	154	33	124	6	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
32	SU93700270	CER			068		1	1	155	34	123	5	2				DR	2	
33	SU93900270	PLO					1	1	150	31	123	7	2				DR	2	SL. GLEY 60+
34	SU90900250	CER			0		2	2	151	32	125	9	2				WD	2	
35	SU91100250	CER			050		1	1	149	30	124	8	2				DR	2	ALMOST GRADE 1
36	SU91300250	CER			0		2	2	101	-18	109	-7	3A				DR	3A	IMPEN 65
37	SU91500250	PLO			055		1	1	152	33	123	9	2				DR	2	SL. GLEY 33-55
38	SU91700250	PLO			0		2	2	158	39	122	6	2				WD	2	
39	SU91900250	PLO			060		1	1	175	56	139	23	1					1	
39A	SU92000240	PLO			035	035	4	3B		0		0					WE	3B	
40	SU92100250	PLO			055		1	1	161	42	125	9	2				DR	2	SL. GLEY 33-55
40A	SU92100240	PLO			038	038	4	3B		0		0					WE	3B	
41	SU92300250	PLO			0	065	3	3A	154	33	131	13	1				WE	3A	
41A	SU92300240	PLO			028	028	4	3B		0		0					WE	3B	
42	SU92500250	STB			035	035	4	3B		0		0					WE	3B	SPL 38
43	SU92700250	PLO			030		2	2	141	22	117	1	2				WD	2	
44	SU92900250	PLO			030		2	2	142	23	116	0	2				WD	2	
45	SU93100250	PLO			045		1	1	146	27	121	5	2				DR	2	
46	SU93300250	CER					1	1	157	36	122	4	2				DR	2	
47	SU93500250	CER			050		1	1	147	26	121	3	2				DR	2	
48	SU93900230	PLO					1	1	144	25	120	4	2				DR	2	SL GLEY 50+
49	SU94120246	CER					1	1	149	30	121	5	2				DR	2	
50	SU94300250	PGR			055		1	1	145	24	121	3	2				DR	2	
51	SU94500247	PGR					1	1	151	32	123	7	2				DR	2	
52	SU94700245	CER					1	1	160	41	124	8	2				DR	2	Q ZL TS
55	SU90900230	CER			050		1	1	150	31	124	8	2				DR	2	ALMOST GRADE 1
56	SU91100230	CER			055		1	1	146	27	122	6	2				DR	2	
57	SU91300230	PLO					1	1	108	-11	119	3	3A				DR	3A	IMP75 DR TO 75
58	SU91500230	PGR			045	045	3	3B		0		0	2				WE	3B	
59	SU91700230	CER			050		1	1	158	39	120	4	2				DR	2	
60	SU91900230	CER			029		2	2	158	37	121	3	2				WD	2	
61	SU92100230	CER			028	028	4	3B		0		0					WE	3B	
62	SU92300230	PGR			037	037	4	3B		0		0					WE	3B	
63	SU92490230	STB			038	038	4	3B		0		0					WE	3B	
64	SU92700230	PLO			050		1	1	145	26	119	3	2				DR	2	
65	SU92900230	PLO			045		1	1	147	28	123	7	2				DR	2	ALMOST GRADE 1
66	SU93100230	PLO			0		2	2	144	25	120	4	2				WD	2	
67	SU93300230	CER			085		1	1	158	37	121	3	2				DR	2	
68	SU93500230	CER			065		1	1	158	39	122	6	2				DR	2	
69	SU93920230	CER			060		1	1	145	25	119	3	2				DR	2	Q SPL 60+
70	SU94100230	CER	W	01			1	1	144	24	120	4	2				DR	2	
71	SU94300230	CER	W	01			1	1	151	31	123	6	2				DR	2	
72	SU94500230	CER	S	01			1	1	154	34	120	3	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
73	SU94700230	CER	S	01				1	1	147	27	118	1	2				DR	2	
74	SU94900230	CER				0	027	4	3B		0		0		Y			WE	3B	
75	SU95100230	CER				028	028	4	3B		0		0		Y			WE	3B	
76	SU95500230	CER				0	038	4	3B		0		0					WE	3B	
77	SU95700230	CER				0	028	4	3B		0		0					WE	3B	
79	SU91300210	CER				033		2	2	157	37	124	8	2				WD	2	CALC LENSES
80	SU91500210	CER				065		1	1	151	31	125	9	2				DR	2	ALMOST GRADE 1
81	SU91700210	CER				065		1	1	153	33	125	9	2				DR	2	ALMOST GRADE 1
82	SU91900210	CER				045		1	1	151	31	125	9	2				DR	2	ALMOST GRADE 1
83	SU92100210	PLO				075		1	1	151	31	122	6	2				DR	2	
84	SU92300210	PGR				035	035	4	3B		0		0					WE	3B	
85	SU92500210	STB				040	040	3	3B		0		0					WE	3B	
86	SU92700210	STB				0		2	2	142	22	117	1	2				WD	2	
87	SU92900210	PLO				060		1	1	149	29	124	8	2				DR	2	ALMOST GRADE 1
88	SU93100210	PLO				0		2	2	149	29	123	6	2				WD	2	
89	SU93640186	PGR						2	3A		0		0					WE	3A	IMPEN 52
90	SU93690209	PGR				080		1	1	157	37	122	3	2				DR	2	
91	SU93950213	CER						1	1	142	22	120	3	2				DR	2	SL.GLEY 50+
92	SU94100210	CER				038	050	3	3A	147	26	123	5	2				WE	3A	
93	SU94300210	CER						1	1	161	40	134	16	1					1	SL.GLEY 50+
94	SU94500210	CER						1	1	161	40	137	19	1					1	SL.GLEY 55+
95	SU94700210	PGR				030	040	4	3B		0		0					WE	3B	
97	SU95100210	CER				0	035	4	3B		0		0					WE	3B	
98	SU95300210	CER				0	033	4	3B		0		0					WE	3B	
99	SU95500210	CER				026	026	4	3B		0		0					WE	3B	
100	SU95700210	CER				0	035	4	3B		0		0					WE	3B	
101	SU95900210	PGR				015	015	4	3B		0		0					WE	3B	
103	SU91500190	CER				045		1	1	147	27	123	7	2				DR	2	
104	SU91700190	CER				045		1	1	147	27	123	7	2				DR	2	
105	SU91900190	CER				030		2	2	160	40	125	8	2				WD	2	CALC LENSES
106	SU92100190	CER						1	1	160	40	122	5	2				DR	2	
107	SU92300190	PLO						1	1	119	-1	123	6	3A				DR	3A	IMP802DR
108	SU92500190	PGR				038	038	4	3B		0		0					WE	3B	
109	SU92700190	STB				032	032	4	3B		0		0					WE	3B	
110	SU92900190	PLO				045		1	1	147	27	123	6	2				DR	2	
111	SU94100190	CER				030		2	2	165	44	134	16	1				WE	2	
112	SU94900190	CER				026	026	4	3B		0		0					WE	3B	
113	SU95100190	CER	N	01				1	1	144	23	120	2	2				DR	2	
114	SU95300190	CER						1	1	154	33	130	12	1					1	
115	SU95500190	CER				057		1	1	164	43	131	13	1					1	
116	SU95700190	CER				050		1	1	162	41	132	14	1					1	
117	SU95900190	PGR				058		1	1	151	30	125	7	2				DR	2	

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
118	SU96100190	PGR				020	4	3B		0		0					WE	3B	
119	SU96300190	SAS				035	4	3B		0		0					WE	3B	
120	SU96500190	SAS				040	4	3B		0		0					WE	3B	
121	SU91500170	OSR			075		1	1	153	33	126	9	2				DR	2	ALMOST 1
122	SU91700171	CER			030		2	2	148	28	122	5	2				WD	2	
123	SU91900170	CER			090		1	1	161	41	125	8	2				DR	2	ALMOST 1
125	SU91900170	CER					1	1	156	35	119	1	2				DR	2	SL.GLEY 35+
125A	SU92200170	PLO			055		1	1	152	32	116	-1	2				DR	2	SL GLEY 28-55
126	SU92500170	OSR			035	035	4	3B		0		0					WE	3B	
126A	SU92600170	PGR			034	034	4	3B		0		0					WE	3B	
127	SU92700170	PGR			034	050	3	3A	140	19	115	-3	2				WE	3A	
128	SU92900170	STB			032	032	4	3B		0		0					WE	3B	
130	SU94700170	CER			030	040	4	3B		0		0					WE	3B	
131	SU95100170	CER	SW	01	050		1	1	149	28	121	3	2				DR	2	
132	SU95300170	CER					1	1	143	22	119	1	2				DR	2	SL.GLEY 26+
133	SU95500170	CER					1	1	143	22	119	1	2				DR	2	SL.GLEY 60+
135	SU95900170	PGR					1	1	149	28	124	6	2				DR	2	
136	SU96100170	PGR			065		1	1	152	31	122	4	2				DR	2	
137	SU96300170	PGR			045		1	1	146	25	122	4	2				DR	2	
138	SU96500170	CER			025	025	4	3B		0		0					WE	3B	PAST FLOOD
139	SU96700170	SAS			0	025	4	3B		0		0					WE	3B	
140	SU91700150	CER			065		1	1	150	30	125	8	2				DR	2	ALMOST GRADE 1
141	SU94700150	CER			0	025	4	3B		0		0					WE	3B	
144	SU95300150	CER			072		1	1	173	52	137	19	1					1	
145	SU95500150	CER			075		1	1	146	25	122	4	2				DR	2	
146	SU95700150	PGR			0	090	2	2	162	41	131	13	1				WE	2	
147	SU95900150	PGR			087		1	1	149	28	118	0	2				DR	2	
148	SU96120152	PGR					1	1	161	40	125	7	2				DR	2	
149	SU96300150	PGR					1	1	156	35	124	6	2				DR	2	SL.GLEY 65+
150	SU96500150	STB			070		1	1	160	39	124	6	2				DR	2	SL.GLEY 30+
151	SU96720152	CER			020	035	4	3B		0		0					WE	3B	
152	SU96900150	PGR					1	1	155	34	125	7	2				DR	2	SL.GLEY 65+
153	SU94500130	CER			035		1	1	152	31	125	7	2				DR	2	
154	SU95300130	PGR	S	02	0	030	4	3B	140	19	116	-2	2				WE	3B	
155	SU95400130	CER			055		1	1	147	26	123	5	2				DR	2	
156	SU95600130	PGR			030		2	2	159	38	123	5	2				WD	2	CALC SUBSOIL
157	SU95900130	PGR			035		2	2	161	40	125	7	2				WD	2	
160	SU96500130	PGR					1	1	147	26	121	3	2				DR	2	SL.GLEY 68+
161	SU96700130	PGR					1	1	153	32	124	6	2				DR	2	SL.GLEY 75+
162	SU96900130	PGR					1	1	157	36	126	8	2				DR	2	SL.GLEY 75+
163	SU94500110	CER			0	028	4	3B		0		0					WE	3B	
164	SU95900110	PGR			0		2	2	160	39	124	6	2				WD	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
165	SU96080107	PGR	0		2	2	156	35	119	1	2					WD	2	WTABLE 90
166	SU96280108	PGR	047	065	2	2	146	25	119	1	2					WD	2	

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
1	0-27	mzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	1						
	27-38	mzcl	25Y 54 00					Y	0	0		0		M				
	38-42	mzcl	25Y 54 00	75YR56 00	C			S	0	0	HR	1		M				
	42-55	hzcl	25Y 64 00	75YR56 00	C			Y	0	0		0		M				
	55-70	zc	25Y 63 64	75YR56 00	M		00MN00 00	Y	0	0		0		M				
	70-120	hzcl	25Y 64 54	75YR56 00	M		00MN00 00	Y	0	0		0		M				
1P	0-25	mzcl	10YR42 00						0	0		0						
	25-43	mzcl	10YR64 00						0	0		0	MDCSAB	FR M				
	43-63	hzcl	10YR64 00	10YR56 00	C			Y	0	0		0	MDCSAB	FR M				
	63-95	zc	10YR63 00	10YR56 00	M			Y	0	0		0	MDCSAB	FR M				
	95-120	zc	10YR63 00	10YR56 00	M			Y	0	0		0	WKCSAB	FM P			Y	
2	0-30	mzcl	10YR53 00	10YR56 00	F				0	0	HR	1						
	30-46	mzcl	10YR66 00						0	0		0		M				
	46-60	hzcl	25Y 64 66	75YR56 00	C			Y	0	0		0		M				
	60-100	zc	25Y 64 00	75YR56 00	M		00MN00 00	Y	0	0		0		M				
	100-120	hzcl	25Y 63 64	75YR56 00	M		00MN00 00	Y	0	0		0		M				
2P	0-30	zl	10YR42 00						0	0	HR	2						
	30-36	mzcl	10YR54 00						0	0		0	MDCSAB	FR M				
	36-50	hzcl	10YR54 00	10YR58 00	F				0	0		0	MDCSAB	FR M				
	50-120	c	10YR64 00	75YR58 00	C		00MN00 00	Y	0	0		0	MDCSAB	FR M			Y	
3	0-35	mzcl	10YR42 00						0	0	HR	1						
	35-45	mzcl	10YR54 00						0	0		0		M				
	45-55	mzcl	10YR54 66	75YR56 00	C			S	0	0		0		M				
	55-65	hzcl	10YR64 00	75YR56 00	C			Y	0	0		0		M				
	65-120	zc	10YR64 00	75YR56 00	M		00MN00 00	Y	0	0		0		M				
3P	0-26	mzcl	10YR42 00						0	0	HR	2						
	26-58	c	75YR54 56			F	00MN00 00		0	0		0	MDCSAB	FM M				
	58-120	c	10YR64 00	75YR58 00	C		00MN00 00	Y	0	0		0	MDCSAB	FR M			Y	
4	0-35	mzcl	10YR53 00						0	0	HR	2						
	35-45	mzcl	10YR54 00	10YR56 00	F				0	0		0		M				
	45-50	hzcl	10YR54 00	10YR56 00	F				0	0		0		M				
	50-58	hzcl	10YR54 00	10YR56 00	C			S	0	0		0		M				
	58-120	c	10YR63 64	75YR56 00	M		00MN00 00	Y	0	0		0		M				
4P	0-25	mzcl	10YR42 00						0	0		0						
	25-50	mzcl	10YR43 00						0	0		0	MDCSAB	FR M				
	50-80	c	10YR44 00						0	0		0	MDVCSB	FR M				
	80-120	mzcl	10YR74 00	75YR58 00	C			Y	0	0		0	STMSAB	FR G				Y
5	0-34	mzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	1						
	34-55	mzcl	10YR64 00						0	0		0		M				
	55-100	hzcl	10YR64 00	10YR56 00	C		00MN00 00	Y	0	0		0		M				
	100-120	hzcl	10YR63 64	75YR56 00	C			Y	0	0		0		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	STR	POR	IMP	SPL	CALC	SUBS
5P	0-23	hcl	25Y 42 00						0	0		0							
	23-63	c	05GY64 00	10YR58 00	P		00N 61 00	Y	0	0		0	MDCPL	FR	M	Y		Y	FS BETWEEN PLATES
6	0-28	mzcl	10YR53 00						0	0		0							
	28-65	mzcl	10YR64 00						0	0		0			M				
	65-75	hzcl	10YR64 00	10YR56 00	C			Y	0	0		0			M				
	75-120	zc	10YR64 00	75YR56 58	M		00MN00 00	Y	0	0		0			M				
6P	0-31	mzcl	10YR43 00						3	0	HR	5							
	31-41	hzcl	10YR54 00				10YR53 00		0	0	HR	5	MCSAB	FM	M				
	41-65	c	10YR54 00				10YR53 00		0	0	HR	5	MCSAB	FM	M				
	65-110	c	10YR54 56						0	0	HR	1	MCSAB	FM	M	Y			
	110-120	mcl	10YR64 00						0	0	CH	10		FR	G			Y	
7	0-35	mzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	2							
	35-50	mzcl	10YR54 00	10YR56 00	F				0	0		0			M				
	50-70	hzcl	10YR54 56	75YR56 00	C			S	0	0		0			M				
	70-120	zc	10YR64 54	75YR56 00	M			Y	0	0		0			M				
7P	0-35	mzcl	10YR42 00						1	0	HR	3							
	35-55	hzcl	10YR54 00						0	0	HR	1	MCSAB	FR	M				
	55-92	hzcl	10YR56 00				10YR54 00		0	0	HR	1	MCSAB	FR	M				
	92-120	hzcl	10YR62 00	10YR68 71	C			Y	0	0	CH	5	MCSAB	FR	M			Y	
8	0-35	mzcl	10YR42 00						0	0	HR	1							
	35-65	mzcl	10YR54 00						0	0		0			M				
	65-75	hzcl	10YR54 00						0	0		0			M				
	75-120	c	10YR54 44	10YR56 00	F				0	0		0			M				
8P	0-30	zl	10YR42 00						0	0	HR	1							
	30-42	mzcl	10YR54 00	10YR68 00	F				0	0		0	MDCSAB	FR	M	Y			
	42-70	mzcl	10YR54 00	10YR68 00	C		00MN00 00	S	0	0		0	MDCSAB	FR	M	Y			
	70-115	hzcl	10YR54 00	10YR68 00	C			S	0	0		0	MDCSAB	FR	M				
	115-120	hzcl	10YR64 00	10YR68 00	C		00MN00 00	S	0	0		0	MDCSAB	FR	M				
9	0-30	mzcl	10YR53 00	10YR56 00	F				0	0		0							
	30-55	mzcl	10YR54 00						0	0		0			M				
	55-85	hzcl	10YR44 00						0	0		0			M				
	85-120	c	10YR44 00	10YR56 00	F				0	0		0			M				
9P	0-28	mzcl	10YR42 00						1	0	HR	2							
	28-40	mzcl	10YR53 00	75YR58 00	C		00MN00 00	Y	0	0	HR	1	MDCSAB	FM	M	Y			
	40-56	hzcl	10YR53 00	75YR58 00	C		00MN00 00	Y	0	0	HR	1	MDCSAB	FM	M	Y			
	56-120	fszl	10YR72 00	10YR68 00	M		00MN00 00	Y	0	0	HR	1	MDCSAB	FM	M	Y			
10	0-36	mzcl	10YR42 00						0	0		0						Y	
	36-60	zc	05Y 52 00	75YR56 00	C			Y	0	0		0			P		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
10P	0-34	zl	10YR43 00	10YR68 00	F				0	0	HR	1						
	34-46	mzcl	10YR54 00	10YR68 00	F				0	0	HR	1	MDCSAB	FR	M	Y		
	46-62	mzcl	10YR54 00	75YR58 00	C		00MN00 00	S	0	0	HR	15	MDCSAB	FR	M	Y		SLI GLEY
	62-82	hcl	10YR54 00	75YR58 00	C		00MN00 00	S	0	0	HR	1	MDCSAB	FR	M	Y		SLI GLEY
	82-105	hzcl	10YR64 00	75YR58 00	C		00MN00 00	Y	0	0	HR	1	MDCSAB	FM	M	Y		
	105-120	mcl	10YR64 00	75YR58 00	C		00MN00 00	Y	0	0	HR	1			M			
11	0-28	mcl	10YR42 00	10YR46 00	F				0	0	HR	2						
	28-55	hcl	10YR54 56	00MN00 00	F				0	0		0			M			
	55-120	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0			M			
12	0-33	mzcl	25Y 42 00						0	0	HR	1						
	33-60	mcl	10YR44 54						0	0		0			M			
	60-90	hzcl	10YR53 00	10YR56 00	C			Y	0	0		0			M			
	90-120	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0			M			
13	0-30	mzcl	10YR42 00						0	0	HR	1						
	30-55	hcl	10YR53 00	10YR58 00	C			Y	0	0		0			M			
	55-90	c	10YR53 00	10YR58 00	M			Y	0	0		0			M			
	90-120	c	10YR53 00	10YR58 00	M		00MN00 00	Y	0	0		0			M			
14	0-35	mzcl	10YR43 00						1	0	HR	2						
	35-45	mzcl	10YR43 00	10YR68 00	F				0	0	HR	1			M			
	45-120	c	10YR64 00	75YR46 00	M		00MN00 00	Y	0	0	HR	1			M			
15	0-29	mzcl	10YR43 00						1	0	HR	2						
	29-68	mzcl	10YR54 00	10YR68 00	F				0	0	HR	1			M			
	68-85	hzcl	10YR64 00	75YR58 00	C		00MN00 00	Y	0	0	HR	1			M			
	85-120	zc	10YR64 00	75YR58 00	C		00MN00 00	Y	0	0	HR	1			M			
16	0-38	mzcl	10YR43 00						1	0	HR	2						
	38-65	mzcl	10YR54 00	10YR68 00	F				0	0	HR	1			M			
	65-79	hzcl	10YR64 00	10YR58 00	C		00MN00 00	Y	0	0	HR	1			M			
	79-120	zc	10YR64 00	75YR58 00	C		00MN00 00	Y	0	0	HR	2			M			
17	0-35	mzcl	10YR42 43						0	0		0						
	35-55	hzcl	10YR54 00	00MN00 00	F				0	0		0			M			
	55-120	c	25Y 52 62	10YR58 00	M		00MN00 00	Y	0	0		0			M			
18	0-32	mzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	1						
	32-45	mzcl	10YR54 64	10YR58 00	C			Y	0	0		0			M			
	45-70	hzcl	10YR64 63	10YR58 00	C			Y	0	0		0			M			
	70-80	c	10YR64 00	10YR58 00	M			Y	0	0		0			M			
	80-120	mzcl	10YR63 00	10YR58 00	M			Y	0	0		0			M		Y	
19	0-35	mzcl	10YR53 00	10YR56 00	F				0	0	HR	1						
	35-45	hzcl	10YR64 00	10YR58 00	C			Y	0	0		0			M			
	45-55	zc	10YR64 00	10YR58 00	C			Y	0	0		0			M			
	55-120	hzcl	10YR64 63	10YR58 00	C			Y	0	0		0			M		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	
20	0-30	mzcl	10YR42 00	10YR56 00	C			Y	0	0	HR	1							
	30-38	mzcl	10YR64 00	10YR58 00	C			Y	0	0		0		M					
	38-65	hzcl	10YR64 00	10YR58 00	M			Y	0	0		0		M					
	65-120	mzcl	10YR63 00	75YR58 00	C			Y	0	0		0		M				Y	
21	0-30	mzcl	10YR42 00	10YR56 00	C			Y	0	0		0							
	30-45	mzcl	10YR64 00						0	0		0		M					
	45-70	hzcl	10YR64 00	10YR58 00	C			Y	0	0		0		M					
	70-120	zc	10YR64 00	10YR58 00	M			Y	0	0		0		M					
22	0-35	mzcl	10YR42 00						0	0	HR	2							
	35-45	mzcl	10YR54 00						0	0		0		M					
	45-65	hzcl	10YR64 00						0	0		0		M					
	65-80	hzcl	10YR64 00	10YR58 00	C			Y	0	0		0		M					
	80-120	zc	25Y 63 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
23	0-25	mzcl	10YR53 00						0	0	HR	1							
	25-38	mzcl	10YR54 00						0	0		0		M					
	38-45	mzcl	10YR54 00	10YR56 00	C			S	0	0		0		M					
	45-60	hzcl	10YR54 00	10YR56 00	C			S	0	0		0		M					
	60-120	zc	10YR64 00	10YR56 00	M			Y	0	0		0		M					
24	0-33	mzcl	10YR42 00						0	0	HR	1							
	33-45	mzcl	10YR43 00						0	0		0		M					
	45-76	hzcl	10YR54 43	10YR56 00	C			S	0	0	HR	2		M					Imp 76+
25	0-28	mzcl	10YR43 00	10YR56					0	0	HR	1							
	28-120	zc	10YR54 00	10YR46 00	C			S	0	0		0		M					
25A	0-38	mzcl	10YR42 00						0	0		0						Y	
	38-60	zc	05Y 52 00	75YR56 00	C			Y	0	0		0		P		Y			
26	0-28	hcl	25Y 42 00	10YR56 00	F				0	0		0							
	28-70	c	05GY61 00	10YR58 00	M			Y	0	0		0		P		Y			
27	0-35	mzcl	10YR42 00						0	0	HR	2							
	35-55	hzcl	25Y 53 00	10YR56 00	M			Y	0	0		0		M					
	55-80	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
	80-105	hcl	25Y 53 63	10YR58 68	M			Y	0	0	CH	5		M				Y	
	105-120	mzcl	10YR73 00	10YR78 00	M			Y	0	0	CH	30		M				Y	
28	0-35	mzcl	10YR42 00						0	0	HR	1							
	35-45	mzcl	10YR43 00						0	0		0		M					
	45-60	hzcl	25Y 53 00	10YR56 00	F		00MN00 00		0	0		0		M					
	60-120	c	10YR53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
29	0-28	mzcl	25Y 42 00						0	0	HR	1							
	28-45	hzcl	25Y 53 00	10YR56 00	C			Y	0	0		0		M					
	45-75	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
	75-120	zc	25Y 73 72	10YR68 00	M			Y	0	0		0		M				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	POR	IMP	SPL	CALC	
30	0-35	mzcl	10YR43 00						1	0	HR	2							
	35-45	mzcl	10YR53 00						0	0	HR	1		M					
	45-55	hzcl	10YR54 00						0	0	HR	1		M				Y	
	55-120	hzcl	10YR63 73	10YR68 00	C			Y	0	0	CH	10		M				Y	
31	0-32	mzcl	10YR43 00						1	0	HR	2							
	32-58	mzcl	10YR43 00	10YR68 00	F				0	0	HR	1		M					
	58-95	hzcl	10YR53 00	75YR46 51	C		00MN00 00	Y	0	0	HR	1		M					
	95-120	c	10YR63 00	75YR46 00	C		00MN00 00	Y	0	0	HR	1		M					
32	0-30	mzcl	10YR53 00						1	0	HR	2							
	30-68	hzcl	10YR63 00	10YR68 00	F				0	0	HR	1		M					
	68-100	hzcl	10YR63 00	75YR58 00	C			Y	0	0	HR	1		M					
	100-120	c	10YR63 00	75YR46 00	C			Y	0	0	HR	1		M					
33	0-25	mzcl	10YR43 00						0	0	HR	1							
	25-60	mzcl	10YR44 00						0	0	HR	1		M					
	60-75	hzcl	10YR56 00	10YR68 52	C			S	0	0		0		M					
	75-120	c	10YR58 00	00MN00 00	F			S	0	0		0		M					
34	0-34	mzcl	10YR53 00	10YR56 00	C			Y	0	0		0							
	34-55	hzcl	10YR64 54	10YR58 00	C		00MN00 00	Y	0	0		0		M					
	55-65	mzcl	10YR54 00	10YR58 00	C			S	0	0		0		M					
	65-120	c	10YR64 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
35	0-34	mzcl	10YR53 00	10YR56 00	F				0	0	HR	1							
	34-50	hzcl	10YR54 00						0	0		0		M					
	50-60	hzcl	10YR64 00	10YR56 00	C		00MN00 00	Y	0	0		0		M					
	60-120	c	10YR64 00	10YR56 00	C		00MN00 00	Y	0	0		0		M					
36	0-30	mzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	1							
	30-55	hcl	10YR54 00					Y	0	0	HR	2		M				Y	
	55-65	mcl	10YR64 63					Y	0	0	SLST	20		M				Y	Imp 65+
37	0-34	mzcl	10YR42 00						0	0	HR	2							
	34-45	mzcl	25Y 54 00						0	0	HR	1		M					
	45-55	hzcl	25Y 54 00						0	0	HR	1		M					
	55-70	c	25Y 64 00	75YR56 00	C			Y	0	0		0		M					
	70-120	mzcl	10YR63 64					Y	0	0	SLST	15		M				Y	
38	0-30	mzcl	10YR42 00	10YR56 00	C			Y	0	0	HR	2							
	30-48	mcl	10YR53 00	10YR56 00	C			Y	0	0		0		M					
	48-70	mzcl	10YR64 00	10YR56 00	C			Y	0	0		0		M				Y	
	70-120	hzcl	10YR64 00	10YR56 00	C			Y	0	0		0		M				Y	
39	0-35	zl	10YR53 00	10YR56 00	F				0	0	HR	1							
	35-60	mzcl	10YR54 00						0	0		0		M					
	60-120	mzcl	10YR54 64	10YR56 00	C		00MN00 00	Y	0	0		0		M					

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
39A	0-35	mzcl	10YR42 00						0	0		0						
	35-60	zc	25Y 52 00	75YR56 00	C			Y	0	0		0		P			Y	
40	0-33	mzcl	10YR42 00	10YR56 00	F				0	0	HR	1						
	33-55	mzcl	10YR54 00	10YR56 00	C			S	0	0		0		M				
	55-120	hzcl	10YR63 00	75YR56 00	C		00MN00 00	Y	0	0		0		M				
40A	0-38	mzcl	10YR42 00						0	0		0						
	38-60	zc	05Y 52 00	75YR56 00	C			Y	0	0		0		P			Y	
41	0-30	mzcl	10YR42 00	10YR56 00	C			Y	0	0		0						Y
	30-38	c	05Y 52 00	75YR56 00	C			Y	0	0		0		P				
	38-65	fszl	10YR63 00	75YR58 00	C			Y	0	0		0		M				Y
	65-120	c	10YR64 00	10YR46 00	M			Y	0	0		0		P			Y	
41A	0-28	mzcl	10YR42 00						0	0		0						
	28-60	c	05Y 52 00	75YR56 00	C			Y	0	0		0		P			Y	
42	0-35	hcl	25Y 42 00						0	0		0						Y
	35-70	c	05GY61 00	10YR58 00	M		00MN00 00	Y	0	0		0		P			Y	Y
43	0-30	mcl	10YR42 00						0	0	HR	2						
	30-50	c	10YR53 00	10YR56 00	C			Y	0	0		0		M				
	50-120	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M				
44	0-30	mzcl	25Y 42 00						0	0	HR	1						
	30-60	zc	25Y 53 00	10YR58 00	C		00MN00 00	Y	0	0		0		M				
	60-75	zc	25Y 63 00	10YR58 00	M		00MN00 00	Y	0	0		0		M				Y
	75-120	c	25Y 73 00	10YR68 00	M			Y	0	0		0		M				Y
45	0-30	mzcl	25Y 42 00						0	0	HR	1						
	30-45	hzcl	10YR43 00						0	0		0		M				
	45-65	c	10YR53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M				
	65-120	zc	10YR63 62	10YR68 00	M			Y	0	0		0		M				Y
46	0-29	mzcl	10YR43 00						1	0	HR	2						
	29-55	hzcl	10YR54 00	75YR46 00	M		00MN00 00	S	0	0	HR	1		M				
	55-120	hzcl	10YR63 00	10YR68 00	C			Y	0	0	CH	10		M				Y
47	0-30	mzcl	10YR43 51	10YR68 00	F		00MN00 00		2	0	HR	3						
	30-50	mzcl	25Y 52 00	10YR68 00	F		00MN00 00		0	0	HR	3		M				
	50-65	hzcl	25Y 53 00	75YR46 51	C			Y	0	0	HR	3		M				
	65-120	c	25Y 71 00	75YR58 00	C			Y	0	0		0		M				
48	0-25	mzcl	10YR43 00						0	0	HR	1						
	25-40	mzcl	10YR44 00						0	0	HR	1		M				
	40-50	hzcl	10YR56 00						0	0	HR	2		M				
	50-120	c	10YR56 00	10YR68 00	F		00MN00 00	S	0	0	HR	2		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
49	0-26	mzcl	10YR42 00						1	0	HR	3							
	26-75	mzcl	10YR54 00						0	0	HR	2		M					
	75-120	c	10YR56 00						0	0		0		M		Y			
50	0-30	mzcl	10YR42 00						0	0		0							
	30-55	c	75YR56 00						0	0		0		M					
	55-120	c	10YR53 00	75YR58 00	C		10YR62 00	Y	0	0		0		M					
51	0-28	mzcl	10YR43 00						0	0	HR	2							
	28-45	mzcl	10YR44 00						0	0	HR	2		M					
	45-80	mzcl	10YR44 46						0	0		0		M					
	80-120	c	10YR56 00						0	0		0		M					
52	0-29	mzcl	10YR43 00						0	0		0							
	29-60	mzcl	10YR44 00						0	0	HR	1		M					
	60-80	mzcl	10YR44 00	10YR56 00	C			S	0	0		0		M					
	80-120	mzcl	10YR54 64	10YR56 00	M		00MN00 00	S	0	0		0		M					
55	0-33	mzcl	10YR42 00						0	0		0							
	33-40	hzcl	10YR44 54						0	0		0		M					
	40-50	hzcl	10YR54 00	00MN00 00	F				0	0		0		M					
	50-95	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
	95-120	mzcl	25Y 73 71	10YR78 00	C			Y	0	0	CH	40		M				Y	
56	0-32	mzcl	10YR42 43						0	0		0							
	32-45	hzcl	10YR54 56						0	0		0		M					
	45-55	zc	10YR56 00						0	0		0		M					
	55-120	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
57	0-30	mzcl	10YR42 00						0	0		0							
	30-40	mzcl	10YR54 56						0	0		0		M					
	40-50	hzcl	10YR56 00						0	0		0		M					
	50-75	c	75YR56 00						0	0	HR	15		M					Imp stone 75+
58	0-30	hzcl	10YR32 00						0	0		0						Y	
	30-45	zc	10YR53 52	10YR56 00	F				0	0		0		M				Y	
	45-65	c	25Y 53 00	10YR66 00	C			Y	0	0		0		P				Y	
	65-120	c	05GY51 00	10YR58 00	C			Y	0	0		0		P				Y	
59	0-30	mzcl	10YR53 00						0	0	HR	1							
	30-50	mcl	10YR54 00						0	0		0		M					
	50-70	mcl	10YR64 00	10YR58 00	C			Y	0	0		0		M					
	70-120	hcl	10YR64 00	10YR58 00	C			Y	0	0		0		M					
60	0-29	mzcl	10YR42 00						0	0	HR	2							
	29-60	mzcl	10YR53 00	10YR58 00	C			Y	0	0	HR	5		M					
	60-120	hzcl	10YR53 00	10YR56 00	C			Y	0	0		0		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
61	0-28	mzcl	10YR42 00	10YR56 00	F				0	0		0						
	28-60	c	05Y 52 00	75YR56 00	C			Y	0	0		0		P			Y	
62	0-37	mzcl	10YR42 00	10YR56 00	F				0	0		0						Y
	37-60	zc	05Y 52 00	75YR56 00	C			Y	0	0		0		P			Y	
63	0-38	hcl	25Y 42 00						0	0		0						Y
	38-70	c	05GY51 00	10YR58 00	M			Y	0	0		0		P			Y	Y
64	0-25	mzcl	10YR42 00						0	0	HR	2						
	25-50	mcl	25Y 53 00	10YR56 00	F				0	0		0		M				
	50-60	hcl	25Y 53 00	10YR58 00	C		00MN00 00	Y	0	0		0		M				
	60-75	c	25Y 53 00	10YR58 00	C		00MN00 00	Y	0	0		0		M				
	75-120	c	25Y 53 52	10YR58 00	M		00MN00 00	Y	0	0		0		M				
65	0-32	mzcl	10YR42 00						0	0		0						
	32-45	hzcl	25Y 42 00						0	0		0		M				
	45-120	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M				
66	0-30	mzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	1						
	30-45	c	25Y 54 00	75YR56 00	C			S	0	0		0		M				
	45-120	c	25Y 64 00	75YR56 00	M			Y	0	0		0		M				
67	0-35	mzcl	10YR43 00						1	0	HR	2						
	35-85	hcl	10YR54 00						0	0	HR	1		M				
	85-120	hzcl	10YR63 00	75YR46 61	M			Y	0	0	HR	1		M				
68	0-30	mzcl	10YR42 00						1	0	HR	5						
	30-65	mzcl	10YR44 00						0	0	HR	1		M				
	65-120	mzcl	10YR53 54	10YR56 44	C			Y	0	0		0		M				
69	0-27	mzcl	10YR42 00						2	0	HR	5						
	27-40	mzcl	10YR54 00						0	0		0		M				
	40-60	mzcl	10YR54 00						0	0	HR	5		M				
	60-120	c	10YR53 00	10YR56 00	M		00MN00 00	Y	0	0		0		M				
70	0-25	mzcl	10YR43 00						1	0	HR	3						
	25-40	mzcl	10YR44 56						0	0		0		M				
	40-60	c	10YR54 56						0	0		0		M				
	60-120	c	10YR54 44	10YR56 00	C		00MN00 00		0	0		0		M				
71	0-30	mzcl	10YR43 00						0	0	HR	3						
	30-70	mzcl	10YR54 44						0	0	HR	1		M				
	70-80	hzcl	10YR54 00						0	0		0		M				
	80-120	c	10YR54 00						0	0		0		M				
72	0-25	mzcl	10YR42 00						1	0	HR	3						
	25-65	mzcl	10YR44 00						0	0	HR	4		M				
	65-120	mzcl	10YR44 00	10YR53 00	F		00MN00 00		0	0	HR	4		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
73	0-27	mzcl	10YR42 00						2	0	HR	5						
	27-40	hzcl	10YR56 54						0	0		0		M				
	40-55	c	10YR56 00						0	0		0		M				
	55-70	c	10YR56 00						0	0	HR	5		M				
	70-95	c	10YR56 00						0	0	HR	1		M				
	95-120	hcl	10YR56 00						0	0	HR	1		M				
74	0-27	hcl	10YR41 00	75YR46 00	C			Y	0	0		0						
	27-70	c	05GY51 00	75YR58 00	M			Y	0	0		0		P			Y	
75	0-28	hcl	10YR41 00						0	0		0						
	28-70	c	25Y 60 00	75YR56 00	M			Y	0	0		0		P			Y	
76	0-38	hzcl	25Y 52 00	10YR68 00	C			Y	0	0	HR	1						
	38-60	c	25Y 61 00	75YR46 00	M			Y	0	0	HR	1		P	Y		Y	
77	0-28	hzcl	25Y 52 00	10YR68 61	C			Y	0	0	HR	1						
	28-60	c	05Y 61 00	75YR46 00	M			Y	0	0	HR	1		P	Y		Y	
79	0-33	mzcl	10YR42 00						0	0		0						Y
	33-60	mzcl	25Y 53 72	10YR68 00	C			Y	0	0	CH	5		M				Y
	60-80	hzcl	25Y 53 63	10YR58 68	C		25Y 71 00	Y	0	0	CH	5		M				Y
	80-120	hzcl	25Y 63 71	10YR78 00	M			Y	0	0	CH	30		M				Y
80	0-35	mzcl	10YR42 00						0	0		0						
	35-45	mzcl	10YR54 00						0	0		0		M				
	45-65	hzcl	10YR56 00						0	0		0		M				
	65-120	zc	10YR53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M				
81	0-32	mzcl	10YR42 00						0	0		0						
	32-65	mzcl	10YR54 56						0	0		0		M				
	65-80	hzcl	10YR53 00	10YR56 00	C		00MN00 00	Y	0	0		0		M				
	80-120	zc	25Y 52 62	10YR58 00	M		00MN00 00	Y	0	0		0		M				
82	0-28	mzcl	10YR43 00						0	0		0						
	28-45	mzcl	10YR44 54						0	0		0		M				
	45-70	hzcl	10YR53 00	10YR56 00	C		00MN00 00	Y	0	0		0		M				
	70-120	c	25Y 53 00	10YR56 00	M		00MN00 00	Y	0	0		0		M				
83	0-30	mzcl	10YR42 00						0	0	HR	2						
	30-50	mzcl	10YR43 00						0	0		0		M				
	50-75	hcl	10YR31 00	10YR56 00	F				0	0		0		M				
	75-120	c	10YR64 00	75YR56 00	M		00MN00 00	Y	0	0		0		M				
84	0-35	mzcl	10YR42 00	10YR56 00	F				0	0		0						Y
	35-60	zc	05Y 52 00	75YR56 00	C			Y	0	0		0		P			Y	Y
85	0-40	hcl	25Y 41 00						0	0		0						Y
	40-70	c	05G 61 00	10YR58 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
86	0-25	mcl	25Y 53 00	10YR56 00	C			Y	0	0		0						
	25-45	mcl	25Y 52 00	10YR58 00	M			Y	0	0		0		M				
	45-55	hcl	25Y 62 00	10YR58 00	M			Y	0	0		0		M				
	55-120	c	25Y 53 00	10YR58 00	M			Y	0	0		0		M				
87	0-35	mzcl	10YR42 00						0	0	HR	1						
	35-60	hzcl	10YR54 00	00MN00 00	F				0	0		0		M				
	60-120	c	25Y 52 00	10YR58 00	M		00MN00 00	Y	0	0		0		M				
88	0-35	mzcl	10YR42 00	10YR56 00	C			Y	0	0	HR	3						
	35-65	mzcl	10YR64 00	75YR56 00	C		00MN00 00	Y	0	0		0		M				
	65-120	zc	10YR64 00	75YR56 00	M		00MN00 00	Y	0	0		0		M				
89	0-25	hzcl	10YR41 00	75YR46 00	M			Y	0	0	HR	1						
	25-52	mcl	10YR53 00	10YR56 51	M		00MN00 00	Y	0	0	HR	1		M				Imp 52+
90	0-20	mzcl	10YR42 00						0	0	HR	1						
	20-60	mzcl	25Y 44 00						0	0	HR	1		M				
	60-80	mzcl	10YR53 00	10YR56 00	F				0	0	CH	5		M				
	80-120	mzcl	10YR63 62	10YR56 51	C			Y	0	0	CH	5		M				
91	0-26	mzcl	10YR43 00						0	0	HR	2						
	26-50	mzcl	10YR56 00						0	0	HR	2		M				
	50-70	c	10YR56 00	10YR68 00	C		00MN00 00	S	0	0	HR	2		M				
	70-120	c	10YR56 00	00MN00 00	M		10YR68 53	S	0	0	HR	5		M				
92	0-30	mzcl	10YR42 00						0	0		0						
	30-38	mzcl	10YR54 00						0	0		0		M				
	38-50	hzcl	10YR53 00	10YR58 00	C		10YR62 00	Y	0	0		0		M				
	50-120	c	25Y 53 00	10YR58 00	C		00MN00 00	Y	0	0		0		M			Y	
93	0-28	zl	10YR42 00						0	0		0						
	28-50	mzcl	10YR44 00						0	0		0		M				
	50-65	hcl	10YR54 00	10YR58 00	F		00MN00 00	S	0	0		0		M				
	65-120	c	10YR44 00	10YR58 00	F		00MN00 00	S	0	0		0		M				
94	0-32	zl	10YR43 00						0	0		0						
	32-55	mzcl	10YR54 00						0	0		0		M				
	55-120	c	10YR44 00	75YR58 00	C			S	0	0		0		M				
95	0-30	hzcl	10YR42 00						0	0		0						
	30-40	hzcl	10YR52 00	10YR58 00	C			Y	0	0		0		M				
	40-70	zc	10YR61 00	10YR58 00	M			Y	0	0		0		P	Y		Y	
97	0-35	hzcl	25Y 52 00	10YR68 61	C			Y	0	0	HR	1						
	35-60	c	10YR62 00	75YR46 61	M			Y	0	0	HR	1		P	Y		Y	
98	0-33	hzcl	25Y 52 00	10YR68 61	C			Y	0	0	HR	1						
	33-60	c	10YR62 00	75YR46 61	M			Y	0	0	HR	1		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	
99	0-26	hzcl	25Y 52 00	10YR68 00	F				0	0	HR	1							
	26-58	c	10YR71 00	75YR46 00	M			Y	0	0	HR	1		P	Y		Y		
100	0-35	mzcl	25Y 52 00	10YR68 00	C			Y	0	0	HR	1							
	35-60	hzcl	25Y 63 00	75YR46 00	M		00MN00 00	Y	0	0	HR	1		P	Y		Y		
101	0-15	hzcl	10YR41 00						0	0		0						Y	
	15-70	c	25Y 60 00	75YR58 00	M			Y	0	0		0		P	Y		Y	Y	
103	0-30	mzcl	10YR43 00						0	0		0							
	30-45	mzcl	10YR56 00						0	0		0		M					
	45-120	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
104	0-32	mzcl	10YR42 00						0	0		0							
	32-45	mzcl	10YR44 54						0	0		0		M					
	45-120	c	25Y 52 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
105	0-30	mzcl	10YR42 00						0	0		0							
	30-65	hzcl	10YR53 00	10YR56 00	C		00MN00 00	Y	0	0		0		M					
	65-80	mzcl	10YR53 00	10YR58 00	C			Y	0	0	HR	2		M					
	80-120	mzcl	25Y 72 00	10YR68 00	M			Y	0	0	CH	10		M				Y	
106	0-30	mzcl	10YR42 00						0	0	HR	1							
	30-45	mzcl	10YR54 44						0	0		0		M					
	45-120	hcl	10YR54 56						0	0		0		M					
107	0-30	mzcl	10YR42 00	10YR56 00	F				0	0	HR	1							
	30-80	mzcl	10YR44 00						0	0	HR	2		M					Imp 80+
108	0-38	mzcl	10YR42 00	10YR56 00	F				0	0		0						Y	
	38-60	zc	05Y 62 00	75YR56 00	C			Y	0	0		0		P			Y		
109	0-32	hcl	25Y 32 00						0	0		0							
	32-70	c	05G 61 00	10YR58 00	M		00MN00 00	Y	0	0		0		P			Y		
110	0-35	mzcl	10YR42 00						0	0	HR	1							
	35-45	hzcl	10YR53 54						0	0		0		M					
	45-120	c	25Y 53 00	40YR58 00	C			Y	0	0		0		M					
111	0-30	zl	10YR42 00						0	0		0							
	30-40	hzcl	10YR53 00	75YR58 00	C			Y	0	0		0		M					
	40-85	c	10YR53 00	75YR58 00	C		10YR62 00	Y	0	0		0		M					
	85-120	mzcl	10YR74 00	10YR58 00	C			Y	0	0		0		M				Y	
112	0-26	hzcl	25Y 53 00						0	0		0							
	26-70	c	05 G61 00	75YR56 00	M		05BG61 00	Y	0	0		0		P			Y		
113	0-27	mzcl	10YR42 00						0	0	HR	1							
	27-40	hcl	10YR44 00						0	0		0		M					
	40-120	c	75YR46 00			C	00MN00 00		0	0		0		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
114	0-28	zl	10YR43 00						0	0	HR	2						
	28-120	c	75YR56 00						0	0		0		M				
115	0-28	zl	10YR43 00						0	0	HR	1						
	28-57	c	10YR54 00			C	00MN00 00		0	0		0		M				
	57-75	c	10YR53 00	75YR58 00	C		00MN00 00	Y	0	0		0		M				
	75-120	hcl	10YR63 00	10YR58 00	C			Y	0	0		0		M				Y
116	0-29	zl	10YR43 00						0	0		0						
	29-45	mcl	10YR54 00						0	0		0		M				
	45-50	hcl	10YR54 00			F	00MN00 00		0	0		0		M				
	50-90	c	10YR53 00	75YR58 00	C		00MN00 00	Y	0	0		0		M				
	90-120	hcl	10YR53 00	75YR58 00	C		00MN00 00	Y	0	0		0		M				
117	0-30	mzcl	10YR42 00	75YR56 00	F				0	0		0						
	30-58	mzcl	10YR53 00						0	0		0		M				
	58-68	mzcl	10YR53 00	75YR58 00	C		10YR62 00	Y	0	0		0		M				
	68-120	c	10YR53 00	75YR58 00	C		10YR62 00	Y	0	0		0		M				Y
118	0-20	hzcl	10YR42 00	75YR46 00	C			Y	0	0		0						
	20-70	c	05Y 51 00	75YR56 00	M			Y	0	0		0		P			Y	
119	0-35	hzcl	10YR42 00	10YR58 00	C			Y	0	0		0						
	35-55	c	10YR51 00	75YR58 00	M			Y	0	0		0		P	Y		Y	
	55-70	c	10YR52 00	10YR58 61	M			Y	0	0		0		P	Y		Y	
120	0-40	hzcl	10YR42 00	10YR58 00	C			Y	0	0		0						
	40-65	c	10YR51 00	75YR78 00	M			Y	0	0		0		P	Y		Y	
121	0-35	mzcl	10YR42 00						0	0		0						
	35-45	mzcl	10YR44 54						0	0		0		M				
	45-75	hzcl	10YR54 00	10YR56 00	F				0	0		0		M				
	75-120	c	25Y 53 62	10YR58 00	M		00MN00 00	Y	0	0		0		M				
122	0-30	mzcl	10YR42 00						0	0		0						
	30-55	mzcl	25Y 53 00	10YR56 00	C			Y	0	0		0		M				
	55-70	zc	25Y 63 62	10YR58 00	M			Y	0	0		0		M				
	70-120	c	25Y 52 51	10YR58 00	M		00MN00 00	Y	0	0		0		M				
123	0-30	mzcl	10YR42 00						0	0		0						
	30-90	hzcl	10YR56 00						0	0		0		M				
	90-120	hzcl	10YR53 00	10YR56 00	C		00MN00 00	Y	0	0		0		M				
125	0-28	mzcl	10YR42 00						0	0	HR	1						
	28-35	mcl	10YR54 00						0	0		0		M				
	35-120	hcl	10YR54 56	75YR56 00	C			S	0	0	HR	2		M				
125A	0-28	mzcl	10YR42 00	10YR56 00	F				0	0	HR	2						
	28-55	hcl	10YR54 00	10YR56 00	C			S	0	0	HR	5		M				
	55-120	hcl	10YR64 54	10YR56 00	C			Y	0	0	HR	5		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
126	0-35	hzcl	10YR53 00						0	0	HR	1						Y
	35-60	zc	25Y 72 00	75YR58 00	M			Y	0	0		0		P			Y	Y
126A	0-34	mzcl	10YR42 00	10YR56 00	F				0	0		0						Y
	34-60	zc	05Y 51 00	75YR56 00	C			Y	0	0		0		P			Y	
127	0-34	mzcl	10YR53 00						0	0		0						
	34-45	hzcl	10YR53 63	10YR56 00	C			Y	0	0		0		M				Y
	45-50	zc	25Y 52 00	75YR56 00	C			Y	0	0		0		M				Y
	50-120	zc	25Y 52 00	75YR56 00	M			Y	0	0		0		P			Y	Y
128	0-32	hcl	25Y 32 00						0	0		0						
	32-65	c	05GY61 00	10YR58 00	M			Y	0	0		0		P			Y	
	65-90	c	05G 61 00	10YR58 00	M			Y	0	0		0		P			Y	
130	0-30	mzcl	10YR42 00	10YR68 00	F				0	0	HR	1						
	30-40	hzcl	25Y 71 00	75YR46 00	M			Y	0	0	HR	1		M				
	40-60	c	25Y 61 00	75YR46 00	M			Y	0	0	HR	1		P	Y		Y	
131	0-32	mzcl	10YR42 00						0	0	HR	2						
	32-50	hcl	10YR53 00						0	0		0		M				Y
	50-60	hcl	10YR63 00	75YR58 00	C		00MN00 00	Y	0	0		0		M				
	60-75	hzcl	10YR63 00	75YR58 00	C		00MN00 00	Y	0	0		0		M				
	75-120	c	10YR63 00	75YR58 00	C		00MN00 00	Y	0	0		0		M				
132	0-26	mzcl	10YR42 00						0	0	HR	2						
	26-120	c	75YR46 00	75YR58 00	C		00MN00 00	S	0	0		0		M				
133	0-28	mzcl	10YR43 00						0	0	HR	2						
	28-60	c	75YR56 00			F	00MN00 00		0	0		0		M				
	60-120	c	75YR56 00	75YR58 00	C		00MN00 00	S	0	0		0		M				
135	0-35	mzcl	10YR43 00						0	0		0						
	35-45	mzcl	10YR53 00						0	0		0		M				
	45-58	hcl	10YR53 00						0	0		0		M				
	58-120	c	10YR54 00			F	00MN00 00		0	0		0		M				
136	0-20	mzcl	10YR42 00						0	0	HR	1						
	20-30	mzcl	10YR43 00						0	0		0		M				
	30-50	mzcl	10YR56 00						0	0		0		M				
	50-65	mzcl	10YR56 00						0	0	CH	2		M				Y
	65-95	c	10YR53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M	Y			
	95-120	hzcl	10YR71 00	10YR56 00	M		00MN00 00	Y	0	0	CH	10		M				Y
137	0-30	mzcl	10YR43 00						0	0		0						
	30-45	mzcl	10YR44 00						0	0	CH	1		M				Y
	45-90	c	10YR53 00	10YR56 58	M			Y	0	0		0		M	Y			
	90-120	c	10YR72 00	10YR58 00	M			Y	0	0	CH	10		M				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
138	0-25	hzcl	10YR32 00						0	0	HR	1						
	25-55	zc	25Y 52 00	10YR58 00	M			Y	0	0		0		P	Y		Y	
139	0-25	hzcl	10YR42 00	10YR58 00	C			Y	0	0		0						
	25-55	c	10YR51 00	10YR78 00	M			Y	0	0		0		P	Y		Y	
140	0-30	mzcl	10YR42 00						0	0		0						
	30-45	mzcl	10YR54 00						0	0		0		M				
	45-65	mzcl	10YR54 53	10YR56 00	F				0	0		0		M				
	65-80	c	25Y 53 00	10YR58 00	C			Y	0	0		0		M				
	80-120	c	25Y 53 52	10YR58 00	M		00MN00 00	Y	0	0		0		M				
141	0-25	mzcl	10YR42 00	75YR68 62	C			Y	0	0	HR	1						
	25-60	c	10YR62 00	75YR46 00	M			Y	0	0	HR	1		P	Y		Y	
144	0-30	zl	10YR43 00						0	0		0						
	30-60	mzcl	10YR54 00						0	0		0		M				
	60-72	hzcl	10YR54 00			F	00MN00 00		0	0		0		M				
	72-120	hzcl	10YR53 00	10YR58 00	C		10YR62 00	Y	0	0		0		M				
145	0-30	mzcl	10YR43 00						0	0		0						
	30-40	hzcl	10YR54 00						0	0		0		M				
	40-75	c	10YR54 00			F	00MN00 00		0	0		0		M				
	75-105	c	10YR53 00	10YR58 00	C		10YR62 00	Y	0	0		0		M				
	105-120	c	10YR53 00	10YR58 00	C		10YR62 00	Y	0	0		0		M				Y
146	0-28	zl	10YR52 00	75YR46 00	C		10YR61 00	Y	0	0	HR	2						
	28-60	mcl	10YR53 00					Y	0	0		0		M				
	60-80	mzcl	10YR53 00			F	00MN00 00	Y	0	0		0		M				
	80-90	hzcl	10YR53 00	10YR58 00	C		10YR62 00	Y	0	0		0		M				
	90-120	c	10YR53 00	10YR58 00	C		10YR62 00	Y	0	0		0		M			Y	
147	0-30	mcl	10YR42 00						0	0	HR	2						
	30-55	mcl	10YR53 00						0	0	HR	2		M				
	55-75	mzcl	10YR53 00						0	0		0		M				
	75-87	hcl	10YR54 00			F	00MN00 00		0	0		0		M				
	87-95	hcl	10YR53 00	75YR58 00	C		10YR62 00	Y	0	0		0		M				
	95-120	c	10YR53 00	75YR58 00	C		10YR62 00	Y	0	0		0		M				
148	0-38	mzcl	10YR43 00						0	0	HR	1						
	38-58	mzcl	10YR53 00						0	0	HR	1		M				
	58-120	hzcl	10YR54 00						0	0	HR	1		M				
149	0-28	mzcl	10YR43 00						0	0	HR	1						
	28-65	mzcl	10YR53 00						0	0	HR	1		M				
	65-100	hzcl	10YR54 00	75YR58 00	C		00MN00 00	S	0	0		0		M				
	100-120	c	10YR58 00	75YR58 00	M		00MN00 00	S	0	0		0		M				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
150	0-30	mzcl	10YR42 00	10YR68 00	F				0	0	HR	1						
	30-75	mzcl	10YR54 00	75YR58 61	M			S	0	0		0		M				
	75-120	hzcl	10YR63 00	75YR58 61	M		00MN00 00	Y	0	0		0		M				
151	0-20	hzcl	10YR42 00	10YR68 00	F				0	0	HR	1						
	20-35	hzcl	10YR42 00	10YR68 00	C			Y	0	0	HR	1		M				
	35-55	c	10YR71 00	10YR68 00	M			Y	0	0		0		P	Y		Y	
	55-60	hzcl	10YR71 00	10YR68 00	M			Y	0	0		0		M			Y	
152	0-38	mzcl	10YR43 00						0	0	HR	1						
	38-65	mzcl	10YR53 00						0	0	HR	1		M				
	65-85	hzcl	10YR54 00	75YR58 00	C		00MN00 00	S	0	0		0		M				
	85-120	c	10YR54 00	75YR58 00	C		00MN00 00	S	0	0		0		M				Y
153	0-35	mszl	10YR43 00	10YR68 00	F				0	0	HR	1						
	35-75	mzcl	10YR53 00	10YR68 61	M			Y	0	0	HR	1		M				
	75-120	c	10YR54 00	75YR58 00	M		00MN00 00	S	0	0	HR	1		M				
154	0-20	mcl	10YR42 00	75YR46 00	C			Y	0	0		0						
	20-30	hcl	10YR42 00	75YR46 00	C			Y	0	0		0		M				
	30-65	c	25Y 62 00	10YR58 00	M		25Y 70 00	Y	0	0		0		M			Y	
	65-120	c	10YR62 00	75YR58 00	M			Y	0	0	CH	5		M			Y	Y
155	0-33	mzcl	10YR43 00						0	0	HR	2						
	33-55	hzcl	10YR56 00						0	0		0		M				
	55-120	c	10YR52 00	10YR58 00	M		00MN00 00	Y	0	0		0		M				
156	0-30	mzcl	10YR32 00						0	0	HR	3						Y
	30-120	hzcl	05Y 72 00	10YR68 00	M			Y	0	0		0		M				Y
157	0-35	mzcl	10YR42 00	10YR56 00	F				0	0	HR	1						
	35-120	mzcl	10YR63 64	10YR58 00	C			Y	0	0		0		M				
160	0-28	mcl	10YR43 00						0	0	HR	1						
	28-38	mzcl	10YR43 00						0	0	HR	1		M				
	38-58	mzcl	10YR53 00						0	0		0		M				
	58-68	hzcl	10YR54 00						0	0		0		M				
	68-120	c	10YR54 00	75YR58 00	C			S	0	0		0		M				Y
161	0-28	mzcl	10YR42 00						0	0	HR	1						
	28-58	mzcl	10YR53 00						0	0	HR	1		M				
	58-75	hzcl	10YR54 00						0	0		0		M				
	75-85	hzcl	10YR54 00	75YR58 00	C		00MN00 00	S	0	0		0		M				
	85-105	c	10YR54 00	75YR58 00	C		00MN00 00	S	0	0		0		M				Y
	105-120	mzcl	10YR62 00	75YR58 00	M			Y	0	0	CH	50		M				Y
162	0-36	mzcl	10YR43 00						0	0	HR	1						
	36-75	mzcl	10YR53 00						0	0		0		M				
	75-98	hzcl	10YR54 00	75YR58 00	C			S	0	0		0		M				
	98-120	c	10YR54 00	75YR58 00	M		00MN00 00	S	0	0		0		M				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
163	0-28	hzcl	10YR42 00	10YR68 00	C			Y	0	0	HR	1						
	28-60	c	10YR53 00	75YR58 62	M			Y	0	0	HR	1		P	Y		Y	
164	0-28	mzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	1						
	28-45	mzcl	10YR64 00	10YR58 00	F			Y	0	0		0		M				
	45-55	mzcl	10YR64 00	10YR58 00	C			Y	0	0		0		M				
	55-120	hzcl	10YR64 00	75YR58 00	M			Y	0	0		0		M				
165	0-28	mcl	10YR42 00	75YR56 00	C			Y	0	0		0						
	28-60	mcl	25Y 53 00					Y	0	0		0		M				
	60-65	mzcl	25Y 53 00					Y	0	0		0		M				
	65-120	mzcl	25Y 63 00	10YR58 00	C			Y	0	0		0		M				
166	0-27	mzcl	10YR42 00						0	0	HR	2						
	27-47	mcl	25Y 53 00						0	0		0		M				
	47-65	mcl	25Y 63 00	10YR58 00	C		10YR61 00	Y	0	0		0		M				
	65-120	c	25Y 62 00	10YR58 00	M		25Y 60 00	Y	0	0		0		M			Y	