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West Sussex Minerals Plan
Site B: North-west Densworth,
East Ashling.
Agricultural Land Classification
ALC Map and Report
May 1995

AGRICULTURAL LAND CLASSIFICATION REPORT

WEST SUSSEX MINERALS PLAN

SITE B: NORTH-WEST DENSWORTH, EAST ASHLING.

1. Summary

- 1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality for a number of sites in West Sussex. The work forms part of MAFF's statutory input to the West Sussex Minerals Plan.
- 1.2 Site B comprises approximately 25 hectares of land to the north-west of Densworth, near East Ashling in West Sussex. An Agricultural Land Classification (ALC) survey was carried out during May 1995. The survey was undertaken at a detailed level of approximately one boring per two hectares of agricultural land surveyed. A total of 15 borings, three soil inspection pits and six topsoil stone measurements were described 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 a long term limitation on its use for agriculture.
- 1.3 The work was carried out by members of the Resource Planning Team in the Guildford Statutory Group of ADAS.
- 1.4 The agricultural land at this site was under cereals and recently drilled maize, with an area of set-aside land in the east.
- 1.5 The distribution of grades and subgrades is shown on the attached ALC map, the areas and extent 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.

Table 1: Distribution of Grades and Subgrades

Grade	Area (ha)	% of Agricultural Land
3a	3.3	13.4
3b	<u>21.6</u>	<u>86.6</u>
Total area of site	24.9	100%

- 1.6 Appendix I 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 The agricultural land on this site has been classified as Subgrade 3a, good quality land and Subgrade 3b, moderate quality land with topsoil stoniness as the main limitation. Soils within the Subgrade 3b mapping unit typically comprise moderately stony topsoils resting upon very stony subsoils. A number of topsoil stone measurements within this mapping unit found the volume of stones greater than 2cm in size to exceed 15%, such that a classification of subgrade 3b is appropriate. Excessively stony topsoils can inhibit crop growth and establishment, and can increase production costs due to wear and tear on machinery and tyres. Towards the east of the site, both topsoils and subsoils were found to be less stony. Yet topsoils were found to contain between 10-15% stones greater than 2cm in size, which is sufficient to limit this land to Subgrade 3a due to the aforementioned topsoil stone limitation.

2. Climate

2.1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe climatic 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 average annual rainfall, as a measure of overall wetness, and accumulated temperature (degree days Jan-June), 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 However, climatic factors do interact with soil factors to influence soil wetness and droughtiness limitations. At this locality the Field Capacity Days value is relatively high in a regional context, and the likelihood of any soil wetness problems may be increased. Similarly, the moisture deficits are relatively high in a regional context and therefore the limiting effect of soil wetness may be diminished.

2.5 No local climatic factors such as exposure or frost risk are believed to affect the site.

Table 2 : Climatic Interpolation

Grid Reference	SU 835 078
Altitude (m)	30
Accumulated Temperature (degree days, Jan-June)	1515
Average Annual Rainfall (mm)	837
Field Capacity (days)	175
Moisture Deficit, Wheat (mm)	111
Moisture Deficit, Potatoes (mm)	105
Overall Climatic Grade	1

3. Relief

3.1 The site is relatively flat, lying at an altitude of 30-35m AOD.

4. Geology and Soils

- 4.1 The published geological map (BGS, 1972) shows the entire site to be underlain by Valley Gravel.
- 4.2 The published Soil Survey map (SSGB, 1967) shows the soils on the site to comprise those of the undifferentiated and extremely flinty Charity series. These are described as 'well drained fine silty and fine silty over clayey soils, locally very flinty, some shallow over flint gravel' (SSEW, 1983).
- 4.3 The majority of the soils on the site comprise silty clay loam textures, with flinty topsoils and extremely flinty subsoils.

5. Agricultural Land Classification

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

Subgrade 3a

- 5.2 An area of land towards the east of the site has been classified as Subgrade 3a, good quality land, with topsoil stoniness as the main limitation. Within this mapping unit, soils tend to be deeper over valley gravel than elsewhere on the site. A soil inspection pit (Pit 2) found the soils to comprise medium silty clay loam topsoils and upper subsoils resting upon heavy silty clay loam lower subsoils. The profile is moderately stony (containing 20-25% total flints) to a depth of 78cm where it becomes stoneless. However, topsoil stone measurements at the pit and elsewhere in this mapping unit found 11-15% flints greater than 2cm in size. This volume of stones in the topsoil is sufficiently high to restrict this land to Subgrade 3a.

Subgrade 3b

- 5.3 The remainder of the agricultural land on the site has been classified as Subgrade 3b, moderate quality land, also with topsoil stoniness as the main limitation. Within this mapping unit, moderately stony medium silty clay loam topsoils rest upon very stony medium silty clay loam subsoils. Consequently these soils proved impenetrable to the auger below the topsoil; a soil inspection pit (Pit 1) was dug to assess the nature of the subsoil. The majority of topsoil stone measurements within this mapping unit found the volume of flints greater than 2cm in size in the topsoil to exceed 15%. Where such volumes were observed, topsoil stoniness causes a significant limitation. Excessively stony topsoils can act as an impediment to cultivation, harvesting and crop growth and also cause a reduction in the available water capacity of a soil. A high stone content can also increase production costs by causing extra wear and tear to implements and tyres.

ADAS Ref: 4203/063/95
MAFF Ref: EL 42/228

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1972), Sheet No. 317, Chichester, 1:63,360 Series (drift edition).

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 Great Britain (1967), Sheet SU70 & SU80, Chichester, 1:25,000 and accompanying bulletin 'Soils of the West Sussex Coastal Plain'.

Soil Survey of England and Wales (1983), Sheet 6, Soils of South East England, 1:250,000 and accompanying legend.

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, 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. 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.

¹The 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 Abbreviations - Explanatory Note

Soil Pit Descriptions

Database Printout - Boring Level Information

Database Printout - Horizon Level Information

SOIL PROFILE DESCRIPTIONS : EXPLANATORY NOTE

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

Boring Header Information

1. **GRID REF** : national 100 km grid square and 8 figure grid reference.
2. **USE** : Land use at the time of survey. The following abbreviations are used.

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

3. **GRDNT** : Gradient as estimated or measured by a hand-held optical clinometer.
4. **GLEYSPL** : Depth in centimetres (cm) to gleying and/or slowly permeable layers.
5. **AP (WHEAT/POTS)** : Crop-adjusted available water capacity.
6. **MB (WHEAT/POTS)** : Moisture Balance. (Crop adjusted AP - crop adjusted MD)
7. **DRT** : Best grade according to soil droughtiness.
8. If any of the following factors are considered significant, 'Y' will be entered in the relevant column.

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

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

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

Soil Pits and Auger Borings

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

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

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

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

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

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

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

4. **MOTTLE CONT** : Mottle contrast

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

5. **PED. COL** : Ped face colour using Munsell notation.
6. **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 **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

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

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

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

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

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

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

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

15. Other notations

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

SOIL PIT DESCRIPTION

Site Name : 1 SUSSEX MINS SITE B Pit Number : 1P

Grid Reference: SUB3200780 Average Annual Rainfall : 837 mm
 Accumulated Temperature : 1515 degree days
 Field Capacity Level : 175 days
 Land Use : Maize
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT. STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 32	MZCL	10YR42 43	14	18	HR					
32- 45	MZCL	10YR44 00	0	30	HR				M	
45-120	MZCL	10YR44 00	0	50	HR				M	

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

Drought Grade : 3A APW : 108mm MBW : -3 mm
 APP : 089mm MBP : -16 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : 1 SUSSEX MINS SITE B Pit Number : 2P

Grid Reference: SUB3500790 Average Annual Rainfall : 837 mm
 Accumulated Temperature : 1515 degree days
 Field Capacity Level : 175 days
 Land Use : Wheat
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 30	MZCL	10YR42 00	11	20	HR					
30- 53	MZCL	10YR44 00	0	20	HR				M	
53- 78	HZCL	10YR53 54	0	25	HR	F			M	
78-120	HZCL	10YR54 00	0	0		C	MDCSAB	FR	M	

Wetness Grade : 1 Wetness Class : I
 Gleying : 53 cm
 SPL : cm

Drought Grade : 2 APW : 137mm MBW : 26 mm
 APP : 100mm MBP : -5 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Topsoil Stoniness

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M.REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC COMMENTS
			GRDNT	GLEYSPL	CLASS	GRADE	AP	MB	AP	MB				
	SU83200780	MZE	1	1	108	-3	89	-16	3A				DR	3A
	SU83100790	MZE	1	1		0		0					ST	3B TOPSOIL STONE
2	SU83100810	CER	1	1	53	-58	53	-52	4				DR	3B IMPQSTON
	SU83500790	WHT	1	1	137	26	100	-5	2				ST	3A TOPSOIL STONE
	SU83200790	MZE	1	1		0		0					ST	3B TOPSOIL STONE
3	SU83000800	CER	1	1	53	-58	53	-52	4				DR	3B IMPQSTON
	SU83300790	MZE	1	1		0		0					ST	3B TOPSOIL STONE
	SU83300800	MZE	1	1		0		0					ST	3A
5	SU83400800	MZE	1	1	68	-43	68	-37	38				DR	3B IMP 40
	SU83360799	MZE	1	1		0		0					ST	3B TOPSOIL STONE
6S	SU83460799	CER	1	1	39	-72	39	-66	4				DR	3B
	SU83400800	MZE	1	1	54	-57	54	-51	4				DR	3B IMP 30
	SU83500800	WHT	1	1		0		0					ST	3A TOPSOIL STONE
9	SU83000790	MZE	1	1		0		0					ST	3B TOPSOIL STONE
13	SU83400790	WHT	1	1		0		0					ST	3A 150 SEE 2P
14	SU83500790	WHT	1	1		0		0					ST	3A 160 SEE 2P
15	SU83600790	WHT	1	1		0		0					ST	3A 150 SEE 2P
17	SU83100780	MZE	1	1	59	-52	59	-46	4				DR	3B IMP 40
18	SU83200780	MZE	1	1	59	-52	59	-46	4				DR	3B IMP 40
19	SU83300780	MZE	1	1	50	-61	50	-55	4				ST	3B TOPSOIL STONE
20	SU83400780	MZE	1	1	46	-65	46	-59	4				DR	3B IMP 30
21	SU83500780	SAS	1	1	37	-74	37	-68	4				ST	3B TOPSOIL STONE
27	SU83500760	SAS	1	1	32	-79	32	-73	4				ST	3B TOPSOIL STONE

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES-----			STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR	IMP	SPL
1P	0-32	mzc1	10YR42 43						14	0	HR	18					
	32-45	mzc1	10YR44 00						0	0	HR	30		M			
	45-120	mzc1	10YR44 00						0	0	HR	50		M			
1S	0-25	mzc1	10YR43 00						20	0	HR	35					
2	0-35	mzc1	10YR43 00						12	0	HR	22					
2P	0-30	mzc1	10YR42 00						11	0	HR	20					
	30-53	mzc1	10YR44 00						0	0	HR	20		M			
	53-78	hzc1	10YR53 54 10YR56 00 F				00MNO0	00	Y	0	0	HR	25		M		
	78-120	hzc1	10YR54 00 10YR56 00 C						S	0	0	0	MDCSAB	FR	M		
2S	0-25	mzc1	10YR43 00						18	0	HR	28					
3	0-35	mzc1	10YR43 00						12	0	HR	22					
3S	0-25	mzc1	10YR43 00						18	0	HR	28					
4S	0-25	mzc1	10YR43 00						8	0	HR	18					
5	0-30	z1	10YR43 00						12	0	HR	22					
	30-40	mzc1	10YR43 00						0	0	HR	20		M			
5S	0-25	mzc1	10YR43 00						20	0	HR	30					
6S	0-25	mzc1	10YR43 00						8	0	HR	18					
7	0-30	z1	10YR43 00						12	0	HR	22					
8	0-28	mzc1	10YR41 42						13	0	HR	20					
	28-45	mzc1	10YR53 54						0	0	HR	10		M			
	45-65	mzc1	10YR53 00 10YR58 00 C						Y	0	0	HR	20		M		
9	0-35	mzc1	10YR43 00						18	0	HR	28					
13	0-30	mzc1	10YR42 00						15	0	HR	25					
	30-50	mzc1	10YR54 00						0	0	HR	20		M			
14	0-28	mzc1	10YR42 00						11	0	HR	20					
	28-45	mzc1	10YR54 00						0	0	HR	10		M			
	45-60	mzc1	10YR53 52 10YR58 00 M				00MNO0	00	Y	0	0	HR	25		M		
15	0-25	mzc1	10YR42 00						8	0	HR	15					
	25-50	mzc1	10YR54 00						0	0	HR	20		M			
17	0-30	mzc1	10YR43 00						12	0	HR	22					
	30-40	mzc1	10YR42 00						0	0	HR	22		M			

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLEY	>2	>6		LITH	TOT	STR	POR	IMP	SPL
18	0-30	mzc1	10YR43 00					14	0	HR	18						
	30-40	mzc1	10YR44 00					0	0	HR	30		M				
19	0-30	mzc1	10YR44 00					18	0	HR	25						
	30-35	mzc1	10YR54 00					0	0	HR	30		M				
20	0-30	mzc1	10YR44 00					13	0	HR	20						
21	0-25	mzc1	10YR42 00					23	0	HR	35						
	25-30	mzc1	10YR54 00					0	0	HR	40		M				
27	0-25	mzc1	10YR42 00					23	0	HR	35						