A1
WEST SUSSEX MINERALS PLAN
SITE 40 : WEST LAVANT FARM
AGRICULTURAL LAND CLASSIFICATION
ALC MAP & REPORT
NOVEMBER 1993

WEST SUSSEX MINERALS PLAN
SITE 40 : WEST LAVANT FARM
AGRICULTURAL LAND CLASSIFICATION REPORT

1.0 Summary

1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality on a number of sites in West Sussex. The work forms part of MAFF's statutory input to the preparation of the West Sussex Minerals Plan.

1.2 Approximately 28 hectares of land relating to site 40, West Lavant Farm near Chichester was surveyed in November 1993. The survey was undertaken at a detailed level of approximately one boring per hectare. A total of 30 soil auger borings and 3 soil inspection pits were assessed in accordance with MAFF's revised guidelines and criteria for grading the quality of agricultural land (MAFF, 1988). These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose longterm limitations on its use for agriculture.

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

1.4 At the time of the survey the land use on the site was permanent grassland and cereals.

1.5 The distribution of grades and subgrades is shown on the attached ALC map and the areas are given in the table below. The map has been drawn at a scale of 1:5,000. It is accurate at this scale, but any enlargement would be misleading. This map supersedes any previous survey information for the site.

Table 1 : Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Area
2	24.4	85.9	100%
Non agricultural	0.8	2.8	
Urban	0.3	1.1	
Woodland	2.9	10.2	
Total area of site	28.4	100%	

1.6 Appendix 1 gives a general description of the grades and 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 entire site has been classified as Grade 2 with soil droughtiness and workability as the key limitations. Soil profiles are well drained, comprising very slightly to slightly stony medium silty clay loam topsoils over upper subsoils of the same texture with similar stone content. Soils become heavier with depth and very stony towards the base of the profile. Soils experience a slight droughtiness limitation due to the stone volumes which reduce available water for plant growth. Together with this, land experiences a slight workability limitation related to the interaction of topsoil texture with climatic factors and can be classified no higher than Grade 2.

2.0 Climate

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

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

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

2.4 No local climatic factors such as exposure or frost risk affect the site. It should be noted that the local climate is quite warm and wet in a regional context with high rainfall and accumulated temperature. As a result climatic factors do interact with soil properties to affect soil wetness/workability and droughtiness limitations.

Table 2 : Climatic Interpolation

Grid Reference :	SU 852 082
Altitude (m) :	40
Accumulated Temperature (days) :	1503
Average Annual Rainfall (mm) :	861
Field Capacity (days) :	181
Moisture Deficit, Wheat (mm) :	108
Moisture Deficit, Potatoes (mm) :	102
Overall Climatic Grade :	1

3.0 Relief

3.1 The site is level and lies at an altitude of approximately 40 metres. Relief or gradient do not affect agricultural land quality.

4.0 Geology and Soil

4.1 The relevant geological sheet for the site, Sheet 317 (BGS, 1972) shows the underlying geology to be Valley Gravel.

4.2 The published soils information for the area, Sheet 6 (SSEW, 1983) shows the soils on the site to comprise the Charity 1 association -"Well drained fine silty and fine silty over clayey soils, locally very flinty. Some shallow over flint gravel" (SSEW,1983). A detailed inspection of soils on the site broadly confirmed the presence of soils similar to those described above, becoming very flinty at depth.

5.0 Agricultural Land Classification

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

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

Grade 2

5.3 All the agricultural land on the site has been classified as grade 2. Profiles typically comprise topsoils of medium silty clay loam containing 0-10% total flints by volume of which 0-4% were > 2 cm in diameter. Upper subsoils consist of the same texture containing 0-20% total flints. Many auger borings proved to be impenetrable in this horizon due to a narrow band of 10-20% total flints revealed in soil pits 2 and 3. Lower subsoils consist of heavy silty clay loam, heavy clay loam or clay containing 1-2% total flints which became 40-58% from a depth of 66-80 cm in the profile (see pits 2 and 3). Soils are well drained, suffering no wetness imperfections and are assigned to a wetness class of I. However, they do experience a slight soil droughtiness limitation. The combination of soil textures, profile stone content, and climatic factors results in a slight reduction of available water reserves in the profile for crops such that land can be classified no higher than grade 2.

5.5 The area marked as urban consists of a car park

5.6 The areas marked as non-agricultural include a playing field and a small area overgrown with trees and bushes.

ADAS REFERENCE : 4203/250/93
MAFF REFERENCE : EL 42/00228

Resource Planning Team
Guildford Statutory Group
ADAS Reading

APPENDIX I

DESCRIPTION OF THE GRADES AND SUB-GRADES

Grade 1 : Excellent Quality Agricultural Land

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

Grade 2 : Very Good Quality Agricultural Land

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

Grade 3 : Good To Moderate Quality Agricultural Land

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

Sub-grade 3A : Good Quality Agricultural Land

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

Sub-grade 3B : Moderate Quality Agricultural Land

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

Grade 4 : Poor Quality Agricultural Land

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

Grade 5 : Very Poor Quality Agricultural Land

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

Urban

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

Non-agricultural

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

Woodland

Includes commercial and non-commercial woodland.

Agricultural Buildings

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

Open Water

Includes lakes, ponds and rivers as map scale permits.

Land Not Surveyed

Agricultural land which has not been surveyed.

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

APPENDIX II

REFERENCES

* BRITISH GEOLOGICAL SURVEY (1972), Sheet No.317, Chichester, 1:63,360 scale.

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

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

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

APPENDIX III

DEFINITION OF SOIL WETNESS CLASSES

Wetness Class I

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

Wetness Class II

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

Wetness Class III

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

Wetness Class IV

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

Wetness Class V

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

Wetness Class VI

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

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

APPENDIX IV

SOIL PIT AND SOIL BORING DESCRIPTIONS

Contents :

SOIL PROFILE DESCRIPTIONS : EXPLANATORY NOTE

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

Boring Header Information

1. GRID REF : national grid square and 8 figure grid reference.

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

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

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

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

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

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

7. DRT : Best grade according to soil droughtiness.

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

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

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

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

Soil Pits and Auger Borings

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

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

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

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

The clay loam and silty clay loam classes will be sub-divided according to the clay content.

M : Medium (< 27% clay) H : Heavy (27-35% clay)

2. MOTTLE COL : Mottle colour

3. MOTTLE ABUN : Mottle abundance, expressed as a percentage of the matrix or surface described.

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

4. MOTTLE CONT : Mottle contrast

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

5. PED. COL : Ped face colour

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

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

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

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

- degree of development WK : weakly developed MD : moderately developed ST : strongly developed

- ped size F : fine M : medium C : coarse VC : very coarse

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

8. CONSIST : Soil consistence is described using the following notation:

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

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

G : good M : moderate P : poor

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

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

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

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

14. Other notations

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

SOIL PIT DESCRIPTION

Site Name : WSUSSEX MINS,SITE 40 Pit Number : 1P

Grid Reference: SU85300828 Average Annual Rainfall : 861 mm
Accumulated Temperature : 1503 degree days
Field Capacity Level : 181 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 33	MZCL	10YR43 00	0	2		MDMSAB
33- 45	MZCL	10YR44 00	0	2		MDCSAB
45- 66	HZCL	10YR56 00	0	2		MDCSAB
66- 90	HCL	10YR56 00	0	58		

Wetness Grade : 2 Wetness Class : I
Gleying : cm
SPL : No SPL

Drought Grade : 2 APW : 116mm MBW : 8 mm
APP : 119mm MBP : 17 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WSUSSEX MINS SITE 40 Pit Number : 2P

Grid Reference: SU85100800 Average Annual Rainfall : 861 mm
Accumulated Temperature : 1503 degree days
Field Capacity Level : 181 days
Land Use : Cereals
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 39	MZCL	10YR43 00	4	8		WDMSAB
39- 44	MZCL	10YR44 00	0	15		
44- 63	MZCL	10YR44 00	0	10		WDCSAB
63- 80	HZCL	10YR56 00	0	2		MDCSAB
80- 95	HZCL	10YR56 00	0	40		

Wetness Grade : 2 Wetness Class : I
Gleying : cm
SPL : No SPL

Drought Grade : 2 APW : 123mm MBW : 15 mm
APP : 117mm MBP : 15 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WSUSSEX MINS SITE 40 Pit Number : 3P

Grid Reference: SU85260794 Average Annual Rainfall : 861 mm
Accumulated Temperature : 1503 degree days
Field Capacity Level : 181 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 30	MZCL	10YR43 00	3	7		MDCSAB
30- 40	MZCL	10YR43 00	0	10		WKCSAB
40- 62	MZCL	10YR54 00	0	3		MDCSAB
62- 77	HCL	10YR54 00	0	2		WKCSAB
77- 92	HCL	10YR56 00	0	40		

Wetness Grade : 2 Wetness Class : I
Gleying : cm
SPL : No SPL

Drought Grade : 2 APW : 121mm MBW : 13 mm
APP : 118mm MBP : 16 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SAMPLE NO.	GRID REF	USE	ASPECT GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	M.REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT		ALC COMMENTS
1	SU84900830	PGR				1	2	38	-70	38	-64	4				DR	4	IMP20 SEE IP
1P	SU85300828	PGR				1	2	116	8	119	17	2				DR	2	PIT 90
2	SU85300830	CER				1	2	59	-49	59	-43	3B				DR	3B	IMP 35 SEE 2P
2P	SU85100800	CER				1	2	123	15	117	15	2				DR	2	PIT 80
3	SU85400830	CER				1	2	53	-55	53	-49	4				DR	4	IMP 30 SEE 2P
3P	SU85260794	PGR				1	2	121	13	118	16	2				DR	2	PIT 92
4	SU85500830	CER				1	2	72	-36	72	-30	3B				DR	3B	IMP 40 SEE 2P
5	SU84700820	PGR				1	2	157	49	123	21	1				WK	2	
6	SU84800820	PGR				1	2	105	-3	113	11	3A				DR	3A	IMP 78 SEE 1P
7	SU84900820	PGR				1	2	99	-9	113	11	3A				DR	3A	IMP 70 SEE 1P
8	SU85000820	PGR				1	2	43	-65	43	-59	4				DR	4	IMP 25 SEE 1P
9	SU85060821	PGR				1	2	60	-48	60	-42	3B				DR	3B	IMP 35 SEE 1P
10	SU85200820	PGR				1	2	111	3	118	16	3A				DR	3A	IMP 80 SEE 1P
11	SU85300820	CER				1	2	72	-36	72	-30	3B				DR	3B	IMP 40 SEE 2P
12	SU85400820	CER				1	2	113	5	122	20	2				DR	2	IMP 75
13	SU85500820	CER				1	2	69	-39	69	-33	3B				DR	3B	IMP 40 SEE 2P
14	SU84700810	PGR				1	2	52	-56	52	-50	4				DR	4	IMP 30 SEE 1P
15	SU84800810	PGR				1	2	91	-17	100	-2	3A				DR	3A	IMP 65 SEE 1P
16	SU84900810	PGR				1	2	78	-30	78	-24	3B				DR	3B	IMP 50 SEE 1P
17	SU85000810	PGR				1	2	64	-44	64	-38	3B				DR	3B	IMP 40 SEE 1P
18	SU85100810	PGR				1	2	127	19	120	18	2				DR	2	IMP 95
19	SU85210812	PGR				1	2	43	-65	43	-59	4				DR	4	IMP 25 SEE 2P
20	SU85280812	CER				1	2	137	29	120	18	2				DR	2	IMP 100
21	SU85408130	CER				1	2	99	-9	109	7	3A				DR	3A	IMP 65 SEE 1P
22	SU85100800	PGR				1	2	108	0	120	18	3A				DR	3A	IMP 70 SEE 1P
23	SU85200800	PGR				1	2	70	-38	70	-32	3B				DR	3B	IMP 40 SEE 3P
24	SU85300800	PGR				1	2	52	-56	52	-50	4				DR	4	IMP 30 SEE 3P
25	SU85100790	PGR				1	2	59	-49	59	-43	3B				DR	3B	IMP 35 SEE 3P
26	SU85200790	PGR				1	2	52	-56	52	-50	4				DR	4	IMP 30 SEE 3P
27	SU85300790	PGR				1	2	53	-55	53	-49	4				DR	4	IMP 30 SEE 3P
28	SU85210813	PGR				1	2	103	-5	113	11	3A				DR	3A	IMP 65 SEE 1P
30	SU85570851	CER				1	2	107	-1	120	18	3A				DR	3A	IMP 70 SEE 1P
31	SU85560813	CER				1	2	112	4	121	19	3A				DR	3A	IMP 75 SEE 1P

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
1	0-20	mzcl	10YR32 00						0	0	HR	1						
1P	0-33	mzcl	10YR43 00						0	0	HR	2	MDMSAB	FR				
	33-45	mzcl	10YR44 00						0	0	HR	2	MDCSAB	FR	M		Y	
	45-66	hzcl	10YR56 00						0	0	HR	2	MDCSAB	FR	M		Y	
	66-90	hcl	10YR56 00						0	0	HR	58			M			
2	0-30	mzcl	10YR42 00						0	0	HR	10						
	30-35	mzcl	10YR54 00						0	0	HR	12			M			
2P	0-39	mzcl	10YR43 00						4	0	HR	8	WDMSAB	FR				
	39-44	mzcl	10YR44 00						0	0	HR	15		FR	M			
	44-63	mzcl	10YR44 00						0	0	HR	10	WDCSAB	FR	M		Y	
	63-80	hzcl	10YR56 00						0	0	HR	2	MDCSAB	FM	M		Y	
	80-95	hzcl	10YR56 00						0	0	HR	40		FM	M			
3	0-30	mzcl	10YR43 00						0	0	HR	8						
3P	0-30	mzcl	10YR43 00						3	0	HR	7	MDCSAB	FR				
	30-40	mzcl	10YR43 00						0	0	HR	10	WKCSAB	FR	M		Y	
	40-62	mzcl	10YR54 00						0	0	HR	3	MDCSAB	FR	M		Y	
	62-77	hcl	10YR54 00						0	0	HR	2	WKCSAB	FR	M		Y	
	77-92	hcl	10YR56 00						0	0	HR	40			M			
4	0-40	mzcl	10YR43 00						0	0	HR	6						
5	0-30	mzcl	10YR43 00						0	0	HR	2						
	30-80	hzcl	10YR54 00						0	0	HR	1			M			
	80-120	hzcl	10YR54 00						0	0	HR	5			M			
6	0-20	mzcl	10YR43 00						0	0	HR	2						
	20-40	hzcl	10YR54 00						0	0	HR	10			M			
	40-70	zc	10YR56 00						0	0		0			M		Y	
	70-78	zc	10YR56 00						0	0	HR	5			M			
7	0-30	mzcl	10YR43 00						0	0	HR	10						
	30-45	mzcl	10YR54 00						0	0	HR	20			M			
	45-70	mzcl	10YR54 00						0	0	HR	5			M			
8	0-25	mzcl	10YR43 00						0	0	HR	10						
9	0-35	mzcl	10YR43 00						0	0	HR	10						
10	0-30	mzcl	10YR43 00						0	0	HR	2						
	30-45	mcl	10YR44 00						0	0	HR	5			M			
	45-55	hcl	10YR44 00						0	0	HR	1			M			
	55-80	c	10YR56 00				00MN00	00	0	0	HR	1			M			

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
11	0-40	mzcl	10YR52 00						0	0	HR	5						
12	0-35	mzcl	10YR43 00						0	0	HR	5						
	35-55	mzcl	10YR44 00						0	0	HR	2		M				
	55-75	hzcl	10YR54 00						0	0		0		M				
13	0-40	mzcl	10YR42 00						0	0	HR	10						
14	0-30	mzcl	10YR43 00						0	0	HR	10						
15	0-30	mzcl	10YR43 00						0	0	HR	10						
	30-40	mzcl	10YR43 00						0	0	HR	20		M				
	40-65	hzcl	10YR54 00						0	0	HR	20		M				
16	0-25	mzcl	10YR43 00						0	0	HR	10						
	25-50	mzcl	10YR54 00						0	0	HR	20		M				
17	0-25	mzcl	10YR43 00						0	0	HR	10						
	25-40	mzcl	10YR54 00						0	0	HR	20		M				
18	0-35	mzcl	10YR43 00						0	0	HR	3						
	35-45	mcl	10YR44 00						0	0	HR	5		M				
	45-66	hcl	10YR44 00						0	0		0		M				
	66-95	c	10YR56 00				00MN00	00	0	0	HR	1		M				
19	0-25	mzcl	10YR43 00						0	0	HR	10						
20	0-25	mzcl	10YR43 00						0	0	HR	5						
	25-55	mzcl	10YR54 00						0	0		0		M				
	55-100	hcl	10YR56 00						0	0	HR	2		M				
21	0-30	mzcl	10YR43 00						0	0	HR	6						
	30-50	hzcl	10YR54 00						0	0	HR	2		M				
	50-65	zc	10YR56 00						0	0	HR	2		M				
22	0-35	mzcl	10YR43 00						0	0	HR	2						
	35-50	mcl	10YR44 00						0	0	HR	2		M				
	50-70	hcl	10YR56 00						0	0	HR	2		M				
23	0-35	mzcl	10YR43 00						0	0	HR	5						
	35-40	mcl	10YR44 00						0	0	HR	15		M				
24	0-30	mzcl	10YR43 00						0	0	HR	10						
25	0-30	mzcl	10YR43 00						0	0	HR	10						
	30-35	mzcl	10YR44 00						0	0	HR	20		M				
26	0-30	mzcl	10YR43 00						0	0	HR	10						

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
27	0-30	mzcl	10YR43 00						0	0	HR	8						
28	0-30	mzcl	10YR43 00						0	0	HR	2						
	30-55	mzcl	10YR54 00						0	0	HR	6		M				
	55-65	hzcl	10YR56 00						0	0	HR	2		M				
30	0-30	mzcl	10YR43 00						0	0	HR	6						
	30-55	mzcl	10YR44 00						0	0	HR	2		M				
	55-70	hzcl	10YR46 00						0	0	HR	2		M				
31	0-35	mzcl	10YR43 00						0	0	HR	6						
	35-65	mzcl	10YR44 00						0	0	HR	2		M				
	65-75	hzcl	10YR56 00						0	0		0		M				