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Arun District Local Plan
Site 40 : Land east of Northfields Lane, Westergate
Agricultural Land Classification
ALC Map and Report
May 1994

AGRICULTURAL LAND CLASSIFICATION REPORT

ARUN DISTRICT LOCAL PLAN
SITE 40 : LAND EAST OF NORTHFIELDS LANE, WESTERGATE

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 the Arun District of West Sussex. The work forms part of MAFF's statutory input to the preparation of the Arun District Local Plan.

1.2 Site 40 comprises approximately 12 hectares of land between the A29, Fontwell Avenue to the east, and Northfields Lane to the west, near Westergate, West Sussex. An Agricultural Land Classification (ALC) survey was carried out during May 1994. The survey was undertaken at a detailed level of approximately one boring per hectare. A total of twelve soil auger borings and one soil inspection pit 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 At the time of the survey, the agricultural land use was pony paddocks, permanent grass and ploughed land. Land mapped as non-agricultural includes scrub, an area of manure storage and a fenced off section containing scrap vehicles. The urban areas mapped include a house and garden, and a metalled roadway leading to an agricultural machinery workshop, shown as agricultural buildings.

1.4 The distribution of grades and subgrades is shown on the attached ALC map and the areas and extent 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 ALC survey information for the site.

Table 1 : Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Land
1	1.8	14.9	16.1
2	8.1	66.9	72.3
3a	1.3	10.7	11.6
Non-Agricultural	0.2	1.7	100% (11.2 ha)
Urban	0.5	4.1	
Agricultural Buildings	0.2	1.7	
Total area of site	12.1 ha	100%	

1.5 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.

1.6 Agricultural land on the site has been classified as excellent quality (Grade 1) to good quality (Subgrade 3a). Where a limitation to agricultural use exists, it is principally soil droughtiness due to high stone contents within the profile. Stones reduce soil water availability in what are otherwise moisture retentive silt loam and silty clay loam soils. On occasion poorly structured clay horizons were encountered, at depths which very slightly inhibit soil drainage, such that in these areas soil wetness is the prime limitation.

2. 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 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. However climatic factors do interact with soil properties to influence soil wetness and droughtiness limitations.

2.4 No local climatic factors such as exposure or frost risk affect the site.

Table 2 : Climatic Interpolation

Grid Reference	*SU940059*
Altitude (m)	12
Accumulated Temperature (°days, Jan-June)	1534
Annual Average Rainfall (mm)	783
Field Capacity (days)	161
Moisture Deficit, Wheat (mm)	116
Moisture Deficit, Potatoes (mm)	112
Overall Climatic Grade	1

3. Relief

3.1 The site lies between approximately 12 and 14m AOD. Overall it is relatively flat, rising very gently to the north east. As such neither microrelief or gradient affect land utilisation and so do not affect the final classification.

4. Geology and Soil

4.1 The published British Geological Survey map, Sheet 317, Chichester (1972, 1:63,360 scale), shows the site to be entirely underlain by valley gravel deposits.

4.2 The published Soil Survey of Great Britain map, Sheet SU90, Bognor Regis, (1:25,000 scale) which accompanies Soils of the West Sussex Coastal Plain (SSGB, 1967), shows the site to be underlain by soils from five different series. The predominant series being Hook and Binsted totalling about 75% of the surveyed area. These are described as being developed in flinty silty head deposits containing a high proportion of variously sized flints and may be calcareous in the case of Hook soils. The remaining 25% of the site is shown as being underlain by soils from the Strettington, Hamble and Charity series which are described as well to moderately drained brown earths developed in silty drift, flinty in the case of Strettington soils. Soils at the site were found to principally comprise silty and silty clay textures, and were variously stony and non-calcareous. In a number of cases they also showed evidence of a slight drainage impedance at depth.

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 are shown on the attached sample point* map.

Grade 1

5.3 Land of excellent quality has been mapped towards the centre of the site around the agricultural machinery workshop. No significant limitations to agricultural use were encountered in profiles which typically comprise a very slightly to slightly stony (2-10% v/v flints) non-calcareous silt loam topsoil, overlying a stoneless or very slightly stony (0-2% v/v flints) medium silty clay loam upper subsoil. This passes to a similarly stony occasionally gleyed, heavy silty clay loam horizon. Below this the lower subsoil becomes either a slightly stony (2-15% v/v flints) silty clay, remains a heavy silty clay loam, or becomes impenetrable to the soil auger around 95 cm. Soils of this nature are both moisture retentive and free draining, such that within local climatic parameters they can be placed in drought Grade 1 and Wetness Class I, which given the good workability status of the soils leads to Grade 1. As such no significant limitations to the agricultural use of the land exist.

Grade 2

5.4 Land of very good quality is mapped across the majority of the agricultural land at this site. The principal limitation is soil droughtiness due to stone contents within the profile slightly restricting available water to plants. Profiles typically comprise a very slightly stony to slightly stony (2-10% v/v flints) non-calcareous silt loam or medium silty clay loam topsoil, passing to a slightly or very slightly stony (2-10% v/v flints) non-calcareous medium silty clay loam upper subsoil, which occasionally

exhibits gleying. Underlying this is a commonly gleyed, though not slowly permeable, slightly or very slightly stony (2-8% v/v flints) heavy silty clay loam, occasionally passing to a similarly stony clay at depth, but more commonly becoming impenetrable to the soil auger between 55 and 80 cm. From the pit observation, 1P (see Appendix III), the lower subsoil horizon was found to consist of a very stony (c.50% v/v flints) heavy silty clay loam. In these profiles this was considered to occur to depth. The stones in the profile lead to there being a slight risk of drought stress to plants, by reducing the volume of water retentive material, such that within the local climatic parameters Grade 2 has been applied. Occasional profiles were considered to contain a slowly permeable clay horizon which very slightly impedes drainage such that Wetness Class II (see Appendix II) was applied and subsequently Grade 2.

Subgrade 3a

5.5 Land of good quality is mapped towards the east of the survey area. The principal limitation is soil droughtiness due to stone contents within the profile slightly restricting water availability to plants. Profiles typically comprise a very slightly to slightly stony (5-10% v/v flints) medium silty clay loam topsoil passing to a very slightly to slightly stony (3-10% v/v flints) heavy silty clay loam upper subsoil which becomes impenetrable to the soil auger between 60 and 70 cm. In the pit observation 1P (see Appendix III), the lower subsoil horizon was found to comprise a very stony (c.50% v/v flints) heavy silty clay loam. This was considered to occur to depth. Profiles of this nature occurring within the prevalent local climatic parameters restricts available water to plants such that there is moderate risk of drought stress and therefore Subgrade 3a has been applied.

SOURCES OF REFERENCE

British Geological Survey (1972), Sheet No 317, Chichester, 1:63,360 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 SU90, Bognor Regis, 1:25,000, Soils of the West Sussex Coastal Plain and accompanying maps.

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 (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 : Very Poor Quality Agricultural Land
Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

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 (e.g. 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, e.g. 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

DEFINITION OF SOIL WETNESS CLASS

Wetness Class I

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

Wetness Class 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 180 days, but only wet within 40 cm depth for 31-90 days in most years.

Wetness Class 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.

Wetness Class IV

The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth fro 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.

Wetness Class V

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

Wetness Class VI

The soil profile is wet within 40 cm depth for more than 335 days in most 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 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	**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 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 **ST** : Topsoil Stones
CH : Chemical	**WE** : Wetness	**WK** : Workability
DR : Drought	**ER** : Erosion Risk	**WD** : Soil Wetness/Droughtiness

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	**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	**GH** : gravel with non-porous (hard) stones
SI : soft weathered igneous/metamorphic rock	

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 appropriate 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 : ARUN LP SITE 40 Pit Number : 1P

Grid Reference: SU94400570 Average Annual Rainfall : 783 mm
Accumulated Temperature : 1534 degree days
Field Capacity Level : 161 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 26	MZCL	10YR42 00	6	10	HR					
26- 63	HZCL	10YR43 00	0	8	HR				M	
63- 75	HZCL	10YR43 00	0	50	HR				P	

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

Drought Grade : 3A APW : 098mm MBW : -18 mm
APP : 107mm MBP : -5 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

SAMPLE NO.	GRID REF	ASPECT USE	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	SU94000590	PGR		45	70	2	2	116	0	118	6	3A				DR	2	IMP DR120 AS1P
1P	SU94400570	PGR				1	1	098	-18	107	-5	3A				DR	3A	PIT 75 DR 120
2	SU94300590	PGR		90		1	1	154	38	118	6	2				DR	2	
3	SU94000580	PGR		30		2	2	100	-16	103	-9	3A				DR	3A	IMP DR120 AS1P
4	SU94100580	PLO				1	1	126	10	130	18	2				DR	2	IMP DR120 AS1P
5	SU94200580	PLO		60		1	1	127	11	125	13	2					1	IMP DR120 AS1P
6	SU94300580	PGR				1	1	153	37	118	6	2				DR	2	
7	SU94500580	PGR				1	1	106	-10	117	5	3A				DR	2	IMP DR120 AS1P
8	SU94100570	PLO		55	75	2	2	155	39	134	22	1				WE	2	SPL 75
9	SU94200570	PLO				1	1	162	46	127	15	1					1	
10	SU94300570	PLO				1	1	159	43	139	27	1					1	
11	SU94400570	PGR				1	1	106	-10	119	7	3A				DR	3A	IMP DR120 AS1P
12	SU94480569	PGR				1	1	098	-18	105	-7	3A				DR	3A	IMP DR120 AS1P

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
1	0-33	mzcl	10YR42 00						0	0	HR	5						
	33-45	mzcl	10YR54 00						0	0	HR	10		M				
	45-60	hzcl	25Y 63 62	10YR56 00	C		00MN00 00	Y	0	0	HR	10		M				
	60-70	hzcl	25Y 62 63	10YR66 00	M			Y	0	0		0		M				
	70-90	c	25Y 62 00	75YR68 00	M		00MN00 00	Y	0	0	HR	20		P		Y		IMP STONES 90
1P	0-26	mzcl	10YR42 00						6	0	HR	10						
	26-63	hzcl	10YR43 00						0	0	HR	8		M				
	63-75	hzcl	10YR43 00						0	0	HR	50		P				IMP STONES 75
2	0-25	mzcl	10YR42 00						3	0	HR	10						
	25-40	mzcl	75YR53 00						0	0	HR	2		M				
	40-90	hzcl	75YR54 00						0	0	HR	2		M				
	90-120	hzcl	75YR53 00	10YR58 00	C			Y	0	0		0		M				
3	0-30	zl	10YR42 00						0	0	HR	5						
	30-50	mzcl	10YR53 54	10YR56 00	C			Y	0	0	HR	10		M				
	50-55	hzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	25		M				IMP STONES 55
4	0-28	zl	10YR42 00						0	0	HR	5						
	28-50	mzcl	10YR54 00						0	0	HR	3		M				
	50-65	mzcl	75YR56 00						0	0	HR	5		M				
	65-80	hzcl	10YR58 00	00MN00 00	C				0	0	HR	15		M				IMP STONES 80
5	0-32	zl	10YR43 00						3	0	HR	10						
	32-45	mzcl	10YR54 00	00MN00 00	F				0	0		0		M				
	45-60	hzcl	10YR53 00	00MN00 00	F				0	0	HR	2		M				
	60-95	hzcl	10YR52 00	10YR58 61	C		00MN00 00	Y	0	0	HR	2		P				IMP STONES 95
6	0-20	mzcl	10YR43 00						0	0	HR	8						
	20-45	mzcl	75YR53 00						0	0	HR	2		M				
	45-120	hzcl	75YR54 00						0	0	HR	2		M				
7	0-35	mzcl	10YR42 00						0	0	HR	2						
	35-67	hzcl	10YR43 00						0	0	HR	5		M				IMP STONES 67
8	0-30	zl	10YR42 00						0	0	HR	5						
	30-55	mzcl	10YR44 54						0	0	HR	3		M				
	55-70	hzcl	10YR53 54	10YR56 00	C			Y	0	0		0		M				
	70-75	zc	10YR53 00	10YR56 00	C		00MN00 00	Y	0	0		0		M				
	75-120	c	10YR53 00	75YR58 00	M		00MN00 00	Y	0	0		0		P		Y		
9	0-25	zl	10YR43 00						0	0	HR	8						
	25-55	mzcl	75YR54 00	00MN00 00	F				0	0	HR	2		M				
	55-120	hzcl	75YR56 00	00MN00 00	F				0	0	HR	2		M				
10	0-37	zl	10YR43 00						0	0	HR	2						
	37-45	mzcl	10YR44 00						0	0	HR	2		M				
	45-70	hzcl	10YR44 00						0	0	HR	2		M				
	70-120	zc	10YR44 00						0	0	HR	15		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	0-35	mzcl	10YR42 00						0	0	HR	5							1P @ BORING 11
	35-65	hzcl	10YR43 00						0	0	HR	4		M					
	65-70	hzcl	10YR43 00						0	0	HR	30		M					IMP STONES 70
12	0-35	mzcl	10YR42 00						0	0	HR	5							
	35-60	hzcl	10YR43 00						0	0	HR	3		M					IMP STONES 60