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Smugley Farm, Goudhurst, Kent
Agricultural Land Classification
Reconnaissance Survey
ALC Map and Report
January 1994

SMUGLEY FARM, GOUDHURST, KENT
AGRICULTURAL LAND CLASSIFICATION
RECONNAISSANCE SURVEY REPORT

1 Summary

1 1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality on an area of land near Goudhurst Kent The work forms part of MAFF's statutory input to the golf course proposal at Smugley Farm

1 2 Approximately 126 hectares of land was surveyed in January 1994 The survey was undertaken at a reconnaissance level of approximately one boring every 4 hectares A total of 30 soil auger borings and three 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 long term 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 majority of the landuse on the site was permanent grassland with an area of unharvested linseed to the west and cereal stubble in the west and central southern parts of the site

1 5 The distribution of grades subgrades and landuses is shown on the attached ALC map and the areas are given in the table below The map has been drawn at a scale of 1 10 000 It is accurate at this scale but any enlargement would be misleading This map supersedes any previous survey information for this site

Table 1 Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Area
3b	106 5	84 3	100
Urban	1 5	1 2	
Non-Agricultural	2 6	2 1	
Woodland	13 9	11 0	
Agricultural Buildings	1 6	1 3	
Open Water	0 2	0 1	
Total area of site	126 3	100%	

1 6 Appendix 1 gives a general description of the grades subgrades and land use categories identified in the survey The main classes are described in terms of the type of limitation that can occur the typical cropping range and the expected level and consistency of yield

1 7 The agricultural area of the site has been entirely classified moderate quality Subgrade 3b This is due to the presence of a poorly structured slowly permeable

clay subsoil causing severe drainage impedance The resultant soil wetness limitation has the effect of restricting grazing by livestock and the opportunities for cultivations as well as adversely affecting crop growth and development

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 as a measure of the relative warmth of a locality

2 3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met Office 1989) The details are given in the table below and these show that there is no overall climatic limitation affecting the site

2 4 No local climatic factors such as exposure or frost risk affect the site However climatic and soil factors interact to influence soil wetness and droughtiness limitations

Table 2 Climatic Interpolations

Grid Reference	TQ734360	TQ723363	TQ733374
Altitude (m)	61	61	91
Accumulated Temperature (°days Jan-June)	1446	1446	1411
Average Annual Rainfall (mm)	761	753	766
Field Capacity days	160	159	160
Moisture Deficit Wheat (mm)	109	110	106
Moisture Deficit Potatoes (mm)	103	103	99
Overall Climatic Grade	1	1	1

3 Relief

3 1 The site lies between approximately 61m and 91m AOD The highest land is in the north around Taywell Wood Land falls southwards before rising slightly to the agricultural buildings (see attached map) The land then falls further southward to the edge of the area surveyed

4 Geology and Soil

4 1 The British Geological Survey published map Sheet 304 Tenterden (1 50 000 1981) shows the majority of the site to be underlain by Cretaceous Wadhurst Clay with a band of Cretaceous Ashdown Beds running from the north-west to the south of the site This borders a band of Pleistocene Alluvium which approximately follows the line of the dismantled railway

4 2 The Soil Survey of England and Wales published map Sheet 6 Soils of South East England (1 250 000 1983) shows the site to comprise soils of the Wickham 1 Association towards the west and Curtisden Association towards the east The legend accompanying the map (SSEW 1983) describes Wickham soils as slowly permeable seasonally waterlogged fine silty over clayey fine loamy over clayey and clayey soils It describes Curtisden soils as silty soils over siltstone with slowly permeable subsoils and slight seasonal waterlogging Some similar well drained soils some well drained coarse loamy soils over sandstone Slumping locally Soils broadly agreeing with the description of Wickham soils were found across the site generally being slowly permeable loamy and clayey

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

Subgrade 3b

5 3 Land of moderate quality is found across the entire area surveyed Typically soils encountered were similar to those found at the pits (See Appendix III) These consist of a stoneless clay or heavy clay loam occasionally medium clay loam topsoil which was commonly gleyed These overlie a poorly structured gleyed and slowly permeable stoneless clay subsoil which causes a severe drainage impedance such that when local climatic factors are taken into account Wetness Class IV is assigned (see Appendix II) This in combination with the workability characteristics of a heavy textured topsoil leads to Subgrade 3b being appropriate Land affected by wetness can depending on the severity of the problem be subject to restrictions on the number of days when cultivation by machinery and/or grazing by livestock may occur without causing structural damage to the soil Soil wetness can also affect seed germination and development by reducing temperature and causing anaerobism due to waterlogging These restrictions limit the range of crops that can tolerate such conditions

Very occasional observations were found to be of a slightly better quality These were however of insufficient quantity or distribution to justify seperate mapping Land of this quality could be expected to produce moderate yields of a narrow range of crops principally cereals and grass

5 4 The areas shown as Urban principally consist of metalled roadways and cinder tracks bordered by hedgerows and/or ditches The building shown as Urban is virtually derelict and of an unknown previous use The areas shown as Non-Agricultural include the remains of a dismantled railway line now grassed over an area of trees previously part of an orchard and several tracks bordering fields

There is also an area of scrub shown as Non Agricultural The remaining areas are primarily deciduous woodland and agricultural buildings

ADAS Reference 2014/035/94
MAFF Reference EL20/711

Resource Planning Team
Guildford Statutory Group
ADAS Reading

REFERENCES

* British Geological Survey (1981) Sheet No 304 Tenterden 1 50 000

* MAFF (1988) Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading of agricultural land

* Meteorological Office (1989) Climatological Data for Agricultural Land Classification

* Soil Survey of England and Wales (1983) Soils of South East England 1 250 000 map and accompanying legend

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 .nd 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

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

Sub-grade 3b Moderate Quality Agricultural L..nd

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

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 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 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 dolomitic 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 SMUGLEY FM GC GOUDHURST Pit Number 1P

Grid Reference TQ72433668 Average Annual Rainfall 747 mm
Accumulated Temperature 1446 degree days
Field Capacity Level 157 days
Land Use Permanent Grass
Slope and Aspect degrees W

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	MOTTLES	STRUCTURE
0- 35	C	10YR53 00	0	0	C	
35- 60	C	25Y 63 00	0	0	M	WKCSAB

Wetness Grade 3B Wetness Class IV
Gleying 0 cm
SPL 035 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 SMUGLEY FM GC GOUDHURST Pit Number 2P

Grid Reference TQ73043645 Average Annual Rainfall 747 mm
Accumulated Temperature 1446 degree days
Field Capacity Level 157 days
Land Use Permanent Grass
Slope and Aspect 01 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	MOTTLES	STRUCTURE
0- 26	C	10YR42 52	0	0		
26- 55	C	25Y 61 62	0	0	M	WKCAB

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

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

FINAL ALC GRADE 3B
MAIN LIMITATION Wetness

SOIL PIT DESCRIPTION

Site Name SMUGLEY FM GC GOUDHURST Pit Number 3P

Grid Reference TQ73253617

Average Annual Rainfall	747 mm
Accumulated Temperature	1446 degree days
Field Capacity Level	157 days
Land Use	Permanent Grass
Slope and Aspect	02 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	MOTTLES	STRUCTURE
0- 29	C	10YR42 52	0	0		
29- 50	C	25Y 62 61	0	0	M	WKCAB

Wetness Grade 3B

Wetness Class	IV
Gleying	029 cm
SPL	029 cm

Drought Grade

APW	mm	MBW	0 mm
APP	mm	MBP	0 mm

FINAL ALC GRADE 3B
MAIN LIMITATION Wetness

AMPLE 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	TQ73303738	PGR	SE	06	035	035	4	3B		0		0					WE	3B	SPL 35
1P	TQ72433668	PGR	W		0	035	4	3B		0		0					WE	3B	SPL 35 PIT 60
2	TQ73203720	PGR	SE	06	030	030	4	3B		0		0					WE	3B	SPL 30
2P	TQ73043645	PGR	W	01	026	026	4	3B		0		0					WE	3B	SPL 26 PIT 55
3	TQ73403720	PGR	SE	06	0	035	4	3B		0		0					WE	3B	SPL 35
3P	TQ73253617	PGR	S	02	029	029	4	3B		0		0					WE	3B	SPL 29 PIT 50
4	TQ73303700	PGR	NW		028	028	4	3B		0		0					WE	3B	SPL 28
5	TQ72203680	LIN	NW		0	034	4	3B		0		0					WE	3B	SPL 34
6	TQ72403680	LIN	NW		028	028	4	3B		0		0					WE	3B	SPL 28
7	TQ72603680	PGR	NW		0	020	4	3B		0		0					WE	3B	SPL 20
8	TQ72803680	PGR	NW		030	030	4	3B		0		0					WE	3B	SPL 30
9	TQ73003680	PGR	NW	04	0	025	4	3B		0		0					WE	3B	SPL 25
10	TQ73203680	PGR	NW	04	0	025	4	3B		0		0					WE	3B	SPL 25
11	TQ72303660	PGR			0	025	4	3B		0		0					WE	3B	SPL 25 H2-QHCL
12	TQ72773658	PGR	W	01	0	033	4	3B		0		0					WE	3B	SPL 33
13	TQ72903660	PGR	NW	02	0	035	4	3B		0		0					WE	3B	SPL 35
14	TQ73103660	PGR	N	02	035	035	4	3B		0		0					WE	3B	SPL 35
15	TQ73303660	PGR	N	01	037	037	4	3B		0		0					WE	3B	SPL 37
16	TQ72403640	STB			0	025	4	3B		0		0					WE	3B	SPL 25
17	TQ72603639	STB			0	030	4	3B		0		0					WE	3B	SPL 30
19	TQ73003640	PGR	W	01	0	030	4	3B		0		0					WE	3B	SPL 30
20	TQ73203640	PGR	W		0	030	4	3B		0		0					WE	3B	SPL 30
21	TQ73403640	PGR	W		032	032	4	3B		0		0					WE	3B	SPL 32
22	TQ73603640	PGR	W		034	034	4	3B		0		0					WE	3B	SPL 34
23	TQ72503620	PGR	NE	04	050		1	2	101	-9	112	8	3A				DR	3A	I70QGLEY
24	TQ72903620	STB	S	02	0	035	4	3B		0		0					WE	3B	SPL 35
25	TQ73103620	STB	S	02	0	038	4	3B		0		0					WE	3B	SPL 38
26	TQ73303620	PGR	S	02	0	035	4	3B		0		0					WE	3B	SPL 35
27	TQ73463616	PGR	S	02	034	034	4	3B		0		0					WE	3B	SPL 34
28	TQ73703620	PGR	SW	03	0	032	4	3B		0		0					WE	3B	SPL 32
29	TQ72903600	STB	W	04	025	035	4	3B		0		0					WE	3B	SPL 35
31	TQ73403600	STB	S	04	025	025	4	3B		0		0					WE	3B	SPL 25
32	TQ72303730	STB	NE	02	0	020	4	3B		0		0					WE	3B	SPL 20

				----MOTTLES-----			PED		----STONES----				STRUCT/	SUBS			
AMPLE	DEPTH	TEXTURE	COLOUR	COL	ABUN	CONT	COL	GLEY	>2	>6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC
1	0-35	c	10YR52 00						0	0		0						
	35-60	c	10YR62 00	10YR58 61	M		00MN00 00	Y	0	0		0		P			Y	
1P	0-35	c	10YR53 00	10YR56 00	C			Y	0	0		0						
	35-60	c	25Y 63 00	10YR58 68	M		00MN00 00	Y	0	0		0	WKCSAB	FR M		Y		Y
2	0 30	c	10YR52 00						0	0		0						
	30 60	c	10YR63 00	10YR58 61	M		00MN00 00	Y	0	0	MSST	10		P			Y	
2P	0 26	c	10YR42 52						0	0		0						
	26-55	c	25Y 61 62	10YR56 66	M			Y	0	0		0	WKCAB	FM P		Y		Y
3	0-35	c	10YR52 00	10YR58 00	C			Y	0	0		0						
	35-60	c	10YR62 00	10YR58 61	M			Y	0	0		0		P			Y	
3P	0 29	c	10YR42 52						0	0		0						
	29 50	c	25Y 62 61	10YR56 66	M			Y	0	0		0	WKCAB	FM P		Y		Y
4	0-28	c	10YR52 00						0	0		0						
	28-60	c	10YR62 00	10YR58 61	M		00MN00 00	Y	0	0		0		P			Y	
5	0 34	c	10YR52 00	10YR58 00	C			Y	0	0		0						
	34 60	c	10YR63 00	10YR58 61	M		00MN00 00	Y	0	0		0		P			Y	
6	0 28	c	10YR52 00						0	0		0						
	28-60	c	75YR62 00	10YR58 61	M		00MN00 00	Y	0	0		0		P			Y	
7	0-20	c	10YR52 00	10YR58 00	C			Y	0	0		0						
	20-45	c	10YR52 00	10YR58 61	M		00MN00 00	Y	0	0		0		P			Y	
	45-60	c	10YR62 00	10YR58 61	M		00MN00 00	Y	0	0	HR	5		P			Y	
8	0 30	c	10YR52 00						0	0		0						
	30-60	c	10YR52 00	10YR58 61	M		00MN00 00	Y	0	0	HR	5		P			Y	
9	0-25	c	10YR52 00	10YR58 00	C			Y	0	0		0						
	25-55	c	10YR62 00	10YR58 61	C			Y	0	0		0		P			Y	
	55-60	c	10YR51 00	75YR58 00	M		00MN00 00	Y	0	0		0		P			Y	
10	0-25	c	10YR53 00	10YR58 00	C			Y	0	0		0						
	25 60	c	10YR62 00	10YR58 61	M		00MN00 00	Y	0	0		0		P			Y	
11	0-25	hcl	10YR42 00	10YR56 00	M			Y	0	0		0						
	25-65	c	10YR53 00	10YR56 52	C			Y	0	0	HF	2		P			Y	
12	0-33	hcl	25Y 53 00	10YR66 00	C			Y	0	0		0						
	33-60	c	05Y 61 62	10YR68 00	M			Y	0	0		0		P			Y	
13	0-35	c	25Y 53 00	10YR56 00	C			Y	0	0		0						
	35 60	c	25Y 62 61	10YR66 68	M			Y	0	0		0		P			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
14	0-35	c	25Y 53 00	10YR66 00	F				0	0	N	0						
	35-70	c	25Y 61 62	75YR66 00	M			Y	0	0		0		P			Y	
15	0-37	c	25Y 53 00						0	0		0						
	37-70	c	25Y 63 62	10YR58 68	M		00MN00 00	Y	0	0		0		P			Y	
16	0-25	mzcl	10YR42 00	10YR56 00	C			Y	0	0	HR	1						
	25-60	hcl	25Y 53 00	10YR56 52	M			Y	0	0		0		P			Y	
17	0-30	hcl	25Y 53 00	10YR56 52	M			Y	0	0		0						
	30-60	c	25Y 53 00	10YR58 68	M		00MN00 00	Y	0	0		0		P			Y	
19	0-30	c	25Y 53 00	10YR56 00	C			Y	0	0		0						
	30-60	c	25Y 61 62	75YR56 00	M			Y	0	0		0		P			Y	
20	0-30	hcl	25Y 63 62	10YR66 00	C			Y	0	0		0						
	30-60	c	25Y 62 61	10YR68 00	M			Y	0	0		0		P			Y	
21	0-32	mcl	25Y 53 00						0	0		0						
	32-60	c	25Y 62 61	75YR66 00	M		00MN00 00	Y	0	0		0		P			Y	
22	0-34	hcl	25Y 53 00	10YR56 00	F				0	0		0						
	34-60	c	25Y 63 62	10YR58 68	M		00MN00 00	Y	0	0		0		P			Y	
23	0-25	hcl	10YR42 00	10YR56 00	F				0	0	MSST	2						
	25-50	hcl	10YR54 56	00MN00 00	F				0	0	MSST	10		M				
	50-70	hcl	10YR53 52	10YR56 51	M			Y	0	0	MSST	3		M				
24	0-35	hcl	10YR53 00	10YR56 00	M			Y	0	0		0						
	35-60	c	10YR62 00	10YR58 52	M		00MN00 00	Y	0	0		0		P			Y	
25	0-38	hcl	10YR41 00	10YR58 00	M			Y	0	0		0						
	38-60	hcl	10YR53 62	10YR58 00	M		00MN00 00	Y	0	0		0		P			Y	
26	0-35	hcl	25Y 53 00	10YR66 00	C			Y	0	0		0						
	35-60	c	25Y 61 62	75YR66 00	M		00MN00 00	Y	0	0		0		P			Y	
27	0-34	hcl	25Y 53 00						0	0		0						
	34-60	c	25Y 63 62	10YR68 00	M		00MN00 00	Y	0	0		0		P			Y	
28	0-32	c	05Y 53 00	10YR46 00	C			Y	0	0		0						
	32-60	c	25Y 53 52	75YR66 00	M		00MN00 00	Y	0	0		0		P			Y	
29	0-25	hcl	10YR42 00						0	0		0						
	25-35	hcl	10YR53 00	10YR56 00	C			Y	0	0		0		M				
	35-60	hcl	10YR53 63	10YR56 00	M			Y	0	0		0		P			Y	
31	0-25	hcl	10YR42 00						0	0		0						
	25-60	c	10YR53 00	10YR56 51	M			Y	0	0		0		P			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
32	0-20	hcl	10YR41 00	10YR56 00	M			Y	0	0		0						
	20-60	c	10YR53 00	10YR56 00	C		00MN00 00	Y	0	0		0		P			Y	