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WEAVERS DOWN, LANGLEY,
WEST SUSSEX
AGRICULTURAL LAND CLASSIFICATION
ALC MAP & REPORT
JUNE, 1993

WEAVERS DOWN, LANGLEY, WEST SUSSEX
AGRICULTURAL LAND CLASSIFICATION REPORT

1.0 Summary

1.1 In June, 1993, a detailed Agricultural Land Classification (ALC) was made on approximately 71 hectares of land north of the hamlet of Langley in West Sussex.

1.2 The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group of ADAS in response to a commission by MAFF's Land Use Planning Unit to provide information on the quality of agricultural land affected by the extension of a golf course.

1.3 The classification has been made using MAFF's revised guidelines and criteria for grading the quality of agricultural land. These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on its use for agriculture.

1.4 The fieldwork was carried out with an observation density of approximately one per hectare. A total of 37 borings and 5 soil pits was examined.

1.5 The table below provides the details of the grades found across the site. The majority of the agricultural land is classified as Sub-grade 3B with areas of Grade 4. The presence of extremely sandy topsoils across the site produces a topsoil texture limitation. Sands are not eligible for Grades 1,2 or 3A because of the risk of structural instability and soil erosion, and the majority of the site is downgraded to Subgrade 3B as a result. Steep slopes also account for part of the 3B map unit and all of the Grade 4 land has gradient as the limiting factor.

Table 1 : Distribution of Grades and Sub-grades

Grade	Area (ha)	%of Site	% of Agricultural Area
3B	55.5	78.3	96.2
4	2.2	3.1	3.8
Non-agric	1.3	1.8	100% (57.7 ha)
Woodland	10.2	14.3	
Urban	1.8	2.5	
TOTAL	71.1	100%	

1.6 The distribution of the ALC grades is shown on the attached map. The information is presented at a scale of 1:10,000; it is accurate at this level but any enlargement would be misleading. This map supercedes any previous ALC information for this site.

1.7 At the time of survey the land use on the site was permanent grass and heathland.

1.8 A general description of the grades and sub-grades is provided as an appendix. 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.

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 conditiions.

2.2 The main parameters used in the assessment of the 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. 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.

Table 2 : Climatic Interpolations

Grid Reference :	SU815305	SU813300	SU812297
Altitude (m) :	130	100	110
Accumulated Temperature (days) :	1391	1426	1415
Average Annual Rainfall (mm) :	891	879	885
Field Capacity (days) :	196	195	195
Moisture Deficit, Wheat (mm) :	93	97	95
Moisture Deficit, Potatoes (mm) :	82	87	85
Overall Climatic Grade :	1	1	1

3.0 Relief

3.1 Most of the central and southern part of the site is gently sloping but the northern and western sections occupy the south-west facing slopes of Weavers Down where gradients are locally steep as altitude ranges from 100-130 metres.

4.0 Geology and Soil

4.1 The relevant geological sheet for the site shows the underlying geology to be a mixture of Sandgate Beds and River & Valley Gravel on the flatter land to the south with Folkestone Beds on the slopes of Weavers Down.

4.2 Light sandy soils have developed over this range of parent material.

5.0 Agricultural Land Classification

5.1 Table 1 provides the details of the area measuements 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 is shown on the attached sample point map.

5.3 Sub-grade 3B : during the augering and hand-texturing, the topsoils across the site were assessed as Organic Loamy Sands. Laboratory analysis, however, has not confirmed this assessment but has shown the topsoils to be mineral soils with a Medium Sand texture (with 90% sand content). Samples were only taken from Pits 4 and 5 and these descriptions have been modified to reflect the laboratory

results. The rest of the field data has not been modified as the soil horizons are complicated and variable but the grading of the site has been made on the basis that the topsoils are sandier and less organic than first believed.

5.4 The presence of sand topsoils immediately excludes this land from Grades 1,2 and 3A. Soils with a high proportion of sand are inherently weakly structured and are prone to surface capping and slaking. Sandy soils are easily worked but are weakly structured and readily form compacted layers if cultivated or traversed when wet. They may also be susceptible to erosion.

5.5 The north-western part of the 3B map unit contains areas where slopes is the limiting factor, with gradients in the range 7-11 degrees.

5.6 No borings have been made in the heathland areas in the north of the site. There is a complicated topography in this area with 3B as the dominant slope category with some facets of Grade 4. Soils on the shoulders of slopes can be seen to thin out and become stony and this area may be a mixture of 3B and 4 on the basis of soil depth alone.

5.7 Grade 4 : The steeper slopes of Weavers Down experience gradients in the range 11-18 degrees and here slope becomes the main limitation.

5.8 The areas marked as Urban relate to houses and their gardens.

5.9 The areas marked as Non-agricultural include farm tracks, an old pond and an area of heathland that has been cleared and levelled.

ADAS REFERENCE : 4203/66/93
MAFF REFERENCE : EL42/320

Resource Planning Team
Guildford Statutory Group

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

* 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.

* British Geological Survey (1978), Sheet No.300 (Alresford) & 301 (Haslemere), 1:50,000

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 : WEAVERS DOWN, LISS Pit Number : 1P

Grid Reference: SU809 294

Average Annual Rainfall : 885 mm
Accumulated Temperature : 1415 degree days
Field Capacity Level : 195 days
Land Use : Permanent Grass
Slope and Aspect : degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 18	OFSL	10YR21 00	0	2		
18- 32	OFSL	10YR21 00	0	15		
32- 62	FSL	10YR56 00	0	0		WCSAB
62-120	LFS	25Y 63 00	0	0		MCPLAT

Wetness Grade : 1

Wetness Class : I
Gleying :000 cm
SPL : No SPL

Drought Grade : 1

APW : 219mm MBW : 124 mm
APP : 161mm MBP : 76 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Topsoil Texture

SOIL PIT DESCRIPTION

Site Name : WEAVERS DOWN, LISS Pit Number : 2P

Grid Reference: SU812 303

Average Annual Rainfall : 885 mm
Accumulated Temperature : 1415 degree days
Field Capacity Level : 195 days
Land Use : Permanent Grass
Slope and Aspect : 04 degrees SW

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 20	OLFS	10YR21 00	0	5		
20-.60	FSL	10YR32 00	0	2	C	
60-120	LFS	10YR66 00	0	2		

Wetness Grade : 1

Wetness Class : I
Gleying :000 cm
SPL : No SPL

Drought Grade : 1

APW : 186mm MBW : 91 mm
APP : 129mm MBP : 44 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Topsoil Texture

SOIL PIT DESCRIPTION

Site Name : WEAVERS DOWN, LISS Pit Number : 3P

Grid Reference: SU811 294

Average Annual Rainfall : 885 mm
Accumulated Temperature : 1415 degree days
Field Capacity Level : 195 days
Land Use : Permanent Grass
Slope and Aspect : 03 degrees NE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 19	OFSL	10YR32 00	0	2		
19- 50	FSL	10YR21 00	0	2		MCSAB
50-120	LFS	25Y 63 00	0	2	C	MVCPY

Wetness Grade : 1

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

Drought Grade : 1

APW : 196mm MBW : 101 mm
APP : 136mm MBP : 51 mm

FINAL ALC GRADE : 1
MAIN LIMITATION :

SOIL PIT DESCRIPTION

Site Name : WEAVERS DOWN, LISS Pit Number : 4P

Grid Reference: SU815 302 Average Annual Rainfall : 885 mm
Accumulated Temperature : 1415 degree days
Field Capacity Level : 195 days
Land Use : Permanent Grass
Slope and Aspect : degrees SE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 22	MS	25Y 20 00	0	2		
22- 45	MS	10YR21 00	0	30		
45- 88	MS	10YR54 00	0	0		MDCSAB
88-120	FS	75YR58 00	0	2		MVCPY

Wetness Grade : 1 Wetness Class : I
Gleying :000 cm
SPL : No SPL

Drought Grade : 3B APW : 86 mm MBW : -9 mm
APP : 44 mm MBP : -41 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WEAVERS DOWN, LISS Pit Number : 5P

Grid Reference: SU814 300

Average Annual Rainfall : 885 mm
Accumulated Temperature : 1415 degree days
Field Capacity Level : 195 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 34	MS	10YR21 00	0	2		
34-120	FSL	75YR58 00	0	0		MVCPY

Wetness Grade : 1

Wetness Class : I
Gleying :000 cm
SPL : No SPL

Drought Grade : 1

APW : 152mm MBW : 57 mm
APP : 97 mm MBP : 12 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Topsoil Texture

SAMPLE NO.	GRID REF	USE	ASPECT	GRONT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	DRT	M.REL FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1P	SU809 294	PGR	S		000		1	1	219	124	161	76	1				TX	2	SLLSTOP
2P	SU812 303	PGR	SW	04	000		1	1	186	91	129	44	1				TX	2	ROOTS 65
3P	SU811 294	PGR	NE	03	050		1	1	196	101	136	51	1					1	ROOT65
4P	SU815 302	PGR	SE		000		1	1	86	-9	44	-41	3B				DR	3B	ROOT65CM
5P	SU814 300	PGR			000		1	1	152	57	97	12	1				TX	3B	ROOT55CM
12	SU812 303	PGR			000		1	1	160	65	147	62	1					1	IMP 90
14	SU814 303	PGR	SE	04	000		1	1	099	4	099	14	3A				DR	2	IMP
19	SU813 302	PGR	W	02	035		1	1	110	15	110	25	2				DR	2	IMP 45
20	SU814 302	PGR			037		1	1	172	77	149	64	1					1	IMP 100
24	SU812 301	PGR	SE	02	000		1	1	075	-20	075	-10	3B				DR	3A	IMPX3QDR
25	SU813 301	PGR			030		1	1	139	44	139	54	1					1	IMP 50
26	SU814 301	PGR	NW	05	080		1	1	167	72	106	21	1				TX	2	
27	SU815 301	PGR	NE		045	085	1	1	159	64	138	53	1					1	
28	SU810 300	PGR	W		000		1	1	090	-5	090	5	3A				DR	3A	IPM -2
29	SU811 300	PGR	W		000		1	1	215	120	154	69	1					1	STONE 40
30	SU812 300	PGR	W		000		1	1	145	50	156	71	1					1	IMP 70
32	SU814 300	PGR	NW		000		1	1	107	12	105	20	2				TX	2	IMP
34	SU810 299	PGR	W		000		1	1	173	78	115	30	1					1	
35	SU811 299	PGR	W		000		1	1	136	41	144	59	1					1	IMP
36	SU812 299	PGR	SE		000		1	1	101	6	101	16	2					1	IMP
37	SU813 299	PGR	SE	03	000		1	1	69	-26	69	-16	3B				DR	3A	IMP
39	SU810 298	PGR	W		000		1	1	189	94	131	46	1					1	Q DISTUR
40	SU811 298	PGR	N		000		1	1	068	-27	068	-17	3B				DR	3A	IMPX2QDR
41	SU812 298	PGR	NW	03	000		1	1	180	85	119	34	1					1	
42	SU813 298	PGR	N	04	050		1	1	204	109	143	58	1					1	
43	SU808 297	PGR	SE	04	040		1	1	137	42	129	44	1					1	IMP 80CM
44	SU809 297	PGR			020		1	1	105	10	106	21	2				DR	2	IMPX2QDR
45	SU810 297	PGR	NW	02	020		1	1	082	-13	082	-3	3A				DR	3A	IMPX3QDR
46	SU811 297	PGR	N	02	025		2	2	150	55	145	60	1				WE	2	POSSGLEY
47	SU812 297	PGR	NW	03	000		1	1	176	81	119	34	1					1	
48	SU808 296	PGR			030		1	1	108	13	112	27	2				DR	2	IMP
49	SU809 296	PGR			020		1	1	114	19	95	10	2				DR	2	
50	SU810 296	PGR	NW	03	000		1	1	069	-26	069	-16	3B				DR	3B	IMPX3QDR
51	SU811 296	PGR	NW	04	025		1	1	117	22	120	35	2				DR	2	IMP
53	SU808 295	PGR			000		1	1	51	-44	51	-34	3B				DR	3B	IMPX2QDR
54	SU809 295	PGR			030		1	1	113	18	62	-23	3A				DR	3A	
56	SU811 295	PGR	NW		020		1	1	083	-12	083	-2	3A				DR	3A	IMPX2QDR
58	SU808 294	PGR			020		1	1	82	-13	85	0	3A				DR	3A	IMP QDR
59	SU809 294	PGR			038		1	1	122	27	75	-10	2				DR	2	
60	SU810 294	PGR	S	04	000		1	1	105	10	106	21	2				DR	2	IMPX2
64	SU808 293	PGR			000		1	1	34	-61	34	-51	4				DR	3B	IMPX3QDR
65	SU808 2935	PGR	SW		000		4	3B	139	44	130	45	1				WE	3B	Q WC

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
1P	0-18	ofsl	10YR21 00						0	0	HR	2						
	18-32	ofsl	10YR21 00						0	0	MSST	15						M
	32-62	fsl	10YR56 00						0	0		0	WCSAB	VF	G			
	62-120	lfs	25Y 63 00						0	0		0	MCPLAT	VF	M			
2P	0-20	olfs	10YR21 00						0	0	HR	5						
	20-60	fsl	10YR32 00	000C00 00	C				0	0	HR	2						M
	60-120	lfs	10YR66 00						0	0	MSST	2						G
3P	0-19	ofsl	10YR32 00						0	0	HR	2						
	19-50	fsl	10YR21 00						0	0	HR	2	MCSAB	VF	M			
	50-120	lfs	25Y 63 00	000C00 00	C			Y	0	0	HR	2	MVCPY	VF	M			
4P	0-22	ms	25Y 20 00						0	0	HR	2						
	22-45	ms	10YR21 00						0	0	HR	30						M
	45-88	ms	10YR54 00						0	0		0	MDCSAB	VF	G			
	88-120	fs	75YR58 00						0	0	HR	2	MVCPY	VF	M			
5P	0-34	ms	10YR21 00						0	0	HR	2						
	34-120	fsl	75YR58 00						0	0		0	MVCPY	FR	M			
12	0-20	olfs	10YR21 00						0	0	HR	2						
	20-38	lfs	75YR42 00						0	0	HR	4						M
	38-57	ofsl	10YR21 00	75YR44 00	C				0	0	HR	1						M
	57-90	fsl	10YR46 00						0	0	HR	3						M
14	0-20	ofsl	10YR21 00						0	0	HR	2						
	20-50	lfs	75YR52 00						0	0	HR	2						G
19	0-35	ofsl	10YR21 00						0	0	HR	3						
	35-45	msl	10YR21 00	000C00 00	C			Y	0	0	HR	3						M
20	0-37	ofsl	10YR21 00						0	0	HR	4						
	37-62	scl	10YR53 00	10YR46 00	C			Y	0	0		0						M
	62-100	msl	25Y 64 00	10YR56 00	C			Y	0	0	HR	2						M
24	0-20	olfs	10YR21 00						0	0	HR	2						
	20-40	lfs	10YR32 00						0	0	HR	2						G
25	0-30	ofsl	10YR21 00						0	0		0						
	30-50	omsl	10YR31 00	000C00 00	C			Y	0	0	HR	1						M
26	0-20	lfs	10YR31 00						0	0	HR	2						
	20-50	fs	75YR52 00						0	0	HR	2						G
	50-60	lfs	10YR43 00						0	0	HR	2						G
	60-80	lfs	10YR56 00						0	0	HR	2						G
	80-120	fsl	25Y 63 00	000C00 00	M			Y	0	0		0						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
27	0-25	ofsl	10YR21 00						0	0	HR	2						
	25-45	lfs	10YR32 00						0	0	HR	2		M				
	45-85	c	25Y 53 00	000C00	00	M		Y	0	0		0		M				
	85-120	c	25Y 53 00	000C00	00	M		Y	0	0		0		P	Y		Y	
28	0-30	olfs	10YR21 00						0	0	HR	1						
	30-45	lfs	10YR22 00						0	0	HR	5		M				
29	0-18	olfs	10YR21 00						0	0		0						
	18-45	oms1	10YR22 00						0	0		0		M				
	45-120	lfs	10YR56 00						0	0	HR	1		M				
30	0-28	ofsl	10YR21 00						0	0		0						
	28-55	lfs	10YR62 00						0	0	HR	1		M				
	55-70	oms1	10YR22 00						0	0	HR	10		M				
32	0-20	lfs	10YR42 00						0	0	HR	2						
	20-45	lfs	10YR42 00						0	0	HR	5		M				
	45-65	lfs	10YR33 00						0	0	HR	10		M				
	65-75	fs	75YR58 00						0	0	HR	5		G				
34	0-15	olfs	10YR21 00						0	0	HR	1						
	15-37	lfs	10YR52 00						0	0	HR	2		M				
	37-50	ms1	75YR56 00						0	0	HR	4		M				
	50-90	lfs	75YR56 00						0	0	HR	1		M				
	90-120	fs	10YR68 00						0	0		0		M				
35	0-30	ofsl	10YR21 00						0	0		0						
	30-55	fs	25Y 62 00						0	0		0		M				
	55-65	ofsl	10YR22 00						0	0	HR	10		M				
36	0-25	olfs	10YR21 00						0	0	HR	2						
	25-50	fsl	10YR22 00						0	0	HR	2		M				
37	0-25	lfs	10YR32 00						0	0	HR	2						
	25-42	lfs	10YR56 00						0	0	HR	2		M				
39	0-10	olfs	10YR21 00						0	0	HR	1						
	10-40	lfs	10YR52 00						0	0	HR	2		M				
	40-55	ofsl	10YR22 00						0	0	HR	1		M				
	55-120	lfs	25Y 64 00						0	0		0		M				
40	0-30	olfs	10YR21 00						0	0	HR	2						
41	0-20	olms	10YR22 00						0	0	HR	2						
	20-80	lfs	75YR58 00						0	0	HR	2		M				
	80-120	lfs	10YR42 00						0	0		0		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
42	0-30	ofs	10YR21 00						0	0	HR	2						
	30-50	ofs	10YR32 00						0	0	HR	2		M				
	50-120	lfs	25Y 64 00	000C00	00	C		Y	0	0		0		M				
43	0-20	ofsl	10YR21 00						0	0	HR	2						
	20-40	lfs	75YR52 00						0	0	HR	2		G				
	40-80	lfs	25Y 64 00	000C00	00	C		Y	0	0	HR	2		G				
44	0-20	ofsl	10YR21 00						0	0	HR	2						
	20-45	lfs	75YR52 00	000C00	00	C		Y	0	0	HR	2		G				
	45-55	lfs	75YR58 00					Y	0	0	HR	5		G				
45	0-20	ofsl	10YR21 00						0	0	HR	5						
	20-40	lfs	10YR52 00	000C00	00	C		Y	0	0	HR	5		M				
46	0-25	ofsl	10YR21 00						0	0	HR	2						
	25-60	fsl	25Y 63 00	000C00	00	M		Y	0	0	HR	2		M				
	60-85	scl	25Y 64 00	000C00	00	C		Y	0	0	HR	2		M				
47	0-20	olfs	10YR21 00						0	0	HR	2						
	20-50	lfs	10YR22 00						0	0	HR	2		M				
	50-80	lfs	10YR56 00						0	0		0		M				
	80-120	fs	10YR66 00						0	0		0		M				
48	0-20	fsl	10YR22 00						0	0	HR	2						
	20-30	fsl	10YR32 00						0	0	HR	2		M				
	30-55	lfs	25Y 62 00	000C00	00	C		Y	0	0	HR	2		G				
	55-70	lfs	75YR58 00					Y	0	0	HR	2		G				
49	0-20	lms	05Y 21 00						0	0	HR	1						
	20-45	msl	25Y 53 00	75YR46	00	M		Y	0	0	HR	2		M				
	45-75	msl	10YR66 00	75YR56	00	C		Y	0	0		0		M				
	75-120	lms	10YR66 00					Y	0	0		0		M				
50	0-25	ofsl	10YR21 00						0	0	HR	2						
51	0-25	ofsl	10YR21 00						0	0	HR	5						
	25-55	fsl	25Y 63 00	000C00	00	C		Y	0	0	HR	2		M				
53	0-30	fsl	10YR42 52						0	0	HR	5						
54	0-10	lms	05Y 21 00						0	0	HR	1						
	10-30	ms	25Y 62 00						0	0		0		M				
	30-55	lms	25Y 53 00	75YR46	00	M		Y	0	0		0		M				
	55-90	msl	25Y 66 00	10YR68	00	M		Y	0	0		0		M				
	90-120	fs	25Y 82 00	10YR66	00	C		Y	0	0		0		M				
56	0-20	ofsl	10YR21 00						0	0	HR	5						
	20-40	lfs	10YR32 00	000C00	00	C		Y	0	0	HR	2		G				

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
58	0-20	lms	10YR52 00						0	0	HR	2						
	20-40	lfs	10YR32 00	000C00 00	M			Y	0	0	HR	5		G				
	40-65	lfs	25Y 66 00					Y	0	0	HR	5		G				
59	0-10	lms	25 Y21 00						0	0	HR	1						
	10-28	ms	25 Y52 00						0	0	HR	2		M				
	28-38	lms	05Y 21 00						0	0		0		M				
	38-55	scl	25Y 63 00	10YR68 00	M			Y	0	0		0		M				
	55-120	msl	25Y 63 00	10YR68 00	M			Y	0	0		0		M				
60	0-20	ofsl	10YR21 00						0	0	HR	2						
	20-45	lfs	10YR56 00						0	0	HR	2		G				
	45-55	lfs	10YR66 00						0	0	HR	2		G				
64	0-20	msl	10YR22 00	000C00 00	C				0	0		0						
65	0-20	ofsl	10YR21 00						0	0	HR	2						
	20-50	lfs	10YR66 00						0	0		0		G				
	50-80	lfs	25Y 63 00						0	0		0		G				