

**A1**  
**Shelswell Park, Hethe, Bicester**  
**Golf Course Proposal**  
**Agricultural Land Classification**  
**ALC Map and Report**  
**November 1993**

**SHELLOWELL PARK, HETHE, BICESTER  
GOLF COURSE PROPOSAL  
AGRICULTURAL LAND CLASSIFICATION REPORT**

**1 Introduction**

- 1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality on a proposed golf course at Shelswell Park, Hethe Bicester Oxfordshire
- 1.2 Approximately 111 hectares of land relating to the proposal at Shelswell Park was surveyed in October 1993. The survey was undertaken at a detailed level of approximately one boring per hectare. A total of 93 soil auger borings and 7 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 land use on the site was predominantly permanent grazing with some arable production, the remainder being non agricultural and urban with some open water
- 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 1:10 000. 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

<u>Grade</u>	<u>Area (ha)</u>	<u>% of site</u>	<u>% of Agricultural Area</u>
2	85.7	77.0	84.7
3a	12.1	10.9	12.0
3b	3.4	3.1	<u>3.3</u>
Non agricultural land	5.3	4.8	100% (101.2 ha)
Urban	2.7	2.4	
Open water	<u>2.0</u>	<u>1.8</u>	
TOTAL	111.2 ha	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 agricultural land on the site has been classified as Grade 2 and Subgrades 3a and 3b with soil droughtiness as the key limitation throughout. The largest area shown as Grade 2 very good quality land experiences a slight limitation due to the presence of a moderately stony subsoil horizon. The area shown as Subgrade 3a good quality land also contains a moderately stony subsoil but with very light subsoil textures which retain less water. The area shown as Subgrade 3b moderate quality land is also moderately stony within the subsoil with very light textures resulting in a significant restriction on both profile available water for plant growth and the range of crops that can tolerate such conditions.

## 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 the 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 5 km 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.

Table 2 Climatic Interpolation

Grid Reference	SP606310
Altitude (m)	110
Accumulated Temperature (°days Jan June)	1375
Average Annual Rainfall (mm)	672
Field Capacity (days)	144
Moisture Deficit Wheat (mm)	100
Moisture Deficit Potatoes (mm)	89
Overall Climatic Grade	1

## 3 Relief

3 1 The site lies at an altitude between 105 m and 115 m AOD with land being level to very gently sloping (0.2°). Nowhere on the site do altitude or relief affect agricultural land quality.

## 4 Geology and Soil

4 1 The relevant geological sheet for the site (Institute of Geological Sciences 1979 Geological Survey Ten mile map South Sheet) shows the underlying geology to be either Great Oolite or Cornbrash.

- 4 2 The published soils information for the area, (Soil Survey of England and Wales 1983 Sheet 6) shows the site to mainly comprise soils of the Bishampton 2 Association, fine loamy slightly stony and waterlogged occasionally in winter (SSEW 1984) Soils of the Ashley Association may occur towards the north east of the site The western most parcel of land is shown to comprise soils of the Hucklesbrook Association These are described as well drained coarse loamy and some sandy soils commonly over gravel with some similar soils affected by ground water (SSEW 1984)

## 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 is shown on the attached sample point map

### 5 2 Grade 2

The majority of the agricultural land found on the site has been classified as Grade 2 very good quality agricultural land Typically profiles comprise very slightly to moderately stony (2 18% total flints by volume) medium sandy loam topsoils with occasional medium clay loams over slightly to moderately stony (12 30% total flints by volume) medium sandy loam upper subsoils with occasional sandy clay loams Subsoils consist mainly of slightly to moderately stony (15 35% total flints by volume) medium and coarse sandy loams with occasional loamy sands sandy clay loams and clay at depth Profiles are typically well drained with a Wetness Class of I

Due to the stone content of the profiles soils experience a slight droughtiness limitation as available water for plant growth is slightly restricted Other pits showed gravel to be encountered between 100 to 120 cm depth These soil characteristics combine with climatic factors to result in a slight droughtiness limitation

### 5 4 Subgrade 3a

Subgrade 3a land lies to the south west of the site west of Featherbed Lane Profiles typically consist of slightly stony (5 15% by volume hard stones) medium sandy loam topsoils over moderately stony (16 35% by volume hard stones) medium sandy loam upper subsoil with occasional loamy medium sand or sandy clay loam Lower subsoils typically consist of moderately stony (15 25% by volume hard stones) loamy medium sands with impenetrable gravel being found between 80 and 120 cm Profiles are typically well drained with a Wetness Class of I These conditions were confirmed by the digging of a detailed soil inspection pit (Pit 1)

Due to the stone content of the profiles and light textures of subsoils soils experience a moderate droughtiness limitation as available water for plant growth is restricted Subgrade 3a is appropriate as a result of the reduced flexibility of this land

5 5 Subgrade 3b

Subgrade 3b land occurs in the south west of the site west of Featherbed Lane Profiles typically consist of slightly stony (5% >2 cm 15% by volume total hard stones) medium sandy loam topsoils over moderately stony (25% by volume hard stones) medium sand subsoils to at least 120 cm Profiles are well drained (Wetness Class I) These conditions were confirmed by the digging of a detailed soil inspection pit

Due to the stone content of the profiles and very light subsoil textures soils experience a severe droughtiness limitation as available water for plant growth is severely restricted Crops may suffer severe drought stress as a consequence

5 6 Non Agricultural

Non agricultural land consists of a wooded area around the estate house along with an area of land planted to conifers to the east of the house A small area of wood exists to the north of the site along with access roads and trees around the area of open water

5 7 Urban

Urban land consists of the estate house and a small cottage to the north of the site

ADAS Reference 3301/221/93  
MAFF Reference EL 33/00590

Resource Planning Team  
Guildford Statutory Group  
ADAS Reading

## Sources of Reference

Institute of Geological Sciences (1979) Geological Survey Ten mile map South Sheet

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

Meteorological Office (1989) Climatic datasets for Agricultural Land Classification

Soil Survey of England and Wales (1983) Sheet 6 Soils of South East England

Soil Survey of England and Wales (1984) Bulletin 16 Soils and their use in South East England

## 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



## SOIL PIT AND SOIL BORING DESCRIPTIONS

Contents	* Soil Abbreviations	Explanatory Note
	* Soil Pit Descriptions	
	* Database Printout	Boring Level Information
	* Database Printout	Horizon Level Information

## SOIL PROFILE DESCRIPTIONS EXPLANATORY NOTE

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

### Boring Header Information

1 GRID REF Location 1 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 Bean BRA Brassicae POT Potatoes SBT Sugar Beet FCD Fodder Crops LIN Linseed  
FRT Soft and Top Fruit HRT Horticultural Crop PGR Permanent Pasture LEY Ley Grass RGR Rough Grazing  
SCR Scrub CFW Coniferous Woodland DCW Deciduous Woodland HTH Heathland BOG Bog or Marsh  
FDW Fallow PLO Ploughed SAS Set aside OTH Other

3 GRDNT Gradient as measured by 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 Storage

### 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 loam and silty clay loam classes will be subdivided according to the clay content:

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

2 MOTTLE COL Mottled colour

3 MOTTLE ABUN Mottled abundance expressed as a percentage of the matrix or surface described

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

4 MOTTLE CONT Mottled 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 metamorphic SLST soft oolitic or dolomitic limestone  
FSST soft fine grained sandstone ZR soft argillaceous or silty rocks CH chalk  
GH gravel with porous (hard) stones GS gravel with porous (soft) stones

Stone contents (>2cm >6cm d 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 grained 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) determined for wheat

APP available water capacity (in mm) determined for potatoes

MBW moisture balance wheat

MBP moisture balance potatoes

SOIL PIT DESCRIPTION

Site Name SHELSWELL PK GOLF COURSE Pit Number 1P

Grid Reference SP59603054 Average Annual Rainfall 672 mm  
 Accumulated Temperature 1375 degree days  
 Field Capacity Level 144 days  
 Land Use Bare Soil  
 Slope and Aspect 01 degrees

HORIZON	TEXTURE	COLOUR	STONES	2 TOT STONE	MOTTLES	STRUCTURE
0 25	MSL	10YR34 00	5	15		
25 45	MSL	10YR44 00	0	35		MDMAB
45 110	LMS	10YR46 00	0	25		WDFSAB
110 120	GH	10YR33 00	0	0		

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

Drought Grade 3A APW 094mm MBW 6 mm  
 APP 075mm MBP 14 mm

FINAL ALC GRADE 3A  
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name SHELSWELL PK GOLF COURSE Pit Number 2P

Grid Reference SP59513067 Average Annual Rainfall 672 mm  
 Accumulated Temperature 1375 degree days  
 Field Capacity Level 144 days  
 Land Use Bare Soil  
 Slope and Aspect 01 degrees

HORIZON	TEXTURE	COLOUR	STONES	2 TOT STONE	MOTTLES	STRUCTURE
0 25	MSL	10YR46 00	5	15		MDMSAB
25 120	MS	10YR46 00	0	25		

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

Drought Grade 3B APW 069mm MBW 31 mm  
 APP 056mm MBP 33 mm

FINAL ALC GRADE 3B  
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name SHELSWELL PK GOLF COURSE Pit Number 3P

Grid Reference SP60853129 Average Annual Rainfall 672 mm  
 Accumulated Temperature 1375 degree days  
 Field Capacity Level 144 days  
 Land Use Cereals  
 Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	MOTTLES	STRUCTURE
0 28	MSL	10YR44 00	5	13		WMAB
28 52	MSL	75YR44 00	0	28		MDMSAB
52 100	CSL	75YR56 00	0	30		
100 120	GH	00ZZ00 00	0	0		

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

Drought Grade 2  
 APW 124mm MBW 24 mm  
 APP 100mm MBP 11 mm

FINAL ALC GRADE 2  
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name SHELSWELL PK GOLF COURSE Pit Number 4P

Grid Reference SP60263125 Average Annual Rainfall 672 mm  
 Accumulated Temperature 1375 degree days  
 Field Capacity Level 144 days  
 Land Use Permanent Grass  
 Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	MOTTLES	STRUCTURE
0 22	MCL	10YR46 00	3	10		MDCSAB
22 110	MSL	10YR56 00	0	30		MMSAB
110 120	TGH	10YR58 00	0	0		

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

Drought Grade 2  
 APW 127mm MBW 27 mm  
 APP 094mm MBP 5 mm

FINAL ALC GRADE 2  
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name SHELSWELL PK GOLF COURSE Pit Number 5P

Grid Reference SP60593082 Average Annual Rainfall 672 mm  
 Accumulated Temperature 1375 degree days  
 Field Capacity Level 144 days  
 Land Use Permanent Grass  
 Slope and Aspect degrees E

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	MOTTLES	STRUCTURE
0 20	MSL	10YR44 00	8	18		
20 62	MSL	10YR34 00	0	25		WDMSAB
62 120	CSL	75YR46 00	0	28		WDMSAB

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

Drought Grade 2 APW 143mm MBW 43 mm  
 APP 96 mm MBP 7 mm

FINAL ALC GRADE 2  
 MAIN LIMITATION Drought ss



SOIL PIT DESCRIPTION

Site Name SHELSWELL PK GOLF COURSE Pit Number 6P

Grid Reference SP60403092 Average Annual Rainfall 672 mm  
 Accumulated Temperature 1375 degree days  
 Field Capacity Level 144 days  
 Land Use Permanent Grass  
 Slope and Aspect 01 degrees E

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	MOTTLES	STRUCTURE
0 23	MCL	10YR43 00	0	2		
23 54	SCL	10YR46 00	0	25		
54 75	SCL	10YR56 00	0	35		
75 120	C	10YR51 00	0	3	C	MDCPR

Wetness Grade 2  
 Wetness Class II  
 Gleying 075 cm  
 SPL 075 cm

Drought Grade 2  
 APW 119mm MBW 19 mm  
 APP 92 mm MBP 3 mm

FINAL ALC GRADE 2  
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name SHELSWELL PK GOLF COURSE Pit Number 7P

Grid Reference SP60053060 Average Annual Rainfall 672 mm  
 Accumulated Temperature 1375 degree days  
 Field Capacity Level 144 days  
 Land Use Permanent Grass  
 Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	MOTTLES	STRUCTURE
0 20	MSL	10YR43 00	0	5		
20 47	MSL	75YR46 00	0	12		WMSAB
47 80	LMS	75YR56 00	0	15		WMSAB
80 120	SCL	75YR58 00	0	7		WKCSAB

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

Drought Grade 2 APW 140mm MBW 40 mm  
 APP 087mm MBP 2 mm

FINAL ALC GRADE 2  
 MAIN LIMITATION Droughtiness

SAMPLE NO	GRID REF	ASPECT USE	WETNESS		WHEAT		POTS		M REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS	
			GRDNT	GLEY	SPL	CLASS	GRADE	AP	MB	AP						MB
1	SP60502150	PLO	01	000	1	1	94	6	97	8	3A		DR	3A	IMP75ST	
1P	SP59603054	PLO	01	000	1	1	94	6	75	14	3A		DR	3A		
2	SP60603150	PLO	01	055	2	1	98	2	98	9	3A		DR	3A		
2P	SP59513067	PLO	01	000	1	1	69	31	56	33	3B		DR	3B		
3	SP60703150	PLO		000	1	1	71	29	71	18	3B		DR	3B	IMP50ST	
3P	SP60853129	CER		000	1	1	124	24	100	11	2		DR	2		
4P	SP60263125	PGR		000	1	1	127	27	94	5	2		DR	2		
5	SP60503140	PLO	01	000	1	1	82	18	86	3	3A		DR	3A	IMP65ST	
5P	SP60593082	PGR	E	000	1	1	143	43	96	7	2		DR	2		
6	SP60603140	PLO		000	1	1	84	16	90	1	3A		DR	3A	IMP65ST	
6P	SP60403092	PGR	E	01	075	075	2	2	119	19	92	3	2	DR	2	
7	SP60703140	PLO		000	1	1	54	46	54	35	3B		DR	3B	IMP35ST	
7P	SP60053060	PGR		000	1	1	140	40	87	2	2		DR	2		
8	SP60803140	PLO		000	1	1	88	12	96	7	3A		DR	3A	IMP70ST	
9	SP60903140	PLO		000	1	1	80	20	85	4	3A		DR	3A	IMP65ST	
10	SP60303130	PGR		000	1	2	112	12	94	5	2		DR	2		
11	SP60403130	PGR		000	1	2	113	13	96	7	2		DR	2		
12	SP60503130	PLO		000	1	1	58	42	58	31	3B		DR	3B	IMP45ST	
13	SP60603130	PLO		000	1	1	92	8	95	6	3A		DR	3A	IMP80ST	
14	SP60703130	PLO		000	1	1	106	6	99	10	2		DR	2	IMP90ST	
15	SP60803150	PLO		000	1	1	79	21	83	6	3B		DR	3A	IMP65ST	
16	SP60903130	PLO		000	1	1	73	27	73	16	3B		DR	3B	IMP50ST	
17	SP60203120	PGR		000	1	2	117	17	100	11	2		DR	2		
18	SP60303120	PGR		000	1	2	93	7	86	3	3A		DR	3A		
19	SP60403120	PGR		000	1	2	99	1	102	13	3A		DR	3A	IMP85ST	
20	SP60503120	PGR		000	1	2	92	8	94	5	3A		DR	3A	IMP75ST	
21	SP60603120	PGR		000	1	2	114	14	100	11	2		DR	2		
22	SP60703120	PGR		000	1	2	97	3	103	14	3A		DR	3A	IMP70ST	
23	SP60803120	PGR		000	1	2	84	16	87	2	3A		DR	3A	IMP65ST	
24	SP60203110	PGR		000	1	1	106	6	87	2	2		DR	2		
25	SP60303110	PGR		000	1	1	99	1	94	5	3A		DR	3A	IMP85ST	
26	SP60403110	PGR		000	1	2	131	31	109	20	1			1		
27	SP60503110	PGR		000	1	2	70	30	70	19	3B		DR	3B	IMP50ST	
28	SP60603110	PGR		000	1	2	88	12	91	2	3A		DR	3A	IMP60ST	
29	SP60703110	PGR		000	1	2	98	2	99	10	3A		DR	3A	IMP80ST	
30	SP60803110	PGR		000	1	2	90	10	96	7	3A		DR	3A	IMP65ST	
31	SP60903110	PGR		000	1	2	106	6	107	18	2		DR	2	IMP80ST	
32	SP59603100	CER		000	1	1	78	22	78	11	3B		DR	3A	IMP50ST	
33	SP59703100	CER		000	1	1	87	13	81	8	3A		DR	3A	IMP80ST	
34	SP60103100	PGR		000	1	1	91	9	94	5	3A		DR	3A	IMP75ST	
35	SP60203100	PGR		000	1	1	82	18	86	3	3A		DR	3A	IMP65ST	
36	SP60303100	PGR		000	1	1	75	25	76	13	3B		DR	3B	IMP55ST	

SAMPLE NO	GRID REF	ASPECT USE	WETNESS		WHEAT		POTS		M REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS	
			GRDNT	GLEY	SPL	CLASS	GRADE	AP	MB	AP						MB
37	SP60403100	PGR		000		1	1	112	12	96	7	2		DR	2	
38	SP60503100	PGR		000		1	1	102	2	96	7	3A		DR	3A	
39	SP60603100	PGR		000		1	1	84	16	89	0	3A		DR	3A	IMP65ST
40	SP60703100	PGR		000		1		77	23	82	7	3B		DR	3B	IMP65ST
41	SP60803100	PGR	02	075	075	2	2	125	25	99	10	2		WE	2	
42	SP59503090	CER		000		1	1	57	43	57	32	3B		DR	3B	IMP35ST
43	SP59603090	CER		000		1	1	122	22	103	14	2		DR	2	IMP100ST
44	SP59703090	PLO	01	000		1	1	117	17	107	18	2		DR	2	IMP90ST
45	SP59803090	PLO	01	070	070	2	2	143	43	115	26	1		WE	2	
46	SP60003090	PGR		000		1	1	117	17	101	12	2		DR	2	
47	SP60103090	PGR		000		1	1	112	12	95	6	2		DR	2	
48	SP60203090	PGR		000		1	1	99	1	98	9	3A		DR	3A	IMP80ST
49	SP60303090	PGR		000			1	110	10	104	15	2		DR	2	
50	SP60403090	PGR		000		1	1	76	24	78	11	3B		WE	3B	IMP55ST
51	SP60503090	PGR		000		1	1	87	13	92	3	3A		DR	3A	IMP65ST
52	SP60603090	PGR		000		1	1	105	5	87	2	2		DR	2	IMP100ST
53	SP60703090	PGR	01	000		1	1	73	27	76	13	3B		DR	3B	IMP60ST
55	SP60903090	ARB	01	000		1	1	70	30	73	16	3B		DR	3B	IMP60ST
56	SP59503080	CER		000		1	1	117	17	107	18	2		DR	2	IMP90ST
57	SP59603080	PLO		000		1	1	88	12	92	3	3A		DR	3A	IMP60ST
58	SP59703080	PLO		000		1	1	69	31	69	20	3B		DR	3B	IMP50ST
59	SP59803080	PLO		000		1	1	72	28	74	15	3B		DR	3B	IMP45ST
60	SP59903080	PGR		000		1	1	87	13	89	0	3A		DR	3A	IMP75ST
61	SP60003080	PGR		000		1	1	103	3	94	5	3A		DR	3A	
62	SP60103080	PGR		000		1	1	97	3	91	2	3A		DR	3A	IMP85ST
63	SP60203080	PGR		000		1	1	101	1	92	3	3A		DR	3A	
64	SP60303080	PGR	E	02	045	1	1	95	5	101	12	3A		DR	3A	IMP80ST
66	SP60503080	PGR	E		000	1	1	89	11	87	2	3A		DR	3A	IMP80ST
67	SP60603080	PGR	E		000	1	1	89	11	87	2	3A		DR	3A	IMP80ST
68	SP60703080	PGR	E	03	000	1	1	92	8	93	4	3A		DR	3A	IMP80ST
69	SP60803080	CER	E	04	000	1	1	71	29	74	15	3B		DR	3B	IMP80ST
70	SP60903080	CER		01	000	1	1	80	20	86	3	3A		DR	3A	IMP70ST
71	SP61003080	CER		01	070	2	2	121	21	109	20	2		WE	2	IMP95ST
72	SP59503070	PLO		01	000	1	1	104	4	97	8	3A		DR	2	IMP100ST
73	SP59603070	PLO		01	000	1	1	91	9	81	8	3A		DR	3A	IMP85ST
74	SP59703070	PLO		01	000	1	1	48	52	48	41	4		DR	3B	IMP30ST
75	SP59903070	PGR		000		1	1	83	17	88	1	3A		DR	3A	IMP65ST
76	SP60003070	PGR		000		1	1	118	18	101	12	2		DR	2	
77	SP60103070	PGR		000		1	1	83	17	88	1	3A		DR	3A	IMP65ST
78	SP60203070	PGR	E		000	1	1	56	44	56	33	3B		DR	3B	IMP55ST
79	SP60303070	PGR	E		000	1	1	69	31	70	19	3B		DR	3B	IMP55ST
81	SP60503070	PGR	E		000	1	1	46	54	46	43	4		DR	4	IMP30ST

SAMPLE NO	GRID REF	ASPECT USE	WETNESS		WHEAT		POTS		M REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
			GRDNT	GLEYSPL	CLASS	GRADE	AP	MB	AP	MB					
84	SP60803070	CER	03	065	1	1	117	17	91	2	2		DR	2	
85	SP60903070	CER		000	1	1	101	1	93	4	3A		DR	3A	
86	SP61003070	STU		038 075	2	2	135	35	110	21	1		WE	2	
87	SP61103070	STU		026 026	4	3B	124	24	101	12	2		WE	3B	
88	SP59503060	PLO	01	000	1	1	108	8	107	18	2		DR	2	IMP80GH
89	SP59603060	PLO	01	000	1	1	128	28	108	19	2		DR	2	IMP100ST
90	SP59903060	PGR		000	1	1	95	5	98	9	3A		DR	3A	IMP80ST
91	SP60003060	PGR		000	1	1	104	4	95	6	3A		DR	3A	
92	SP60103060	PGR		000	1	1	96	4	91	2	3A		DR	3A	
93	SP60203060	PGR		000	1	1	90	10	88	1	3A		DR	3A	IMP90ST
94	SP60303060	PGR		000	1	1	91	9	93	4	3A		DR	3A	IMP80ST
95	SP60403060	PGR		000	1	1	72	28	74	15	3B		DR	3B	IMP55ST
98	SP60703060	CER	04	000	1	1	81	19	86	3	3A		DR	3A	IMP60ST
99	SP60803060	CER	02	000	1	1	88	12	94	5	3A		DR	3A	IMP70ST
100	SP60903060	CER		000	1	1	78	22	81	8	3B		DR	3B	IMP60ST
101	SP61003060	STU		060	1	1	145	45	108	19	1			1	
102	SP59603050	PLO	01	000	1	1	56	44	56	33	3B		DR	3B	IMP35ST
103	SP60003050	PGR		000	1	1	109	9	96	7	2		DR	2	
104	SP60103050	PGR SE	02	000	1	1	104	4	85	4	3A		DR	3A	IMP100ST
105	SP60203050	PGR SE	02	000	1	1	98	2	85	4	3A		DR	3A	IMP100ST
106	SP60303050	PGR SE	02	000	1	1	135	35	99	10	1		DR	2	
107	SP60403050	PGR		000	1	1	86	14	87	2	3A		DR	3A	IMP80ST
108	SP60503050	PGR E	04	045 075	2	2	109	9	107	18	2		WD	2	
109	SP60603050	CER	02	070	2	2	135	35	100	11	1		WE	2	
110	SP60703050	CER	02	000	1	1	84	16	90	1	3A		DR	3A	IMP70ST
111	SP60803050	CER	01	000	1	1	73	27	75	14	3B		DR	3B	IMP60ST
112	SP60903050	STU		000	1	1	138	38	105	16	1			1	
113	SP61003050	STU		000	1	1	142	42	104	15	1			1	
114	SP60103040	PGR		040 060	3	3A	137	37	111	22	1		WE	3A	
115	SP60203040	PGR		000	1	1	61	39	61	28	3B		DR	3B	IMP40ST
116	SP60303040	PGR		000	1	1	73	27	79	10	3B		DR	3B	IMP65ST
117	SP60403040	PGR		000	1	1	92	8	92	3	3A		DR	3A	IMP80ST
118	SP60503040	PGR		030 040	4	3B	137	37	113	24	1		WE	3B	
119	SP60603040	CER		000	1	1	75	25	78	11	3B		DR	3B	IMP60ST
120	SP60703040	CER		000	1	1	54	46	54	35	3B		DR	3B	IMP35ST
121	SP60803040	CER		000	1	1	66	34	66	23	3B		DR	3B	IMP45ST
122	SP60903040	STU		000	1	1	59	41	59	30	3B		DR	3B	IMP40ST
123	SP61003040	STU		035	2	2	141	41	110	21	1		WE	2	
124	SP60503030	PGR		025 060	3	3A	000	0	000	0			WE	3A	
125	SP61003030	STU		028 028	4	3B	84	16	90	1	3A		WE	3B	

SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES			PED		STONES			STRUCT/		SUBS				
				COL	ABUN	CONT	COL	GLEYS	2	6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC
1	0 25	ms1	10YR34 00						5	0	HR	10						
	25 75	ms1	10YR44 00						0	0	HR	15				M		
1P	0 25	m 1	10YR34 00						5	0	HR	15						
	25 45	ms1	10YR44 00						0	0	HR	35	MDMAB	FR	M			
	45 110	1ms	10YR46 00						0	0	HR	25	WDFSAB	FR	G			
	110 120	gh	10YR33 00						0	0		0				M		
2	0 25	ms1	10YR34 00						0	0	HR	10						
	25 55	ms1	10YR44 00						0	0	HR	15				M		
	55-80	sc1	10YR51 00	10YR6B 00	C			Y	0	0	HR	10				M		
2P	0 25	ms1	10YR46 00						5	0	HR	15	MDMSAB	FR				
	25 120	ms	10YR46 00						0	0	HR	25				M		
3	0 25	ms1	10YR34 00						0	0	HR	10						
	25 50	ms1	10YR44 00						0	0	HR	15				M		
3P	0 28	ms1	10YR44 00						5	0	HR	13	WKMBAB	FR				
	28 52	ms1	75YR44 00						0	0	HR	28	MDMSAB	FR	G			
	52 100	c 1	75YR56 00						0	0	HR	30				G		
	100 120	gh	00HR00 00						0	0		0				M		
4P	0 22	mc1	10YR46 00						3	0	HR	10	MDCSAB	FR				
	22 110	ms1	10YR56 00						0	0	HR	30	MMSAB	FR	G			
	110 120	gh	10YR58 00						0	0		0				M		
5	0 25	ms1	10YR34 00						5	0	HR	10						
	25 60	ms1	10YR44 00						0	0	HR	15				M		
	60 80	gh	10YR33 00						0	0		0				M		
5P	0 20	ms1	10YR44 00						8	0	HR	18						
	20 62	ms1	10YR34 00						0	0	HR	25	WDMSAB	VF	G			
	62 120	cs1	75YR46 00						0	0	HR	28	WDMSAB	VF	G			
6	0 25	m 1	10YR34 00						0	0	HR	10						
	25 50	ms1	10YR44 00						0	0	HR	15				M		
	50 65	sc1	10YR46 00						0	0	HR	15				M		
6P	0 23	mc1	10YR43 00						0	0	HR	2						
	23-54	sc1	10YR46 00						0	0	HR	25				M		
	54 75	sc1	10YR56 00						0	0	HR	35				M		
	75 120	c	10YR51 00	10YR58 00	C			Y	0	0	HR	3	MDCPR	VM	P			Y
7	0 35	ms1	10YR34 00						0	0	HR	10						
7P	0 20	ms1	10YR43 00						0	0	HR	5						
	20 47	ms1	75YR46 00						0	0	HR	12	WMSAB	VF	G			
	47 80	1ms	75YR56 00						0	0	HR	15	WMSAB	VF	M			
	80 120	sc1	75YR58 00						0	0	HR	7	WKCSAB	VF	G			

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES		PED		STONES			STRUCT/ CONSIST	SUBS						
				COL	ABUN	CONT	COL	GLE	2	6		LITH	TOT	STR	POR	IMP	SPL	CALC
8	0 25	ms1	10YR34 00							0	0	HR	10					
	25 55	ms1	10YR44 00							0	0	HR	15				M	
	55 70	sc1	10YR46 00							0	0	HR	20				M	
9	0 25	ms1	10YR34 00							0	0	HR	10					
	25 65	ms1	10YR44 00							0	0	HR	25				M	
10	0 10	mc1	10YR42 00							0	0	HR	6					
	10 65	ms1	10YR56 00							0	0	HR	15				M	
	65 100	ms1	10YR58 00							0	0	HR	25				M	
11	0 20	mc1	10YR43 00							0	0	HR	5					
	20 55	mc1	10YR54 00							0	0	HR	20				M	
	55 100	ms1	10YR58 00							0	0	HR	30				M	
12	0 25	mc1	10YR34 00							0	0	HR	10					
	25 45	mc1	10YR44 00							0	0	HR	50				M	
13	0 25	mc1	10YR34 00							0	0	HR	10					
	25-60	mc1	10YR44 00							0	0	HR	20				M	
	60 80	mc1	10YR44 00							0	0	HR	50				M	
14	0 25	mc1	10YR33 00							0	0	HR	10					
	25 90	mc1	10YR46 00							0	0	HR	20				M	
15	0 25	mc1	10YR34 00							0	0	HR	10					
	25 45	ms1	10YR44 00							0	0	HR	15				M	
	45 65	ms1	10YR44 00							0	0	HR	50				M	
16	0 25	mc1	10YR34 00							0	0	HR	10					
	25 50	mc1	10YR44 00							0	0	HR	20				M	
17	0 25	mc1	10YR42 00							0	0	HR	5					
	25 55	mc1	10YR58 00							0	0	HR	15				M	
	55 100	ms1	10YR58 00							0	0	HR	30				M	
18	0 30	mc1	10YR43 00							0	0	HR	6					
	30 50	ms1	10YR56 00							0	0	HR	20				M	
	50 100	lm	10YR46 00							0	0	HR	30				M	
19	0 30	mc1	10YR44 00							0	0	HR	6					
	30 45	ms1	10YR56 00							0	0	HR	10				M	
	45 85	c	10YR58 00							0	0	HR	25				M	
20	0 25	mc1	10YR44 00							0	0	HR	6					
	25 45	sc1	10YR56 00							0	0	HR	15				M	
	45 75	ms1	10YR68 00							0	0	HR	35				M	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES		PED		STONES		STRUCT/ CONSIST	SUBS							
				COL	ABUN	CONT	COL	GLEY	2		6	LITH	TOT	STR	POR	IMP	SPL	CALC
21	0 25	mc1	10YR43 00						0	0	HR	3						
	25 50	mc1	10YR54 00						0	0	HR	15						M
	50 100	sc1	10YR56 00						0	0	HR	30						M
22	0 30	mc1	10YR44 00						0	0	HR	2						
	30 45	mc1	75YR54 00						0	0	HR	10						M
	45-70	ms1	75YR56 00						0	0	HR	25						M
23	0 30	mc1	10YR54 00						0	0	HR	3						
	30 45	ms1	75YR56 00						0	0	HR	20						M
	45 60	ms1	75YR58 00						0	0	HR	30						M
24	0 20	mc1	10YR42 00						0	0	HR	6						
	20 45	mc1	10YR44 00						0	0	HR	10						M
	45 65	1ms	10YR58 00						0	0	HR	25						M
	65 100	ms1	10YR56 00						0	0	HR	30						M
25	0 30	ms1	10YR43 00						0	0	HR	8						
	30 45	ms1	10YR54 00						0	0	HR	15						M
	45 85	ms1	10YR56 00						0	0	HR	30						M
26	0 30	mc1	10YR43 00						0	0	HR	2						
	30 55	1	10YR56 00						0	0	HR	5						M
	55 100	ms1	10YR56 00						0	0	HR	10						M
27	0 20	mc1	10YR43 00						0	0	HR	2						
	20 50	ms1	10YR58 00						0	0	HR	25						M
28	0 30	mc1	10YR43 00						0	0	HR	3						
	30 60	ms1	10YR54 00						0	0	HR	15						M
29	0 25	mc1	10YR43 00						0	0	HR	3						
	25 55	sc1	10YR56 00						0	0	HR	15						M
	55 80	sc	10YR58 00						0	0	HR	30						M
30	0 20	mc1	10YR42 00						0	0	HR	2						
	20 40	mc1	10YR54 00						0	0	HR	5						M
	40 65	sc1	75YR58 00						0	0	HR	20						M
31	0 30	mc1	10YR43 00						0	0	HR	3						
	30 55	c1	10YR56 00						0	0	HR	8						M
	55 80	sc1	10YR58 00						0	0	HR	15						M
32	0 35	ms1	10YR34 00						0	0	HR	5						
	35 50	sc1	10YR44 00						0	0	HR	5						M
33	0 30	m 1	10YR34 00						0	0	HR	5						
	30 45	ms1	10YR44 00						0	0	HR	10						M
	45 70	ms	10YR46 00						0	0	HR	15						M
	70 80	sc1	10YR46 00						0	0	HR	10						M



SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES		PED		GLEYS	STONES			STRUCT/ CONSIST	SUBS			
				COL	ABUN	CONT	COL		2	6	LITH		TOT	STR	POR	IMP
34	0 20	mc1	10YR43 00						0	0	HR	8				
	20 55	ms1	10YR54 00						0	0	HR	15		M		
	55 75	ms1	10YR58 00						0	0	HR	35		M		
35	0 20	mc1	10YR42 00						0	0	HR	8				
	20 40	ms1	10YR54 00						0	0	HR	15		M		
	40 65	ms1	10YR58 00						0	0	HR	30		M		
36	0 25	mc1	10YR44 00						0	0	HR	8				
	25 55	ms1	10YR56 00						0	0	HR	25		M		
37	0 25	mc1	10YR43 00						0	0	HR	6				
	25 55	ms1	10YR58 00						0	0	HR	20		M		
	55 85	sc1	75YR56 00						0	0	HR	25		M		
	85 100	ms1	10YR58 00						0	0	HR	30		M		
38	0 25	mc1	10YR43 00						0	0	HR	8				
	25 65	ms1	10YR56 00						0	0	HR	15		M		
	65 100	lms	10YR58 00						0	0	HR	20		M		
39	0 25	mc1	10YR33 00						0	0	HR	5				
	25 65	ms1	10YR46 00						0	0	HR	25		M		
40	0 25	mc1	10YR34 00						0	0	HR	10				
	25 45	mc1	10YR44 00						0	0	HR	25		M		
	45 65	mc1	10YR44 00						0	0	HR	50		M		
41	0 25	mc1	10YR34 00						0	0	HR	10				
	25 55	mc1	10YR44 00						0	0	HR	25		M		
	55 75	hc1	10YR56 00						0	0	HR	10		M		
	75 120	c	10YR51 00	10YR6B 00	C			Y	0	0		0		P		Y
42	0 35	ms1	10YR34 00						0	0	HR	5				
43	0 30	ms1	10YR34 00						0	0	HR	5				
	30 55	ms1	10YR44 00						0	0	HR	10		M		
	55 100	sc1	75YR56 00						0	0	HR	10		M		
44	0 25	mc1	10YR33 00						0	0	HR	5				
	25 90	sc1	10YR46 00						0	0	HR	5		M		
45	0 30	mc1	10YR33 00						0	0	HR	3				
	30 40	mc1	10YR46 00						0	0	HR	1		M		
	40 70	hc1	10YR52 00						0	0	HR	2		M		
	70 120	c	10YR51 00	10YR58 00	C			Y	0	0	HR	1		M		Y
46	0 20	mc1	10YR43 00						0	0	HR	6				
	20 45	mc1	10YR54 00						0	0	HR	10		M		
	45 100	sc1	75YR54 00						0	0	HR	20		M		

SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES		PED		STONES			STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL	GLEY	2	6		LITH	TOT	STR	POR	IMP
47	0 20	mc1	10YR43 00					0	0	HR	6					
	20 75	ms1	10YR56 00					0	0	HR	20			M		
	75 100	ms1	75YR58 00					0	0	HR	30			M		
48	0 30	mc1	10YR43 00					0	0	HR	6					
	30 55	ms1	10YR54 00					0	0	HR	20			M		
	55-80	ms1	10YR56 00					0	0	HR	30			M		
49	0 30	mc1	10YR43 00					0	0	HR	6					
	30 45	mc1	10YR56 00					0	0	HR	15			M		
	45 90	hc1	75YR54 00					0	0	HR	20			M		
50	0 25	mc1	10YR43 00					0	0	HR	8					
	25 45	ms1	10YR54 00					0	0	HR	15			M		
	45 55	ms1	10YR54 00					0	0	HR	35			M		
51	0 20	mc1	10YR43 00					0	0	HR	6					
	20 40	mc1	10YR54 00					0	0	HR	10			M		
	40 65	ms1	10YR56 00					0	0	HR	25			M		
52	0 25	ms1	10YR34 00					0	0	HR	10					
	25 100	ms1	10YR46 00					0	0	HR	30			M		
53	0 25	ms1	10YR34 00					0	0	HR	10					
	25 60	ms1	10YR44 00					0	0	HR	30			M		
55	0 25	ms1	10YR34 00					0	0	HR	5					
	25 40	sc1	10YR46 00					0	0	HR	30			M		
	40 60	sc1	10YR46 00					0	0	HR	50			M		
56	0 30	ms1	10YR34 00					0	0	HR	5					
	30 90	sc1	10YR44 00					0	0	HR	3			M		
57	0 30	sc1	10YR33 00					0	0	HR	5					
	30 60	ms1	10YR44 00					0	0	HR	5			M		
58	0 40	ms1	10YR34 00					0	0	HR	6					
	40 50	ms	10YR56 00					0	0	HR	25			M		
59	0 30	ms1	10YR33 00					0	0	HR	5					
	30 45	m 1	10YR44 00					0	0	HR	7			M		
	45 65	gh	10YR33 00					0	0		0			M		
60	0 20	mc1	10YR43 00					0	0	HR	6					
	20 40	mc1	10YR54 00					0	0	HR	10			M		
	40 55	ms1	10YR56 00					0	0	HR	20			M		
	55 75	lms	75YR58 00					0	0	HR	30			M		

SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES		PED		GLEYS	STONES		STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT	COL		2	6		LITH	TOT	STR	POR	IMP	SPL
61	0 20	mc1	10YR43 00						0	0	HR	6					
	20 50	ms1	75YR56 00						0	0	HR	15					M
	50 80	m 1	75YR56 00						0	0	HR	30					M
	80 100	lms	75YR58 00						0	0	HR	30					M
62	0 25	ms1	10YR43 00						0	0	HR	6					
	25 55	ms1	10YR56 00						0	0	HR	25					M
	55 85	ms1	10YR58 00						0	0	HR	30					M
63	0 15	mc1	10YR44 00						0	0	HR	6					
	15 50	ms1	10YR54 00						0	0	HR	15					M
	50 80	ms1	75YR56 00						0	0	HR	30					M
	80 100	lms	75YR58 00						0	0	HR	30					M
64	0 30	mc1	10YR33 00						0	0	HR	5					
	30 45	sc1	10YR46 00						0	0	HR	10					M
	45 80	c	10YR51 00	10YR58 00	C			Y	0	0	HR	30					M
66	0 25	ms1	10YR34 00						0	0	HR	10					
	25 80	ms1	10YR46 00						0	0	HR	30					M
67	0 25	ms1	10YR34 00						0	0	HR	10					
	25 80	ms1	10YR44 00						0	0	HR	30					M
68	0 20	mc1	10YR34 00						0	0	HR	5					
	20 55	sc1	10YR46 00						0	0	HR	25					M
	55-80	hc1	10YR44 00						0	0	HR	25					M
69	0 25	ms1	10YR34 00						0	0	HR	10					
	25 40	mc1	10YR44 00						0	0	HR	25					M
	40 60	mc1	10YR44 00						0	0	HR	50					M
70	0 25	mc1	10YR33 00						0	0	HR	10					
	25 50	sc1	10YR46 00						0	0	HR	25					M
	50 70	sc1	10YR44 00						0	0	HR	50					M
71	0 25	mc1	10YR33 00						0	0	HR	7					
	25 70	mc1	10YR53 00						0	0	HR	7					M
	70 95	hc1	10YR53 00	75YR56 00	C			Y	0	0	HR	7					M
72	0 30	ms1	10YR34 00						0	0	HR	6					
	30 60	ms1	10YR44 00						0	0	HR	6					M
	60 100	lms	10YR56 00						0	0	HR	10					M
73	0 40	ms1	10YR34 00						0	0	HR	6					
	40 70	ms	75YR58 00						0	0	HR	3					M
	70 85	sc1	75YR58 00						0	0	HR	10					M

SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES			PED		STONES			STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL	GLE	2	6	LITH		TOT	STR	POR	IMP	SPL
74	0 30	ms1	10YR34 00						0	0	HR	6					
75	0 20	mc1	10YR43 00						0	0	HR	6					
	20 45	ms1	10YR56 00						0	0	HR	15			M		
	45 65	ms1	10YR56 00						0	0	HR	30			M		
76	0 25	ms1	10YR43 00						0	0	HR	6					
	25 70	ms1	10YR56 00						0	0	HR	10			M		
	70 100	cs1	10YR58 00						0	0	HR	30			M		
77	0 20	ms1	10YR43 00						0	0	HR	6					
	20 45	ms1	10YR54 00						0	0	HR	10			M		
	45 65	ms1	10YR56 00						0	0	HR	30			M		
78	0 35	ms1	75YR56 00						0	0	HR	10					
	35 55	hr	75YR56 00						0	0	HR	50			M		
79	0 35	ms1	10YR34 00						0	0	HR	10					
	35 55	ms1	10YR33 00						0	0	HR	50			M		
81	0 30	ms1	10YR34 00						0	0	HR	10					
84	0 20	mc1	10YR44 00						0	0	HR	10					
	20 65	sc1	10YR46 00						0	0	HR	25			M		
	65 100	hc1	10YR51 00	10YR68 00 C				Y	0	0	HR	20			M		
	100 120	sc1	10YR58 00					Y	0	0	HR	50			M		
85	0 25	ms1	10YR34 00						0	0	HR	10					
	25 70	sc1	10YR46 00						0	0	HR	20			M		
	70 90	hc1	10YR58 00						0	0	HR	20			M		
86	0 28	mc1	10YR43 00						0	0	HR	5					
	28 38	sc1	10YR44 00	10YR56 00 C					0	0	HR	5			M		
	38 60	sc1	25Y 63 00	75YR56 00 C				Y	0	0	HR	3			M		
	60 75	hc1	25Y 63 00	75YR56 00 M				Y	0	0	HR	3			M		
	75-120	c	25Y 63 00	75YR56 00 M				00MN00 00	Y	0	0	HR	3			P	
87	0 26	hc1	10YR42 00						0	0	HR	5					
	26 90	c	10YR53 00	75YR56 00 M				Y	0	0	HR	1			P		Y
	90 120	c	05Y 52 00	75YR56 00 M				Y	0	0		0			P		Y
88	0 30	ms1	10YR34 00						0	0	HR	6					
	30 60	ms1	10YR44 00						0	0	HR	3			M		
	60 80	sc1	10YR44 00						0	0	HR	2			M		
89	0 30	ms1	10YR34 00						0	0	HR	6					
	30 50	cs1	10YR58 00						0	0	HR	3			M		
	50 100	sc1	10YR58 00						0	0	HR	3			M		

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES			PED		STONES			STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL	GLEYS	2	6	LITH		TOT	STR	POR	IMP	SPL
90	0 25	msl	10YR43 00						0	0	HR	6					
	25 70	msl	10YR56 00						0	0	HR	15					M
	70 80	lms	75YR58 00						0	0	HR	30					M
91	0 20	mc1	10YR44 00						0	0	HR	6					
	20 55	msl	10YR56 00						0	0	HR	15					M
	55 80	msl	10YR56 00						0	0	HR	30					M
	80 100	lms	75YR58 00						0	0	HR	35					M
92	0 25	msl	10YR44 00						0	0	HR	6					
	25 60	msl	10YR56 00						0	0	HR	15					M
	60 100	lms	75YR58 00						0	0	HR	30					M
93	0 20	mc1	10YR42 00						0	0	HR	6					
	20 60	msl	10YR56 00						0	0	HR	20					M
	60 90	lms	10YR58 00						0	0	HR	30					M
94	0 20	mc1	10YR43 00						0	0	HR	6					
	20 40	mc1	10YR54 00						0	0	HR	10					M
	40 60	msl	10YR58 00						0	0	HR	20					M
	60 80	lms	75YR58 00						0	0	HR	30					M
95	0 10	mc1	10YR42 00						0	0	HR	10					
	10 35	mc1	10YR54 00						0	0	HR	15					M
	35 55	msl	10YR56 00						0	0	HR	25					M
98	0 25	mc1	10YR44 00						0	0	HR	10					
	25 60	hc1	10YR46 00						0	0	HR	20					M
99	0 50	mc1	10YR44 00						0	0	HR	15					
	50 70	mc1	10YR44 00						0	0	HR	50					M
100	0 25	msl	10YR34 00						0	0	HR	10					
	25 60	msl	10YR46 00						0	0	HR	20					M
101	0 28	sc1	10YR43 00						0	0	HR	5					
	28 50	l	10YR44 00						0	0	HR	3					M
	50 60	c1	10YR56 00	10YR66 00	C				0	0	HR	3					M
	60 70	mc1	25Y 64 00	75YR56 00	C			Y	0	0	HR	2					M
	70 78	c	25Y 64 00	75YR56 00	M			00MN00 00	Y	0	0		0				M
	78 120	sc	25Y 64 00	75YR56 00	M			00MN00 00	Y	0	0	HR	2				M
102	0 35	msl	10YR34 00						0	0	HR	6					
103	0 30	msl	10YR44 00						0	0	HR	15					
	30 40	sc1	10YR46 00						0	0	HR	10					M
	40 70	msl	10YR46 00						0	0	HR	15					M
	70 120	lms	10YR56 00						0	0	HR	20					M

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES			PED		STONES		STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT	COL	GLEY	2	6		LITH	TOT	STR		POR
104	0 25	ms1	10YR44 00						0	0	HR	15				
	25 45	ms1	10YR56 00						0	0	HR	15			M	
	45 60	lms	10YR56 00						0	0	HR	10			G	
	60 95	lms	10YR56 00						0	0	HR	2			G	
	95 100	ms1	10YR46 00						0	0	HR	10			G	
105	0 28	ms1	10YR43 00						0	0	HR	15				
	28 50	ms1	10YR44 00						0	0	HR	15			G	
	50 90	lms	10YR56 00						0	0	HR	15			M	
	90 100	sc1	10YR56 00						0	0	HR	20			M	
106	0 27	ms1	10YR43 00						0	0	HR	10				
	27 60	sc1	75YR46 00						0	0	HR	10			M	
	60 120	ms1	10YR56 00						0	0	HR	20			M	
107	0 20	mc1	10YR44 00						0	0	HR	6				
	20 55	m 1	10YR54 00						0	0	HR	15			M	
	55 80	lms	75YR58 00						0	0	HR	30			M	
108	0 25	mc1	10YR43 00						0	0	HR	6				
	25 45	mc1	10YR44 00						0	0	HR	5			M	
	45 60	c	10YR53 00	10YR68 00 C			00MN00 00 Y		0	0	HR	5			M	
	60 75	c	10YR54 00	00MN00 00 C				Y	0	0	HR	30			M	
	75 90	c	10YR62 00	10YR68 00 C				Y	0	0		0			M	Y
109	0 25	mc1	10YR34 00						0	0	HR	10				
	25 50	sc1	10YR44 00						0	0	HR	20			M	
	50 70	hc1	10YR51 00						0	0	HR	10			M	
	70 120	hc1	10YR51 00	10YR58 00 C				Y	0	0	HR	10			M	
110	0 25	mc1	10YR34 00						0	0	HR	10				
	25 50	mc1	10YR46 00						0	0	HR	20			M	
	50 70	hc1	10YR46 00						0	0	HR	50			M	
111	0 25	mc1	10YR34 00						0	0	HR	10				
	25 40	ms1	10YR44 00						0	0	HR	20			M	
	40 60	ms1	10YR44 00						0	0	HR	50			M	
112	0 28	sc1	10YR43 00						0	0	HR	8				
	28 55	sc1	10YR44 00						0	0	HR	8			M	
	55 75	c	10YR56 00					00MN00 00	0	0	HR	2			M	
	75 120	sc1	10YR56 00					00MN00 00	0	0	HR	5			M	
113	0 28	ms1	10YR43 00						0	0	HR	8				
	28 120	sc1	10YR44 00	10YR56 00 F			00MN00 00		0	0	HR	5			M	
114	0 25	mc1	10YR34 00						0	0	HR	10				
	25 40	mc1	10YR44 00						0	0	HR	10			M	
	40 60	hc1	10YR51 00	10YR58 00 C				Y	0	0		0			M	
	60 120	c	10YR51 00	10YR58 00 C				Y	0	0		0			M	Y

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES			PED		STONES			STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL	GLEYS	2	6	LITH		TOT	STR	POR	IMP	SPL
115	0 25	mc1	10YR34 00						0	0	HR	10					
	25 40	ms1	10YR44 00						0	0	HR	10		M			
116	0 30	ms1	10YR34 00						0	0	HR	30					
	30 65	hc1	10YR56 00						0	0	HR	25		M			
117	0 30	mc1	10YR34 00						0	0	HR	10					
	30 80	sc1	10YR46 00						0	0	HR	30		M			
118	0 30	mc1	10YR34 00						0	0	HR	10					
	30 40	hc1	10YR52 00	10YR68 00 C				Y	0	0	HR	1		M			
	40 120	c	10YR51 00	10YR58 00 C				Y	0	0		0		M		Y	
119	0 40	ms1	10YR34 00						0	0	HR	10					
	40 60	ms1	10YR44 00						0	0	HR	50		M			
120	0 35	ms1	10YR44 00						0	0	HR	10					
121	0 30	ms1	10YR44 00						0	0	HR	10					
	30 45	mc1	10YR44 00						0	0	HR	20		M			
122	0 28	sc1	10YR43 00						0	0	HR	10					
	28 40	sc1	10YR44 00						0	0	HR	15		M			
123	0 28	mc1	10YR42 00						0	0	HR	5					
	28 35	mc1	10YR43 00						0	0	HR	2		M			
	35 90	sc1	10YR53 00	10YR56 00 C				Y	0	0	HR	3		M			
	90 120	c	05Y 52 00	75YR56 00 M				Y	0	0		0		P			
124	0 25	mc1	10YR34 00						0	0	HR	1					
	25 60	hc1	10YR52 00					Y	0	0		0					
	60 120	c	10YR51 00	10YR58 00 C				Y	0	0		0		M		Y	
125	0 28	hc1	10YR42 00						0	0	HR	5					
	28 60	c	25Y 63 00	75YR56 00 C				Y	0	0		0		P		Y	