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BASINGSTOKE AND DEANE BOROUGH
LOCAL PLAN
SITE 20: WORTINGWOOD FARM
WORTING
AGRICULTURAL LAND CLASSIFICATION
ALC MAP AND REPORT
JUNE 1993

AGRICULTURAL LAND CLASSIFICATION

BASINGSTOKE AND DEANE BOROUGH LOCAL PLAN

Site 20: Wortingwood Farm, Worting

1. SUMMARY

- 1.1 In May 1993, an Agricultural Land Classification (ALC) survey was made on approximately 102 hectares of land at Worting to the west of Basingstoke in Hampshire.
- 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 proposals for development in the Basingstoke and Deane Borough Local Plan.
- 1.3 The classification has been made using 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.
- 1.4 The fieldwork was carried out with an observation density of approximately one per hectare. A total of 102 borings and six soil pits were examined.
- 1.5 The table below provides the details of the grades found across the site. The majority of the land is classified as good quality. The key limitation is droughtiness.

Table 1 : Distribution of Grades and Subgrades

<u>Grade</u>	<u>Area (ha)</u>	<u>% of Site</u>	<u>% Total Agricultural Land</u>
2	14.02	13.7	13.9
3a	84.10	82.3	83.3
3b	<u>2.90</u>	2.8	<u>2.8</u>
Total agricultural area	101.02		100
Woodland	0.05	0.06	
Urban	0.97	0.97	
Agricultural Buildings	<u>0.16</u>	<u>0.17</u>	
Total area of site	<u>102.2</u>	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 supersedes any previous ALC information for this site.
- 1.7 At the time of survey the land use on the site was in a combination of oilseed rape, cereal crops, pasture and rough grassland.

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. 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 annual average rainfall, as a measure of overall wetness, and accumulated temperature, as a measure of the relative warmth of a locality.
- 2.3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met. Office, 1989). The details are given in the table below and these show that there is no overall climatic limitation affecting the site.
- 2.4 No local climatic factors such as exposure or frost risk affect the site.

Table 2 : Climatic Interpolations

Grid Reference :	SU 605 522	SU 607 528	SU 608 537
Altitude (m) :	110	120	135
Accumulated Temperature (days) :	1409	1397	1380
Average Annual Rainfall (mm) :	795	797	805
Field Capacity (days) :	172	171	171
Moisture Deficit, Wheat (mm) :	97	96	94
Moisture Deficit, Potatoes (mm) :	87	85	83
Overall Climatic Grade :	1	1	1

3. RELIEF

- 3.1 Land within the survey area lies between 105 and 135 m AOD, overall rising gently from the south to the north. Within the site are significant relief features, consisting of ridges and hollows as evidence of a pre-existing large scale natural drainage system. However at no point within the site does gradient or altitude present a limitation to land quality.

4. GEOLOGY AND SOIL

- 4.1 The relevant geological sheet (British Geological Survey (1981), Sheet 284, 1:50000) for the site, shows the underlying geology to be almost entirely Cretaceous Upper Chalk, with small areas of clay with flints on crests to the west of the site.
- 4.2 The soil types occurring on the site as shown by the Soil Survey Map of South East England (SSEW, 1983, 1:250000), are Andover 1 Association, shallow, well drained silty soils over chalk, on slopes

and deeper though similar textures in valley bottoms, these occurring where chalk underlies the site. A small area of Carstens Association soils also occur approximately where the underlying geology is clay with flints. These soils are described as either fine silty over clayey or clayey and fine silty soils, often very flinty. Detailed field examination broadly confirmed these descriptions.

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.

5.3 Grade 2

Land of this quality is mapped in two blocks. The larger area in the south east of the site occurs within a minor dry valley feature, the smaller area in the extreme south occupies gentle slopes on the lowest land on the site. The soils observed in the large area consist of a very slightly stony (up to 5% flints, all <2 cm), calcareous silty clay loam topsoil, over similarly textured though slightly stony (up to 12% flints) calcareous subsoil, containing increasing quantities of small weathered chalk fragments (up to 50%), passing to pure chalk between 50 and 85 cm. From an observation pit dug in this area it was found that the vegetation was only able to root a short distance into the chalk (c. 10cm when pure chalk was encountered at 85 cm). This results in a slight droughtiness limitation caused by restricted water availability in the profile.

The smaller area in the extreme south of the site was found to have different soils consisting of a slightly stony (12% flints, 8% >2 cm) calcareous medium silty clay loam topsoil, overlying similarly textured though moderately stony (20% flints) calcareous upper subsoils passing to a moderately stony (up to 30% chalk fragments) calcareous medium silty clay loam lower subsoil. This soil is therefore limited by topsoil stone content (12% flints, 8% >2 cm), which acts as a slight impediment to cultivation, restricting the flexibility of the land to Grade 2.

5.4 Grade 3A

Land of this quality covers the majority of the surveyed area, mapped as a single block from the south to the north. The soils observed in this area consist of a slightly stony (up to 10% (5% >2 cm) flints, in addition to rare weathered chalk fragment inclusions (up to 10% where present)), calcareous silty clay loam over either, a slightly to very stony (up to 40% chalk fragments) calcareous silty clay loam passing to pure chalk between 30 and 45 cm, or passing directly to pure chalk beneath the topsoil between 24 and 40 cm. From descriptions of 5 soil observation pits dug in this map unit, it was found that vegetation was able to root into the chalk between 35 and 40 cm. This restricts the available water in the profile. Occasional profiles were impenetrable due to a higher proportion of flints (up to 10%) in

the subsoil. Rare profiles were of a higher quality within this grade unit. These cases were of an insufficient distribution to justify separate mapping.

5.5 Grade 3B

Land of this quality covers a small area (<3%) of the site in 2 units to the west corresponding in part to the areas mapped as Clay With Flints on the geology map (BGS, 1981). The soils contained within this unit consist of a very slightly stony (<5% flints) non-calcareous clay or silty clay topsoil over a gleyed and slowly permeable stoneless to very slightly stony non-calcareous clay subsoil to depth. This causes a soil wetness problem within these profiles adversely affecting plant growth and/or cultivation timings, such that Subgrade 3B is appropriate here.

5.6 The areas marked as Urban include two metalled tracks running across the site to Wortingwood Farm and a cottage with its grounds.

5.7 The area marked as Non-agricultural is a small area of dense deciduous woodland at a field boundary.

ADAS Ref: 1501/036/93

MAFF Ref: EL 15/144

Resource Planning Team
Guildford Statutory Group
ADAS Reading

APPENDIX I

DESCRIPTION OF THE GRADES AND SUBGRADES

Grade 1 : Excellent Quality Agricultural Land

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

Grade 2 : Very Good Quality Agricultural Land

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

Grade 3 : Good To Moderate Quality Agricultural Land

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

Sub-grade 3A : Good Quality Agricultural Land

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

Sub-grade 3B : Moderate Quality Agricultural Land

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

Grade 4 : Poor Quality Agricultural Land

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

Grade 5 : Very Poor Quality Agricultural Land

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

Urban

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

Non-agricultural

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

Woodland

Includes commercial and non-commercial woodland.

Agricultural Buildings

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

Open Water

Includes lakes, ponds and rivers as map scale permits.

Land Not Surveyed

Agricultural land which has not been surveyed.

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

APPENDIX II

REFERENCES

- * British Geological Survey (1981), Sheet No. 284, Basingstoke. 1:50,000
- * MAFF (1988), Agricultural Land Classification of England And Wales : Revised guidelines and criteria for grading the quality of agricultural land.
- * Meteorological Office (1989), Climatological Data for Agricultural Land Classification.
- * Soil Survey of England and Wales (1983), Sheet No. 6, Soils of South East England, 1:250000
- * Soil Survey of England and Wales (1984), Soils and their use in South East England. Bulletin No. 15.

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 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 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. **GLEYSPL** : 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 pedes are described using the following notation:

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

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

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

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

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

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

G : good M : moderate P : poor

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

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

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

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

14. Other notations

APW : available water capacity (in mm) adjusted for wheat

APP : available water capacity (in mm) adjusted for potatoes

MBW : moisture balance, wheat

MBP : moisture balance, potatoes

SOIL PIT DESCRIPTION

Site Name : WORTING BASING LP S 20 Pit Number : 1P

Grid Reference: SU60755360 Average Annual Rainfall : 797 mm
 Accumulated Temperature : 1397 degree days
 Field Capacity Level : 171 days
 Land Use : Oilseed Rape
 Slope and Aspect : degrees SE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 24	MZCL	10YR43 00	5	10		
24- 64	CH	00CH00 00	0	0		

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

Drought Grade : 3A APW : 77 mm MBW : -19 mm
 APP : 81 mm MBP : -4 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WORTING BASING LP S 20 Pit Number : 2P

Grid Reference: SU60385278 Average Annual Rainfall : 797 mm
 Accumulated Temperature : 1397 degree days
 Field Capacity Level : 171 days
 Land Use : Cereals
 Slope and Aspect : 03 degrees NE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 25	MZCL	10YR43 00	0	4		
25- 30	HZCL	10YR54 00	0	10		
30- 62	CH	00CH00 00	0	0		

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

Drought Grade : 3A APW : 82 mm MBW : -14 mm
 APP : 86 mm MBP : 1 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WORTING BASING LP S 20 Pit Number : 3P

Grid Reference: SU60085213 Average Annual Rainfall : 797 mm
 Accumulated Temperature : 1397 degree days
 Field Capacity Level : 171 days
 Land Use : Cereals
 Slope and Aspect : 02 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 24	MZCL	10YR42 00	0	10		
24- 58	CH	00CH00 00	0	0		

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

Drought Grade : 3B APW : 75 mm MBW : -21 mm
 APP : 77 mm MBP : -8 mm

FINAL ALC GRADE : 3B
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WORTING BASING LP S 20 Pit Number : 4P

Grid Reference: SU60035223 Average Annual Rainfall : 797 mm
 Accumulated Temperature : 1397 degree days
 Field Capacity Level : 171 days
 Land Use : Cereals
 Slope and Aspect : 02 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 26	C	10YR43 00	0	5		
26- 50	C	10YR56 00	0	50		
50- 60	CH	00CH00 00	0	0		

Wetness Grade : 3A Wetness Class : I
 Gleying : cm
 SPL : No SPL

Drought Grade : 3A APW : 80 mm MBW : -16 mm
 APP : 83 mm MBP : -2 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WORTING BASING LP S 20 Pit Number : 5P

Grid Reference: SU60155235 Average Annual Rainfall : 797 mm
 Accumulated Temperature : 1397 degree days
 Field Capacity Level : 171 days
 Land Use : Cereals
 Slope and Aspect : 02 degrees E

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 28	HZCL	10YR42 00	0	4		
28- 48	HZCL	10YR43 00	0	5		MCSAB
48- 73	HZCL	10YR43 00	0	12		MCSAB
73- 85	HZCL	10YR44 00	0	50		
85- 95	CH	00CH00 00	0	0		

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

Drought Grade : 2 APW : 124mm MBW : 28 mm
 APP : 117mm MBP : 32 mm

FINAL ALC GRADE : 2
 MAIN LIMITATION : Workability

SOIL PIT DESCRIPTION

Site Name : WORTING BASING LP S 20 Pit Number : 6P

Grid Reference: SU60185192 Average Annual Rainfall : 797 mm
 Accumulated Temperature : 1397 degree days
 Field Capacity Level : 171 days
 Land Use : Rough Grazing
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 25	MZCL	10YR42 00	8	12		
25- 40	MZCL	10YR43 00	0	20		
40- 70	MZCL	10YR64 81	0	20		
70- 90	MZCL	10YR64 81	0	30		

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

Drought Grade : 2 APW : 115mm MBW : 19 mm
 APP : 110mm MBP : 25 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	GLEYSPL	CLASS	GRADE	AP	MB	AP	MB					DRT
1	SU60805370	OSR			1	1	79	-17	84	-1	3A		DR	3A	ROOT 40 AS 1P
1P	SU60755360	OSR SE			1	1	77	-19	81	-4	3A		DR	3A	ROOT 40
2	SU60905370	OSR SE	03		1	1	79	-17	83	-2	3A		DR	3A	ROOT 40 AS 1P
2P	SU60385278	CER NE	03		1	1	82	-14	86	1	3A		DR	3A	ROOT 32
3	SU60605360	OSR N			1	1	81	-15	86	1	3A		DR	3A	ROOT 40 AS 1P
3P	SU60085213	CER S	02		1	1	75	-21	77	-8	3B		DR	3B	ROOT 34
4	SU60705360	OSR			1	1	82	-14	86	1	3A		DR	3A	ROOT 40 AS 1P
4P	SU60035223	CER S	02		1	3A	80	-16	83	-2	3A		DR	3A	PIT 65
5	SU60805360	OSR N	02		1	1	82	-14	87	2	3A		DR	3A	ROOT 40 AS 1P
5P	SU60155235	CER E	02		1	2	124	28	117	32	2		WK	2	PIT 78CM
6	SU60905360	OSR SE	03		1	1	80	-16	84	-1	3A		DR	3A	ROOT 40 AS 1P
6P	SU60185192	RGR			1	1	115	19	110	25	2		DR	2	PIT 90
7	SU61005360	OSR SE	03		1	1	81	-15	86	1	3A		DR	3A	ROOT 40 AS 1P
8	SU60505350	OSR			1	1	107	11	107	22	2		DR	2	IMP 55 SEE 2P
9	SU60605350	OSR N	02		1	1	80	-16	84	-1	3A		DR	3A	ROOT 32 AS 2P
10	SU60705350	OSR			1	1	94	-2	99	14	3A		DR	3A	ROOT 32 AS 2P
11	SU60805350	OSR E	02		1	1	84	-12	89	4	3A		DR	3A	ROOT 40 AS 1P
12	SU60905350	PLO NE	01		1	1	87	-9	93	8	3A		DR	3A	ROOT 40 AS 1P
13	SU61005350	OSR SE	03		1	1	84	-12	90	5	3A		DR	3A	ROOT 40 AS 1P
14	SU60505340	OSR			1	1	91	-5	97	12	3A		DR	3A	ROOT 32 AS 2P
15	SU60605340	OSR N	02		1	1	87	-9	92	7	3A		DR	3A	ROOT 40 AS 1P
16	SU60705340	OSR			1	1	87	-9	92	7	3A		DR	3A	ROOT 40 AS 1P
17	SU60805340	OSR E	02		1	1	100	4	100	15	3A		DR	3A	ROOT 32 AS 2P
18	SU60905340	PLO NE	01		1	1	81	-15	85	0	3A		DR	3A	ROOT 40 AS 1P
19	SU61005340	OSR E	02		1	1	77	-19	77	-8	3A		DR	3A	IMP 47 SEE 2P
20	SU60505330	OSR			1	1	85	-11	86	1	3A		DR	3A	IMP 50 SEE 4P
21	SU60605330	OSR N	01		1	2	79	-17	83	-2	3A		DR	3A	ROOT 40 AS 1P
22	SU60705330	OSR			1	1	88	-8	94	9	3A		DR	3A	ROOT 40 AS 1P
23	SU60805330	OSR SE	03	036 036	4	3B	83	-13	83	-2	3A		WE	3B	SPL 36
24	SU60905330	OSR S	01		1	1	88	-8	93	8	3A		DR	3A	IMP 35 SEE 1P
25	SU60505320	OSR			1	3A	80	-16	82	-3	3A		DR	3A	IMP 45 SEE 1P
26	SU60605320	OSR S	02	025 025	4	3B	81	-15	87	2	3A		WE	3B	SPL 25
27	SU60705320	OSR S	01	030 030	4	3B	138	42	114	29	1		WE	3B	SPL 30
28	SU60805320	OSR SE	04		1	1	85	-11	91	6	3A		DR	3A	ROOT 40 AS 1P
29	SU60905320	OSR S	01		1	1	88	-8	93	8	3A		DR	3A	ROOT 32 AS 2P
30	SU60405310	OSR			1	2	89	-7	94	9	3A		DR	3A	ROOT 32 AS 2P
31	SU60505310	OSR		030 030	4	3B	125	29	102	17	2		WE	3B	SPL 30
32	SU60605310	OSR S	02		1	2	97	1	102	17	3A		DR	3A	ROOT AS 4P
33	SU60705310	OSR SE	02		1	2	92	-4	98	13	3A		DR	3A	ROOT 32 AS 2P
34	SU60805310	OSR SE	03		1	1	88	-8	94	9	3A		DR	3A	ROOT 40 AS 1P
35	SU60905310	OSR E	01		1	1	84	-12	89	4	3A		DR	3A	ROOT 40 AS 1P
36	SU60605300	OSR S	03		1	1	88	-8	93	8	3A		DR	3A	IMP 60 SEE 4P

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M. REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
			GRONT	GLEY	SPL CLASS	GRADE	AP	MB	AP	MB					
37	SU60705300	OSR SE	01		1	2	92	-4	97	12	3A			DR 3A	IMP 40 SEE 2P
38	SU60805300	OSR SE	02		1	1	85	-11	90	5	3A			DR 3A	ROOT 40 AS 1P
39	SU60505290	OSR SE	02		1	1	87	-9	92	7	3A			DR 3A	ROOT 40 AS 1P
40	SU60605290	OSR SE	02		1	1	83	-13	88	3	3A			DR 3A	ROOT 40 AS 1P
41	SU60705290	OSR SE	02		1	1	70	-26	70	-15	3B			DR 3B	IMP 50 SEE 4P
42	SU60805290	OSR SE	02		1	1	84	-12	89	4	3A			DR 3A	ROOT 40 AS 1P
43	SU60005280	CER		050 050	3	3B	94	-2	106	21	3A			WE 3B	SPL 50
44	SU60105280	CER SE	02		1	3A	79	-17	84	-1	3A			DR 3A	ROOT 35 AS 3P
45	SU60205280	CER S	03		1	1	77	-19	80	-5	3A			DR 3A	ROOT 35 AS 3P
46	SU60305280	CER SE	03		1	1	83	-13	87	2	3A			DR 3A	ROOT 35 AS 3P
47	SU60405280	CER SE	02		1	1	92	-4	98	13	3A			DR 3A	ROOT 32 AS 3P
48	SU60505280	OSR S	01		1	1	107	11	116	31	2			DR 2	ROOT 10 AS 4P
49	SU60605280	OSR S	01		1	1	85	-11	89	4	3A			DR 3A	ROOT 35 AS 3P
50	SU60705280	OSR S	02		1	1	81	-15	84	-1	3A			DR 3A	ROOT 35 AS 3P
51	SU60805280	OSR SE	03		1	1	51	-45	51	-34	3B			DR 3B	IMP 30 SEE 2P
52	SU60005270	CER SE	02		1	2	76	-20	79	-6	3A			DR 3A	ROOT 32 AS 3P
53	SU60105270	CER SE	03		1	2	92	-4	97	12	3A			DR 3A	ROOT 32 AS 2P
54	SU60205270	CER S	03		1	1	104	8	111	26	2			DR 2	IMP 75 SEE 5P
55	SU60305270	CER SE	02		1	1	80	-16	84	-1	3A			DR 3A	IMP 30 SEE 3P
56	SU60405270	CER SE	02		1	1	82	-14	85	0	3A			DR 3A	IMP 35 SEE 3P
57	SU60505270	CER SE	01		1	1	105	9	112	27	2			DR 2	IMP 65 SEE 3P
58	SU60605270	OSR S	02		1	1	86	-10	91	6	3A			DR 3A	ROOT 35 AS 3P
59	SU60705270	OSR S	02		1	1	91	-5	97	12	3A			DR 3A	ROOT 32 AS 3P
60	SU60005260	CER SE	02		1	2	78	-18	81	-4	3A			DR 3A	ROOT 35 AS 3P
61	SU60105260	CER SE	02		1	1	85	-11	89	4	3A			DR 3A	ROOT 35 AS 3P
62	SU60205260	CER S	02		1	1	89	-7	94	9	3A			DR 3A	ROOT 32 AS 2P
63	SU60305260	CER SE	02		1	1	83	-13	87	2	3A			DR 3A	IMP 32 SEE 3P
64	SU60405260	CER SE	01		1	1	92	-4	95	10	3A			DR 3A	IMP 55 SEE 3P
65	SU60505260	CER S	02		1	1	107	11	111	26	2			DR 2	IMP 80 SEE 5P
66	SU60605260	CER S	03		1	1	82	-14	86	1	3A			DR 3A	ROOT 35 AS 3P
67	SU60705260	CER S	02		1	1	79	-17	82	-3	3A			DR 3A	ROOT 35 AS 3P
68	SU60005250	CER SE	02		1	2	83	-13	87	2	3A			DR 3A	ROOT 35 AS 3P
69	SU60105250	CER SE	01		1	1	78	-18	81	-4	3A			DR 3A	ROOT 35 AS 3P
70	SU60205250	CER N	02		1	1	77	-19	80	-5	3A			DR 3A	ROOT 35 AS 3P
71	SU60305250	CER SE	01		1	1	91	-5	92	7	3A			DR 3A	IMP 52 SEE 4P
72	SU60405250	CER SE	01		1	1	85	-11	90	5	3A			DR 3A	IMP 35 SEE 3P
73	SU60505250	CER E	01		1	1	110	14	114	29	2			DR 2	ROOT 10 AS 5P
74	SU60605250	CER S	02		1	1	41	-55	41	-44	4			DR 3A	IMP 25 SEE 3P
75	SU60005240	CER W	02		1	2	93	-3	97	12	3A			DR 3A	ROOT 32 AS 3P
76	SU60105240	CER SE	02		1	1	51	-45	51	-34	3B			DR 2	IMP 30 SEE 3P
77	SU60205240	CER S	02		1	1	97	1	104	19	3A			DR 3A	IMP 40 SEE 3P
78	SU60305240	CER SE	02		1	1	96	0	101	16	3A			DR 3A	IMP 55 SEE 3P

SAMPLE NO.	GRID REF	ASPECT USE	GRDNT	--WETNESS--			-WHEAT-		-POTS-		M.REL		EROSN	FROST	CHEM	ALC	COMMENTS
				GLEYS	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	DIST	LIMIT	
79	SU60405240	CER SE	01			1	1	93	-3	96	11	3A				DR 3A	IMP 55 SEE 4P
80	SU60505240	CER				1	1	80	-16	84	-1	3A				DR 3A	ROOT 35 AS 3P
81	SU60605240	CER E	02			1	1	33	-63	33	-52	4				DR 3B	IMP 20 SEE 3P
82	SU60005230	CER NE	04	025		2	3B	54	-42	54	-31	3B				WE 3B	IMP 30 SEE 4P
83	SU60105230	CER NE	04	025		2	3B	47	-49	47	-38	3B				WE 3B	IMP 35 SEE 4P
84	SU60205230	CER N	03			1	2	116	20	114	29	2				DR 2	ROOT 10 AS 5P
85	SU60305230	CER NE	03			1	1	96	0	98	13	3A				DR 3A	ROOT 35 AS 3P
86	SU60405230	CER SE	01			1	1	61	-35	61	-24	3B				DR 2	IMP 35 SEE 5P
87	SU60505230	CER S	03			1	1	100	4	104	19	3A				DR 3A	ROOT 32 AS 2P
88	SU60605230	CER S	02			1	1	80	-16	83	-2	3A				DR 3A	ROOT 35 AS 3P
89	SU60005220	CER SE	02			1	3A	49	-47	49	-36	3B				DR 3A	IMP 30 SEE 4P
90	SU60105220	CER E	02	025 025		4	3B	81	-15	87	2	3A				WE 3B	SPL 25
91	SU60205220	CER SE	02			1	3A	49	-47	49	-36	3B				DR 3A	IMP 30 SEE 4P
92	SU60305220	CER E	01			1	2	83	-13	87	2	3A				DR 3A	IMP 30 SEE 3P
93	SU60405220	CER NE	02			1	1	77	-19	80	-5	3A				DR 3A	IMP 30 SEE 3P
94	SU60505220	CER E	01			1	1	106	10	109	24	2				DR 2	ROOT 10 AS 5P
95	SU60105210	CER SE	02			1	1	83	-13	88	3	3A				DR 3A	ROOT 35 AS 3P
96	SU60205210	CER SE	02			1	1	82	-14	86	1	3A				DR 3A	ROOT 35 AS 3P
97	SU60105200	CER SE	02			1	1	83	-13	88	3	3A				DR 3A	ROOT 35 AS 3P
98	SU60205200	CER SE	03			1	1	86	-10	91	6	3A				DR 3A	ROOT 32 AS 2P
99	SU60205190	PGR SE	02			1	1	45	-51	45	-40	4				ST 2	IMP 25 SEE 6P
100	SU60205180	PGR SE	01			1	1	71	-25	71	-14	3B				ST 2	IMP 40 SEE 6P
101	SU60235195	PGR SE	02			1	1	54	-42	54	-31	3B				ST 2	IMP 30 SEE 6P
102	SU60245182	PGR SE	01			1	1	54	-42	54	-31	3B				ST 2	IMP 30 SEE 6P

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			SPL	CALC
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		
1	0-25	mzc1	10YR43 00					0	0	HR	8					Y
	25-65	ch	00CH00 00					0	0		0		P			Y
1P	0-24	mzc1	10YR43 00					5	0	HR	10					Y
	24-64	ch	00CH00 00					0	0		0		P			Y
2	0-24	mzc1	10YR43 00					0	0	HR	5					Y
	24-64	ch	00CH00 00					0	0		0		P			Y
2P	0-25	mzc1	10YR43 00					0	0	HR	4					Y
	25-30	hzc1	10YR54 00					0	0	CH	10		M			Y
	30-62	ch	00CH00 00					0	0		0		P			Y
3	0-26	mzc1	10YR43 00					0	0	HR	8					Y
	26-66	ch	00CH00 00					0	0		0		P			Y
3P	0-24	mzc1	10YR42 00					0	0	CH	10					Y
	24-58	ch	00CH00 00					0	0		0		P			Y
4	0-26	mzc1	10YR43 00					0	0	HR	3					Y
	26-66	ch	00CH00 00					0	0	HR	5		P			Y
4P	0-26	c	10YR43 00					0	0	HR	5					Y
	26-50	c	10YR56 00					0	0	CH	50		M			Y
	50-60	ch	00CH00 00					0	0		0		P			Y
5	0-27	mzc1	10YR43 00					0	0	HR	8					Y
	27-67	ch	00CH00 00					0	0		0		P			Y
5P	0-28	hzc1	10YR42 00					0	0	HR	4					Y
	28-48	hzc1	10YR43 00					0	0	HR	5	MCSAB	FR	M	Y	Y
	48-73	hzc1	10YR43 00					0	0	HR	12	MCSAB	FR	M		Y
	73-85	hzc1	10YR44 00					0	0	CH	50			M		Y
	85-95	ch	00CH00 00					0	0		0			M		
6	0-25	mzc1	10YR43 00					0	0	HR	7					Y
	25-65	ch	00CH00 00					0	0		0		P			Y
6P	0-25	mzc1	10YR42 00					8	0	HR	12					Y
	25-40	mzc1	10YR43 00					0	0	HR	20		M			Y
	40-70	mzc1	10YR64 81					0	0	CH	20		M			Y
	70-90	mzc1	10YR64 81					0	0	CH	30		M			Y
7	0-26	mzc1	10YR43 00					0	0	HR	7					Y
	26-66	ch	00CH00 00					0	0		0		P			Y
8	0-33	mzc1	10YR44 00					0	0	HR	2					
	33-48	c	10YR56 00					0	0		0		M			
	48-80	ch	00CH00 00					0	0	HR	5		P			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED	-----STONES-----			STRUCT/	SUBS	SPL	CALC
				COL	ABUN	CONT	COL.	GLEY >2	>6	LITH	TOT	CONSIST		
9	0-25	mzc1	10YR43 00					0	0	HR	5			Y
	25-30	mzc1	10YR43 00					0	0	CH	60	M		Y
	30-62	ch	00CH00 00					0	0		0	P		Y
10	0-30	mzc1	10YR43 00					0	0	CH	5			Y
	30-39	mzc1	10YR64 81					0	0	CH	30	M		Y
	39-71	ch	00CH00 00					0	0	HR	5	P		Y
11	0-27	mzc1	10YR43 00					0	0	HR	5			Y
	27-67	ch	00CH00 00					0	0		0	P		Y
12	0-30	mzc1	10YR43 00					0	0	HR	5			Y
	30-70	ch	00CH00 00					0	0	HR	5	P		Y
13	0-28	mzc1	10YR43 00					0	0	HR	7			Y
	28-68	ch	00CH00 00					0	0		0	P		Y
14	0-30	mzc1	10YR43 00					0	0	HR	4			Y
	30-38	mzc1	10YR64 81					0	0	CH	40	M		Y
	38-70	ch	00CH00 00					0	0	HR	5	P		Y
15	0-28	mzc1	10YR43 00					0	0	CH	5			Y
	28-68	ch	00CH00 00					0	0		0	P		Y
16	0-29	mzc1	10YR43 00					0	0	HR	2			Y
	29-69	ch	00CH00 00					0	0	HR	5	P		Y
17	0-28	mzc1	10YR43 00					0	0	HR	2			Y
	28-46	mzc1	10YR44 00					0	0	CH	50	M		Y
	46-78	ch	00CH00 00					0	0		0	P		Y
18	0-26	mzc1	10YR43 00					0	0	CH	10			Y
	26-66	ch	00CH00 00					0	0	HR	5	P		Y
19	0-25	mzc1	10YR43 00					0	0	HR	5			Y
	25-35	zc	10YR44 00					0	0	HR	5	M		Y
	35-47	mzc1	10YR73 00					0	0	CH	40	M		Y
20	0-22	mzc1	10YR43 00					0	0	CH	5			Y
	22-32	hzc1	10YR54 00					0	0	CH	5	M		Y
	32-45	mzc1	10YR64 81					0	0	CH	30	M		Y
	45-55	ch	00CH00 00					0	0	HR	5	P		Y
21	0-25	hzc1	10YR43 00					0	0	HR	5			Y
	25-65	ch	00CH00 00					0	0	HR	5	P		Y
22	0-30	mzc1	10YR43 00					0	0	CH	5			Y
	30-70	ch	00CH00 00					0	0	HR	5	P		Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT	COL.	GLEY	>2	>6	LITH		TOT	STR	POR	IMP	SPL	CALC
23	0-26	hzc1	10YR43 00						0	0	HR	2						Y
	26-36	hzc1	10YR44 00						0	0	HR	5		M				
	36-50	c	75YR54 00				00MN00 00		0	0		0		P				
24	0-31	mzc1	10YR43 42						0	0	HR	5						Y
	31-71	ch	00CH00 00						0	0	HR	5		P				Y
25	0-25	zc	10YR43 00						0	0	HR	2						Y
	25-32	zc	10YR54 00						0	0	CH	5		M				Y
	32-45	c	75YR56 00						0	0	CH	10		M				Y
	45-55	ch	00CH00 00						0	0	HR	5		P				Y
26	0-25	zc	10YR43 00						0	0	HR	3						
	25-60	c	10YR63 64	75YR58 00	M			Y	0	0		0		P				Y
27	0-30	zc	10YR42 00						0	0	CH	5						Y
	30-120	c	75YR54 00	00MN00 00	C				0	0		0		M				Y
28	0-28	mzc1	10YR43 00						0	0	HR	5						Y
	28-68	ch	00CH00 00						0	0		0		P				Y
29	0-30	mzc1	10YR44 00						0	0	HR	5						Y
	30-35	mzc1	10YR44 81						0	0	CH	20		M				Y
	35-67	ch	00CH00 00						0	0	HR	5		P				Y
30	0-30	hzc1	10YR53 00						0	0	CH	5						Y
	30-35	hzc1	10YR56 00						0	0	CH	30		M				
	35-67	ch	00CH00 00						0	0	HR	5		P				Y
31	0-25	zc	10YR43 53						0	0	HR	2						Y
	25-30	c	10YR54 00	10YR56 00	C				0	0	HR	2		M				
	30-120	c	10YR53 52	10YR56 00	M	00MN00 00	Y	0	0		0		P				Y	
32	0-25	hzc1	10YR43 00						0	0	HR	5						Y
	25-45	c	75YR54 00				00MN00 00		0	0		0		P				
	45-65	hzc1	75YR54 00						0	0	CH	60		M				Y
	65-75	ch	10YR81 73						0	0		0		P				Y
33	0-26	hzc1	10YR42 00						0	0	CH	5						Y
	26-38	c	10YR43 00	10YR56 00	C	00MN00 00		0	0		0		M				Y	
	38-70	ch	00CH00 00						0	0	HR	5		P				Y
34	0-30	mzc1	10YR43 00						0	0	HR	5						Y
	30-70	ch	00CH00 00						0	0		0		P				Y
35	0-28	mzc1	10YR52 53						0	0	HR	5						Y
	28-68	ch	00CH00 00						0	0	HR	5		P				Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED	----STONES----			STRUCT/	SUBS	SPL	CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT		
36	0-30	mzc1	10YR43 00					0	0	HR	8			Y
	30-42	zc	10YR44 00					0	0	HR	10	M		Y
	42-60	mzc1	10YR73 00					0	0	CH	50	M		Y
37	0-28	hzc1	10YR43 00					0	0	HR	3			Y
	28-40	zc	10YR44 54					0	0	HR	10	M		Y
	40-72	ch	00CH00 00					0	0	HR	5	P		Y
38	0-28	mzc1	10YR43 00					0	0	HR	6			Y
	28-68	ch	00CH00 00					0	0		0	P		Y
39	0-29	mzc1	10YR43 00					0	0	CH	5			Y
	29-69	ch	00CH00 00					0	0	HR	5	P		Y
40	0-27	mzc1	10YR42 52					0	0	CH	5			Y
	27-67	ch	00CH00 00					0	0	HR	5	P		Y
41	0-29	mzc1	10YR43 00					0	0	HR	5			Y
	29-40	mzc1	10YR73 00					0	0	HR	5	M		Y
42	0-27	mzc1	10YR43 00					0	0	CH	10			Y
	27-67	ch	00CH00 00					0	0		0	P		Y
43	0-30	c	10YR43 00	000C00	00	C		0	0	HR	5			
	30-50	c	10YR54 00	000C00	00	M	00MN00	00	0	0	HR	2	M	
	50-70	c	10YR54 53	000C00	00	M	00MN00	00 Y	0	0	HR	2	P	Y
44	0-30	c	10YR43 00					0	0	HR	5			
	30-65	ch	00CH00 00					0	0		0	M		
45	0-25	mzc1	10YR43 00					0	0	CH	10			Y
	25-60	ch	00CH00 00					0	0		0	P		Y
46	0-28	mzc1	10YR43 53					0	0	HR	3			Y
	28-63	ch	00CH00 00					0	0		0	P		Y
47	0-25	mzc1	10YR43 00					0	0	CH	5			Y
	25-38	hzc1	10YR54 00					0	0	CH	10	M		Y
	38-70	ch	00CH00 00					0	0	HR	5	P		Y
48	0-28	mzc1	10YR42 00					0	0	HR	3			Y
	28-62	hzc1	10YR54 00					0	0	CH	3	M		Y
	62-72	ch	00CH00 00					0	0	HR	5	P		Y
49	0-30	mzc1	10YR43 53					0	0	CH	5			Y
	30-65	ch	00CH00 00					0	0	HR	5	P		Y
50	0-27	mzc1	10YR43 00					0	0	HR	4			Y
	27-62	ch	00CH00 00					0	0		0	P		Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED	----STONES-----			STRUCT/	SUBS			CALC	
				COL	ABUN	CONT	COL.	GLEY	>2	>6	LITH	TOT	CONSIST	STR		POR
51	0-28	mzc1	10YR43 00					0	0	HR	10					Y
	28-30	hzc1	10YR44 00					0	0	HR	10		M			
52	0-25	hc1	10YR43 00					0	0	CH	7					Y
	25-60	ch	00CH00 00					0	0		0		M			
53	0-30	hc1	10YR43 00					0	0	HR	5					
	30-40	c	10YR54 00					0	0	CH	10		M			
	40-72	ch	00CH00 00					0	0		0		M			
54	0-25	mzc1	10YR43 00					0	0	HR	6					Y
	25-45	hzc1	10YR44 00					0	0	HR	8		M			Y
	45-55	zc	10YR44 00					0	0	HR	5		M			
	55-75	mzc1	10YR64 73					0	0	CH	50		M			Y
55	0-27	mzc1	10YR43 53					0	0	HR	5					Y
	27-62	ch	00CH00 00					0	0		0		P			Y
56	0-28	mzc1	10YR43 00					0	0	CH	5					Y
	28-63	ch	00CH00 00					0	0	HR	5		P			Y
57	0-42	mzc1	10YR53 00					0	0	CH	10					Y
	42-62	mzc1	10YR64 81					0	0	CH	40		M			Y
	62-72	ch	00CH00 00					0	0	HR	5		P			Y
58	0-30	mzc1	10YR43 00					0	0	HR	2					Y
	30-65	ch	00CH00 00					0	0		0		P			Y
59	0-27	mzc1	10YR43 00					0	0	HR	5					Y
	27-37	hzc1	10YR44 00					0	0	CH	10		M			Y
	37-69	ch	00CH00 00					0	0		0		P			Y
60	0-25	hzc1	10YR43 00					0	0	CH	5					
	25-60	ch	00CH00 00					0	0		0		M			
61	0-30	mzc1	10YR43 00					0	0	HR	5					
	30-65	ch	00CH00 00					0	0		0		M			
62	0-25	mzc1	10YR43 00					0	0	HR	6					Y
	25-36	hzc1	10YR44 00					0	0	HR	6		M			Y
	36-68	ch	00CH00 00					0	0		0		P			Y
63	0-29	mzc1	10YR43 00					0	0	HR	5					Y
	29-64	ch	00CH00 00					0	0		0		P			Y
64	0-28	mzc1	10YR43 00					0	0	HR	4					Y
	28-50	mzc1	10YR64 81					0	0	CH	25		M			Y
	50-60	ch	00CH00 00					0	0		0		P			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED	----STONES----			STRUCT/	SUBS	SPL	CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT		
65	0-27	mzc1	10YR43 00					0	0	HR	5			Y
	27-45	hzc1	10YR44 00					0	0	HR	10	M		
	45-65	zc	75YR46 00					0	0	HR	10	M		
	65-80	mzc1	10YR64 00					0	0	CH	50	M		Y
66	0-28	mzc1	10YR43 00					0	0	HR	5			Y
	28-63	ch	00CH00 00					0	0		0	P		Y
67	0-26	mzc1	10YR43 00					0	0	HR	5			Y
	26-61	ch	00CH00 00					0	0		0	P		Y
68	0-28	hzc1	10YR43 00					0	0	CH	5			
	28-63	ch	00CH00 00					0	0		0	M		
69	0-25	mzc1	10YR43 00					0	0	CH	5			
	25-60	ch	00CH00 00					0	0		0	M		
70	0-25	mzc1	10YR53 00					0	0	CH	10			Y
	25-60	ch	00CH00 00					0	0		0	P		Y
71	0-35	mzc1	10YR42 43					0	0	HR	3			Y
	35-52	hzc1	10YR54 00					0	0	HR	5	M		Y
	52-53	hr	00ZZ00 00					0	0		0	P		
72	0-30	mzc1	10YR43 00					0	0	HR	4			Y
	30-65	ch	00CH00 00					0	0		0	P		Y
73	0-26	mzc1	10YR43 00					0	0	HR	5			Y
	26-55	hzc1	10YR44 00					0	0	HR	5	M		Y
	55-70	mzc1	10YR73 00					0	0	CH	50	M		Y
	70-80	ch	00CH00 00					0	0		0	P		Y
74	0-25	mzc1	10YR43 00					0	0	HR	15			
75	0-25	hc1	10YR43 00					0	0	HR	2			
	25-40	hc1	10YR44 00					0	0	CH	10	M		
	40-72	ch	00CH00 00					0	0		0	M		
76	0-30	mc1	10YR43 00					0	0	HR	5			
77	0-25	mzc1	10YR43 00					0	0	HR	4			Y
	25-62	hzc1	10YR44 00					0	0	HR	7	M		Y
78	0-30	mzc1	10YR43 53					0	0	CH	5			Y
	30-52	mzc1	10YR54 00					0	0	CH	15	M		Y
	52-62	ch	00CH00 00					0	0		0	P		Y
79	0-27	mzc1	10YR43 00					0	0	HR	3			Y
	27-50	mzc1	10YR54 81					0	0	CH	20	M		Y
	50-60	ch	00CH00 00					0	0		0	P		Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES-----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR		IMP
80	0-27	mzc1	10YR42 00						0	0	HR	5					Y
	27-62	ch	00CH00 00						0	0		0		P			Y
81	0-20	mzc1	10YR43 00						0	0	HR	15					Y
82	0-25	c	10YR43 00						0	0	HR	2					
	25-35	c	10YR44 00	000C00	00 C		00MN00	00 Y	0	0	HR	5		P	Y		
83	0-25	c	10YR42 00						0	0	HR	5					
	25-30	c	75YR46 00	000C00	00 C		10YR42	00 Y	0	0	HR	5		P	Y		
84	0-25	hzc1	10YR43 00						0	0	HR	2					Y
	25-65	zc	10YR44 00				00MN00	00	0	0	HR	2		M			
	65-73	hzc1	10YR44 00						0	0		0		M			
	73-80	mzc1	10YR73 00						0	0	CH	50		M			Y
	80-90	ch	00CH00 00						0	0		0		P			Y
85	0-25	mzc1	10YR43 00						0	0	HR	5					Y
	25-40	hzc1	10YR44 54						0	0	HR	10		M			Y
	40-75	ch	00CH00 00						0	0		0		P			Y
86	0-23	mzc1	10YR43 00						0	0	HR	5					Y
	23-35	mzc1	10YR54 00						0	0	HR	5		M			Y
87	0-35	mzc1	10YR53 00						0	0	HR	3					Y
	35-42	mzc1	10YR43 00						0	0	CH	20		M			Y
	42-74	ch	00CH00 00						0	0		0		P			Y
88	0-27	mzc1	10YR42 00						0	0	HR	6					Y
	27-62	ch	10CH00 00						0	0		0		P			Y
89	0-30	c	10YR53 00	00MN00	00 C				0	0	HR	5					
90	0-25	c	10YR43 00						0	0	HR	2					
	25-60	c	10YR54 00	000C00	00 C		10YR53	00 Y	0	0	CH	5		P	Y		Y
91	0-30	c	10YR43 00						0	0	HR	5					
92	0-28	hzc1	10YR43 00						0	0	HR	3					Y
	28-63	ch	00CH00 00						0	0		0		P			Y
93	0-25	mzc1	10YR43 00						0	0	HR	5					Y
	25-60	ch	00CH00 00						0	0		0		P			Y
94	0-27	mzc1	10YR43 00						0	0	HR	5					Y
	27-45	hzc1	10YR44 00						0	0	HR	8		M			
	45-55	c	75YR46 00						0	0	HR	2		P			
	55-70	mzc1	10YR73 00						0	0	CH	60		M			Y
	70-80	ch	00CH00 00						0	0		0		P			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLEY	>2	>6		LITH	TOT	STR	POR	IMP	SPL
95	0-30	mc1	10YR43 00					0	0	CH	5						
	30-65	ch	00CH00 00					0	0		0		M				
96	0-30	mc1	10YR43 00					0	0	HR	5						
	30-65	ch	00CH00 00					0	0		0		M				
97	0-30	mc1	10YR53 00					0	0	CH	5						
	30-65	ch	00CH00 00					0	0		0		M				
98	0-30	mc1	10YR43 00					0	0	HR	5						
	30-35	mc1	10YR44 00					0	0	CH	10		M				
	35-67	ch	00CH00 00					0	0		0		M				
99	0-25	mzc1	10YR31 00					0	0	HR	5						
100	0-30	mzc1	10YR32 00					0	0	HR	2						
	30-40	hc1	10YR64 00					0	0	CH	10		M				
101	0-30	mzc1	10YR32 00					0	0	HR	5						
102	0-30	mzc1	10YR32 00					0	0	HR	5						