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BILLINGSHURST PLANNING STRATEGY
AREA 3
AGRICULTURAL LAND CLASSIFICATION
ALC MAP & REPORT
DECEMBER 1993

**BILLINGSHURST PLANNING STRATEGY
AREA 3
AGRICULTURAL LAND CLASSIFICATION REPORT**

1.0 Summary

1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality on an area of land to the north-east of the town of Billingshurst in West Sussex. The work forms part of MAFF's statutory input to in the preparation of the Billingshurst Planning Strategy.

1.2 Approximately 36 hectares of land was surveyed in December 1993. The survey was undertaken at a detailed level of approximately one boring per hectare. A total of 25 soil auger borings and 2 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 landuse on the site was permanent grassland, cereals and an orchard in the north-west of the site. Approximately 7 hectares of land was not surveyed due to problems with contacting the owner to gain access.

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 1:5,000. 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>
3a	7.4	20.4	31.1
3b	16.4	45.4	68.9
Non agricultural area	1.7	4.7	<u>100.0</u> (23.8 ha.)
Urban	0.9	2.5	
Woodland	2.4	6.6	
Not surveyed	<u>7.4</u>	<u>20.4</u>	
Total	<u>36.2</u>	<u>100.0</u>	

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

1.7 The majority of land on the site has been classified as Subgrade 3b, moderate quality agricultural land, with soil wetness as the main limitation. Soils in this mapping unit typically comprise heavy clay loam topsoils which become heavier with depth. There is evidence of significant drainage impedance due to the presence of a poorly structured clay subsoil. In the north of the site there is an area of Subgrade 3a, good quality agricultural land. In this area of the site soils tend to comprise medium clay loam topsoils which become heavier and occasionally sandy with depth. These soils show evidence of a moderate soil wetness limitation due to the presence of a poorly structured heavy clay loam subsoil deep in the profile.

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 conditions.

2.2 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall, as a measure of overall wetness, and accumulated temperature (degree days Jan-June), as a measure of the relative warmth of a locality.

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

2.4 No local climatic factors such as exposure or frost risk affect the site. However, climatic factors do interact with soil factors to influence soil wetness and droughtiness limitations. In the locality of this particular site, field capacity days are relatively high, with average moisture deficits. In a regional context, this is likely to exacerbate any soil wetness limitations which occur on the site.

Table 2 : Climatic Interpolation

Grid Reference :	TQ 094 259
Altitude (m) :	45
Accumulated Temperature (days) :	1484
Average Annual Rainfall (mm) :	793
Field Capacity (days) :	166
Moisture Deficit, Wheat (mm) :	108
Moisture Deficit, Potatoes (mm) :	102
Overall Climatic Grade :	1

3.0 Relief

3.1 The site is gently undulating, lying at an altitude ranging between 30 and 52 metres rising gently from west to east. On no part of the site do gradient or relief pose any limitation to agricultural use.

4.0 Geology and Soil

4.1 The relevant geological sheet for the site (BGS Sheet 301, Haslemere 1981) shows the majority of the underlying geology to be Weald Clay with an area of Sandstone in Weald Clay in the north of the site.

4.2 The published soils information for the area (SSEW Sheet 6, Soils of South East England 1983) shows the soils on the site to be of the Wickham 5 association. These are described as 'slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils, locally reddish. Some coarse loamy soils with slowly permeable subsoils and slight seasonal waterlogging over sandstone' (SSEW, 1983). Detailed field examination broadly confirms this.

5.0 Agricultural Land Classification

5.1 Table 1 provides the details of the area measurements for each grade and the distribution of each grade is shown on the attached ALC map.

5.2 The location of the soil observation points are shown on the attached sample point map.

5.3 Subgrade 3a: An area of land (7.4 ha.) in the north of the site has been classified as Subgrade 3a, good quality land, with soil wetness as the main limitation. These soils show only a moderate wetness limitation, reflecting the underlying geology of Sandstone in Weald Clay. Soil profiles are correspondingly variable and complex as demonstrated by a soil inspection pit (Pit 1). However, soil profiles typically comprise medium clay loam topsoils overlying a heavy clay loam upper subsoil, which in turn overlies a clay lower subsoil. The subsoils in this mapping unit usually contain layers of sand, which contributes to variations in subsoil textures. A number of soil augerings and Pit 1 showed the existence of poorly structured coarse textured sandy subsoils in layers within the subsoil. Profiles tend to be gleyed from the upper subsoil, and Pit 1 showed the existence of a poorly structured heavy clay loam subsoil at 45 cm, which satisfies the criteria for classification as a slowly permeable layer. This allows these soils to be assigned to Wetness Class III, with a resultant land classification of Subgrade 3a. Within this mapping unit, a number of soil augerings gave a resultant soil classification of Grade 2, although these variations are not regarded as sufficiently significant to warrant mapping as a separate unit.

5.4 Subgrade 3b: The majority of the agricultural land on the site has been classified as Subgrade 3b, moderate quality land, with soil wetness as the main limitation. Soil profiles typically comprise heavy clay loam topsoils overlying clay. Soils tend to be gleyed from the upper subsoil. A subsequent soil inspection pit (Pit 2) showed the clay subsoil as having a poor substructural condition and low porosity, allowing it to be classified as a slowly permeable layer. As a result, the majority of the soils within this mapping unit are assigned to Wetness Class IV, which when considered alongside the topsoil texture and the field capacity level (days) for the site, gives a resultant classification of Subgrade 3b. Soils in a few areas within this mapping unit have been assigned to Wetness Class III due to the existence of a slowly permeable layer deeper in the profile, yet this has no effect on the final grade for these soils, due to the heavy texture of the topsoils.

The presence of slowly permeable layers within soils has a detrimental effect upon the drainage of these soils, leading to associated wetness problems. There are restrictions on the frequency with which these soils can be grazed by livestock, or worked effectively with agricultural machinery. Plant development, particularly rooting, is adversely affected by wet soils.

5.5 Areas marked as Urban in the east of the site include private dwellings. There is also some Woodland and Non-agricultural land mapped on the site.

5.6 An area of land in the east of the site totalling 7.4 hectares was not surveyed due to difficulties in obtaining permission for access to the land.

ADAS Ref: 4205/226/93
MAFF Ref: EL20/578

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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 re-claimed 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.

REFERENCES

- * British Geological Survey (1981), Sheet No.301, Haslemere, 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: 250,000 and accompanying legend.

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. 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

FSSST : 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 : AREA 3, BILLINGSHURST

Pit Number : 1P

Grid Reference: TQ09392639

Average Annual Rainfall : 787 mm

Accumulated Temperature : 1477 degree days

Field Capacity Level : 167 days

Land Use : Permanent Grass

Slope and Aspect : 02 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 26	MCL	10YR53 00	0	0		
26- 35	HCL	10YR53 00	0	0	F	MDCSAB
35- 45	MSL	10YR21 63	0	0	C	MASSIV
45- 64	HCL	25Y 53 00	0	10	M	WKCSAB
64- 80	C	05Y 72 00	0	0	M	WKCSAB
80-100	MSL	10YR21 63	0	0	C	MASSIV
100-120	C	25Y 73 00	0	0	M	

Wetness Grade : 3A

Wetness Class : III

Gleying : 035 cm

SPL : 045 cm

Drought Grade :

APW : mm MBW : 0 mm

APP : mm MBP : 0 mm

FINAL ALC GRADE : 3A

MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : AREA 3, BILLINGSHURST

Pit Number : 2P

Grid Reference: TQ09252613

Average Annual Rainfall : 787 mm

Accumulated Temperature : 1477 degree days

Field Capacity Level : 167 days

Land Use : Permanent Grass

Slope and Aspect : 01 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0-28	HCL	25Y 53 00	0	0	C	
28-60	C	25Y 72 00	0	0	M	WKMA

Wetness Grade : 3B

Wetness Class : IV

Gleying : 000 cm

SPL : 028 cm

Drought Grade :

APW : mm MBW : 0 mm

APP : mm MBP : 0 mm

FINAL ALC GRADE : 3B

MAIN LIMITATION : Wetness

SAMPLE NO.	GRID REF	USE	ASPECT	--WETNESS--		-WHEAT-		-POTS-		M.REL		EROSN	FROST	CHEM	ALC	COMMENTS
				GRDNT	GLEY	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	
1	TQ09002650	PGR	S	01	030	065	3	3A		0	0				WE 3A	
1P	TQ09392639	PGR	S	02	035	045	3	3A		0	0				WE 3A	P90 A120
2	TQ09002640	ORC	S	01	025		2	2		0	0				WE 2	
2P	TQ09252613	PGR	N	01	0	028	4	3B		0	0				WE 3B	PIT 60
3	TQ09102640	PGR	S	02	0	65	3	3A		0	0				WE 3A	
4	TQ09202640	PGR	S	02	0	060	3	3A		0	0				WE 3A	
5	TQ09302640	PGR			0	030	4	3B		0	0				WE 3B	
6	TQ09002630	PGR			0	045	4	3B		0	0				WE 3B	
7	TQ09102630	PGR			0	020	4	3B		0	0				WE 3B	
8	TQ09202630	PGR			025	045	4	3B		0	0				WE 3B	
9	TQ09302630	PGR			035		2	2		0	0				WE 2	
10	TQ09402630	PGR			030	55	3	3A		0	0				WE 3A	
11	TQ09502630	CER			030	030	4	3B		0	0				WE 3B	
13	TQ09242620	PGR			030	030	4	3B		0	0				WE 3B	
14	TQ09302620	PGR			025	050	3	3B		0	0				WE 3B	
15	TQ09402620	PGR			025	035	4	3B		0	0				WE 3B	
16	TQ09502620	PGR			030	030	4	3B		0	0				WE 3B	
21	TQ09202610	PGR	N	03	030	030	4	3B		0	0				WE 3B	
22	TQ09302610	PGR	N	01	025	070	3	3B		0	0				WE 3B	
23	TQ09402610	PGR	S	01	0	040	4	3B		0	0				WE 3B	
24	TQ09502610	PGR			0	032	4	3B		0	0				WE 3B	
26	TQ09202600	PLO	E	02	028	028	4	3B		0	0				WE 3B	
27	TQ09302600	PLO	N	01	035	035	4	3B		0	0				WE 3B	
28	TQ09402600	PGR	N	01	0	030	4	3B		0	0				WE 3B	
29	TQ09502600	PGR			030	045	4	3B		0	0				WE 3B	
31	TQ09402590	PGR	N	03	033	060	3	3B		0	0				WE 3B	
32	TQ09502590	PGR	N	03	033	033	4	3B		0	0				WE 3B	

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----			STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR	IMP	SPL
11	0-30	mc1	10YR53 00						0	0	0						
	30-50	c	10YR63 00	10YR68 51 M				Y	0	0	0		P	Y		Y	
	50-70	c	05Y 71 00	10YR68 00 C			00MN00	00	Y	0	0	0		P	Y		Y
13	0-30	hc1	10YR53 00	10YR58 61 C				Y	0	0	0						
	30-70	c	10YR62 00	10YR68 51 M			00MN00	00	Y	0	0	0		P	Y		Y
14	0-25	hc1	10YR52 00						0	0	0						
	25-50	hc1	10YR52 00	10YR58 61 C				Y	0	0	0		M				
	50-80	c	10YR52 00	10YR68 71 M				Y	0	0	0		P	Y		Y	
15	0-25	hc1	10YR53 00						0	0	0						
	25-35	hc1	10YR52 00	10YR58 00 C				Y	0	0	0		M				
	35-70	c	75YR52 00	10YR68 72 M				Y	0	0	0		P	Y		Y	
16	0-30	hc1	10YR53 00						0	0	0						
	30-70	c	10YR52 00	10YR68 61 M			00MN00	00	Y	0	0	0		P	Y		Y
21	0-30	hc1	10YR53 00						0	0	0						
	30-70	c	25Y 63 52	10YR66 00 M				Y	0	0	0		P			Y	
22	0-25	hc1	10YR43 00						0	0	0						
	25-40	hc1	10YR53 00	10YR56 00 C			00MN00	00	Y	0	0	0		M			
	40-70	c	10YR63 00	10YR66 00 C			00MN00	00	Y	0	0	0		M			
	70-90	c	25Y 72 00	10YR68 00 M					Y	0	0	0		P			Y
23	0-25	hc1	25Y 52 00	10YR46 00 C				Y	0	0	0						
	25-40	c	10YR53 00	10YR46 56 C				Y	0	0	0		M				
	40-70	c	25Y 53 62	10YR56 00 M				Y	0	0	0		P			Y	
24	0-32	hc1	25Y 42 00	10YR46 00 C				Y	0	0	0						
	32-70	c	25Y 52 00	75YR58 00 M			00MN00	00	Y	0	0	0		P			Y
26	0-28	hc1	10YR53 00						0	0	0						
	28-70	c	05Y 72 00	10YR68 00 M				Y	0	0	0		P			Y	
27	0-35	hc1	10YR53 00						0	0	0						
	35-70	c	10YR63 00	25Y 72 00 M			10YR68	00	Y	0	0	0		P			Y
28	0-30	hc1	10YR51 00	10YR46 00 C				Y	0	0	0						
	30-70	c	25Y 62 00	10YR58 00 M			00MN00	00	Y	0	0	0		P			Y
29	0-30	mc1	10YR53 00	10YR56 00 F					0	0	0						
	30-45	hc1	25Y 53 52	10YR56 00 C				Y	0	0	0		M				
	45-80	c	05Y 72 00	10YR58 68 M			00MN00	00	Y	0	0	0		P			Y
31	0-33	hc1	10YR53 00						0	0	0						
	33-60	c	10YR53 00	05Y 72 00 C			10YR68	00	Y	0	0	0		M			
	60-90	c	05Y 72 00	10YR68 00 M					Y	0	0	0		P			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED	----STONES-----			STRUCT/	SUBS	IMP	SPL	CALC
				COL	ABUN	CONT	COL.	GLY	>2	>6	LITH	TOT			
32	0-33	hc1	10YR53 00					0	0	0					
	33-70	c	25Y 72 00	10YR58	68	M		Y	0	0	0	P		Y	