

**A1**  
**Canterbury District Local Plan**  
**RUR 13: Land north of Popes Lane,**  
**Sturry**  
**Agricultural Land Classification**  
**ALC Map and Report**  
**September 1995**

# AGRICULTURAL LAND CLASSIFICATION REPORT

## CANTERBURY DISTRICT LOCAL PLAN RUR 13: LAND NORTH OF POPES LANE, STURRY

### 1. Summary

- 1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality for a number of sites in the Canterbury district of Kent. The work forms part of MAFF's statutory input to the Canterbury District Local Plan.
- 1.2 RUR 13 comprises 9.8 hectares of land to the north of Popes Lane, at Sturry, north-east of Canterbury, Kent. An Agricultural Land Classification (ALC) survey was carried out during September 1995. The survey was undertaken at a detailed level of approximately one boring per hectare. A total of 8 borings and two soil inspection pits were described 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 a long term limitation on its use for agriculture.
- 1.3 The work was carried out by members of the Resource Planning Team in the Guildford Statutory Group of ADAS.
- 1.4 At the time of survey the agricultural land use was cereal stubble. Due to lack of access permission, land in the west of the site has been classed as Not Surveyed. The area mapped as Woodland comprises mature deciduous trees.
- 1.5 The distribution of grades and subgrades is shown on the attached ALC map and the areas and extent 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 survey supersedes previous ALC surveys on this land.

**Table 1 : Distribution of Grades and Subgrades**

<b>Grade</b>	<b>Area (ha)</b>	<b>% of Site</b>	<b>% of Agricultural Land</b>
3a	2.0	20.4	24.4
3b	6.2	63.3	<u>75.6</u>
Woodland	1.0	10.2	100.0 (8.2 ha)
Not Surveyed	<u>0.6</u>	<u>6.1</u>	
Total area of site	9.8	100.0	

- 1.6 Appendix I 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 Land in the north-west of the site has been classified as Subgrade 3a, good quality. The land is limited by moderate soil droughtiness. The soils in this area are varied, but typically comprise loamy textures which have very flinty lower subsoils. Some of the soils in this area are deeper, but sandy textured. The interaction between these soil properties and the prevailing local climate, which is relatively dry in a regional context, acts to impart a moderate soil droughtiness limitation. Consequently this land may suffer from a slightly lower yield potential and less consistent crop yields.
- 1.8 The land classified as Subgrade 3b is restricted by a significant soil droughtiness limitation. In comparison to Subgrade 3a land, the flintier subsoils occur at shallower depths within the soil profile. Consequently, there is less moisture available for crops. This land will thus be subject to lower yield potential and inconsistent crop yields.

## 2. Climate

- 2.1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.
- 2.2 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall, as a measure of overall wetness, and accumulated temperature, as a measure of the relative warmth of a locality.
- 2.3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met. Office, 1989). The details are given in the table below and these show that there is no overall climatic limitation affecting the site. However climatic factors do interact with soil factors to influence soil wetness and droughtiness limitations. The soil moisture deficits are relatively high, in a regional context, at this locality. High soil moisture deficits increase the likelihood of soil droughtiness limitations.

**Table 2 : Climatic Interpolation**

Grid Reference	TR 175 615
Altitude (m)	45
Accumulated Temperature (degree days, Jan-June)	1443
Average Annual Rainfall (mm)	628
Field Capacity (days)	129
Moisture Deficit, Wheat (mm)	120
Moisture Deficit, Potatoes (mm)	117
Overall Climatic Grade	1

- 2.4 No other local climatic factors, such as exposure or frost risk, are believed to affect the site.

### **3. Relief**

- 3.1 The site is flat and lies at approximately 45 m AOD.

### **4. Geology and Soil**

- 4.1 The relevant geological sheet (BGS, 1974) shows the entire site to be underlain by drift deposits of head gravel over London Clay.
- 4.2 The most recent published soils information (SSEW, 1983) shows the agricultural land on the site to comprise soils of the Sonning 2 Association. These soils are described as 'well drained flinty coarse loamy and gravelly soils. Associated with slowly permeable seasonally waterlogged fine loamy over clayey soils, and coarse loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging' (SSEW, 1983).
- 4.3 Detailed field examination typically found well drained and moderately well drained flinty loamy soils across the site.

### **5. Agricultural Land Classification**

- 5.1 Table 1 provides the details of the area measurements for each grade and the distribution of each grade is shown on the attached ALC map.
- 5.2 The location of the soil observation points are shown on the attached sample point map.

#### **Subgrade 3a**

- 5.3 Land classified as Subgrade 3a, good quality, is limited by soil droughtiness. This map unit has been delineated on the basis of two auger borings. This land arises from either sandy textured soils, or soils which only become very flinty at depth. Where the former occur, non-calcareous medium sandy loam topsoils overlie medium clay loam upper subsoils. Topsoils and upper subsoils are slightly stony. These pass into sandy clay loam and medium sandy loam lower subsoils which are only very slightly stony. All subsoils are moderately structured and the profiles are well drained (Wetness Class I). Elsewhere, non-calcareous medium clay loam topsoils and upper subsoils overlie clay lower subsoils. Upper subsoils are moderately structured, whereas the clay is poorly structured and slowly permeable. Consequently, these profiles are moderately well drained (Wetness Class II). The topsoils and upper subsoils are slightly stony, passing into gravelly lower subsoils at approximately 80 cm depth. Using information from Pits 1 and 2, located in the adjacent 3b map unit, it is likely that this profile passes into very stony lower subsoils. The high soil moisture deficits at this locality means that both the sandy and flintier profiles within this map unit will give rise to land with moderate amounts of moisture for crops. Consequently this land may suffer from a slightly lower yield potential and less consistent crop yields.

### **Subgrade 3b**

- 5.4 Land classified as Subgrade 3b is limited by significant soil droughtiness. In comparison to Subgrade 3a land, the flinty subsoils occur at shallower depths within the soil profile. Non-calcareous medium clay loam topsoils overlie similarly textured upper subsoils. These pass into variably textured lower subsoils, typically medium clay loams but occasionally heavy clay loams or medium sandy loams. Profiles are either well drained (Wetness Class I) or moderately well drained (Wetness Class II) due to gleying within 40 cm. Topsoils are slightly stony, containing 6-9% of flints >2cm, 1-2% of flints > 6 cm and 10-15% total flints by volume. Upper subsoils are typically moderately stony, containing 15-30% total flints by volume. Due to the gravelly nature of the lower subsoils, all of the auger borings proved impenetrable between 40 and 60 cm depth. Consequently, two soil inspection pits (Pits 1 and 2) were dug to assess subsoil conditions.
- 5.5 The lower subsoils of both pits were found to be very stony, containing approximately 45 to 55% total flints by volume. Where horizons contained 55% flints the soils were very compacted, and have been assumed to be poorly structured. The flinty nature of these lower subsoils meant that for both pits it was only possible to dig to a depth of 65 cm. It is possible that below 65 cm the soil profile may pass into pure gravel (that is, greater than 70% stone by volume). Roots should be able to extend further in search of available water but the exact depth of penetration and stone content below 65 cm is unknown. Given the high soil moisture deficits at this locality, the land has been placed in Subgrade 3b because of a significant risk of drought stress. Consequently, this land will be subject to lower yield potential and inconsistent crop yields.

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Resource Planning Team  
Guildford Statutory Group  
ADAS Reading

## **SOURCES OF REFERENCE**

British Geological Survey (1974), Sheet No. 273, Faversham, 1:50,000 Series (solid and drift edition).

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 6, Soils of South East England, 1:250,000 and accompanying legend.

## APPENDIX I

### DESCRIPTIONS 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 of this 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 land.

#### **Grade 3: Good to Moderate Quality Land**

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

#### **Subgrade 3a: Good Quality Agricultural Land**

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

#### **Subgrade 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 (e.g. 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 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 including: 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. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

## **Woodland**

Includes commercial and non-commercial woodland. A distinction may be made as necessary between farm and non-farm woodland.

## **Agricultural Buildings**

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses. Temporary structures (e.g. 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, e.g. 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

### FIELD ASSESSMENT OF SOIL WETNESS CLASS

#### SOIL WETNESS CLASSIFICATION

Soil wetness is classified according to the depth and duration of waterlogging in the soil profile. Six soil wetness classes are identified and are defined in the table below.

#### Definition of Soil Wetness Classes

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Wetness Class	Duration of Waterlogging <sup>1</sup>
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years. <sup>2</sup>
II	The soil profile is wet within 70 cm depth for 31-90 days in most years or, if there is no slowly permeable layer within 80 cm depth, it is wet within 70 cm for more than 90 days, but only wet within 40 cm depth for 30 days in most years.
III	The soil profile is wet within 70 cm depth for 91-180 days in most years or, if there is no slowly permeable layer present within 80 cm depth, it is wet within 70 cm for more than 180 days, but only wet within 40 cm depth for between 31-90 days in most years.
IV	The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth for more than 210 days in most years or, if there is no slowly permeable layer present within 80 cm depth, it is wet within 40 cm depth for 91-210 days in most years.
V	The soil profile is wet within 40 cm depth for 211-335 days in most years.
VI	The soil profile is wet within 40 cm depth for more than 335 days in most years.

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Soils can be allocated to a wetness class on the basis of quantitative data recorded over a period of many years or by the interpretation of soil profile characteristics, site and climatic factors. Adequate quantitative data will rarely be available for ALC surveys and therefore the interpretative method of field assessment is used to identify soil wetness class in the field. The method adopted here is common to ADAS and the SSLRC.

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<sup>1</sup>The number of days specified is not necessarily a continuous period.

<sup>2</sup>'In most years' is defined as more than 10 out of 20 years.

**APPENDIX III**  
**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 computer database. This uses notations and abbreviations as set out below.

### Boring Header Information

- GRID REF** : national 100 km grid square and 8 figure grid reference.
- USE** : Land use at the time of survey. The following abbreviations are used.

<b>ARA</b> : Arable	<b>WHT</b> : Wheat	<b>BAR</b> : Barley
<b>CER</b> : Cereals	<b>OAT</b> : Oats	<b>MZE</b> : Maize
<b>OSR</b> : Oilseed rape	<b>BEN</b> : Field Beans	<b>BRA</b> : Brassicae
<b>POT</b> : Potatoes	<b>SBT</b> : Sugar Beet	<b>FCD</b> : Fodder Crops
<b>LIN</b> : Linseed	<b>FRT</b> : Soft and Top Fruit	<b>FLW</b> : Fallow
<b>PGR</b> : Permanent Pasture	<b>LEY</b> : Ley Grass	<b>RGR</b> : Rough Grazing
<b>SCR</b> : Scrub	<b>CFW</b> : Coniferous Woodland	<b>DCW</b> : Deciduous Wood
<b>HTH</b> : Heathland	<b>BOG</b> : Bog or Marsh	<b>FLW</b> : Fallow
<b>PLO</b> : Ploughed	<b>SAS</b> : Set aside	<b>OTH</b> : Other
<b>HRT</b> : Horticultural Crops		
- GRDNT** : Gradient as estimated or measured by a hand-held optical clinometer.
- GLEYSPL** : Depth in centimetres (cm) to gleying and/or slowly permeable layers.
- AP (WHEAT/POTS)** : Crop-adjusted available water capacity.
- MB (WHEAT/POTS)** : Moisture Balance. (Crop adjusted AP - crop adjusted MD)
- DRT** : Best grade according to soil droughtiness.
- If any of the following factors are considered significant, 'Y' will be entered in the relevant column.

<b>MREL</b> : Microrelief limitation	<b>FLOOD</b> : Flood risk	<b>EROSN</b> : Soil erosion risk
<b>EXP</b> : Exposure limitation	<b>FROST</b> : Frost prone	<b>DIST</b> : Disturbed land
<b>CHEM</b> : Chemical limitation		
- LIMIT** : The main limitation to land quality. The following abbreviations are used.

<b>OC</b> : Overall Climate	<b>AE</b> : Aspect	<b>EX</b> : Exposure
<b>FR</b> : Frost Risk	<b>GR</b> : Gradient	<b>MR</b> : Microrelief
<b>FL</b> : Flood Risk	<b>TX</b> : Topsoil Texture	<b>DP</b> : Soil Depth
<b>CH</b> : Chemical	<b>WE</b> : Wetness	<b>WK</b> : Workability
<b>DR</b> : Drought	<b>ER</b> : Erosion Risk	<b>WD</b> : Soil Wetness/Droughtiness
<b>ST</b> : Topsoil Stoniness		

## Soil Pits and Auger Borings

1. **TEXTURE** : soil texture classes are denoted by the following abbreviations.

<b>S</b> :	Sand	<b>LS</b> :	Loamy Sand	<b>SL</b> :	Sandy Loam
<b>SZL</b> :	Sandy Silt Loam	<b>CL</b> :	Clay Loam	<b>ZCL</b> :	Silty Clay Loam
<b>ZL</b> :	Silt Loam	<b>SCL</b> :	Sandy Clay Loam	<b>C</b> :	Clay
<b>SC</b> :	Sandy Clay	<b>ZC</b> :	Silty Clay	<b>OL</b> :	Organic Loam
<b>P</b> :	Peat	<b>SP</b> :	Sandy Peat	<b>LP</b> :	Loamy Peat
<b>PL</b> :	Peaty Loam	<b>PS</b> :	Peaty Sand	<b>MZ</b> :	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 the following prefixes:

<b>F</b> :	Fine (more than 66% of the sand less than 0.2mm)
<b>M</b> :	Medium (less than 66% fine sand and less than 33% coarse sand)
<b>C</b> :	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 using Munsell notation.
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 using Munsell notation.
6. **GLEYS** : If the soil horizon is gleyed a 'Y' will appear in this column. If slightly gleyed, an 'S' will appear.
7. **STONE LITH** : Stone Lithology - One of the following is used.

<b>HR</b> :	all hard rocks and stones	<b>SLST</b> :	soft oolitic or dolimitic limestone
<b>CH</b> :	chalk	<b>FSST</b> :	soft, fine grained sandstone
<b>ZR</b> :	soft, argillaceous, or silty rocks	<b>GH</b> :	gravel with non-porous (hard) stones
<b>MSST</b> :	soft, medium grained sandstone	<b>GS</b> :	gravel with porous (soft) stones
<b>SI</b> :	soft weathered igneous/metamorphic rock		

Stone contents (>2cm, >6cm and total) are given in percentages (by volume).

8. **STRUCT** : the degree of development, size and shape of soil peds are described using the following notation:

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

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

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

9. **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

10. **SUBS STR** : Subsoil structural condition recorded for the purpose of calculating profile droughtiness : **G** : good    **M** : moderate    **P** : poor

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

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

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

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

15. 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 : CANTERBURY LP RUR 13 Pit Number : 1P

Grid Reference: TR17606140 Average Annual Rainfall : 628 mm  
 Accumulated Temperature : 1443 degree days  
 Field Capacity Level : 129 days  
 Land Use :  
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 27	MCL	10YR43 42	6	10	HR					
27- 40	MCL	10YR44 00	0	30	HR				M	
40- 60	MCL	10YR54 00	0	45	HR				M	
60- 65	MCL	10YR54 00	0	55	HR				P	

Wetness Grade : 1 Wetness Class : I  
 Gleying : 999 cm  
 SPL : No SPL

Drought Grade : 3B APW : 76 mm MBW : -44 mm  
 APP : 80 mm MBP : -37 mm

FINAL ALC GRADE : 3B  
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : CANTERBURY LP RUR 13 Pit Number : 2P

Grid Reference: TR17706140 Average Annual Rainfall : 628 mm  
 Accumulated Temperature : 1443 degree days  
 Field Capacity Level : 129 days  
 Land Use :  
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 27	MCL	10YR43 00	8	15	HR					
27- 47	MCL	10YR53 00	0	25	HR	C	MDCSAB	FR	M	
47- 54	HCL	10YR53 00	0	15	HR	M	MDCSAB	FM	M	
54- 65	HCL	10YR53 00	0	55	HR	M				P

Wetness Grade : 2 Wetness Class : II  
 Gleying : 027 cm  
 SPL : No SPL

Drought Grade : 3B APW : 78 mm MBW : -42 mm  
 APP : 82 mm MBP : -35 mm

FINAL ALC GRADE : 3B  
 MAIN LIMITATION : Droughtiness

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M.REL		EROSN	FROST		CHEM	ALC	COMMENTS	
			GRDNT	GLEYSPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	DIST	LIMIT		
1	TR17606150	STB	040		2	1	150	30	105	-12	3A				DR	3A	Sandy textures
1P	TR17606140	STB			1	1	76	-44	80	-37	3B				DR	3B	Pit65Qgravel65
2	TR17706150	STB			1	1	57	-63	57	-60	4				DR	3B	I40flinty Re1P
2P	TR17706140	STB	027		2	2	78	-42	82	-35	3B				DR	3B	Pit65Qgravel65
4	TR17506140	STB	060 060		2	2	100	-20	104	-13	3A				DR	3A	Sl. gleyed 25
5	TR17606140	STB			1	1	059	-61	059	-58	4				DR	3B	I40flinty Re1P
6	TR17706140	STB	020		2	2	76	-44	81	-36	3B				DR	3A	I60flinty Re2P
7	TR17806140	STB	020 045		3	3A	119	-1	96	-21	3A				WD	3A	
9	TR17506130	STB	030		2	2	59	-61	59	-58	4				DR	3B	I40flinty Re1P
10	TR17606130	STB			1	1	80	-40	83	-34	3B				DR	3B	I60flinty Re2P

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED	---STONES---			STRUCT/	SUBS	STR	POR	IMP	SPL	CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6							
1	0-25	ms1	10YR43 00					5	1	HR	10						
	25-40	mc1	10YR68 00					0	0	HR	10						M
	40-50	mc1	10YR53 00	10YR68 00	M			Y	0	0	HR	5					M
	50-60	sc1	10YR53 00	10YR68 00	M			Y	0	0	HR	5					M
	60-120	ms1	10YR53 00	75YR66 68	M		00MN00 00	Y	0	0	HR	2					M
1P	0-27	mc1	10YR43 42					6	0	HR	10						
	27-40	mc1	10YR44 00					0	0	HR	30						M
	40-60	mc1	10YR54 00					0	0	HR	45						M
	60-65	mc1	10YR54 00					0	0	HR	55						M
																	<i>Compacted</i>
																	Q gravel 65
2	0-28	mc1	10YR43 00					6	2	HR	15						
	28-40	mc1	10YR54 00					0	0	HR	30						M
																	Impen 40 flinty
2P	0-27	mc1	10YR43 00					8	2	HR	15						
	27-47	mc1	10YR53 00	10YR56 00	C		00MN00 00	Y	0	0	HR	25	MDCSAB	FR	M		
	47-54	hc1	10YR53 00	10YR56 00	M		00MN00 00	Y	0	0	HR	15	MDCSAB	FM	M		
	54-65	hc1	10YR53 00	10YR56 00	M		00MN00 00	Y	0	0	HR	55					P
																	Q gravel 65
4	0-25	mc1	10YR43 00					3	1	HR	8						
	25-40	mc1	10YR43 00	75YR58 00	C		00MN00 00	S	0	0	HR	10					M
	40-60	mc1	10YR54 00	75YR58 00	C		00MN00 00	S	0	0	HR	10					M
	60-80	c	10YR64 00	75YR58 00	M		00MN00 00	Y	0	0	HR	10					P Y Y
																	Slightly gleyed
																	Slightly gleyed
																	Impen 80 flinty
5	0-28	mc1	10YR43 00					6	2	HR	10						
	28-40	mc1	10YR44 00					0	0	HR	30						M
																	Impen 40 flinty
6	0-20	mc1	10YR43 00					6	2	HR	15						
	20-50	mc1	10YR53 00	10YR56 00	C			Y	0	0	HR	25					M
	50-60	hc1	10YR53 00	10YR58 00	M			Y	0	0	HR	15					M
																	Impen 60 flinty
7	0-20	mc1	10YR43 00					6	2	HR	15						
	20-35	mc1	10YR53 00	10YR56 00	C			Y	0	0	HR	25					M
	35-45	mc1	10YR53 00	10YR56 00	C			Y	0	0	HR	10					M
	45-120	c	10YR53 00	10YR68 71	M			Y	0	0		0					P Y
																	Y
9	0-30	mc1	10YR43 00					9	2	HR	15						
	30-40	mc1	10YR42 00	10YR58 00	C		00MN00 00	Y	0	0	HR	25					M
																	Impen 40 flinty
10	0-30	mc1	10YR43 00					8	2	HR	15						
	30-50	mc1	10YR54 00	10YR58 00	C		00MN00 00	S	0	0	HR	20					M
	50-60	ms1	10YR56 00					0	0	HR	30						M
																	Slightly gleyed
																	Impen 60 flinty