

**A1  
MEDWAY TOWNS LOCAL PLAN  
Darland Farm, Gillingham,  
Kent**

**Agricultural Land Classification  
May 1996**

**Resource Planning Team  
Guildford Statutory Group  
ADAS Reading**

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## MEDWAY TOWNS LOCAL PLAN DARLAND FARM, GILLINGHAM, KENT

### Introduction

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 130.1 ha of land at Darland Farm, Gillingham. The site comprises two distinct areas of land, one comprising the side slopes and bottom land of a dry valley to the north of Hempstead, whilst the second slightly smaller area occupies the ridge top and upper slopes of land to the west of Capstone Country Park. The survey was carried out in May 1996.
2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) from its Land Use Planning Unit in Reading in connection with the Medway Towns Local Plan. This survey supersedes previous ALC surveys on this land.
3. The work was carried out under sub-contracting arrangements by NA Duncan & Associates and was supervised by members of the Resource Planning Team in the Guildford Statutory Group of ADAS. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF, 1988). A description of the ALC grades and subgrades is given in Appendix I.
4. At the time of survey the majority of the land was in arable cultivation with the principal crops comprising wheat, barley and rape. Included within the site boundary are several areas of woodland, together with residential and farm buildings in the vicinity of Darland.

### Summary

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10,000. It is accurate at this scale but any enlargement would be misleading.
6. The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1.
7. The fieldwork was conducted at an average density of one auger boring per hectare over the agricultural land. A total of 105 borings and 4 soil pits were described.
8. The area of Grade 2, very good quality agricultural land, occupies the lower lying land of the dry valley, where deep aeolian silty drift deposits have been identified. Soils in this area typically have a medium silty clay loam topsoil over a similar subsoil, which generally becomes heavier with depth. The soils are free draining, but tend to be variably flinty especially in the topsoil horizons. The major limitation associated with this area is a minor droughtiness restriction, although the quality of some areas may be further restricted by the amount of flints in the topsoil horizon. Included within this area are localised profiles of Grade 1 quality, where the available water capacity is slightly higher and the amount of topsoil stone less.

However, due to the valley bottom being a frost pocket, land in this area does not qualify for Grade 1.

**Table 1: Area of grades and other land**

Grade/Other land	Area (hectares)	% Total site area	% surveyed area
2	22.5	17.3	22.7
3a	39.2	30.1	39.4
3b	36.5	28.1	36.7
4	1.2	0.9	1.2
Other	30.7	23.6	-
<hr/>			
Total survey area	99.4	-	100.0
Total site area	130.1	100.0	-

9. Good quality agricultural land, Subgrade 3a, has been mapped on the upper, north east facing slopes and also on the flatter land on the crests of the ridges. The soils in these areas are developed in Plateau Drift and Clay-with-flints, which caps the underlying chalk. On the more steeply sloping land aeolian drift forms the upper layers, but this thins out on the ridge tops, exposing the Clay-with-flints. Soils on the valley sides typically have a medium silty clay loam topsoil overlying a medium or heavy silty clay loam upper subsoil, which in turn overlies a stony reddish brown clay. The depth to the underlying chalk is variable, as is the amount of stone in the upper horizons which in many profiles is limiting in terms of ALC grading. On the crest of the ridges the soils typically have a medium or heavy clay loam topsoil over a reddish brown mottled clay subsoil, which is variably stony throughout. On the more gently sloping areas on the crests of the ridges, the land has a moderate wetness and workability limitation due to the presence of slowly permeable clayey soils, whilst on the more steeply sloping land, the soils typically have a moderate droughtiness restriction and in many profiles have a stoniness limitation due to the presence of more than 10% flints larger than 2 cm in the topsoil layer, restricting the land quality to Subgrade 3a.

10. Subgrade 3b, moderate quality agricultural land has been mapped on the more steeply sloping land on the site, where shallow, fine silty soils overlying chalk have been mapped. The major limitation associated with the majority of the area mapped as Subgrade 3b is due to a gradient limitation, as the slopes are generally in the range of 8-11°. In addition droughtiness is a further limitation on this land due to the shallow rooting depth over hard chalk. Moisture balance calculations indicate that in this low rainfall area such soils will be droughty restricting the land quality to Subgrade 3b.

11. A small area of Grade 4, poor quality agricultural land has been mapped in the north east corner of the site where the land is very steep (15-18°) and unsuited for arable cultivations.

## FACTORS INFLUENCING ALC GRADE

### Climate

9. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

10. The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

**Table 2: Climatic and altitude data**

Factor	Units	Values
Grid reference	N/A	TQ 797 629
Altitude	m, AOD	125
Accumulated Temperature	day°C	1361
Average Annual Rainfall	mm	670
Field Capacity Days	days	136
Moisture Deficit, Wheat	mm	106
Moisture Deficit, Potatoes	mm	97

11. 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.

12. The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR), as a measure of overall wetness, and accumulated temperature (AT0, January to June), as a measure of the relative warmth of a locality.

13. The combination of rainfall and temperature at this site mean that the area is relatively dry and warm. The site is not considered to be exposed but the farmer indicated that the valley bottom was a frost pocket, due to cold air draining into this area from the surrounding higher land. The majority of the land therefore has no climatic limitation, but it is considered that because of the frost risk in the valley bottom, this area should not be graded higher than Grade 2.

### Site

14. The site constitutes two distinct areas of land, the larger comprising the side slopes and bottom land of a dry valley, running south east to north west, to the north of Hempstead, with the second area occupying the ridge top and upper slopes of land to the west and north of Capstone Country Park. On the larger area, the altitude ranges from 90 m AOD on the upper valley slopes to 50 m AOD in the valley bottom. The gradients on the north east facing slopes are typically 5-7°, whilst on the south west facing slopes the land is steeper, typically 8-10°, with very steeply sloping land (15-18°) on the upper slopes at the northern end of the

area. These steeper areas are therefore limiting in terms of ALC grading, restricting the land at best to Subgrade 3b and Grade 4 respectively

15. On the smaller area to the west of Capstone Country Park, the land ranges in altitude from 105 m AOD on the south western boundary to 40 m AOD in the valley bottom beside Capstone Road. Steep slopes occur at the southern end of the area and to the north west of the pumping station where slopes of 8-11° occur limiting the ALC grading to Subgrade 3b. Over the remainder of the area, the slopes are relatively gentle.

### **Geology and soils**

16. The published geological information (BGS, 1977), shows the whole site to be underlain by Clay-with-flints.

17. There is no detailed published soil map for the area, but the reconnaissance soil survey map (SSEW, 1983) for the area shows the site to comprise soils of the Batcombe association. These soils are described as variably flinty, fine silty or fine loamy over clayey with slowly permeable subsoils and slight seasonal waterlogging, developed in Plateau drift and Clay-with-flints.

### **AGRICULTURAL LAND CLASSIFICATION**

18. The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1, page 1

19. The location of the auger borings and pits is shown on the attached sample location map and the details of the soils data are presented in Appendix III.

#### **Grade 2**

20. The area of Grade 2, very good quality agricultural land, occupies the lower lying land of the dry valley, where deep aeolian silty drift deposits have been identified. Soils in this area typically have a medium silty clay loam topsoil over a similar subsoil, which generally becomes heavier with depth. The soils are free-draining Wetness Class I (see Appendix II), but tend to be variably flinty, especially in the topsoil horizons. The major limitation associated with this area is a minor droughtiness restriction, although the quality of some areas may also be restricted by the amount of flints in the topsoil horizon. Included within this area are localised profiles of Grade 1 quality, where the available water capacity is slightly higher and the amount of topsoil stone less, but the climatic limitation in this area, referred to in paragraph 13, prevents any upgrading.

#### **Subgrade 3a**

21. Good quality agricultural land, Subgrade 3a, has been mapped on the upper, north east facing slopes and also on the flatter land on the crests of the ridges. The soils in these areas are developed in Plateau Drift and Clay-with-flints, which caps the underlying chalk. On the more steeply sloping land, aeolian drift forms the upper layers, but this thins out on the ridge tops, exposing the Clay-with-flints. Soils on the valley sides typically have a medium silty clay loam topsoil overlying a medium or heavy silty clay loam upper subsoil, which in turn overlies

a stony reddish brown clay. The depth to the underlying chalk is variable, as is the amount of stone in the upper horizons which in many profiles is limiting in terms of ALC grading (10-15% > 2 cm). The soils are generally free draining (Wetness Class I). The major limitations therefore associated with this area are droughtiness and stoniness. Moisture balance calculations indicate that the soils typically have a moderate droughtiness restriction especially for deeper rooting crops, due to the restricted rooting depth and the amount of hard stone in the soil profile, which restricts the land to Subgrade 3a. Furthermore many profiles have a stoniness limitation due to the presence of more than 10% flints larger than 2 cm in the topsoil layer, which again restricts the land quality to Subgrade 3a.

22. On the crest of the ridges the soils typically have a medium or heavy clay loam topsoil over a reddish brown mottled clay subsoil, which is variably stony throughout. The upper clay subsoil has a moderate coarse subangular blocky structure, but below approximately 45 cm the structure is coarse angular blocky and hence the soil is slowly permeable. These soils therefore have been assessed as Wetness Class II, although occasional profiles of Wetness Class I and III occur locally. The major limitation therefore associated with the more gently sloping land on the crests of the ridges, is a moderate wetness and workability limitation. The presence of slowly permeable subsoil horizons together with clay loam topsoil textures mean that these soils will be susceptible to structural damage, limiting the time that the soil is in a suitable condition for cultivation, trafficking by machinery or grazing by livestock, restricting the land quality to Subgrade 3a.

### **Subgrade 3b**

23. Subgrade 3b, moderate quality agricultural land, has been mapped on the more steeply sloping land on the site, where shallow, fine silty soils overlying chalk have been mapped. The major limitation associated with the majority of the area mapped as Subgrade 3b is due to a gradient limitation, as the slopes are generally in the range of 8-11°. In addition droughtiness is a further limitation on this land due to the shallow rooting depth over hard chalk. Moisture balance calculations indicate that in this low rainfall area such soils will be moderately droughty, restricting the land quality to Subgrade 3b.

### **Grade 4**

24. A small area of Grade 4, poor quality agricultural land, has been mapped in the north east corner of the site where the land is very steep (15-18°) and unsuited for arable cultivations.

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## SOURCES OF REFERENCE

British Geological Survey (1977) *Sheet No. 272*. BGS: London.

Ministry of Agriculture, Fisheries and Food (1988) *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land*. MAFF: London.

Met. Office (1989) *Climatological Data for Agricultural Land Classification*.  
Met. Office: Bracknell.

Soil Survey of England and Wales (1983) *Sheet 6, South East England*.  
SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in South East England*  
SSEW: Harpenden

## 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.



## APPENDIX II

### SOIL WETNESS CLASSIFICATION

#### Definitions of Soil Wetness Classes

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.

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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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#### Assessment of Wetness Class

Soils have been allocated to wetness classes by the interpretation of soil profile characteristics and climatic factors using the methodology described in *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988).

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<sup>1</sup> The number of days 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 DATA**

**Contents:**

**Sample location map**

**Soil abbreviations - Explanatory Note**

**Soil Pit Descriptions**

**Soil boring descriptions (boring and horizon levels)**

**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

- 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:

<b>M:</b> Medium (<27% clay)	<b>H:</b> Heavy (27-35% clay)
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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>CH:</b> chalk <b>ZR:</b> soft, argillaceous, or silty rocks <b>MSST:</b> soft, medium grained sandston <b>SI:</b> soft weathered igneous/metamorphic rock	<b>SLST:</b> soft oolitic or dolimitic limestone <b>FSST:</b> soft, fine grained sandstone <b>GH:</b> gravel with non-porous (hard) stones <b>GS:</b> gravel with porous (soft) stones
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 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:  

<u>degree of development</u>	WK: weakly developed	MD: moderately developed
	ST: strongly developed	
<u>ped size</u>	F: fine	M: medium
	C: coarse	VC: very coarse
<u>ped shape</u>	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:  
  

<b>APW:</b>	available water capacity (in mm) adjusted for wheat
<b>APP:</b>	available water capacity (in mm) adjusted for potatoes
<b>MBW:</b>	moisture balance, wheat
<b>MBP:</b>	moisture balance, potatoes.

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M.REL		EROSN	FROST		CHEM LIMIT	ALC	COMMENTS
			GRDNT	GLEYSPL	CLASS	GRADE	AP	MB	AP	MB		DRT	FLOOD			
1	TQ775 658	WHT N	05	000	1	1	078	-37	084	-25	3B			DP	3B	DR
1P	TQ787 653	OSR NE	04	070	1	1	105	-10	101	-8	3A			DR	3A	STONES
2	TQ776 658	WHT E	11	000	1	1	000	0	000	0				GR	3B	
2P	TQ787 655	OSR NW	01	000	1	1	149	34	114	5	2			DR	2	STONY
3	TQ779 658	BAR E	03	000	1	1	000	0	000	0			Y		2	
3P	TQ775 653	OSR NE	01	027 045	2	3A	124	9	102	-7	2			WE	3A	
4P	TQ775 656	WHT NW	03	000	1	1	071	-44	074	-35	3B			DR	3B	
5	TQ781 658	BAR NE		000	1	1	000	0	000	0			Y	Y	DR	3A
6	TQ782 658	BAR NW	01	000	1	1	000	0	000	0				Y		3A
7	TQ785 658	OSR SW	08	000	1	1	000	0	000	0				GR	3B	
8	TQ786 658	OSR SW	09	000	1	1	000	0	000	0				GR	3B	
9	TQ775 657	WHT N	04	000	1	1	101	-14	087	-22	3A			DP	3B	
10	TQ776 657	WHT NE	04	028	2	3A	103	-12	106	-3	3A			DR	3A	WE
11	TQ777 657	WHT E	08	030	2	3A	000	0	000	0				GR	3B	
12	TQ778 657	BAR E	10	000	1	1	000	0	000	0				GR	3B	
13	TQ779 657	BAR N	01	000	1	1	153	38	118	9	2		Y	DR	2	FR
15	TQ781 657	BAR NE	02	000	1	1	000	0	000	0			Y	Y	DR	3A
16	TQ782 657	BAR N	02	000	1	1	149	34	113	4	2			DR	2	
19	TQ785 657	OSR SW	10	000	1	1	000	0	000	0				GR	3B	
20	TQ786 657	OSR SW	07	000	1	1	000	0	000	0				DR	3B	
21	TQ787 657	RGR SW	18	000	1	1	000	0	000	0				GR	3B	GRADE 4
22	TQ775 656	WHT W	02	000	1	1	000	0	000	0				DP	3B	DR
23	TQ776 656	WHT NE	04	060	2	3A	000	0	000	0				WE	3A	DR
24	TQ777 656	WHT NE	03	000			000	0	000	0				ST	3A	
25	TQ778 656	BAR E	12	000		1	000	0	000	0				GR	3B	
26	TQ779 656	BAR E	07	000	1	1	162	47	125	16	1		Y		1	2-DIST
30	TQ784 656	OSR NE	05	000	1	1	000	0	000	0				DR	3A	
31	TQ785 656	OSR NE	01	000	1	1	121	6	115	6	2			DR	2	
32	TQ786 656	OSR SW	08	000	1	1	000	0	000	0				GR	3B	
33	TQ787 656	OSR SW	08	000	1	1	000	0	000	0				GR	3B	DR
34	TQ788 656	OSR SW	08	000	1	1	000	0	000	0				GR	3B	
35	TQ775 655	WHT N	02	000	1	1	000	0	000	0				DR	3A	
36	TQ776 655	WHT E	01	030	2	3A	000	0	000	0				WE	3A	DR
37	TQ777 655	WHT E	04	000	1	1	082	-33	084	-25	3B			DR	3B	
38	TQ778 655	BAR E	04	030	2	3A	000	0	000	0				WE	3A	
39	TQ781 655	BAR W	07	000	1	1	113	-2	085	-24	3A			DP	3B	
41	TQ783 655	OSR NW	06	000	1	1	122	7	094	-15	3A			ST	3B	
42	TQ784 655	OSR NE	06	000		1	000	0	000	0				ST	3A	
43	TQ785 655	OSR NE	07	000	1	1	000	0	000	0				DR	2	
44	TQ786 655	OSR N	02	000	1	1	000	0	000	0				ST	2	
45	TQ787 655	OSR NW	01	000	1	1	151	36	116	7	2			DR	2	ST
46	TQ788 655	OSR SW	09	000	1	1	000	0	000	0				GR	3B	

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--				-WHEAT-		-POTS-		M.REL		EROSN	FROST		CHEM	ALC	COMMENTS
			GRDNT	GLEY	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	DIST	LIMIT		
47	TQ789 655	OSR SW	08	000	1	1	000	0	000	0					GR	3B		
48	TQ774 654	BAR W	06	000	1	1	082	-33	088	-21	3B				DR	3B	DP	
49	TQ755 654	OSR NE	01	030	2	3A	000	0	000	0					WE	3A		
50	TQ776 654	OSR NE	01	000	1	1	000	0	000	0					ST	3A	DR	
53	TQ784 654	OSR N	02	000	1	1	115	0	087	-22	3A				DR	3A		
54	TQ785 654	OSR NE	08	000	1	1	000	0	000	0					GR	3B		
55	TQ786 654	OSR NE	07	000	1	1	153	38	118	9	2				DR	2	ST	
56	TQ787 654	OSR NE	04	000	1	1	158	43	122	13	1					1		
57	TQ788 654	OSR NE	04	000	1	1	153	38	118	9	2				DR	2	ST	
58	TQ789 654	OSR W	01	000	1	1	154	39	119	10	1				ST	2		
59	TQ790 654	OSR SW	06	000	1	1	156	41	120	11	1				ST	2		
60	TQ792 654	BAR SW	08	000	1	1	000	0	000	0					GR	3B		
61	TQ774 653	BAR W	06	000	1	1	099	-16	098	-11	3A				DR	3A		
62	TQ775 653	OSR NE	01	025 040	2	3A	124	9	101	-8	2				WE	3A		
63	TQ776 653	OSR E	03	027	2	3A	000	0	000	0					WE	3B		
65	TQ784 653	BAR N	05	025	2	3A	000	0	000	0					ST	3A	WE	
67	TQ786 653	OSR NE	07	000	1	1	000	0	000	0					ST	3A		
68	TQ787 653	OSR NE	04	060	2	2	000	0	000	0					ST	3A		
69	TQ788 653	OSR NE	05	000	1	1	000	0	000	0					ST	3A		
70	TQ789 653	WHT NE	05	000	1	1	000	0	000	0					ST	2		
71	TQ790 653	WHT NE	04	000	1	2	000	0	000	0					ST	2		
72	TQ791 653	WHT NE	04	000	1	1	000	0	000	0					ST	2		
73	TQ792 653	BAR NW	01	000	1	1	000	0	000	0					ST	2		
74	TQ793 653	BAR W	03	000	1	1	000	0	000	0					ST	2		
75	TQ774 652	WHT N	01	027	2	3A	154	39	116	7	2				WE	3A		
76	TQ775 652	OSR E	02	050	2	3A	000	0	000	0					WE	3A		
77	TQ776 652	OSR E	03	027	2	3A	000	0	000	0					WE	3A		
78	TQ784 642	BAR SW	03	000	1	1	000	0	000	0					ST	3A		
79	TQ785 652	BAR N	03	030	2	3A	000	0	000	0					WE	3A		
81	TQ787 652	OSR NE	04	000	1	1	000	0	000	0					ST	3A		
82	TQ788 652	WHT NE	06	000	1	2	000	0	000	0					ST	3B		
83	TQ789 652	WHT NE	05	000	1	1	000	0	000	0					DR	3A		
84	TQ790 652	WHT NE	05	000	1	1	000	0	000	0					DR	3A	CH AT 48	
85	TQ791 652	WHT NE	04	000	1	1	000	0	000	0					ST	2		
86	TQ792 652	WHT NE	05	045	2	2	000	0	000	0					DR	2		
87	TQ793 652	WHT E	05	000	1	1	000	0	000	0					ST	2		
88	TQ794 652	BAR W	09	000	1	1	000	0	000	0					GR	3B		
89	TQ773 651	WHT NW	03	028	2	3A	000	0	000	0					WE	3A	DR	
90	TQ774 651	WHT N	01	065 065	2	3A	000	0	000	0					WE	3A		
91	TQ775 651	WHT NE	02	028 060	2	3A	128	13	108	-1	2				WE	3A		
92	TQ776 651	OSR E	04	000	1	1	089	-26	088	-21	3B				ST	3B	DR	
93	TQ785 651	BAR W	02	000	1	1	106	-9	078	-31	3B				DR	3B	ST	

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	
99	TQ791 651	WHT NE	05	045	2	2	000	0	000	0			ST	3A	
100	TQ792 651	WHT NE	05	000	1	2	000	0	000	0			ST	3A	
101	TQ793 651	WHT E	08	000	1	2	143	28	120	11	2		GR	3B	
102	TQ794 651	BAR NW	02	000	1	1	000	0	000	0			ST	2	
103	TQ795 651	BAR SW	08	000	1	1	000	0	000	0			GR	3B	DR
105	TQ774 650	WHT N	01	030 065	2	3A	129	14	110	1	2		WE	3A	
106	TQ775 650	WHT NE	02	000			000	0	000	0			DR	3A	
107	TQ776 650	OSR E	05	050	2	3A	107	-8	109	0	3A		WE	3A	DR
108	TQ786 650	BAR NW	01	030	2	3A	000	0	000	0			WE	3A	
114	TQ794 650	WHT NE	05	000	1	1	000	0	000	0			DR	3A	
115	TQ795 650	BAR NW	02	000	1	1	152	37	118	9	2		DR	2	ST
117	TQ774 649	WHT NE	02	028	2	3A	000	0	000	0			WE	3A	
118	TQ775 649	WHT E	05	027	2	3A	000	0	000	0			WE	3A	
119	TQ795 649	BAR NW	03	000	1	1	084	-31	090	-19	3B		DR	3B	
120	TQ773 648	WHT E		028	2	3B	000	0	000	0			WE	3B	
121	TQ774 648	WHT E	06	000	1	1	085	-30	091	-18	3B		DR	3B	
122	TQ775 648	WHT E	11	000	1	1	000	0	000	0			GR	3B	DR
123	TQ774 647	WHT E	08	000	1		000	0	000	0			GR	3B	DR
124	TQ773 646	WHT E	03	030 030	3	3B	131	16	095	-14	3A		WE	3B	
125	TQ774 646	WHT E	08	000	1	1	000	0	000	0			GR	3B	
126	TQ773 645	WHT E	08	000	1	1	000	0	000	0			GR	3B	DR
127	TQ774 645	WHT E	10	000	1	1	000	0	000	0			GR	3B	
128	TQ774 644	WHT E	07	000	1	1	085	-30	090	-19	3B		DR	3B	
129	TQ774 643	WHT E	08	000	1	1	000	0	000	0			GR	3B	
130	TQ780 659	BAR NE		000	1	1	137	22	121	12	2	Y	DR	2	FR





SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT		GLEY	>2	>6		LITH	TOT	STR		POR
11	0-30	hc1	75YR43 00						3	0	HR	7				Y
	30-50	c	75YR55 00	00MN00	00	F		S	0	0	HR	8				Y
	50-90	hzc1	75YR56 00	00MN00	00	F		S	0	0	HR	5				
12	0-35	hc1	10YR53 00						4	2	HR	9				Y
	35-60	hc1	10YR55 00						0	0	HR	5				Y
	60-100	ch	10YR81 00						0	0	HR	5				
13	0-30	mc1	10YR43 00						3	0	HR	5				Y
	30-70	hzc1	10YR64 00						0	0	HR	3		M		Y
	70-120	hzc1	75YR55 00						0	0	HR	3		M		Y
15	0-30	mzc1	10YR53 00						0	0	HR	2				Y
	30-50	z1	10YR65 00						0	0		0				Y
16	0-34	ms1	10YR23 00						1	0	HR	3				Y
	34-70	hzc1	75YR44 00						0	0	HR	8		M		Y
	70-120	mzc1	75YR56 00						0	0	HR	2		M		
19	0-27	mzc1	10YR53 00						5	6	HR	13				Y
	27-40	ch	10YR82 00						0	0	HR	5				
20	0-30	mzc1	10YR43 00						5	2	HR	8				Y
	30-35	ch	10YR82 00						0	0	HR	5				
21	0-30	mzc1	10YR53 00						0	0	HR	10				Y
	30-40	mzc1	10YR74 00						0	0	HR	10				Y
	40-45	ch	10YR82 00						0	0	HR	5				
22	0-25	hc1	10YR33 00						5	6	HR	14				Y
	25-35	ch	10YR81 00						0	0	HR	10				
23	0-25	hc1	10YR43 00						8	0	HR	10				Y
	25-60	hc1	75YR45 00						0	0	HR	15				
	60-70	c	05YR55 00	00MN00	00	F		S	0	0	HR	15				
24	0-28	hc1	75YR43 00						7	5	HR	14				
	28-40	yhc1	75YR45 00						0	0	HR	20				
25	0-23	c	75YR44 00						9	3	HR	15				Y
	23-50	hzc1	75YR56 00						0	0	HR	3				
26	0-55	mzc1	10YR53 00						0	0	HR	4				Y
	55-120	hzc1	10YR55 00						0	0	HR	5		M		Y
30	0-28	mzc1	10YR43 00						5	1	HR	6				Y
	28-45	mzc1	10YR55 00						0	0	CH	20				Y
	45-50	ch	10YR81 00						0	0	HR	5				

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED		----STONES----				STRUCT/ CONSIST	SUBS			
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT		STR	POR	IMP	SPL
31	0-30	mzc1	10YR33 00						4	0	HR	5					
	30-90	hzc1	75YR54 00						0	0	HR	11		M			
32	0-28	mzc1	10YR43 00						6	0	HR	8					Y
	28-45	mzc1	10YR64 00						0	0	HR	5					Y
	45-50	ch	10YR81 00						0	0	HR	5					
33	0-27	mzc1	10YR53 00						3	5	HR	9					Y
	27-30	ch	10YR81 00						0	0	HR	5					
34	0-30	mzc1	10YR43 00						6	4	HR	11					Y
	30-50	mzc1	10YR73 00						0	0	CH	40					Y
	50-55	ch	10YR81 00						0	0	HR	5					
35	0-25	hc1	10YR33 00						8	2	HR	11					Y
	25-35	c	05YR46 00						0	0	HR	20					Y
	35-70	ch	10YR81 00						0	0	HR	10					
36	0-30	hc1	10YR33 00						8	0	HR	10					
	30-50	c	05YR56 00	00MN00	00	F		S	0	0	HR	15					
37	0-25	c	10YR33 00						10	0	HR	12					Y
	25-40	c	75YR55 00						0	0	CH	70		M			Y
	40-75	ch	10YR81 00						0	0	HR	5		P			
38	0-30	hc1	10YR43 00						5	0	HR	7					Y
	30-50	c	75YR56 00	00MN00	00	F		S	0	0	HR	10					Y
39	0-25	mc1	10YR52 00						8	2	CH	15					Y
	25-120	ch	10YR81 00						0	0	HR	5		P			
41	0-28	hzc1	10YR33 00						6	10	HR	20					Y
	28-50	c	75YR46 00						0	0	HR	10		M			Y
	50-120	ch	10YR81 00						0	0	HR	5		P			
42	0-23	hzc1	10YR43 00						10	2	HR	14					Y
	23-50	c	75YR56 00						0	0	HR	8					Y
	50-70	hzc1	10YR56 00						0	0	HR	5					Y
43	0-30	mzc1	10YR44 00						5	2	HR	8					Y
	30-85	mzc1	75YR55 00	00MN00	00	F			0	0	HR	3					Y
44	0-28	mzc1	75YR43 00						5	1	HR	7					Y
	28-90	hzc1	75YR56 00						0	0	HR	3					Y
45	0-28	mzc1	10YR33 00						4	2	HR	7					Y
	28-85	hzc1	10YR55 00						0	0	HR	8		M			Y
	85-120	mzc1	75YR55 00						0	0	HR	3		M			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED		----STONES----				STRUCT/ CONSIST	SUBS			SPL	CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT		STR	POR	IMP		
46	0-33	mc1	10YR42 00						6	0	HR	8					Y	
	33-50	mzc1	10YR53 00						0	0	CH	15					Y	
	50-70	chalk	10YR82 00						0	0		0						
47	0-25	mzc1	10YR43 00						6	3	HR	12					Y	
	25-35	chalk	10YR83 00						0	0	HR	15						
48	0-28	hc1	10YR33 00						3	2	HR	5					Y	
	28-70	ch	10YR81 00						0	0	HR	5		P				
49	0-30	hc1	10YR33 00						6	0	HR	10					Y	
	30-70	c	75YR54 00	05YR56 00	C			Y	0	0	HR	10						
50	0-28	hc1	75YR43 00						8	2	HR	11						
	28-50	hc1	75YR56 00						0	0	HR	13						
53	0-25	mzc1	10YR43 00						2	2	CH	15					Y	
	25-120	ch	10YR81 00						0	0	HR	5		P				
54	0-27	hc1	10YR33 00						8	4	HR	14					Y	
	27-70	hzc1	75YR55 00						0	0	HR	2					Y	
55	0-27	mzc1	10YR43 00						8	0	HR	10					Y	
	27-90	hzc1	75YR55 00	00MNO0 00	F				0	0	HR	2		M			Y	
	90-120	mzc1	75YR65 00						0	0	HR	2		M				
56	0-30	mzc1	10YR33 00						4	0	HR	5					Y	
	30-85	hzc1	75YR55 00						0	0		0		M			Y	
	85-120	mzc1	75YR65 00						0	0	HR	2		M			Y	
57	0-30	mzc1	10YR43 00						5	0	HR	8					Y	
	30-120	mzc1	75YR55 00						0	0	HR	4		M			Y	
58	0-30	mzc1	10YR42 00						5	0	HR	7					Y	
	30-120	hzc1	75YR55 00						0	0	HR	3		M			Y	
59	0-32	mzc1	10YR43 00						4	2	HR	7					Y	
	32-80	mzc1	10YR64 00						0	0	CH	4		M			Y	
	80-120	mzc1	10YR72 00						0	0	CH	5		M			Y	
60	0-30	mzc1	10YR53 00						5	6	HR	12					Y	
	30-40	ch	10YR83 00						0	0	HR	5					Y	
61	0-30	hc1	10YR33 00						5	0	HR	6					Y	
	30-50	c	10YR46 00						0	0	CH	30		M			Y	
	50-80	ch	10YR81 00						0	0	HR	5		P				
62	0-25	hc1	10YR33 00						6	1	HR	8					Y	
	25-40	c	10YR54 00	75YR56 00	C			S	0	0	HR	8		M				
	40-80	c	10YR64 00	75YR66 68	C			Y	0	0	HR	5		P		Y		
	80-120	c	25Y 63 00	75YR56 00	C			Y	0	0	HR	2		P		Y		

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED	----STONES----				STRUCT/	SUBS	SPL	CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT	CONSIST		
63	0-27	c	10YR33 00						4	5	HR	10			
	27-45	c	75YR56 00	00MN00	00	C		S	0	0	HR	11			
	45-70	c	75YR64 00	00MN00	00	M		Y	0	0	HR	13			
	70-75	c	75YR64 00	00MN00	00	M		Y	0	0	HR	20			
65	0-25	c	75YR43 00						8	5	HR	15			Y
	25-50	c	05YR46 00	00MN00	00	C		Y	0	0	HR	15			Y
67	0-28	mzc1	10YR33 00						12	2	HR	15			Y
	28-50	hzc1	75YR55 00						0	0	HR	5			Y
	50-70	zc	75YR55 00						0	0	HR	18			
68	0-30	mzc1	10YR33 00						10	0	HR	14			Y
	30-60	hzc1	75YR55 00						0	0	HR	15			Y
	60-70	c	05YR46 00	00MN00	00	C		S	0	0	HR	15			
69	0-28	mzc1	10YR33 00						6	4	HR	12			Y
	28-70	hzc1	75YR55 00	00MN00	00	F			0	0	HR	12			Y
70	0-28	mzc1	10YR43 00						6	2	HR	8			Y
	28-80	hzc1	75YR55 00						0	0	HR	8			Y
71	0-28	hzc1	10YR44 00						6	0	HR	9			Y
	28-75	hzc1	75YR56 00						0	0	HR	8			Y
	75-85	hzc1	10YR64 00						0	0	HR	10			Y
72	0-28	mzc1	10YR43 00						6	0	HR	8			Y
	28-90	hzc1	10YR55 00	00MN00	00	F			0	0	HR	10			Y
73	0-28	mzc1	10YR33 00						5	1	HR	8			Y
	28-60	mzc1	10YR55 00						0	0	HR	17			Y
74	0-28	mzc1	10YR43 00						5	5	HR	10			Y
	28-70	hzc1	10YR55 00						0	0	HR	10			Y
75	0-27	hc1	10YR33 00						2	0	HR	3			Y
	27-75	hc1	25Y 54 00	75YR56	00	C		Y	0	0		0		M	
	75-120	sc1	10YR55 00	10YR56	00	C		Y	0	0		0		M	
76	0-27	hc1	10YR33 00						4	0	HR	6			
	27-50	c	75YR56 00	00MN00	00	F			0	0	HR	10			
	50-70	c	75YR54 00	75YR56	00	C		Y	0	0	HR	9			
77	0-27	hc1	75YR33 00						6	6	HR	14			
	27-60	c	05YR56 00	00MN00	00	C		Y	0	0	HR	13			
78	0-30	hc1	75YR43 00						9	3	HR	15			Y
	30-50	mc1	10YR65 00						0	0	HR	18			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED	----STONES----			STRUCT/	SUBS	SPL	CALC
				COL	ABUN	CONT	COL.	GLEY	>2	>6	LITH	TOT		
79	0-30	hc1	75YR43 00					6	0	HR	10			
	30-70	c	75YR56 00	00M00	00	C		S	0	0	HR	8		
81	0-27	hc1	10YR33 00					11	2	HR	14			Y
	27-45	hc1	75YR45 00					0	0	HR	15			Y
82	0-20	hc1	10YR43 00					8	7	HR	18			Y
	20-30	hc1	75YR56 00					0	0	HR	30			Y
83	0-30	mzc1	10YR43 00					6	0	HR	8			Y
	30-40	hc1	75YR56 00					0	0	HR	15			
84	0-30	mzc1	10YR33 00					6	2	HR	10			Y
	30-48	hc1	10YR64 00					0	0	HR	10			Y
85	0-30	mzc1	10YR33 00					5	0	HR	8			Y
	30-60	hzc1	75YR55 00					0	0	HR	10			Y
86	0-30	mzc1	10YR33 00					3	0	HR	5			Y
	30-45	hc1	75YR55 00					0	0	HR	10			Y
	45-50	c	75YR55 00	00M00	00	C		S	0	0	HR	15		
87	0-28	mzc1	10YR43 00					6	0	HR	8			Y
	28-70	hzc1	10YR55 00					0	0	HR	5			Y
88	0-27	mzc1	10YR53 00					8	3	HR	11			Y
	27-30	ch	10YR83 00					0	0	HR	5			
89	0-28	hc1	10YR33 00					0	0	HR	5			Y
	28-65	c	10YR54 00	10YR56	00	C		S	0	0	HR	5		
	65-70	ch	10YR81 00					S	0	0		0		
90	0-28	hc1	10YR43 00					3	2	HR	7			
	28-65	c	10YR65 00	00M00	00	C		0	0	HR	2			
	65-80	c	10YR64 00	10YR66	00	C		Y	0	0	HR	5		Y
91	0-28	hc1	10YR33 00					4	2	HR	7			
	28-60	c	10YR54 00	10YR56	00	C		S	0	0	HR	5		M
	60-120	c	25Y 54 00	05YR56	00	C		Y	0	0	HR	5		P
92	0-25	hc1	10YR33 00					5	10	HR	15			Y
	25-40	c	75YR76 00					0	0	HR	15			Y
	40-80	ch	10YR81 00					0	0	HR	5			P
93	0-26	c	75YR44 00					8	10	HR	20			Y
	26-120	ch	10YR81 00					0	0	HR	5			P
99	0-30	mzc1	75YR43 00					5	7	HR	15			Y
	30-45	hzc1	75YR56 00	00M00	00	F		0	0	HR	10			Y
	45-70	c	05YR46 00	00M00	00	C		Y	0	0	HR	15		

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLEY >2	>6	LITH		TOT	STR	POR	IMP	SPL	CALC
100	0-28	hc1	10YR56 00					5	5	HR	12						Y
	28-60	hc1	75YR56 00					0	0	HR	15						Y
	60-90	hzc1	10YR56 00	00MN00	00	F		0	0	HR	5						Y
	90-120	c	75YR46 00	00MN00	00	F		0	0	HR	18						
101	0-28	hzc1	75YR43 00					3	0	HR	5						Y
	28-108	hzc1	75YR55 00	00MN00	00	F		0	0	HR	3			M			
102	0-30	mzc1	10YR43 00					6	0	HR	8						Y
	30-70	hzc1	75YR55 00					0	0	HR	11						Y
103	0-28	mzc1	10YR43 00					12	0	HR	15						Y
	28-45	mzc1	10YR84 54					0	0	CH	50						Y
105	0-30	hc1	10YR43 00					5	1	HR	7						
	30-65	c	75YR55 00	75YR55	00	F		S	0	0	HR	5			M		
	65-120	hc1	10YR64 00	75YR56	00	C		Y	0	0	HR	5			P		Y
106	0-28	hc1	10YR43 00					4	2	HR	8						
	28-40	hc1	10YR55 00					0	0	HR	18						
107	0-25	hc1	10YR43 00					8	3	HR	12						Y
	25-50	hc1	10YR54 64					0	0	HR	5			M			
	50-70	c	75YR55 00	00MN00	00	C		S	0	0	HR	5			M		
	70-90	ch	10YR81 00					S	0	0	HR	5			P		
108	0-30	hc1	10YR33 00					8	0	HR	11						
	30-50	c	05YR56 00	00MN00	00	C		S	0	0	HR	13					
114	0-30	mzc1	10YR33 00					2	0	HR	4						Y
	30-45	mzc1	75YR56 00					0	0	HR	15						Y
115	0-28	mzc1	10YR43 00					5	0	HR	7						Y
	28-50	hzc1	10YR54 00					0	0	HR	5			M			Y
	50-120	hzc1	10YR55 00					0	0	HR	5			M			Y
117	0-28	hc1	10YR43 00					5	0	HR	7						Y
	28-60	c	75YR55 54	05YR56	00	C		S	0	0	HR	5					Y
	60-80	c	75YR54 00	75YR56	00	C	00MN00	00	S	0	0	HR	8				
118	0-27	c	10YR43 00					5	6	HR	14						Y
	27-50	c	05YR56 00	00MN00	00	C		S	0	0	HR	10					
119	0-28	hzc1	10YR43 00					10	0	HR	15						Y
	28-45	hzc1	10YR73 00					0	0	CH	70			M			Y
	45-70	ch	10YR82 00					0	0	HR	5			P			
120	0-28	c	10YR33 00					5	2	HR	9						Y
	28-50	c	05YR56 00	00MN00	00	F		S	0	0	HR	15					

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----				STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT		STR	POR	IMP	SPL	CALC
121	0-25	hzc1	10YR43 00						4	5	HR	10						Y
	25-33	hzc1	10YR44 00						0	0	CH	30		M				Y
	33-70	ch	10YR81 00						0	0	HR	3		P				
122	0-30	mzc1	10YR53 00						3	0	HR	5						Y
	30-50	ch	10YR81 00						0	0	HR	5						
123	0-30	hzc1	10YR43 00						2	2	HR	5						Y
	30-40	ch	10YR81 00						0	0		0						
124	0-30	c	10YR43 00						10	5	HR	15						
	30-75	c	25Y 63 00	10YR66	56	C	00MN00	00	Y	0	0	HR	2		P			Y
	75-120	hzc1	25Y 64 00	10YR68	00	M			Y	0	0	HR	2		M			Y
125	0-28	hzc1	10YR43 00						2	0	HR	4						Y
	28-45	hzc1	10YR54 00						0	0	CH	18						Y
	45-50	ch	10YR81 00						0	0		0						
126	0-30	c	75YR43 00						4	4	HR	10						Y
	30-50	ch	10YR81 00						0	0	HR	5						
127	0-30	hzc1	10YR43 00						3	0	HR	5						Y
	30-95	hzc1	10YR64 00						0	0	CH	5						Y
128	0-27	mzc1	10YR52 00						2	0	HR	4						Y
	27-70	ch	10YR81 00						0	0	HR	5		P				
129	0-25	mzc1	10YR34 00						2	0	HR	4						Y
	25-55	mzc1	75YR65 00						0	0	CH	18						Y
	55-60	ch	10YR81 00						0	0	HR	5						
130	0-28	mzc1	10YR43 00						2	0	HR	3						Y
	28-100	hzc1	10YR55 00						0	0	HR	3		M				

SOIL PIT DESCRIPTION

Site Name : GILLINGHAM, DARLAND FARM Pit Number : 1P

Grid Reference: TQ787 653 Average Annual Rainfall : 669 mm  
 Accumulated Temperature : 1434 degree days  
 Field Capacity Level : 136 days  
 Land Use : Oilseed Rape  
 Slope and Aspect : 04 degrees NE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 27	MZCL	10YR33 00	10	12	HR					Y
27- 70	HZCL	75YR55 00	0	25	HR		MDCSB	FM	M	Y
70- 90	C	05YR46 00	0	12	HR	C	MDMAB	VM	M	
90-110	CH	10YR81 00	0	5	HR				P	Y

Wetness Grade : 1 Wetness Class : I  
 Gleying : 070 cm  
 SPL : No SPL

Drought Grade : 3A APW : 105mm MBW : -10 mm  
 APP : 101mm MBP : -8 mm

FINAL ALC GRADE : 3A  
 MAIN LIMITATION : Droughtiness



SOIL PIT DESCRIPTION

Site Name : GILLINGHAM, DARLAND FARM Pit Number : 2P

Grid Reference: TQ787 655 Average Annual Rainfall : 669 mm  
 Accumulated Temperature : 1434 degree days  
 Field Capacity Level : 136 days  
 Land Use : Oilseed Rape  
 Slope and Aspect : 01 degrees NW

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MZCL	10YR33 00	4	7	HR					Y
28- 80	HZCL	10YR55 00	0	10	HR		MDCSB	FR	M	Y
80-120	MZCL	75YR55 00	0	5	HR		WKCSB	FR	M	Y

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

Drought Grade : 2 APW : 149mm MBW : 34 mm  
 APP : 114mm MBP : 5 mm

FINAL ALC GRADE : 2  
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : GILLINGHAM, DARLAND FARM . Pit Number : 3P

Grid Reference: TQ775 653      Average Annual Rainfall : 669 mm  
 Accumulated Temperature : 1434 degree days  
 Field Capacity Level : 136 days  
 Land Use : Oilseed Rape  
 Slope and Aspect : 01 degrees NE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 27	HCL	10YR33 00	5	8	HR					Y
27- 45	C	10YR54 00	0	10	HR	C	MDCSB	FM	M	
45- 80	C	10YR63 64	0	5	HR	C	MDCAB	FM	P	
80-120	C	25Y 63 00	0	5	HR	C	WKVCSB	FM	P	

Wetness Grade : 3A                      Wetness Class : II  
 Gleying : 027 cm  
 SPL : 045 cm

Drought Grade : 2                      APW : 124mm      MBW : 9 mm  
 APP : 102mm      MBP : -7 mm

FINAL ALC GRADE : 3A  
 MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : GILLINGHAM, DARLAND FARM . Pit Number : 4P

Grid Reference: TQ775 656      Average Annual Rainfall : 669 mm  
 Accumulated Temperature : 1434 degree days  
 Field Capacity Level : 136 days  
 Land Use : Wheat  
 Slope and Aspect : 03 degrees NW

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 27	HCL	10YR33 00	6	15	HR					Y
27- 60	CH	10YR81 00	0	3	HR				P	

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

Drought Grade : 3B                      APW : 071mm    MBW : -44 mm  
 APP : 074mm    MBP : -35 mm

FINAL ALC GRADE : 3B  
 MAIN LIMITATION : Droughtiness