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MEDWAY TOWNS LOCAL PLAN
Site 44, Hoo St Werburgh

Agricultural Land Classification
February 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

ADAS Reference: 2008/009/96
MAFF Reference: EL 20/1376
***LUPU* Commission: 02367**

AGRICULTURAL LAND CLASSIFICATION REPORT
MEDWAY TOWNS LOCAL PLAN, SITE 44, HOO ST WERBURGH

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of approximately 23 ha of land on the south-western side of the village of Hoo St Werburgh, Kent. The survey was carried out in February 1996.

2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) Land Use Planning Unit, Reading in connection with the Medway Towns Local Plan. This survey supersedes the previous ALC survey which was carried out over the southern part of this site as part of Site Q of the Kent Minerals Plan in 1988.

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 all the agricultural land on the site was under winter cereals. On the northern boundary of the site is a relatively new residential development, whilst the north-east corner is occupied by an area of playing fields. A small area on the southern boundary is occupied by Cockham Cottages. It is evident that the eastern half of the site has been worked for minerals in the past.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10000 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.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% agricultural area	% total site area
2	5.8	32.0	25.3
3a	9.7	53.6	42.3
3b	2.6	14.4	11.4
Other	4.8		21.0
Total survey area	18.1	100.0	
Total site area	22.9		100.0

7. The fieldwork was conducted at an average density of one auger boring per hectare. A total of 24 borings and 3 soil pits was described.

8. The lower lying, northern part of the site alongside the built up area has been mapped as Grade 2, very good quality agricultural land. The main limitation associated with this area is a slight droughtiness restriction due to the soils being unable to provide sufficient plant available water in this area of high moisture deficits. Over the remainder of the area the main limitation is due to wetness and workability restrictions. On the area mapped as Subgrade 3a, good quality agricultural land, the soils have a moderate wetness and workability limitation due to the presence of slowly permeable,clayey lower subsoil horizons. In the area mapped as Subgrade 3b moderate quality agricultural land, the wetness and workability restriction is more severe due to the presence of less well drained soils having slowly permeable, clayey subsoil horizons immediately below the topsoil.

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 780 719
Altitude	m, AOD	17
Accumulated Temperature	day°C	1480
Average Annual Rainfall	mm	601
Field Capacity Days	days	116
Moisture Deficit, Wheat	mm	126
Moisture Deficit, Potatoes	mm	123

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 or subject to any particular frost risk and as such no climatic limitation exists on this site.

Site

14. The site generally falls from the southwest toward the northeast, from a high point of 30 m AOD to approximately 15 m AOD in the northeast corner. Gradients on the site are relatively gentle in the range 1-3° although on the eastern side of the site slightly steeper slopes occur locally in the area of the former mineral workings, although nowhere exceed 7°. The site is not prone to flooding. There are therefore no site limitations that will affect the grading of the area.

Geology and soils

15. The published geological information (BGS, 1977), shows the solid geology of the area to comprise London Clay which is overlain by Head Brickearth in the north and by River Terrace Gravels in the south and east.

16. There is no detailed published soil map for this district but the reconnaissance soil survey map (SSEW, 1983) shows the area to comprise soils of the Park Gate association. Park Gate soils are derived from aeolian deposits and are described as 'deep stoneless silty soils variably affected by groundwater' (SSEW, 1983).

AGRICULTURAL LAND CLASSIFICATION

17. 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.

18. 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

19. An area of Grade 2, very good quality agricultural land, has been mapped on the lower lying land at the north of the site. This area comprises well or moderately well drained silty and fine loamy soils overlying clay at depth. These soils typically have a medium silty clay loam topsoil over a yellowish brown, heavy silty clay loam or clay loam upper subsoil. The lower subsoil is a fine sandy clay or clay often with ochreous mottling or manganiferrous concretions. The soils are stoneless throughout with a moderate subsoil structure and have been assessed as Wetness Class I or II (see Appendix II). The main limitation associated with this area therefore is due to droughtiness, and moisture balance calculations indicate that in this low rainfall area, these soils will be slightly droughty restricting the land to Grade 2.

Subgrade 3a

20. Subgrade 3a, good quality agricultural land, has been mapped over much of the southern part of the site, where fine loamy soils overlying slowly permeable clay have been mapped. These soils typically have a heavy clay loam topsoil over a mottled heavy clay loam upper subsoil with moderate structure. The lower subsoil is typically poorly structured, strongly mottled clay which is considered to be slowly permeable. These soils have therefore been assessed as Wetness Class II giving rise a moderate wetness and workability limitation during the wetter parts of the year restricting the land to Subgrade 3a. Included within this area are some profiles with sandy or stony subsoil horizons which are moderately droughty during the drier periods of the year. Moisture balance calculations indicate that in this low rainfall area such land is restricted to Subgrade 3a.

Subgrade 3b

21. At the south-western corner of the site, a small area of moderate quality agricultural land, Subgrade 3b, has been mapped. This area comprises heavy textured soils developed on the London Clay, where heavy clay loam or clay topsoils overlie mottled, slowly permeable clay subsoils, which have been assessed as Wetness Class III. These soils therefore have a moderately severe wetness and workability limitation, restricting the versatility of the land, principally in terms of timing of cultivations and stocking, if structural damage to the soils is to be avoided.

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for Resource Planning Team
ADAS Reading

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.

Wetness Class	Duration of waterlogging[1]
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years.[2]
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.

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).

[1] The number of days is not necessarily a continuous period.
[2] 'In most years' is defined as more than 10 out of 20 years.

APPENDIX III

SOIL DATA

Contents:

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

1. **GRID REF**: national 100 km 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	**FLW**:	Fallow
PGR:	Permanent Pasture	**LEY**:	Ley Grass	**RGR**:	Rough Grazing
SCR:	Scrub	**CFW**:	Coniferous Woodland	**DCW**:	Deciduous Wood
HTH:	Heathland	**BOG**:	Bog or Marsh	**FLW**:	Fallow
PLO:	Ploughed	**SAS**:	Set aside	**OTH**:	Other
HRT:	Horticultural Crops				

3. **GRDNT**: Gradient as estimated or measured by a hand-held optical clinometer.

4. **GLEY/SPL**: Depth in centimetres (cm) to gleying and/or slowly permeable layers.

5. **AP (WHEAT/POTS)**: Crop-adjusted available water capacity.

6. **MB (WHEAT/POTS)**: Moisture Balance. (Crop adjusted AP - crop adjusted MD)

7. **DRT**: Best grade according to soil droughtiness.

8. If any of the following factors are considered significant, 'Y' will be entered in the relevant column.

MREL:	Microrelief limitation	**FLOOD**:	Flood risk	**EROSN**:	Soil erosion risk
EXP:	Exposure limitation	**FROST**:	Frost prone	**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**:	Erosion Risk	**WD**:	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
ZL:	Silt 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 the following 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 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. **GLEY:** 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:

HR:	all hard rocks and stones	**SLST**:	soft oolitic or dolimitic limestone
CH:	chalk	**FSST**:	soft, fine grained sandstone
ZR:	soft, argillaceous, or silty rocks	**GH**:	gravel with non-porous (hard) stones
MSST:	soft, medium grained sandston	**GS**:	gravel with porous (soft) stones
SI:	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.

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	M.REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	TQ77607200	CER	N	01	055		1	1	135	9	117	-6	2				DR	2	
1P	TQ77607170	CER	N	02	030	030	3	3B	124	-2	101	-22	3A				WE	3B	
2	TQ77707200	CER	N	01	045		1	1	142	16	119	-4	2				DR	2	
2P	TQ77707200	CER	N	01	000		1	1	162	36	128	5	2				DR	2	
3	TQ77807200	CER	N	01	033	085	1	1	151	25	124	1	2				DR	2	
3P	TQ77907190	CER	N	02	035	060	2	2	140	14	116	-7	2				WE	2	DR
4	TQ77907200	CER	N	01	060		1	2	122	-4	112	-11	3A				DR	3A	
7	TQ77607190	CER	N	02	037	070	2	3A	000	0	000	0					WE	3A	
8	TQ77707190	CER	N	02	032	045	2	3A	000	0	000	0					WE	3A	
9	TQ77807190	CER	N	02	035	060	2	3A	000	0	000	0					WE	3A	
10	TQ77907190	CER	N	02	033	060	2	2	141	15	118	-5	2				WE	2	
11	TQ78007190	CER	N	02	065		1	2	122	-4	113	-10	3A				DR	3A	
12	TQ78107190	CER	N	02	085	085	1	1	146	20	113	-10	3A				DR	3A	
13	TQ77607180	CER	N	03	028	028	3	3B	101	-25	099	-24	3B				WE	3B	DR
14	TQ77707180	CER	N	03	030	030	3	3B	000	0	000	0					WE	3B	
15	TQ77807180	CER	N	03	032	032	3	3B	000	0	000	0					WE	3B	
16	TQ77907180	CER	N	03	030		1	1	140	14	120	-3	2				DR	2	
17	TQ78007180	CER	NE	02	095	095	1	1	146	20	116	-7	2				DR	2	
18	TQ78107180	CER	W	04	028	060	2	3A	000	0	000	0					WE	3A	
19	TQ78207180	CER	N	01	000		1	2	000	0	000	0					DR	2	WE
20	TQ77607170	CER	N	02	030	045	2	3A	128	2	104	-19	3A				WE	3A	DROUGHT
21	TQ77707170	CER	N	02	027	027	3	3B	000	0	000	0					WE	3B	
22	TQ77807170	CER	N	02	030	030	3	3B	126	0	103	-20	3A				WE	3B	
23	TQ77907170	CER	E	04	040	100	2	3A	153	27	114	-9	2				WE	3A	
24	TQ78007170	CER	W		000		1	1	123	-3	108	-15	3A				DR	3A	
25	TQ78107170	CER	W	01	055	055	2	3A	136	10	113	-10	3A				WE	3A	DROUGHT
26	TQ78207170	CER	N		055		1	2	000	0	000	0					WE	2	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	PED GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
1	0-37	mzcl	10YR43 00						0	0	HR	2						
	37-55	mzcl	10YR44 54						0	0	HR	1		M				
	55-120	hzcl	75YR55 64 00MN00 00 C					S	0	0		0		P				
1P	0-30	c	10YR43 00						3	0	HR	5		FM				
	30-60	c	10YR53 00 75YR56 00 C				10YR63 00	Y	0	0		0	STVCAB	FM	P	Y		Y	
	60-120	c	10YR63 00 75YR66 00 C				10YR63 00	Y	0	0		0	MDMAB	FM	P			Y	Y
2	0-30	mzcl	10YR43 00						0	0	HR	2						
	30-45	hzcl	10YR54 00						0	0	HR	1		M				
	45-60	hzcl	10YR54 00 75YR55 00 F				00MN00 00	S	0	0		0		M				
	60-120	zc	75YR54 00 75YR55 00 F				00MN00 00	S	0	0		0		P				
2P	0-30	mzcl	75YR43 00						2	0	HR	2						
	30-50	hzcl	75YR54 00						0	0		0	MDMSAB	FR	G				
	50-80	zc	75YR54 00						0	0		0	STVCSB	FM	M				
	80-120	hcl	10YR65 00 75YR66 00 C				10YR63		0	0	HR	1	MDVCSB	FM	M				Y
3	0-33	mzcl	10YR43 00						0	0	HR	2						
	33-85	hzcl	10YR55 64 10YR56 00 F				00MN00 00	S	0	0		0		M				
	85-120	sc	10YR64 00 75YR56 00 C					Y	0	0	HR	8		P			Y	
3P	0-35	mzcl	75YR43 00						1	0	HR	2						
	35-60	hcl	10YR64 55 10YR56 00 C				10YR64 00	Y	0	0	HR	5	MDCSB	FM	M				
	60-120	c	25Y 63 72 10YR56 00 M				05Y 72 00	Y	0	0		0	STVCAB	VM	P	Y		Y	Y
4	0-35	hcl	10YR43 00						0	0	HR	2						
	35-60	hcl	75YR55 00 00MN00 00 F						0	0		0		M				
	60-100	sc	10YR54 00 10YR56 00 C					Y	0	0	HR	20		P				
7	0-37	hzcl	10YR43 00						0	0	HR	2						
	37-70	hcl	10YR54 53 75YR56 00 C					Y	0	0	HR	1		M				
	70-120	hzcl	10YR64 00 75VR56 00 M					Y	0	0		0		P			Y	
8	0-32	hcl	10YR43 00						0	0	HR	2						
	32-45	hcl	10YR64 00 10YR65 00 C					S	0	0		0						
	45-120	hcl	10YR64 00 10YR66 00 C					Y	0	0		0					Y	
9	0-35	hcl	10YR43 00						0	0	HR	2						
	35-60	c	10YR55 00 00MN00 00 F					S	0	0	HR	1		M				
	60-90	c	10YR63 00 10YR68 00 C					Y	0	0		0		P			Y	
	90-120	c	25Y 62 00 10YR68 00 C					Y	0	0		0		P			Y	
10	0-33	mzcl	10YR43 00						0	0	HR	2						
	33-60	hcl	10YR64 00 10YR66 00 C					Y	0	0		0		M				
	60-120	c	25Y 63 00 10YR66 61 M					Y	0	0		0		P			Y	
11	0-37	hcl	10YR43 00						1	0	HR	3						
	37-65	hcl	75YR54 00						0	0	HR	5		M				
	65-80	sc	10YR54 00 75YR56 00 C					S	0	0	HR	10		P				
	80-100	sc	10YR54 00 10YR54 00 C					Y	0	0	HR	25		P				

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
12	0-30	mcl	10YR43 00						3	0	HR	4						
	30-45	hcl	10YR43 54						0	0	HR	5		M				
	45-85	hcl	10YR64 00						0	0	HR	5		M				
	85-100	hzcl	10YR64 00	75YR56	62	C		Y	0	0	HR	5		P			Y	
	100-120	fsl	25Y 73 00	75YR56	00	C		Y	0	0		0		P			Y	
13	0-28	c	10YR43 00						3	0	HR	5						
	28-85	c	10YR64 00	10YR66	00	C		Y	0	0	HR	1		P			Y	
	85-90	c	10YR65 00					Y	0	0	HR	20		P			Y	
14	0-30	hcl	10YR43 00						2	0	HR	3						
	30-50	c	10YR63 00	75YR56	00	M		Y	0	0	HR	2					Y	
	50-80	c	10YR64 00	75YR68	00	C		Y	0	0	HR	1					Y	
	80-120	sc	10YR63 00	75YR58	00	M		Y	0	0	HR	10					Y	
15	0-32	hcl	10YR43 00						2	0	HR	4						
	32-70	c	10YR63 00	75YR56	00	C		Y	0	0	HR	3					Y	
	70-95	sc	10YR64 00	75YR56	00	C		Y	0	0	HR	10					Y	
	95-120	c	75YR64 00	75YR66	00	C		Y	0	0		0					Y	
16	0-30	mcl	10YR43 00						1	0	HR	3						
	30-80	hzcl	10YR54 00	75YR56	00	C		S	0	0		0		M				
	80-120	hzcl	10YR64 00	75YR66	00	F		S	0	0		0		P				Y
17	0-35	mcl	10YR43 00						0	0	HR	3						
	35-95	hcl	75YR54 00	00MN00	00	F			0	0	HR	2		M				
	95-120	c	10YR54 63	75YR66	00	C		Y	0	0	HR	5		P			Y	
18	0-28	hcl	10YR43 00						2	0	HR	4						
	28-60	hcl	10YR64 00	75YR58	00	C		Y	0	0	HR	3		M				
	60-120	c	10YR64 00	75YR56	62	C		Y	0	0	HR	3		P			Y	
19	0-35	hcl	10YR43 00						1	0	HR	3						
	35-50	hcl	75YR54 00	00MN00	00	F			0	0	HR	1						
	50-120	c	75YR54 00	00MN00	00	F			0	0		0						
20	0-30	hcl	10YR33 00						3	0	HR	5						
	30-45	c	10YR54 00	10YR56	00	C		S	0	0	HR	5		M				
	45-70	c	10YR53 00	10YR56	00	C		Y	0	0	HR	11		P			Y	
	70-120	c	10YR54 00	10YR56	00	C		Y	0	0		0		P			Y	
21	0-27	hcl	10YR43 00						4	0	HR	5						
	27-60	c	10YR53 52	10YR56	00	C	00MN00	00 Y	0	0		0					Y	
	60-120	c	10YR63 00	10YR66	00	C		Y	0	0		0					Y	
22	0-30	hcl	10YR43 00						3	0	HR	4						
	30-80	c	10YR63 00	75YR56	00	C		Y	0	0	HR	3		P			Y	
	80-120	c	75YR63 00	75YR55	00	C		Y	0	0		0		P			Y	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
23	0-40	hcl	10YR43 00						2	0	HR	3						
	40-55	scl	10YR64 00	75YR56 00	C			Y	0	0	HR	3		M				
	55-100	msl	10YR64 00	05YR56 00	C			Y	0	0		0		M				
	100-120	c	75YR53 00	75YR56 00	C			Y	0	0		0		P			Y	
24	0-35	mcl	10YR43 00						1	0	HR	4						
	35-70	scl	10YR64 00						0	0	HR	10		M				
	70-120	lms	10YR66 00						0	0		0		M				
25	0-35	hcl	10YR43 00						1	0	HR	3						
	35-55	hcl	10YR53 00						0	0		0		M				
	55-120	c	25Y 63 00	75YR56 00	C			Y	0	0		0		P			Y	
26	0-37	hcl	10YR33 00						2	0	HR	4						
	37-55	hcl	10YR54 00						0	0	HR	3						
	55-120	c	75YR56 00	00MN00 00	C			S	0	0		0						

SOIL PIT DESCRIPTION

Site Name : MEDWAY TOWNS LP SITE 44 Pit Number : 1P

Grid Reference: TQ77607170 Average Annual Rainfall : 601 mm
Accumulated Temperature : 1480 degree days
Field Capacity Level : 116 days
Land Use : Cereals
Slope and Aspect : 02 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 30	C	10YR43 00	3	5	HR			FM		
30- 60	C	10YR53 00	0	0		C	STVCAB	FM	P	
60-120	C	10YR63 00	0	0		C	MDMAB	FM	P	Y

Wetness Grade : 3B Wetness Class : III
Gleying :030 cm
SPL :030 cm

Drought Grade : 3A APW : 124mm MBW : -2 mm
APP : 101mm MBP : -22 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : MEDWAY TOWNS LP SITE 44 Pit Number : 2P

Grid Reference: TQ77707200 Average Annual Rainfall : 601 mm
Accumulated Temperature : 1480 degree days
Field Capacity Level : 116 days
Land Use : Cereals
Slope and Aspect : 01 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 30	MZCL	75YR43 00	2	2	HR					
30- 50	HZCL	75YR54 00	0	0			MDMSAB	FR	G	
50- 80	ZC	75YR54 00	0	0			STVCSB	FM	M	
80-120	HCL	10YR65 00	0	1	HR	C	MDVCSB	FM	M	Y

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

Drought Grade : 2 APW : 162mm MBW : 36 mm
APP : 128mm MBP : 5 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : MEDWAY TOWNS LP SITE 44 Pit Number : 3P

Grid Reference: TQ77907190
Average Annual Rainfall : 601 mm
Accumulated Temperature : 1480 degree days
Field Capacity Level : 116 days
Land Use : Cereals
Slope and Aspect : 02 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 35	MZCL	75YR43 00	1	2	HR					
35- 60	HCL	10YR64 55	0	5	HR	C	MDCSB	FM	M	
60-120	C	25Y 63 72	0	0		M	STVCAB	VM	P	Y

Wetness Grade : 2
Wetness Class : II
Gleying :035 cm
SPL :060 cm

Drought Grade : 2
APW : 140mm MBW : 14 mm
APP : 116mm MBP : -7 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Wetness