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MEDWAY TOWNS LOCAL PLAN
Site 46, Hoo St Werburgh

Agricultural Land Classification
February 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

ADAS Reference: 2008/007/96
MAFF Reference: EL 20/1376
LUPU Commission: 02367

AGRICULTURAL LAND CLASSIFICATION REPORT
MEDWAY TOWNS LOCAL PLAN, SITE 46, HOO ST WERBURGH

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 23 ha of land on the eastern side of the village of Hoo St Werburgh, Kent. The site is bounded to west by residential development, Stoke Road to the south and by open farmland to the north and east. 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 any 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 whole site comprised an area of orchards and associated farm buildings, although a small area of private housing was also included within the site boundary at the north-western corner of the site. At the south western corner of the site is a former mineral working, that has been restored to agricultural use at low level which is also planted to orchard.

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	3.0	19.6	13.1
3a	6.3	41.2	27.5
3b	6.0	39.2	26.2
Other	1.5		6.5
Not surveyed	6.1		26.7
Total agric. area	15.3	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 15 borings and 3 soil pits was described.

8. Two areas of Grade 2, very good quality agricultural land have been mapped at the southern and eastern parts of the site. The former comprises well drained fine silty soils and is restricted to this grade by a minor droughtiness limitation. The other area comprises fine loamy over clayey soils which have a slight wetness and workability restriction. The central part of the site comprises an area of good quality agricultural land, Subgrade 3a with fine loamy over slowly permeable clayey soils giving rise to a moderate wetness and workability restriction. At the northern end, moderate quality agricultural land, Subgrade 3b, has been identified, comprising clayey soils developed on London Clay, which have a moderately severe wetness and workability restriction. In the south west corner of the site is a reclaimed quarry, which has been planted to orchard. This low level area has very variable soils and is also likely to be a frost pocket and consequently the area has been included within Subgrade 3b.

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 782 728
Altitude	m, AOD	30
Accumulated Temperature	day°C	1464
Average Annual Rainfall	mm	602
Field Capacity Days	days	115
Moisture Deficit, Wheat	mm	124
Moisture Deficit, Potatoes	mm	121

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 (ATO, 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 apart from the area of the old quarry. Due to current development taking place along the southwestern boundary of the old quarry and the construction of a high retaining wall, cold air will no longer be able to drain out of this low lying area and consequently it is likely to develop into a frost pocket. Therefore apart from the old quarry the remainder of the area has no climatic limitation. The climatic limitation in the old quarry area however is unlikely to outweigh the soil limitations of the area which are dealt with later in the report.

Site

14. The site lies on a southeast facing slope ranging in altitude from 45 m AOD at the northern end to 15 m AOD in the south. Slopes on the site are very gentle 1-2°. Very steep slopes occur round the eastern and northern edges of the old quarry, which are not in agricultural use, but in the remainder of the quarry slopes of 0-10° have been created. The site is not prone to flooding and therefore with the exception of the old quarry, site limitations will not affect the grading of the land. In the old quarry, localised steep slopes at the northern end will restrict land quality to Subgrade 3b.

Geology and soils

15. The published geological information (BGS, 1977), shows the solid geology of the area to be London Clay, which is overlain by Head over the northern part of the site, with Head Brickearth covering the south.

16. There is no detailed published soil map for this district but the reconnaissance soil survey map (SSEW, 1983) shows the site as Ratsborough association. Ratsborough soils are developed on thick drift of varied origin and can be highly variable in nature. They are described as 'fine silty or fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging, with some slowly permeable seasonally waterlogged fine loamy over clayey and clayey soils' (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. Two areas of Grade 2, very good quality agricultural land have been mapped at the southern and eastern parts of the site. The area at the south comprises well drained fine silty soils and a typical profile has a medium silty clay loam topsoil over a brown heavy silty clay loam upper subsoil, with moderately developed coarse blocky structure. The lower subsoil is typically a silty clay with occasional faint mottling. These soils are assessed as Wetness Class I (see Appendix II). Slight droughtiness is the main limitation for this area and moisture balance calculations indicate that in this low rainfall area, these soils will be slightly droughty

restricting the land quality to Grade 2. On the eastern side, the soils are moderately well drained (Wetness Class II) fine loamy over clayey and a typical profile has a medium clay loam topsoil over a heavy clay loam upper subsoil becoming slowly permeable clay at depth. This area therefore has a slight wetness and workability limitation during the wetter periods of the year and a slight droughtiness restriction during the drier months, both limiting the land quality to Grade 2.

Subgrade 3a

20. Subgrade 3a, good quality agricultural land, has been mapped on the very gently sloping land in the central part of the site. This area mainly comprises fine loamy over clayey soils, although toward the northern end profiles with stony and sandy subsoil horizons have been mapped. The majority of the soils typically have a medium clay loam topsoil over a slightly stony, faintly mottled heavy clay loam upper subsoil, over a slowly permeable, strongly mottled clay at depth. These soils have been assessed as Wetness Class III which in conjunction with the medium clay loam topsoil and under the prevailing climatic conditions will result in a moderate wetness and workability limitation. In the case of the more stony variants, droughtiness is the overriding limitation and moisture balance calculations indicate that these soils are moderately droughty restricting the land quality to Subgrade 3a.

Subgrade 3b

21. Moderate quality agricultural land, Subgrade 3b, has been mapped at the northern end of the site and also in the area of the former pit at the south-west corner. At the northern end of the site, heavy textured soils developed on the London Clay have been mapped, which typically have clay topsoils overlying mottled, slowly permeable clay subsoils, and 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. In the area of the old mineral workings, the soils are very variable ranging from deep clay soils to shallow stony soils containing cinders and brick fragments. Furthermore, with new development taking place along the western side of the old workings, this area is likely to become a frost pocket as the cold air will no longer be able to drain away to the south-west. This disturbed area has therefore been included within Subgrade 3b.

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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.

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
1P	TQ78307280	FRT	SE	01	000		1	1	106	-18	095	-26	3A				DR	3A	
2P	TQ78407270	FRT	SE	01	027	050	3	3A	135	11	112	-9	2				WE	3A	
3P	TQ78607260	FRT	SE	01	065		1	1	147	23	122	1	2				DR	2	
7	TQ78107300	FRT	E	02	028	028	3	3B	075	-49	075	-46	3B				WE	3B	
8	TQ78207300	FRT	SE	01	025	025	3	3B	000	0	000	0					WE	3B	
9	TQ78107290	FRT	E	02	028	050	3	3B	000	0	000	0					WE	3B	
10	TQ78207290	FRT	SE	01	035	035	3	3B	000	0	000	0					WE	3B	DR
11	TQ78307290	FRT	SE	01	045	065	2	2	139	15	116	-5	2				DR	2	WE
12	TQ78307280	FRT	SE	01	000		1	1	000	0	000	0					DR	3A	PIT1
13	TQ78407280	FRT	SE	01	055	095	2	2	000	0	000	0					DR	2	SPL75-WE
14	TQ78407270	FRT	SE	01	030	045	3	3A	000	0	000	0					WE	3A	DR
15	TQ78507270	FRT	SE	01	030	045	3	3A	139	15	112	-9	2				WE	3A	
16	TQ78307260	FRT	SE	01	030	050	3	3B	129	5	106	-15	3A				WE	3B	
17	TQ78407260	FRT	SE	01	027	050	3	3A	000	0	000	0					WE	3A	
18	TQ78507260	FRT	SE	01	033	050	2	3A	094	-30	104	-17	3B				WE	3A	DRZUGHT
19	TQ78607260	FRT	SE	01	060		1	1	147	23	121	0	2				DR	2	
20	TQ78407250	FRT	SE	01	000				000	0	000	0			Y	Y		4	DIST 3B
21	TQ78507250	FRT	N	04	000	028	3	3B	120	-4	098	-23	3A		Y	Y	WE	3B	DIST

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
1P	0-30	mcl	10YR43 53						0	0	HR	6						
	30-55	scl	75YR54 46						0	0	HR	20	MDMSB	FR	G			
	55-120	cs	10YR54 00						0	0	HR	10	S	VF	M			
2P	0-27	mzcl	10YR33 00						0	0	HR	2						
	27-50	hcl	10YR53 00	75YR56 00	C		10YR53 00	Y	0	0	HR	2	MDCSB	FR	M			
	50-120	c	10YR63 64	10YR68 72	M		10YR63 00	Y	0	0		0	MDCPR	FM	P	Y		Y
3P	0-28	mzcl	75YR33 00						3	0	HR	3						
	28-65	hzcl	75YR54 00						0	0	HR	1	MDCSB	FR	M			
	65-100	zc	75YR54 00	75YR56 00	C			S	0	0		0	MDMPR	FM	M			
	100-120	scl	10YR54 56	75YR56 00	C			S	0	0	HR	3	M	FR	P			
7	0-28	hcl	10YR42 00						3	0	HR	5						
	28-50	c	25Y 64 00	10YR56 00	C			Y	0	0	HR	8			P		Y	
	50-70	c	25Y 64 00	75YR58 00	M			Y	0	0	HR	10			P		Y	
8	0-25	hcl	10YR43 00						2	0	HR	3						
	25-95	c	10YR64 00	75YR68 00	M			Y	0	0	HR	1					Y	
	95-120	sc	25Y 72 00	75YR56 00	C			Y	0	0		0					Y	
9	0-28	hcl	10YR43 00						2	0	HR	4						
	28-50	hcl	10YR64 00	75YR56 00	C			Y	0	0	HR	2						
	50-120	c	10YR64 00	75YR56 00	C			Y	0	0		0					Y	
10	0-25	hcl	10YR43 00						4	0	HR	8						
	25-35	c	10YR55 00	10YR56 00	F				0	0	HR	8						Y
	35-50	c	10YR63 00	75YR56 00	M			Y	0	0	HR	20					Y	
11	0-32	mcl	10YR43 00						0	0	HR	2						
	32-45	mcl	75YR54 00						0	0		0			M			
	45-65	hcl	10YR64 00	75YR56 00	C			Y	0	0		0			M			
	65-120	c	10YR64 00	75YR56 00	M			Y	0	0		0			P		Y	
12	0-30	mcl	10YR43 00						4	0	HR	7						
	30-40	hcl	75YR46 00						0	0	HR	20						
13	0-30	scl	10YR42 00						0	0	HR	1						
	30-55	hcl	10YR52 00						0	0	HR	3						
	55-75	hcl	10YR52 00	75YR56 00	C			Y	0	0		0						
	75-95	c	10YR63 00	75YR58 00	M			Y	0	0		0						
	95-120	scl	25Y 72 00	75YR58 00	M			Y	0	0		0					Y	
14	0-30	mzcl	10YR33 00						1	0	HR	2						
	30-45	hcl	10YR53 00	75YR56 00	C			Y	0	0	HR	5						
	45-120	c	10YR64 00	10YR66 58	M			Y	0	0	HR	1			P		Y	
15	0-30	mzcl	10YR42 00						0	0	HR	2						
	30-45	hcl	25Y 53 63	10YR56 00	C			Y	0	0	HR	2			M			
	45-75	c	25Y 63 00	10YR56 72	M			Y	0	0		0			P		Y	
	75-120	scl	10YR63 00	75YR58 72	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
16	0-30	hcl	10YR33 00						3	0	HR	5						
	30-50	hcl	10YR52 00	75YR46 00	C			Y	0	0	HR	5		M				
	50-80	c	10YR62 00	75YR58 00	M			Y	0	0	HR	10		P			Y	
	80-120	c	10YR64 00	10YR66 00	C			Y	0	0	HR	1		P			Y	
17	0-27	mcl	10YR32 00						2	0	HR	3						
	27-50	hcl	10YR54 00	75YR56 00	C			S	0	0	HR	5						
	50-70	c	10YR63 00	10YR56 00	C			Y	0	0	HR	6					Y	
	70-100	c	10YR63 00	10YR58 00	M			Y	0	0	HR	20					Y	
18	0-33	hcl	10YR33 00						2	0	HR	4						
	33-50	hcl	10YR53 00	75YR46 00	C			Y	0	0	HR	5		M				
	50-70	c	10YR53 00	75YR56 00	C			Y	0	0	HR	20		P			Y	
19	0-28	mzcl	10YR32 00						0	0	HR	1						
	28-60	hzcl	10YR54 55						0	0	HR	2		M				
	60-120	zc	10YR54 00	75YR56 00	C			S	0	0		0		M				
20	0-15	mcl	75YR43 00						0	0	HR	4						
	15-35	hcl	10YR65 00						0	0	HR	20		P				
21	0-28	mcl	10YR22 00						0	0	HR	10						
	28-120	c	75YR54 72						0	0	HR	5		P			Y	

SOIL PIT DESCRIPTION

Site Name : MEDWAY TOWNS LP SITE 46 Pit Number : 1P

Grid Reference: TQ78307280 Average Annual Rainfall : 602 mm
Accumulated Temperature : 1464 degree days
Field Capacity Level : 115 days
Land Use :
Slope and Aspect : 01 degrees SE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 30	MCL	10YR43 53	0	6	HR					
30- 55	SCL	75YR54 46	0	20	HR		MDMSB	FR	G	
55-120	CS	10YR54 00	0	10	HR		S	VF	M	

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

Drought Grade : 3A APW : 106mm MBW : -18 mm
APP : 095mm MBP : -26 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : MEDWAY TOWNS LP SITE 46 Pit Number : 2P

Grid Reference: TQ78407270 Average Annual Rainfall : 602 mm
Accumulated Temperature : 1464 degree days
Field Capacity Level : 115 days
Land Use :
Slope and Aspect : 01 degrees SE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 27	MZCL	10YR33 00	0	2	HR					
27- 50	HCL	10YR53 00	0	2	HR	C	MDCSB	FR	M	
50-120	C	10YR63 64	0	0		M	MDCPR	FM	P	

Wetness Grade : 3A Wetness Class : III
Gleying :027 cm
SPL :050 cm

Drought Grade : 2 APW : 135mm MBW : 11 mm
APP : 112mm MBP : -9 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : MEDWAY TOWNS LP SITE 46 Pit Number : 3P

Grid Reference: TQ78607260 Average Annual Rainfall : 602 mm
Accumulated Temperature : 1464 degree days
Field Capacity Level : 115 days
Land Use :
Slope and Aspect : 01 degrees SE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MZCL	75YR33 00	3	3	HR					
28- 65	HZCL	75YR54 00	0	1	HR		MDCSB	FR	M	
65-100	ZC	75YR54 00	0	0		C	MDMPR	FM	M	
100-120	SCL	10YR54 56	0	3	HR	C	M	FR	P	

Wetness Grade : 1 Wetness Class : I
Gleying :065 cm
SPL : No SPL

Drought Grade : 2 APW : 147mm MBW : 23 mm
APP : 122mm MBP : 1 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness