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LAND AT PADDLESWORTH FARM, SNODLAND, KENT

Agricultural Land Classification
ALC Map and Report

September 1998

Resource Planning Team
Eastern Region
FRCA Reading

RPT Job Number 2013/091/98
MAFF Reference EL 20/01650

AGRICULTURAL LAND CLASSIFICATION REPORT

LAND AT PADDLESWORTH FARM, SNODLAND, KENT

INTRODUCTION

1 This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 19 3 ha of land between Paddlesworth Road and Snodland Road to the west of Snodland in Kent The survey was carried out during September 1998

2 The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)[1] on behalf of the Ministry of Agriculture Fisheries and Food (MAFF) in connection with a planning application to transfer soil from the proposed Snodland Chalk quarry located to the north and spread it on this land This survey supersedes any previous ALC information for this land

3 The work was conducted by members of the Resource Planning Team in the Eastern Region of FRCA 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 most of the site in agricultural use was in arable cropping having recently been ploughed To the east a small area was in permanent grassland this was being utilised for sheep and horse grazing at the time of survey The area mapped as Other Land is an unmetalled track

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

Table 1 Area of grades and Other Land

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	3 7	19 3	19 2
3b	15 5	80 7	80 3
Other Land	0 1		0 5
Total surveyed area	19 2	100	99 5
Total site area	19 3		100

[1] FRCA is an executive agency of MAFF and the Welsh Office

7 The fieldwork was conducted at an average density of 1 boring per hectare of agricultural land In total 24 borings and three soil pits were described

8 The agricultural land at this site has been classified as being Subgrade 3a (good quality) and Subgrade 3b (moderate quality) Principal limitations include both soil wetness and soil droughtiness

9 The area mapped as Subgrade 3a is located towards the north east of the site Soils in this area comprise a slightly stony heavy clay loam topsoil overlying similar or clayey upper subsoils The lower subsoils are also of a clay texture but are moderately to very flinty and also contain appreciable quantities of weathered chalk In the local climate these factors are likely to cause a soil droughtiness limitation which may act to lower the level and consistency of crop yields In some cases the profiles also exhibit some signs of soil wetness which is also sufficient to limit them to Subgrade 3a

10 Subgrade 3b is mapped over the majority of the site The soils in this area comprise heavy clay loam and clay topsoils which in most cases directly overlie clay subsoils The clay horizons significantly impede soil drainage In the local climate this is sufficient to restrict the classification to Subgrade 3b as a result of soil wetness This reduces the versatility of the land in terms of access by machinery (e g for cultivations or harvesting) and grazing by livestock if damage to the soil is to be avoided Soil wetness will also adversely affect seed germination and root growth and is therefore likely to reduce the level and consistency of yields

FACTORS INFLUENCING ALC GRADE

Climate

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

12 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)

13 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

14 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

Table 2 Climatic and altitude data

Factor	Units	Values		
Grid reference	N/A	TQ 692 613	TQ 687 616	TQ 685 617
Altitude	m AOD	25	35	40
Accumulated Temperature	day°C (Jan June)	1477	1466	1460
Average Annual Rainfall	mm	676	680	682
Field Capacity Days	days	139	139	140
Moisture Deficit, Wheat	mm	118	116	116
Moisture Deficit, Potatoes	mm	114	112	111
Overall climatic grade	N/A	Grade 1	Grade 1	Grade 1

15 The combination of rainfall and temperature at this site mean that there is no overall climatic limitation The site is not believed to be either frost-prone or to suffer from exposure As such the site may be considered as being climatically Grade 1 However climatic factors do interact with soil properties to influence soil wetness and soil droughtiness At this locality the high moisture deficits may enhance the likelihood of soil droughtiness problems

Site

16 The survey area lies between approximately 25m and 40m AOD The higher land is located towards the west of the site with gentle slopes towards the east Nowhere on the site does gradient or microrelief adversely affect agricultural land quality

Geology and soils

17 The most detailed published geological information for this area (BGS 1977) maps the majority of the site as being underlain by Cretaceous Gault Clay deposits In one part of the site to the east this is overlain by head drift deposits broadly equating with some of the lower lying land

18 The most recent published soils information covering the area (SSEW 1983) shows the site to consist of soils from the Denchworth Association These soils are described as Slowly permeable seasonally waterlogged clayey soils with similar fine loamy over clayey soils Some fine loamy over clayey soils with only slight seasonal waterlogging and some slowly permeable calcareous clayey soils Landslips and associated irregular terrain locally (SSEW 1983) Soils of Kent (SSEW 1980) maps this area as being underlain by soils from the Titchfield and Denchworth series which are similar to those described above Soils of this nature are represented throughout much of the site However towards the east the clayey subsoils contained many chalk fragments and were not slowly permeable

AGRICULTURAL LAND CLASSIFICATION

19 The details of the classification of the survey area are shown on the attached ALC map and the area statistics of each grade are given in Table 1

20 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 II

Subgrade 3a

21 Land of good quality has been mapped in a single unit towards the north east of the area surveyed The principal limitation is soil droughtiness with wetness being equally limiting on occasion the profiles are typified by soil pits 1 and 2 (see Appendix II)

22 Soil profiles in this area typically comprise a non calcareous heavy clay loam topsoil overlying similar or clayey upper subsoils with a heavy clay loam or clay lower subsoil Stone contents are typically slight in the topsoil and upper subsoil increasing significantly (to a maximum of 51% flints and chalk by volume) in the lower subsoil horizons The presence of ochreous mottles in pale coloured matrices indicate that drainage is restricted in some of these soils When existent they occur from the upper subsoil ie within 40cm of the surface The pit confirms that none of the horizons in this unit were slowly permeable and as such drainage is not likely to be seriously impeded In the relatively dry local climate these profiles are placed in Wetness Classes I and II which when combined with the heavy topsoils leads to Grade 2 and Subgrade 3a being appropriate on the basis of soil wetness The stony nature of the lower subsoils leads to a restriction in the amount of water available to crops which in the local climate is sufficient to place all these profiles in Subgrade 3a on the basis of soil droughtiness This limitation is likely to restrict the consistency of crop yields available from this land

Subgrade 3b

23 Land of moderate quality has been mapped over the majority of the survey area Principal limitations include soil wetness and topsoil workability The soils in this area are typified by those described at soil pits 3 and 2 (see Appendix II)

24 Profiles across this area were of two main types The most common are typified by soil pit 3 and comprise a non calcareous heavy clay loam or clay topsoil which directly overlies clay subsoils some of which were calcareous to at least 120cm The profiles were stoneless or very slightly stony (up to 5% flints by volume) In the pit the clay subsoils were discovered to be poorly structured and slowly permeable This acts to impede drainage to the extent that within the local climate Wetness Class IV is appropriate and subsequently Subgrade 3b when the non-calcareous nature of the heavy topsoils are taken into account The drainage impedance is sufficient to significantly restrict the flexibility of the land by reducing the number of days when the soil is in a suitable condition for cultivation trafficking by machinery or grazing by livestock The imperfect drainage is also likely to adversely affect crop growth and development

25 The second less common soil type present in this unit is typified by soil pit 2 They are essentially similar to those encountered in the Subgrade 3a unit described above (para 22) except that the topsoil was adjudged to be of clay rather than heavy clay loam texture and the clay upper subsoils were all gleyed within 40cm As a result there is an additional workability limitation This is because the topsoil is less often in a suitable condition for cultivations and/or grazing without the possibility of structural damage Given the local climatic parameters these profiles are placed in Wetness Class II but because of the workability limitation they are therefore appropriately classified as Subgrade 3b to reflect this Occasional

borings in the Subgrade 3b unit were of slightly better quality but these were too few and too scattered to be mapped separately

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SOURCES OF REFERENCE

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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 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	**OTH**	Other
DCW	Deciduous woodland	**BOG**	Bog or marsh	**SAS**	Set Aside
HTH	Heathland	**HRT**	Horticultural crops	**PLO**	Ploughed

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 ent red in the relevant column

MREL	Microrelief limitation	**FLOOD**	Flood risk	**EROSN**	Soil erosion risk
EXP	Exposure limitation	**FROST**	Frost pron	**DIST**	Disturbed land
CHEM	Chemical limitation				

9 **LIMIT** The main limitation to land quality Th following abbreviations are used

OC	Overall Climate	**AE**	Aspect	**ST**	Topsoil Stoniness
FR	Frost Risk	**GR**	Gradient	**MR**	Microreli f
FL	Flood Risk	**TX**	Topsoil Texture	**DP**	Soil Depth
CH	Chemical	**WE**	Wetness	**WK**	Workability
DR	Drought	**ER**	Erosion Risk	**WD**	Soil Wetness/Droughtin ss
EX	Exposure				

Soil Pits and Auger Borings

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

S	Sand	**I S**	Loamy Sand	**SL**	Sandy Loam
SZL	Sandy Silt Loam	**CL**	Clay Loam	**ZCI**	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 L ght Silts

For the sand loamy sand, sandy loam and sandy silt loam classes the predominant size of sand fract o n 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 M dium (<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	FSST	soft, fine grained sandstone
ZR	soft, argillaceous or silty rocks	CH	chalk
MSST	soft, medium grained sandstone	CS	gravel with porous (soft) stones
SI	soft weathered igneous/metamorphic rock	GH	gravel with non porous (hard) stones

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		
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	FM firm	EH extremely hard
VF very friable	VM very firm	
FR friable	EM extremely firm	

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 heat
APP	available water capacity (in mm) adjusted for potatoes
MBW	moisture balance wheat
MBP	moisture balance potatoes

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	- WETNESS GLEY	SPL	CLASS	GRADE	WHEAT AP	WHEAT MB	-POTS- AP	-POTS- MB	M REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	TQ68506170	PLO			30	30	4	3B	123	7	100	12	3A				WE	3B	
2	TQ68606170	PLO			32	32	4	3B	122	6	99	13	3A				WE	3B	
3	TQ68706170	PLO			28	28	4	3B	122	6	99	-13	3A				WE	3B	
4	TQ68406160	PLO			32	32	4	3B	125	9	102	-10	3A				WE	3B	
5	TQ68506160	PLO			30	30	4	3B	123	7	100	12	3A				WE	3B	
6	TQ68606160	PLO			27	27	4	3B	125	9	102	10	3A				WE	3B	3P LOCATION
7	TQ68706160	PLO			28		2	3B	84	32	90	22	3B				WK	3B	IMP 60 SEE 2P
8	TQ68806160	PLO			55		1	2	93	-23	103	-9	3B				DR	3A	IMP 65 SEE 2P
9	TQ68906160	PLO			28		2	3A	89	27	96	-16	3B				WD	3A	IMP 60 2P LOC
10	TQ69006160	PLO					1	2	81	35	81	31	3B				DR	3A	IMP 50 1P LOC
11	TQ69106160	PLO					1	2	96	20	112	0	3A				DR	3A	I70 SLGL25 1P
12	TQ68806150	PLO			26		2	3A	91	25	99	13	3B				WD	3A	IMP 60 SEE 2P
13	TQ68906150	PLO		>	22		2	3B	80	36	80	32	3B				WK	3B	IMP 50 SEE 2P
14	TQ69006150	PLO			20	20	4	3B	123	7	100	-12	3A				WE	3B	
15	TQ69106150	PLO			25		2	3B	86	-30	97	-15	3B				WE	3B	IMP 70 STONES
16	TQ69006140	PLO			30	30	4	3B	136	20	112	0	3A				WE	3B	
17	TQ69106140	PLO			24	24	4	3B	121	5	98	14	3A				WE	3B	
18	TQ69206140	PLO			38	38	4	3B	126	10	103	9	2				WE	3B	
19	TQ69106130	PLO			30	30	4	3B	126	10	103	9	2				WE	3B	
20	TQ69206130	PLO			20	20	4	3B	121	5	99	13	3A				WE	3B	LIMED TOPSOIL
21	TQ69206120	PLO			28	55	3	3A	134	18	111	-1	2				WE	3A	
22	TQ68456153	PLO			25	25	4	3B	120	4	97	15	3A				WE	3B	
23	TQ68726151	PLO			30	30	4	3B	124	8	101	11	3A				WE	3B	
24	TQ68946142	PLO			30		2	3B	77	39	77	35	3B				WK	3B	IMP 50 SEE 2P
1P	TQ69006160	PLO					1	2	108	8	97	-15	3A				DR	3A	PIT80 IMPAUG95
2P	TQ68906160	PLO			30		2	3A	89	27	94	-18	3B				DR	3B	PIT IMP 63
3P	TQ68606160	PLO	E	1	32	32	4	3B	124	8	101	11	3A				WE	3B	PIT 65 DR 120

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES >2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1	0 30	C	10YR32						5	0	HR	7							
	30 90	C	25Y 63	10YR66	C	D		Y	0	0		0		P			Y		
	90 120	C	25Y 62						0	0		0		P			Y	Y	
2	0 32	C	10YR32						5	2	HR	10						Y	
	32 70	C	25Y 64	10YR56	C	D		Y	0	0		0		P			Y		
	70 120	C	25Y 63						0	0		0		P			Y	Y	
3	0 28	C	25Y 42						1	0	HR	5							
	28 60	C	25Y 52 62	10YR68	M	D	FEW MN	Y	0	0	CH	3		P			Y	Y	+3% FLINTS
	60 120	C	25Y 63	10YR68	M	D		Y	0	0		0		P			Y		
4	0 32	C	10YR32						0	0	HR	3							
	32 70	C	05Y 52	10YR66	C	D		Y	0	0		0		P			Y		
	70 120	C	25Y 61	10YR68	C	D		Y	0	0		0		P			Y	Y	
5	0 30	C	10YR32						0	0	HR	6							
	30 45	C	25Y 53	10YR56	C	D	COM MN	Y	0	0		0		P			Y		
	45 80	C	25Y 64	10YR56	C	D		Y	0	0		0		P			Y		
	80 120	C	25Y 63						0	0		0		P			Y	Y	
6	0 27	C	10YR32						0	0	HR	5							3P LOCATION
	27 80	C	25Y 64	10YR66	C	D		Y	0	0		0		P			Y		
	80 120	C	25Y 63	10YR68	C	D		Y	0	0		0		P			Y	Y	
7	0 28	C	10YR42						1	0	HR	5							SEE 2P
	28 55	C	25Y 52 62	10YR58	M	D	COM MN	Y	0	0	HR	10		M					NOT SPL SEE 2P
	55 60	C	25Y 62	75YR68	M	D	FEW MN	Y	0	0	CH	15		M				Y	IMP60 +10%FLINTS
8	0 30	HCL	10YR42						1	0	HR	5							SEE 2P
	30 55	C	10YR54	10YR56	C	F	FEW MN	S	0	0	HR	5		M					SLIGHTLY GLEYED
	55 65	C	10YR53	10YR56	C	F	FEW MN	Y	0	0	CH	25		M				Y	IMP 65 +5%FLINTS
9	0 28	HCL	10YR42						1	0	HR	4							2P LOCATION
	28 55	C	25Y 52	10YR58	C	D	COM MN	Y	0	0	HR	5		M			Y		
	55 60	C	25Y 62	10YR68	C	D	FEW MN	Y	0	0	HR	5		P				Y	IMP60 +30%CHALK
10	0 26	HCL	10YR43						1	0	HR	5						Y	1P LOCATION
	26 50	C	10YR54						0	0	HR	5		M				Y	IMP 50 FLINTS
11	0 25	HCL	10YR42						1	0	HR	5						Y	LIMED TS SEE 1P
	25 70	C	10YR54	10YR56	C	F	FEW MN	S	0	0	HR	5		M					IMP FLINTS 70
12	0 26	HCL	10YR42						0	0	HR	5							SEE 2P
	26 60	C	25Y 64	10YR66	C	D		Y	0	0		0		M					IMP FLINTS 60
13	0 22	C	10YR42						2	1	HR	6							SEE 1P/2P
	22 50	C	25Y 63	10YR66	C	D	COM MN	Y	0	0		0		M					IMP FLINTS 50

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	
14	0 20	HCL	10YR42						0	0	HR	4							
	20 120	C	25Y 63	10YR56	C	D	COM MN	Y	0	0		0			P		Y	Y	
15	0 25	C	10YR42						0	0	HR	3							SEE 2P
	25 70	C	05Y 52	10YR58	M	D	COM MN	Y	0	0	HR	5			M				IMP STONES 70
16	0-30	C	25Y 43						3	1	HR	6							
	30 74	C	25Y 64	10YR66	C	D	COM MN	Y	0	0		0			P		Y		
	74 120	C	25Y 63						0	0		0			P		Y	Y	
17	0 24	C	25Y 32						2	2	HR	6						Y	
	24 120	C	25Y 53	10YR56	C	D		Y	0	0		0			P		Y	Y	
18	0 38	C	25Y 42						2	2	HR	6							
	38 70	C	25Y 64	10YR58	C	D	COM MN	Y	0	0		0			P		Y		
	70 120	C	25Y 63						0	0		0			P		Y	Y	
19	0 30	HCL	10YR43 42						0	0	HR	2							
	30 80	C	25Y 62 63	10YR68	M	D	COM MN	Y	0	0	HR	5			P		Y		
	80 120	C	05Y 62	10YR68	M	D		Y	0	0		0			P		Y		
20	0 20	HCL	10YR42						0	0	HR	3							
	20 35	C	10YR62	10YR58	C	D	FEW MN	Y	0	0	HR	2			P		Y		
	35 120	C	25Y 62	75YR68	M	D	FEW MN	Y	0	0	HR	2			P		Y		
21	0 28	MCL	10YR42						0	0	HR	3							
	28 55	HCL	10YR53 54	10YR56	C	F	FEW MN	Y	0	0	HR	2			M				
	55 120	C	10YR63	75YR58	M	D	FEW MN	Y	0	0		0			P		Y		
22	0 25	C	10YR32						5	0	HR	10							
	25 59	C	25Y 64	10YR68	C	D		Y	0	0		0			P		Y		
	59 120	C	25Y 62	10YR56	C	D		Y	0	0		0			P		Y	Y	
23	0 30	C	10YR42						0	0	HR	3							
	30 50	C	25Y 52 53	10YR58	M	F	FEW MN	Y	0	0	CH	5			P		Y	Y	
	50 120	C	05Y 62	10YR58	M	F		Y	0	0	CH	3			P		Y	Y	
24	0 30	C	10YR42						1	0	HR	5							SEE 2P
	30 45	C	25Y 52	10YR58	C	D	COM MN	Y	0	0	HR	5			M				NOT SPL SEE 2P
	45 50	C	25Y 52	10YR58	M	D	FEW MN	Y	0	0	HR	30			M				IMP FLINTS 50
1P	0 28	HCL	10YR42						2	0	HR	6	WKCSAB	FR				Y	PIT @ BOR 10
	28 44	HCL	10YR54						0	0	HR	5	MDCSAB	FR	M			Y	
	44 60	HCL	10YR54						0	0	HR	51	MDCSAB	FR	M			Y	SIEVED STONES
	60 95	HCL	10YR64						0	0	HR	23		FM	M			Y	+10% CHALK
2P	0 30	HCL	10YR42						1	0	HR	5	WKCSAB	FR					PIT @ BOR 9
	30 50	C	25Y 53	10YR56	C	D	25Y 52	Y	0	0	HR	5	MDCSAB	FR	M				COM MN
	50 63	C	25Y 64	10YR68	C	F		Y	0	0	HR	35		FM	M			Y	+20% CHALK

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	
3P	0 32	C	10YR42						1	0	HR	5							PIT @ BOR 6
	32 60	C	25Y 63	10YR66	M	D		Y	0	0		0	MDCAB	FM P	Y		Y		PIT 60