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Newbury District Local Plan
Site 64 : Church Side, East Ilsley
Agricultural Land Classification
ALC Map and Report
April 1994

AGRICULTURAL LAND CLASSIFICATION REPORT

NEWBURY DISTRICT LOCAL PLAN
SITE 64 : CHURCH SIDE, EAST ILSLEY

1 Summary

1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality for a number of sites in the Newbury District of Berkshire. The work forms part of MAFF's statutory input to the preparation of the Newbury District Local Plan.

1.2 Approximately one hectare of land relating to site 64, Church Side, East Ilsley was surveyed in February 1994. The survey was undertaken at a detailed level of approximately eight borings per hectare. A total of 8 soil auger borings and two soil inspection pits were assessed in accordance with MAFF's revised guidelines and criteria for grading the quality of agricultural land (MAFF, 1988). These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose longterm limitations on its use for agriculture.

1.3 The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group of ADAS.

1.4 At the time of the survey the agricultural land was under permanent pasture, and used for grazing horses.

1.5 The distribution of grades and subgrades is shown on the attached ALC map and the areas are given in the table below. The map has been drawn at a scale of 1:5,000. It is accurate at this scale, but any enlargement would be misleading. This map supersedes any previous survey information for this site.

Table 1 : Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Area
2	0.2	18.2	25.0
3a	0.2	18.2	25.0
3b	0.4	36.4	50.0
Urban	0.4	9.0	100% (0.8 ha)
Woodland	0.2	18.2	
Total area of site	1.1 ha	100%	

1.6 Appendix 1 gives a general description of the grades, subgrades and land use categories identified in the survey. The main classes are described in terms of the type of limitation that can occur, the typical cropping range and the expected level and consistency of yield.

1.7 The area under agricultural use has been classified, Grade 2, (very good quality), Subgrade 3a (good quality) and Subgrade 3b (moderate quality), with soil workability and soil droughtiness as the principal limitations. The area towards the north of the site shown as Grade 2, comprises deep (>120 cm) well drained soils over chalk which are restricted by heavy topsoil textures, giving rise to a slight workability limitation. The remainder of the site is limited by soil droughtiness. This is due to chalk underlying the soil profile at shallow depths. Chalk has the effect of restricting rooting and profile available water, giving rise to a moderate droughtiness limitation on this site. Where the drought risk is more severe land is graded 3b; slightly deeper soils over chalk are grade 3a.

2. Climate

2.1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.

2.2 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall, as a measure of overall wetness, and accumulated temperature, as a measure of the relative warmth of a locality.

2.3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met. Office, 1989). The details are given in the table below and these show that there is no overall climatic limitation affecting the site.

2.4 No local climatic factors such as exposure or frost risk affect the site. However, climatic and soil factors interact to influence soil wetness and droughtiness limitations.

Table 2 :Climatic Interpolations

Grid Reference	SU495810	SU495809
Altitude, (m, AOD)	115	120
Accumulated Temperature (°days, Jan-June)	1394	1388
Average Annual Rainfall (mm)	671	673
Field Capacity Days	143	143
Moisture deficit, wheat (mm)	105	104
Moisture deficit, potatoes (mm)	95	95
Overall Climatic Grade	1	1

3. Relief

3.1 The site lies at an altitude of approximately 115 and 120 m. It is flat in the north rising to a flat plateau in the south. However at no point on the site does gradient or microrelief affect land quality.

4. Geology and Soils

4.1 British Geological Survey published map, Sheet 253, Abingdon (1:63360 scale, 1971), shows the site to be underlain by Cretaceous Middle Chalk with Cretaceous Chalk rock encountered at the boundary between Upper and Middle Chalk. Directly to the north of the site recent coombe deposits are shown.

4.2 Soil Survey of England and Wales, published map, Sheet 6, Soils of South-East England (1983, 1:250,000 scale), shows the site to lie on the border between the Andover 2 and Coombe 1 Associations. Andover 2 soils are described as "shallow well drained calcareous silty soils over chalk, on slopes and crests. Deep calcareous and non calcareous fine silty soils in valley bottoms, striped soil patterns locally, Wetness Class I" (SSEW 1983 and 1984). Coombe 1 soils are described as "well drained calcareous fine silty soils, deep in valley bottoms, shallow to chalk on valley sides in places, slight risk of water erosion, Wetness Class I". These essentially similar descriptions fit the nature of the soils encountered at this site. The more detailed publication, Soils of the Wantage and Abingdon District, (SSEW, 1973) does not differentiate the site separately from the adjoining Urban area.

5. Agricultural Land Classification

5.1 Table 1 provides the details of the area measurements for each grade and the distribution of each grade is shown on the attached ALC map.

5.2 The location of the soil observation points are shown on the attached sample point map.

Grade 2

5.3 An area of very good quality is mapped towards the north of the site on the lowest lying land. Profiles typically comprise, a very slightly stony shallow calcareous heavy silty clay loam topsoil, over a very slightly stony and chalky calcareous heavy silty clay loam upper subsoil. This passes to a similarly textured though more stony and chalky horizon, which overlies slightly stony, moderately chalky calcareous permeable clay from c.45-65 cm to depth. Due to the heavy topsoil textures, this area is limited to Grade 2 by topsoil workability, such that opportunities for cultivations and/or grazing may be slightly limited. The land could be expected to be capable of growing good yields of a wide range of crops.

5.4 **Subgrade 3a**

Land of good quality is mapped towards the south of the site on the highest land. The principal limitation is droughtiness caused by chalk underlying the soil at a relatively shallow depth (c.35-70 cm). Profiles were typically found to comprise a very slightly chalky calcareous medium silty clay loam topsoil, overlying a slightly to very chalky (c.10 to 40% chalk), and occasionally stony calcareous heavy silty clay loam subsoil overlying pure chalk. Chalk has the effect of restricting plant rooting depth and subsequently reduces available water such that on this site a moderate droughtiness risk occurs. Land of good quality could be expected to produce good yields of a narrow range of crops or moderate yields of a wide range, including cereals, grass, oilseed rape and potatoes.

Subgrade 3b

5.5 Land of moderate quality covers the majority of the site on sloping land in a central band. The principal limitation here is droughtiness due to the presence of chalk at shallow depths (c.25-35 cm) in the profile. Typically, profiles comprise a very slightly stony and chalky medium silty clay loam topsoil, which overlies a narrow moderately chalky, slightly to moderately stony heavy silty clay loam subsoil passing to the chalk. The limitation is similar to the above for Subgrade 3a (para 5.3), except that, because the pure chalk occurs at a shallower depth, rooting and profile available water is more restricted, such that Subgrade 3b is most appropriate. Land of this quality could be expected to produce moderate yields of a narrow range of crops principally cereals and grass.

5.6 The land shown as Urban is part of the access made for the redeveloped East Ilsley farm now known as "Hildersley Court". The area shown as Woodland is a recently planted and fenced off area of saplings.

ADAS Ref: 0202/018/94
MAFF Ref: EL02/0297

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1971), Sheet 253, Abingdon, 1:63,360. Drift Edition.

MAFF (1988), Agricultural Land Classification of England and Wales : Revised guidelines and criteria for grading the quality of agricultural land.

Meteorological Office (1989), Climatic datasets for Agricultural Land Classification.

Soil Survey of England and Wales (1973), Soils of the Wantage and Abingdon District, (Sheet 253).

Soil Survey of England and Wales (1983), Sheet No. 6, Soils of South-East England, 1:250,000, and Accompanying Legend.

Soil Survey of England and Wales (1984), Soils and their use in South-East England. Bulletin No.15.

APPENDIX I

DESCRIPTION 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 (eg. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 : Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including: housing, industry, commerce, education, transport, religous buildings, cemetries. Also, hard-surfaced sports facilities, permanent caravan sites and vacant land; all types of derelict land, including mineral workings which are only likely to be reclaimed using derelict land grants.

Non-agricultural

'Soft' uses where most of the land could be returned relatively easily to agriculture, including: private parkland, public open spaces, sports fields, allotments and soft-surfaced areas on airports. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

Woodland

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

Agricultural Buildings

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses. Temporary structures (eg. polythene tunnels erected for lambing) may be ignored.

Open Water

Includes lakes, ponds and rivers as map scale permits.

Land Not Surveyed

Agricultural land which has not been surveyed.

Where the land use includes more than one of the above, eg. buildings in large grounds, and where map scale permits, the cover types may be shown separately. Otherwise, the most extensive cover type will be shown.

APPENDIX II

FIELD ASSESSMENT OF SOIL WETNESS CLASS

Definition of Soil Wetness Classes

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 not wet within 40 cm depth for more than 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 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 and 90 days in most years.
IV	The soil profile is wet within 70 cm depth for more than 180 days but not within 40 cm depth for more than 210 days in most years *or*, if there is no slowly permeable layer 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.

[1] The number of days specified is not necessarily a continuous period.

[2] 'In most years' is defined as more than 10 out of 20 years.

APPENDIX III

SOIL PIT AND SOIL BORING DESCRIPTIONS

Contents :

SOIL PROFILE DESCRIPTIONS : EXPLANATORY NOTE

Soil profile and pit information obtained during ALC surveys is held on a database. This has commonly used notations and abbreviations as set out below.

BORING HEADERS

1. GRID REF : National grid square followed by 8 figure grid reference.

2. USE : Land-use at the time of survey.
   The following abbreviations are used.

ARA - arable	PAS/PGR - permanent pasture
WHT - wheat	RGR - rough grazing
BAR - barley	LEY - ley grassland
CER - cereals	CFW - coniferous woodland
OAT - oats	DCW - deciduous woodland
MZE - maize	SCR - scrub
OSR - oilseed rape	HTH - heathland
BEN - field beans	BOG - bog or marsh
BRA - brassicae	FLW - fallow
POT - potatoes	PLO - ploughed
SBT - sugarbeet	SAS - set-aside
FDC - fodder crops	OTH - other
FRT - soft and top fruit	LIN - linseed
HOR/HRT - horticultural crops	

3. GRDNT : Gradient as measured by optical reading clinometer.

4. GLEY/SPL : Depth in centimetres (cm) to gleyed and/or slowly permeable horizons.

5. AP (WHEAT/POTS) : Crop-adjusted available water capacity. The amount of soil water (in millimetres) held in the soil profile that is available to a growing crop (wheat and potatoes are used as reference crops).

6. MB (WHEAT/POTS) : The moisture balance for wheat and potatoes obtained by *subtracting the soil moisture deficit from the crop-adjusted available water capacity.*

7. DRT: Grade according to soil droughtiness assessed against soil moisture balances.

8. M REL : Micro-relief)
   FLOOD : Flood risk)
   EROSN : Soil erosion)
   EXP : Exposure) If any of these factors are considered significant in terms of the assessment of agricultural land quality a 'y' will be entered in the relevant column.
   FROST : Frost prone)
   DIST : Disturbed land)
   CHEM : Chemical limitation)

9. LIMIT : Principal limitation to agricultural land quality.
The following abbreviations are used:

OC - overall climate
AE - aspect
EX - exposure
FR - frost
GR - gradient
MR - micro-relief
FL - flooding
TX - soil texture
DP - soil depth
CH - chemical limitations
WE - wetness
WK - workability
DR - drought
ER - erosion
WD - combined soil wetness/soil droughtiness
ST - topsoil stoniness

PROFILES & PITS

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

S - sand
LS - loamy sand
SL - sandy loam
SZL - sandy silt loam
ZL - silt loam
MZCL - medium silty clay loam
MCL - medium clay loam
SCL - sandy clay loam
HZCL - heavy silty clay loam
HCL - heavy clay loam
SC - sandy clay
ZC - silty clay
C - clay

For the sand, loamy sand, sandy loam and sandy silt loam classes, the predominant size of sand fraction may be indicated by the use of prefixes.

F - fine (more than ⅔ of the sand less than 0.2 mm)
C - coarse (more than ⅓ of sand greater than 0.6 mm)
M - medium (less than ⅔ fine sand and less than ⅓ coarse sand)

The sub-divisions of clay loam and silty clay loam classes according to clay content are indicated as follows:

M - medium (less than 27% clay)
H - heavy (27-35% clay)

Other possible texture classes include:

OL - organic loam
P - peat
SP - sandy peat
LP - loamy peat
PL - peaty loam
PS - peaty sand
MZ - marine light silts

2. MOTTLE COL : Mottle colour

3. MOTTLE ABUN : Mottle abundance

F - few - less than 2% of matrix or surface described
C - common - 2-20% of the matrix
M - many - 20-40% of the matrix
VM - very many - 40% + of the matrix

4. MOTTLE CONT : Mottle continuity

F - faint - indistinct mottles, evident only on close examination
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

6. STONE LITH : Stone lithology. One of the following is used.

HR - all hard rocks or stones
MSST - soft, medium or coarse grained sandstone
SI - soft weathered igneous or metamorphic
SLST - soft oolitic or dolomitic limestone
FSST - soft, fine grained sandstone
ZR - soft, argillaceous, or silty rocks
CH - chalk
GH - gravel with non-porous (hard) stones
GS - gravel with porous (soft) stones

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

7. 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 well developed

- ped size

F - fine
M - medium
C - coarse
VC - very coarse

- ped shape

S - single grain
M - massive
GR - granular
SB/SAB - sub-angular blocky
AB - angular blocky
PR - prismatic
PL - platy

8. CONSIST : Soil consistence is decribed using the following notation:

L - loose
VF - very friable
FR - friable
FM - firm
VM - very firm
EM - extremely firm
EH - extremely hard

9. SUBS STR : Subsoil structural condition recorded for the purpose of calculating profile droughtiness.

G - good
M - moderate
P - poor

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

11. IMP : If the profile is impenetrable a `y' will appear in this column at the appropriate horizon.

12. SPL : Slowly permeable layer. If the soil horizon is slowly permeable a `y' will appear in this column.

13. CALC : If the soil horizon is calcareous, a 'y' will appear in this column.

14. Other Notations

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

SOIL PIT DESCRIPTION

Site Name : NEWBURY LP SITE 64 Pit Number : 1P

Grid Reference: SU49518101 Average Annual Rainfall : 673 mm
Accumulated Temperature : 1388 degree days
Field Capacity Level : 143 days
Land Use : Permanent Grass
Slope and Aspect : 02 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 15	HZCL	10YR43 00	0	2		
15- 37	HZCL	10YR44 54	0	5		WKCSAB
37- 62	HZCL	10YR44 00	0	10		WKCSAB
62- 74	C	75YR46 00	0	10		WKMSAB
74-120	C	75YR46 00	0	10		

Wetness Grade : 2 Wetness Class : I
Gleying : cm
SPL : No SPL

Drought Grade : 1 APW : 158mm MBW : 54 mm
APP : 110mm MBP : 15 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Workability

SOIL PIT DESCRIPTION

Site Name : NEWBURY LP SITE 64 Pit Number : 2P

Grid Reference: SU49538096 Average Annual Rainfall : 673 mm
Accumulated Temperature : 1388 degree days
Field Capacity Level : 143 days
Land Use : Permanent Grass
Slope and Aspect : 05 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	MOTTLES	STRUCTURE
0- 15	HZCL	10YR42 43	0	5		
15- 28	MZCL	10YR54 00	5	17		WKCSAB
28- 45	CH	10YR81 64	0	20		
45- 52	CH	10YR81 00	0	10		

Wetness Grade : 2 Wetness Class : I
Gleying : cm
SPL : No SPL

Drought Grade : 3B APW : 059mm MBW : -45 mm
APP : 059mm MBP : -36 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	DRT	M.REL FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	SU49508100	PGR	N	06			1	2	143	39	119	24	1				WK	2	HEAVY TOPSOIL
1P	SU49518101	PGR	N	02			1	2	158	54	110	15	1				WK	2	PIT 74 AUG 120
2	SU49518094	PGR	N	02			1	1	125	21	116	21	2				DR	2	IMPCH100 DR100
2P	SU49538096	PGR	N	05			1	2	059	-45	059	-36	3B				DR	3B	ROOTS 45 PIT52
2Q	SU49538096	PGR	N	05			1	2	080	-24	082	-13	3B				DR	3B	PIT 52 DR 70
3	SU44968093	PGR	N	02			1	1	090	-14	096	1	3A				DR	3A	IMPCH 70 DR 70
4	SU49558100	PGR	N	03			1	2	143	39	118	23	1				WK	2	HEAVY TOPSOIL
5	SU49548099	PGR	N	05			1	1	051	-53	051	-44	4				DR	4	IMPST 30 TO 3B
5Q	SU49548099	PGR	N	05			1	1	082	-22	088	-7	3B				DR	3B	IMPST 30 DR 70
6	SU49518098	PGR	N	05			1	1	081	-23	087	-8	3B				DR	3B	IMPCH 40 DR 70
7	SU49498097	PGR	N	05			1	1	080	-24	086	-9	3B				DR	3B	IMPCH 35 DR 70
8	SU49468095	PGR	N	03			1	1	082	-22	087	-8	3B				DR	3B	IMPCH 50 DR 70

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	
1	0-25	hzcl	10YR43 00						0	0	CH	2						Y	
	25-45	hzcl	10YR44 00						0	0	CH	5		M				Y	
	45-65	c	10YR44 00						0	0	CH	5		M				Y	
	65-105	c	10YR44 54						0	0	CH	25		M				Y	
	105-120	c	75YR46 00						0	0	CH	15		M				Y	
1P	0-15	hzcl	10YR43 00						0	0	CH	2						Y	
	15-37	hzcl	10YR44 54						0	0	HR	5	WKCSAB VF	M				Y	STONES +10% CHALK
	37-62	hzcl	10YR44 00						0	0	HR	10	WKCSAB VF	M				Y	STONES +20% CHALK
	62-74	c	75YR46 00						0	0	HR	10	WKMSAB FR	G				Y	STONES +25% CHALK
	74-120	c	75YR46 00						0	0	HR	10		G				Y	STONES +25% CHALK
2	0-23	mzcl	10YR43 00						0	0	CH	5						Y	
	23-30	hzcl	10YR44 00						0	0	CH	10		M				Y	
	30-45	hzcl	10YR46 00						0	0	CH	15		M				Y	
	45-65	hzcl	10YR54 00						0	0	CH	40		M				Y	
	65-85	ch	10YR64 81						0	0		0		P				Y	
	85-100	ch	10YR81 00						0	0		0		P				Y	IMP CHALK 100
2P	0-15	hzcl	10YR42 43						0	0	HR	5						Y	
	15-28	mzcl	10YR54 00						5	0	HR	17	WKCSAB FR	M				Y	STONES +10% CHALK
	28-45	ch	10YR81 64						0	0	HR	20		P				Y	SOME SOIL 20% MZCL
	45-52	ch	10YR81 00						0	0	HR	10		P		Y		Y	NO ROOTS VISIBLE
2Q	0-15	hzcl	10YR42 43						0	0	HR	5						Y	
	15-28	mzcl	10YR54 00						0	0	HR	17	WKCSAB FR	M				Y	STONES +10% CHALK
	28-45	ch	10YR81 64						0	0	HR	20		P				Y	SOME SOIL 20% MZCL
	45-75	ch	10YR81 00						0	0	HR	10		P				Y	NO ROOTS VISIBLE
3	0-22	mzcl	10YR43 00						0	0	CH	5						Y	
	22-35	hzcl	10YR53 00						0	0	CH	25		M				Y	
	35-70	ch	10YR81 64						0	0		0		M				Y	IMP CHALK 70
4	0-22	hzcl	10YR43 00						0	0	CH	2						Y	
	22-40	hzcl	10YR43 53						0	0	CH	5		M				Y	
	40-55	hzcl	10YR44 00						0	0	CH	15		M				Y	
	55-60	c	10YR54 00						0	0	CH	20		M				Y	
	60-120	c	75YR46 00						0	0	CH	15		M				Y	
5	0-25	mzcl	10YR43 00						0	0	HR	5						Y	STONES +2% CHALK
	25-30	hzcl	10YR44 54						0	0	HR	15		M				Y	STONES +20% CHALK
5Q	0-25	mzcl	10YR43 00						0	0	HR	5						Y	STONES +2% CHALK
	25-30	hzcl	10YR44 54						0	0	HR	15		M				Y	STONES +20% CHALK
	30-70	ch	10YR44 54						0	0	HR	10		P				Y	IMP HARD CHALK 30
6	0-25	mzcl	10YR42 00						0	0	HR	5						Y	
	25-30	hzcl	10YR54 00						0	0	HR	15		M				Y	STONES +15% CHALK
	30-70	ch	10YR81 00						0	0	HR	15		M					IMP CHALK 40

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	STONES GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC	
7	0-23	mzcl	10YR43 00						0	0	HR	7					Y		
	23-31	hzcl	10YR54 44						0	0	HR	15		M			Y		STONES +10% CHALK
	31-70	ch	10YR81 00						0	0	HR	15		M			Y		IMP CHALK 35
8	0-25	mzcl	10YR43 00						0	0	HR	5					Y		STONES +5% CHALK
	25-35	hzcl	10YR53 00						0	0	CH	25		M			Y		STONES +15% FLINTS
	35-70	ch	10YR81 00						0	0	HR	15		P			Y		IMP CHALK 50