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**West Oxfordshire Local Plan
Site 261: Bampton
Agricultural Land Classification
ALC Map and Report
November 1993**

**WEST OXFORDSHIRE LOCAL PLAN
SITE 261: BAMPTON
AGRICULTURAL LAND CLASSIFICATION REPORT**

1. SUMMARY

1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality for 8 sites in West Oxfordshire. The work forms part of MAFF's statutory input to the West Oxfordshire Local Plan.

1.2 Approximately 20 hectares of land relating to site 261 at Bampton, Oxfordshire was surveyed during August 1993. The survey was undertaken at a detailed level of approximately one boring per hectare. A total of 20 soil auger borings and one soil inspection pit 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 long term limitations on its agricultural use.

At the time of survey the land was in permanent grass, some of which was being grazed by cows and horses.

1.3 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 1:5000. It is accurate at this scale, but any enlargement may be misleading.

Table 1 : Distribution of Grades and Subgrades

<u>Grade</u>	<u>Area (ha)</u>	<u>% of Site</u>	<u>% Total Agricultural Land</u>
2	5.4	26.1	30.3
3a	<u>12.4</u>	<u>59.9</u>	<u>69.7</u>
Total agricultural area	17.8	86.0	100
Urban	0.2	1.0	
Non agricultural land	2.5	12.0	
Agricultural buildings	<u>0.2</u>	<u>1.0</u>	
Total Area of Site	20.7	100	

1.4 Appendix I gives a general description of the grades and subgrades and land use categories identified in the survey.

1.5 The site has been classified grades 2 and 3a. The key limitation is soil droughtiness. The area shown as grade 2 is limited by slight droughtiness, caused by a stony sandy horizon occurring deep in the profile. The area shown as Subgrade 3a is more severely limited, the stony and sandy layer occurring higher in the profile. Soils of this nature cause a droughtiness limitation by restricting available water due to the free draining nature of sandy soils and a reduced volume of water retained in the

soil profile due to stone content, such that within local climatic there is a slight risk of soil drought stress.

2. CLIMATE

- 2.1 The climate 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 the 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 5 km 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 Interpolation

Grid Reference:	SP323030
Altitude (m):	68
Accumulated Temperature (days):	1442
Average Annual Rainfall (mm):	678
Field Capacity (days):	146
Moisture Deficit, Wheat (mm):	108
Moisture Deficit, Potatoes (mm):	100
Overall Climatic Grade:	1

3. RELIEF

- 3.1 The land at this site lies at approximately 68 m AOD. The area is level overall. Neither slope gradient, or microrelief affect agricultural land quality.

4. GEOLOGY AND SOIL

- 4.1 The British Geological Survey published map sheet 236, Witney (1982) shows the site to be underlain by Quaternary 1st (Flood Plain) Terrace Deposits from the series of River Gravels present in the area. Two areas to the south east and west of the site are underlain by Quaternary Alluvium.
- 4.2 The Soil Survey of England and Wales published map, sheet 6, Soils of South East England, (1983) shows the site to be underlain with soils from the Badsey 1 and Kelmscott Associations. The former is mapped to the north of the site and is described as 'well drained calcareous and non calcareous fine loamy soils over limestone gravel, with some deep fine loamy soils and similar shallower soils

affected by groundwater' (SSEW, 1984). The latter is mapped over the majority of the site and is described as consisting of, 'calcareous fine loamy soils over gravel, variably affected by groundwater, associated with non-calcareous clayey soils over gravel. Most of the soils are permeable but affected by groundwater, especially on flat land where there is a risk of flooding' (SSEW, 1984). Soils broadly similar to these descriptions were found to occur across the site.

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.

5.3 Grade 2

Land of very good quality is mapped in the northern third of the site, and is primarily limited by soil droughtiness (see para 5.5). Profiles generally consist of a very slightly stony (c. 5% limestone fragments by volume) calcareous medium or heavy clay loam, occasionally medium silty clay loam topsoil, over a slightly to moderately stony (up to c. 30% limestone fragments by volume) heavy clay loam and/or clay upper subsoil, considered from the pit observation (1P, Appendix III) to be moderately structured. These pass to a medium sandy loam, occasionally loamy medium sand, or sandy clay loam lower subsoil containing up to c. 40% small limestone fragments, at which point many profiles become impenetrable to the soil auger. Within local climatic parameters soils of this nature are subject to a slight drought limitation due to the stone content reducing the water holding capacity of the soil and the free draining nature of sandy soils. Land of this quality could be expected to produce high yields of a wide range of crops, both agricultural and horticultural, although some loss of versatility may be experienced with demanding crops such as winter harvested vegetables and arable root crops.

5.4 Subgrade 3a

Land of good quality is mapped on the remaining two-thirds of the site towards the south. This is also primarily drought limited. Essentially the soil profiles are similar to those described above (para 5.3) except that the lower subsoil horizon of medium sandy loam or sandy clay loam containing c. 40% hard limestone fragments, occurs at a shallower depth within the profile such that the droughty nature of the land is more pronounced. Land of this quality could be expected to produce 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, sugar beet and less demanding horticultural crops.

- 5.5 Land limited by soil droughtiness is that which is unable to supply adequate water to the crop during all or part of the growing season. In this case the stone content in combination with light subsoil textures serves to limit available water in the profile. The interaction between these soil properties and climatic factors result in the soil droughtiness limitation..

ADAS Ref: 3305/143/93
MAFF Ref: EL 33/225

Resource Planning Team
Guildford Statutory Centre
ADAS Reading

SOURCES OF REFERENCE

- * British Geological Survey (1982) Sheet No. 236, Witney, 1:50,000.
- * MAFF (1988), Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.
- * Meteorological Office (1989), Climatological Data for Agricultural Land Classification.
- * Soil Survey of England and Wales (1983), Sheet No. 6, Soils of South East England, 1:250,000.
- * 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 SUB-GRADES

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 on the 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.

Grade 3 : Good To Moderate Quality Agricultural Land

Land with moderate limitations which affect the choice of crops, 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.

Sub-grade 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 very 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 : housing, industry, commerce, education, transport, religious buildings, cemeteries. 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/airfields. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

Woodland

Includes commercial and non-commercial 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

DEFINITION OF SOIL WETNESS CLASSES

Wetness Class I

The soil profile is not wet within 70cm depth for more than 30 days in most years.

Wetness Class II

The soil profile is wet within 70cm depth for 31-90 days in most years or, if there is no slowly permeable layer within 80cm depth, it is wet within 70cm for more than 90 days, but not wet within 40cm depth for more than 30 days in most years.

Wetness Class III

The soil profile is wet within 70cm depth for 91-180 days in most years or, if there is no slowly permeable layer within 80cm depth, it is wet within 70cm for more than 180 days, but only wet within 40cm depth for 31-90 days in most years.

Wetness Class IV

The soil profile is wet within 70cm depth for more than 180 days but not wet within 40cm depth for more than 210 days in most years or, if there is no slowly permeable layer within 80cm depth, it is wet within 40cm depth for 91-210 days in most years.

Wetness Class V

The soil profile is wet within 40cm depth for 211-335 days in most years.

Wetness Class VI

The soil profile is wet within 40cm depth for more than 335 days in most years.

(The number of days is not necessarily a continuous period. 'In most years' is defined as more than 10 out of 20 years.)

APPENDIX III

SOIL PIT AND SOIL BORING DESCRIPTIONS

- Contents :**
- * Soil Abbreviations : Explanatory Note
 - * Soil Pit Descriptions
 - * Database Printout : Boring Level Information
 - * Database Printout : Horizon Level Information

SOIL PROFILE DESCRIPTIONS : EXPLANATORY NOTE

Soil pit and auger boring information collected during ALC fieldwork is held on a database. This has commonly used notations and abbreviations as set out below.

Boring Header Information

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

3. GRDNT : Gradient as measured by a hand-held optical clinometer.
4. GLEY/SPL : Depth in cm to gleying or slowly permeable layers.
5. AP (WHEAT/POTS) : Crop-adjusted available water capacity.
6. MB (WHEAT/POTS) : Moisture Balance.
7. DRT : Best grade according to soil droughtiness.
8. If any of the following factors are considered significant, an entry of 'Y' will be entered in the relevant column.

MREL : Microrelief limitation FLOOD : Flood risk EROSN : Soil erosion risk EXP : Exposure limitation FROST : Frost
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 : Soil Erosion Risk WD : Combined 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
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 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

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

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

HR : all hard rocks and stones MSST : soft, medium or coarse grained sandstone

SI : soft weathered igneous or metamorphic SLST : soft oolitic or dolimitic 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 pedes 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

8. 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

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 : WOXON LP S261. BAMPTON Pit Number : 1P

Grid Reference: SP32391310 Average Annual Rainfall : 678 mm
 Accumulated Temperature : 1442 degree days
 Field Capacity Level : 146 days
 Land Use : Permanent Grass
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT. STONE	MOTTLES	STRUCTURE
0- 27	HCL	10YR42 00	0	3		
27- 53	C	10YR54 00	0	21		MDCSAB
53-120	MSL	10YR54 00	0	39		

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

Drought Grade : 2 APW : 113mm MBW : 5 mm
 APP : 93 mm MBP : -7 mm

FINAL ALC GRADE : 2
 MAIN LIMITATION : Droughtiness

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M.REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS	
			GRDNT	GLEY SPL	CLASS	GRADE	AP	MB	AP	MB						DRT
1	SP32001320	PGR			1	2	117	9	109	9	2			DR	2	IMPST 95 1P
1P	SP32391310	PGR			1	2	113	5	93	-7	2			DR	2	PIT 70 AUG 120
2	SP32101320	PGR			1	1	104	-4	113	13	3A			DR	2	IMPST 80 1P
3	SP32301320	PGR			1	1	113	5	113	13	2			DR	2	IMPST 80 1P
4	SP32401320	PGR			1	1	126	18	118	18	2			DR	2	IMPST 90 1P
5	SP32501320	PGR			1	1	127	19	113	13	2			DR	2	IMPST 100 1P
6	SP32001310	PGR			1	2	84	-24	90	-10	3B			DR	3A	IMPST 60 1P
7	SP32101310	PGR	040		1	1	100	-8	105	5	3A			DR	3A	IMPST 80 1P
8	SP32201330	PGR	045		1	1	120	12	100	0	2			DR	2	NOT IMP 1P
9	SP32301310	PGR			1	2	95	-13	102	2	3A			DR	3A	IMPST 65 1P
10	SP32401310	PGR			1	2	112	4	107	7	3A			DR	3A	IMPST 90 1P
11	SP32501310	PGR			1	2	140	32	114	14	1			WK	2	WK=WORKABILITY
12	SP32001300	PGR			1	1	82	-26	85	-15	3B			DR	3A	IMPST 55 1P
13	SP32101300	PGR			1	2	107	-1	105	5	3A			DR	3A	IMPST 95 1P
14	SP32201300	PGR			1	1	88	-20	90	-10	3A			DR	3A	IMPST 55 1P
15	SP32301300	PGR	025	045	3	3A	99	-9	107	7	3A			WE	3A	IMPST 75 1P
16	SP32401300	PGR			1	2	100	-8	108	8	3A			DR	3A	IMPST 70 1P
17	SP32101290	PGR			1	1	77	-31	77	-23	3B			DR	3B	IMPST 50 1P
18	SP32201290	PGR			1	1	87	-21	89	-11	3B			DR	3A	IMPST 60 1P
19	SP32301290	PGR	035		2	2	102	-6	108	8	3A			DR	3A	IMPST 75 1P
20	SP32401290	PGR			1	1	97	-11	102	2	3A			DR	3A	IMPST 70 1P

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES-----			STRUCT/ CONSIST	SUBS			CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR	
1	0-29	hc1	10YR42 00						0	0	HR	5				Y
	29-55	c	10YR44 54						0	0	HR	10		M		Y
	55-80	hc1	10YR54 00						0	0	HR	10		M		Y
	80-95	ms1	10YR54 00						0	0	HR	40		M		Y
1P	0-27	hc1	10YR42 00						0	0	HR	3				Y
	27-53	c	10YR54 00						0	0	HR	21	MDCSAB	FR	M	Y
	53-120	ms1	10YR54 00						0	0	HR	39		P		Y
2	0-33	mc1	10YR42 00						0	0	HR	5				Y
	33-55	c	10YR44 54						0	0	HR	5		M		Y
	55-70	hc1	10YR54 00						0	0	HR	5		M		Y
	70-80	lms	10YR54 00						0	0	HR	40		M		Y
3	0-25	mzc1	10YR43 00						0	0	HR	2				
	25-50	c	10YR56 00						0	0	HR	5		M		
	50-80	sc1	10YR64 00						0	0	HR	6		M		
4	0-30	mzc1	10YR43 00						0	0	HR	2				
	30-55	hc1	10YR54 00						0	0	HR	5		M		
	55-90	mc1	10YR54 00						0	0		0		M		
5	0-20	mc1	10YR42 00						0	0		0				
	20-50	hc1	10YR54 00						0	0	HR	5		M		
	50-70	c	10YR46 00						0	0	HR	2		M		
	70-100	sc1	10YR64 00						0	0	HR	3		M		
6	0-25	hc1	10YR42 00						0	0	HR	5				Y
	25-55	c	10YR44 54						0	0	HR	15		M		Y
	55-60	c	10YR54 00						0	0	HR	30		M		Y
7	0-28	mc1	10YR42 00						0	0	HR	5				Y
	28-40	hc1	10YR44 54						0	0	HR	10		M		Y
	40-52	c	10YR53 00	10YR66 00	C			Y	0	0	HR	15		M		Y
	52-70	hc1	25Y 53 00	10YR66 00	C			Y	0	0	HR	20		M		Y
	70-80	ms1	10YR63 00	10YR66 00	C			Y	0	0	HR	40		P		Y
8	0-28	mc1	10YR42 00						0	0	HR	5				Y
	28-45	c	10YR54 00						0	0	HR	15		M		Y
	45-80	sc1	10YR63 00	10YR66 00	C			Y	0	0	HR	25		M		Y
	80-120	ms1	10YR64 00						Y	0	0	HR	40		P	
9	0-25	hc1	10YR43 00						0	0	HR	2				
	25-50	c	10YR53 00						0	0	HR	8		M		
	50-65	sc1	10YR64 00						0	0	HR	10		M		
10	0-30	hc1	10YR42 00						0	0	HR	2				
	30-55	c	10YR54 00						0	0	HR	5		M		
	55-60	sc1	10YR64 00						0	0	HR	8		M		
	60-90	ms1	10YR64 00						0	0	HR	40		M		

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLEY	>2	>6		LITH	TOT	STR	POR	IMP	SPL
11	0-35	hc1	10YR43 00					0	0	HR	2						
	35-60	hc1	10YR54 00	10YR58 00	F			0	0	HR	5		M				
	60-80	sc1	10YR64 00					0	0	HR	5		M				
	80-120	ms1	10YR63 00					0	0	HR	40		M				
12	0-26	mc1	10YR42 00					0	0	HR	3						Y
	26-40	c	10YR44 54					0	0	HR	15		M				Y
	40-53	c	10YR54 00					0	0	HR	15		M				Y
	53-55	hc1	10YR54 00					0	0	HR	30		M				Y
13	0-28	hc1	10YR43 00					0	0	HR	5						Y
	28-50	c	10YR54 64					0	0	HR	10		M				Y
	50-60	c	10YR54 00					0	0	HR	15		M				Y
	60-90	c	10YR54 00	10YR56 00	F			0	0	HR	30		M				Y
	90-95	hc1	10YR54 64					0	0	HR	50		M				Y
14	0-20	mc1	10YR43 00					0	0		0						
	20-50	c	10YR53 00	10YR58 00	F			0	0		0		M				
	50-55	sc1	10YR54 00					0	0	HR	20		M				
15	0-25	mc1	10YR43 00					0	0		0						
	25-45	c	10YR52 00	10YR58 61	C			Y	0	0	0		M				
	45-75	c	10YR53 00	10YR58 61	C			Y	0	0	HR	8		P			Y
16	0-30	hzc1	10YR42 00					0	0	HR	2						
	30-55	c	10YR54 00	10YR58 00	F			0	0	HR	5		M				
	55-70	sc1	10YR64 00					0	0	HR	40		M				
17	0-28	mc1	10YR42 00					0	0	HR	5						Y
	28-40	hc1	10YR44 54					0	0	HR	10		M				Y
	40-50	c	10YR54 00					0	0	HR	30		M				Y
18	0-20	mc1	10YR42 00					0	0	HR	5						
	20-50	c	10YR54 00					0	0	HR	5		M				
	50-60	ms1	10YR54 00					0	0	HR	40		M				
19	0-35	mc1	10YR42 00					0	0	HR	2						
	35-60	c	10YR53 00	10YR58 00	C			Y	0	0	HR	8		M			
	60-75	ms1	10YR54 00					Y	0	0	HR	40		M			
20	0-25	mc1	10YR42 00					0	0		0						
	25-50	c	10YR54 00					0	0	HR	5		M				
	50-70	ms1	10YR54 00					0	0	HR	40		M				