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Bracknell Forest Local Plan
Site H/Wink/14 : Land at Chavey Down Farm,
Chavey Down
Agricultural Land Classification
ALC Map & Report
November 1994

AGRICULTURAL LAND CLASSIFICATION REPORT

BRACKNELL FOREST LOCAL PLAN

SITE H/WINK/14 : LAND AT CHAVEY DOWN FARM, CHAVEY DOWN

1. Summary

- 1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality on a number of sites in the Bracknell district of Berkshire. The work forms part of MAFF's statutory input to the preparation of the Bracknell Forest Local Plan.
- 1.2 Site Wink 14 comprises 19.8 hectares of land north west of Chavey Down Farm and north of Main Drive, Chavey Down, Berkshire. An Agricultural Land Classification, (ALC), survey was carried out during November 1994. The survey was undertaken at a detailed level of approximately one boring per hectare. A total of 13 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 a long term limitation 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 survey the land use on the site was permanent grass, with areas of woodland to the east and west and a private house and gardens to the south.
- 1.5 The distribution of grades and subgrades is shown on the attached ALC map and the areas and extent are given in the table below. The map has been drawn at a scale of 1:10,000. It is accurate at this scale, but any enlargement would be misleading.

Table 1 : Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Land
3a	6.3	31.8	48.5 (6.3 ha)
3b	6.7	33.8	<u>51.5</u> (6.7 ha)
Woodland	5.6	28.3	100.0 (13.0 ha)
Urban	<u>1.2</u>	<u>6.1</u>	
Total area of site	19.8	100%	

- 1.6 Appendix I 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 agricultural land surveyed has been classified as Subgrade 3a and Subgrade 3b. Good quality land, Subgrade 3a occurs to the centre and south of the site. Soil profiles typically comprise moderately well drained to imperfectly drained profiles having coarse loamy topsoils over gleyed moderately structured permeable sandy and loamy upper subsoils, which in turn rest over poorly structured slowly permeable gleyed clayey lower subsoils. These soils are limited by a combination of soil droughtiness and/or wetness restrictions. Moderate quality Subgrade 3b land occurs over the remainder of the agricultural land. Soil profiles typically comprise medium silty clay loam topsoils over poorly structured slowly permeable silty clay subsoils. These soils are poorly drained limited by significant soil wetness and workability restrictions.

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. It should be noted that climatic characteristics such as moisture deficits for wheat and potatoes can interact with soil properties to increase risk of soil droughtiness problems. Equally, rainfall and field capacity days can influence the degree of wetness problems, especially on heavy soils. No local climatic factors are believed to affect the site.

Table 2 : Climatic Interpolation

Grid Reference	SU895703
Altitude (m)	75
Accumulated Temperature (degree days, Jan-June)	1435
Average Annual Rainfall (mm)	688
Field Capacity (days)	143
Moisture Deficit, Wheat (mm)	108
Moisture Deficit, Potatoes (mm)	101
Overall Climatic Grade	1

3. Relief

3.1 The site is flat to gently sloping and lies at an altitude of between 75 and 90m AOD. Nowhere on the site do relief or gradient affect agricultural land quality.

4. Geology and Soil

4.1 The published geological sheet for the site, Sheet 269 Windsor (BGS, 1978, 1:50,000) shows the site to be mapped as London clay to the north and Bagshot Beds to the south.

4.2 The published soils information for the area, Sheet 6 (SSEW, 1983) shows Wickham 4 association to the north - "Slowly permeable seasonally waterlogged fine loamy over clayey and fine silty over clayey soils associated with similar clayey soils, often with brown subsoils". To the south Holidays Hill - "Naturally very acid sandy over clayey and loamy over clayey soils, locally with humose or peaty surface horizons, slowly permeable subsoils and slight seasonal waterlogging. Some very acid well drained sandy soils and some deep sandy soils, affected by groundwater, with humose surface horizons". A detailed inspection of the site revealed poorly drained clayey soils to the north and moderately to imperfectly drained coarse loamy and sandy over clay to the south.

5.0 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.

Subgrade 3a

5.3 Good quality land covers the southern half of the site with soils being limited by droughtiness and wetness restrictions. Profiles to the south of this area typically comprise stoneless medium sandy loam topsoils over stoneless, gleyed, permeable medium sand upper subsoils, in turn over poorly structured, gleyed slowly permeable clay subsoils, containing approximately 10% hard stones. Soils are well or moderately well drained, falling into Wetness Class I and II. These soils are limited by soil droughtiness. Evidence from a soil pit representative of this soil type (1P) indicates that these soils may contain discontinuous iron pans. Due to the discontinuous and sporadic nature they were not considered to have a significant effect on land quality at this location. Remaining profiles typically comprise stoneless, gleyed, medium sandy loam or medium clay loam topsoils over stoneless, gleyed medium clay loam upper subsoils, in turn over stoneless, poorly structured clay subsoils. Slowly permeable layers occur at varying depths, typically giving rise to imperfectly and poorly drained soils typically falling into Wetness Class III or IV. Soil Pit 2 is typical of these soils. These soils are limited by moderate soil wetness restrictions. In the case of soil variants placed in Wetness Class IV, they have the advantage of workable coarse loamy topsoils.

Subgrade 3b

- 5.4 The remaining agricultural land to the north is of moderate quality. Soil profiles typically comprise stoneless, gleyed medium clay loam topsoils over stoneless, gleyed poorly structured clay subsoils. These soils are poorly drained falling into Wetness Class IV. Slowly permeable layers occur within 35 cm. These soils are limited by significant workability and wetness restrictions.

ADAS Ref: 0201/269/94
MAFF Ref: EL02/388

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1978) Sheet No. 269, Windsor, 1:50,000 scale.

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 6, Soils of South-East England, 1:250,000 scale and accompanying legend.

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.

APPENDIX II

FIELD ASSESSMENT OF SOIL WETNESS CLASS

SOIL WETNESS CLASSIFICATION

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.

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 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.

Soils can be allocated to a wetness class on the basis of quantitative data recorded over a period of many years or by the interpretation of soil profile characteristics, site and climatic factors. Adequate quantitative data will rarely be available for ALC surveys and therefore the interpretative method of field assessment is used to identify soil wetness class in the field. The method adopted here is common to ADAS and the SSLRC.

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

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

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including: 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. 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 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 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. **GLEYSPL** : 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. **GLEYS** : 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 sandstone	GS :	gravel with porous (soft) stones
SI :	soft weathered igneous/metamorphic rock		

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

SOIL PIT DESCRIPTION

Site Name : BRACK.LP.SITE WINK 14 Pit Number : 1P

Grid Reference: SU89707010 Average Annual Rainfall : 0 mm
 Accumulated Temperature : 0 degree days
 Field Capacity Level : 143 days
 Land Use : Permanent Grass
 Slope and Aspect : 01 degrees W

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 37	MSL	25Y 32 00	0	0						
37- 68	MS	10YR73 63	0	0		C	MCSAB	FM	M	
68- 81	MS	10YR73 63	0	0		C	WKMSAB	FM	M	
81-120	C	10YR73 63	0	10	HR	M			P	

Wetness Grade : 1 Wetness Class : II
 Gleying : 037 cm
 SPL : 081 cm

Drought Grade : 3A APW : 107mm MBW : -1 mm
 APP : 081mm MBP : -20 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : BRACK.LP.SITE WINK 14 Pit Number : 2P

Grid Reference: SU89577022 Average Annual Rainfall : 0 mm
 Accumulated Temperature : 0 degree days
 Field Capacity Level : 143 days
 Land Use : Permanent Grass
 Slope and Aspect : 01 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 20	MSL	10YR42 00	0	0		C				
20- 34	MCL	10YR71 00	0	0		M	MCSAB	FR	M	
34- 70	C	10YR71 00	0	0		M	MDMP	FM	P	

Wetness Grade : 3A Wetness Class : IV
 Gleying : 000 cm
 SPL : 034 cm

Drought Grade : 3A APW : 091mm MBW : -17 mm
 APP : 103mm MBP : 2 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Wetness

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--				-WHEAT-		-POTS-		M.REL		EROSN	FROST	CHEM	ALC	COMMENTS
			GRONT	GLEY	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	DIST	LIMIT	
1	SU89407040	PGR W		000	025	4	3B	000	0	000	0				WE	3B	
1P	SU89707010	PGR W	01	037	081	2	1	107	-1	081	-20	3A			DR	3A	FE PANS
2	SU89507040	PGR W		000	035	4	3B	000	0	000	0				WE	3B	
2P	SU89577022	PGR N	01	000	034	4	3A	091	-17	103	2	3A			WE	3A	VARIABLE
3	SU89607040	PGR W	02	000	035	4	3B	000	0	000	0				WE	3B	
4	SU89407030	PGR W		000	065	3	2	123	15	099	-2	2			WD	2	
5	SU89507030	PGR W		000	030	4	3B	000	0	000	0				WE	3B	
6	SU89607030	PGR W		000	060	3	3A	122	14	096	-5	2			WE	3A	
8	SU89407020	PGR NW	02	030	050	3	2	119	11	096	-5	2			WD	2	WET FLUSH ;GDW
9	SU89507020	PGR W		025	038	4	3A	000	0	000	0				WE	3A	
10	SU89607020	PGR W		000	060	3	3A	000	0	000	0				WE	3A	
14	SU89507010	PGR E	02	000	090	1	1	145	37	110	9	2			DR	2	? FE PANS
15	SU89607010	PGR E	02	030	055	3	2	134	26	111	10	2			WD	2	Q-MCL TS?=3A
16	SU89707010	PGR NW	02	025		1	1	125	17	086	-15	3A			DR	3A	
18	SU89707000	PGR NW	02	035		1	1	122	14	092	-9	2			DR	2	Fe PANS 2-3A

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- PED			----STONES-----			STRUCT/	SUBS	SPL	CALC
				COL	ABUN	CONT	COL.	GLE	>2				
1	0-25	mc1	10YR51 00 75YR56 00 C					Y	0	0	0		
	25-70	zc	25Y 71 00 10YR68 00 C					Y	0	0	0	P	Y
1P	0-37	ms1	25Y 32 00						0	0	0		
	37-68	ms	10YR73 63 10YR56 00 C					Y	0	0	0	MCSAB	FM M
	68-81	ms	10YR73 63 10YR56 00 C					Y	0	0	0	WKMSAB	FM M
	81-120	c	10YR73 63 10YR56 00 M					Y	0	0	HR	10	P
2	0-35	mc1	10YR51 00 75YR56 00 C					Y	0	0	0		
	35-70	c	10YR51 00 10YR58 00 M					Y	0	0	0	P	Y
2P	0-20	ms1	10YR42 00 10YR46 00 C					Y	0	0	0		
	20-34	mc1	10YR71 00 75YR58 00 M					Y	0	0	0	MCSAB	FR M
	34-70	c	10YR71 00 75YR58 00 M					Y	0	0	0	MDMP	FM P
3	0-35	mc1	10YR51 00 75YR56 00 C					Y	0	0	HR	1	
	35-70	zc	10YR52 00 10YR58 00 C					Y	0	0	0	P	Y
4	0-30	ms1	10YR51 00 75YR56 00 C					Y	0	0	0		
	30-50	lms	10YR62 00 10YR68 00 C					Y	0	0	HR	2	G
	50-65	sc1	10YR52 00 10YR58 00 C					Y	0	0	0		M
	65-120	c	10YR52 00 10YR58 00 C					Y	0	0	0	P	Y
5	0-30	mc1	10YR51 00 75YR56 00 C					Y	0	0	0		
	30-70	c	25Y 71 00 10YR58 00 C					Y	0	0	0	P	Y
6	0-30	mc1	10YR51 00 75YR56 00 C					Y	0	0	0		
	30-60	lms	10YR61 00 10YR58 00 C					Y	0	0	0		G
	60-120	c	10YR52 00 10YR58 00 C					Y	0	0	0	P	Y
8	0-30	ms1	10YR32 00						0	0	0		
	30-50	lms	10YR51 00 75YR56 00 F					Y	0	0	0		G
	50-120	c	10YR51 00 10YR58 00 C					Y	0	0	0	P	Y
9	0-25	ms1	10YR32 00						0	0	0		
	25-38	ms1	10YR61 00 10YR68 00 C					Y	0	0	0		M
	38-70	c	25Y 71 00 10YR58 00 C					Y	0	0	0	P	Y
10	0-30	mc1	10YR51 00 75YR56 00 C					Y	0	0	0		
	30-60	mc1	25Y 71 00 10YR58 00 M					Y	0	0	0		M
	60-100	c	75Y 71 00 10YR58 00 M					Y	0	0	0	P	Y
14	0-30	ms1	10YR42 00 75YR56 00 F					Y	0	0	0		
	30-90	ms1	10YR52 00 10YR58 00 C					Y	0	0	HR	2	M
	90-120	c	10YR52 00 10YR58 00 C					Y	0	0	0	P	Y
15	0-30	ms1	10YR32 00						0	0	0		
	30-55	mc1	10YR52 00 10YR58 00 C					Y	0	0	0		M
	55-120	c	25Y 71 00 10YR58 00 C					Y	0	0	0	P	Y

?ORGANIC SOME CEMENT LAYERS

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----			STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL.	GLEYS	>2	>6	LITH		TOT	STR	POR	IMP	SPL
16	0-25	ms1	10YR31 00						0	0	0						
	25-90	1ms	10YR61 00	10YR58 00	C				Y	0	0	0			G		
	90-120	sc1	10YR52 00	10YR58 00	C				Y	0	0	0			M		
18	0-35	ms1	10YR32 00						0	0	0						
	35-80	1ms	10YR61 00	10YR68 00	C				Y	0	0	HR	3		G		
	80-100	ms	10YR42 00						Y	0	0	0			G		
	100-120	sc1	10YR42 00	10YR58 00	C				Y	0	0	0			M		