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Lewes District Local Plan
Sites 1 & 2 : Land at Seaford.
ALC Map and Report
May 1995

AGRICULTURAL LAND CLASSIFICATION REPORT

LEWES DISTRICT LOCAL PLAN.
SITES 1 & 2: LAND AT SEAFORD.

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 Lewes District of East Sussex. The work forms part of MAFF's statutory input to the preparation of the Lewes District Local Plan.

1.2 The site comprises approximately 24.5 hectares of land on the north east side of Seaford. An Agricultural Land Classification (ALC) survey was carried out in May 1995. The survey was undertaken at a detailed level of approximately one boring per hectare of agricultural land surveyed. A total of 23 auger borings and one soil inspection pit were described 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 survey work was carried out by members of the Resource Planning Team in the Guildford Statutory Group of ADAS.

1.4 At the time of the survey all the agricultural land on the site was cropped with winter barley. Included within the site boundary is a small recycling centre which has been mapped as urban and three areas of non agricultural land, two of which represent former chalk workings with the remaining area comprising a derelict former nursery.

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
2	11.6	47.3	53.4
3a	8.0	32.7	36.9
3b	2.1	8.6	9.7
Non agricultural	2.4	9.8	100.0 (21.7 ha)
Urban	0.4	1.6	
Total area of site	24.5	100.0	

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 majority of the agricultural land on the site has been classified as Grade 2 and Subgrade 3a, very good and good quality agricultural land, with a small area of Subgrade 3b, moderate quality agricultural confined to the western edge of the site. The major limitation associated with this site is soil droughtiness, with the severity of the limitation being governed by the depth to the underlying chalk strata. The chalk is generally covered by deep fine loamy soils which are moderately stony in the subsoil. The chalk is generally encountered at shallower depths over the western and southern parts of the site, with the shallowest area being restricted to the western edge of the site, where the land has been classified as Subgrade 3b. A further limitation to the agricultural quality of the land on this western edge of the site is caused by moderately steep slopes (slopes in excess of 7°). Elsewhere on the site the chalk is encountered deeper in the soil profile. The soil droughtiness limitation is therefore less pronounced allowing land to be assigned to Grade 2 and Subgrade 3a.

2. Climate

2.1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe climatic 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 grid point 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 However, climatic factors do interact with soil factors to influence soil wetness and droughtiness limitations. The climate at this location is relatively warm and moist in a regional context and moderately high moisture deficits are common, therefore the likelihood of a wetness or droughtiness limitation may be enhanced depending on the soil conditions.

2.4 No local climatic factors such as exposure or frost risk are believed to affect the site significantly.

Table 2 : Climatic Interpolations

Grid Reference	TQ 499 006
Altitude (m)	60
Accumulated Temperature (Day °C, Jan-June)	1469
Average Annual Rainfall (mm)	767
Field Capacity (days)	163
Moisture Deficit, Wheat (mm)	115
Moisture Deficit, Potatoes (mm)	110
Overall Climatic Grade	1

3. Relief

3.1 The site is located on the southern side of the South Downs and the majority of the area comprises gently sloping land. The altitude of the site ranges from approximately 50-70 m AOD and the land generally has a south westerly aspect. The extreme western part of the site forms the side of a dry valley and the land falls more steeply, with slopes of 7-8° measured in this area. Relief on the site therefore does not impose any limitation to the agricultural use, with the exception of a small area at the western edge of the site where the steeper slopes occur.

4. Geology and Soil

4.1 The published geological map (BGS, 1979) shows the site to be underlain by Upper and Middle Chalk with the central part overlain by a veneer of Clay-with-Flints.

4.2 The published Soil Survey map (SSEW, 1983) shows the area to comprise soils of the Andover 1 association, which are described as 'shallow, well drained, silty soils over chalk'. Areas of Marlow association are also mapped in close proximity to the site. These soils are described as 'well drained fine loamy over clayey soils developed in plateau drift'.

4.3 Detailed field examination showed the majority of the site to comprise flinty, fine loamy over clayey soils overlying chalk. A typical soil profile has a medium clay loam or silty clay loam topsoil over a heavy clay loam upper subsoil. Below approximately 50-60 cm depth the soil texture is clay with common manganiferrous concretions. The topsoils are generally slightly flinty but become stonier in the subsoil horizons. The underlying chalk was encountered in the soil profile on the lower lying land to the south and west of the site.

4.4 On the steeper sloping land on the extreme western side of the site, shallow silty soils overlying chalk were encountered. These soils typically have a medium silty clay loam topsoil directly overlying weathered chalk. The topsoils generally contain an appreciable amount of small chalk stones in addition to the flints as a result of the plough hitting the underlying chalk.

5. Agricultural Land Classification

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

Grade 2

5.2 The majority of the site has been classified as Grade 2 due to a minor soil droughtiness limitation. Moisture balance calculations indicate that under the prevailing climatic conditions these fine loamy over clayey soils are slightly droughty restricting the land to Grade 2. In addition due to the relatively moist conditions that occur in this area, the land is also restricted to Grade 2 due to the presence of a medium clay loam topsoil, which restricts its workability during the wetter periods of the year.

Subgrade 3a

5.3 A small area of Subgrade 3a has been identified on the lower lying land on the south side of the site where shallower soils overlying chalk have been mapped. The presence of the underlying chalk restricts the rooting depth of the crops and results in a reduction of the plant available water. Moisture balance calculations indicate that these soils are moderately droughty especially for deeper rooting crops such as wheat restricting the land to this subgrade.

Subgrade 3b

5.4 Two areas of Subgrade 3b has been mapped on the western side of the site where shallow soils overlying chalk have been mapped on the steeper sloping land of the dry valley side slopes. Moisture balance calculations indicate that these soils, which are described in paragraph 4.4 above, have a moderately severe droughtiness limitation restricting the land to this subgrade. A further restriction to the agricultural quality of the land are the moderately steep slopes that occur in this area which may cause difficulties to some farming operations and give rise to an increased risk of soil erosion.

SOURCES OF REFERENCE

British Geological Survey (1979), Sheet No 334 Eastbourne, 1:50,000 Series (solid and 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), Climatological Data for Agricultural Land Classification.

Soil Survey of England and Wales (1983), Sheet 6, Soils of South East England, 1:250,000 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.

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

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.

[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 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. **GLEY/SPL** : Depth in centimetres (cm) to gleying and/or slowly permeable layers.

5. **AP (WHEAT/POTS)** : Crop-adjusted available water capacity.

6. **MB (WHEAT/POTS)** : Moisture Balance. (Crop adjusted AP - crop adjusted MD)

7. **DRT** : Best grade according to soil droughtiness.

8. If any of the following factors are considered significant, 'Y' will be entered in the relevant column.

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

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

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

Soil Pits and Auger Borings

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

S :	Sand	**LS** :	Loamy Sand	**SL** :	Sandy Loam
SZL :	Sandy Silt Loam	**CL** :	Clay Loam	**ZCL** :	Silty Clay Loam
ZL :	Silt Loam	**SCL** :	Sandy Clay Loam	**C** :	Clay
SC :	Sandy Clay	**ZC** :	Silty Clay	**OL** :	Organic Loam
P :	Peat	**SP** :	Sandy Peat	**LP** :	Loamy Peat
PL :	Peaty Loam	**PS** :	Peaty Sand	**MZ** :	Marine Light Silts

For the sand, loamy sand, sandy loam and sandy silt loam classes, the predominant size of sand fraction will be indicated by the use of the following prefixes:

F : Fine (more than 66% of the sand less than 0.2mm)
M : Medium (less than 66% fine sand and less than 33% coarse sand)
C : Coarse (more than 33% of the sand larger than 0.6mm)

The clay loam and silty clay loam classes will be sub-divided according to the clay content: **M** : Medium (<27% clay) **H** : Heavy (27-35% clay)

2. **MOTTLE COL** : Mottle colour using Munsell notation.

3. **MOTTLE ABUN** : Mottle abundance, expressed as a percentage of the matrix or surface described.

F : few <2% **C** : common 2-20% **M** : many 20-40% **VM** : very many 40% +

4. **MOTTLE CONT** : Mottle contrast

F : faint - indistinct mottles, evident only on close inspection
D : distinct - mottles are readily seen
P : prominent - mottling is conspicuous and one of the outstanding features of the horizon

5. **PED. COL** : Ped face colour using Munsell notation.

6. **GLEY** : If the soil horizon is gleyed a 'Y' will appear in this column. If slightly gleyed, an 'S' will appear.

7. **STONE LITH** : Stone Lithology - One of the following is used.

HR :	all hard rocks and stones	**SLST** :	soft oolitic or dolimitic limestone
CH :	chalk	**FSST** :	soft, fine grained sandstone
ZR :	soft, argillaceous, or silty rocks	**GH** :	gravel with non-porous (hard) stones
MSST :	soft, medium grained 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).

8. **STRUCT** : the degree of development, size and shape of soil peds are described using the following notation:

degree of development	**WK** : weakly developed **ST** : strongly developed	**MD** : moderately developed
ped size	**F** : fine **C** : coarse	**M** : medium **VC** : very coarse
ped shape	**S** : single grain **GR** : granular **SAB** : sub-angular blocky **PL** : platy	**M** : massive **AB** : angular blocky **PR** : prismatic

9. **CONSIST** : Soil consistence is described using the following notation:

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

10. **SUBS STR** : Subsoil structural condition recorded for the purpose of calculating profile droughtiness : **G** : good **M** : moderate **P** : poor

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

12. **IMP** : If the profile is impenetrable to rooting a 'Y' will appear in this column at the appropiate horizon.

13. **SPL** : Slowly permeable layer. If the soil horizon is slowly permeable a 'Y' will appear in this column.

14. **CALC** : If the soil horizon is calcareous, a 'Y' will appear in this column.

15. Other notations
APW : available water capacity (in mm) adjusted for wheat
APP : available water capacity (in mm) adjusted for potatoes
MBW : moisture balance, wheat
MBP : moisture balance, potatoes

SOIL PIT DESCRIPTION

Site Name : LEWES LP, SITES 1 & 2 Pit Number : 1P

Grid Reference: TQ50000050
Average Annual Rainfall : 763 mm
Accumulated Temperature : 1480 degree days
Field Capacity Level : 162 days
Land Use : Cereals
Slope and Aspect : 02 degrees SW

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 33	MZCL	10YR44 00	4	8	HR					Y
33- 60	MZCL	10YR46 00	0	25	HR		WKCSB	FR	M	Y
60-120	C	75YR56 00	0	15	HR	C	WVCSB	FM	M	

Wetness Grade : 2
Wetness Class : II
Gleying : cm
SPL :060 cm

Drought Grade : 2
APW : 129mm MBW : 13 mm
APP : 107mm MBP : -5 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Soil Wetness/Droughtiness

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	M.REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
	TQ49600080	CER	W	06			1	1	082	-34	088	-24	3B				DR	3B	
1P	TQ50000050	CER	SW	02	060		2	2	129	13	107	-5	2				WD	2	SL. GLEY60
2	TQ49700080	CER	W	04			1	1	115	-1	114	2	3A				DR	3A	
	TQ49800080	CER	SW	02	050		3	3A	130	14	111	-1	2				WE	3A	SL. GLEY50
	TQ49600070	CER	W	05			1	1	068	-48	068	-44	3B				DR	3B	
6	TQ49700070	CER	SW	02	070		2	2	000	0	000	0					WD	2	SL. GLEY70
	TQ49800070	CER	SW	02			1	1	000	0	000	0					DR	2	SEE 1P
8	TQ49900070	CER	S	02	055		3	3A	000	0	000	0					WE	3A	SL. GLEY55
9	TQ50000070	CER	SW	03			1	1	000	0	000	0					DR	2	SEE 1P
	TQ49600060	CER	SW	03			1	1	126	10	105	-7	2				DR	2	
11	TQ49700060	CER	SE	03	050		3	3A	000	0	000	0					WE	3A	SL. GLEY55
	TQ49800060	CER	SE	02			1	1	095	-21	101	-11	3B				DR	2	SEE 1P
	TQ49900060	CER	SW	03			1	1	000	0	000	0					DR	2	SEE 1P
14	TQ50000060	CER	S	03	050		3	3A	000	0	000	0					WE	3A	
15	TQ50100060	CER	S	03			3	3B	000	0	000	0					WE	3B	SL. GLEY50
16	TQ49600050	CER	SE	04			1	1	089	-27	096	-16	3B				DR	3B	
17	TQ49700050	CER	S	05	050		3	3B	108	-8	108	-4	3A				WE	3B	SL. GLEY50
	TQ49800050	CER	W	02			1	1	000	0	000	0					DR	2	SEE 1P
	TQ49900050	CER	SW	02			1	1	000	0	000	0					DR	2	SEE 1P
20	TQ50000050	CER	SW	02			1	1	000	0	000	0					DR	2	SEE 1P
	TQ50100050	CER	S	03			1	1	148	32	117	5	2				DR	2	SL. GLEY105
23	TQ49900040	CER	SW	02			1	1	117	1	099	-13	3A				DR	3A	
24	TQ50000040	CER	S	02			1	1	100	-16	102	-10	3A				DR	3A	SL. GLEY55
	TQ49930031	CER	SW	02			1	1	000	0	000	0					DR	3A	

				----MOTTLES-----			PED		----STONES----				STRUCT/	SUBS				
MPLE	DEPTH	TEXTURE	COLOUR	COL	ABUN	CONT	COL.	GLEY	>2	>6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC	
1	0-23	mzcl	10YR44 00						5	0	HR	10						Y	
	23-45	hzcl	10YR72 00						0	0	CH	85		M				Y	
	45-70	ch	10YR81 00						0	0	HR	5		P				Y	
1P	0-33	mzcl	10YR44 00						4	2	HR	8						Y	
	33-60	mzcl	10YR46 00						0	0	HR	25	WKCSB	FR	M			Y	
	60-120	c	75YR56 00	00MN00	00	C		S	0	0	HR	15	WVCSB	FM	M		Y		
2	0-30	mzcl	10YR44 00						6	0	HR	8						Y	
	30-70	hzcl	75YR45 00						0	0	HR	10		M				Y	
	70-90	ch	10YR81 00						0	0	HR	5		P				Y	
3	0-30	mzcl	10YR44 00						4	0	HR	6						Y	
	30-50	hzcl	10YR46 00						0	0	HR	12		M					
	50-120	c	75YR55 00	00MN00	00	C		S	0	0	HR	18		M			Y		
5	0-25	mzcl	10YR44 00						8	3	HR	15						Y	
	25-30	zc	75YR46 00						0	0	HR	10		M				Y	
	30-50	hzcl	10YR81 00						0	0	CH	85		P				Y	IMP CHALK
6	0-28	mzcl	10YR44 00						4	0	HR	6						Y	
	28-70	hzcl	10YR46 00						0	0	HR	7		M					
	70-80	c	75YR55 00	00MN00	00	C		S	0	0	HR	15		M			Y		IMP FLINTS
7	0-30	mzcl	10YR44 00						5	0	HR	7						Y	
	30-45	mzcl	75YR46 00						0	0	HR	20		M					IMP FLINTS
8	0-28	mzcl	10YR44 00						4	0	HR	6						Y	
	28-55	mzcl	10YR46 00						0	0	HR	10		M					
	55-80	c	75YR46 00	00MN00	00	C		S	0	0	HR	10		M			Y		IMP FLINTS
9	0-30	mzcl	10YR43 00						4	0	HR	6						Y	
	30-50	mcl	10YR46 00						0	0	HR	10		M					IMP FLINTS
10	0-30	mcl	10YR44 00						7	0	HR	10						Y	
	30-45	hcl	10YR46 00						0	0	HR	15		M					
	45-120	c	75YR55 00						0	0	HR	12		M					
11	0-30	mzcl	10YR44 00						5	0	HR	8						Y	
	30-50	hcl	10YR46 00						0	0	HR	17		M					
	50-70	c	75YR55 00	00MN00	00	C		S	0	0	HR	15		M			Y		
12	0-30	mzcl	10YR44 00						3	0	HR	4						Y	
	30-60	mzcl	10YR46 00						0	0	HR	10		M					IMP FLINTS
13	0-30	mzcl	75YR44 00						3	0	HR	5						Y	
	30-65	mzcl	75YR55 00						0	0	HR	8		M					IMP FLINTS