3303 - 123 - 92

AGRICULTURAL LAND CLASSIFICATION
MAPLEDURHAM
OXFORDSHIRE

DECEMBER 1992

ADAS Ref 3303/123/92
MAFF Ref EL 6832

Resource Planning Team
ADAS Statutory Group
Reading

AGRICULTURAL LAND CLASSIFICATION

LAND AT MAPLEDURHAM, OXFORDSHIRE

1 INTRODUCTION

1 1 In November 1992 an Agricultural Land Classification (ALC) survey was carried out on approximately 185 hectares of land at Mapledurham Oxfordshire ADAS was commissioned by MAFF to determine the quality of land in connection with a proposal for a change of land use to a golf course with associated amenities

1 2 The survey work was carried out using a hand held Dutch soil auger and sampling at 100 metre intervals Five soil inspection pits were also dug to assess subsoil conditions Both the auger borings and soil inspection pits were described using 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 the survey the land was in a variety of uses including cereals set aside ley permanent grassland and recently ploughed

1 3 The distribution of the grades and subgrades is shown on the attached ALC map and the areas are given in the table below The map has been drawn to a scale of 1 10 000 Any enlargement of this scale would be misleading

Table 1 Distribution of Grades and Subgrades

Grade	Area (ha)		% of agricultural land	
2	36 52	19.7	22	21.9
3A	97 47	52.7	59	58.6
3B	32 32	17.5	19	19.4
Non agricultural land	8 93	4.8	100%	(166 31 ha)
Woodland	9 54	5.1		
Urban	0 3	0.2		
Total area of site	185 08	100		

A general description of the ALC grades and subgrades and land cover categories is attached

1 4 The majority of the site has been graded as 3A and is typically limited by droughtiness due to a combination of soil textures and profile stone content A smaller area to the north of the site experiences subsoil wetness problems Additionally topsoil stone volume limits land to this grade

1 5 Smaller areas of deep clayey soils have been classed as Grade 2 due to a slight droughtiness limitation and topsoil stone volumes

1 6 The rema nder of the site is graded as 3B limited by slope in excess of 7 and by topsoil stone volumes

2 PHYSICAL FACTORS AFFECTING LAND QUALITY

Altitude and Relief

2 1 The site comprises land at an altitude of 70 100 m AOD sloping gently east-west A dry valley develops in the vicinity of Pithouse Farm and runs through the central area of the site before joining the Thames river valley to the south The slopes of this dry valley are above 7 and limit this land to subgrade 3B

Climate

2 2 Climate data for the site was obtained by interpolation from a 5 KM grid dataset (Met Office 1989) for a representative location in the survey area

Climatic Interpolation

Grid Reference	SU 691766	SU 683767
Altitude (m)	70	99
Accumulated Temperature (day)	1443	1410
Annual Average Rainfall (mm)	691	703
Field Capacity Days	144	146
Moisture Deficit - wheat (mm)	110	106
Moisture Deficit - potatoes (mm)	103	98

2 3 These climatic characteristics do not impose any climatic limitation on the ALC grading of the site However both climate and soil factors interact to affect soil droughtiness and wetness limitations

Geology and Soils

2 4 The published 1 63 360 scale British Geological Survey sheet 268 (1904) shows the majority of the site to be mapped as Plateau Gravel Cretaceous Upper Chalk is mapped in the valley bottom Eocene Reading Beds on the valley sides and land at higher altitude The published 1 250 000 scale soils map sheet 6 Soils of South East England shows the site to be mapped predominantly as Hornbeam 1 Association fine and coarse loamy over clayey To the South of the site Upton 1 Association is mapped shallow often extremely calcareous grey rendzinas (SSEW 1984) A detailed examination of the soils indicates the occurrence of coarse loamy and fine loamy over clayey soils

3 AGRICULTURAL LAND CLASSIFICATION

Grade 2

3 1 Very good quality agricultural land has been mapped in several areas across the site Profiles consist of slightly stony non calcareous medium clay loam medium sandy loam or medium silty clay loam topsoils Upper subsoils are non-calcareous and variable in texture though typically comprise medium and heavy clay loam and clay Stone content is very variable very slightly to moderately stony (2-20% by volume flints) Lower subsoils typically consist of non calcareous clay occasionally sandy clay or heavy clay loam Stone content is very

slightly to moderately stony (2-25% by volume flints) Profiles are well drained wetness class I occasionally wetness class II The heavy textures and stone contents in combination with relatively high moisture deficits limit the land to grade 2 on droughtiness Topsoil stone volumes between 5 10% >2 cm (flints) also limit the land to this grade in places

Subgrade 3a

Land of this quality covers the majority of the site Profiles typically comprise non-calcareous medium clay loam occasionally medium sandy loam topsoils which are very slightly to moderately stony Upper subsoils consist of non calcareous medium clay loam sandy clay loam or medium sandy loam sometimes passing into loamy medium sand Stone content is very variable between 5-40% flints by volume Lower subsoils become heavier in texture typically comprising clay or sandy clay loam which are very slightly to moderately stony 3 30% flints by volume

Land is limited to subgrade 3a primarily due to moderate droughtiness limitations associated with the lighter textures and profile stone contents

A smaller area north of Rose Farm experiences subsoil wetness problems It was felt appropriate to give a wetness class of II to this land soil profiles being wet within 70 cm depth for 31-90 days in most years In places topsoil stone volumes between 11 13% >2 cm also limit the land to subgrade 3A Some higher quality grade 2 profiles were found but due to their limited extent and sporadic nature these were included in this 3A map unit

Subgrade 3B

Moderate quality agricultural land is associated with a dry valley feature in the central area of the site Slope angles between 7 5 9 limit this land to subgrade 3B Also topsoil stone volumes between 17 30% >2 cm (flints) limit land to the same subgrade and are associated with the upper slopes and plateau bordering the valley feature

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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

Sub grade 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 re claimed 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 sclae 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

Sources of Reference

BRITISH GEOLOGICAL SURVEY 1904 Sheet 268 1 63 360 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 Datasets for Agricultural Land Classification

SOIL SURVEY OF ENGLAND AND WALES 1983 Sheet 6 Soils of South Eastern England 1 250 000 scale

SOIL SURVEY OF ENGLAND AND WALES 1984 Bulletin 15 Soils and their use in South East England

APPENDIX III

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 IV

SOIL PIT AND SOIL BORING DESCRIPTIONS

Contents

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 peds are described using the following notation:

- degree of development **WK** : weakly developed **MD** : moderately developed **ST** : strongly developed

- ped size **F** : fine **M** : medium **C** : coarse **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 appropiate 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 MAPLEDURHAM OXON Pit N mber 1P

G id Reference SU69457595 A erage Annual Rainfall 691 mm
Acc mul ted Tempe at 1443 degree days
Field Capa ity Le el 144 d ys
Land Use A able
Slope and Aspect 01 degree S

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	MOTTLES	STRUCTURE
0 30	MCL	10YR42 00	2	7		
30 55	MCL	75YR43 00	0	4		MCSAB
55 70	C	75YR54 00	0	2		MCSAB
70 120	C	75YR56 00	0	25		

Wet ess Grade 1 Wet ess Class I
Gleying 000 cm
SPL No SPL

Dro ght G de 2 APW 128mm MBW 18 mm
APP 112mm MBP 9 mm

FINAL ALC GRADE 2
MAIN LIMITATION Dro ghtiness

SOIL PIT DESCRIPTION

S te Name MAPLEDURHAM OXON Pıt N mber 2P

Grid Refe e ce SU69357570 A erage Annual Rainfall 691 mm
Accum lated Tempe at e 1443 degree d ys
F eld Cap ty L el 144 days
La d Use A able
Slope a d A pect 01 deg ees S

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	MOTTLES	STRUCTURE
0 30	MCL	10YR42 00	17	22		
30 48	MCL	75YR43 44	0	45		
48 58	MCL	75YR56 00	0	55		
58 120	HCL	75YR56 58	0	45		

Wet ss G d 1 Wet ess Class I
Gl yi g 000 cm
SPL No SPL

D ought G ade 3A APW 100mm MBW 10 mm
APP 078mm MBP 25 mm

FINAL ALC GRADE 3B
MAIN LIMITATION Topso 1 Sto s

SOIL PIT DESCRIPTION

S te Name MAPLEDURHAM OXON P t N mbe 3P

G id Refe e ce SU69107595 A e age A al Ra nfall 691 mm
Acc lated Tempe t 1443 deg ee days
Field Capa ity L el 144 days
Land Use Ba é Soil
Slope and Aspect 02 degrees S

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	MOTTLES	STRUCTURE
0 35	MSL	10YR42 00	9	18		
35 120	MSL	75YR43 00	0	20		

Wet ess G ade 1 W t s Cl ss I
Gleying 000 cm
SPL No SPL

D ought G ade APW 130mm MBW 20 mm
APP 920mm MBP 11 mm

INAL ALC GRADE 3A
MAIN LIMITATION D ght s

SOIL PIT DESCRIPTION

Site Name MAPLEDURHAM OXON Pit N mbe 4P

Grid Ref rence SU68127728 A erage Ann al Rainfall 691 mm
A m l ted Tempe t re 1443 degree days
Field Capacity Le el 144 days
La d Use Arable
Slope a d Aspect 01 deg ees NE

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	MOTTLES	STRUCTURE
0 26	MCL	10YR42 00	9	13		
26 43	MSL	10YR44 00	0	25		
43 85	LMS	75YR54 56	0	30		
85 120	C	75YR53 00	0	20	C	

Wetness Grade 1 Wet ess Class I
Gleying 085 cm
SPL No SPL

D ought G ade 3A APW 096mm MBW 14 mm
APP 075mm MBP 28 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Dro ghtiness

SOIL PIT DESCRIPTION

Site Name MAPLEDURHAM OXON P t N mbe 5P

G id Reference SU68407740 A erage A l Rainfall 691 mm
Acc mul ted Temper t 1443 degree day
Fi ld Capac ty Le el 144 days
L d Use Cereals
Slope a d Aspect 02 degrees NE

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	MOTTLES	STRUCTURE
0 28	MCL	10YR42 00	8	12		
28 60	HCL	10YR44 00	0	17		MDCSAB
60 105	C	75YR56 00	0	15		MDCSAB
105 120	C	75YR54 56	0	25		

Wet ess G ade 1 Wet ess Class I
Gleying 000 cm
SPL N SPL

D o ght G de 2 APW 123mm MBW 13 mm
APP 101mm MBP 2 mm

FINAL ALC GRADE 2
MAIN LIMITATION D o ghtiness

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WETNESS GRADE	WHEAT AP	WHEAT MB	POTS AP	POTS MB	M REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
P	SU69457595	ARA	S	01	000		1	1	128	18	112	9	2				DR	2	
2	SU68407760	CER	NE	02	000		1	1	083	27	085	18	3B				DR	3B	PROB 2
2P	SU69357570	ARA	S	01	000		1	1	100	10	078	25	3A				ST	3B	17 TSST
	SU68507760	CER	S	02	000		1	1	052	58	052	51	4				ST	3B	TSST
3P	SU69107595	PLO	S	02	000		1	1	130	20	920	11	3A				DR	3A	DEEP MSL
	SU68607760	CER	S	01	000		1	1	073	37	077	26	3B				ST	3B	TSST
P	SU68127728	ARA	NE	01	085		1	1	096	14	075	28	3A				DR	3A	
5	SU68207750	ARA	N	02	000		1	1	099	11	101	2	3A				ST	3A	IMP 80
5P	SU68407740	CER	NE	02	000		1	1	123	13	101	2	2				DR	2	
	SU68307750	ARA	N	02	000		1	1	095	15	098	5	3A				DR	3A	IMP 75
7	SU68407750	CER	NE	02	000		1	1	125	15	108	5	2				DR	2	
	SU68507750	CER	S	02	000		1	1	092	18	106	3	3A				DR	3A	IMP 70 2DR IF
	SU68707750	CER	S	01	000		1	1	130	20	092	11	3A				ST	3B	TSST
11	SU68807750	SAS	S		000		1	1	055	55	055	48	4				ST	3B	TSST
	SU68107740	ARA	NE	01	000		1	1	079	31	086	17	3B				DR	3B	PROB 3A
15	SU68307740	CER	NE	01	000		1	1	125	15	093	10	3A				DR	3A	
17	SU68507740	CER	NE	02	000		1	1	143	33	115	12	1				DR	1	
	SU68907740	SAS	S		000		1	1	070	40	074	29	3B				ST	3B	TSST
23	SU68007730	ARA	NE	01	000		1	1	000	0	000	0					ST	3A	IMP 40
25	SU68207730	ARA	NE	01	000		1	1	060	50	060	43	3B				DR	3B	IMP 40
	SU68307730	CER	N	01	000		1	1	127	17	108	5	2				DR	2	
27	SU68407730	CER	NE	02	000		1	2	124	14	103	0	2				DR	2	NOSPL
29	SU68607730	SAS	N	05	025	025	4	3B	074	36	080	23	3B				WE	3B	SPL 35
	SU68907730	SAS	SW	02	025	025	4	3B	079	31	090	13	3B				WE	3B	WEDR ST
33	SU69007730	SAS	S	02	070	070	2	1	113	3	089	14	3A				ST	3B	TSST
	SU68107720	ARA	NE	01	000		1	1	116	6	087	16	3A				DR	3A	
	SU68207720	ARA	N		055	055	2	2	093	17	096	7	3A				DR	3A	
37	SU68307720	CER	NE	02	065	065	2	2	103	7	108	5	3A				DR	3A	
39	SU68507720	SAS	N	02	000		1	1	000	0	000	0					ST	3B	TSST
	SU68907720	ARA	N		000		1	1	116	6	107	4	2				DR	2	NO CH
46	SU69207720	SAS	S		000		1	1	000	0	000	0					ST	3B	18 ST
	SU68007710	SCR	N		000		1	1	058	52	058	45	4				DR	4	IMP 40
50	SU68207710	CER	N	02	000		1	1	135	25	110	7	2				DR	2	NO SPL
51	SU68307710	CER	N	02	054	054	2	2	128	18	106	3	2				WE	2	WEDR
	SU68607710	ARA	N		000	000	1	1	000	0	000	0					ST	3B	VWET 40
56	SU68807710	ARA	N	02	000		1	1	000	0	000	0					ST	3B	IMP 30
58	SU69407710	SAS	S	03	000		1	1	128	18	105	2	2				DR	2	
	SU68107700	CER	N	02	000		1	1	128	18	104	1	2				ST	3A	
66	SU68307700	CER	N	02	027	027	4	3B	077	33	082	21	3B				WE	3B	SPL 27
68	SU68507700	CER	N		000		1	1	070	40	070	33	3B				ST	3A	VWET 50
	SU68707700	ARA	N		000		1	1	000	0	000	0					ST	3B	IMP 40
76	U69307700	LEY	S	02	000		1	1	129	19	107	4	2				DR	2	

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WETNESS GRADE	WHEAT AP	WHEAT MB	POTS AP	POTS MB	M REL DRT	EROSN FLOOD	FROST EXP	CHEM DIST	ALC LIMIT	COMMENTS
77	SU69407700	SAS	S	02	000		1	1	134	24	111	8	2				DR 2	
79	SU68207690	CER	NW	02	000		1	1	074	36	074	29	3B				ST 3A	VWET 60
80	SU68307690	CER	N	02	080	080	1	1	124	14	106	3	2				DR 2	
81	SU68407690	CER	N	02	000		1	1	091	19	101	2	3A				DR 3A	IMP 70
83	SU68607690	ARA			000		2	2	000	0	000	0					WE 2	VWET 50
86	SU68857692	ARA	N	02	055	055	2	2	126	16	105	2	2				WE 2	SPL 55
89	SU69207690	ARA	S	02	000		1	1	078	32	078	25	3B				DR 3A	IMP 50
90	SU69307690	ARA	S	02	000		1	1	132	22	099	4	2				DR 2	
91	SU69407690	CER	S		000		1	1	106	4	105	2	3A				DR 3A	IMP 85
92	SU69507690	CER	S	01	000		1	1	096	14	104	1	3A				DR 3A	IMP 72
94	SU68307680	CER	NW	02	000		1	1	138	28	104	1	2				DR 2	
96	SU68507680	CER			000		1	1	103	7	101	2	3A				ST 3A	VWET 65
100	SU69107680	ARA	N	02	000		1	1	149	39	113	10	2				DR 2	
101	SU69207680	LEY			000		1	1	102	8	105	2	3A				DR 2	IMP Q
102	SU69307680	LEY			000		1	1	085	25	090	13	3B				DR 3A	IMP Q
103	SU69407680	CER	S	01	080	080	1	1	125	15	095	8	2				DR 2	
104	SU69507680	CER	S	01	000		1	1	088	22	093	10	3B				DR 3B	PROB 3A
106	SU68407670	CER			000		1	1	000	0	000	0					ST 3A	VWET 60
110	SU69207670	ARA	N	01	000		1	1	112	2	092	11	3A				DR 3A	
111	SU69307670	LEY			000		1	1	062	48	062	41	3B				DR 3B	VSTONSUB
112	SU69407670	CER	N	02	000		1	1	093	17	101	2	3A				DR 3A	IMP
113	SU69507670	CER	N	02	000		1	1	128	18	098	5	2				DR 2	
116	SU69207660	LEY			000		1	1	080	30	083	20	3B				DR 3A	IMPX2 Q
117	SU69307660	LEY			000		1	1	102	8	099	4	3A				DR 3A	IMP Q
118	SU69407660	CER	N	01	000		1	1	073	37	078	25	3B				DR 3B	IMP 65
119	SU69507660	CER	N	01	000		1	1	097	13	083	20	3A				DR 3A	
120	SU69607660	CER	N	01	000		1	1	074	36	074	29	3B				DR 3B	PROB 3A
122	SU69207650	ARA	S	01	000		1	1	090	20	089	14	3A				DR 3A	IMP 85
123	SU69307650	LEY			000		1	1	141	31	101	2	2				DR 2	DEEP MSL
124	SU69407650	CER	N		000		1	1	076	34	080	23	3B				DR 3B	IMP 65
125	SU69507650	CER	N		000		1		069	41	072	31	3B				DR 3B	IMP 65
126	SU69607650	CER	N		000		1	1	084	26	090	13	3B				DR 3B	IMP 70
127	SU69207640	ARA	N	02	000		1	1	057	53	059	44	4				DR 3B	IMP 60
128	SU69307640	ARA	N	02	000		1	1	132	22	109	6	2				DR 2	NO SPL
130	SU69507640	CER	N	01	000		1	1	096	14	111	8	3A				DR 3A	IMP 70
131	SU69607640	CER	N	01	000		1	1	146	36	110	7	2				DR 2	NO SPL
132	SU69107630	LEY			000		1	1	092	18	100	3	3A				DR 3A	IMPX2 Q
133	SU69207630	ARA	N	02	000		1	1	144	34	102	1	2				DR 2	
134	SU69307630	ARA			000		1	1	080	30	066	37	3B				DR 3B	MS 55
135	SU69407630	PAS	S		000		1	1	065	45	065	38	3B				DR 3A	IMP 45
136	SU69507630	PAS	S		000		1	1	058	52	058	45	4				DR 3A	IMP 40
137	U69007620	LEY			000	040	3	3A	128	18	105	2	2				WE 3A	RED FIG7

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WETNESS GRADE	WHEAT AP	WHEAT MB	POTS AP	POTS MB	M REL DRT	EROSN FLOOD	FROST EXP	CHEM DIST	ALC LIMIT	ALC	COMMENTS
13[illegible]	SU69107620	LEY			000		1	1	087	23	092	11	3B				DR	3A	IMP Q
139	SU69207620	LEY			000		1	1	054	56	054	49	4				DR	3B	IMPX2 Q
140	SU69307620	LEY			000		1	1	153	43	115	12	1					1	
14[illegible]	SU69407620	ARA	S		000		1	1	101	9	086	17	3A				DR	3A	
14[illegible]	SU69107610	LEY			000		1	1	104	6	105	2	3A				DR	3A	WC1 CLAY
14[illegible]	SU69207610	LEY			000		1	1	074	36	074	29	3B				DR	3B	IMP Q
14[illegible]	SU69407610	ARA	S	02	000		1	1	135	25	107	4	2				DR	2	DEEP CL
147	SU69507610	ARA	S	01	000		1	1	112	2	099	4	3A				DR	3A	IMP 80
148	SU69607610	ARA	S	01	000		1	1	059	51	059	44	4				DR	3B	IMP 40
15[illegible]	SU69107600	LEY			000		1	1	046	64	046	57	4				WE	3B	IMPX2 Q
151	SU69207600	LEY			000		1	1	089	21	070	33	3B				DR	3B	DEEP LMS
[illegible]	SU69307600	LEY			000		1	1	061	49	061	42	3B				DR	3B	IMPX2 Q
15[illegible]	SU69407600	SAS	S	03	060	060	2	2	125	15	105	2	2				WE	2	WEDR
154	SU69507600	SAS	S	03	000		1	1	145	35	109	6	2				DR	2	NO SPL
15[illegible]	SU69607600	ARA	S	02	000		1	1	133	23	110	7	2				DR	2	
157	SU69107590	ARA			000		1	1	128	18	105	2	2				DR	2	WC1 CLAY
159	SU69307590	ARA			000		1	1	128	18	105	2	2				DR	2	WC1 CLAY
16[illegible]	SU69407590	SAS	S	02	000		1	1	141	31	107	4	2				DR	2	
16[illegible]	SU69507590	SAS	S	02	000		1	1	117	7	112	9	2				DR	2	IMP 90
162	SU69607590	SAS	S	01	000		1	1	146	36	113	10	2				DR	2	
16[illegible]	SU69007580	ARA			000		1	1	129	19	106	3	2				DR	2	DEEPCLAY
164	SU69107580	ARA			000		1	1	131	21	108	5	2				DR	2	WC1 CLAY
166	SU69307580	ARA			000		1	1	139	29	114	11	2				DR	2	WC1 CLAY
16[illegible]	SU69407580	ARA			000		1	1	108	2	112	9	3A				DR	2	IMPX2 Q
168	SU69507580	SAS			000		1	1	072	38	074	29	3B				DR	3B	IMP 55
16[illegible]	SU69607580	SAS	E	02	000		1	1	106	4	091	12	3A				DR	3A	
17[illegible]	SU69007570	ARA			000		1	1	134	24	102	1	2				DR	2	Q TOPSTN
171	SU69107570	ARA			000		1	1	081	29	086	17	3B				DR	3A	IMP Q
17[illegible]	SU69207570	ARA			000		1	1	080	30	080	23	3B				DR	3B	IMP Q
17[illegible]	SU69307570	ARA			000		1	1	055	55	055	48	4				DR	3B	IMPX2 Q
174	SU69407570	ARA			000		1	1	106	4	107	4	3A				DR	3A	IMP Q
17[illegible]	SU69507570	SAS			000		1	1	133	23	107	4	2				DR	2	NO SPL
17[illegible]	SU69507560	SAS			000		1	1	097	13	084	19	3A				DR	3A	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	PED GLEY	STONES 2	STONES 6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
1P	0 30	mcl	10YR42 00						2	0	HR	7						
	30 55	mcl	75YR43 00						0	0	HR	4	MCSAB FR	M	Y			
	55 70	c	75YR54 00				75YR53 00		0	0	HR	2	MCSAB FR	M	Y			
	70 120	c	75YR56 00				75YR53 00		0	0	HR	25		M				
2	0 30	mcl	10YR42 00						5	0	HR	8						
	30 50	mcl	10YR43 44						0	0	HR	10		M				
	50 55	mcl	10YR44 00						0	0	HR	25		M				
2P	0 30	mcl	10YR42 00					N	17	0	HR	22				N	N	
	30 48	mcl	75YR43 44					N	0	0	HR	45		M		N	N	
	48 58	mcl	75YR56 00					N	0	0	HR	55		M		N	N	
	58 120	hcl	75YR56 58					N	0	0	HR	45		M		N	N	
3	0 27	mcl	10YR42 00						20	0	HR	25						
	27 40	mcl	10YR43 00						0	0	HR	30		M				
3P	0 35	msl	10YR42 00						9	0	HR	18						
	35 120	msl	75YR43 00						0	0	HR	20		M				
4	0 28	mcl	10YR42 00						17	0	HR	21						
	28 60	mcl	10YR43 44						0	0	HR	30		M				
4P	0 26	mcl	10YR42 00						9	0	HR	13						
	26 43	m l	10YR44 00						0	0	HR	25		M				
	43 85	lms	75YR54 56						0	0	HR	30		M				
	85 120		75YR53 00	75YR56 58	C			Y	0	0	HR	20		P			N	
5	0 28	mcl	10YR43 00						11	0	HR	15						
	28 75	mcl	10YR44 00						0	0	HR	15		M				
	75 80	scl	10YR44 56						0	0	HR	25		M				
5P	0 28	mcl	10YR42 00						8	0	HR	12						
	28 60	hcl	10YR44 00						0	0	HR	17	MDCSAB FR	M	Y			
	60 105	c	75YR56 00						0	0	HR	15	MDCSAB F	M	Y			
	105 120	c	75YR54 56						0	0	HR	25		M				
6	0 28	mcl	10YR43 00						4	0	HR	10						
	28 42	scl	10YR44 00						0	0	HR	12		M				
	42 65	msl	10YR44 56						0	0	HR	20		M				
	65 75	1	10YR56 44						0	0	HR	25		M				
7	0 25	mcl	10YR43 00						3	0	HR	7						
	25 35	mcl	10YR44 00						0	0	HR	5		M				
	35 50	hcl	75YR54 56						0	0	HR	5		M				
	50 60	c	75YR54 56						0	0	HR	5		M				
	60 120	c	75YR54 56						0	0	HR	25		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
8	0 25	mcl	10YR42 00						7	0	HR	10						
	25 70		75YR56 00	75YR58 00	C		00MN00 00		0	0	HR	10		M				
10	0 28	mcl	10YR42 00						17	0	HR	21						
	28 120	msl	10YR44 56						0	0	HR	20		M				
11	0 28	mcl	10YR42 00						16	0	HR	20						
	28 40	scl	10YR44 56						0	0	HR	25		M				
13	0 28	mcl	10YR42 00						7	0	HR	12						
	28 35	mcl	10YR43 00						0	0	HR	15		M				
	35 45	scl	75YR54 56						0	0	HR	15		M				
	45 60	c	75YR56 00						0	0	HR	25		M				
15	0 28	mcl	10YR42 00						18	0	HR	22						
	28 45	scl	10YR56 00						0	0	HR	20		M				
	45 88	msl	75YR54 56						0	0	HR	15		M				
	88 120	c	75YR56 00						0	0	HR	15		M				
17	0 29	mcl	10YR43 00						0	0	HR	3						
	29 55	hcl	75YR54 00						0	0	HR	2		M				
	55 70	c	75YR54 56						0	0	HR	2		M				
	70 85	hcl	75YR54 56						0	0	HR	2		M				
	85 120	hcl	75YR54 56						0	0	HR	20		M				
21	0 30	msl	10YR42 00						18	0	HR	25						
	30 60	msl	10YR56 00						0	0	HR	25		M				
23	0 28	mcl	10YR42 00						11	0	HR	15						
	28 40	mcl	10YR43 00						0	0	HR	25		M				
25	0 28	mcl	10YR42 00						5	0	HR	8						
	28 40	scl	10YR43 44						0	0	HR	25		M				
26	0 28	mcl	10YR42 00						0	0	HR	6						
	28 65	mcl	10YR44 00						0	0	HR	10		M				
	65 80	msl	10YR44 00						0	0	HR	8		M				
	80 120	lms	75YR56 00						0	0	HR	3		M				
27	0 50	hcl	10YR44 54						0	0	HR	15						
	50 70	hcl	10YR44 54				00MN00 00		0	0	HR	20		M				
	70 120		10YR44 54						0	0	HR	25		M				
29	0 25	hcl	10YR42 00						12	0	HR	15						
	25 60	c	25Y 64 63	75YR56 00	C			Y	0	0	HR	10		P			Y	
32	0 25	hcl	10YR42 00						16	0	HR	20						
	25 60	c	10YR53 54	75YR56 00	C			Y	0	0	HR	10		P			Y	
	60 70	c	25Y 72 62	75YR56 00	C			Y	0	0	HR	10		P			Y	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
33	0 30	msl	10YR42 00						30	0	HR	35						
	30 70	mcl	75YR56 00						0	0	HR	15		M				
	70 120	c	25Y 72 00	75YR58 00	C			Y	0	0	HR	3		P			Y	
35	0 28	msl	10YR42 00						0	0	HR	5						
	28 45	msl	10YR54 00						0	0	HR	5		M				
	45 100	lms	10YR56 00						0	0	HR	3		M				
	100 120	scl	10YR56 58						0	0	HR	3		M				
36	0 29	mcl	10YR42 00						0	0	HR	8						
	29 45	msl	10YR56 00						0	0	HR	3		M				
	45 55	lms	75YR56 00						0	0	HR	3		M				
	55 80	c	75YR56 00	75YR53 00	C			Y	0	0	HR	10		P			Y	
37	0 28	mcl	10YR42 00						6	0	HR	10						
	28 65	mcl	10YR44 56						0	0	HR	5		M				
	65 80	mcl	10YR64 63	75YR56 00	C		00MN00 00	Y	0	0	HR	5		P			Y	
39	0 28	mcl	10YR42 00						16	0	HR	20						
	28 40	mcl	10YR43 00						0	0	HR	25		M				
43	0 28	mcl	10YR42 00						0	0	HR	8						
	28 55	h l	10YR43 44						0	0	HR	10		M				
	55 100	c	10YR44 00				00MN00 00		0	0	HR	10		M				
46	0 30	scl	10YR42 00						18	0	HR	25						
	30 70	scl	75YR56 00						0	0	HR	25		M				
48	0 28	msl	10YR42 00						0	0	HR	12						
	28 40	msl	10YR43 44						0	0	HR	15		M				
50	0 28	mcl	10YR42 00						4	0	HR	10						
	28 60	mcl	10YR54 56						0	0	HR	5		M				
	60 65	mcl	10YR54 00	75YR56 00	C				0	0	HR	5		M				
	65 120	c	10YR54 00	75YR56 00	C				0	0	HR	6		M				
51	0 26	mcl	10YR42 00						0	0	HR	8						
	26 35	hcl	10YR43 00						0	0	HR	5		M				
	35 54	c	75YR56 00	75YR58 00	C		00MN00 00		0	0	HR	5		M				
	54 120	c	75YR63 64	75YR56 00	C		00MN00 00	Y	0	0	HR	3		P			Y	
54	0 28	mcl	10YR42 00						16	0	HR	20						
	28 40	mcl	10YR43 44						0	0	HR	20		M				
56	0 30	mcl	10YR42 00						17	0	HR	24						
62	0 28	mcl	10YR42 00						8	0	HR	12						
	28 35	mcl	10YR43 44						0	0	HR	5		M				
	35 56	hcl	75YR56 00						0	0	HR	5		M				
	56 120	c	75YR56 00				00MN00 00		0	0	HR	2		P				

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
64	0 28	mcl	10YR42 00						13	0	HR	16						
	28 65	mcl	10YR44 00						0	0	HR	10		M				
	65 120	c	75YR56 00				10YR54 00		0	0	HR	10		M				
66	0 27	mcl	10YR42 00						0	0	HR	8						
	27 60	c	10YR53 00	75YR56 00 C				Y	0	0	HR	15		P			Y	
68	0 28	mcl	10YR42 00						12	0	HR	16						
	28 50	scl	10YR54 56						0	0	HR	20		M				
70	0 28	mcl	10YR42 00						18	0	HR	25						
	28 40	mcl	10YR43 00						0	0	HR	30		M				
76	0 30	mcl	10YR42 00						4	0	HR	8						
	30 45	mcl	10YR43 44						0	0	HR	5		M				
	45 55	h l	75YR54 56						0	0	HR	5		M				
	55 120		75YR56 00				00MN00 00		0	0	HR	3		P				
77	0 27	mcl	10YR43 00						4	0	HR	6						
	27 45	mcl	10YR44 00						0	0	HR	3		M				
	45 65	hcl	75YR54 00				00MN00 00		0	0	HR	3		M				
	65 120	c	75YR54 56				00MN00 00		0	0	HR	3		P				
79	0 27	mcl	10YR42 00						11	0	HR	14						
	27 50	mcl	10YR43 44						0	0	HR	15		M				
80	0 28	mcl	10YR43 00						0	0	HR	12						
	28 55	hcl	10YR44 54						0	0	HR	10		M				
	55 80	c	75YR56 00	75YR56 58 C			75YR54 00		0	0	HR	10		M				
	80 120		75YR53 00	75YR56 00 C			00MN00 00	Y	0	0	HR	12		P			Y	
81	0 34	mcl	10YR42 00						8	0	HR	12						
	34 70	mcl	10YR43 44						0	0	HR	20		M				
83	0 28	mcl	10YR42 00						8	0	HR	12						
	28 50	mcl	10YR54 53						0	0	HR	15		M				
86	0 28	mcl	10YR42 00						0	0	HR	8						
	28 55	hcl	10YR54 53						0	0	HR	8		M				
	55 120	c	10YR53 00	75YR58 56 C				Y	0	0	HR	8		P				
89	0 28	mcl	10YR42 00						5	0	HR	10						
	28 50	mcl	10YR43 00						0	0	HR	10		M	Y		Y	
90	0 28	mcl	10YR42 00						5	0	HR	10						
	28 45	scl	10YR43 44						0	0	HR	10		M				
	45 120	scl	75YR56 00						0	0	HR	20		M				

				MOTTLES			PED		STONES				STRUCT/	SUBS				
SAMPLE	DEPTH	TEXTURE	COLOUR	COL	ABUN	CONT	COL	GLEY	2	6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC
91	0 34	mcl	10YR42 00						6	0	HR	10						
	34 75	mcl	10YR43 44						0	0	HR	15		M				
	75 85	scl	75YR56 00						0	0	HR	30		M				
92	0 34	mcl	10YR42 00						5	0	HR	10						
	34 60	mcl	10YR43 44						0	0	HR	10		M				
	60 72	scl	75YR56 00						0	0	HR	30		M				
94	0 28	mcl	10YR42 00						13	0	HR	16						
	28 80	mcl	10YR43 44						0	0	HR	10		M				
	80 120	hcl	10YR56 00				00MN00	00	0	0	HR	10		M				
96	0 28	mcl	10YR42 00						11	0	HR	16						
	28 65	h l	10YR44 00						0	0	HR	15		M				
	65 90	c	75YR56 00	75YR58	00	C			0	0	HR	15		M				
100	0 34	mcl	10YR42 00						0	0	HR	6						
	34 65	mcl	10YR43 44						0	0	HR	5		M				
	65 120	hcl	10YR43 44						0	0	HR	5		M				
101	0 30	mcl	10YR42 00						2	0	HR	10						
	30 60	m l	10YR54 00						0	0	HR	7		M				
	60 75	scl	10YR54 00						0	0	HR	5		M				
102	0 30	mcl	10YR42 00						4	0	HR	10						
	30 60	mcl	10YR44 00						0	0	HR	15		M				
103	0 30	msl	10YR42 00						8	0	HR	15						
	30 80	msl	75YR54 56						0	0	HR	15		M				
	80 120	c	75YR56 00	75YR58	00	C	75YR53	00 Y	0	0	HR	5		P		Y		
104	0 30	msl	10YR42 00						7	0	HR	14						
	30 70	msl	10YR43 44						0	0	HR	20		M				
	70 75	lms	75YR56 00						0	0	HR	25		M				
106	0 28	mcl	10YR42 00						12	0	HR	17						
	28 55	hcl	10YR44 00						0	0	HR	20		M				
	55 65	c	75YR56 00	000M00	00	C			0	0	HR	25		M				
110	0 34	mcl	10YR42 00						8	0	HR	15						
	34 5	sl	10YR43 44						0	0	HR	15		M				
	55 67	lm	75YR56 00						0	0	HR	5		M				
	67 75	scl	75YR56 58						0	0	HR	5		M				
	75 120	lm	75YR56 00						0	0	HR	5		M				
111	0 30	msl	10YR42 00						2	0	HR	7						
	30 45	msl	10YR44 00						0	0	HR	40		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	GLEY	STONES 2	STONES 6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
112	0 28	mcl	10YR42 00						6	0	HR	12						
	28 65	msl	10YR43 44						0	0	HR	10		M				
	65 70	scl	10YR44 00						0	0	HR	25		M				
113	0 30	msl	10YR42 00						8	0	HR	14						
	30 48	msl	10YR43 00						0	0	HR	15		M				
	48 65	scl	75YR54 56						0	0	HR	10		M				
	65 75	hcl	75YR56 00						0	0	HR	5		M				
	75 120	c	75YR56 00						0	0	HR	5		M				
116	0 30	msl	10YR42 00						5	0	HR	10						
	30 60	msl	75YR44 00						0	0	HR	20		M				
117	0 30	msl	10YR32 00						2	0	HR	7						
	30 80	msl	75YR44 00						0	0	HR	15		M				
118	0 34	scl	10YR42 00						13	0	HR	20						
	34 65	scl	10YR43 44						0	0	HR	35		M				
119	0 34	msl	10YR42 00						8	0	HR	12						
	34 50	msl	10YR43 00						0	0	HR	20		M				
	50 75	lm	75YR56 00						0	0	HR	20		M				
	75 120	m	75YR56 00						0	0	HR	10		M				
120	0 34	mcl	10YR42 00						7	0	HR	14						
	34 50	m l	75YR56 00						0	0	HR	15		M				
122	0 28	mcl	10YR42 00						8	0	HR	15						
	28 45	mcl	10YR43 44						0	0	HR	15		M				
	45 55	msl	75YR56 00						0	0	HR	15		M				
	55 75	lm	75YR56 00						0	0	HR	15		M				
	75 80	l	75YR56 58						0	0	HR	20		M				
123	0 30	msl	10YR42 00						4	0	HR	10						
	30 60	msl	10YR44 00						0	0	HR	10		M				
	60 120	scl	75YR44 00						0	0	HR	5		M				
124	0 30	s l	10YR42 00						8	0	HR	16						
	30 55	l	10YR43 44						0	0	HR	20		M				
	55 60	msl	75YR56 00						0	0	HR	20		M				
125	0 35	scl	10YR42 00						13	0	HR	20						
	35 45	m l	75YR54 56						0	0	HR	20		M				
	45 65	lms	75YR56 00						0	0	HR	20		M				
126	0 30	scl	10YR42 00						8	0	HR	15						
	30 70	msl	10YR56 00						0	0	HR	25		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
127	0 28	msl	10YR42 00						8	0	HR	15						
	28 60	lms	10YR56 00						0	0	HR	25		M				
128	0 28	mcl	10YR42 00						5	0	HR	8						
	28 45	mcl	75YR43 00						0	0	HR	10		M				
	45 120	c	75YR56 00				75YR54 00		0	0	HR	5		M				
130	0 28	mcl	10YR43 00						3	0	HR	6						
	28 45	mcl	75YR54 56						0	0	HR	5		M				
	45 70	c	75YR56 00						0	0	HR	6		M				
131	0 29	mcl	10YR42 00						5	0	HR	8						
	29 45	mcl	75YR54 00						0	0	HR	8		M				
	45 65	hcl	75YR54 00						0	0	HR	5		M				
	65 120	h l	10YR43 00						0	0	HR	5		M				
132	0 25	msl	10YR32 00						5	0	HR	10						
	25 70	msl	10YR54 00						0	0	HR	10		M				
133	0 35	mcl	10YR42 00						8	0	HR	15						
	35 120	msl	75YR56 54						0	0	HR	10		M				
134	0 30	msl	10YR42 00						8	0	HR	15						
	30 55	lm	10YR43 00						0	0	HR	20		M				
	55 120	m	10YR56 00						0	0	HR	15		M				
135	0 28	mcl	10YR42 00						8	0	HR	15						
	28 40	mcl	10YR43 44						0	0	HR	15		M				
	40 45	mcl	10YR43 00						0	0	HR	40		M				
136	0 28	mcl	10YR42 00						8	0	HR	15						
	28 40	msl	10YR43 00						0	0	HR	20		M				
137	0 30	mcl	10YR43 00						2	0	HR	7						
	30 40	hcl	75YR44 00						0	0	HR	5		M				
	40 120	c	25YR44 00						0	0		0		P	Y		Y	
138	0 30	mcl	10YR42 00						5	0	HR	10						
	30 60	h l	10YR44 00						0	0	HR	10		M				
139	0 35	mcl	10YR42 00						5	0	HR	15						
140	0 30	mcl	10YR42 00						2	0	HR	5						
	30 55	hcl	10YR54 00						0	0		0		M				
	55 120	hcl	10YR54 00	000C00 00	F		00MN00 00		0	0		0		M				
141	0 35	scl	10YR42 00						8	0	HR	15						
	35 55	sl	10YR56 00						0	0	HR	15		M				
	55 120	l s	10YR56 00						0	0	HR	20		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
143	0 30	mcl	10YR43 00						2	0	HR	10						
	30 60	mcl	10YR44 00						0	0	HR	10		M				
	60 85	c	75YR56 00						0	0		0		P	Y			
144	0 30	msl	10YR42 00						5	0	HR	10						
	30 50	mcl	10YR44 00						0	0	HR	15		M				
146	0 36	mcl	10YR42 00						8	0	HR	12						
	36 80	mcl	10YR43 00						0	0	HR	10		M				
	80 120		75YR54 56						0	0	HR	5		M				
147	0 30	mcl	10YR42 00						5	0	HR	12						
	30 65	l	10YR43 00						0	0	HR	15		M				
	65 75	msl	75YR56 00						0	0	HR	20		M				
	75 120	l s	75YR56 00						0	0	HR	25		M				
148	0 30	mcl	10YR42 00						8	0	HR	15						
	30 40	mcl	10YR42 43						0	0	HR	25		M				
150	0 30	msl	10YR42 00						5	0	HR	10						
151	0 25	msl	10YR42 00						5	0	HR	10						
	25 50	lms	75YR44 00						0	0	HR	7		M				
	50 120	lms	75YR56 00						0	0		0		M				
152	0 30	msl	10YR32 00						5	0	HR	10						
	30 40	mcl	10YR44 00						0	0	HR	10		M				
153	0 25	mcl	10YR43 00						6	0	HR	12						
	25 40	hcl	75YR54 56						0	0	HR	10		M				
	40 60	c	75YR58 00	75YR56 00	C				0	0	HR	5		M				
	60 120	c	75YR58 00	75YR56 00	C		75YR53 00	Y	0	0	HR	5		P				Y
154	0 35	mcl	10YR42 00						5	0	HR	12						
	35 75	mcl	10YR43 00						0	0	HR	5		M				
	75 120	h l	10YR43 00						0	0	HR	5		M				
155	0 28	mcl	10YR42 00						4	0	HR	8						
	28 55	hcl	10YR43 54	75YR56 00	F				0	0	HR	5		M				
	55 120	c	75YR54 56						0	0	HR	8		M				
157	0 30	mcl	10YR42 00						2	0	HR	7						
	30 50	mcl	10YR44 00						0	0	HR	10		M				
	50 120	c	75YR44 00						0	0		0		P	Y			
159	0 30	mcl	10YR42 00						2	0	HR	7						
	30 40	hcl	10YR44 00						0	0		0		M				
	40 60	c	75YR46 00						0	0		0		P	Y			
	60 120	c	75YR56 00	000C00 00	C				0	0		0		P	Y			

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6 LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
160	0 26	mcl	10YR42 00						5	0 HR	10						
	26 65	hcl	10YR43 00						0	0 HR	8		M				
	65 80	c	75YR56 00				10YR54 00		0	0 HR	10		M				
	80 100	s	75YR56 00						0	0 HR	5		M				
	100 120	cl	75YR56 00						0	0 HR	5		M				
161	0 30	mcl	10YR42 00						3	0 HR	6						
	30 74	mcl	10YR43 00						0	0 HR	5		M				
	74 90	c	10YR54 00	75YR56 00	C				0	0 HR	3		M				
162	0 25	mzcl	10YR42 00						3	0 HR	8						
	25 40	mcl	10YR43 00						0	0 HR	5		M				
	40 75	mcl	10YR54 44						0	0 HR	5		M				
	75 85	hcl	10YR54 00						0	0 HR	15		M				
	85 95	l	10YR56 00						0	0 HR	15		M				
	95 120	sc	75YR56 00						0	0 HR	10		M				
163	0 28	mcl	10YR43 00						0	0 HR	4						
	28 40	hcl	10YR44 00						0	0 HR	2		M				
	40 70	c	75YR46 00						0	0	0		P	Y			
	70 120	c	75YR56 00						0	0 HR	1		P	Y			
164	0 30	mcl	10YR43 00						0	0 HR	4						
	30 50	mcl	10YR54 00						0	0 HR	5		M				
	50 80	c	10YR54 00						0	0	0		P				
	80 120	c	10YR56 00	000C00	00	C			0	0	0		P	Y			
166	0 30	mcl	10YR42 00						2	0 HR	5						
	30 45	mcl	10YR44 00						0	0 HR	5		M				
	45 55	hcl	10YR54 00						0	0	0		M				
	55 75	c	10YR54 00						0	0	0		M				
	75 120	c	75YR56 00	000C00	00	C			0	0	0		M				
167	0 25	mcl	10YR42 00						2	0 HR	7						
	25 60	mzcl	10YR44 00						0	0 HR	5		M				
	60 80	hcl	10YR44 00						0	0 HR	20		M				
168	0 30	mcl	10YR42 00						6	0 HR	13						
	30 55	mcl	10YR43 00						0	0 HR	35		M				
169	0 35	mcl	10YR33 00						5	0 HR	12						
	35 45	mcl	10YR43 00						0	0 HR	25		M				
	45 55	m l	10YR56 00						0	0 HR	15		M				
	55 80	l s	10YR56 00						0	0 HR	5		M				
	80 120	ms	10YR56 00						0	0 HR	2		M				
170	0 30	mcl	10YR42 00						2	0 HR	7						
	30 80	scl	10YR44 00						0	0 HR	15		M				
	80 120	mcl	10YR44 00						0	0 HR	20		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
171	0 25	mcl	10YR42 00						5	0	HR	10						
	25 60	mcl	10YR44 00						0	0	HR	20		M				
172	0 30	mcl	10YR43 00						2	0	HR	5						
	30 50	mcl	10YR44 00						0	0	HR	10		M				
173	0 25	mcl	10YR43 00						5	0	HR	10						
	25 35	hcl	10YR44 00						0	0	HR	15		M				
174	0 30	mcl	10YR42 00						2	0	HR	5						
	30 60	mcl	10YR44 00						0	0	HR	10		M				
	60 80	sc	75YR46 00						0	0	HR	20		M				
175	0 35	mcl	10YR42 00						5	0	HR	12						
	35 55	mcl	10YR54 66	75YR56 00	F				0	0	HR	10		M				
	55 65	hcl	75YR66 00	75YR56 00	C				0	0	HR	10		M				
	65 120	c	75YR56 00	75YR58 00	C				0	0	HR	5		M				
178	0 28	scl	10YR33 00						5	0	HR	10						
	28 55	scl	10YR43 00						0	0	HR	20		M				
	55 120	lms	10YR56 00						0	0	HR	30		M				