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Hampshire Minerals Plan,
Omission Site 33,
Bickton, North Gorley
Agricultural Land Classification,
ALC Map & Report
November 1994

AGRICULTURAL LAND CLASSIFICATION REPORT

HAMPSHIRE MINERALS PLAN
OMISSION SITE 33 BICKTON, NORTH GORLEY

1 Summary

1 1 ADAS was commissioned by MAFF s Land Use Planning Unit to provide information on land quality for a number of omission sites relating to the Hampshire Minerals and Waste Disposal Plan The work forms part of MAFF s statutory input to the above plan

1 2 Site 33 comprises 91 2 hectares of land between the villages of Bickton and North Gorley in the Avon Valley Hampshire 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 100 borings and three soil inspection pits 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 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 the agricultural land on the site was a mixture of cereal cropping and permanent pasture with a small area of set-aside land Land shown as being in Non Agricultural use consists of a small recently excavated area and an area of scrub The Woodland marked comprises young deciduous trees around field margins together with a larger block of woodland to the west of the site

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 This map supersedes any previous survey information for the site

Table 1 Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Land
1	6 7	7 4	7 7
2	12 7	13 9	14 6
3a	54 3	59 5	62 3
3b	13 4	14 7	15 4
Non Agricultural	0 2	0 2	100%(87 1Ha)
Woodland	3 9	4 3	
Total area of site	91 2	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 on this site ranges from excellent quality Grade 1 to poor quality Subgrade 3b land The majority of the site has however been classified as good quality Subgrade 3a the key limitation being soil droughtiness The Grade 1 profiles are deep and well drained comprising very slightly flinty sandy silt loam topsoils over clay loams or sandy loams The remainder of the site consists of similar textured soils which become increasingly flinty due to gravelly layers at varying depths On this site the high stone content of the lower subsoil is thought likely to restrict the amount of profile available water for plants and thus reduce crop growth and yield The shallower more flinty profiles have therefore been classified as Subgrade 3b due to a significant soil droughtiness limitation The slightly deeper profiles have been assessed as slightly to moderately droughty and are classified as either Grade 2 or 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 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 (degree days Jan June) 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 However climatic factors do interact with soil properties to influence soil wetness and droughtiness limitations

2 4 No local climatic factors such as exposure or frost risk are believed to affect the site

Table 2 Climatic Interpolations

Grid Reference	SU 154 119
Altitude (m)	28
Accumulated Temperature (degree days Jan-June)	1531
Average Annual Rainfall (mm)	867
Field Capacity (days)	180
Moisture Deficit Wheat (mm)	108
Moisture Deficit Potatoes (mm)	101
Overall Climatic Grade	1

3 Relief

3 1 The land on the site slopes very gently from 25m AOD in the south west to 30m AOD in the north east The site lies above the River Avon floodplain

4 Geology and Soil

4 1 The British Geological Survey (1976) sheet 314 Ringwood (Drift Edition 1 50 000 scale) shows that the majority of the site is underlain by valley gravel A narrow strip of alluvium is also shown along the western boundary of the site to the south of Bickton Farm

4 2 The Soil Survey Survey of England and Wales (1983) maps the Hucklesbrook soil association across the majority of the site Such soils comprise well drained coarse loamy and some sandy soils commonly over gravel Some similar permeable soils affected by groundwater Usually on flat land (SSEW 1983) A small area of the Frome association was also shown to correspond to the alluvium

4 3 Detailed field examination broadly confirmed the existence of soils similar in type to the Hucklesbrook association

5 Agricultural Land Classification

5 1 Table 1 provides the details of the area measurements for each grade and the distribution of each grade is shown on the attached ALC map

5 2 The location of the soil observation points are shown on the attached sample point map

5 3 Grade 1

A number of slightly stony deep free draining profiles were identified in the north west corner of the site These have been assessed as excellent quality Grade 1 land which typically comprises medium sandy silt loam topsoils over similar textured or slightly heavier subsoils The profiles generally continue unchanged to depth although occasional heavier and stonier horizons do exist below 90cm from the surface The flint content throughout much of the profile ranges from 1 5% total stone (v/v) whilst that in the heavy clay loam and clay horizons can be up to 30% (v/v) Despite the stonier horizons the moisture deficits in this locality are not sufficient to impose a droughtiness limitation The soil is also freely draining so soil wetness is not limiting Such land has no other significant limitations to agricultural use and is therefore suitable for a diverse range of agricultural and horticultural practices

5 4 **Grade 2**

Very good quality Grade 2 land occurs in three distinct blocks across the site The eastern area forms a long tongue which stretches northwest from Hern Gate Farm The second area is situated in the north just west of the Bickton cross roads and the third is found near the western margin just east of the wooded strip Typical profiles in all three blocks comprise medium sandy silt loam or medium sandy loam topsoils over heavier or sandier lower subsoils Most become impenetrable over gravels at around 80-90cm depth but occasional deeper and sandier profiles were encountered The flint content ranges from 5-8% total stone (v/v) in the topsoil and increases to between 20 60% total flint (v/v) in the lower subsoils The moderate flint content and underlying gravel combine to reduce the amount of profile available water for plants thus restricting crop consistency and yield This land has therefore been classified as Grade 2 on the basis of a minor soil droughtiness limitation

5 5 **Subgrade 3a**

The majority of the site comprises good quality Subgrade 3a land The soil profiles are similar in texture to those described as Grade 2 however the stone content is generally higher and the depth of the soil is much shallower In this soil unit the total flint content is between 8 15% (v/v) in the topsoil increasing to 50% (v/v) in the lower horizons The gravel is usually encountered at depths of 50-80cm from the surface As a result profile available water for crop growth is more significantly reduced thus leading to a moderate droughtiness limitation Occasional borings also contain 11% to 15% flints larger than 2cm in diameter in the topsoils making them ineligible for a higher grade This can lead to a lack of consistency in crop yields and may inflict increased wear and damage to farm machinery This land has therefore been classified as Subgrade 3a due to a moderate droughtiness limitation and locally to higher stone contents (11 15% > 2cm)

5 6 **Subgrade 3b**

Three distinct areas of moderate quality Subgrade 3b land were recorded across the site One was identified in the centre one in the south west and one much smaller strip was noted between the woodland and the site boundary on the western side The comparatively shallow soil profiles typically comprise slightly to moderately stony medium sandy silt loam or medium sandy loam topsoils over medium clay loam upper subsoils Total flint content measures between 8-18% (v/v) in the topsoil and 15 40% below Topsoil stones greater than 2cm in diameter may occur locally in excess of 15% v/v thus imposing a limitation in

terms of land quality due to the affects on crop germination growth cultivations and implement and tyre wear However the gravel uniformly occurs at a very shallow depths (45-60cm) resulting in droughtiness which is the key limitation This land has therefore been classified as Subgrade 3b on the basis of significant soil droughtiness limitation and the occasional topsoil stone limitation

ADAS Ref 1508/271/94
MAFF Ref EL15/107

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1976) Sheet No 314 Ringwood 1 50 000 Series (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 (1980) Sheet 6 Soils of South East England 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 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	**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	

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

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WETNESS GRADE	WHEAT AP	WHEAT MB	POTS AP	POTS MB	DRT	M REL FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
[redacted]	SU15201270	STB	W	01			1	2	116	8	109	8	2				WD	2	Imp 90
[redacted]	SU15651244	CER	W	02			1	1	125	17	106	5	2				DR	2	
2	SU15271270	STB	W	01	88		1	1	151	43	110	9	2				DR	2	
[redacted]	SU15401200	STB	W	02			1	1	106	2	91	10	3A				DR	3A	Pit 80
[redacted]	SU15401270	CER					1	1	91	17	88	-13	3A				DR	3A	Imp 50
3P	SU15401170	LEY					1	1	65	-43	62	-39	3B				DR	3B	
[redacted]	SU15001260	CER					1	1	86	-22	83	-18	3B				DR	3B	Imp 50
[redacted]	SU15101260	CER			70		1	1	132	24	119	18	2				DR	2	Imp 90
6	SU15201260	CER			60		1	1	122	14	117	16	2				DR	2	Imp 80
[redacted]	SU15301260	CER			80		1	1	127	19	106	5	2				DR	2	Imp 80
8	SU15401260	CER					1	1	95	-13	94	7	3A				DR	3A	Imp 55
9	SU15501260	CER					1	1	145	37	107	6	2				DR	2	Imp 80
[redacted]	SU15001250	LEY	W	01			1	1	140	32	118	17	1					1	
[redacted]	SU15101250	STB	W	01			1	1	102	6	104	3	3A				DR	3A	Imp 62
12	SU15201250	STB	W	01			1	1	156	48	120	19	1					1	
[redacted]	SU15301250	STB					1	1	87	-21	86	-15	3B				DR	3B	Imp 60
14	SU15401250	CER					1	1	91	-17	90	-11	3A				DR	3A	Imp 55
[redacted]	SU15501250	CER					1	1	100	8	101	0	3A				DR	3A	Imp 60
[redacted]	SU15601250	CER					1	1	110	2	108	7	3A				DR	3A	Imp 80
[redacted]	SU15701250	CER	E	01			1	1	107	-1	103	2	3A				DR	3A	Imp 80
[redacted]	SU15021240	CER			70		1	1	156	48	115	14	1					1	
[redacted]	SU15101240	CER			55		1	2	107	1	113	12	3A				DR	3A	Imp 70
20	SU15201240	CER					1	1	92	-16	91	-10	3A				DR	3A	Imp 60
[redacted]	SU15301240	CER					1	1	108	0	112	11	3A				DR	3A	Imp 70
[redacted]	SU15401240	CER					1	1	95	-13	96	-5	3A				DR	3A	Imp 60
23	SU15501240	CER					1	1	82	-26	79	-22	3B				DR	3B	Imp 45
[redacted]	SU15601240	CER					1	1	82	-26	79	-22	3B				DR	3B	Imp 50
[redacted]	SU15701240	CER					1	1	117	9	107	6	2				DR	2	Imp 95
26	SU15801240	CER	E	01			1	1	93	-15	95	6	3A				DR	3A	Imp 70
[redacted]	SU15901240	CER	E	02			1	1	126	18	111	10	2				DR	2	
1	SU15001230	CER					1	1	151	43	114	13	1					1	
	SU15101230	CER					1	1	161	53	120	19	1					1	
	SU15201230	CER					1	1	158	50	119	18	1					1	
	SU15301230	CER					1	1	106	-2	108	7	3A				DR	3A	Imp 60
	SU15601230	PGR					1	1	88	-20	87	-14	3A				DR	3A	Imp 55
	SU15701230	PGR					1	1	85	23	86	-15	3B				DR	3B	Imp 60
	SU15801230	CER	W	01			1	1	115	7	113	12	2				DR	2	Imp 80
	SU15901230	CER	W	01			1	1	87	-21	84	-17	3B				DR	3B	Imp 60
	SU16001230	PGR					1	1	110	2	113	12	3A				DR	3A	Imp 75
	SU14901220	CER					1	1	157	49	117	16	1					1	
	SU15001220	CER					1	1	158	50	121	20	1					1	
	SU15101220	CER					1	2	110	2	116	15	3A				DR	3A	Imp 70

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
41	SU15201220	CER					1	1	161	53	120	19	1				1	
42	SU15301220	CER					1	1	89	-19	88	13	3A			DR	3A	Imp 55
43	SU15601220	PGR					1	1	82	-26	79	22	3B			DR	3B	Imp 50
44	SU15701220	PGR					1	1	80	-28	77	24	3B			DR	3B	Imp 50
45	SU15801220	PGR					1	1	92	-16	93	8	3A			DR	3A	Imp 60
46	SU15901220	PGR					1	1	123	15	114	13	2			DR	2	Imp 100
47	SU16001220	PGR					1	1	98	-10	103	2	3A			DR	3A	Imp 70
48	SU16081220	PGR					1	1	117	9	114	13	2			DR	2	Imp 80
49	SU14851205	PGR	W	03					66	42	63	-38	3B			DR	3B	Imp 40
50	SU15001210	STB					1	1	106	-2	111	10	3A			DR	3A	Imp 70
51	SU15101210	STB	W	01			1	1	106	2	109	8	3A			DR	3A	Imp 65
52	SU15201210	STB	E	01			1	1	121	13	112	11	2			DR	2	Imp 90
53	SU15301210	STB	W	01			1	1	80	28	77	-24	3B			DR	3B	Imp 48
54	SU15601210	PGR					1	1	122	14	111	10	2			DR	2	Imp 90
55	SU15701210	PGR			75		1	1	104	4	104	3	3A			DR	3A	Imp 80
56	SU15801210	PGR					1	1	103	-5	104	3	3A			DR	3A	Imp 75
57	SU15901210	PGR					1	1	116	8	111	10	2			DR	2	Imp 85
58	SU16001210	PGR			75		1	1	135	27	110	9	2			DR	2	Imp 110
60	SU15001200	STB	W	01			1	1	121	13	113	12	2			DR	2	Imp 90
61	SU15101195	STB	W	01			1	1	121	13	118	17	2			DR	2	Imp 90
62	SU15201200	STB	E	01			1	1	98	-10	98	3	3A			DR	3A	Imp 60
63	SU15301200	STB	E	02			1	1	82	-26	79	-22	3B			DR	3B	Imp 50
64	SU15401200	STB	W	02			1	1	91	-17	93	8	3A			DR	3A	Imp 62
65	SU15601200	PGR					1	1	109	1	107	6	3A			DR	3A	Imp 80
66	SU15701200	PGR					1	1	105	-3	102	1	3A			DR	3A	Imp 85
67	SU15801200	PGR					1	1	94	-14	95	6	3A			DR	3A	Imp 65
68	SU15901200	PGR					1	1	100	-8	99	2	3A			DR	3A	Imp 75
69	SU16001200	PGR			75		1	1	112	4	108	7	3A			DR	3A	Imp 85
70	SU14901190	PGR	W	02			1	1	93	-15	93	8	3A			DR	3A	Imp 75
71	SU15001190	STB					1	1	106	2	110	9	3A			DR	3A	Imp 75
72	SU15101190	STB					1	1	120	12	117	16	2			DR	2	Imp 90
73	SU15201190	LEY	E	01			1	1	108	0	113	12	3A			DR	3A	Imp 70
74	SU15301190	LEY	E	01			1	1	94	14	94	-7	3A			DR	3A	Imp 60
75	SU15401190	LEY	W	01			1	1	112	4	112	11	3A			DR	3A	Imp 80
76	SU15501190	PGR	SW	01			1	2	84	24	83	-18	3B			DR	3B	Imp 55
77	SU15601190	PGR	SW	01			1	2	80	28	77	24	3B			DR	3B	Imp 48
78	SU15701190	PGR	SW	01			1	2	106	-2	104	3	3A			DR	3A	Imp 78
79	SU15801190	PGR	SW	01			1	2	98	-10	101	0	3A			DR	3A	Imp 70
80	SU15901190	PGR			75		1	1	123	15	113	12	2			DR	2	Imp 100
81	SU16001190	PGR			70		1	1	107	-1	108	7	3A			DR	3A	Imp 80
82	SU15001180	STB					1	2	99	-9	102	1	3A			DR	3A	Imp 70
83	SU15101180	STB					1	1	104	-4	107	6	3A			DR	3A	Imp 70

AMPLE NO	GRID REF	USE	ASPECT	GRONT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT AP	MB	POTS- AP	MB	M REL ORT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
84	SU15221180	LEY					1	1	109	1	116	15	3A				DR	3A	Imp 70
85	SU15301180	LEY					1	1	110	2	116	15	3A				DR	3A	Imp 70
86	SU15401180	LEY					1	1	84	-24	83	-18	3B				DR	3B	Imp 55
87	SU15601180	PGR	SW	01			1	1	102	-6	105	4	3A				DR	3A	Imp 70
88	SU15701180	PGR					1	1	103	-5	103	2	3A				DR	3A	Imp 66
89	SU15801180	PGR	SW	01			1	2	93	-15	94	-7	3A				DR	3A	Imp 70
90	SU15901180	PGR	SW	01			1	2	123	15	106	5	2				DR	2	Imp 100
91	SU16001180	PGR					1	1	102	-6	105	4	3A				DR	3A	Imp 75
92	SU15001170	CER					1	1	80	-28	77	24	3B				DR	3B	Imp 50
93	SU15101170	CER					1	1	96	-12	99	-2	3A				DR	3A	Imp 65
94	SU15201170	CER					1	1	83	25	80	-21	3B				DR	3B	Imp 50
95	SU15301170	LEY					1	1	85	23	82	-19	3B				DR	3B	Imp 50
96	SU15401170	LEY					1	1	77	31	74	-27	3B				DR	3B	Imp 45
97	SU15601170	PGR	SW	01			1	1	115	7	113	12	2				DR	2	Imp 95
98	SU15701170	CER	SW	01			1	1	140	32	111	10	1					1	Imp 110
99	SU15801170	PGR	SW	01			1	1	104	4	105	4	3A				DR	3A	Imp 80
100	SU15901170	CER	SW	01			1	1	112	4	106	5	3A				DR	3A	Imp 92
01	SU15101160	CER					1	1	79	-29	76	-25	3B				DR	3B	Imp 50
02	SU15681160	PGR	SW	01			1	1	103	5	102	1	3A				DR	3A	Imp 80

SAMPLE	DEPTH	TEXTURE	COLOUR	-- MOTTLES --- COL	ABUN	CONT	PED COL	GLEY	--- STONES - - >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1	0-30	mcl	10YR32 00						4	0	HR	8							
	30-80	mcl	10YR43 33						0	0	HR	8		M					
	80-90	hcl	10YR43 00						0	0	HR	40		M					
	90 120	gh	10YR44 00						0	0		0		M					
1P	0 30	msl	10YR42 00						2	0	HR	5							hand textd mszl
	30-40	msl	10YR43 00						0	0	HR	5	MDCSAB FR	M					hand textd mszl
	40 60	msl	10YR44 00						0	0	HR	5	WKCSAB FR	G					hand textd mszl
	60 90	mszl	10YR44 00						0	0	HR	40		M					
	90 120	mcl	10YR44 00						0	0	HR	60		M					
2	0 30	mszl	10YR42 00						4	0	HR	8							
	30 60	msl	10YR43 00						0	0	HR	10		M					
	60 88	mszl	10YR43 00						0	0	HR	3		M					
	88 120	scl	10YR53 54	10YR46 00	C			Y	0	0	HR	3		M					
2P	0 29	msl	10YR42 00						6	0	HR	14	WKCSAB FR						hand textd mszl
	29 48	msl	10YR43 00						0	0	HR	15	MDCSAB FR	M					hand textd mszl
	48 60	msl	10YR44 00						0	0	HR	34	WKCSAB FR	M					hand textd mszl
	60 70	mcl	10YR44 00						0	0	HR	34	MDCSAB FR	M					
	70 120	hcl	75YR44 00						0	0	HR	59		M					
3	0 28	mszl	10YR42 00						3	0	HR	8							
	28-50	mszl	10YR43 00						0	0	HR	8		M					
	50 120	gh	22XX22 00						0	0		0		M					
3P	0 29	msl	10YR42 00						10	0	HR	22							hand textd mszl
	29-35	msl	10YR42 00						0	0	HR	34		M					hand textd mszl
	35 50	mcl	10YR42 00						0	0	HR	50		M					
	50-120	gh	10YR43 00						0	0		0		M					
4	0 25	mszl	10YR43 00						0	0	HR	11							
	25 50	mcl	75YR44 00						0	0	HR	10		M					
	50 120	gh	10YR44 00						0	0		0		M					
5	0 30	mszl	10YR43 00						3	0	HR	5							
	30 70	mszl	75YR44 00						0	0	HR	5		M					
	70 90	mszl	75YR44 00	75YR46 00	C			Y	0	0	HR	5		M					
	90 120	gh	10YR44 00						0	0		0		M					
6	0 30	mszl	10YR43 00						0	0	HR	5							
	30 60	mszl	75YR44 00						0	0	HR	5		M					
	60 80	msl	10YR52 53	75YR58 00	C			Y	0	0	HR	5		M					
	80 120	gh	10YR44 00						0	0		0		M					
7	0 30	msl	10YR43 00						0	0	HR	5							
	30 80	msl	75YR44 00						0	0	HR	5		M					
	80 120	lms	10YR52 53	75YR46 00	C			Y	0	0	HR	5		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	0-28	mszl	10YR42 00						3	0	HR	8						
	28-55	mszl	10YR43 00						0	0	HR	10		M				
	55 120	gh	22XX22 00						0	0		0		M				
9	0-25	mszl	10YR42 00						3	0	HR	8						
	25 55	mcl	10YR43 00						0	0	HR	10		M				
	55 80	mcl	10YR43 00						0	0	HR	20		M				
	80 120	msl	10YR64 54						0	0	HR	10		M				
10	0 25	mszl	10YR42 43						1	0	HR	2						
	25 40	mszl	10YR43 00						0	0	HR	3		M				
	40 90	mcl	10YR43 00						0	0	HR	3		M				
	90 110	hcl	10YR43 00						0	0	HR	30		M				
11	0 30	mszl	10YR42 00						3	0	HR	5						
	30 50	mszl	10YR43 00						0	0	HR	5		M				
	50 58	mcl	10YR43 00						0	0	HR	5		M				
	58-62	hcl	10YR44 00						0	0	HR	45		M				
	62 120	gh	10YR44 00						0	0		0		M				
12	0 25	mszl	10YR42 00						2	0	HR	3						
	25 65	mszl	10YR43 00						0	0	HR	3		M				
	65 100	msl	10YR44 00						0	0	HR	1		M				
	100 120	c	10YR54 00						0	0	HR	10		M				
13	0 25	mszl	10YR42 00						3	0	HR	8						
	25 45	mszl	10YR43 00						0	0	HR	20		M				
	45-60	hcl	10YR43 00						0	0	HR	50		M				
	60 120	gh	10YR44 00						0	0		0		M				
14	0 25	mszl	10YR42 00						3	0	HR	8						
	25 40	mszl	10YR43 00						0	0	HR	10		M				
	40 55	mcl	10YR43 00						0	0	HR	20		M				
	55 120	gh	22XX22 00						0	0		0		M				
15	0 28	mszl	10YR42 00						3	0	HR	8						
	28 60	mszl	10YR43 00						0	0	HR	8		M				
	60 120	gh	10YR43 00						0	0		0		M				
16	0 25	mszl	10YR42 00						3	0	HR	8						
	25 60	mcl	10YR43 00						0	0	HR	8		M				
	60 80	scl	10YR43 00						0	0	HR	20		M				
	80 120	gh	22XX22 00						0	0		0		M				
17	0 25	mszl	10YR42 00						2	0	HR	8						
	25-48	mszl	10YR44 00						0	0	HR	8		M				
	48 75	msl	10YR54 00						0	0	HR	34		M				
	75 80	c	75YR44 00						0	0	HR	50		M				
	80-120	gh	00ZZ00 00						0	0		0		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
18	0 30	mzcl	10YR43 00						0	0	HR	5						
	30 70	mcl	75YR44 00						0	0	HR	5		M				
	70 120	mszl	10YR53 42	75YR46 00	C			S	0	0	HR	5		M				
19	0-30	mcl	75YR44 00						0	0	HR	5						
	30 55	mszl	75YR44 00						0	0	HR	10		M				
	55 70	mszl	75YR42 52	75YR58 00	C			Y	0	0	HR	10		M				
	70 120	gh	10YR42 00						0	0		0		M				
20	0-30	mszl	10YR43 00						10	0	HR	12						
	30-60	msl	10YR44 00						0	0	HR	15		M				
	60-120	gh	10YR44 00						0	0		0		M				
21	0 30	mszl	10YR43 00						0	0	HR	7						
	30 60	mszl	75YR44 00						0	0	HR	10		M				
	60-70	msl	10YR44 00						0	0	HR	20		M				
	70-120	gh	10YR44 00						0	0		0		M				
22	0-25	mszl	10YR42 00						2	0	HR	7						
	25-40	mszl	10YR43 00						0	0	HR	7		M				
	40-60	mcl	10YR43 00						0	0	HR	20		M				
	60-120	gh	10YR43 00						0	0		0		M				
23	0-28	mszl	10YR42 00						3	0	HR	8						
	28 45	mszl	10YR43 00						0	0	HR	15		M				
	45 120	gh	10YR43 00						0	0		0		M				
24	0-25	mszl	10YR42 00						8	0	HR	15						
	25-50	mcl	10YR43 00						0	0	HR	15		M				
	50-120	gh	22XX22 00						0	0		0		M				
25	0 30	mszl	10YR43 00						3	0	HR	13						
	30-55	mszl	10YR44 00						0	0	HR	13		M				
	55 65	msl	10YR54 00						0	0	HR	13		M				
	65 85	mcl	10YR54 00						0	0	HR	13		M				
	85 90	c	10YR54 00						0	0	HR	40		M				
	90 120	gh	10YR54 00						0	0		0		M				
26	0 30	mszl	10YR32 00						4	0	HR	13						
	30 45	mcl	10YR43 00						0	0	HR	15		M				
	45 65	mszl	10YR44 00						0	0	HR	34		M				
	65 120	gh	00ZZ00 00						0	0		0		M				
27	0 20	mszl	10YR42 00						3	0	HR	5						
	20 35	mcl	10YR42 00						0	0	HR	8		M				
	35 58	mcl	10YR44 00						0	0	HR	5		M				
	58 70	msl	75YR46 00						0	0	HR	1		M				
	70 105	lms	75YR46 00						0	0	HR	1		M				
	105 120	lms	10YR54 00						0	0	HR	1		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
28	0 25	msz1	10YR44 00						0	0	HR	5						
	25 75	mc1	10YR43 00						0	0	HR	5		M				
	75-120	mc1	75YR44 00						0	0	HR	3		M				
29	0 35	msz1	10YR43 00						0	0	HR	5						
	35 70	msz1	75YR44 00						0	0	HR	5		M				
	70 120	msz1	10YR54 00						0	0	HR	5		M				
30	0 35	msz1	10YR43 00						0	0	HR	5						
	35 65	msz1	75YR44 00						0	0	HR	5		M				
	65 120	ms1	10YR54 00						0	0	HR	10		M				
31	0 35	msz1	10YR43 00						10	0	HR	2						
	35 60	msz1	75YR44 00						0	0	HR	5		M				
	60 120	gh	10YR44 00						0	0		0		M				
32	0 30	msz1	10YR43 00						8	0	HR	10						
	30 55	mc1	10YR43 00						0	0	HR	20		M				
	55-120	gh	10YR43 00						0	0		0		M				
33	0 30	msz1	10YR42 00						10	0	HR	18						
	30 60	mc1	75YR44 00						0	0	HR	25		M				
	60 120	gh	10YR43 00						0	0		0		M				
34	0 28	msz1	10YR43 00						2	0	HR	8						
	28 48	mc1	10YR43 00						0	0	HR	5		M				
	48 80	mc1	10YR44 00						0	0	HR	5		M				
	80-120	gh	00ZZ00 00						0	0		0		M				
35	0-30	msz1	10YR44 00						5	0	HR	13						
	30-50	msz1	75YR44 00						0	0	HR	13		M				
	50 120	gh	75YR44 00						0	0		0		M				
36	0 30	msz1	10YR42 00						0	0	HR	10						
	30 75	mc1	10YR43 00						0	0	HR	5		M				
	75 120	gh	10YR43 00						0	0		0		M				
38	0 35	msz1	10YR43 00						0	0	HR	5						
	35 80	mc1	10YR44 00						0	0	HR	5		M				
	80 120	msz1	75YR44 00						0	0	HR	5		M				
39	0-40	msz1	10YR43 00						0	0	HR	5						
	40 80	msz1	75YR44 00						0	0	HR	5		M				
	80 120	mc1	10YR54 00						0	0	HR	5		M				
40	0 40	mc1	10YR43 00						0	0	HR	5						
	40 60	msz1	75YR44 00						0	0	HR	5		M				
	60 70	mc1	75YR44 00						0	0	HR	5		M				
	70 120	gh	75YR44 00						0	0		0		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
41	0-35	msz1	10YR43 00						0	0	HR	5						
	35-90	msz1	75YR44 00						0	0	HR	5		M				
	90-120	ms1	75YR44 00						0	0	HR	5		M				
42	0 30	msz1	10YR43 00						12	0	HR	15						
	30 55	mc1	75YR44 00						0	0	HR	10		M				
	55-120	gh	10YR44 00						0	0		0		M				
43	0 25	msz1	10YR43 00						8	0	HR	12						
	25 50	mc1	10YR42 00						0	0	HR	20		M				
	50 120	gh	10YR43 00						0	0		0		M				
44	0-20	msz1	10YR42 00						8	0	HR	12						
	20 50	mc1	10YR43 00						0	0	HR	20		M				
	50 120	gh	10YR43 00						0	0		0		M				
45	0-30	msz1	10YR42 00						8	0	HR	10						
	30 60	mc1	10YR43 00						0	0	HR	20		M				
	60-120	gh	10YR43 00						0	0		0		M				
46	0-30	msz1	10YR42 00						0	0	HR	8						
	30-80	mc1	10YR43 00						0	0	HR	5		M				
	80 100	lms	10YR54 00						0	0	HR	2		M				
	100 120	gh	10YR54 00						0	0		0		M				
47	0 30	msz1	10YR42 00						8	4	HR	12						
	30 70	mc1	10YR43 00						0	0	HR	20		M				
	70 120	gh	10YR43 00						0	0		0		M				
48	0 30	msz1	10YR42 00						0	0	HR	10						
	30 55	mc1	75YR44 00						0	0	HR	5		M				
	55 80	msz1	10YR54 00						0	0	HR	5		M				
	80 120	gh	10YR54 00						0	0		0		M				
49	0 25	mzc1	10YR42 00						12	1	HR	22						
	25 40	msz1	10YR53 54						0	0	HR	25		M				
	40 120	gh	10YR53 00						0	0		0		M				
50	0 25	msz1	10YR42 00						1	0	HR	3						
	25 60	mc1	10YR43 00						0	0	HR	3		M				
	60 70	hc1	10YR43 53						0	0	HR	40		M				
	70 120	gh	10YR43 00						0	0		0		M				
51	0 30	msz1	10YR42 00						2	0	HR	5						
	30 58	msz1	10YR43 00						0	0	HR	5		M				
	58 65	hc1	10YR43 00						0	0	HR	30		M				
	65 120	gh	10YR44 00						0	0		0		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
52	0 28	msz1	10YR42 00						4	0	HR	8						
	28 52	msz1	10YR43 00						0	0	HR	8		M				
	52 68	msz1	10YR54 00						0	0	HR	20		M				
	68 85	ms1	10YR54 00						0	0	HR	10		M				
	85-90	hc1	10YR54 00						0	0	HR	30		M				
53	0-30	msz1	10YR32 00						5	0	HR	10						
	30 48	mc1	10YR33 00						0	0	HR	30		M				
	48 120	gh	10YR33 00						0	0		0		M				
54	0 30	msz1	10YR42 00						1	0	HR	5						
	30-60	mc1	10YR43 00						0	0	HR	10		M				
	60 70	msz1	10YR44 54						0	0	HR	25		M				
	70-90	fsz1	10YR54 00	10YR56 00	F				0	0	HR	40		M				
	90-120	gh	00ZZ00 00						0	0		0		P				
55	0-28	mc1	10YR43 00						2	0	HR	5						
	28 55	mc1	10YR44 00						0	0	HR	10		M				
	55 75	mc1	10YR44 54	10YR56 00	F				0	0	HR	30		M				
	75 80	hc1	10YR54 00	10YR56 00	C			S	0	0	HR	60		P				
	80 120	gh	00ZZ00 00					S	0	0		0		P				
56	0 25	msz1	10YR42 00						1	0	HR	5						
	25 40	mc1	10YR43 44						0	0	HR	10		M				
	40 55	mc1	10YR43 44						0	0	HR	15		M				
	55 75	mc1	10YR44 54						0	0	HR	35		M				
	75 120	gh	00ZZ00 00						0	0		0		P				
57	0 30	msz1	10YR43 00						1	0	HR	5						
	30 60	mc1	75YR46 00						0	0	HR	10		M				
	60 75	ms1	75YR54 00						0	0	HR	10		M				
	75 85	sc1	10YR54 00						0	0	HR	50		M				
	85 120	gh	00ZZ00 00						0	0		0		P				
58	0 25	msz1	10YR42 43						2	0	HR	5						
	25 55	mc1	75YR46 00						0	0	HR	5		M				
	55 75	sc1	75YR54 00						0	0	HR	15		M				
	75 95	hc1	10YR53 00	10YR56 00	C			Y	0	0	HR	15		M				
	95 110	sc1	10YR53 00	10YR58 00	M			Y	0	0	HR	25		M				
	110 120	gh	00ZZ00 00					Y	0	0		0		P				
60	0-28	msz1	10YR43 00						4	0	HR	8						
	28 45	mc1	10YR43 42						0	0	HR	8		M				
	45 85	msz1	10YR44 00						0	0	HR	10		M				
	85 90	mc1	10YR44 00						0	0	HR	25		M				
61	0 28	msz1	10YR43 00						2	0	HR	5						
	28 60	msz1	10YR44 00						0	0	HR	5		M				
	60 80	mc1	10YR44 00						0	0	HR	5		M				
	80 90	c	10YR54 00						0	0	HR	40		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES- 2	>6	LITH	STRUCT/ TOT	CONSIST	SUBS STR	POR	IMP	SPL	CALC
62	0 30	mszl	10YR42 00						2	0	HR	5						
	30-45	mszl	10YR43 00						0	0	HR	5		M				
	45-60	mcl	10YR43 00						0	0	HR	30		M				
	60-120	gh	10YR44 00						0	0		0		M				
63	0-28	mszl	10YR42 00						9	0	HR	15						
	28-45	mcl	10YR43 00						0	0	HR	15		M				
	45-50	mcl	10YR43 00						0	0	HR	30		M				
	50-120	gh	10YR43 00						0	0		0		M				
64	0-29	mszl	10YR42 00						7	0	HR	15						
	29 45	mcl	10YR43 00						0	0	HR	15		M				
	45 62	mcl	10YR44 00						0	0	HR	20		M				
	62 120	gh	10YR44 00						0	0		0		M				
65	0 30	mszl	10YR42 00						2	0	HR	7						
	30 60	mcl	10YR44 00						0	0	HR	15		M				
	60 80	mszl	10YR46 00						0	0	HR	30		M				
	80 120	gh	00ZZ00 00						0	0		0		P				
66	0 30	mszl	10YR42 00						2	0	HR	8						
	30-60	mcl	10YR44 00						0	0	HR	15		M				
	60 85	scl	10YR54 00						0	0	HR	50		M				
	85 120	gh	00ZZ00 00						0	0		0		P				
67	0 30	mszl	10YR42 00						3	0	HR	10						
	30 55	mcl	10YR43 44						0	0	HR	15		M				
	55 65	mcl	10YR44 54						0	0	HR	50		M				
	65 120	gh	00ZZ00 00						0	0		0		P				
68	0 28	mszl	10YR42 00						2	0	HR	6						
	28 55	mcl	10YR44 00						0	0	HR	15		M				
	55 75	scl	10YR54 00						0	0	HR	50		M				
	75-120	gh	00ZZ00 00						0	0		0		P				
69	0 25	mszl	10YR42 00						1	0	HR	5						
	25 55	mcl	10YR44 00						0	0	HR	10		M				
	55 75	hcl	10YR54 00						0	0	HR	20		M				
	75 85	mcl	10YR53 00	10YR56 00	C			Y	0	0	HR	40		M				
	85-120	gh	00ZZ00 00					Y	0	0		0		P				
70	0 25	mszl	10YR42 00						5	0	HR	15						
	25 70	msl	10YR53 54						0	0	HR	25		M				
	70 73	msl	10YR53 54						0	0	HR	40		M				
	73 120	gh	10YR53 00						0	0		0		M				
71	0 25	mszl	10YR42 00						5	0	HR	10						
	25 40	mszl	10YR43 00						0	0	HR	10		M				
	40 70	mcl	10YR43 00						0	0	HR	10		M				
	70 75	hcl	10YR53 43						0	0	HR	40		M				
	75 120	gh	10YR53 00						0	0		0		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
72	0 25	mszl	10YR42 00						3	0	HR	8						
	25 70	mszl	10YR43 00						0	0	HR	5		M				
	70-90	mcl	10YR43 53						0	0	HR	30		M				
73	0-25	mzcl	10YR42 43						2	0	HR	3						
	25 50	mszl	10YR43 00						0	0	HR	3		M				
	50 60	mcl	10YR43 00						0	0	HR	3		M				
	60 70	mcl	10YR43 00						0	0	HR	40		M				
	70 120	gh	10YR43 00						0	0		0		M				
74	0 25	mszl	10YR42 43						5	0	HR	8						
	25 40	mszl	10YR43 00						0	0	HR	8		M				
	40 50	mcl	10YR43 00						0	0	HR	10		M				
	50 60	mcl	10YR43 00						0	0	HR	40		M				
	60 120	gh	10YR43 00						0	0		0		M				
75	0 25	mszl	10YR42 00						5	0	HR	8						
	25 40	mszl	10YR43 00						0	0	HR	8		M				
	40 75	mcl	10YR43 00						0	0	HR	8		M				
	75 80	mcl	10YR53 43						0	0	HR	40		M				
	80 120	gh	10YR53 00						0	0		0		M				
76	0-30	mcl	10YR42 00						5	0	HR	8						
	30-40	mszl	10YR43 00						0	0	HR	15		M				
	40 55	mcl	10YR43 00						0	0	HR	40		M				
	55 120	gh	10YR44 00						0	0		0		M				
77	0-30	mcl	10YR42 00						5	0	HR	8						
	30 40	mszl	10YR43 00						0	0	HR	15		M				
	40 48	mcl	10YR43 00						0	0	HR	40		M				
	48 120	gh	10YR44 00						0	0		0		M				
78	0 20	mcl	10YR43 00						2	0	HR	5						
	20 55	mszl	10YR43 00						0	0	HR	10		M				
	55 65	msl	10YR53 00						0	0	HR	30		M				
	65 78	mcl	10YR53 00						0	0	HR	40		M				
	78 120	gh	10YR53 00						0	0		0		M				
79	0 30	mcl	10YR42 00						2	0	HR	5						
	30 45	mcl	10YR43 00						0	0	HR	10		M				
	45 58	mcl	10YR43 00						0	0	HR	15		M				
	58 68	scl	10YR54 00						0	0	HR	40		M				
	68 120	gh	10YR54 00						0	0		0		M				
80	0 25	mszl	10YR42 00						1	0	HR	5						
	25 50	mszl	10YR44 00						0	0	HR	10		M				
	50 75	mcl	10YR46 00						0	0	HR	10		M				
	75 95	scl	10YR54 00	10YR66 00	C			S	0	0	HR	40		M				
	95 100	scl	10YR54 00	10YR56 00	C			S	0	0	HR	60		P				
	100 120	gh	00ZZ00 00					S	0	0		0		P				

SAMPLE	DEPTH	TEXTURE	COLOUR	-- MOTTLES -- COL	ABUN	CONT	PED COL	GLEY	-STONES - >2	6	LITH	STRUCT/ TOT	CONSIST	SUBS STR	POR	IMP	SPL	CALC
81	0 25	msz1	10YR43 00						2	0	HR	8						
	25 50	mc1	10YR44 46						0	0	HR	10		M				
	50 70	mc1	10YR54 00						0	0	HR	15		M				
	70 80	sc1	10YR54 00	10YR56 00	C			S	0	0	HR	50		M				
	80 120	gh	00ZZ00 00					S	0	0		0		P				
82	0 25	mc1	10YR42 00						5	0	HR	8						
	25 55	mc1	10YR43 00						0	0	HR	5		M				
	55 70	hc1	10YR43 44						0	0	HR	40		M				
	70 120	gh	10YR43 00						0	0		0		M				
83	0 25	msz1	10YR42 00						3	0	HR	6						
	25 55	msz1	10YR43 00						0	0	HR	5		M				
	55 70	msz1	10YR43 00						0	0	HR	50		M				
	70 120	gh	10YR43 00						0	0		0		M				
84	0 30	msz1	10YR43 00						0	0	HR	7						
	30 55	mc1	10YR54 00						0	0	HR	5		M				
	55 70	msz1	10YR52 00						0	0	HR	5		M				
	70 120	gh	10YR52 00						0	0		0		M				
85	0-30	msz1	10YR43 00						0	0	HR	8						
	30 55	msz1	10YR44 00						0	0	HR	5		M				
	55 70	mc1	75YR44 00						0	0	HR	5		M				
	70 120	gh	75YR44 00						0	0		0		M				
86	0 25	msz1	10YR42 00						7	1	HR	17						
	25 55	mc1	10YR43 00						0	0	HR	17		M				
	55 120	gh	22XX22 00						0	0		0		M				
87	0 30	msz1	10YR42 00						2	0	HR	5						
	30 50	msz1	10YR43 00						0	0	HR	10		M				
	50 68	mc1	10YR43 00						0	0	HR	35		M				
	68 120	gh	10YR44 00						0	0		0		M				
88	0 20	msz1	10YR42 00						2	0	HR	5						
	20-55	msz1	10YR43 00						0	0	HR	15		M				
	55 75	msz1	10YR43 00						0	0	HR	40		M				
	75 120	gh	10YR44 00						0	0		0		M				
89	0 20	mc1	10YR42 00						2	0	HR	5						
	20 38	msz1	10YR42 00						0	0	HR	15		M				
	38 58	msz1	10YR43 00						0	0	HR	25		M				
	58 65	ms1	10YR43 00						0	0	HR	40		M				
	65 120	gh	10YR44 00						0	0		0		M				
90	0 25	mc1	10YR42 00						2	0	HR	5						
	25 40	msz1	10YR43 00						0	0	HR	15		M				
	40 70	mc1	10YR44 00						0	0	HR	15		M				
	70 90	ms1	10YR44 00						0	0	HR	15		M				
	90 100	ms1	10YR44 00						0	0	HR	40		M				
	100-120	gh	10YR44 00						0	0		0		M				

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
91	0 25	mszl	10YR43 00						2	0	HR	8						
	25 55	mcl	10YR46 00						0	0	HR	10			M			
	55 70	mcl	10YR54 56						0	0	HR	30			M			
	70 75	scl	10YR54 00						0	0	HR	60			P			
	75 120	gh	00ZZ00 00						0	0		0			P			
92	0 30	mszl	10YR43 00						16	0	HR	18						
	30 50	mcl	10YR44 00						0	0	HR	20			M			
	50 120	gh	10YR44 00						0	0		0			M			
93	0 30	mszl	10YR43 00						8	0	HR	10						
	30 60	mcl	75YR44 00						0	0	HR	20			M			
	60 65	mcl	10YR43 00						0	0	HR	5			M			
	65 120	gh	10YR44 00						0	0		0			M			
94	0 35	mszl	10YR43 00						15	0	HR	18						
	35 50	mcl	75YR44 00						0	0	HR	15			M			
	50 120	gh	75YR44 00						0	0		0			M			
95	0 30	mszl	10YR43 00						10	0	HR	15						
	30 50	mcl	75YR44 00						0	0	HR	10			M			
	50-120	gh	75YR44 00						0	0		0			M			
96	0 30	mszl	10YR43 00						16	0	HR	18						
	30 45	mcl	10YR44 00						0	0	HR	10			M			
	45-120	gh	10YR44 00						0	0		0			M			
97	0 28	mszl	10YR42 00						2	0	HR	5						
	28 40	mszl	10YR43 00						0	0	HR	5			M			
	40 58	mszl	10YR43 00						0	0	HR	15			M			
	58 80	mcl	10YR44 00						0	0	HR	15			M			
	80 120	gh	10YR44 00						0	0		0			M			
98	0 28	mszl	10YR42 00						5	0	HR	8						
	28 60	mcl	10YR43 00						0	0	HR	8			M			
	60 80	msl	10YR44 00						0	0	HR	5			M			
	80 110	msl	10YR44 00						0	0	HR	20			M			
	110 120	gh	10YR44 00						0	0		0			M			
99	0 30	mszl	10YR42 00						6	0	HR	10						
	30 50	mszl	10YR43 00						0	0	HR	15			M			
	50 75	mcl	10YR44 00						0	0	HR	25			M			
	75 120	gh	10YR44 00						0	0		0			M			
00	0 18	mszl	10YR42 00						5	0	HR	8						
	18 38	mcl	10YR43 00						0	0	HR	15			M			
	38-50	mcl	10YR43 00						0	0	HR	5			M			
	50 75	msl	10YR43 00						0	0	HR	5			M			
	75 92	lms	10YR54 00						0	0	HR	40			M			
	92 120	gh	10YR54 00						0	0		0			M			

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
101	0 25	msz1	10YR43 00						15	0	HR	18						
	25 50	mc1	75YR44 00						0	0	HR	20		M				
	50 120	gh	75YR44 00						0	0		0		M				
102	0 28	msz1	10YR42 00						4	0	HR	8						
	28 55	msz1	10YR43 00						0	0	HR	15		M				
	55 65	mc1	10YR43 00						0	0	HR	40		M				
	65 80	sc1	10YR43 00						0	0	HR	60		M				
	80 120	gh	10YR43 00						0	0		0		M				

SOIL PIT DESCRIPTION

Site Name HANTS MINS OM SITE 33 Pit Number 1P

Grid Reference SU15651244

Average Annual Rainfall	867 mm
Accumulated Temperature	1531 degree days
Field Capacity Level	180 days
Land Use	Cereals
Slope and Aspect	02 degrees W

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 30	MSL	10YR42 00	2	5	HR					
30 40	MSL	10YR43 00	0	5	HR		MDCSAB	FR	M	
40 60	MSL	10YR44 00	0	5	HR		WKCSAB	FR	G	
60 90	MSZL	10YR44 00	0	40	HR				M	
90 120	MCL	10YR44 00	0	60	HR				M	

Wetness Grade 1

Wetness Class	I
Gleying	cm
SPL	cm

Drought Grade 2

APW	125mm	MBW	17 mm
APP	106mm	MBP	5 mm

FINAL ALC GRADE 2

MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name HANTS MINS OM SITE 33 Pit Number 2P

Grid Reference SU15401200 Average Annual Rainfall 867 mm
Accumulated Temperature 1531 degree days
Field Capacity Level 180 days
Land Use
Slope and Aspect 02 degrees W

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 29	MSL	10YR42 00	6	14	HR		WKCSAB	FR		
29 48	MSL	10YR43 00	0	15	HR		MDCSAB	FR	M	
48 60	MSL	10YR44 00	0	34	HR		WKCSAB	FR	M	
60 70	MCL	10YR44 00	0	34	HR		MDCSAB	FR	M	
70-120	HCL	75YR44 00	0	59	HR				M	

Wetness Grade 1 Wetness Class I
Gleying cm
SPL cm

Drought Grade 3A APW 106mm MBW -2 mm
APP 91 mm MBP -10 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name HANTS MINS OM SITE 33 Pit Number 3P

Grid Reference SU15401170 Average Annual Rainfall 867 mm
Accumulated Temperature 1531 degree days
Field Capacity Level 180 days
Land Use Ley
Slope and Aspect degrees W

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 29	MSL	10YR42 00	10	22	HR					
29 35	MSL	10YR42 00	0	34	HR				M	
35 50	MCL	10YR42 00	0	50	HR				M	
50 120	GH	10YR43 00	0	0					M	

Wetness Grade 1 Wetness Class I
Gleying cm
SPL cm

Drought Grade 3B APW 65 mm MBW -43 mm
APP 62 mm MBP -39 mm

FINAL ALC GRADE 3B
MAIN LIMITATION Droughtiness