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Wokingham District Local Plan
Sites SH11, SH13, SH14, SH15 and SH16 -
Shinfield, Berkshire
Agricultural Land Classification
Semi-detailed survey
February 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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AGRICULTURAL LAND CLASSIFICATION REPORT

WOKINGHAM DISTRICT LOCAL PLAN
SH11, SH13, SH14, SH15, SH16 - SHINFIELD, BERKSHIRE

Introduction

1. This report presents the findings of a semi-detailed Agricultural Land Classification (ALC) survey of 218.6 ha of land around Shinfield, to the west of Wokingham, Berkshire. The survey was carried out in February 1996.

2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) from its Land Use Planning Unit in Reading, in connection with the Wokingham District Local Plan. All of this site was surveyed in 1976 in connection with the subdivision of Grade 3 land. However, the results of this, more recent, survey supersede any previous ALC information for this land. Land to the south of Aborfield Road and to the east of Hyde End Road was surveyed in 1993 as part of the Berkshire Minerals Plan. This survey was undertaken when the soil conditions were extremely dry. Consequently, not all of the soil profiles could be sampled to full auger depth (120 cm). As a result the recent survey work, carried out during wetter soil conditions, revealed some land quality variation within this area. Consequently, the 1995 survey supersedes the 1993 ALC information for this area.

3. The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group of ADAS. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF, 1988). A description of the ALC grades and subgrades is given in Appendix I.

4. At the time of survey much of the agricultural land was in permanent grass. Most of the land to the south-west of Shinfield was in arable use. The areas shown as 'Other Land' include woodland, tracks and roads, open water, dwellings with gardens, farm and university research buildings plus associated land, and a recreation ground. The 'Not Surveyed' area to the south of Shinfield Grange was not entered due to ongoing work with trial plots.

Summary

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:15,000 it is accurate at this scale but any enlargement would be misleading.

6. The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1 overleaf.

7. The fieldwork was conducted at an average density of approximately 2 borings every 3 hectares of agricultural land surveyed. A total of 120 borings and 8 soil pits were described.

Table 1: Area of grades and other land

Grade/ Other land	Area (hectares)	% Total site area	% Agricultural Land
2	2.6	1.2	1.5
3a	84.7	38.7	47.9
3b	86.5	39.6	49.0
4	2.9	1.3	1.6
Other land	38.7	17.7	
Not Surveyed	3.2	1.5	
Total agricultural area	176.7		100.0
Total site area	218.6	100.0	

8. The majority of agricultural land surveyed has been classified as Subgrade 3a (good quality) and Subgrade 3b (moderate quality). A small area in the north of the site has been classified as Grade 2 (very good quality). A small area of land next to the Infant School has been classified as Grade 4 (poor quality).

9. The land classified as Grade 2 is limited by both soil wetness and droughtiness. Medium sandy loam topsoils overlie medium clay loam upper subsoils which become heavier and slowly permeable at moderate depths within the profile. These lower subsoils either extend to depth or overlie gravelly horizons deep within the soil profile. The drainage within these profiles is impeded; however, the sandy textured topsoils and the relatively dry prevailing climate means that there is only slight restrictions on the flexibility of cropping, stocking and cultivations. In addition, these soil characteristics at this locality act to impose a slight soil droughtiness limitation. This may lead to the soil available water being insufficient to fully meet crop needs. Consequently, this land will suffer from slightly lower and less consistent crop yields.

10. Most of the land classified as Subgrade 3a is limited by soil droughtiness, sometimes in conjunction with soil wetness. In comparison to land classified as Grade 2, the subsoils of these profiles tend to be sandier, stonier, and with gravelly horizons occurring at slightly shallower depths. There is thus less soil water available for uptake by crop roots. Parts of this land are also limited by soil wetness. Some of the profiles are similar to those in para. 9 but with medium textured topsoils. These slightly heavier topsoils thus increase the risk of workability problems. Some of the profiles still have sandy topsoils but, in comparison to Grade 2 land, overlie slowly permeable horizons at much shallower depths.

11. Land classified as Subgrade 3b is either limited by soil wetness or droughtiness. The former occurs to the west and south of Shinfield Grange, plus to the east of Tanner's Copse. These profiles typically comprise medium textured topsoils which directly overlie slowly permeable subsoils. This results in poor drainage conditions, as indicated by hydrophilic vegetation plus standing water across parts of these areas. The remaining land classified as Subgrade 3b is limited by significant soil droughtiness. Medium sandy loam topsoils overlie

gravelly and sandy textured horizons, often loamy sands and sands, at relatively shallow depths within the soil profile. This land will be subject to low and inconsistent crop yields.

12. Next to the Infant School, Grade 4 has been mapped on the basis of microrelief limitations. This area of the site is currently in a state whereby most mechanised operations are not feasible and as such it is only suited to permanent grazing.

Factors Influencing ALC Grade

Climate

13. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

14. The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

Table 2: Climatic and altitude data

Factor	Units	Values	Values	Values	Values
Grid reference	N/A	SU735672	SU742694	SU724678	SU736688
Altitude	m, AOD	44	50	55	60
Accumulated Temperature	day°C	1475	1467	1462	1456
Average Annual Rainfall	mm	667	662	672	670
Field Capacity Days	days	138	138	139	139
Moisture Deficit, Wheat	mm	115	115	113	114
Moisture Deficit, Potatoes	mm	110	110	108	108

15. 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.

16. The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR), as a measure of overall wetness, and accumulated temperature (AT0, January to June), as a measure of the relative warmth of a locality.

17. The combination of rainfall and accumulated temperature at this site mean that there is no overall climatic limitation. However, climatic factors do interact with soil properties to influence soil wetness and droughtiness limitations. The crop-adjusted soil moisture deficits at this locality are above the average for the south-east of England. This increases the likelihood of soil droughtiness limitations. No local climatic factors, such as exposure or frost risk, are believed to adversely affect the land quality on the site. This site is climatically Grade 1.

Site

18. The land on this site is either flat, or is very gently sloping. Where sloping the land generally falls through gradients of 1-3° and is of a southerly or south-easterly aspect. The land on this site lies at approximately 45 to 60 m AOD. Nowhere on the site does gradient affect agricultural land quality. However, a small area of land has been classified as Grade 4 on the basis of a microrelief limitation.

Geology and soils

19. The published geological information (BGS, 1971) shows the entire site to be underlain by a solid geology of London Clay. Drift deposits of alluvium flank the River Loddon, extending as far west as Parrot Farm and Shinfield Grange. An extensive area of land in the south of the site, from Parrot Farm to Ryeish Green is overlain by drift deposits of valley gravel. The latter also occur in the north-east of the site, to the south of Cutbush Lane. Two small areas of land, to the north-east of Ryeish Green and to the south of the reservoir, are mapped as plateau gravel.

20. The published soils information (SSEW, 1983) shows three soil types across the site. The majority of the site comprises soils of the Hurst Association. These soils, which are mapped over the gravel deposits, are described as 'coarse and fine loamy permeable soils mainly over gravel variably affected by groundwater.' (SSEW, 1983). The eastern boundary of the site is mapped as the Fladbury 3 Association. These soils, which are mapped in conjunction with the alluvial deposits, are described as 'stoneless clayey, fine silty, and fine loamy soils affected by groundwater. Flat land. Risk of flooding.' (SSEW, 1983). The north-west of the site is mapped as the Wickham 4 Association. These soils occur where there is an absence of drift over the London Clay. These soils are described as 'slowly permeable seasonally waterlogged fine loamy over clayey and fine silty over clayey soils associated with similar clayey soils, often with brown subsoils.' (SSEW, 1983).

Agricultural Land Classification

21. The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1, page 2.

22. The location of the auger borings and pits is shown on the attached sample location map and the details of the soils data are presented in Appendix III.

Grade 2

23. A small area of slightly higher land in the north of the site has been classified as Grade 2, very good quality. This land is subject to slight soil droughtiness and wetness limitations. Topsoils comprise non-calcareous medium sandy loams. These overlie permeable medium clay loam upper subsoils which are gleyed and moderately structured. At approximately 50 cm depth these pass into heavy clay loam and clay lower subsoils. These subsoils are poorly structured and slowly permeable. These profiles either become sandier at depth (sandy clay, sandy clay loam) or overlie gravelly deposits at approximately 95 cm depth. These profiles are virtually stoneless. Given the local climate, these profiles are assessed as imperfectly drained (Wetness Class III, see Appendix II). However, the sandy textured topsoils and the relatively

dry prevailing climate means that this land is limited by minor soil wetness and workability. This may result in slightly restricted flexibility of cropping, stocking and cultivations. In addition, the interaction between these soil characteristics (texture, stone content and subsoil structure) and the relatively dry prevailing climate slightly reduces the amount of profile available water for plants. This is likely to have the effect of restricting the level and consistency of crop yields due to minor soil droughtiness to the extent that Grade 2 is appropriate.

Subgrade 3a

24. Just under half of the agricultural land surveyed on this site has been classified as Subgrade 3a, good quality. Most of this land is limited by soil droughtiness with smaller areas limited by soil wetness. Across parts of the site these limitations occur in conjunction.

25. Where soil wetness is the principal limitation profiles are similar to those described in para. 23. However, the topsoils comprise medium clay loams rather than medium sandy loams. These slightly heavier topsoils thus increase the risk of workability problems and so this land is classified as Subgrade 3a. Occasionally, the slowly permeable subsoils occur at shallower depths within the soil profile, typically 35 cm depth. These profiles, which are represented by Pit 8, are poorly drained and are thus assigned to Wetness Class IV. However, these profiles have easily worked sandy textured topsoils (medium sandy loams) and are accordingly classified as Subgrade 3a.

26. Where soil droughtiness occurs in conjunction with soil wetness, profiles are similar to those described in para. 25 but have slightly less profile available water for plants. This results from profiles with either sandier upper subsoils (medium sandy loams), stonier subsoils (containing 20-25% total flints by volume) or profiles overlying gravelly lower subsoils at approximately 80-90 cm depth.

27. Where soil droughtiness is the key limitation profiles either comprise relatively deep soils over gravelly deposits or deep sandy textured soils. Where the latter occurs, profiles typically comprise medium sandy loam topsoils over similarly textured or, occasionally, loamy medium sand upper subsoils. These pass to similarly textured or medium sand lower subsoils. As a result of fluctuating groundwater levels, profiles tend to be gleyed within 40 cm depth and so are assessed as moderately well drained (Wetness Class II). Topsoils tend to be slightly stony, containing 2-5% flints > 2 cm and 10-12% total flints by volume. Subsoils are similarly stony, though occasionally stonier (approximately 20% total flints by volume) at depth. The topsoils and upper subsoils of these profiles are similar to Pit 6, though the lower subsoils are less stony than those of Pit 6. All subsoils are moderately structured. The interaction of the soil characteristics with the local climatic regime acts to impart a moderate soil droughtiness limitation. This may result in the soil available water being insufficient to fully meet crop needs in some years. Consequently this land may suffer from reduced and less consistent crop yields.

28. Where soil profiles overlie gravelly deposits at depth topsoils comprise medium sandy loams. These overlie permeable similarly textured or sandy clay loam (tending medium sandy loam) upper subsoils. At approximately 45-70 cm depth some of these profiles pass into poorly structured and slowly permeable lower subsoils (sandy clay loams, heavy clay loams, clay). These profiles are imperfectly drained (Wetness Class III). In other profiles the lower

subsoils are also sandy textured and are moderately well drained (Wetness Class II). Topsoils tend to be slightly stony, containing 0-2% of flints > 2 cm and 5-10% total flints by volume. Subsoils tend to be either slightly or moderately stony, containing 5-30% total flints by volume. Occasionally lower subsoils are very stony, containing 40% total flints by volume. At approximately 60-95 cm depth these profiles proved impenetrable to a soil auger because of underlying gravelly deposits. Consequently, soil inspection pits were dug to assess the soil conditions of horizons below 60-95 cm depth. Pit 4 represents profiles where slowly permeable lower subsoils are present; Pit 6 typifies profiles which are sandy textured prior to proving impenetrable.

29. From Pit 6 it could be seen that the auger proved impenetrable because the underlying horizons are very stony. Lower subsoils were found to comprise medium sandy loams and medium sands which contain approximately 55% total flints by volume. The high stone content of these horizons meant that it was impossible to assess the ped size, shape and their degree of development. However, due to the friable consistence it has been assumed that these lower horizons are moderately structured. From Pit 4 it could be seen that the auger proved impenetrable because the underlying horizon comprised a slightly or moderately stony clay (containing 15% total flints by volume) of very firm consistence. The interaction between the soil characteristics (texture, stone contents, subsoil structures) of both Pits 4 and 6 with the relatively dry prevailing climate acts to impart a moderate soil droughtiness limitation. This may result in the soil available water being insufficient to fully meet crop needs in some years. Consequently this land may suffer from reduced and less consistent crop yields.

Subgrade 3b

30. Land classified as Subgrade 3b, moderate quality, is subject to either significant soil wetness or droughtiness limitations. The former occur to the west of Cutbush Lane (in the north of the site), around the Food Research Institute, across the lower-lying land to the south of Shinfield Grange, and to the south of Millworth Lane. Topsoils comprise medium clay loams and medium silty clay loams. These usually pass into slowly permeable heavier textured (heavy clay loam, clay) subsoils. Occasionally permeable medium clay loam or stony heavy clay loam upper subsoils occur. However, these pass into the slowly permeable lower subsoils at shallow depths (30-36 cm) within the soil profile. Profiles tend to be very slightly stony, containing 0-5% total flints by volume. These profiles, which are represented by Pit 5, are poorly drained. This drainage impedance is indicated by gleying within the subsoils, and often within the topsoils. Given the prevailing climate these profiles are assigned to Wetness Class IV. The interaction between the topsoil textures and drainage characteristics with the local climatic regime means that this land is most appropriately classified as Subgrade 3b. This land will be subject to significant restrictions on the flexibility of cropping, stocking and cultivations.

31. The remainder of the Subgrade 3b land is limited by soil droughtiness. In comparison to land classified as Subgrade as 3a, the profiles in this mapping unit are sandier or shallower over gravelly deposits. The majority of profiles have medium sandy loams topsoils, which are occasionally organic. These profiles pass into similarly textured or loamy medium sand subsoils. Topsoils typically contain 1-7% of flints larger than 2 cm and 8-15% of total flints by volume. Upper subsoils are moderately stony (20-35% total flints), though occasionally are very stony (40% total flints). At approximately 35-45 cm depth these pass into very stony (40-60% total flints) lower subsoils. Fluctuating groundwater levels means that these profiles

are well to moderately well drained (Wetness Classes I and II), depending upon the depth to gleying. These profiles proved impenetrable to a soil auger between 45 and 70 cm depth because of underlying gravelly deposits.

32. Other profiles in this mapping unit tend to have slightly heavier textured subsoils. Topsoils comprise sandy clay loams, medium clay loams and occasionally medium sandy loams. Subsoils comprise medium, heavy and sandy clay loams. The flint content of these profiles is similar to before. The slightly heavier subsoils means that these profiles are usually moderately well drained (Wetness Class II). However, profiles which have slowly permeable heavy clay loam, sandy clay loam or clay at depth are imperfectly drained (Wetness Class III). Profiles generally proved impenetrable to a soil auger at slightly shallower depths, typically 40 to 55 cm.

33. In order to assess the lower subsoil conditions of the profiles which proved impenetrable to a soil auger soil inspection pits 1, 2, 3 and 7 were dug. From Pit 2 it could be seen that lower subsoils comprise loamy medium sands. In this profile an iron pan occurred at 42 cm. Although this horizon is only slightly stony (10% total flints) its consolidated nature means that roots are unlikely to penetrate more than a few cm. The very firm consistence of this horizon means that a poor subsoil structure has been assumed.

34. Subsoils in the remaining pits were found to comprise loamy medium sandy, medium sand and, occasionally, medium sandy loams. Horizons were found to be moderately to very stony (31-65% total flints). In many cases the high stone contents meant that it was not possible to determine the size and shape of soil peds or their degree of development. However, given the friable and very friable consistence of these horizons moderate subsoil structures have been assumed. A comparison of the auger boring descriptions and the conditions observed in Pits 3 and 7 highlighted that subsoils were often both sandier and much stonier than originally envisaged in the auger borings. The fact that fieldwork was carried out when subsoils were moist, combined with the subsoils being of friable or very friable consistence, meant that it was often possible to auger through very stony subsoils(including that of 60% total flints). These factors have been considered in determining the extent and boundary of the Subgrade 3b mapping unit.

35. For all of the above pits the interaction of the soil properties, such as texture, stone content, subsoils structures (and restricted rooting in the case of Pit 2), and the prevailing climate results in the amount of soil available water being inadequate to meet crop requirements in most years. The resultant soil droughtiness limitation means that this land will suffer from lower and less consistent yield potential.

Grade 4

36. Grade 4, poor quality, land has been mapped in a single mapping unit to the north-west of Shinfield Infants School. The principal limitation to land quality in this area is microrelief and a lack of soil resource due to the fact that it appears to have been disturbed at

some point in the past. This means that the majority of mechanical operations are not feasible and as such it is best suited to permanent grazing.

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SOURCES OF REFERENCE

British Geological Survey (1971) *Sheet No.268, Reading, 1:63,360 (drift edition).*
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Met. Office (1989) *Climatological Data for Agricultural Land Classification.*
Met. Office: Bracknell.

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

Soil Survey of England and Wales (1984) *Soils and their Use in South East England*
SSEW: Harpenden

APPENDIX I

DESCRIPTIONS 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 (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5: Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

APPENDIX II

SOIL WETNESS CLASSIFICATION

Definitions of Soil Wetness Classes

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.

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.

Assessment of Wetness Class

Soils have been allocated to wetness classes by the interpretation of soil profile characteristics and climatic factors using the methodology described in *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988).

[1] The number of days is not necessarily a continuous period.
[2] 'In most years' is defined as more than 10 out of 20 years.

APPENDIX III

SOIL DATA

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

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

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

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

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

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

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

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

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

SOIL PIT DESCRIPTION

Site Name : WOKINGHAM DLP SH11,13,14 Pit Number : 1P

Grid Reference: SU73006760 Average Annual Rainfall : 662 mm
Accumulated Temperature : 1467 degree days
Field Capacity Level : 138 days
Land Use : Ley
Slope and Aspect : 01 degrees NW

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	OMSL	10YR42 00	3	12	HR					
28- 46	SCL	10YR43 53	0	25	HR		MDCSAB	FR	M	
46- 64	MS	10YR64 00	0	57	HR	C			M	
64- 90	LMS	10YR64 00	0	50	HR	M			M	
90-120	C	25Y 62 00	0	30	HR	M		FM	P	

Wetness Grade : 1 Wetness Class : I
Gleying :046 cm
SPL :090 cm

Drought Grade : 3B APW : 94 mm MBW : -21 mm
APP : 75 mm MBP : -35 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOKINGHAM DLP SH11,13,14 Pit Number : 2P

Grid Reference: SU73106710 Average Annual Rainfall : 662 mm
Accumulated Temperature : 1467 degree days
Field Capacity Level : 138 days
Land Use : Arable
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 29	MSL	10YR21 00	1	5	HR					
29- 42	MSL	75YR34 00	0	10	HR		WKCSAB	FR	M	
42- 50	LMS	75YR44 00	0	10	HR			VM	P	
50-120	LMS	75YR44 00	0	55	HR				P	

Wetness Grade : 1 Wetness Class : I
Gleying : cm
SPL : cm

Drought Grade : 3B APW : 66 mm MBW : -49 mm
APP : 66 mm MBP : -44 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOKINGHAM DLP SH11,13,14 Pit Number : 3P

Grid Reference: SU72806740 Average Annual Rainfall : 662 mm
Accumulated Temperature : 1467 degree days
Field Capacity Level : 138 days
Land Use : Ploughed
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 30	MSL	10YR42 00	4	15	HR					
30- 50	SCL	10YR43 00	0	40	HR		WKCSAB	FR	M	
50- 55	MSL	10YR62 00	0	60	HR		WKCSAB	VF	M	
55- 75	LMS	10YR62 00	0	60	HR		WKCSAB	VF	M	
75-120	MS	10YR63 00	0	60	HR				M	

Wetness Grade : 1 Wetness Class : I
Gleying : cm
SPL : No SPL

Drought Grade : 3B APW : 78 mm MBW : -37 mm
APP : 71 mm MBP : -39 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOKINGHAM DLP SH11,13,14 Pit Number : 4P

Grid Reference: SU73266816 Average Annual Rainfall : 662 mm
Accumulated Temperature : 1467 degree days
Field Capacity Level : 138 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MSL	10YR43 00	2	8	HR					
28- 45	MSL	10YR53 00	0	15	HR	C	MDCSAB	FR	M	
45- 55	SCL	25Y 63 53	0	15	HR	M	MDCPR	FM	P	
55- 80	C	25Y 51 00	0	5	HR	M	MDCPR	VM	P	
80-120	C	25Y 51 00	0	15	HR	M	MDCPR	VM	P	

Wetness Grade : 2 Wetness Class : III
Gleying :028 cm
SPL :045 cm

Drought Grade : 3A APW : 116mm MBW : 1 mm
APP : 96 mm MBP : -14 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOKINGHAM DLP SH11,13,14 Pit Number : 5P

Grid Reference: SU73906790 Average Annual Rainfall : 662 mm
Accumulated Temperature : 1467 degree days
Field Capacity Level : 138 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 16	MZCL	10YR41 00	0	1	HR	F				
16- 40	HCL	25Y 52 62	0	0		M	WKCSAB	FM	P	
40- 60	C	25Y 61 62	0	0		M	WKVCAB	FM	P	

Wetness Grade : 3B Wetness Class : IV
Gleying :016 cm
SPL :016 cm

Drought Grade : APW : mm MBW : 0 mm
APP : mm MBP : 0 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : WOKINGHAM DLP SH11,13,14 Pit Number : 6P

Grid Reference: SU74206860 Average Annual Rainfall : 662 mm
Accumulated Temperature : 1467 degree days
Field Capacity Level : 138 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 25	MSL	10YR44 43	1	5	HR					
25- 43	MSL	10YR44 54	0	5	HR		MDCSAB	FR	M	
43- 67	MSL	10YR53 00	0	5	HR	M	MDCSAB	FR	M	
67- 95	MSL	10YR53 00	0	56	HR	M			M	
95-120	MS	10YR64 00	0	56	HR	M			M	

Wetness Grade : 1 Wetness Class : I
Gleying :043 cm
SPL : No SPL

Drought Grade : 3A APW : 113mm MBW : -2 mm
APP : 103mm MBP : -7 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOKINGHAM DLP SH11,13,14 Pit Number : 7P

Grid Reference: SU72786797 Average Annual Rainfall : 662 mm
Accumulated Temperature : 1467 degree days
Field Capacity Level : 138 days
Land Use : Cereals
Slope and Aspect : 02 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 29	MSL	10YR42 00	3	8	HR					
29- 52	LMS	10YR52 00	0	58	HR	F		VF	M	
52- 75	MS	10YR52 00	0	31	HR	C		VF	M	
75- 95	MS	75YR68 58	0	36	HR			VF	M	
95-120	LMS	05Y 62 00	0	65	HR	C		VF	M	

Wetness Grade : 1 Wetness Class : I
Gleying :052 cm
SPL : No SPL

Drought Grade : 3B APW : 70 mm MBW : -45 mm
APP : 61 mm MBP : -49 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOKINGHAM DLP SH11,13,14 Pit Number : 8P

Grid Reference: SU72506770 Average Annual Rainfall : 662 mm
Accumulated Temperature : 1467 degree days
Field Capacity Level : 138 days
Land Use : Cereals
Slope and Aspect : 03 degrees SE

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 26	MSL	10YR42 00	1	5	HR					
26- 35	MSL	10YR53 00	0	5	HR	C	MDCSAB	FR	M	
35- 67	SCL	25Y 63 00	0	2	HR	M	MDVCPR	FM	P	
67-120	SCL	25Y 63 00	0	2	HR	M	WKCSAB	FM	P	

Wetness Grade : 3A Wetness Class : IV
Gleying :026 cm
SPL :035 cm

Drought Grade : 2 APW : 129mm MBW : 14 mm
APP : 100mm MBP : -10 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Wetness

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	DRT	M.REL FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	SU74306948	PLO	S	01	030		2	2	72	-43	73	-37	3B				DR	3B	Imp55 gravelly
1P	SU73006760	LEY	NW	01	046	090	1	1	94	-21	75	-35	3B				DR	3B	AB impen at 50
2	SU74056938	PLO	S	03	028	075	2	2	119	4	113	3	3A				WD	2	Imp90 gravelly
2P	SU73106710	ARA					1	1	66	-49	66	-44	3B				DR	3B	Iron pan 42
3	SU74206940	PLO	S	06	030	030	4	3B		0		0					WE	3B	Imp60 gravelly
3P	SU72806740	PLO					1	1	78	-37	71	-39	3B				DR	3B	Pit100 ASP179
4	SU74106930	PLO	S	03	030	055	3	3A	94	-21	103	-7	3B				WD	3A	Imp60 gravelly
4P	SU73266816	PGR			028	045	3	2	116	1	96	-14	3A				DR	3A	Pit90 Augd120
5	SU74336928	FLW			030	070	2	1	108	-7	97	-13	3A				DR	3A	Imp95gravelly
5P	SU73906790	PGR			016	016	4	3B		0		0					WE	3B	Surf. water nr
6	SU74206920	PLO	S	02	0	025	4	3B		0		0					WE	3B	
6P	SU74206860	PGR			043		1	1	113	-2	103	-7	3A				DR	3A	Pockets of scl
7	SU74406920	FLW			028		2	2	86	-29	91	-19	3B				DR	3A	Imp60 gravelly
7P	SU72786797	CER	S	02	052		1	1	70	-45	61	-49	3B				DR	3B	At boring 101
8	SU74306910	FLW			035		2	1	77	-38	82	-28	3B				DR	3B	Imp70 gravelly
8P	SU72506770	CER	SE	03	026	035	4	3A	129	14	100	-10	2				WE	3A	
9	SU74196907	PGR			028		2	1	75	-40	80	-30	3B				DR	3B	Imp70 gravelly
10	SU74446907	FLW			030	075	2	1	106	-9	82	-28	3A				DR	3A	Wet at 55 plus
11	SU73506900	PGR	SW	02	030	050	3	2	115	0	108	-2	3A				WD	2	Imp95 gravelly
12	SU73526894	FLW			026	070	2	1	109	-6	100	-10	3A				DR	3A	Imp100gravelly
13	SU73406890	PGR	SW	02	030	050	3	2	129	14	102	-8	2				WD	2	Augd to depth
14	SU73676892	PGR	W	02	0	025	4	3B		0		0					WE	3B	Plastic 25
15	SU73706890	PGR			025	050	3	3A	125	10	101	-9	2				WE	3A	
16	SU73286882	PGR	SW	01	030	060	3	2	105	-10	105	-5	3A				DR	3A	Imp90 gravelly
17	SU73526878	PGR	SE	02	025	025	4	3B		0		0					WE	3B	London clay
18	SU73706880	PGR	S	03	0	025	4	3B		0		0					WE	3B	Plastic 25
19	SU73876881	PGR	SE	03	025	060	3	3A	133	18	109	-1	2				WE	3A	Horizon2 Q hcl
20	SU73606870	PGR	SE	02	030	050	3	2	122	7	108	-2	2				WD	2	
20A	SU73506863	PGR	E	02	042	065	2	1	119	4	108	-2	3A				DR	3A	Borderline Gr2
21	SU73806870	PGR	S	02	030	030	4	3B		0		0					WE	3B	
22	SU73786860	PGR	SE	01	030	045	3	3A	110	-5	92	-18	3A				WD	3A	
23	SU74006860	FLW	SE	01	0		2	1	95	-20	101	-9	3A				DR	3A	Imp70 gravelly
24	SU74206860	PGR			050	060	2	1	98	-17	102	-8	3A				DR	3A	Imp75 gravelly
25	SU73076857	PGR			024	045	3	3A	102	-13	106	-4	3A				WD	3A	
26	SU72956853	PGR			0	055	3	3A	134	19	111	1	2				WE	3A	Augd to depth
27	SU73706850	PGR	SE	02	028	060	3	2	125	10	102	-8	2				WD	2	H2 Q msl - 3a
28	SU73906850	ARA			045	080	1	1	137	22	112	2	2				DR	2	
29	SU74106850	PGR					1	1	92	-23	99	-11	3B				DR	3A	Imp70 gravelly
30	SU74306850	PGR			025	060	3	2	106	-9	102	-8	3A				DR	3A	Imp90 gravelly
31	SU72946844	PGR			0	036	4	3B		0		0					WE	3B	
32	SU73806840	PGR	SE	01	0		2	2	59	-56	59	-51	4				DR	3B	Imp40 gravelly
33	SU74006840	PGR			025	040	3	3A	78	-37	80	-30	3B				DR	3B	Imp55 gravelly

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	DRT	M.REL FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
34	SU74206840	PGR			040	060	3	2	144	29	104	-6	2				DR	2	Augd to depth
35	SU73706830	FLW	E	02	028	060	3	2	125	10	100	-10	2				DR	2	Borderline 3a
36	SU73906830	PGR			015	015	4	3B		0		0					WE	3B	Imp70 gravelly
37	SU74106830	PGR			028		2	2	78	-37	78	-32	3B				DR	3A	Imp48 gravelly
38	SU73176826	PGR	S	01			1	1	52	-63	52	-58	4				DR	3B	Imp50 gravelly
39	SU73626824	FLW			030	064	3	2	113	-2	84	-26	3A				DR	3A	Just WC III
40	SU73776820	PGR			020	035	4	3A	76	-39	85	-25	3B				DR	3B	Imp70 gravelly
41	SU74006820	PGR			045	045	3	3A	111	-4	105	-5	3A				WE	3A	Sl.gley0;Imp85
42	SU72786815	PGR			023	070	2	1	133	18	110	0	2				DR	2	Augd to depth
43	SU73106815	PGR	S	01			1	1	61	-54	61	-49	4				DR	3B	Imp50 gravelly
44	SU73266816	PGR	S	01	028	055	3	2	100	-15	101	-9	3A				DR	3A	Imp85 gravelly
45	SU73706810	FLW			030	090	2	1	132	17	99	-11	3A				DR	3A	
46	SU73906812	PGR			0	010	4	3B		0		0					WE	3B	Rushes
47	SU74106810	PGR			020	020	4	3B		0		0					WE	3B	
48	SU72606800	CER	S	02			1	1	86	-29	91	-19	3B				DR	3A	Imp65 gravelly
49	SU72806800	CER	S	02	038		2	1	91	-24	97	-13	3B				DR	3B	Imp72 gravelly
50	SU73026800	PGR	S	02	025	047	3	2	121	6	99	-11	3A				DR	3A	
51	SU73226802	PGR	S	01	026	060	3	2	126	11	103	-7	2				WD	2	
52	SU73306800	PGR			028	055	3	2	112	-3	103	-7	3A				DR	3A	Imp100gravelly
53	SU73606800	LEY			030	075	2	1	111	-4	84	-26	3A				DR	3A	
54	SU73826800	PGR			025	050	3	3A	103	-12	109	-1	3A				WD	3A	Imp80 gravelly
55	SU74006800	PGR			0	025	4	3B		0		0					WE	3B	
56	SU72506790	CER			030		2	1	99	-16	99	-11	3A				DR	3A	Prob stonier3b
57	SU72686788	CER	S	02	065		1	1	86	-29	85	-25	3B				DR	3B	Imp90 gravelly
58	SU72906790	PGR	S	01	026	035	4	3A	119	4	97	-13	3A				WD	3A	Augd to depth
59	SU73106790	PGR			050		1	1	124	9	100	-10	2				DR	2	Imp110gravelly
60	SU73616791	FLW			035	070	2	1	113	-2	103	-7	3A				DR	3A	Imp100gravelly
61	SU73906790	PGR			015	030	4	3B		0		0					WE	3B	
62	SU74106790	PGR			045	045	3	3A	115	0	112	2	3A				WE	3A	V wet 60 -Q 3b
63	SU72406780	CER					1	1	59	-56	59	-51	4				DR	3B	Imp45 gravelly
64	SU72606780	CER	S	02	023	055	3	2	110	-5	94	-16	3A				DR	3A	Augd to depth
65	SU72806780	CER	S	01	028	055	3	2	126	11	99	-11	3A				DR	3A	Augd to depth
66	SU73006780	FLW	N	1			1	1	68	-47	68	-42	3B				DR	3B	Imp45 gravelly
67	SU73206780	RGR			010		2	1	39	-76	39	-71	4	Y		Y	MR	4	Disturbed
68	SU73806780	PGR			030		2	2	89	-26	97	-13	3B				DR	3A	Imp70 gravelly
69	SU72306770	CER	SE	01			1	1	107	-8	80	-30	3A				DR	3A	Wet & stony
70	SU72506770	CER	SE	03	030	035	4	3A	123	8	96	-14	3A				WD	3A	
71	SU72706770	CER			028		2	1	83	-32	87	-23	3B				DR	3A	Imp65 gravelly
72	SU72876769	PLO			040		1	1	99	-16	109	-1	3A				DR	3A	Imp70 gravelly
73	SU73106770	FLW	N	01			1	1	49	-66	49	-61	4				DR	3B	Imp50 gravelly
74	SU73306770	FLW					1	1	66	-49	66	-44	3B				DR	3B	Imp45 gravelly
75	SU73706770	PGR					1	1	78	-37	78	-32	3B				DR	3B	Imp50 gravelly

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	M.REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
76	SU72606760	STB			030		2	1	92	-23	89	-21	3B				DR	3B	V. compact 100
77	SU72806760	FLW					1	1	70	-45	70	-40	3B				DR	3B	Imp50 gravelly
78	SU73006760	LEY	NW	01			1	1	64	-51	64	-46	4				DR	3B	Imp50 gravelly
79	SU73206760	LEY			030	045	3	3A	106	-9	104	-6	3A				WD	3A	See 5P -spl 45
80	SU73626760	PGR			025	050	3	3A	98	-17	109	-1	3A				WD	3A	Imp70 gravelly
81	SU73806760	PGR			030		2	2	82	-33	89	-21	3B				DR	3B	Imp70 gravelly
82	SU72706750	PLO			028		2	1	65	-50	65	-45	3B				DR	3B	Imp48 gravelly
83	SU72906750	PLO	N	01			1	1	79	-36	83	-27	3B				DR	3B	Imp60 gravelly
84	SU73106750	FLW					1	1	57	-58	57	-53	4				DR	3B	Imp45 gravelly
85	SU73706750	PGR			030	070	2	1	108	-7	109	-1	3A				DR	3A	Imp80 gravelly
86	SU73196745	FLW					1	1	29	-86	29	-81	4				ST	3B	Imp40 gravelly
87	SU73566745	PGR			0		2	2	92	-23	100	-10	3B				DR	3A	Imp70 gravelly
88	SU72606740	CER					1	1	69	-46	69	-41	3B				DR	3B	See 5P
89	SU72826742	PLO	S	01			1	1	86	-29	90	-20	3B				DR	3B	Imp75 gravelly
90	SU73016741	FLW			027		2	1		0		0					ST	3B	Imp45 gravelly
91	SU73646740	PGR			0		2	2	57	-58	57	-53	4				DR	3B	Imp40 gravelly
92	SU73806740	PGR			035		1	1	91	-24	100	-10	3B				DR	3A	Imp65 gravelly
93	SU72606730	CER			058	068	2	1	128	13	106	-4	2				DR	2	Augd to depth
94	SU72706730	CER			050	072	2	1	131	16	105	-5	2				DR	2	Prob stonier3a
95	SU72806730	CER			035	060	3	2	107	-8	104	-6	3A				DR	3A	Imp90 gravelly
96	SU72886732	CER			030		2	1	87	-28	91	-19	3B				DR	3A	Imp60 gravelly
97	SU73006730	PLO			030	045	3	2	82	-33	88	-22	3B				DR	3A	Imp65 gravelly
98	SU73106730	PLO			030	075	2	1	116	1	90	-20	3A				DR	3A	Augd to depth
99	SU73306730	OSR	W	03	035		2	1	128	13	105	-5	2				DR	2	Augd to depth
100	SU73506730	PGR	W	03	0	030	4	3B		0		0					WE	3B	
101	SU72606720	CER					1	1	94	-21	103	-7	3B				DR	3A	Imp70 gravelly
102	SU72706720	CER			025	045	3	2	83	-32	88	-22	3B				DR	3A	Imp60 gravelly
103	SU72806720	CER					1	1	67	-48	67	-43	3B				DR	3B	Imp50 gravelly
104	SU73006720	PLO			025		2	1	71	-44	72	-38	3B				DR	3B	Imp55 gravelly
105	SU73106720	PLO					1	1	75	-40	76	-34	3B				DR	3B	Imp55 gravelly
106	SU73606720	PGR			030		2	1	115	0	112	2	3A				DR	2	Imp90 gravelly
107	SU72606710	FLW			030		2	1	64	-51	64	-46	4				DR	3B	Imp42 gravelly
108	SU72706710	FLW			045	060	2	1	102	-13	107	-3	3A				DR	3A	Imp80 gravelly
109	SU72906710	ARA					1	1	55	-60	55	-55	4				DR	3B	Imp40 gravelly
110	SU73006710	CER			025		2	1	113	-2	94	-16	3A				DR	3A	Waterlogged 55
111	SU73106710	PLO					1	1	64	-51	64	-46	4				DR	3B	Imp50 gravelly
112	SU73506710	PGR	W	03	0	080	2	2	137	22	116	6	2				WD	2	Imp110gravelly
113	SU72606702	FLW			065		1	1	153	38	107	-3	2				DR	2	Augd to depth
114	SU72706700	FLW			025	045	3	3A	127	12	104	-6	2				WE	3A	
115	SU72806700	FLW			025		2	1	59	-56	59	-51	4				DR	3B	Imp45 gravelly
116	SU72906700	CER			030		2	1	110	-5	83	-27	3A				DR	3A	Augd to depth
117	SU72986702	ARA			015		2	1	106	-9	88	-22	3A				DR	3A	Wet at 60

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	DRT	M.REL FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
118	SU72906690	PLO		025	060		3	2	128	13	104	-6	2				WD	2	Augd to depth
119	SU73006690	PLO		030	045		3	2	95	-20	94	-16	3A				DR	3A	Imp90 gravelly

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	
1	0-30	mcl	10YR42 00						6	0	HR	15							
	30-40	hcl	10YR52 00	75YR56 00	M			Y	0	0	HR	30		P					Borderline c
	40-55	msl	25Y 52 00	75YR56 00	M			Y	0	0	HR	20		M					Q iron pan
1P	0-28	omsl	10YR42 00						3	0	HR	12							
	28-46	scl	10YR43 53						0	0	HR	25	MDCSAB FR	M					Borderline msl
	46-64	ms	10YR64 00	10YR58 00	C			Y	0	0	HR	57		M					Wet sieved
	64-90	lms	10YR64 00	10YR58 00	M			Y	0	0	HR	50		M					Wet sieved
	90-120	c	25Y 62 00	10YR58 00	M			Y	0	0	HR	30		FM P	Y		Y		
2	0-28	mcl	10YR42 00						2	0	HR	5							
	28-60	mcl	10YR53 00	10YR56 46	C		00MN00 00	Y	0	0	HR	2		M					Borderline hcl
	60-75	scl	10YR62 00	10YR56 00	C			Y	0	0	HR	2		M					Light scl
	75-90	scl	25Y 62 00	75YR56 00	M			Y	0	0	HR	2		P			Y		Border sc; Impen90
2P	0-29	msl	10YR21 00						1	0	HR	5							
	29-42	msl	75YR34 00						0	0	HR	10	WKCSAB FR	M					
	42-50	lms	75YR44 00						0	0	HR	10		VM P		Y			Iron Pan
	50-120	lms	75YR44 00						0	0	HR	55		P					Pit to 60
3	0-30	mcl	10YR42 00						4	0	HR	10							
	30-50	c	10YR62 00	10YR56 00	M			Y	0	0	HR	10		P			Y		Very firm
	50-60	c	25Y 62 00	10YR56 00	M			Y	0	0	HR	25		P			Y		Imp 60 gravelly
3P	0-30	msl	10YR42 00						4	0	HR	15							
	30-50	scl	10YR43 00						0	0	HR	40	WKCSAB FR	M					
	50-55	msl	10YR62 00						0	0	HR	60	WKCSAB VF	M					
	55-75	lms	10YR62 00						0	0	HR	60	WKCSAB VF	M					
	75-120	ms	10YR63 00						0	0	HR	60		M					
4	0-30	mcl	10YR42 00						2	0	HR	5							
	30-55	mcl	10YR63 00	10YR66 61	C			Y	0	0	HR	10		M					
	55-70	hcl	10YR62 00	75YR58 00	M			Y	0	0	HR	15		P			Y		Heavy scl
4P	0-28	msl	10YR43 00						2	0	HR	8							
	28-45	msl	10YR53 00	10YR56 00	C			Y	0	0	HR	15	MDCSAB FR	M					
	45-55	scl	25Y 63 53	75YR68 00	M			Y	0	0	HR	15	MDCPR FM	P	Y		Y		
	55-80	c	25Y 51 00	75YR68 58	M			Y	0	0	HR	5	MDCPR VM	P	Y		Y		Borderline sc
	80-120	c	25Y 51 00	75YR68 58	M			Y	0	0	HR	15	MDCPR VM	P	Y		Y		
5	0-30	msl	10YR41 42						3	0	HR	8							
	30-55	msl	10YR52 00	10YR56 66	C		00MN00 00	Y	0	0	HR	15		M					
	55-70	msl	10YR52 62	10YR58 00	C		00MN00 00	Y	0	0	HR	25		M					
	70-90	scl	25Y 62 00	10YR58 00	M			Y	0	0	HR	10		P			Y		Heavy scl
	90-95	sc	25Y 62 00	10YR58 68	M			Y	0	0	HR	20		P			Y		Imp 95 gravelly
5P	0-16	mzcl	10YR41 00	10YR46 00	F				0	0	HR	1							Borderline mcl
	16-40	hcl	25Y 52 62	10YR68 00	M			Y	0	0		0	WKCSAB FM	P	Y		Y		
	40-60	c	25Y 61 62	75YR68 00	M			Y	0	0		0	WKVCAB FM	P	Y		Y		Tending massive

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	
6	0-25	mcl	10YR42 00 75YR58 00 C					Y	1	0	HR	5							
	25-60	hcl	10YR52 00 10YR58 00 C					Y	0	0	HR	10		P			Y		Very firm
	60-80	c	10YR52 00 75YR56 00 M					Y	0	0	HR	10		P			Y		
6P	0-25	msl	10YR44 43						1	0	HR	5							
	25-43	msl	10YR44 54						0	0	HR	5	MDCSAB	FR	M				
	43-67	msl	10YR53 00 75YR58 00 M					Y	0	0	HR	5	MDCSAB	FR	M				
	67-95	msl	10YR53 00 75YR58 00 M					Y	0	0	HR	56		M					Wet sieved
	95-120	ms	10YR64 00 75YR58 68 M					Y	0	0	HR	56		M					Q stones as above
7	0-28	mcl	10YR42 00						2	0	HR	8							
	28-55	mcl	10YR53 52 10YR56 00 C				00MN00 00	Y	0	0	HR	10		M					
	55-60	hcl	10YR52 53 10YR58 56 C				00MN00 00	Y	0	0	HR	40		M					Imp 60 gravelly
7P	0-29	msl	10YR42 00						3	0	HR	8							Wet sieved
	29-52	lms	10YR52 00 75YR46 00 F						0	0	HR	58		VF	M				Wet sieved
	52-75	ms	10YR52 00 75YR56 00 C				00MN00 00	Y	0	0	HR	31		VF	M				Wet sieved
	75-95	ms	75YR68 58					Y	0	0	HR	36		VF	M				Wet sieved
	95-120	lms	05Y 62 00 75YR66 00 C					Y	0	0	HR	65		VF	M				Estimated stone
8	0-28	msl	10YR41 42						1	0	HR	8							
	28-35	msl	10YR53 00 10YR56 00 F						0	0	HR	25		M					
	35-60	msl	10YR53 00 10YR56 00 C					Y	0	0	HR	40		M					Borderline scl
	60-70	scl	10YR52 53 10YR58 00 M					Y	0	0	HR	60		M					Borderline msl
8P	0-26	msl	10YR42 00						1	0	HR	5							
	26-35	msl	10YR53 00 75YR56 46 C				00MN00 00	Y	0	0	HR	5	MDCSAB	FR	M				Borderline scl
	35-67	scl	25Y 63 00 75YR68 00 M				25Y 62 00	Y	0	0	HR	2	MDVCPR	FM	P	Y		Y	Heavy scl
	67-120	scl	25Y 63 00 75YR58 00 M				25Y 62 00	Y	0	0	HR	2	WKCSAB	FM	P	Y		Y	Tending massive
9	0-28	msl	10YR41 42						0	0	HR	10							
	28-45	msl	10YR52 00 10YR56 00 C					Y	0	0	HR	35		M					
	45-65	msl	10YR53 00 75YR58 00 C					Y	0	0	HR	50		M					
	65-70	msl	10YR58 00					Y	0	0	HR	60		M					Imp 70 gravelly
10	0-30	msl	10YR41 00						1	0	HR	10							
	30-45	msl	10YR53 00 10YR56 00 C					Y	0	0	HR	20		M					
	45-55	msl	10YR62 00 10YR58 00 C				00MN00 00	Y	0	0	HR	30		M					
	55-75	lms	25Y 62 00 10YR58 68 M				00MN00 00	Y	0	0	HR	40		M					Very wet
	75-120	scl	25Y 51 61 75YR58 00 M				00MN00 00	Y	0	0	HR	30		P			Y		Border sc -v wet
11	0-30	msl	10YR42 00						0	0		0							
	30-50	mcl	10YR62 00 75YR58 00 C				10YR71 00	Y	0	0		0		M					
	50-60	hcl	10YR62 00 75YR68 00 C					Y	0	0		0		P			Y		
	60-95	c	25 Y62 00 75YR68 00 M					Y	0	0		0		P			Y		Imp 95 gravelly
12	0-26	msl	10YR41 42						0	0	HR	10							
	26-50	msl	10YR53 63 10YR56 58 C					Y	0	0	HR	15		M					Borderline scl
	50-70	msl	10YR62 00 10YR58 00 M					Y	0	0	HR	5		M					Borderline scl
	70-90	scl	25Y 63 00 75YR58 00 C					Y	0	0	HR	25		P			Y		Heavy scl
	90-100	msl	25Y 53 00 75YR58 00 M					Y	0	0	HR	60		M			Y		Imp 100 gravelly

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	
13	0-30	msl	10YR42 00						0	0	HR	5							
	30-50	mcl	10YR62 00 75YR56 00 C				10YR73 00	Y	0	0	HR	8		M					
	50-75	hcl	10YR73 00 75YR68 00 C					Y	0	0		0		P			Y		Prob spl
	75-100	c	10YR73 00 75YR68 00 M					Y	0	0		0		P			Y		
	100-110	sc	10YR73 00 75YR68 00 M					Y	0	0		0		P			Y		
	110-120	scl	10YR73 00 75YR68 00 M					Y	0	0		0		P			Y		
14	0-25	hcl	10YR42 00 10YR56 00 C					Y	0	0	HR	2							
	25-60	zc	25Y 61 00 75YR68 56 M					Y	0	0		0		P			Y		
15	0-25	mcl	10YR43 00						1	0	HR	5							
	25-50	mcl	10YR53 43 10YR56 00 C					Y	0	0	HR	15		M					
	50-120	zc	25Y 61 00 75YR68 56 M					Y	0	0	HR	2		P			Y		
16	0-30	msl	10YR42 00						0	0	HR	2							
	30-60	scl	10YR53 00 75YR58 00 C				10YR61 00	Y	0	0	HR	5		M					Tending msl
	60-75	scl	10YR53 00 75YR58 00 C				10YR61 00	Y	0	0	HR	10		P			Y		Heavy scl
	75-90	lms	10YR62 00 75YR68 00 M					Y	0	0	HR	25		M					Clay lens,Imp 90
17	0-25	mcl	10YR42 00						0	0	HR	1							Imp 90 gravelly
	25-35	hcl	10YR61 00 75YR46 00 C					Y	0	0		0		P			Y		
	35-90	c	10YR62 00 75YR58 00 M					Y	0	0		0		P			Y		
18	0-25	mcl	10YR42 00 10YR56 00 C					Y	1	0	HR	3							
	25-60	zc	25Y 61 00 75YR68 56 M					Y	0	0		0		P			Y		
19	0-25	mcl	10YR43 00						1	0	HR	5							
	25-60	mcl	10YR64 00 10YR56 00 C				00MN00 00	Y	0	0	HR	5		M					Borderline hcl
	60-120	c	25Y 51 00 75YR68 00 M					Y	0	0		0		P			Y		
20	0-30	msl	10YR42 00						0	0	HR	2							
	30-50	mcl	10YR53 00 10YR58 00 C					Y	0	0	HR	0		M					
	50-65	scl	10YR63 00 75YR58 00 C					Y	0	0		0		P			Y		Heavy scl
	65-100	sc	10YR62 00 75YR58 00 M					Y	0	0		0		P			Y		
20A	0-35	msl	10YR41 00						0	0	HR	2							
	35-42	msl	10YR43 00						0	0	HR	2		M					
	42-65	scl	10YR53 00 75YR46 00 C				10YR61 00	Y	0	0	HR	2		M					Borderline msl
	65-75	hcl	10YR62 00 75YR58 00 C					Y	0	0	HR	2		P			Y		Prob spl
	75-100	c	10YR63 00 75YR58 00 M					Y	0	0	HR	2		P			Y		
21	0-30	mcl	10YR42 00						0	0	HR	1							
	30-50	hcl	10YR61 00 75YR46 00 C				10YR71 00	Y	0	0		0		P			Y		
	50-80	c	10YR52 00 75YR58 00 M					Y	0	0		0		P			Y		
	80-85	c	10YR52 00 75YR58 00 M					Y	0	0		0		P			Y		
22	0-30	mcl	10YR32 00						3	0	HR	12							
	30-45	mcl	10YR32 00 75YR56 00 C					Y	0	0	HR	20		M					Borderline hcl
	45-55	hcl	10YR53 00 75YR58 00 C					Y	0	0	HR	25		P			Y		
	55-90	c	10YR53 62 75YR58 00 M					Y	0	0	HR	25		P			Y		
	90-120	hcl	25Y 52 00 75YR58 00 M					Y	0	0	HR	25		P			Y		Sandyish

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	CALC
23	0-30	msl	10YR41 00	10YR46 00	C			Y	2	0	HR	2						
	30-50	scl	10YR62 00	75YR46 00	C			Y	0	0	HR	1		M				Borderline mcl
	50-60	msl	10YR61 00	10YR58 00	C			Y	0	0	HR	2		M				
	60-70	lms	10YR71 00					Y	0	0	HR	10		M				Imp 70 gravelly
24	0-25	msl	10YR43 44						1	0	HR	5						
	25-50	msl	10YR54 44						0	0	HR	5		M				
	50-60	msl	25Y 52 00	75YR58 00	M			Y	0	0	HR	5		M				
	60-75	scl	25Y 52 00	75YR58 00	M			Y	0	0	HR	10		P		Y		Heavy scl; Imp 75
25	0-24	mcl	10YR42 00	10YR46 00	F				0	0		0						
	24-45	mcl	10YR53 52	10YR56 00	C			Y	0	0	HR	5		M				
	45-55	hcl	25Y 62 00	10YR58 00	C	00MN00	00	Y	0	0	HR	5		P		Y		
	55-80	c	25Y 53 51	10YR58 00	M			Y	0	0		0		P		Y		
26	0-28	mcl	10YR41 00	10YR46 00	C			Y	0	0		0						
	28-50	mcl	25Y 41 00	10YR46 00	C			Y	0	0	HR	5		M				
	50-55	hcl	25Y 42 00	10YR46 00	M	00MN00	00	Y	0	0	HR	5		M				Q spl
	55-120	c	25Y 53 51	10YR58 68	M			Y	0	0		0		P		Y		
27	0-28	msl	10YR43 00						1	0	HR	8						
	28-60	scl	10YR64 53	10YR58 00	M			Y	0	0	HR	5		M				Borderline msl
	60-120	c	25Y 52 00	75YR58 00	M			Y	0	0	HR	5		P		Y		
28	0-28	mcl	10YR42 00						0	0	HR	1						
	28-45	scl	10YR53 00	10YR56 00	F				0	0	HR	2		M				Tending msl
	45-80	scl	10YR63 00	75YR56 00	C			Y	0	0	HR	2		M				Tending msl
	80-120	c	10YR62 63	75YR56 00	M			Y	0	0	HR	10		P		Y		
29	0-30	msl	10YR43 00						1	0	HR	5						
	30-40	msl	10YR43 00						0	0	HR	10		M				
	40-70	msl	10YR43 00						0	0	HR	20		M				Imp 70 gravelly
30	0-25	msl	10YR43 00						1	0	HR	5						
	25-45	msl	10YR53 00	10YR56 00	C			Y	0	0	HR	5		M				
	45-60	msl	10YR64 00	10YR58 00	C			Y	0	0	HR	5		M				
	60-90	c	25Y 51 00	75YR58 00	M	00MN00	00	Y	0	0	HR	10		P		Y		Imp 90 gravelly
31	0-25	mcl	10YR41 42	10YR46 00	C			Y	0	0	HR	3						
	25-36	mcl	10YR52 00	10YR46 56	C			Y	0	0	HR	5		M				
	36-80	c	25Y 53 51	10YR58 68	M			Y	0	0		0		P		Y		
	80-100	c	25Y 53 51	10YR58 68	M			Y	0	0	HR	10		P		Y		
32	0-25	mcl	10YR42 00	10YR56 00	C			Y	1	0	HR	5						
	25-35	mcl	10YR53 00	10YR58 00	C			Y	0	0	HR	30		M				Sandyish
	35-40	mcl	10YR64 00	10YR58 00	M			Y	0	0	HR	50		M				Imp 40 gravelly
33	0-25	mcl	10YR43 00						1	0	HR	5						
	25-40	hcl	10YR53 00	10YR56 00	C			Y	0	0	HR	5		M				Tending mcl
	40-55	c	25Y 52 00	75YR58 00	M			Y	0	0	HR	30		P		Y		Imp 55 gravelly

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	CALC
34	0-25	msl	10YR43 00						1	0	HR	5						
	25-40	mcl	10YR54 44						0	0	HR	5		M				Slightly sandy
	40-60	msl	10YR63 00	10YR56 00	C			Y	0	0	HR	5		M				
	60-85	scl	25Y 62 00	75YR68 53	M			Y	0	0	HR	5		P		Y		Borderline sc
	85-120	msl	25Y 61 00	75YR68 00	M			Y	0	0	HR	5		M				
35	0-28	msl	10YR43 00						1	0	HR	5						
	28-40	msl	10YR64 53	10YR56 00	C			Y	0	0	HR	5		M				
	40-60	msl	10YR63 64	75YR58 00	M			Y	0	0	HR	20		M				
	60-120	c	25Y 51 52	75YR58 68	M			Y	0	0	HR	2		P		Y		
36	0-15	mzcl	10YR42 00						0	0		0						
	15-30	hcl	10YR61 00	75YR56 00	C			Y	0	0		0		P		Y		
	30-70	c	10YR61 00	75YR58 00	M			Y	0	0		0		P		Y		Imp 70 gravelly
37	0-28	mcl	10YR43 00						1	0	HR	4						
	28-45	mcl	10YR53 00	10YR68 00	C			Y	0	0	HR	3		M				
	45-48	mcl	10YR53 00	10YR68 00	M			Y	0	0	HR	45		M				Imp 48 gravelly
38	0-27	msl	10YR43 42						0	0	HR	15						Borderline lms
	27-45	lms	10YR43 00						0	0	HR	25		M				Borderline msl
	45-50	lms	10YR44 00						0	0	HR	50		M				Imp 50 gravelly
39	0-30	msl	10YR42 00						3	0	HR	10						
	30-55	msl	10YR63 00	10YR46 00	C		00MN00 00	Y	0	0	HR	40		M				
	55-64	msl	10YR63 00	10YR46 00	C		00MN00 00	Y	0	0	HR	45		M				Borderline scl
	64-120	scl	25Y 62 00	75YR56 00	M			Y	0	0	HR	15		P		Y		Borderline c
40	0-20	msl	10YR42 00						6	0	HR	15						
	20-35	scl	10YR62 00	10YR46 00	C		00MN00 00	Y	0	0	HR	30		M				Borderline msl
	35-70	hcl	25Y 62 00	10YR56 00	M		00MN00 00	Y	0	0	HR	5		P		Y		With fine sand
41	0-20	mzcl	10YR43 00	10YR58 00	C			S	0	0		0						Slightly gleyed
	20-45	mcl	10YR54 00	10YR58 00	C			S	0	0		0		M				Slightly gleyed
	45-60	hcl	10YR52 62	75YR58 00	C			Y	0	0		0		P		Y		Q spl
	60-70	hcl	10YR52 62	75YR58 00	C			Y	0	0	HR	50		M				
	70-85	scl	10YR52 62	75YR58 00	M			Y	0	0	HR	5		M				Imp 85 gravelly
42	0-23	msl	10YR42 00						0	0	HR	3						
	23-50	msl	10YR52 00	10YR56 00	C			Y	0	0		0		M				
	50-70	mcl	10YR53 00	10YR58 00	M		00MN00 00	Y	0	0		0		M				
	70-120	c	25Y 52 62	10YR58 00	M			Y	0	0		0		P		Y		
43	0-25	msl	10YR43 41						0	0	HR	10						Borderline lms
	25-40	msl	10YR43 00						0	0	HR	20		M				Borderline lms
	40-50	lms	10YR44 00						0	0	HR	50		M				Imp 50 gravelly
44	0-28	msl	10YR42 43						0	0	HR	5						
	28-45	msl	10YR53 00	10YR56 00	C			Y	0	0	HR	10		M				Borderline scl
	45-55	scl	10YR53 63	10YR58 00	M		00MN00 00	Y	0	0	HR	5		M				Tending msl
	55-80	c	25Y 53 00	75YR58 00	M			Y	0	0	HR	5		P		Y		
	80-85	c	25Y 51 61	75YR58 00	C			Y	0	0	HR	30		P		Y		Imp 85 gravelly

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	CALC
45	0-30	msl	10YR42 00						1	0	HR	5						
	30-60	msl	10YR63 00	10YR46 00	C		00MN00 00	Y	0	0	HR	15		M				
	60-90	msl	10YR63 00	75YR46 00	C		00MN00 00	Y	0	0	HR	25		M				Very moist
	90-120	scl	25Y 62 00	75YR56 00	M			Y	0	0	HR	5		P		Y		Heavy scl
46	0-10	mzcl	10YR42 00	75YR46 00	M			Y	0	0	HR	5						
	10-20	hzcl	10YR62 00	75YR56 00	M			Y	0	0	HR	5		P		Y		
	20-70	c	10YR61 00	75YR56 00	M		00MN00 00	Y	0	0		0		P		Y		Very firm
47	0-20	mzcl	10YR43 00						0	0		0						
	20-70	c	10YR61 00	75YR58 00	M		10YR71 00	Y	0	0		0		P		Y		
48	0-28	msl	10YR42 00						3	0	HR	10						
	28-50	msl	10YR43 44						0	0	HR	5		M				
	50-60	msl	10YR54 00						0	0	HR	5		M				
	60-65	lms	10YR54 53						0	0	HR	50		M				Imp 65 gravelly
49	0-28	msl	10YR41 42						2	0	HR	10						
	28-38	msl	10YR42 00						0	0	HR	15		M				Borderline lms
	38-65	msl	10YR53 63	10YR58 00	M			Y	0	0	HR	10		M				Borderline lms
	65-72	msl	25Y 62 00	10YR68 00	M			Y	0	0	HR	50		M				Imp 72 gravelly
50	0-25	msl	10YR43 00						2	0	HR	8						
	25-47	msl	10YR53 63	10YR56 00	C			Y	0	0	HR	5		M				
	47-120	c	25Y 63 61	10YR58 00	M			Y	0	0	HR	5		P		Y		Borderline scl
51	0-26	msl	10YR42 00						0	0	HR	5						
	26-60	scl	10YR53 52	10YR56 00	C		00MN00 00	Y	0	0	HR	5		M				Borderline msl
	60-120	c	25Y 61 00	10YR68 00	M			Y	0	0	HR	5		P		Y		
52	0-28	msl	10YR42 43						0	0	HR	5						
	28-55	msl	10YR53 63	10YR58 00	C		00MN00 00	Y	0	0	HR	5		M				
	55-100	c	25Y 61 62	10YR58 68	M			Y	0	0	HR	5		P		Y		
53	0-30	msl	10YR42 00						1	0	HR	10						Q lms
	30-50	msl	10YR63 00	10YR56 00	C		00MN00 00	Y	0	0	HR	30		M				
	50-75	msl	10YR63 00	10YR56 00	C		00MN00 00	Y	0	0	HR	50		M				
	75-120	hcl	25Y 62 00	75YR56 00	M			Y	0	0	HR	10		P		Y		Very firm
54	0-25	mzcl	10YR42 00						1	0	HR	5						
	25-50	mzcl	10YR52 00	10YR56 00	C			Y	0	0	HR	5		M				
	50-80	hzcl	10YR62 00	75YR56 00	M			Y	0	0	HR	2		P		Y		Border c;Imp
55	0-25	mzcl	10YR51 00	10YR58 00	C			Y	0	0		0						
	25-80	c	10YR61 00	75YR46 00	M		00MN00 00	Y	0	0		0		P		Y		
56	0-30	msl	10YR42 00						2	0	HR	8						Q stonier as 7P
	30-78	msl	10YR53 00	75YR46 00	C		00MN00 00	Y	0	0	HR	15		M				Q stonier as 7P

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
57	0-28	msl	10YR41 42						5	0	HR	15							
	28-55	msl	10YR42 52						0	0	HR	15		M					Borderline lms
	55-65	lms	10YR52 00						0	0	HR	20		M					
	65-75	lms	10YR63 00 10YR58 00 M					Y	0	0	HR	15		M					Very wet
	75-90	ms	75YR58 00 75YR58 00 M					Y	0	0	HR	40		M					Imp 90 gravelly
58	0-26	msl	10YR42 00						0	0	HR	8							
	26-35	mcl	10YR53 63 10YR66 00 C					Y	0	0	HR	5		M					
	35-45	hcl	10YR63 53 10YR68 00 C				00MN00 00	Y	0	0	HR	5		P		Y			
	45-120	c	25Y 63 61 10YR58 00 M					Y	0	0	HR	5		P		Y			
59	0-25	msl	10YR42 00						3	0	HR	10							
	25-50	msl	10YR54 53 10YR56 00 F						0	0	HR	10		M					
	50-65	msl	10YR53 63 10YR58 00 C				00MN00 00	Y	0	0	HR	10		M					
	65-95	mcl	10YR53 00 10YR58 00 M				00MN00 00	Y	0	0	HR	10		M					
	95-110	mcl	10YR63 00 10YR68 00 M					Y	0	0	HR	40		M					Imp 110 gravelly
60	0-35	msl	10YR42 00						1	0	HR	8							
	35-70	mcl	10YR52 00 10YR56 00 C					Y	0	0	HR	15		M					
	70-100	hcl	10YR62 00 10YR56 00 C					Y	0	0	HR	5		P		Y			Imp gravly;firm
61	0-15	mcl	10YR43 00						0	0	HR	2							
	15-30	hcl	10YR53 00 75YR58 00 C					Y	0	0	HR	30		M					Stony-prob not spl
	30-50	hcl	10YR61 00 75YR46 00 M					Y	0	0	HR	2		P		Y			
	50-80	c	10YR61 00 75YR46 00 M					Y	0	0		0		P		Y			
62	0-30	mzcl	10YR43 00						0	0		0							
	30-45	hcl	10YR34 00						0	0		0		M					
	45-60	hcl	10YR42 00 10YR58 00 C				00MN00 00	Y	0	0		0		P		Y			
	60-90	c	10YR42 00 75YR46 00 M					Y	0	0		0		P		Y			Saturated
63	0-30	msl	10YR42 00						6	0	HR	12							
	30-45	msl	10YR43 00						0	0	HR	40		M					Imp 45 gravelly
64	0-23	msl	10YR41 42						5	0	HR	12							
	23-55	msl	10YR53 63 10YR56 00 C					Y	0	0	HR	15		M					
	55-90	c	25Y 53 63 10YR58 00 M					Y	0	0	HR	10		P		Y			Sandyish
	90-120	lcs	10YR53 00 10YR58 00 M					Y	0	0	HR	5		M					
65	0-28	msl	10YR41 42						2	0	HR	10							
	28-55	msl	10YR63 62 10YR66 00 C					Y	0	0	HR	5		M					
	55-85	c	25Y 53 00 10YR58 00 M					Y	0	0	HR	10		P		Y			Sandyish
	85-120	scl	25Y 63 00 75YR58 00 M					Y	0	0	HR	5		P		Y			Borderline sc
66	0-25	mcl	10YR42 00						3	0	HR	10							Borderline scl
	25-45	mcl	10YR44 54						0	0	HR	15		M					Border scl,Imp45
67	0-10	fszl	10YR42 00						0	0	HR	10							Disturbed
	10-40	hcl	25Y 62 00 10YR58 00 M					Y	0	0	HR	50		P					V wet & gravelly

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	
68	0-30	mcl	10YR43 00						0	0	HR	10							Previous survey
	30-55	mcl	10YR52 00	10YR58 00	C		10YR61 00	Y	0	0	HR	20		M					
	55-70	scl	10YR62 00	75YR58 00	C			Y	0	0	HR	35		M					Light scl; Imp70
69	0-30	msl	10YR43 00						11	0	HR	20							
	30-60	msl	10YR44 00						0	0	HR	35		M					
	60-120	msl	10YR44 00						0	0	HR	45		M					
70	0-30	msl	10YR42 00						2	0	HR	5							
	30-35	msl	10YR63 00	75YR46 00	C		00MN00 00	Y	0	0	HR	25		M					
	35-120	scl	25Y 62 00	75YR56 00	M			Y	0	0	HR	10		P		Y			Heavy scl
71	0-28	msl	10YR41 42						3	0	HR	10							
	28-55	msl	10YR53 00	10YR58 00	C			Y	0	0	HR	15		M					Borderline scl
	55-65	msl	10YR53 52	10YR58 00	C			Y	0	0	HR	40		M					Imp 65 gravelly
72	0-40	msl	10YR42 00						1	0	HR	3							
	40-55	msl	10YR53 00	75YR46 00	C			Y	0	0	HR	5		M					
	55-70	hcl	10YR63 00	75YR46 00	C		00MN00 00	Y	0	0	HR	10		M					Border mcl;Imp 70
73	0-25	msl	10YR42 00						12	3	HR	30							Borderline msl
	25-38	msl	10YR44 00						0	0	HR	40		M					
	38-50	msl	10YR54 00						0	0	HR	60		P					Imp 50 gravelly
74	0-28	scl	10YR43 00						0	0	HR	5							Borderline msl
	28-42	scl	10YR54 53	10YR56 00	F				0	0	HR	15		M					
	42-45	msl	10YR64 00						0	0	HR	50		M					Imp 45 gravelly
75	0-30	mcl	10YR43 00						0	0	HR	5							Previous survey
	30-40	mcl	10YR43 53						0	0	HR	10		M					
	40-50	mcl	10YR43 53						0	0	HR	25		M					Imp 50 gravelly
76	0-30	msl	10YR42 00						3	0	HR	10							
	30-48	msl	10YR53 00	75YR58 00	C			Y	0	0	HR	25		M					
	48-68	scl	10YR52 00	75YR56 00	C			Y	0	0	HR	30		M					Coarser sand
	68-100	ms	10YR72 00						0	0	HR	20		M					Compact 100,Imp
77	0-28	msl	10YR42 00						3	0	HR	12							
	28-45	scl	10YR44 00	10YR46 56	F				0	0	HR	10		M					
	45-50	msl	10YR44 00						0	0	HR	40		M					Imp 50 gravelly
78	0-28	scl	10YR43 00						3	0	HR	12							
	28-42	scl	10YR44 54	10YR56 00	C			S	0	0	HR	20		M					Slightly gleyed
	42-50	msl	10YR56 00						0	0	HR	50		P					No gleying apparent
79	0-30	mcl	10YR43 00						0	0	HR	5							Q msl
	30-45	scl	10YR53 52	10YR58 00	C		00MN00 00	Y	0	0	HR	2		M					Light scl
	45-60	hcl	25Y 53 63	10YR58 00	M		00MN00 00	Y	0	0	HR	2		P		Y			See 5P - spl
	60-90	c	25Y 62 00	10YR68 00	M		00MN00 00	Y	0	0	HR	5		P		Y			

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	
80	0-25	mcl	10YR42 00						0	0	HR	2							Previous survey
	25-50	mcl	10YR52 00	75YR58	00	C		Y	0	0		0		M					
	50-60	hcl	10YR62 00	75YR58	00	M		Y	0	0		0		P		Y			
	60-70	c	10YR62 00	75YR58	00	M		Y	0	0		0		P		Y			Imp 70 gravelly
81	0-30	msl	10YR42 00						0	0	HR	10							Previous survey
	30-70	scl	10YR61 00	75YR58	00	C		Y	0	0	HR	30		M					Imp 70 gravelly
82	0-28	msl	10YR42 00						3	0	HR	10							
	28-38	hcl	10YR42 00	75YR46	00	C	00MN00	00 Y	0	0	HR	25		M					Q lighter see3P
	38-48	hcl	10YR53 00	75YR46	00	C	00MN00	00 Y	0	0	HR	40		M					As above; Imp48
83	0-35	msl	10YR42 00						3	0	HR	10							See 1P
	35-60	scl	10YR54 00						0	0	HR	25		M					Imp 60 gravelly
84	0-28	msl	10YR32 00						7	0	HR	15							
	28-40	scl	10YR43 00						0	0	HR	25		M					Tending msl
	40-45	mcl	10YR43 00						0	0	HR	60		P					Imp 45 gravelly
85	0-30	msl	10YR43 00						0	0	HR	4							
	30-70	msl	10YR53 00	75YR58	00	C	10YR62	00 Y	0	0		0		M					
	70-80	c	10YR62 00	75YR58	00	C		Y	0	0		0		P					Qspl,I80gravelly
86	0-25	msl	10YR31 00						20	5	HR	35							
	25-40	lms	10YR31 00						0	0	HR	60		P					Imp 40 gravelly
87	0-28	mcl	00YR42 00	75YR56	00	C		Y	0	0	HR	5							Previous survey
	28-50	mcl	10YR52 00	75YR56	00	M	00MN00	00 Y	0	0	HR	10		M					Sandyish
	50-70	mcl	10YR52 00	75YR56	00	C		Y	0	0	HR	40		M					Sandyish; Imp 70
88	0-30	msl	10YR42 00						2	0	HR	8							
	30-40	msl	10YR53 00						0	0	HR	20		M					
	40-50	mcl	10YR53 00						0	0	HR	40		M					Imp 50 gravelly
89	0-30	msl	10YR42 00						3	0	HR	10							) Q stonier
	30-50	hcl	10YR52 53						0	0	HR	25		M					) and sandier
	50-75	scl	10YR72 00						0	0	HR	40		M					) as Pit 3
90	0-27	omsl	10YR21 00						16	3	HR	30							Borderline fszl
	27-45	lms	10YR62 00	10YR66	00	C		Y	0	0	HR	50		P					Imp 45 gravelly
91	0-30	mcl	10YR42 00	75YR46	00	C		Y	0	0	HR	15							Previous survey
	30-40	mcl	10YR53 00	75YR56	52	C		Y	0	0	HR	35		M					Imp 40 gravelly
92	0-35	msl	10YR43 00						0	0	HR	10							Previous survey
	35-65	mcl	10YR44 00	75YR46	00	C		S	0	0	HR	5		M					Imp 65 gravelly
93	0-25	msl	10YR43 00						1	0	HR	5							
	25-58	msl	10YR53 00						0	0	HR	2		M					
	58-68	scl	10YR63 00	10YR58	00	C		Y	0	0	HR	5		M					Light scl
	68-120	c	10YR62 72	75YR56	00	M		Y	0	0	HR	10		P		Y			

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	
94	0-25	msl	10YR42 00						2	0	HR	8							
	25-50	hcl	10YR43 00						0	0	HR	10		M					) Prob stonier
	50-72	msl	10YR63 00	75YR58 00	C			Y	0	0	HR	2		M					) like Pit 1
	72-120	c	10YR72 00	75YR56 00	M			Y	0	0	HR	5		P		Y			Firm
95	0-35	msl	10YR42 00						1	0	HR	5							
	35-60	scl	10YR53 63	75YR56 00	C			Y	0	0	HR	5		M					Light scl
	60-78	hcl	10YR63 00	75YR56 00	C			Y	0	0	HR	5		P		Y			
	78-95	hcl	10YR63 00	75YR56 00	C			Y	0	0	HR	40		P		Y			Q spl; Impen
96	0-30	msl	10YR42 00						1	0	HR	8							
	30-40	msl	10YR53 00	10YR58 00	C			Y	0	0	HR	2		M					) Prob stonier
	40-58	msl	10YR73 00	10YR58 00	C			Y	0	0	HR	2		M					) like Pit 1
	58-60	c	10YR62 63	75YR56 00	M			Y	0	0	HR	10		P					Imp 60 gravelly
97	0-30	msl	10YR32 00						1	0	HR	5							
	30-45	msl	10YR53 00	10YR56 00	C			Y	0	0	HR	15		M					
	45-65	scl	10YR63 00	75YR56 00	C			Y	0	0	HR	25		P		Y			Border c; Imp
98	0-30	msl	10YR42 00						3	0	HR	8							
	30-50	msl	10YR53 64	10YR56 00	C			Y	0	0	HR	5		M					
	50-75	lms	10YR63 00	75YR68 00	C			Y	0	0	HR	5		M					
	75-90	c	25Y 52 00	75YR68 00	M			Y	0	0	HR	5		P		Y			
	90-120	c	25Y 61 00	75YR46 68	M			Y	0	0	HR	10		P		Y			
99	0-35	msl	10YR32 00						3	0	HR	8							Previous survey
	35-60	msl	10YR62 00	75YR58 00	C			Y	0	0	HR	5		M					
	60-80	msl	05Y 62 00	75YR56 00	M			Y	0	0	HR	2		M					
	80-120	lms	05Y 62 00	75YR56 00	M			Y	0	0		0		M					
100	0-30	mcl	10YR42 00	10YR58 00	C			Y	0	0	HR	2							Previous survey
	30-40	hcl	10YR52 62	10YR58 00	M			Y	0	0	HR	2		P		Y			Firm
	40-80	c	10YR62 00	75YR56 00	M			Y	0	0	HR	2		P		Y			Very firm
	80-90	scl	10YR62 00	75YR56 00	M			Y	0	0	HR	15		P		Y			Imp 90 gravelly
101	0-30	msl	10YR42 00						1	0	HR	5							
	30-60	scl	10YR53 00						0	0	HR	5		M					Borderline mcl
	60-70	scl	10YR53 00						0	0	HR	25		M					Border mcl; Imp 70
102	0-25	msl	10YR42 00						1	0	HR	3							
	25-45	scl	10YR62 00	10YR58 00	C			Y	0	0	HR	2		M					Borderline msl
	45-60	c	10YR72 00	75YR56 00	M			Y	0	0	HR	10		P		Y			Imp 60 gravelly
103	0-30	msl	10YR42 00						1	0	HR	5							
	30-50	scl	10YR41 00						0	0	HR	40		M					Imp 50 gravelly
104	0-25	msl	10YR42 00						3	0	HR	10							
	25-40	msl	10YR52 53	10YR56 00	C			Y	0	0	HR	20		M					
	40-50	msl	10YR52 53	10YR56 00	C			Y	0	0	HR	30		M					
	50-55	msl	10YR52 53	10YR56 00	C			Y	0	0	HR	40		M					Imp 55 gravelly

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	
105	0-30	msl	10YR32 00						3	0	HR	10							
	30-45	msl	75YR44 00						0	0	HR	10		M					
	45-55	msl	75YR44 00						0	0	HR	40		M					Imp 55 gravelly
106	0-30	fsl	10YR42 00						0	0	HR	5							Previous survey
	30-70	mcl	10YR53 00	75YR56 00	M		00MN00 00	Y	0	0	HR	5		M					Sandyish
	70-90	msl	10YR53 00	75YR58 00	M		00MN00 00	Y	0	0	HR	40		M					Imp 90 gravelly
107	0-30	msl	10YR42 00						2	0	HR	10							
	30-42	mcl	10YR42 53	75YR46 00	C			Y	0	0	HR	10		M					Imp 42 gravelly
108	0-30	msl	10YR42 00						1	0	HR	5							
	30-45	mcl	10YR44 00						0	0	HR	5		M					Sandyish
	45-60	mcl	10YR53 00	75YR46 00	C			Y	0	0	HR	5		M					Sandyish
	60-80	c	25Y 51 00	75YR58 00	M			Y	0	0	HR	5		P			Y		Imp 80 gravelly
109	0-28	msl	10YR42 00						2	0	HR	8							
	28-40	msl	75YR54 00						0	0	HR	40		M					Imp 40 gravelly
110	0-25	msl	10YR41 00						2	0	HR	7							
	25-55	msl	10YR62 00	75YR46 00	C			Y	0	0	HR	2		M					
	55-120	lms	10YR61 00	75YR58 00	C			Y	0	0	HR	2		M					Waterlogged
111	0-30	msl	10YR32 00						3	0	HR	10							
	30-40	msl	75YR44 32						0	0	HR	10		M					
	40-50	lms	75YR44 00						0	0	HR	40		M					Imp 50 gravelly
112	0-30	mcl	10YR43 00	75YR56 00	C			Y	0	0	HR	2							Previous survey
	30-50	mcl	10YR53 00	75YR46 00	C			Y	0	0	HR	2		M					Sandyish
	50-68	mcl	10YR63 00	75YR58 62	C			Y	0	0	HR	2		M					Sandyish
	68-80	hcl	10YR63 00	75YR58 62	C			Y	0	0	HR	2		M					Tending mcl
	80-100	c	10YR72 00	05YR56 00	M			Y	0	0	HR	5		P			Y		
	100-110	msl	10YR72 00	05YR56 00	M			Y	0	0	HR	15		M					Imp 110 gravelly
113	0-25	msl	10YR42 00						1	0	HR	5							
	25-45	mcl	10YR44 00						0	0	HR	5		M					
	45-65	msl	10YR54 00						0	0	HR	5		M					
	65-75	msl	10YR53 00	10YR68 00	C			Y	0	0	HR	5		M					
	75-120	msl	10YR53 00	75YR68 00	M			Y	0	0	HR	2		M					
114	0-25	mcl	10YR42 00						1	0	HR	5							
	25-45	mcl	10YR53 00	10YR56 00	C			Y	0	0	HR	5		M					
	45-70	c	10YR52 00	75YR68 00	M			Y	0	0	HR	5		P			Y		Borderline hcl
	70-120	c	10YR52 00	75YR68 61	M			Y	0	0	HR	2		P			Y		
115	0-25	msl	10YR42 00						2	0	HR	10							
	25-40	msl	10YR53 00	10YR56 00	C			Y	0	0	HR	30		M					
	40-45	msl	10YR53 00	10YR58 00	C			Y	0	0	HR	40		M					Imp 45 gravelly

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
116	0-30	msl	10YR42 00						2	0	HR	5							
	30-60	lms	10YR53 00	75YR58 00	C			Y	0	0	HR	10		M					
	60-90	msl	10YR52 00	75YR58 00	C			Y	0	0	HR	2		M					
	90-120	ms	25 Y63 00	75YR58 00	C			Y	0	0	HR	2		M					
117	0-15	msl	10YR42 00						3	0	HR	10							
	15-40	msl	25Y 52 51	75YR46 00	M			Y	0	0	HR	10		M					
	40-60	msl	25Y 52 51	75YR46 00	M			Y	0	0	HR	20		M					
	60-120	lms	25Y 51 00	75YR58 00	M			Y	0	0	HR	5		M					
118	0-25	msl	10YR42 00						2	0	HR	5							
	25-60	scl	10YR52 62	75YR58 00	C			Y	0	0	HR	5		M					Light scl
	60-120	c	10YR61 00	75YR58 00	M		00MN00 00	Y	0	0		0		P		Y			
119	0-30	msl	10YR41 00						3	0	HR	8							Light scl
	30-45	scl	10YR52 00	10YR58 00	C			Y	0	0	HR	25		M					
	45-80	c	25 Y62 00	75YR58 00	M			Y	0	0	HR	10		P		Y			
	80-90	c	25 Y62 00	75YR58 00	M			Y	0	0	HR	25		P		Y			Imp 90 gravelly