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**LONDON BOROUGH OF BARNET
Land at Bury Farm, Edgware**

**Agricultural Land Classification
ALC Map and Report
Reconnaissance Survey**

January 1999

Resource Planning Team

**Eastern Region
FRCA Reading**

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AGRICULTURAL LAND CLASSIFICATION REPORT

LONDON BOROUGH OF BARNET LAND AT BURY FARM, EDGWARE RECONNAISSANCE SURVEY

INTRODUCTION

1. This report presents the findings of a reconnaissance Agricultural Land Classification (ALC) survey of 148 ha of land surrounding Bury Farm, between the A41 Trunk Road and the M1 Motorway to the north of Edgware, in the London Borough of Barnet. The survey was carried out during January 1999.
2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)¹ on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF). The survey was carried out in connection with MAFF's statutory input to an *ad hoc* planning application for the development of a golf course. This survey supersedes any previous ALC information for this land, including a 1982 survey (FRCA ref: 2602/82/B1) covering part of the western area.
3. The work was conducted by members of the Resource Planning Team in the Eastern Region of FRCA. 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 the agricultural land on the site was under either cereals, oilseed rape or grass. The areas mapped as 'Other land' include farm dwellings and associated buildings, trackways, an electricity sub-station and woodland.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:25,000. 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.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
3b	141.6	100	95.7
Other land	6.4	N/A	4.3
Total surveyed area	141.6	100	95.7
Total site area	148.0	-	100

¹ FRCA is an executive agency of MAFF and the Welsh Office

7. The fieldwork was conducted at an average density of 1 boring per 4 hectares of agricultural land. In total, 37 borings and 3 soil pits were described.
8. All of the agricultural land on the site has been classified as Subgrade 3b (moderate quality), with soil wetness as the main limitation. Soils comprise non-calcareous heavy clay loam or clay topsoils overlying shallow, poorly structured, clay subsoils which impede soil drainage. The heavy and poorly draining nature of the land creates a significant soil wetness limitation. This restricts the flexibility of the land - there will be a relatively small window within which the land can be worked without the risk of damaging the soil and the range of crops that can perform well under such conditions will also be restricted.

FACTORS INFLUENCING ALC GRADE

Climate

9. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.
10. 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		
		TQ 193 942	TQ 183 943	TQ 197 942
Grid reference	N/A			
Altitude	m, AOD	90	100	75
Accumulated Temperature	day°C (Jan-June)	1400	1389	1417
Average Annual Rainfall	mm	694	694	693
Field Capacity Days	days	148	148	148
Moisture Deficit, Wheat	mm	104	103	105
Moisture Deficit, Potatoes	mm	95	94	97
Overall climatic grade	N/A	Grade 1	Grade 1	Grade 1

11. 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.
12. 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.
13. The combination of rainfall and temperature at this site mean that there is no overall climatic limitation. Local climatic factors, such as exposure and frost risk do not affect land quality at this location. The site is climatically Grade 1.

Site

14. The survey area lies at altitudes in the range 70–110 m AOD. The highest land occurs along the northern boundary, adjacent to the M1 motorway. From this point the land falls gently southwards towards Edgware with the lowest lying land located along the southern boundary with Edgwarebury Park. The area is not affected by any site restrictions (i.e., gradient, microrelief or flooding).

Geology and soils

15. The most detailed published geological information for the site (BGS, 1969) shows it to be entirely underlain by London Clay.
16. The most detailed published soils information for the site (SSEW, 1983) shows it to comprise entirely soils of the Windsor association. These soils are described as 'slowly permeable seasonally waterlogged clayey soils mostly with brown subsoils. Some fine loamy over clayey, fine silty over clayey soils and, locally on slopes, clayey soils with only slight seasonal waterlogging. Soils consistent with this description were observed across the site.

AGRICULTURAL LAND CLASSIFICATION

17. 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 1.
18. 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 II.

Subgrade 3b

19. Subgrade 3b (moderate quality agricultural land) is mapped over the entire site and suffers from a soil wetness limitation, coincident with the underlying London Clay.
20. Land of moderate quality suffers from a significant soil wetness limitation. Soils typically comprise a non-calcareous very slightly stony (up to 5% flints by volume) heavy clay loam or clay topsoil, which directly overlies a stoneless clay subsoil. From the pit observations, 1P, 2P and 3P (see Appendix II), the clay was found to be poorly structured and slowly permeable. This causes a significant drainage impedance which, in the local climate, is sufficient to place these soils into Wetness Class III or IV. This combination of soil properties, in the local climate, results in the land being appropriately classified as Subgrade 3b. Excessive soil wetness adversely affects seed germination and survival, partly by a reduction in soil temperature and partly because of anaerobism. It also inhibits the development of a good root system, all of which can affect the range of crops that can be grown and the level of yield. Soil wetness also influences the sensitivity of the soil to structural damage and is,

therefore, a major factor in determining the number of days when the soil is in a suitable condition for cultivation, trafficking by machinery or grazing by livestock.

21. Signs of disturbance were observed in the western area of the site. The conditions present in this restricted area were commensurate with a Subgrade 3b clay situation. Therefore, this area has not been distinguished separately. Consequently, the whole survey area has been classified as Subgrade 3b.

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SOURCES OF REFERENCE

British Geological Survey (1959) *Sheet No.256, North London, 1:50,000, Drift Edition.*
BGS: London.

Ministry of Agriculture, Fisheries and Food (1988) *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.*
MAFF: London.

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.*
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 DATA

Contents:

Sample location map

Soil abbreviations - explanatory note

Soil pit and soil boring descriptions (boring and horizon levels)

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	OTH: Other
DCW: Deciduous woodland	BOG: Bog or marsh	SAS: Set-Aside
HTH: Heathland	HRT: Horticultural crops	PLO: Ploughed

3. **GRDNT:** Gradient as estimated or measured by a hand-held optical clinometer.

4. **GLEYSPL:** Depth in centimetres (cm) to gleying and/or slowly permeable layers.

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

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

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

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

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

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

OC: Overall Climate	AE: Aspect	ST: Topsoil Stoniness
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
EX: Exposure		

Soil Pits and Auger Borings

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

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

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

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

The clay loam and silty clay loam classes will be sub-divided according to the clay content:

- M:** Medium (<27% clay)
- H:** Heavy (27-35% clay)

2. **MOTTLE COL:** Mottle colour using Munsell notation.
3. **MOTTLE ABUN:** Mottle abundance, expressed as a percentage of the matrix or surface described:
F: few <2% **C:** common 2-20% **M:** many 20-40% **VM:** very many 40% +
4. **MOTTLE CONT:** Mottle contrast:
F: faint - indistinct mottles, evident only on close inspection
D: distinct - mottles are readily seen
P: prominent - mottling is conspicuous and one of the outstanding features of the horizon
5. **PED. COL:** Ped face colour using Munsell notation.
6. **GLEYS:** If the soil horizon is gleyed a 'Y' will appear in this column. If slightly gleyed, an 'S' will appear.
7. **STONE LITH:** Stone Lithology - one of the following is used:

- | | | | |
|--------------|---|--------------|--------------------------------------|
| HR: | all hard rocks and stones | FSST: | soft, fine grained sandstone |
| ZR: | soft, argillaceous, or silty rocks | CH: | chalk |
| MSST: | soft, medium grained sandstone | GS: | gravel with porous (soft) stones |
| SI: | soft weathered igneous/metamorphic rock | GH: | gravel with non-porous (hard) stones |

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 | |
| 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 | FM: firm | EH: extremely hard |
| VF: very friable | VM: very firm | |
| FR: friable | EM: extremely firm | |

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

SAMPLE NO.	GRID REF	ASPECT USE	GRDNT		--WETNESS--		-WHEAT-		-POTS-		M.REL		EROSN	FROST	CHEM	ALC	COMMENTS
			GRDNT	GLEY	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	DIST	LIMIT	
1	TQ19209460	OSR E	2	35	35	4	3B	97	-7	109	13	3A			WE	3B	
3	TQ19409460	OSR E	2	32	32	4	3B	95	-9	107	11	3A			WE	3B	SEE1P
13	TQ18609440	CER S	2	33	33	4	3B	92	-11	104	8	3A			WE	3B	SEE3P
14	TQ18809440	PGR S	2	25	25	4	3B	89	-14	101	5	3A			WE	3B	SEE3P
16	TQ19009440	OSR S	6	33	33	4	3B	99	-4	104	8	3A			WE	3B	
18	TQ19209440	OSR S	1	25	25	4	3B	89	-14	101	5	3A			WE	3B	SEE3P
20	TQ19409440	OSR E	2	30	30	4	3B	91	-13	100	4	3A			WE	3B	SEE1P
22	TQ19609440	OSR		30	30	4	3B	87	-17	93	-3	3A			WE	3B	SEE1P
24	TQ19809440	PGR		30	30	4	3B	93	-11	105	9	3A			WE	3B	SEE1P
44	TQ18009420	PGR E	6	0	20	4	3B	82	-22	88	-8	3B			WE	3B	
46	TQ18209420	CER S	6	29	29	4	3B	91	-12	103	7	3A			WE	3B	SEE3P
48	TQ18409420	CER S	2	28	28	4	3B	90	-13	102	6	3A			WE	3B	SEE3P
50	TQ18609420	CER S	2	27	27	4	3B	90	-13	102	6	3A			WE	3B	SEE3P
54	TQ19059415	PGR W	2	17	17	4	3B	95	-9	100	4	3A			WE	3B	SEE1P
56	TQ19209420	PGR W	2	22	22	4	3B	90	-14	102	6	3A			WE	3B	SEE1P
58	TQ19409420	OSR NE	2	28	28	4	3B	93	-11	105	9	3A			WE	3B	SEE1P
60	TQ19609420	OSR		35	35	4	3B	97	-7	109	13	3A			WE	3B	
62	TQ19809420	PGR		0	20	4	3B	96	-8	101	5	3A			WE	3B	SEE1P
87	TQ18009400	PGR E	2	0	26	4	3B	85	-19	91	-5	3A			WE	3B	SEE2P
89	TQ18209400	PGR SW	1	0	28	4	3B	93	-11	105	9	3A			WE	3B	SEE2P
91	TQ18409400	CER N	1	28	28	4	3B	86	-18	92	-4	3A			WE	3B	SEE2P
93	TQ18609400	CER N	1	26	26	4	3B	82	-22	88	-8	3B			WE	3B	SEE2P
95	TQ18809400	PGR W	1	0	20	4	3B	82	-22	88	-8	3B			WE	3B	SEE2P
97	TQ19009400	PGR		0	23	4	3B	84	-19	90	-6	3A			WE	3B	
99	TQ19209400	PGR W	1	0	30	4	3B	94	-10	106	10	3A			WE	3B	SEE1P
101	TQ19609400	PGR N	2	0	27	4	3B	86	-18	92	-4	3A			WE	3B	SEE1P
103	TQ19809400	PGR S	1	0	27	4	3B	85	-19	91	-5	3A			WE	3B	SEE1P
105	TQ20009400	PGR		0	22	4	3B	83	-21	89	-7	3B			WE	3B	SEE1P
119	TQ18069380	PGR E	5	20	20	4	3B	82	-21	88	-8	3B			WE	3B	
121	TQ18209380	PGR		0	45	3	3B	100	-3	105	9	3A			WE	3B	QDISTURBED?
123	TQ18409380	PGR		0	28	3	3B	93	-10	98	2	3A			WE	3B	QDISTURBED?
125	TQ18609380	OSR S	1	30	30	4	3B	87	-16	93	-3	3A			WE	3B	SEE2P
127	TQ18809380	OSR E	1	28	28	4	3B	83	-20	89	-7	3A			WE	3B	SEE2P
129	TQ19009380	PGR W	1	0	30	4	3B	87	-16	93	-3	3A			WE	3B	SEE2P
140	TQ18209360	PGR E	5	0	20	2	3A	62	-41	62	-34	3B			DW	3B	QDISTURBED?
142	TQ18409360	OSR		30	30	4	3B	87	-16	93	-3	3A			WE	3B	SEE2P
144	TQ18609360	OSR		30	30	4	3B	87	-16	93	-3	3A			WE	3B	SEE2P
1P	TQ19709410	PGR E	3	0	22	4	3B	90	-14	102	6	3A			WE	3B	PIT TO 70
2P	TQ18809380	OSR		33	33	4	3B	85	-18	91	-5	3A			WE	3B	PIT TO 60
3P	TQ18609430	CER S	2	28	28	4	3B	83	-21	89	-7	3B			WE	3B	PIT TO 60

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED COL.	-----STONES-----			STRUCT/ CONSIST	SUBS STR POR IMP SPL	CALC	
				COL	ABUN	CONT		GLEYS	>2	>6				LITH
1	0-35	HCL	10YR42					0	0	0				
	35-70	C	25Y 5254	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
3	0-32	HCL	10YR4243					0	0	0				
	32-70	C	25Y 5152	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
13	0-33	C	10YR43	10YR56	C	D		S	0	0	0			HZCL?
	33-70	C	25Y 61	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
14	0-25	C	10YR43	10YR56	C	D		S	0	0	0			SL. GLEYED
	25-70	C	25Y 61	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
16	0-33	C	10YR43					0	0	0				
	33-80	C	10YR53	10YR56	C	F		Y	0	0	0	P	Y	PLASTIC
18	0-25	C	10YR43	10YR56	C	D		S	0	0	0			SL. GLEYED
	25-70	C	25Y 61	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
20	0-30	HCL	10YR42					0	0	0				
	30-65	C	25Y 51	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
22	0-30	HCL	10YR42					0	0	0				
	30-60	C	25Y 5152	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
24	0-30	HCL	10YR42					0	0	HR 2				
	30-70	C	05Y 5141	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
44	0-20	HCL	10YR42	10YR58	F	D		0	0	0				
	20-60	C	10YR41	10YR68	C	D		Y	0	0	0	P	Y	PLASTIC
46	0-29	C	10YR43	10YR56	F	D		0	0	0				
	29-70	C	25Y 61	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
48	0-28	C	10YR43	10YR56	F	D		0	0	0				
	28-70	C	25Y 61	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
50	0-27	C	10YR43	10YR56	C	D		S	0	0	0			SL. GLEYED
	27-70	C	25Y 61	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
54	0-17	HCL	10YR21					0	0	0				
	17-80	C	25Y 51	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
56	0-22	HCL	10YR42					0	0	0				
	22-70	C	25Y 51	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC
58	0-28	HCL	10YR4243					0	0	0				
	28-70	C	25Y 51	10YR58	M	D		Y	0	0	0	P	Y	PLASTIC

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED		----STONES----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR		IMP
60	0-35	HCL	10YR42							0	0	0					
	35-70	C	10YR52	10YR4658	M	D			Y	0	0	0	P		Y		PLASTIC
62	0-20	HCL	10YR3242	10YR46	C	D			Y	0	0	0					
	20-80	C	25Y 51	10YR58	M	D			Y	0	0	0	P		Y		PLASTIC
87	0-26	HCL	10YR41	10YR56	C	D			Y	0	0	0					
	26-60	C	10YR61	10YR68	M	D			Y	0	0	0	P		Y		PLASTIC
89	0-28	HCL	10YR41	10YR58	C	D			Y	0	0	0					
	28-40	C	10YR61	10YR58	C	D			Y	0	0	0	P		Y		PLASTIC
	40-70	C	10YR61	10YR68	M	D			Y	0	0	0	P		Y		PLASTIC
91	0-28	HCL	10YR42							0	0	0					
	28-60	C	10YR61	10YR58	M	D			Y	0	0	0	P		Y		PLASTIC
93	0-26	C	10YR42							0	0	0					
	26-60	C	10YR61	10YR68	M	D			Y	0	0	0	P		Y		PLASTIC
95	0-20	HCL	10YR42	10YR56	C	D			Y	0	0	0					
	20-60	C	10YR61	10YR68	M	D			Y	0	0	0	P		Y		PLASTIC
97	0-23	HCL	10YR42	10YR56	C	F			Y	0	0	0					
	23-60	C	10YR52	10YR68	M	D			Y	0	0	0	P		Y		PLASTIC
99	0-30	HCL	10YR4142	75YR56	C	D			Y	0	0	0					
	30-70	C	25Y 51	10YR58	M	D			Y	0	0	0	P		Y		PLASTIC
101	0-27	HCL	10YR4142	10YR58	M	D			Y	0	0	0					
	27-60	C	25Y 51	10YR58	M	D			Y	0	0	0	P		Y		PLASTIC
103	0-27	HCL	10YR41	10YR58	M	D			Y	0	0	HR 2					
	27-60	C	25Y 51	10YR58	M	D			Y	0	0	0	P		Y		PLASTIC
105	0-22	HCL	10YR41	10YR58	C	D			Y	0	0	0					
	22-60	C	25Y 61	10YR58	M	D			Y	0	0	0	P		Y		PLASTIC
119	0-20	HCL	10YR43							0	0	0					
	20-70	C	25Y 52	10YR68	M	D			Y	0	0	0	P		Y		PLASTIC
121	0-25	C	10YR41	10YR46	C	D			Y	0	0	HR 2					
	25-45	C	25Y 41	10YR56	C	D			Y	0	0	HR 5	M				
	45-80	C	25Y 52	10YR56	M	D			Y	0	0	0	P		Y		PLASTIC
123	0-28	C	10YR41	10YR46	C	D			Y	0	0	HR 2					
	28-40	C	25Y 31	10YR46	C	D			Y	0	0	HR 10	P		Y		
	40-80	C	75YR44	75YR4656	C	D			S	0	0	HR 5	P		Y		PLASTIC

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT		GLEY	>2	>6		LITH	TOT	STR		POR
125	0-30	C	10YR52						0	0	0					
	30-60	C	25Y 52	10YR68	M	D		Y	0	0	0		P		Y	PLASTIC
127	0-28	C	10YR53						0	0	0					
	28-60	C	25Y 52	10YR68	M	D		Y	0	0	0		P		Y	PLASTIC
129	0-30	HCL	10YR41	10YR56	C	D		Y	0	0	0					
	30-60	C	25Y 52	10YR58	M	D		Y	0	0	0		P		Y	PLASTIC
140	0-20	C	10YR21	10YR46	C	D		Y	0	0	HR 5					
	20-45	C	10YR41	10YR58	C	D		Y	0	0	HR 10		P			IMP45 DISTURBED?
142	0-30	HCL	10YR4252						0	0	0					
	30-60	C	25Y 52	10YR68	M	D		Y	0	0	0		P		Y	PLASTIC
144	0-30	HCL	10YR4252						0	0	0					
	30-60	C	25Y 52	10YR58	M	D		Y	0	0	0		P		Y	PLASTIC
1P	0-22	HCL	10YR41	10YR56	C	D		Y	0	0	0					
	22-70	C	25Y 51	10YR58	M	D		Y	0	0	0	WKDCPR	FM P	Y		Y
2P	0-33	C	10YR42	10YR56	F	D			0	0	0					
	33-60	C	10YR61	10YR68	M	D		Y	0	0	0	MDCAB	FM P	Y		Y
3P	0-28	C	10YR4142						0	0	0					
	28-60	C	25Y 5152	10YR58	M	D		Y	0	0	0	MDCPR	FM P	Y		Y