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Proposed Lees Farm Golf Course,
West Byfleet, Surrey
Agricultural Land Classification
February 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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MAFF Reference: EL 40/01387
LUPU Commission: 02399

AGRICULTURAL LAND CLASSIFICATION REPORT

PROPOSED LEES FARM GOLF COURSE, WEST BYFLEET, SURREY.

Introduction

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of approximately 52 hectares of land at Lees Farm, West Byfleet, in Surrey. The site is situated between Dodd's Lane, to the north, and Lock Lane, to the south, with the River Wey Navigation running along the eastern site boundary. The survey was carried out during 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 a planning application for a golf course. The results of this survey supersede any previous ALC information for this land.

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 all of the agricultural land was under permanent or rough grassland. The areas shown as 'Other Land' include woodland and occasional farm buildings.

Summary

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10,000. 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 below.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% Total site area	% Surveyed Area
3a	15.8	30.6	38.3
3b	8.2	16.0	20.0
4	17.2	33.3	41.7
Other land	10.4	20.1	-
Total surveyed area	41.2	-	100
Total site area	51.6	100	-

7. The fieldwork was conducted at an average density of approximately 1 boring per hectare. A total of 45 borings and three soil pits were described.

8. The majority of the agricultural land at this site has been classified as Grade 4 (poor quality) on the basis of a significant soil wetness limitation. To the north of the site the principal limitation is soil droughtiness. These profiles have been classified as Subgrade 3a (good quality) with a smaller area of Subgrade 3b (moderate quality) towards the centre of the site.

9. To the south east of Lees Farm, north of Peatmoor Wood, the land is extremely wet with hydrophilic vegetation such as *Juncus Spp.* occurring across much of it. The profiles generally comprise peaty loams and loamy peats over anaerobic loamy sand and sand lower subsoils. This land is too flat and low lying to be adequately drained and is likely to be permanently waterlogged. Thus, despite the locally dry climatic regime, it has been classified as Grade 4.

10. The land to the north of the site is slightly higher, falling very gently to the south east. The profiles in this area are well drained comprising light textured soils with a moderate to high flint content. Medium sandy loam, sandy silt loam and occasional clay loam topsoils generally overlie loamy sands and sands. The stone content ranges from 2-7% total flint by volume in the topsoil to 55% in the lower subsoil. This combination of light textured, stony soils and the locally dry climate act to reduce the amount of profile available water for plants. The level and consistency of crop yields is therefore restricted such that Subgrade 3a has been assigned over much of this area. However, towards the central drain gravel occurs in the lower subsoil. This leads to a more significant soil droughtiness limitation consistent with Subgrade 3b.

Factors Influencing ALC Grade

Climate

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

12. 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
Grid reference	N/A	TQ 048 597
Altitude	m, AOD	18
Accumulated Temperature	day°C (Jan-June)	1501
Average Annual Rainfall	mm	659
Field Capacity Days	days	138
Moisture Deficit, Wheat	mm	118
Moisture Deficit, Potatoes	mm	115

13. 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.

14. 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.

15. The combination of rainfall and temperature at this site mean that there is no overall climatic limitation (Climatic Grade 1). However, climatic factors do interact with soil properties to influence soil wetness and droughtiness. At this location the crop adjusted soil moisture deficits are comparatively high thus increasing the likelihood of soil droughtiness. Correspondingly the field capacity day values are relatively low thus decreasing the effects of soil wetness.

16. Local climatic factors such as frost risk and exposure are not thought likely to adversely affect agricultural land use on this site.

Site

17. The land on this site is relatively flat and low-lying though there is an abrupt change in altitude across the centre of the site. To the south of the drain the land lies at 18m AOD while to the north it lies at 20m AOD. However neither gradient or microrelief affect agricultural land quality on this site.

18. Towards the south east of the site, along the edge of the River Wey Navigation the land may be susceptible to periodic flooding due to its flat topography and low-lying position.

Geology and soils

19. The relevant geological sheet (BGS, 1978) maps the north and south west of the site as river gravels with alluvium through the centre.

20. The most recently published soils information for this area (SSEW, 1983) maps the Hucklesbrook soil association over the river gravels and the Fladbury 3 association over the alluvium. The former are described as 'well drained coarse loamy and some sandy soils, commonly over gravel. Some similar soils affected by groundwater. Usually flat land.' (SSEW, 1983). The latter, on the other hand, are described as 'stoneless clayey, fine silty, and fine loamy soils affected by groundwater. Flat land. Risk of flooding.' (SSEW, 1983).

21. Detailed field survey revealed similar soils to those described above as the Hucklesbrook association. However, those overlying the alluvium were found to be more peaty than expected.

Agricultural Land Classification

22. 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.

23. 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.

Subgrade 3a

24. The majority of the northern half of the site has been classified as Subgrade 3a due to a moderate soil droughtiness limitation. The soil profiles here comprise stoneless to slightly flinty (0-10% total flint) medium sandy loam topsoils over gleyed, very slightly to moderately flinty (5-25%

total flint) medium sandy loam, sandy clay loam or medium clay loam upper subsoils. At approximately 50cm depth some profiles comprise slightly to very flinty (5-55% total flint) sandy clay loams, heavy clay loams or poorly structured clays (see pit 3, Appendix III). These profiles therefore range from Wetness Class III-I, Wetness Grade 2 or 1. Other profiles comprise moderately structured, very slightly to moderately flinty (2-35% total stone) medium sandy loams, loamy medium sands or medium sands (see pit 2, Appendix III) which are also gleyed from the upper subsoil. Occasionally these profiles became impenetrable over flinty gravel at depth. Given the local climatic regime these profiles have been classified as Wetness Class II, Wetness Grade 1. However, the combination of soil textures, structures and stone contents acts to reduce the amount of profile available water for crops leading to drought stress. As a result the level and consistency of crop growth and yields will be restricted.

25. Occasional borings of better or worse quality also occur within this mapping unit. However, these were not mapped separately due to their limited number and extent.

Subgrade 3b

26. Two areas of Subgrade 3b land have been mapped where the land is restricted by a significant soil droughtiness limitation. In the extreme south of the site the profiles comprise stoneless to very slightly flinty (0-1% total flint) loamy medium sand topsoils and upper subsoils over stoneless to slightly flinty (0-15% total flint) medium sand lower subsoils. Towards the north of the site the profiles comprise very slightly flinty (2-5% total flint) medium sandy loam topsoils over very slightly or slightly flinty (3-15% total flint) medium sandy loam and loamy medium sand upper subsoils. Below this a combination of medium sandy loam, loamy medium sand and medium sand occurs with between 5 and 40% total flint. These profiles are generally gleyed or slightly gleyed from the upper subsoil and are therefore classified as Wetness Class I or II. The light topsoil textures reduce the effects of soils wetness however such that Wetness Grade 1 is appropriate throughout this mapping unit. In this local climatic regime the combination of light soil textures, structures and stone content acts to reduce the available moisture within the profile causing severe drought stress. This may lead to reduced crop growth and yields.

Grade 4

27. The majority of the agricultural land on this site has been classified as Grade 4 due to a severe soil wetness limitation. Soil inspection pit 1 shows that these profiles are stoneless throughout comprising peaty loam topsoils over loamy peat upper subsoils. Occasionally anaerobic medium sandy loam, loamy medium sand or medium sand occurs at depth. The water table is extremely high in these profiles and land is too flat and low-lying to be adequately drained. The presence of *Juncus Spp.* across the area suggests that it is waterlogged for much of the year. This land has therefore been classified as Wetness Class V, Wetness Grade 4 as wet soils such as these can significantly restrict crop growth and yields as well as limiting the timing of cultivations. This land will be best suited to seasonal grazing only.

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SOURCES OF REFERENCE

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SSEW: Harpenden

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED COL.	-----STONES-----			STRUCT/ CONSIST	SUBS			CALC		
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		POR	IMP
1	0-40	msl	10YR32 00						0	0	HR	7					
	40-50	sc1	10YR53 00	10YR68	00	C		Y	0	0	HR	10		M			
	50-100	c	25 Y72 00	75YR68	00	M		Y	0	0	HR	2		P		Y	
	100-120	sc1	25 Y72 00	75YR68	00	M		Y	0	0	HR	2		M			
1P	0-24	p1	75YR21 00					Y	0	0	HR	1					
	24-38	lp	75YR31 00					Y	0	0		0	MVCSAB	FM	M		
	38-50	lp	75YR34 53					Y	0	0		0			M		
	50-60	ms	75YR42 43					Y	0	0		0	WK	FR	M		
	60-120	lms	05GY51 00					Y	0	0		0	WK	FR	M		
2	0-35	msl	10YR32 00						0	0	HR	3					
	35-50	sc1	10YR53 00	10YR58	00	C		Y	0	0	HR	5		M			
	50-90	c	25 Y72 00	75YR68	00	M		Y	0	0	HR	2		P		Y	
2P	0-34	msl	10YR31 00						0	0	HR	5					
	34-55	msl	10YR33 00						0	0	HR	5	MDCSAB	VF	M		
	55-74	lms	10YR41 00	10YR58	00	C		Y	0	0	HR	10	WKCSAB	VF	M		
	74-88	lms	25Y 63 00	75YR58	00	M		Y	0	0	HR	15	WKCSAB	VF	M		
	88-120	ms	25Y 73 74	10YR58	00	M		Y	0	0	HR	25	WKCSAB	VF	M		
3	0-40	msl	10YR32 00						2	0	HR	10					
	40-50	msl	10YR32 00	10YR56	00	F			0	0	HR	10		M			
	50-65	sc1	10YR53 00	10YR56	00	C		Y	0	0	HR	30		M			
	65-80	ms	10YR56 00					Y	0	0	HR	30		M			Imp Gravelly
3P	0-26	msl	10YR32 00						0	0	HR	3					
	26-45	mc1	10YR31 00						0	0	HR	5	MDCSAB	FR	M		
	45-63	hc1	10YR52 00	10YR56	00	C		Y	0	0	HR	10	MDCSAB	FR	M		
	63-85	msl	10YR53 56	10YR68	00	M		Y	0	0	HR	55		M			Wet Sieved
	85-120	gh	10YR53 00						0	0		0		M			
4	0-35	msl	10YR31 00						0	0	HR	5					
	35-70	sc1	10YR53 00	10YR68	00	C		Y	0	0	HR	3		M			
	70-80	lms	10YR63 00	10YR68	00	C		Y	0	0	HR	15		M			
	80-100	sc1	25 Y72 00	75YR68	00	M		Y	0	0	HR	30		M			Imp Gravelly
5	0-35	msl	10YR32 00						1	0	HR	3					
	35-50	sc1	10YR52 00	10YR56	00	C		Y	0	0	HR	3		M			
	50-60	lms	10YR63 00	10YR56	00	C		Y	0	0	HR	2		M			
	60-70	ms	10YR63 00	10YR56	00	C		Y	0	0	HR	2		M			
	70-120	sc1	25 Y72 00	75YR68	00	C		Y	0	0		0		M			
6	0-35	mc1	10YR62 00						2	0	HR	5					
	35-60	msl	10YR53 00	10YR56	00	C		Y	0	0	HR	25		M			Imp Gravelly
7	0-35	sc1	10YR33 00						2	0	HR	7					
	35-60	sc1	10YR53 00	10YR56	00	C		Y	0	0	HR	20		M			Imp Gravelly

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL.	---STONES---			STRUCT/ CONSIST	SUBS			
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR	POR
8	0-35	ms1	10YR31 32						0	0	HR	5			
	35-65	ms1	10YR53 00 10YR56 00 C					Y	0	0	HR	15	M		
	65-70	1ms	10YR54 56					Y	0	0	HR	40	M		Imp Gravelly
9	0-35	ms1	10YR32 00						0	0	HR	5			
	35-55	1ms	10YR53 63 10YR68 00 C					Y	0	0	HR	15	M		
	55-60	1ms	10YR66 00 75YR58 00 C					Y	0	0	HR	35	M		Imp Gravelly
10	0-35	ms1	10YR31 00						0	0		0			
	35-55	ms1	10YR53 63 10YR68 00 C					Y	0	0	HR	15	M		
	55-70	1ms	10YR63 00 10YR68 00 C					Y	0	0	HR	25	M		
	70-120	ms	10YR66 00 75YR58 00 C					Y	0	0	HR	35	M		
11	0-30	ms1	10YR31 00						0	0	HR	5			
	30-55	ms1	10YR42 00 10YR58 00 C					Y	0	0	HR	15	M		
	55-60	1ms	10YR66 00 75YR56 00 C					Y	0	0	HR	35	M		Imp Gravelly
12	0-35	ms1	10YR43 00						0	0	HR	5			
	35-65	1ms	10YR54 00 10YR58 00 C					S	0	0	HR	10	M		
	65-90	ms1	10YR43 00 10YR58 00 C					S	0	0	HR	10	M		
	90-120	1ms	10YR53 00 10YR58 00 M					Y	0	0	HR	20	M		
13	0-25	ms1	10YR43 00						0	0	HR	2			
	25-55	ms1	10YR53 00 10YR56 00 C					Y	0	0	HR	10	M		
	55-65	ms1	10YR53 63 10YR58 00 C					Y	0	0	HR	20	M		
	65-70	sc1	25Y 63 00 75YR68 00 M					Y	0	0	HR	40	M		Imp Gravelly
14	0-40	ms1	10YR31 00						0	0	HR	2			
	40-60	mc1	10YR42 00						0	0	HR	2	M		
	60-65	sc1	10YR52 00 10YR56 00 C					Y	0	0	HR	3	M		
	65-100	sc1	10YR63 00 10YR68 00 M					Y	0	0	HR	1	M		Imp Gravelly
15	0-30	ms1	10YR31 00						0	0	HR	2			
	30-40	sc1	10YR53 00 10YR56 00 C					Y	0	0	HR	10	M		
	40-75	1ms	10YR53 00 75YR68 00 C					Y	0	0	HR	35	M		Imp Gravelly
16	0-30	ms1	10YR32 00						0	0	HR	2			
	30-40	ms1	10YR32 00 05YR58 00 F						0	0	HR	2	M		
	40-60	ms1	10YR52 00 10YR58 00 M				05YR58 00	Y	0	0	HR	10	M		
	60-80	1ms	10YR52 00 10YR46 00 C					Y	0	0	HR	2	M		
	80-110	1ms	10YR63 00 10YR68 00 M					Y	0	0	HR	2	M		Imp Gravelly
17	0-35	ms1	10YR42 00						0	0	HR	3			
	35-45	ms1	10YR52 00 05YR46 00 C					Y	0	0	HR	3	M		
	45-70	1ms	10YR62 00 75YR46 00 C					Y	0	0	HR	10	M		
	70-90	ms	10YR58 00					Y	0	0		0	M		Imp Gravelly
18	0-35	ms1	10YR43 00						0	0	HR	5			
	35-45	1ms	75YR68 00						0	0	HR	15	M		
	45-60	1ms	10YR66 00						0	0	HR	15	M		
	60-90	1ms	10YR53 00 10YR58 00 C					Y	0	0	HR	15	M		
	90-120	ms	10YR63 00 10YR56 00 C					Y	0	0	HR	30	M		V Wet

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED COL.	-----STONES-----			STRUCT/ CONSIST	SUBS			CALC
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR	
20	0-35	ms1	10YR31 00						0	0	HR	3			
	35-50	sc1	10YR53 00	10YR56	00	C		Y	0	0	HR	5	M		
	50-70	sc1	10YR53 00	10YR68	00	C		Y	0	0	HR	25	M		Imp gravelly
21	0-30	ms1	10YR31 32						0	0	HR	5			
	30-45	ms1	10YR41 42						0	0	HR	5	M		
	45-90	1ms	25Y 63 00	10YR58	00	C		Y	0	0	HR	15	M		
	90-120	ms	75YR68 00	10YR64	00	C		Y	0	0	HR	20	M		
22	0-30	ms1	10YR33 43						0	0	HR	3			
	30-60	1ms	10YR43 53	10YR58	00	M		Y	0	0		0	M		
	60-100	ms	75YR68 00	10YR64	00	C		Y	0	0	HR	5	M		
	100-120	ms	25Y 63 00	10YR68	00	M		Y	0	0	HR	5	M		
23	0-30	ms1	10YR42 00						0	0	HR	2			
	30-45	1ms	10YR43 00						0	0	HR	5	M		
	45-70	ms	10YR53 00	10YR56	00	C		Y	0	0	HR	5	M		
	70-120	ms	25Y 63 00	75YR68	00	M		Y	0	0	HR	10	M		
24	0-30	ms1	10YR42 00						0	0	HR	5			
	30-45	1ms	10YR42 43						0	0	HR	10	M		
	45-55	sc1	05Y 62 00	10YR58	00	M		Y	0	0	HR	20	M		
	55-60	1ms	10YR44 00	75YR58	00	M		Y	0	0	HR	50	M		Imp Gravelly
25	0-30	1ms	75YR32 00						0	0	HR	3			
	30-55	1ms	10YR42 00	10YR68	00	C		Y	0	0	HR	3	M		
	55-100	ms	75YR63 00	75YR68	00	M		Y	0	0	HR	15	M		
	100-120	ms	25Y 63 00	10YR68	00	M		Y	0	0	HR	10	M		
26	0-30	ms1	10YR32 00						0	0	HR	2			
	30-50	sc1	75YR68 00	25Y 63	00	C		Y	0	0	HR	2	M		
	50-60	1ms	75YR68 00	25Y 63	00	C		Y	0	0	HR	10	M		
	60-100	ms	75YR66 00	10YR64	00	C		Y	0	0	HR	5	M		
	100-120	ms	25Y 63 00	10YR68	00	M		Y	0	0		0	M		
27	0-30	p1	10YR21 00					Y	0	0		0			
	30-120	1p	75YR21 23					Y	0	0		0	M		V Wet
28	0-25	p1	10YR21 00					Y	0	0		0			
	25-120	1p	75YR21 23					Y	0	0		0	M		V Wet
30	0-30	p1	75YR21 00					Y	0	0	HR	1			
	30-120	1p	75YR43 00					Y	0	0		0	M		V Wet
31	0-30	p1	10YR21 00					Y	0	0	HR	1			
	30-120	1p	75YR43 00					Y	0	0		0	M		V Wet
32	0-25	p1	10YR21 00					Y	0	0		0			
	25-75	1p	75YR21 23					Y	0	0		0	M		V Wet
	75-120	1ms	05GY41 00					Y	0	0		0	M		Anaerobic

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED	-----STONES-----			STRUCT/	SUBS	CALC				
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT		CONSIST	STR	POR	IMP
33	0-28	p1	10YR31 00					Y	0	0	0						
	28-35	1ms	10YR53 00	10YR56	00	C		Y	0	0	HR	5	M				V wet
	35-50	ps	05Y 51 62					Y	0	0	HR	5	M				Anaerobic
	50-60	1ms	25Y 42 00					Y	0	0	HR	15	M				Imp gravelly
34	0-25	p1	10YR21 00					Y	0	0	0						
	25-50	ps	75YR31 00					Y	0	0	0		M				
	50-90	ms1	10YR62 00	75YR68	00	M		Y	0	0	0		M				V Wet/ C tenses
	90-120	sc1	05Y 51 00	75YR68	00	M		Y	0	0	0		M				V Wet
35	0-30	p1	75YR21 00					Y	0	0	HR	0					
	30-120	1p	75YR43 00					Y	0	0	0		M				V Wet
36	0-30	p1	75YR21 00					Y	0	0	HR	1					
	30-50	p1	75YR31 00					Y	0	0	0		M				V Wet
	50-120	1p	75YR43 00					Y	0	0	0		M				V Wet
37	0-25	p1	10YR21 00					Y	0	0	0						
	25-80	1p	10YR21 00					Y	0	0	0		M				V Wet
38	0-25	p1	10YR31 00					Y	0	0	0						
	25-40	1p	10YR21 00					Y	0	0	0		M				V Wet
	40-60	ps	10YR53 42	10YR56	00	C		Y	0	0	0		M				V Wet
	60-90	ms	05GY51 00	10YR56	00	C		Y	0	0	0		M				Anaerobic
41	0-30	p1	75YR21 00					Y	0	0	0						
	30-60	p1	75YR31 00					Y	0	0	0		M				V Wet
	60-70	1p	75YR34 00					Y	0	0	0		M				V Wet
	70-120	ms	25Y 61 00	10YR56	00	C		Y	0	0	0		M				Anaerobic
42	0-30	p1	75YR21 00					Y	0	0	HR	1					
	30-120	1p	75YR31 00					Y	0	0	0		M				V Wet
43	0-25	p1	10YR31 00					Y	0	0	0						
	25-50	1p	10YR21 00					Y	0	0	0		M				V Wet
	50-80	ms	05GY51 61					Y	0	0	0		M				Anaerobic
45	0-30	p1	75YR21 00					Y	0	0	HR	1					
	30-50	p1	75YR31 00					Y	0	0	0		M				V Wet
	50-120	1p	75YR43 00					Y	0	0	0		M				V Wet
46	0-30	p1	10YR21 00					Y	0	0	HR	1					
	30-55	p1	75YR31 00					Y	0	0	0		M				V Wet
	55-70	ps	75YR43 00					Y	0	0	0		M				V Wet
	70-90	ms	05Y 61 00					Y	0	0	0		M				Anaerobic
	90-120	ps	75YR43 00					Y	0	0	0		M				V wet
47	0-20	p1	10YR31 00					Y	0	0	0						
	20-60	1p	10YR21 00					Y	0	0	0		M				V Wet

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT	COL.	GLEYS	>2	>6	LITH		TOT	STR	POR	IMP	SPL	CALC
48	0-25	p1	10YR31 00						Y	0	0	0						
	25-60	1p	10YR21 00						Y	0	0	0		M				V Wet
	60-80	ps	25Y 61 00	75YR58	00	M			Y	0	0	0		M				Anaerobic
49	0-38	1ms	10YR32 00	75YR46	00	C	00MN00	00	Y	0	0	HR	1					
	38-70	1ms	25Y 64 74	75YR58	00	M			Y	0	0	HR	1		M			
	70-85	ms	25Y 72 73	10YR56	00	C			Y	0	0	HR	10		M			
	85-120	1ms	10YR63 00	75YR58	00	M			Y	0	0	HR	15		M			
53	0-35	1ms	10YR32 00							0	0	0						
	35-75	1ms	25Y 64 74	75YR58	00	M			Y	0	0	0			M			
	75-85	ms	25Y 72 00	10YR56	00	C			Y	0	0	0			M			
	85-120	fs1	25Y 72 00	75YR56	00	M			Y	0	0	0			M			

SOIL PIT DESCRIPTION

Site Name : LEES FARM,GC, W BYFLEET Pit Number : 1P

Grid Reference: TQ05009540 Average Annual Rainfall : 659 mm
 Accumulated Temperature : 1501 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- 24	PL	75YR21 00	0	1	HR					
24- 38	LP	75YR31 00	0	0			MVCSAB	FM	M	
38- 50	LP	75YR34 53	0	0					M	
50- 60	MS	75YR42 43	0	0			WK	FR	M	
60-120	LMS	05GY51 00	0	0			WK	FR	M	

Wetness Grade : 4 Wetness Class :
 Gleying : 0 cm
 SPL : No SPL

Drought Grade : 1 APW : 188mm MBW : 70 mm
 APP : 168mm MBP : 53 mm

FINAL ALC GRADE : 4
 MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : LEES FARM,GC, W BYFLEET Pit Number : 2P

Grid Reference: TQ04705980 Average Annual Rainfall : 659 mm
 Accumulated Temperature : 1501 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- 34	MSL	10YR31 00	0	5	HR					
34- 55	MSL	10YR33 00	0	5	HR		MDCSAB	VF	M	
55- 74	LMS	10YR41 00	0	10	HR	C	WKCB	VF	M	
74- 88	LMS	25Y 63 00	0	15	HR	M	WKCSAB	VF	M	
88-120	MS	25Y 73 74	0	25	HR	M	WKCSAB	VF	M	

Wetness Grade : 1 Wetness Class : I
 Gleying : 055 cm
 SPL : No SPL

Drought Grade : 3A APW : 107mm MBW : -11 mm
 APP : 95 mm MBP : -20 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : LEES FARM, GC, W BYFLEET Pit Number : 3P

Grid Reference: TQ04986011 Average Annual Rainfall : 659 mm
 Accumulated Temperature : 1501 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- 26	MSL	10YR32 00	0	3	HR					
26- 45	MCL	10YR31 00	0	5	HR		MDCSAB	FR	M	
45- 63	HCL	10YR52 00	0	10	HR	C	MDCSAB	FR	M	
63- 85	MSL	10YR53 56	0	55	HR	M			M	
85-120	GH	10YR53 00	0	0					M	

Wetness Grade : 1 Wetness Class : I
 Gleying : 045 cm
 SPL : No SPL

Drought Grade : 3A APW : 102mm MBW : -16 mm
 APP : 103mm MBP : -12 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M. REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC COMMENTS	
			GRONT	GLEY	SPL	CLASS	GRADE	AP	MB	AP					MB
1	TQ04816028	PGR	040	050	2	1	131	13	103	-12	3A		DR	3A	
1P	TQ05009540	PGR		0	5	4	188	70	168	53	1		WE	4	At Boring 43
2	TQ04806020	PGR	035	050	3	2	107	-11	105	-10	3A		DR	3A	
2P	TQ04705980	PGR		055	1	1	107	-11	95	-20	3A		DR	3A	At Boring 21
3	TQ04906020	PGR		050	1	1	90	-28	93	-22	3B		DR	3B	I80 See 3P
3P	TQ04986011	PGR		045	1	1	102	-16	103	-12	3A		DR	3A	At Boring 7
4	TQ04706010	PGR		035	2	1	116	-2	108	-7	3A		DR	3A	Imp 100
5	TQ04806010	PGR		035	2	1	138	20	92	-23	3A		DR	3A	
6	TQ04906010	PGR		035	2	2	86	-32	89	-26	3B		DR	3A	I60 See 3P
7	TQ04986011	PGR		035	2	2	82	-36	86	-29	3B		DR	3A	I60 See 3P
8	TQ05106010	PGR		035	2	1	98	-20	104	-11	3A		DR	3A	I70 See 3P
9	TQ04706000	PGR		035	2	1	70	-48	72	-43	3B		DR	3B	Imp 60
10	TQ04806000	PGR		035	2	1	103	-15	94	-21	3A		DR	3A	
11	TQ04906000	PGR		030	2	1	81	-37	83	-32	3B		DR	3B	Imp 60
12	TQ05006000	PGR		035	1	1	110	-8	83	-32	3B		DR	3B	
13	TQ05106000	PGR		090	2	1	93	-25	99	-16	3B		DR	3B	S1 gley 35
14	TQ04605990	PGR		060	1	1	132	14	113	-2	2		DR	2	Imp 100
15	TQ04705990	PGR		030	2	1	77	-41	79	-36	3B		DR	3B	Imp 75
16	TQ04805990	PGR		040	1	1	112	-6	99	-16	3A		DR	3A	Imp 110
17	TQ04905990	PGR		035	2	1	92	-26	89	-26	3B		DR	3B	Imp 90
18	TQ05005990	PGR		060	1	1	91	-27	79	-36	3B		DR	3B	V Wet 90
20	TQ04605980	PGR		035	2	1	95	-23	102	-13	3B		DR	3A	I70 See 3P
21	TQ04705980	PGR		045	1	1	100	-18	86	-29	3A		DR	3A	See 2P
22	TQ04805980	PGR		030	2	1	92	-26	77	-38	3B		DR	3B	
23	TQ04905982	PGR		045	1	1	89	-29	74	-41	3B		DR	3B	
24	TQ05005982	PGR		045	1	1	70	-48	73	-42	3B		DR	3B	Imp 60
25	TQ04585970	PGR		030	2	1	70	-48	55	-60	4		DR	4	
26	TQ04705970	PGR		030	2	1	107	-11	91	-24	3A		DR	3A	
27	TQ04805970	PGR		0	5	4		215	221	106			WE	4	Peaty
28	TQ04905970	PGR		0	5	4		0	0				WE	4	Rushes/Peaty
30	TQ04725962	PGR		0	5	4		0	0				WE	4	Peaty
31	TQ04805960	PGR		0	5	4		0	0				WE	4	Peaty
32	TQ04905960	PGR		0	5	4		0	0				WE	4	Peaty
33	TQ05005960	PGR		0	5	4		0	0				WE	4	Peaty
34	TQ05105960	PGR		0	5	4		0	0				WE	4	See 1P
35	TQ04725954	PGR		0	5	4		0	0				WE	4	Peaty
36	TQ04805950	PGR		0	5	4		0	0				WE	4	Peaty
37	TQ04905950	PGR		0	5	4		0	0				WE	4	Peaty
38	TQ05005950	PGR		0	5	4		0	0				WE	4	Peaty
41	TQ04805940	RGR		0	5	4		0	0				WE	4	Rushes/Peaty
42	TQ04905940	PGR		0	5	4		0	0				WE	4	Peaty
43	TQ05005940	PGR		0	5	4		0	0				WE	4	Peaty

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M. REL DRT	EROSN FLOOD	FROST EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
			GRDNT	GLEY	SPL CLASS	GRADE	AP	MB							
45	TQ04805930	PGR		0	5	4		0					WE	4	Peaty
46	TQ04905930	PGR		0	5	4		0					WE	4	Peaty
47	TQ05005930	PGR		0	5	4		0					WE	4	Peaty
48	TQ05085931	PGR		0	5	4		0					WE	4	Peaty
49	TQ04705920	PGR		0	2	1		087	-31	72	-43	3B	DR	3B	
53	TQ04705910	PGR		035	2	1		118	0	71	-44	3B	DR	3B	