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West Sussex Structure Plan Review
Reconnaissance Survey
Land at Christ's Hospital
Agricultural Land Classification
September 1995

Resource Planning Team
Guildford Statutory Group
ADAS Reading

ADAS Reference 4205/151/95
MAFF Reference EL42/768
LUPU Commission 02129

AGRICULTURAL LAND CLASSIFICATION REPORT

WEST SUSSEX STRUCTURE PLAN REVIEW
LAND AT CHRIST S HOSPITAL

INTRODUCTION

1 This summary report presents the findings of a reconnaissance Agricultural Land Classification (ALC) survey on approximately 256 ha of land to the west of Christ s Hospital near Itchingfield West Sussex The survey was carried out in September 1995

2 The survey was commissioned by the Ministry of Agriculture Fisheries and Food (MAFF) Land Use Planning Unit (Reading) in connection with the West Sussex Structure Plan Review The survey was completed at a reconnaissance level of detail on a free survey basis as it was undertaken primarily to update the 1 63 360 scale provisional ALC maps for the area of search Consequently the results are designed for strategic planning purposes only For site specific proposals more detailed surveys may be required

3 The land in the north east of this area was surveyed at a semi detailed level under the revised ALC system in March 1995 (ADAS Ref 4205/22/95) The results of this previous survey have been used in the classification of land in the current survey

4 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

5 At the time of survey the land use on the site comprised mainly arable land which had been ploughed recently A very small area of permanent grassland also occurs to the north west of Shelley s Wood Little Fulfords and Lower Barn have been mapped as Urban while Western s Farm and Fulfords Farm are shown as Agricultural Buildings Shelley s Wood Eastland Copse and a narrow strip of land near to the River Arun are shown as Woodland The scrub land of Butler s Gill and an active landfill site in the north of the area of search have been classified as Non agricultural land

SUMMARY

6 The findings of the survey are shown on the enclosed ALC map The map has been drawn at a scale of 1 50 000 it is accurate at this scale but any enlargement would be misleading

7 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
3a	2 2	0 9
3b	205 0	82 5
Farm Buildings	2 6	1 1
Woodland	25 3	10 2
Non Agricultural	10 5	4 2
Urban	2 8	1 1
Not surveyed	7 9	N/A
Total survey area	248 4	100
Total site area	256 3	N/A

8 The fieldwork on the current site was conducted at an average density of approximately 1 boring per 11 hectares A total of 16 borings were described during this reconnaissance survey with a further 34 borings and 3 soil inspection pits reviewed from the existing survey in the north east (ADAS Ref 4205/22/95) This earlier survey was however carried out at a semi detailed level of approximately 1 boring per 2 5 hectares

9 The majority of this site has been classified as Subgrade 3b moderate quality land on the basis of a severe soil wetness limitation These soils are all derived from the Weald Clay and as such comprise poorly drained loamy over clayey soils with slowly permeable subsoils A small area of land in the extreme north of the site has been classified as Subgrade 3a, good quality land due to a less severe soil wetness restriction resulting from the occurrence of slowly permeable layers deeper in the profile

FACTORS INFLUENCING ALC GRADE

Climate

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

11 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 141 283
Altitude	m AOD	60
Accumulated Temperature	day C	1465
Average Annual Rainfall	mm	799
Field Capacity Days	days	167
Moisture Deficit Wheat	mm	107
Moisture Deficit Potatoes	mm	101

12 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

13 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 (ATO January to June) as a measure of the relative warmth of a locality

14 The combination of rainfall and temperature at this site mean that there is no overall climatic limitation (Climate Grade 1) However climatic factors can interact with soil properties to influence soil wetness and droughtiness limitations

15 Local climatic factors such as exposure or frost risk are not believed to affect the site

Site

16 The site is relatively flat in the north and east lying between 30m and 50m Towards the south west the site becomes more undulating ranging from 50m to 91m Nowhere on the site does either gradient or relief impose restrictions to agriculture land use

17 Flooding does not appear to be limiting on this site

Geology and soils

18 The relevant geological sheet (BGS 1972) maps the majority of the site as Weald Clay with some Upper Horsham Stone in the north east Alluvial drift deposits are shown in the centre of the site towards the north

19 The most recently published soil information for the site (SSEW 1983) shows the Wickham 1 soil association across most of the site with some Wickham 5 soils in the north east The former are described as Slowly permeable seasonally waterlogged fine silty over clayey fine loamy over clayey and clayey soils (SSEW 1983) The latter are similar but include some coarse loamy soils with slowly permeable subsoils and slight seasonal waterlogging over sandstone and are reddish locally (SSEW 1983) Detailed field survey broadly confirms the existence of both

AGRICULTURAL LAND CLASSIFICATION

20 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

21 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

22 A small area of land towards the north east of the site has been classified as Subgrade 3a, good quality with soil wetness as the main limitation Soil inspection pit no 2 (4205/22/95) is typical of the soils within this mapping unit though subsoils were found to contain variable amounts of layered soft sandstone Texture variations are thus indicative of the presence of interbedded soft sandstone within a clayey soil matrix

23 At the location of pit no 2 the profile was found to comprise a very slightly stony (5% total soft sandstone by volume) medium clay loam topsoil resting upon a moderately stony (20% total soft sandstone v/v) heavy clay loam upper subsoil which extends to a depth of 50cm A very slightly stony (5% total soft sandstone by volume) clay subsoil commences at 50cm and extends to approximately 70cm, at which point the profile becomes more stony (20% total soft sandstone by volume) consisting of a heavy clay loam texture Profiles show evidence of a soil wetness imperfection in the form of gleying from the upper subsoil Furthermore both the clay and heavy clay loam lower subsoils were found to be slowly permeable with low porosity causing a moderate drainage impedance

24 Such drainage characteristics equate these soils to Wetness Class III at this location with a resultant classification of Subgrade 3a given the prevailing local climatic conditions These soils show a moderate wetness limitation which can restrict plant and root development and may increase the likelihood of soil structural damage through trafficking by agricultural machinery or poaching by grazing livestock

Subgrade 3b

25 The vast majority of the agricultural land on this site has been classified as Subgrade 3b (moderate quality) Two soil inspection pits equate to this mapping unit Pits 1 and 3 (4205/22/95) The profiles here are generally gleyed throughout comprising medium or heavy clay loam topsoils with heavy clay loam or clay upper subsoils over clay In both Pits the clay subsoils are shown to be poorly structured with low porosity and therefore slowly permeable in nature In general this horizon occurs within 45cm depth resulting in a significant drainage impedance Given the prevailing climatic conditions this land has been assessed as being consistent with Wetness Class IV which in combination with the heavy topsoil textures gives rise to Subgrade 3b quality land Poorly drained soils such as these can inhibit plant and root development as well as affect the timing and frequency of cultivations as trafficking by agricultural machinery and poaching by grazing livestock can lead to structural damage

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ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1972) *Sheet No 302* Horsham 1 63360 scale (Solid & 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 (1983) *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

Urban

Built up or hard uses with relatively little potential for a return to agriculture including housing industry commerce education transport religious buildings cemeteries Also hard surfaced sports facilities permanent caravan sites and vacant land all types of derelict land including mineral workings which are only likely to be reclaimed using derelict land grants

Non agricultural

Soft uses where most of the land could be returned relatively easily to agriculture including private parkland public open spaces sports fields allotments and soft surfaced areas on airports Also active mineral workings and refuse tips where restoration conditions to soft after uses may apply

Woodland

Includes commercial and non commercial woodland A distinction may be made as necessary between farm and non farm woodland

Agricultural Buildings

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses Temporary structures (eg polythene tunnels erected for lambing) may be ignored

Open Water

Includes lakes ponds and rivers as map scale permits

Land Not Surveyed

Agricultural land which has not been surveyed

Where the land use includes more than one of the above eg buildings in large grounds and where map scale permits the cover types may be shown separately Otherwise the most extensive cover type will be shown

APPENDIX II

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

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

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

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

11 **POR** Soil porosity If a soil horizon has less than 0 5% biopores >0 5 mm a Y' will appear in this column

12 **IMP** If the profile is impenetrable to rooting a Y will appear in this column at the 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

MPLE	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WHEAT GRADE	POTS AP	POTS MB	M REL DRT	EROSN FLOOD	FROST EXP	CHEM DIST	ALC LIMIT	ALC	COMMENTS
1	TQ13103000	STB			0	030	4	3B	0	0					WE	3B	Cracked
2	TQ13602990	STB	SW	02	0	044	4	3B	0	0					WE	3B	J st WC4
3	TQ13102978	STB			0	040	4	3B	0	0					WE	3B	Cracked
4	TQ13702974	STB	S	02	030	030	4	3B	0	0					WE	3B	
5	TQ13052943	STB			0	030	4	3B	0	0					WE	3B	C acked
6	TQ13302952	STB	NE	05	0	030	4	3B	0	0					WE	3B	Cl y Top
7	TQ13602949	STB	NE	03	028	040	4	3B	0	0					WE	3B	
8	TQ13352919	STB			030	040	4	3B	0	0					WE	3B	Cracked
9	TQ13412886	PLO	E	01	0	030	4	3B	0	0					WE	3B	Cracked
10	TQ14332862	STB			028		2	2	0	0					WE	3A	Imp 40 q Sst
11	TQ14322843	STB			0	035	4	3B	0	0					WE	3B	Nea B10
12	TQ14002840	STB	NE	07	0	018	4	3B	0	0					WE	3B	C cked
13	TQ13802814	STB	SE	03	0	018	4	3B	0	0					WE	3B	
14	TQ14102805	PLO	SE	05	0	020	4	3B	0	0					WE	3B	Plast c Clay
15	TQ13652786	STB	S	06	025	025	4	3B	0	0					WE	3B	Plastic Clay
16	TQ13852764	STB	S	02	0	035	4	3B	0	0					WE	3B	Plastic Clay

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1	0 30	mcl	10YR53 00	10YR56 00	C			Y	0	0		0							
	30 55	c	25Y 63 00	10YR68 71	M			Y	0	0		0		P			Y		
2	0 30	mcl	10YR53 00	10YR56 00	C			Y	0	0		0							
	30 44	hcl	10YR53 63	10YR56 00	C			Y	0	0		0		M					
	44 65	c	05GY51 00	10YR58 00	M		00MN00 00	Y	0	0		0		P			Y		
3	0 30	mcl	10YR53 00	10YR56 00	C			Y	0	0		0							
	30 40	hcl	25Y 52 00	10YR58 00	M			Y	0	0		0		M					
	40 60	c	25Y 51 00	75YR58 71	M			Y	0	0		0		P			Y		
4	0 30	mcl	10YR53 00	10YR68 00	F				0	0	MSST	2							
	30 50	c	10YR62 72	10YR68 00	C			Y	0	0	MSST	2		P			Y		
	50 65	c	25Y 71 00	75YR58 00	M		00MN00 00	Y	0	0	MSST	2		P			Y		
5	0 30	mcl	10YR53 00	10YR56 00	C			Y	0	0		0							
	30 55	c	25Y 52 00	75YR58 71	M			Y	0	0		0		P			Y		
6	0 30	c	25Y 53 00	10YR58 00	M		00MN00 00	Y	0	0		0							
	30 55	c	25Y 51 00	75YR58 71	M			Y	0	0		0		P			Y		
7	0 28	mcl	10YR53 00	10YR68 00	F				0	0	HR	2							
	28 40	hcl	10YR53 00	10YR68 72	C			Y	0	0		0		M					Hard & Dry
	40 55	c	10YR71 00	10YR58 00	M			Y	0	0		0		P			Y		
8	0 30	mcl	10YR53 00	10YR68 00	F				0	0	HR	2							
	30 40	hcl	10YR71 72	10YR66 00	C			Y	0	0		0		M					
	40 65	c	10YR71 00	10YR58 00	M			Y	0	0		0		P			Y		
9	0 30	mcl	10YR53 00	10YR68 00	C			Y	0	0	HR	2							
	30 60	c	10YR71 00	10YR58 00	M			Y	0	0		0		P			Y		
10	0 28	cl	10YR53 00	10YR56 00	C				0	0	MSST	2							
	28 40	hcl	10YR53 63	10YR68 51	M		00MN00 00	Y	0	0	MSST	2		M					Imp Sandstone
11	0 28	mcl	10YR53 00	10YR56 00	C			Y	0	0	MSST	1							
	28 35	hcl	10YR53 63	10YR56 00	C			Y	0	0		0		M					
	35 55	c	25Y 52 00	10YR58 00	M		00MN00 00	Y	0	0		0		P			Y		
12	0 18	mcl	10YR53 00	10YR58 51	M			Y	0	0		0							
	18 55	c	05GY51 00	75YR68 00	M			Y	0	0		0		P			Y		
13	0 18	mcl	10YR53 00	10YR56 00	C			Y	0	0		0							
	18 55	c	25Y 52 00	75YR68 00	M			Y	0	0		0		P			Y		
14	0 20	hcl	10YR63 00	10YR58 00	C			Y	0	0	HR	2							
	20 60	c	25Y 71 00	75YR58 00	M			Y	0	0		0		P			Y		Plast c

				MOTTLES			PED		STONES			STRUCT/	SUBS				
MPLE	DEPTH	TEXTURE	COLOUR	COL	ABUN	CONT	COL	GLEY	2	6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC	
15	0 25	hcl	10YR53 00	10YR68 00	F				0	0	HR	2							
	25 60	c	25Y 71 00	75YR58 00	M			Y	0	0		0		P		Y		Plast c	
16	0 35	mcl	10YR53 00	10YR68 00	C			Y	0	0	HR	2							
	35 60	c	10YR72 71	75YR58 00	M			Y	0	0		0		P		Y		Plast c	

PREVIOUS SURVEY 4205/22/95

SOIL PIT DESCRIPTION

Site N me HORSHAM LP CHRISTS HOSP Pit N mbe 1P

G d R f TQ14102900 A e age A al R f ll 790 mm
Acc lated Tempe at e 1493 deg e days
F ld Capac ty Le el 165 days
Land Use
Slope a d Aspect deg ees

HORIZON	TEXTURE	COLOUR	STONES	2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 26	MCL	25Y 42 00	0		5	HR	C				
26 70	C	10YR62 00	0		0		M	WKCAB	FM	P	

Wet ess G ade 3B Wet ess Class IV
Gley ng 0 cm
SPL 026 cm

D o ght G de APW mm MBW 0 mm
APP mm M8P 0 mm

FINAL ALC GRADE 3B
MAIN LIMITATION Wetness

PREVIOUS SURVEY 4205/22/95

SOIL PIT DESCRIPTION

S te Name HORSHAM LP CHRISTS HOSP P t N mber 2P

G d Refe e c TQ14502950 A e g A l Ra f ll 790 mm
Acc m lated Tempe at re 1493 deg ee d ys
F eld Capac ty L l 165 days
La d U F ld Be s
Slope a d A pect degrees

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 29	MCL	10YR42 00	0	5	HR					
29 50	HCL	25Y 63 61	0	20	MSST	C	MDCSAB	FR	M	
50 71	C	25Y 63 62	0	5	MSST	M	WKCSAB	FR	M	
71 90	HCL	25Y 72 73	0	20	MSST	M	WKCSAB	FR	M	

W tne G ade 3A Wet ess Clas III
Gl y g 029 cm
SPL 050 cm

Dro ght G de APW mm MBW 0 mm
APP mm MBP 0 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Wetness

PREVIOUS SURVEY 4205/22/95

SOIL PIT DESCRIPTION

S te Name HORSHAM LP CHRISTS HOSP P t N mbe 3P

G d Refere e TQ14502920 A e g A l R f ll 790 mm
Acc m lated Te pe at re 1493 degree days
F ld Capac ty L el 165 days
Land Use P nt Grass
Slope a d Aspect deg ees

HORIZON	TEXTURE	COLOUR	STONES	2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 30	MCL	10YR52 00	0		0		C				
30 60	C	25Y 61 00	0		2	MSST	M	WKCAB	FM	P	

Wet ess G ade 3B W t e Class IV
Gley ng 0 cm
SPL 030 cm

D o ght Grade APW mm MBW 0 mm
APP mm MBP 0 mm

FINAL ALC GRADE 3B
MAIN LIMITATION W t ess

PREVIOUS SURVEY 4205/22/95

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WHEAT GRADE	AP	MB	POTS AP	MB	M REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	TQ13902290	PGR		0	040	4	3B		0		0						WE	3B	
1P	TQ14102900	STB		0	026	4	3B		0		0						WE	3B	PIT70
2	TQ14412949	BEA		025	025	4	3B		0		0						WE	3B	
2P	TQ14502950	BEN		029	050	3	3A		0		0						WE	3A	PIT90
3	TQ14502950	BEN		030	047	3	3A		0		0						WE	3A	
3P	TQ14502920	PGR		0	030	4	3B		0		0						WE	3B	WATER 55
4	TQ14602950	BEN		0	066	3	3A		0		0						WE	3A	
5	TQ14092937	STB		025	025	4	3B		0		0						WE	3B	
6	TQ14502940	BEN		0	024	4	3B		0		0						WE	3B	
7	TQ14602940	BEN		029	042	4	3B		0		0						WE	3B	
8	TQ14702940	BEN		0	026	4	3B		0		0						WE	3B	
9	TQ13902930	PGR		0	030	4	3B		0		0						WE	3B	
10	TQ14302930	PLO		025	025	4	3B		0		0						WE	3B	
11	TQ14402930	PGR		029	040	4	3B		0		0						WE	3B	
12	TQ14502930	PGR		0	030	4	3B		0		0						WE	3B	
13	TQ14582940	BEN		0	025	4	3B		0		0						WE	3B	
14	TQ14102920	STB		030	030	4	3B		0		0						WE	3B	
15	TQ14302920	PLO		030	055	3	3A		0		0						WE	3A	
16	TQ14502920	PGR		0	030	4	3B		0		0						WE	3B	
17	TQ14672915	PGR		0	028	4	3B		0		0						WE	3B	
18	TQ13902910	STB		0	025	4	3B		0		0						WE	3B	
19	TQ14302910	PLO		025	025	4	3B		0		0						WE	3B	
20	TQ14402910	PLO		030	030	4	3B		0		0						WE	3B	
21	TQ14102900	STB		0	030	4	3B		0		0						WE	3B	
22	TQ14302900	PLO		028	028	4	3B		0		0						WE	3B	
23	TQ14402900	PLO		025	025	4	3B		0		0						WE	3B	
24	TQ14502900	PLO		030	055	3	3A		0		0						WE	3A	
25	TQ14602900	PGR		0	027	4	3B		0		0						WE	3B	
26	TQ13902890	PGR		0	028	4	3B		0		0						WE	3B	
27	TQ14402890	PLO		025	025	4	3B		0		0						WE	3B	
28	TQ14102882	STB		0	030	4	3B		0		0						WE	3B	
29	TQ14302880	PLO		028	028	4	3B		0		0						WE	3B	
30	TQ14502880	PLO		025	025	4	3B		0		0						WE	3B	
31	TQ15002920	PGR		0	028	4	3B		0		0						WE	3B	
32	TQ14902910	PGR		0	037	4	3B		0		0						WE	3B	
33	TQ15002910	PGR		020	025	4	3B		0		0						WE	3B	
34	TQ15082908	PGR		0	025	4	3B		0		0						WE	3B	

PREVIOUS SURVEY 4205/22/95

				MOTTLES			PED			STONES			STRUCT/	SUBS			
SAMPLE	DEPTH	TEXTURE	COLOUR	COL	ABUN	CONT	COL	GLEY	2	6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC
1	0 30	mcl	10YR42 00	10YR56 00	C			Y	0	0		0						
	30 40	hcl	10YR42 00	10YR56 00	C		00MN00 00	Y	0	0		0		M				
	40 60	c	10YR53 00	10YR56 00	M		00MN00 00	Y	0	0		0		P				Y
	60 80	c	25Y 51 00	75YR56 00	M		00MN00 00	Y	0	0		0		P				Y
1P	0 26	mcl	25Y 42 00	10YR56 00	C			Y	0	0	HR	5						
	26 70	c	10YR62 00	10YR68 71	M		00MN00 00	Y	0	0		0	WKCAB	FM	P	Y		Y
2	0 25	hcl	10YR53 00	10YR58 00	F				0	0	HR	5						
	25 35	c	10YR62 63	10YR68 71	M			Y	0	0	MSST	5		M				Y
	35 50	scl	10YR63 00	10YR68 71	M		00MN00 00	Y	0	0	MSST	10		M				Y
	50 80	c	10YR62 00	10YR68 71	M			Y	0	0	MSST	5		M				Y
2P	0 29	mcl	10YR42 00						0	0	HR	5						
	29 50	hcl	25Y 63 61	10YR68 00	C		00MN00 00	Y	0	0	MSST	20	MDCSAB	FR	M			
	50 71	c	25Y 63 62	10YR58 00	M		00MN00 00	Y	0	0	MSST	5	WKCSAB	FR	M	Y		Y
	71 90	hcl	25Y 72 73	10YR68 00	M		00FE00 00	Y	0	0	MSST	20	WKCSAB	FR	M	Y		Y
3	0 30	mcl	10YR43 00	00MN00 00	F				0	0	HR	2						
	30 47	hcl	10YR42 44	10YR58 61	C			Y	0	0		0		M				
	47 65	c	10YR62 00	10YR68 71	M		00MN00 00	Y	0	0	MSST	5		M				Y
	65 80	hcl	10YR63 00	10YR68 71	M			Y	0	0	MSST	5		M				Y
3P	0 30	mcl	10YR52 00	10YR58 00	C			Y	0	0		0						
	30 60	c	25Y 61 00	10YR58 00	M		00MN00 00	Y	0	0	MSST	2	WKCAB	FM	P	Y		Y
4	0 26	mcl	10YR53 00	10YR58 00	C			Y	0	0	HR	2						
	26 66	hcl	10YR63 00	10YR68 71	M		00MN00 00	Y	0	0	MSST	5		M				
	66 85	c	10YR62 00	10YR68 71	M		00MN00 00	Y	0	0	MSST	5		M				Y
5	0 25	hcl	10YR42 00	10YR56 00	F				0	0		0						
	25 70	c	25Y 52 00	10YR58 00	M		00MN00 00	Y	0	0		0		P				Y
6	0 24	hcl	10YR52 53	10YR58 00	C			Y	0	0	HR	2						
	24 60	c	25Y 62 00	10YR68 00	M		00MN00 00	Y	0	0		0		P				Y
7	0 29	hcl	10YR52 00						0	0	HR	5						
	29 42	hcl	10YR52 53	10YR58 00	C		00MN00 00	Y	0	0	MSST	5		M				
	42 70	c	10YR62 63	10YR68 71	M		00MN00 00	Y	0	0		0		P				Y
8	0 26	mcl	10YR53 00	10YR58 00	C			Y	0	0	HR	5						
	26 55	c	10YR62 00	10YR68 71	M			Y	0	0	MSST	5		P				Y
9	0 30	hcl	10YR42 00	10YR56 00	C			Y	0	0		0						
	30 50	c	25Y 51 00	10YR56 00	M		00MN00 00	Y	0	0		0		P				Y
	50 70	c	25Y 61 00	75YR56 00	M			Y	0	0		0		P				Y
10	0 25	hcl	10YR42 00	10YR66 00	F				0	0	HR	10						
	25 70	c	05Y 61 00	10YR68 00	M		00MN00 00	Y	0	0		0		P				Y

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
11	0 29	mcl	10YR52 53	00MN00	00	C			0	0		0						
	29 40	h l	10YR52 00	10YR58	61	C	00MN00	00 Y	0	0		0		M				
	40 70	c	10YR62 00	10YR68	71	M		Y	0	0	MSST	5		P			Y	
12	0 30	hcl	10YR52 53	10YR68	00	C		Y	0	0		0						
	30 65	c	10YR62 00	10YR68	71	M		Y	0	0	MSST	5		P			Y	
13	0 25	hcl	10YR52 53	10YR58	00	C		Y	0	0	HR	2						
	25 60	c	10YR62 63	10YR68	71	M		Y	0	0		0		P			Y	
14	0 30	hcl	10YR42 00						0	0		0						
	30 70	c	25Y 51 00	75YR56	00	M		Y	0	0		0		P			Y	
15	0 30	mcl	10YR42 00						0	0		0						
	30 55	scl	25Y 61 00	10YR68	00	M	00MN00	00 Y	0	0		0		M				
	55 90	c	05Y 62 61	10YR68	00	M	00MN00	00 Y	0	0		0		P			Y	
16	0 30	mcl	25Y 42 00	10YR46	00	C	00MN00	00 Y	0	0		0						
	30 70	c	05Y 62 61	75YR58	00	M	00MN00	00 Y	0	0		0		P			Y	
	70 71	c	00ZZ00 00					Y	0	0		0		P			Y	
17	0 28	hcl	25Y 42 00	10YR56	00	C		Y	0	0		0						
	28 60	c	05Y 62 00	10YR58	00	M	00MN00	00 Y	0	0		0		P			Y	
18	0 25	hcl	10YR42 00	10YR56	00	C		Y	0	0		0						
	25 50	c	25Y 61 00	10YR58	00	M		Y	0	0		0		P			Y	
	50 70	c	25Y 61 00	10YR58	00	M	00MN00	00 Y	0	0		0		P			Y	
19	0 25	h l	10YR42 00						0	0		0						
	25 60	c	25Y 52 51	10YR58	00	M	00MN00	00 Y	0	0		0		P			Y	
20	0 30	mcl	10YR42 00						0	0		0						
	30 70	c	25Y 52 00	75YR58	00	M	00MN00	00 Y	0	0		0		P			Y	
21	0 30	hcl	10YR42 00	10YR56	00	C		Y	0	0		0						
	30 70	c	25Y 61 00	75YR56	00	M		Y	0	0		0		P			Y	
22	0 28	mcl	10YR42 00						0	0		0						
	28 70	c	05GY71 00	10YR68	00	M	00MN00	00 Y	0	0		0		P			Y	
23	0 25	m l	10YR42 00						0	0		0						
	25 50	c	10YR51 00	10YR58	00	M		Y	0	0		0		P			Y	
24	0 30	mcl	10YR42 00						0	0	HR	5						
	30 55	hcl	25Y 62 61	10YR58	00	C	00MN00	00 Y	0	0	MSST	20		M				
	55 80	c	05GY71 00	10YR58	00	M		Y	0	0		0		P			Y	
25	0 27	mcl	10YR42 43	10YR58	61	C		Y	0	0		0						
	27 65		10YR52 00	10YR68	71	M		Y	0	0		0		P			Y	

				MOTTLES			PED		STONES			STRUCT/	SUBS			
MPLE	DEPTH	TEXTURE	COLOUR	COL	ABUN	CONT	COL	GLEY	2	6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC
26	0 28	hcl	10YR53 00	10YR56 00	M			Y	0	0		0						
	28 70	c	25Y 61 00	10YR58 00	M			Y	0	0		0		P			Y	
27	0 25	mcl	10YR42 00						0	0	HR	4						
	25 70	c	05Y 71 72	10YR68 00	M		00MN00	00 Y	0	0		0		P			Y	
28	0 30	hcl	10YR42 00	10YR56 00	C			Y	0	0		0						
	30 50	c	25Y 51 52	10YR58 00	M		00MN00	00 Y	0	0		0		P			Y	
	50 70	c	25Y 61 00	75YR56 00	M			Y	0	0		0		P			Y	
29	0 28	mcl	25Y 42 52						1	0	HR	5						
	28 75	c	25Y 52 00	10YR66 00	C		00MN00	00 Y	0	0	HR	5		P			Y	
30	0 25	mcl	10YR42 00						0	0	HR	5						
	25 40	c	25Y 71 00	10YR58 00	M		00MN00	00 Y	0	0	HR	5		P			Y	
	40 70	c	05Y 62 00	10YR68 00	M		00MN00	00 Y	0	0		0		P			Y	
31	0 28	mcl	10YR43 00	10YR58 00	C			Y	0	0		0						
	28 70	c	25Y 62 00	10YR68 00	M		00MN00	00 Y	0	0		0		P			Y	
32	0 25	mcl	10YR42 00	10YR58 61	C			Y	0	0		0						
	25 37	hcl	10YR53 00	10YR56 00	C			Y	0	0		0		M				
	37 70	c	10YR62 00	10YR68 71	M		00MN00	00 Y	0	0		0		P			Y	
33	0 20	mcl	10YR42 00	10YR58 00	F				0	0		0						
	20 25	mcl	10YR53 00	10YR58 00	C			Y	0	0		0		M				
	25 70	c	25Y 62 00	10YR76 00	M		00MN00	00 Y	0	0		0		P			Y	
34	0 25	mcl	10YR42 00	10YR58 00	C			Y	0	0		0						
	25 70	c	10YR62 00	75YR68 71	M		00MN00	00 Y	0	0		0		P			Y	