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TUNBRIDGE WELLS LOCAL PLAN

SITE 7 Land East of Church Road
Paddock Wood Kent

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SITE 7 - LAND EAST OF CHURCH ROAD, PADDOCK WOOD, KENT

1 INTRODUCTION

1 1 In June 1992 an Agricultural Land Classification (ALC) was carried out on 19 1 hectares of land at Paddock Wood Kent ADAS was commissioned by MAFF to determine the land quality affected by the proposal to include this site as part of the Tunbridge Wells Local Plan

1 2 The survey work was carried out by members of the Resource Planning Team within the Guildford Statutory Group at a detailed level of approximately 1 boring per hectare A total of 19 borings and two soil pits were described using MAFF s revised guidelines and criteria for grading the quality of agricultural land (MAFF (1988)) These guidelines provide a framework for classifying land according to the extent to which its physical and chemical characteristics impose long term limitations on its agricultural use

1 3 The distribution of the grades is shown on the attached ALC map and the area and extent is given in the table below The map has been drawn at a scale of 1 5 000 Any enlargement of this would be misleading

Distribution of Grades and Subgrades

Grade	Area (ha)	% of total agricultural area
3a	5 98	32
3b	12 65	68
Total Agricultural Area	18 63	100
Urban	0 07	
Non Agricultural	0 40	
Total Area of Site	19 10	

1 4 Grades 3a and 3b have been mapped at this site The higher quality land is placed in subgrade 3a as a result of minor soil wetness problems causing the main physical limitation Subgrade 3b soils experience a significant wetness problem as a result of shallow slowly permeable layers

2 PHYSICAL FACTORS AFFECTING LAND QUALITY

Relief

2 1 The site varies in altitude between approximately 17 and 20 m A O D The land is generally flat or sloping gently south and south west Nowhere on the site does gradient or altitude represent a significant limitation to agricultural land quality

Climate

2 2 Estimates of climatic variables were obtained for a representative location in the survey area by interpolation from a 5 km grid database (Met Office 1989)

Climatic Interpolation

Grid Reference	TQ 679 450
Altitude (m A O D)	20
Accumulated Temperature (days Jan-June)	191
Average Annual Rainfall (mm)	688
Field Capacity Days	142
Moisture Deficit Wheat (mm)	123
Moisture Deficit Potatoes (mm)	120

2 3 Climatic factors alone place no limitation on agricultural land quality but do affect the interactive limitations between soil and climate namely soil wetness and droughtiness

Geology and Soils

2 4 British Geological Survey Sheet 287 Sevenoaks (1971) shows the site to be underlain by Recent Brickearth deposits towards the west of the site and Cretaceous Wealden Sandstone towards the east

2 5 Soil Survey of England and Wales Sheet TQ 64 Paddock Wood (1977) shows the site to comprise two soil mapping units Towards the west of the site soils of the Park Gate Series have been mapped These are described as Typical argillic gleys with grey and ochreous mottled subsoils They are affected by seasonally high groundwater (SSEW 1984) The Wickham Series has been mapped towards the east of the site these soils are described as Typical stagnogleys fine loamy or fine silty over clayey subsoils (SSEW 1984)

2 6 Detailed field examination identifies two mapping units similar to these described above

3 AGRICULTURAL LAND CLASSIFICATION

3 1 The ALC grading of the site is primarily determined by the interaction between climate and soil factors namely soil wetness and droughtiness Soil wetness is the overriding limitation to land quality at this site

3 2 Grade 3a

Land of this quality is mapped towards the north west corner of the site Topsoils comprise non-calcareous medium silty clay loam or medium clay loam overlying subsoils of a similar texture becoming heavier with depth eventually passing into lower subsoils of clay or silty clay Profiles are typically gleyed below the topsoils and slowly permeable between 40 and 50 cm thus placing these soils into wetness class III Grade 3a land at this locality is therefore limited by minor wetness limitations Land within this grade is capable of consistently producing moderate to high yields of a narrow range of crops or moderate yields of a wide range of crops

3 3 Grade 3b

Land of this quality has been mapped towards the east of the site Profiles typically comprise deep poorly drained soils that are limited by wetness and workability Medium silty clay loam heavy silty clay loam or heavy clay loam topsoils typically rest over gleyed and slowly permeable heavy silty clay loam heavy clay loam or clay between 24 and 32 cm wetness class IV is assigned to such profiles

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Resource Planning Team
Guildford Statutory Group
ADAS

SOURCES OF REFERENCE

BRITISH GEOLOGICAL SURVEY (1971) Sheet 287 Sevenoaks

MAFF (1988) Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land

METEOROLOGICAL OFFICE (1989) Climatological datasets for Agricultural Land Classification

SOIL SURVEY OF ENGLAND AND WALES (1977) Sheet TQ 64 Paddock Wood

SOIL SURVEY OF ENGLAND AND WALES (1984) Soils and their use in South East England Bulletin 15

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 32	zl	25Y 43 00						2	0	MSST	2							
	32 40	mzcl	25Y 42 00	10YR58 68	C		25Y 73 00	Y	0	0		0		M					
	40 55	mcl	25Y 72 00	75YR58 00	C			Y	0	0		0		M					
	55 75	hcl	10YR71 72	10YR58 00	M			Y	0	0		0		P			Y		
	75 120	hcl	10YR71 72	10YR58 00	M			Y	0	0		0		P			Y		
2	0 29	mzcl	25Y 43 00						0	0		0							
	29 40	mzcl	25Y 42 52	10YR66 68	F			Y	0	0		0		M					
	40 50	hcl	10YR72 00	10YR68 78	C			Y	0	0	MSST	5		P			Y		
	50 120	zc	05Y 71 00	10YR68 00	M			Y	0	0	MSST	2		P			Y		
2P	0 28	mcl	25Y 43 00						0	0		0							
	28 56	mcl	25Y 42 00	10YR58 68	C		25Y 73 00	Y	0	0		0	Md CSB Fm	M					
	56 64	hzcl	25Y 72 00	75YR58 00	C			Y	0	0		0	Wk CAB Fm	P			Y		
	64 80	hzcl	10YR71 72	10YR58 00	M			Y	0	0		0	Wk CAB Fm	P			Y		zc 80cm +
3	0 29	fszl	25Y 43 00						0	0		0							
	29 50	mzcl	25Y 53 54	25Y 76 00	F		25Y 73 74	Y	0	0		0		M					
	50 120	h l	25Y 53 00	25Y 76 78	C		25Y 72 73	Y	0	0		0		P			Y		FEW Mn CONCS
4	0 32	mzcl	25Y 43 44						0	0		0							
	32 45	mzcl	25Y 63 00	10YR66 00	F		25Y 72 73	Y	0	0		0		M					
	45 80	hzcl	05Y 71 00	75YR68 00	M			Y	0	0		0		P			Y		
	80 120	c	10YR58 68	10YR58 68	M		00N 70 00	Y	0	0		0		P			Y		
5	0 27	mzcl	25Y 43 00						0	0		0							
	27 31	mzcl	25Y 52 00	10YR58 00	F		10YR72 00	Y	0	0		0		M					
	31 52	hcl	05Y 71 00	10YR58 78	C			Y	0	0	HR	5		P			Y		COMMON Mn / Fe CONC
	52 120	zc	00N 70 00	10YR68 00	M			Y	0	0		0		P			Y		
6	0 25	hzcl	05Y 43 00						0	0		0							
	25 35	hzcl	25Y 52 00	75Y 58 00	F		10YR71 72	Y	0	0		0		P			Y		
	35 47	hcl	05Y 71 00	75YR58 68	M			Y	0	0		0		P			Y		COMMON Mn / Fe CONC
	47 70	c	05Y 71 00	75YR58 68	M			Y	0	0		0		P			Y		
	70 120	scl	05Y 71 00	75YR58 68	M			Y	0	0	MSST	20		P			Y		
7	0 28	hcl	25Y 43 00						0	0		0							
	28 37	hcl	25Y 52 53						0	0		0		M					
	37 60	hcl	05Y 71 00	10YR58 68	M			Y	0	0		0		P			Y		COMMON Mn / Fe CONC
	60 70	hcl	05Y 71 00	10YR58 68	M			Y	0	0		0		P			Y		
	70 120	zc	05Y 61 00	75YR58 68	M			Y	0	0		0		P			Y		
8	0 28	mcl	25Y 43 00						0	0		0							
	28 43	mcl	25Y 63 00	10YR58 68	C		25Y 72 00	Y	0	0		0		M					
	43 120	c	05Y 71 72	10YR58 68	C			Y	0	0		0		P			Y		COMMON M / Fe CONC
9	0 29	hcl	25Y 43 00						2	0	HR	2							
	29 37	hcl	25Y 52 00	10YR66 00	F		25Y 62 72	Y	0	0		0		P			Y		
	37 50	c	25Y 63 00	10YR58 68	C		25Y 73 72	Y	0	0		0		P			Y		COMMON Mn CONCS
	50 120	c	00N 70 00	10YR58 00	C			Y	0	0	HR	2		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	
10	0 29	hcl	25Y 43 00						0	0		0							
	29 120	zc	05Y 71 00	10YR58 68	M			Y	0	0		0		P			Y		
11	0 27	h cl	25Y 43 00						0	0		0							
	27 60	zc	25Y 53 63	25Y 68 00	F		05Y 72 73	Y	0	0		0		P			Y		
	60 120	c	05Y 71 00	10YR66 68	M			Y	0	0		0		P			Y		
12	0 28	mzcl	10YR43 52						0	0		0							
	28 35	hzcl	05Y 53 00	10YR56 00	F		25Y 63 73	Y	0	0		0		P			Y		
	35 50	hzcl	05Y 72 00	10YR56 66	M			Y	0	0		0		P			Y		
	50 120	c	05Y 71 00	75YR68 00	M			Y	0	0		0		P			Y		
12P	0 27	mzcl	10YR43 00						0	0		0							
	27 33	hzcl	25Y 53 00	10YR56 00	F		25Y 63 00	Y	0	0		0	Md CAB Fm	P			Y		
	33 48	h cl	05Y 72 00	10YR66 56	M			Y	0	0		0	MdVCAB Fm	P	Y		Y		c 48cm +
13	0 30	hzcl	25YZ43 00						0	0		0							
	30 42	c	05Y 71 00	75YR58 00	C			Y	0	0		0		P			Y		FEW Mn / Fe CONCS
	42 120	c	05Y 61 00	10YR66 00	M		00N 70 00	Y	0	0		0		P			Y		
14	0 32	hzcl	10YR43 00						0	0		0							
	32 47	h cl	05Y 71 00	10YR58 00	C			Y	0	0		0		P			Y		COMMON Mn CONCS
	47 75	zc	05Y 71 00	10YR58 00	M			Y	0	0		0		P			Y		MANY Mn / FE CONCS
	75 120	zc	00N 70 00	10YR66 68	M			Y	0	0		0		P			Y		
16	0 26	mzcl	25Y 43 00						0	0		0							
	26 39	mzcl	25Y 53 00	10YR66 00	F		25Y 73 00	Y	0	0		0		M					
	39 50	hzcl	05Y 71 00	10YR66 00	C			Y	0	0		0		P			Y		
	50 120	zc	05Y 61 00	10YR66 76	M			Y	0	0		0		P			Y		
17	0 26	hzcl	05Y 43 00						0	0		0							
	26 120	c	05Y 71 00	75YR58 00	M			Y	0	0		0		P			Y		
18	0 29	mzcl	25Y 43 00						0	0		0							
	29 38	mzcl	25Y 53 52	10YR66 00	F		25Y 63 00	Y	0	0		0		M					
	38 55	h l	05Y 72 00	75YR68 00	M			Y	0	0		0		P			Y		
	55 120	c	05Y 72 00	75YR58 00	M			Y	0	0		0		P			Y		
19	0 25	hcl	25Y 43 00						0	0		0							
	25 34	hcl	25Y 53 00						0	0		0		M					
	34 120	z	05Y 71 00	75YR68 00	M			Y	0	0		0		P			Y		
20	0 24	hzcl	25Y 43 00						0	0		0							
	24 38	zc	05Y 72 00	10YR76 78	M			Y	0	0		0		P			Y		
	38 120	zc	05Y 71 00	10YR68 66	M			Y	0	0		0		P			Y		

SAMPLE			ASPECT				WETNESS	WHEAT		POTS			M REL	EROSN	FROST	CHEM	ALC	
NO	GRID REF	USE		GRDNT	GLEY	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	DIST	LIMIT		COMMENTS
1	TQ67804520	WHT	W		032	055	3	3A	128	5	128	8	3A				WD	3A	
2	TQ67904520	WHT	W		029	050	3	3A	134	11	109	11	3A				WD	3A	
2P	TQ67904520	WHT	W		028	056	3	3A	106	17	112	8	3A				WE	3A	
3	TQ67704510	WHT			029	050	3	2	142	19	124	4	2				WD	2	
4	TQ67804510	WHT	S		032	045	3	3A	135	12	113	7	2				WE	3A	
5	TQ67904510	WHT	S		027	031	4	3B	108	15	104	16	3A				WE	3B	
6	TQ68004510	WHT	S		025	025	4	3B	102	21	104	16	3A				WE	3B	
7	TQ67704500	WHT	S		037	037	4	3B	129	6	104	16	3A				WE	3B	
8	TQ67804500	WHT	S		028	043	3	3A	133	10	110	10	3A				WD	3A	BORDERLINE DR
9	TQ67904500	WHT	S		029	037	4	3B	105	18	101	19	3A				WE	3B	
10	TQ68004500	WHT	S		029	029	4	3B	105	18	101	19	3A				WE	3B	
11	TQ67704490	GRS	S		027	027	4	3B	128	5	103	17	3A				WE	3B	
12	TQ67804490	GRS	S		028	028	4	3B	128	5	104	16	3A				WE	3B	
12P	TQ67804490	GRS	W		033	033	4	3B	128	5	103	17	3A				WE	3B	
13	TQ67904490	WHT	S		030	030	4	3B	109	14	105	15	3A				WE	3B	
14	TQ68004490	WHT	S		032	032	4	3B	110	13	106	14	3A				WE	3B	
16	TQ67804480	WHT	SW		039	039	3	3A	133	10	109	11	3A				WE	3A	
17	TQ67904480	WHT	SW		026	026	4	3B	127	4	102	18	3A				WE	3B	
18	TQ68004480	WHT	S		029	038	4	3B	133	10	110	10	3A				WE	3B	
19	TQ67804470	WHT	W		034	034	4	3B	124	1	99	21	3A				WE	3B	
20	TQ67904470	WHT	N		024	024	4	3B	126	3	101	19	3A				WE	3B	