READING AGRICULTURAL CONSULTANTS

February 2020

Wessex Solar Energy
Agricultural Land Classification and Soil Resources

at

Land west of Blackberry Lane, Cosheston, Pembrokeshire

Beechwood Court,
Long Toll, Woodcote,
RG8 0RR

01491 684 233
readingagricultural.co.uk

1 Introduction

1.1 Reading Agricultural Consultants Ltd (RAC) is instructed by Wessex Solar Energy to investigate the Agricultural Land Classification (ALC) and soil resources of land west of Blackberry Lane, Cosheston, Pembrokeshire by means of a detailed survey of soil and site characteristics.

1.2 Guidance for assessing the quality of agricultural land in England and Wales is set out in the Ministry of Agriculture, Fisheries and Food (MAFF) revised guidelines and criteria for grading the quality of agricultural land (1988)[1].

1.3 Agricultural land in England and Wales is graded between 1 and 5, depending on the extent to which physical or chemical characteristics impose long-term limitations on agricultural use. The principal physical factors influencing grading are climate, site and soil which, together with interactions between them, form the basis for classifying land into one of the five grades.

1.4 Grade 1 land is excellent quality agricultural land with very minor or no limitations to agricultural use, and Grade 5 is very poor quality land, with severe limitations due to adverse soil, relief, climate or a combination of these. Grade 3 land is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Land which is classified as Grades 1, 2 and 3a is defined in paragraph 3.54 of Planning Policy Wales[2] as the best and most versatile agricultural land, which should be conserved as a finite resource for the future. Paragraph 3.55 goes on the state that considerable weight should be given to protecting BMV land from development because of its special importance, and that it should only be developed if there is an overriding need for the development and either previously developed land or land in lower agricultural grades is unavailable, or if available lower grade land has a recognised environmental value.

1.5 Natural Resources Wales published a Predictive Agricultural Land Classification Map in November 2017. The map is designed on a 50m grid. Criteria including climate, slope, soil wetness, droughtiness and stone contents have been considered and used to determine the most likely limitation to agricultural land quality within each grid square.

---

[1] **MAFF (1988).** *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications.

[2] **Welsh Government (2018).** Planning Policy Wales, Edition 10. https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf

1.6 The Predictive ALC Map shows the site west of Blackberry Land to be mostly Grade 2, with some Subgrade 3a and 3b.

2 General features and land form

2.1 The site extends to approximately 37ha of grassland and is bounded to the south by the A477, to the east by Blackberry Lane and to the west by agricultural land. Woodland and further agricultural land border the site to the north.

2.2 Topography across the site is dominantly low-lying and flat in central areas, at approximately 26m above Ordnance Datum (AOD). In the south, the land slopes gently towards the A477.

2.3 A shallow depression runs east-west across the northern part of the site, with land sloping south from the northern borders of the site. These slopes are gentle in the east and more pronounced to the west. There are no site or gradient limitations to agricultural land quality.

Agro-climatic conditions

2.4 Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5km grid point data set at a representative altitude of 26m AOD, and are given in Table 1. The site has a warm, very wet climate with moderate to moderately small crop moisture deficits. The number of Field Capacity Days is considered to be large and is unfavourable for providing opportunities for agricultural field work. There are, however, no overriding climatic limitations to agricultural land quality.

Table 1: Local agro-climatic conditions

Parameter	Value
Average Annual Rainfall	1,101mm
Accumulated Temperatures >0°C	1,541 day°
Field Capacity Days	225 days
Average Moisture Deficit, wheat	83mm
Average Moisture Deficit, potatoes	71mm

Soil parent material and soil type

2.5 The principal underlying geological units mapped by the British Geological Survey[3] across the site are:

- the Avon Group across the north, which comprises interbedded grey mudstone and thin to medium bedded limestone;
- undifferentiated Black Rock Subgroup and Gully Oolite Formation across central areas, which comprises bedded limestone and mudstone with variable composition and thickness; and
- the Pembroke Limestone Group across the south, which comprises beds of limestone and mudstone with some fluvial sandstone.

2.6 These formations are mapped as bands running in an east to west orientation.

2.7 Superficial Till deposits are mapped across a small area to the north east. No other superficial deposits are recorded.

2.8 The Soil Survey of England and Wales soil association mapping[4] (1:250,000 scale) shows the East Keswick 3 association across most of the site, with the Brickfield 2 association mapped across the north.

2.9 The East Keswick 3 association is characterised by deep fine loamy soils with some shallower soils over limestone. Soils are well drained and typically classed as Wetness Class (WC) I[5].

2.10 Brickfield 2 association soils are characterised by slowly permeable fine loamy soils. Soils are commonly seasonally waterlogged, typically assessed as WC IV.

3 Agricultural land quality

Soil survey methods

3.1 In total, 37 soil profiles were examined using an Edelman (Dutch) auger at an observation density of approximately one per hectare of agricultural land in accordance with the established recommendations for ALC surveys. Two observation pits were also excavated to examine subsoil

[3] **British Geological Survey (2020).** *Geology of Britain viewer*, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

[4] **Soil Survey of England and Wales (1984).** *Soils of Wales* (1:250,000), Sheet 2

[5] **Rudeforth et al (1984).** *Soils and their Use in Wales,* Soil Survey of England and Wales, Bulletin No.11

structures. The locations of observations are indicated on Figure RAC8665-1. At each observation point the following characteristics were assessed for each soil horizon up to a maximum of 120 cm or any impenetrable layer:

- soil texture;
- significant stoniness;
- colour (including localised mottling);
- consistency;
- structural condition;
- free carbonate; and
- depth.

3.2 Topsoil samples from both pits were submitted for laboratory determination of pH, organic matter content and nutrient contents (P, K, Mg). Topsoil samples were also submitted from Boreholes 5 and 26 for analysis of nutrient content only. Results are presented in Appendix 1.

3.3 Soil Wetness Class (WC) was inferred from the matrix colour, presence or absence of, and depth to, greyish and ochreous gley mottling, and slowly permeable subsoil layers at least 15 cm thick, in relation to the number of Field Capacity Days at the location.

3.4 Soil droughtiness was investigated by the calculation of moisture balance equations (given in Appendix 2). Crop-adjusted Available Profile Water (AP) is estimated from texture, stoniness and depth, and then compared to a calculated moisture deficit (MD) for the standard crops wheat and potatoes. The MD is a function of potential evapotranspiration and rainfall. Grading of the land can be affected if the AP is insufficient to balance the MD and droughtiness occurs.

Agricultural land classification and site limitations

3.5 Assessment of land quality has been carried out according to the MAFF revised ALC guidelines (1988)[1]. Soil profiles have been described according to Hodgson (1997)[6] which is the recognised source for describing soil profiles and characteristics according to the revised ALC guidelines.

3.6 There are two main soil types present at the site. Photographs of each type are included in Appendix 3.

[6] **Hodgson, J. M. (Ed.) (1997).** *Soil survey field handbook.* Soil Survey Technical Monograph No. 5, Silsoe.

3.7 The first soil type is present within the north of the site. Topsoil is greyish brown to dark greyish brown (10YR4/1 or 10YR4/2 in the Munsell soil colour charts[7]) medium clay loam. Topsoils are stoneless, with common mottles frequently observed. The topsoil has a medium subangular blocky structure and was largely saturated at the time of survey.

3.8 The subsoil is a grey (10YR6/1) stoneless clay. Many distinct ochreous mottles were observed indicating prolonged periods of wetness. Consistency is very firm with a massive structure impeding drainage through the soil profile. Clays continue to depth with no change in characteristics between the upper and lower subsoil.

3.9 Soils with these characteristics are assessed as WC IV and limited to Subgrade 3b by soil wetness. Photos of this soil type from Pit 1 can be seen in Appendix 3.

3.10 The second soil type is dominant across the remainder of the site. Topsoil is dark greyish brown (10YR4/2) medium clay loam. The topsoils are stoneless to very slightly stony, at 0-5%. They are friable and have a fine to medium subangular blocky structure.

3.11 The upper subsoil comprises brown (7.5YR4/3, 7.5YR4/4, 10YR4/3, 10YR4/4) predominantly medium clay loam, with sandy silt loam, heavy clay loam or clay observed irregularly. The upper subsoils are stoneless to slightly stony, at 0-10%. They are friable with a medium subangular blocky structure. Recordings of ochreous mottling and manganiferous nodules vary from commonly observed to absent.

3.12 The lower subsoil is brown to dark yellowish brown (7.5YR4/4, 10YR4/4, 10YR4/6) and is typically medium clay loam. Some lower subsoils are of sandy silt loam, heavy clay loam or clay, matching the upper subsoils. The lower subsoil is stoneless to moderately stony, at 0- 20%. Mottling is consistent with observations in the upper subsoil.

3.13 Where soils do not contain gleyed upper subsoil, they are assessed as WC I and limited to Grade 2 by soil wetness. Where soil profiles have gleyed upper subsoils they are assessed as WC II and are further restricted to Subgrade 3a by soil wetness. Gleyed upper subsoils within these profiles are mottled with either greyish (7.5YR4/2, 10YR4/2, 10YR6/1) or reddish (5YR4/3) matrix colours. Photos of this soil type from Pit 2 can be seen in Appendix 3.

[7] **Munsell Color (2009).** *Munsell Soil Color Book*. Grand Rapids, MI, USA

3.14 A few points in the north-east of the site have been downgraded to Subgrade 3a or 3b based on a microrelief limitation which can affect the safe use of machinery and cause localised areas of prolonged wetness.

3.15 Observation 32 has been assessed as Subgrade 3a but is an isolated observation and does not make a coherent mapping unit on its own. It has therefore has been incorporated into the surrounding Grade 2 map unit.

3.16 All of the agricultural land at the site is assessed as Grade 2, Subgrade 3a or Subgrade 3b, as shown in Figure RAC8665-2 and set out below in Table 2.

Table 2: ALC areas

Grade	Description	Hectares	% of agricultural land
Grade 2	Very good quality	23.5	64
Subgrade 3a	Good quality	7	19
Subgrade 3b	Moderate quality	6.5	17
	Total Agricultural	37	100

Appendix 1: Laboratory Data

Determinand	Pit 1	Pit 2	Units
Sand 2.00-0.063 mm	37	39	% w/w
Silt 0.063-0.002 mm	41	37	% w/w
Clay <0.002 mm	22	24	% w/w
Organic Matter	4.9	2.9	% w/w
Texture	MCL	MCL	

Determinand	Pit 1	Pit 2	Units
Soil pH	6.3	6.1	
Phosphorus (P)	13.4	5.4	Mg/l (av)
Potassium (K)	106	52.4	Mg/l (av)
Magnesium (Mg)	181	78.6	Mg/l (av)

Determinand	Pit 1	Pit 2	Units
Phosphorus (P)	1	0	ADAS Index
Potassium (K)	1	0	ADAS Index
Magnesium (Mg)	4	2	ADAS Index

Determinand	BH5	BH26	Units
Soil pH	6.1	6.5	
Phosphorus (P)	5.2	10.2	Mg/l (av)
Potassium (K)	50	117	Mg/l (av)
Magnesium (Mg)	70	111	Mg/l (av)

Determinand	BH5	BH26	Units
Phosphorus (P)	0	1	ADAS Index
Potassium (K)	0	1	ADAS Index
Magnesium (Mg)	3	3	ADAS Index

Appendix 2: Soil Profile Summaries and Droughtiness Calculations

Wetness / workability limitations are determined according to the methodology given in Appendix 3 of the ALC guidelines, MAFF 1988

Droughtiness calculations are made according to the methodology given in Appendix 4 of the ALC guidelines, MAFF 1988.

Grades are shown for drought, wetness and any other soil or site factors which are relevant. The overall Grade is set by the most limiting factor and shown on the right.

Stone types		
%	TAv	EAv
hard	1	0.5

Climate Data	
MDwheat	83
MDpotato	71
FCD	225

Wetness Class Guidelines	*II*	*III*	*IV*	*V*
SPL within 80cm, gleying within 40cm	N/A	>61cm	<61cm	
SPL within 80cm, gleying at 40-70cm	>83cm	<83cm		
No SPL but gleying within 40cm	coarse subsoil	*I*	other cases	*II*

hard flint & pebble

Maximum depth of auger penetration is <u>underlined</u>

Site No.		Depth cm		Texture	$CaCO_3$	Colour	Mottle colour	abund-ance	stone% hard	stone%	Struct-ure	APwheat mm	AP potato mm	Gley	SPL	WC	Wetness grade WE	Final Grade	Limiting Factor(s)
1	T	0	30	mCL		10YR4/2			2			53	53	n	n	*I*	2	**2**	WE
		30	70	mCL		10YR4/3	Fe	few	3			51	62	n	n				
		70	120	mCL		10YR4/3	Fe	few	5			48	0	n	n				
											Total	**151**	**115**						
											MD	68	44						
									Droughtiness grade (DR)			1	1						
2	T	0	28	mCL		10YR4/2			2			39	39	n	n	*I*	2	**2**	WE
		28	70	mCL		10YR4/3	Femn	com	3			25	25	n	n				
		70	120	mCL		10YR4/4	Femn	com	3			31	28	n	n				
											Total	**122**	**91**						
											MD	39	20						
									Droughtiness grade(DR)			1	1						
3	T	0	32	mCL		10YR4/2			2			57	57	n	n	*II*	3a	**3a**	WE
		32	60	mCL		10YR4/2	Fe	com	2			38	44	y	n				
		60	120	mCL		10YR4/3	Fe	com	2			59	16	n	n				
											Total	**153**	**116**						
											MD	70	45						
									Droughtiness grade(DR)			1	1						

Two augers done in corner of field

One over clay, mCL to depth representative

4	T	0	28	mCL	10YR4/2			2		49	49	n	n	*I*	2	**2**	WE
		28	85	SZL	10YR4/3	Fe	few	5		72	68	n	n				
		85	120	SZL	10YR4/3			10		35	0	n	n				
									Total	**157**	**117**						
									MD	74	46						
								Droughtiness grade(DR)		1	1						
5	T	0	35	mCL	10YR4/2			0		63	63	n	n	*I*	2	**2**	WE
		35	80	mCL	7.5YR4/3			5		51	53	n	n				
		80	120	mCL	7.5YR4/3			10		36	0	n	n				
									Total	**151**	**116**						
									MD	68	45						
								Droughtiness grade(DR)		1	1						
6	T	0	30	mCL	10YR4/2			3		52	52	n	n	*II*	3a	**3a**	WE
		30	90	hCL	5YR4/3	Fe	com	7		67	60	y	n				
		90	120	hCL	5YR4/3	Fe	com	15		26	0	y	n				
									Total	**145**	**112**						
									MD	62	41						
								Droughtiness grade(DR)		1	1						
7	T	0	40	mCL	7.5YR4/2			0		72	72	n	n	*I*	2	**2**	WE
		40	92	mCL	7.5YR4/3	mn	few	3		56	47	n	n				
		92	120	LfS	5YR4/1			3		35	0	n	n				
									Total	**164**	**119**						
									MD	81	48						
								Droughtiness grade(DR)		1	1						
8	T	0	28	mCL	7.5YR4/2			2		49	49	n	n	*II*	3a	**3a**	WE
		28	87	mCL	5YR4/3	mn	com	5		69	64	y	n				
		87	120	mCL	5YR4/3	mn	com	7		31	0	y	n				
									Total	**149**	**113**						
									MD	66	42						

							Droughtiness grade(DR)		1	1							
9	T	0	30	mCL	7.5YR4/2			2		53	53	n	n	*I*	2	**2**	WE
		30	120	mCL	7.5YR4/4	Fe	com	3		99	62	n	n				
									Total	**152**	**115**						
									MD	69	44						
							Droughtiness grade(DR)		1	1							
10	T	0	32	mCL	10YR4/2			0		58	58	n	n	*II*	3a	**3a**	WE
		32	70	mCL	7.5YR4/2	Fe	many	5		47	58	y	n				
		70	120	hCL	7.5YR4/3	Fe	many	5		48	0	n	n				
									Total	**152**	**116**						
									MD	69	45						
							Droughtiness grade(DR)		1	1							
11	T	0	33	mCL	10YR4/2			0		59	59	n	n	*II*	3a	**3a**	WE
		33	120	hCL	5YR4/3	Femn	com	3		94	58	y	n				
									Total	**154**	**117**						
									MD	71	46						
							Droughtiness grade(DR)		1	1							
12	T	0	35	mCL	10YR4/2			0		63	63	n	n	*I*	2	**2**	WE
		35	120	mCL	7.5YR4/3	Fe	com	2		92	55	n	n				
									Total	**155**	**118**						
									MD	72	47						
							Droughtiness grade(DR)		1	1							
13/P1	T	0	25	mCL	10YR4/1	Fe	com	0		67	67	y	n	*IV*	3b	**3b**	WE
		25	60	C	10YR6/1	Fe	v.many	0	poor	46	51	y	y				
		60	120	C	10YR6/1	Fe	v.many	0	poor	29	0	y	y				
									Total	**142**	**118**		Pit dug to 60				
									MD	59	47		Firm soil, coarse sub TS, Massive SS				
							Droughtiness grade(DR)		1	1							

14	T	0	38	mCL	10YR4/2	Fe	com	0		68	68	y	n	*IV*	3b	**3b**	WE
		38	120	C	10YR6/1	Fe/red	v.many	0	poor	65	42	y	y				
									Total	**133**	**110**						
									MD	50	39						
								Droughtiness grade(DR)		1	1						
15	T	0	35	SCL	10YR4/2			0		60	60	n	n	*IV*	3b	**3b**	WE
		35	120	C	10YR6/1	Fe/red	v.many	0	poor	69	46	y	y				
									Total	**128**	**105**						
									MD	45	34						
								Droughtiness grade(DR)		1	1						
16	T	0	40	mCL	10YR4/1	Fe	com	0		60	60	y	n	*IV*	3b	**3b**	WE
		40	120	C	10YR6/1	Fe/red	v.many	0	poor	69	46	y	y				
									Total	**128**	**105**						
									MD	45	34						
								Droughtiness grade(DR)		1	1						
17	T	0	28	mCL	7.5YR4/2			3		49	49	n	n	*I*	2	**2**	WE
		28	65	SL	7.5YR4/2			10		45	50	n	n				
		65	90	SL	10YR5/4			15		24	6	n	n				
		90	120	SL	10YR5/4			20		27	0	n	n				
									Total	**144**	**106**						
									MD	61	35						
								Droughtiness grade(DR)		1	1						
18	T	0	30	mCL	10YR4/2			2		53	53	n	n	*I*	2	**2**	WE
		30	76	mCL	7.5YR4/4	Fe	few	5		55	61	n	n				
		76	120	mCL	7.5YR4/4			5		42	0	n	n				
									Total	**150**	**114**						
									MD	67	43						
								Droughtiness grade(DR)		1	1						

Some soils to south and centre of the field deeper over clay

Deeper soils WC III but severely waterlogged- 3b

19	T	0	33	mCL	10YR4/2			2		58	58	n	n	*I*	2	**2**	WE	
		33	76	mCL	7.5YR4/4			3		52	58	n	n					
		76	120	mCL	7.5YR4/4			3		43	0	n	n					
									Total	**153**	**116**							
									MD	70	45							
								Droughtiness grade(DR)		1	1							
20	T	0	25	mCL	10YR4/2	Fe	com	2		44	44	y	n	*II*	3a	**3a**	WE MR	
		25	56	mCL	10YR6/1	Fe	v.many	3		45	48	y	n					
		56	75	SZL	10YR6/1	Fe	v.many	3		20	23	y	n					
		75	120	SZL	10YR6/1	Fe	v.many	15		42	0	y	n					
									Total	**152**	**115**		MR.microrelief			3a		
									MD	69	44		Sloped field undulating					
								Droughtiness grade(DR)		1	1							
21	T	0	63	mCL	10YR4/2	Fe	com	0		111	111	y	n	*II*	3a	**3b**	MR	
		63	70	mCL	10YR4/1	Fe	v.many	2		7	11	y	n					
		70	120	mCL	10YR6/1	Fe	v.many	3		49	0	y	n					
									Total	**167**	**122**		MR.microrelief			3b		
									MD	84	51		Sloped field uneven surface water flowing to depressions					
								Droughtiness grade(DR)		1	1							
22	T	0	28	mCL	10YR4/2	Fe	com	0		50	50	y	n	*IV*	3b	**3b**	WE	
		28	120	C	10YR6/1	Fe	v.many	0	poor	78	55	y	y					
									Total	**128**	**105**		Fully saturated					
									MD	45	34		Standing water					
								Droughtiness grade(DR)		1	1							
23	T	0	35	mCL	10YR4/2	Fe	com	0		111	111	y	n	*III*	3b	**3b**	MR WE	
		35	70	mCL	10YR4/1	Fe	v.many	2		7	11	y	n					
		70	120	hCL	10YR6/1	Fe	v.many	3	poor	49	0	y	y					
									Total	**167**	**122**		MR.microrelief			3b		
									MD	84	51		Sloped field uneven surface water flowing to depressions					

								Droughtiness grade(DR)		1	1							
24	T	0	27	mCL	10YR4/2	Fe	com	0		49	49	y	n	*II*	3a	**3a**	WE	
		27	72	SZL	10YR4/1	Fe	many	2		62	72	y	n					
		72	120	SZL	10YR6/1	Fe	many	20		43	0	y	n					
									Total	**153**	**120**		Stopped in SS-					
									MD	70	49		Wet profile- WCII assessment					
								Droughtiness grade(DR)		1	1							
25	T	0	40	mCL	10YR4/2			0		72	72	n	n	*I*	2	**2**	WE	
		40	73	mCL	10YR4/3			3		38	47	n	n					
		73	120	mCL	10YR4/3			7		44	0	n	n					
									Total	**154**	**119**							
									MD	71	48							
								Droughtiness grade(DR)		1	1							
26	T	0	37	mCL	10YR4/2			0		67	67	n	n	*I*	2	**2**	WE	
		37	120	mCL	7.5YR4/3			7		85	49	n	n					
									Total	**151**	**116**							
									MD	68	45							
								Droughtiness grade(DR)		1	1							
27	T	0	35	mCL	10YR4/2			0		67	67	n	n	*I*	2	**2**	WE	
		35	120	mCL	7.5YR4/3			7		85	49	n	n					
									Total	**151**	**116**							
									MD	68	45							
								Droughtiness grade(DR)		1	1							
28	T	0	31	mCL	10YR4/2			2		55	55	n	n	*I*	2	**2**	WE	
		31	80	mCL	10YR4/6			10		55	57	n	n					
		80	120	SZL	10YR4/6			15		38	0	n	n					
									Total	**147**	**111**							
									MD	64	40							
								Droughtiness grade(DR)		1	1							

29	T	0	30	mCL	10YR4/2			3		52	52	n	n	*I*	2	**2**	WE
		30	40	mCL	10YR4/3			10		15	15	n	n				
		40	53	mCL	10YR5/2			20		15	17	n	n				
		53	120	mCL	10YR5/2			20		54	22	n	n				
									Total	**137**	**106**						
									MD	54	35						
									Droughtiness grade(DR)	1	1						
30	T	0	34	mCL	10YR4/2			0		61	61	n	n	*I*	2	**2**	WE
		34	90	mCL	10YR4/6	mn	few	5		63	55	n	n				
		90	120	hCL	10YR4/6	mn	few	5		29	0	n	n				
									Total	**152**	**116**						
									MD	69	45						
									Droughtiness grade(DR)	1	1						
31	T	0	40	mCL	10YR4/2			0		72	72	n	n	*I*	2	**2**	WE
		40	82	mCL	7.5YR4/3	mn	few	3		47	47	n	n				
		82	120	SCL	7.5YR4/3	mn	few	7		35	0	n	n				
									Total	**154**	**119**						
									MD	71	48						
									Droughtiness grade(DR)	1	1						
32	T	0	36	mCL	10YR4/2			0		67	67	n	n	*II*	3a	**3a**	WE
		36	120	C	5YR4/3	Fe	com	5		63	41	y	n				
									Total	**129**	**108**						
									MD	46	37						
									Droughtiness grade(DR)	1	1						
33	T	0	37	mCL	10YR4/3			0		67	67	n	n	*I*	2	**2**	WE
		37	70	mCL	7.5YR4/4	Fe	com	2		40	52	n	n				
		70	120	mCL	7.5YR4/6	Fe	com	2		49	0	n	n				
									Total	**156**	**118**						

									MD	73	47							
								Droughtiness grade(DR)		1	1							
34/P2	T	0	37	mCL	10YR4/2			0		67	67	n	n	/	2	**2**	WE	
		37	70	mCL	7.5YR4/4	Fe	few	0		63	41	n	n					
		70	120	mCL	10YR4/6	Fe	few	0		63	41	n	n					
									Total	**129**	**108**		Dug to 70cm					
									MD	46	37		Lots of worm activity					
								Droughtiness grade(DR)		1	1							
35	T	0	44	mCL	10YR4/2			0		79	79	n	n	/	2	**2**	WE	
		44	90	mCL	10YR5/4	Fe	few	0		50	42	n	n					
		90	120	mCL	10YR4/6	Fe	few	0		30	0	n	n					
									Total	**159**	**121**							
									MD	76	50							
								Droughtiness grade(DR)		1	1							
36	T	0	40	mCL	10YR4/2			5		69	69	n	n	/	2	**2**	WE	
		40	45	mCL	10YR4/3			10		7	7	n	n					
		45	65	mCL	10YR4/3			10		21	29	n	n					
		65	120	mCL	10YR4/6			20		45	7	n	n					
									Total	**141**	**111**							
									MD	58	40							
								Droughtiness grade(DR)		1	1							
37	T	0	30	mCL	10YR4/2			0		54	54	n	n	/	2	**2**	WE	
		30	65	mCL	10YR4/3	Fe	com	3		46	54	n	n					
		65	120	mCL	10YR4/6	Fe	com	5		52	8	n	n					
									Total	**152**	**116**							
									MD	69	45							
								Droughtiness grade(DR)		1	1							

Appendix 3: Site Photographs

Pit 1 shallow topsoil

Pit 1 topsoil directly over clay

Slowly permeable massive clay within Pit 1

Pit 2 topsoil

Pit 2 upper subsoil

View of Pit 2 exposed profile

KEY:

Survey area

+1 Observations

+P Pit

0 100 200 300 400 500 m

N

Rev.	Comment	Date

Drawing title

OBSERVATION MAPPING

Contract

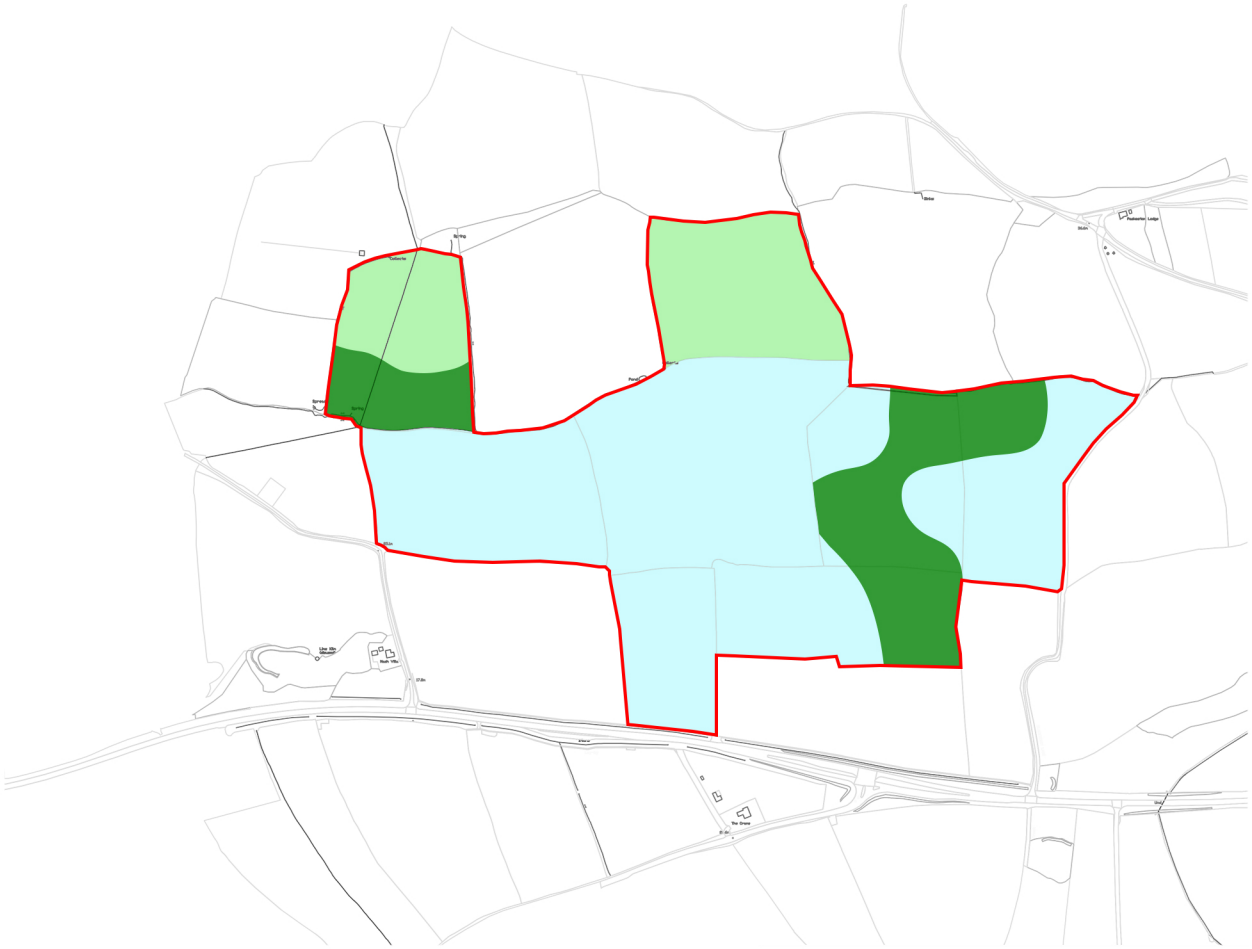
WESSEX SOLAR ENERGY

Reading Agricultural Consultants Ltd
Gate House
Beechwood Court
Long Toll
Woodcote
RG8 0RR
01491 684233

www.readingagricultural.co.uk

READING AGRICULTURAL CONSULTANTS

Ref.	Rev.
RAC/8665/1	
Drawn by	**Checked by**
AGM	AIF
Scales	**Date**
1:10,000@A4	FEB 2020



N

KEY: ALC GRADES

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Subgrade 3a - good quality

} Best and most versatile land

- Not Present
- Subgrade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-Agricultural

0 100 200 300 400 500 m

Rev.	Comment	Date

Drawing title

ALC MAPPING

Contract

WESSEX SOLAR ENERGY

Reading Agricultural Consultants Ltd
Gate House
Beechwood Court
Long Toll
Woodcote
RG8 0RR
01491 684233

www.readingagricultural.co.uk

READING AGRICULTURAL CONSULTANTS

Ref.	Rev.
RAC/8665/2	
Drawn by	**Checked by**
AGM	AIF
Scales	**Date**
1:10,000@A4	FEB 2020