Gate Burton
ENERGY PARK

Gate Burton Energy Park Environmental Statement

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Gate Burton Energy Park Limited

SOIL RESOURCES AND AGRICULTURAL QUALITY OF LAND AT GATE BURTON

Report 1901/1

10th June, 2022

Land Research ASSOCIATES

SOIL RESOURCES AND AGRICULTURAL QUALITY

OF LAND AT GATE BURTON

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SUMMARY

A soil resource and agricultural land quality survey has been undertaken of 652.0 ha of land at Gate Burton, West Lindsey, Lincolnshire in November 2021 and April 2022. Small areas of the site in the west were not surveyed, these areas have been estimated using available published information and nearby observations.

The site is proposed as the location of a solar farm. An additional report estimating the land grades of the cable route is included as an appendix to this report (1901/2).

The land has three main soil types: sandy soils; loamy over slowly permeable soils and heavy slowly permeable soils. The site is a combination of subgrade 3a and 3b agricultural quality, variably limited by wetness and droughtiness restrictions.

1.0 Introduction

1.1 This report provides information on the agricultural quality of 652.0 ha of land at Gate Burton, West Lindsey, Lincolnshire. The report is based on a survey of the land in November 2021 and April 2022.

SITE ENVIRONMENT

1.2 The survey area comprises large ditch-drained arable fields, with smaller grassland fields in the north-west. The site is bisected by a railway line that runs north-south through the centre of the site. The site is bordered to the west by the villages of Knaith and Gate Burton and by the A156, to the north by Knaith Park, to the east by Willingham by Stow and to the south by adjoining agricultural land.

1.3 The land is mainly level, with gentle slopes in the north. Average elevation is approximately 10 m AOD.

PUBLISHED INFORMATION

1.4 1:50,000 scale BGS information records the basal geology of the land as Scunthorpe Mudstone Formation (interbedded mudstone and limestone) with Penarth Group mudstone recorded in the north-west. Glacial sand and gravel deposits are recorded to overlie the bedrock in the north-west and centre of the site, with a small area of alluvium mapped in the south.

1.5 The National Soil Map (published at 1:250,000 scale) records the land as predominantly within the Wickham 2 Association: typically slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils. The land in the north-west of the site is recorded to be within the Blackwood Association: typically deep permeable sandy and coarse loamy soils, with groundwater controlled by ditches[1].

[1]Ragg, J.M., *et al.,* (1984). *Soils and their Use in Midland and Western England,* Soil Survey of England and Wales Bulletin No. 12, Harpenden.

2.0 Soils

2.1 A semi-detailed soils and agricultural quality survey was carried out in November 2021 and April 2022 in strict accordance with MAFF (1988) guidelines[2]. It was based on observations at alternate intersects of a 100 m grid, giving a density of one observation per two hectares. Where soils were found to vary significantly, increased sampling density was employed (one observation per hectare). During the survey, soils were examined by a combination of pits and augerings to a maximum depth of 1.0 m. A log of the sampling points and a map (Map 1) showing their location is in an appendix to this report.

2.2 The soils were found to vary in texture and drainage. The soils are described below and their distribution shown on Map 2 in an appendix to this report.

SANDY SOILS

2.3 These are most common in the north-west of the site. The topsoil is dark coloured loamy medium sand and usually stoneless. It overlies sandy subsoils with occasional iron-rich layers and which are mottled at depth, indicating water ponding on lower clay layers. They are usually over a metre thick before slowly permeable clay is encountered, but occasional thinner soils are also found.

2.4 An example profile from a pit at location 18 (Map 1) is described below:

0-32 cm	Very dark brown (10YR 2/2) stoneless loamy medium sand with bleached sand grains and mica; weakly developed medium subangular blocky structure; friable; common very fine fibrous roots; sharp smooth boundary to:
32-66 cm	Dark reddish brown (7.5YR 3/3) and pale brown (10YR 6/3) stoneless medium sand; structureless, single grain but with blocks cemented by iron; loose with hard cemented layers; a few fine fibrous roots; sharp smooth boundary to:
66-100+ cm	Light brownish grey (10YR 6/2) stoneless medium sand with common fine strong brown (7.5YR 5/8) mottles; structureless, single grain; loose; rare roots.

2.5 These soils are freely-draining (Soil Wetness Class I) once artificial drainage measures are installed.

LOAMY OVER SLOWLY PERMEABLE SOILS

2.6 These are most common on hill tops in the north and west of the site, where a cover of sandier drift overlies the basal clay. The topsoil is sandy clay loam in texture and variably stony with quartzite pebbles, some large. It overlies sandy clay loam upper subsoils with similar stone content and showing grey colours

[2]MAFF, (1988).*Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

and ochreous mottling indicative of seasonal wetness. The lower subsoil occurs usually within 50-60 cm depth and is grey-mottled clay with occasional bands of sandstone and limestone.

2.7 An example profile from a pit at location 91 (Map 1) is described below:

0-31 cm	Dark greyish brown (10YR 4/2) sandy clay loam; 3% small and medium rounded quartzite stones; weakly to moderately developed medium subangular blocky structure; friable; many very fine fibrous roots; common medium and fine pores and earthworm channels; clear smooth boundary to:
31-52 cm	Grey (10YR 6/1) sandy clay loam with many large strong brown (7.5YR 5/8) mottles; 5% small and medium rounded quartzite stones; weakly developed coarse subangular blocky structure; friable to firm; common fine fibrous roots; 2% fine macropores; clear smooth boundary to:
52-80+ cm	Blueish grey (5B 6/1) stoneless clay with abundant strong brown (7.5YR 5/6) mottles; very weakly developed coarse prismatic structure; firm; a few fine fibrous roots; 0.1 % fine macropores.

2.8 The soils are imperfectly-draining with some seasonal wetness (Soil Wetness Class III).

HEAVY SLOWLY PERMEABLE SOILS

2.9 These soils occur across most of the site and typically comprise clay or heavy clay loam topsoils directly overlying slowly permeable dense clay subsoils. The subsoils are gleyed (pale colours with greyish and ochreous coloured mottles), indicating seasonal waterlogging to shallow depth. The subsoils are variably calcareous at depth.

2.10 An example profile from a pit at location 96 (Map 1) is described below:

0-26 cm	Dark greyish brown (10YR 4/2) clay; a few small rounded quartzite stones; weakly developed coarse subangular blocky structure; friable; many very fine fibrous roots; a few medium and fine pores and earthworm channels; sharp smooth boundary to:
26-80 cm+	Grey (10YR 5/1) clay with many yellowish brown (10YR 5/6) mottles; mainly stoneless, but a stony layer at 50-55 cm depth; weakly developed coarse prismatic structure with slickensides; firm; common very fine fibrous roots; 0.5% very fine macropores; merging to:
66-80+ cm	Dark greenish grey (5BG 4/1) calcareous clay with many yellowish brown (10YR 5/6) mottles; a few very small limestone fragments; structureless, massive; firm; no roots; 0.1 % fine macropores

The soils are imperfectly-draining with some seasonal wetness (Soil Wetness Class III).

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3.0 Agricultural land quality

3.1 To assist in assessing land quality, the Ministry of Agriculture, Fisheries and Food (MAFF) developed a method for classifying agricultural land by grade according to the extent to which physical or chemical characteristics impose long-term limitations on agricultural use for food production. The MAFF ALC system classifies land into five grades numbered 1 to 5, with grade 3 divided into two subgrades (3a and 3b). The system was devised and introduced in the 1960s and revised in 1988.

3.2 The agricultural climate is an important factor in assessing the agricultural quality of land and has been calculated using the Climatological Data for Agricultural Land Classification[3]. The relevant site data for an average elevation of 10 m is given below.

- Average annual rainfall: 596 mm
- January-June accumulated temperature >0°C 1415 day°
- Field capacity period (when the soils are fully replete with water) 121 days early Dec-early Apr
- Summer moisture deficits for: wheat: 113 mm potatoes: 107 mm

3.3 The survey described in the previous section was used in conjunction with the agro-climatic data above to classify the site using the revised guidelines for ALC issued in 1988 by MAFF[4]. There are no overriding climatic limitations at this locality.

SURVEY RESULTS

3.4 The agricultural quality of the land is primarily limited by droughtiness and wetness. Other factors were assessed but do not affect the land grade. Land of grade 3 has been identified.

Subgrade 3a

3.5 This land grade comprises sandy loam soils in the north-east of the site that are limited by droughtiness restrictions: the high sand content of the subsoils means

[3]Meteorological Office, (1989).*Climatological Data for Agricultural Land Classification*.
[4]MAFF, (1988).*Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

they will store sub-optimal moisture for crop uptake under the local climate, reducing average yields of arable crops in dry years.

3.6 Also included in this subgrade are medium loamy soils with imperfect drainage (Soil Wetness Class III). The combination of moderately high topsoil clay content and impeded drainage means that land access will be restricted in winter and early spring in most years for machinery; although late spring and autumn sowings are usually possible.

Subgrade 3b

3.7 This land includes the heavy slowly permeable soils across most of the site. The high topsoil clay content combined with imperfect drainage (Soil Wetness Class III) means access with machinery is restricted in winter and spring. Arable cropping of the land is therefore mainly limited to autumn-sown crops in years.

3.8 Also included are minor areas of sandy soils limited by droughtiness where sand occurs directly below the topsoil. The sandy subsoils will store limited moisture for crop uptake meaning the land is likely to give low average yields.

Non agricultural

3.9 This includes the railway line that intersects the site, Clay Farm steading and areas of woodland.

Grade areas

3.10 The land grades are shown on Map 3 and the areas occupied shown below.

Table 1: Areas occupied by the different land grades

Grade/subgrade	*Area (ha)*	*% of the land*
Subgrade 3a	73.6	11
Subgrade 3b	548.9	84
Non agricultural	18.2	3
Estimated[1] BMV	6.8	1
Estimated subgrade 3b	4.5	1
Total	652.0	100

[1] Grades estimated using published soils and geology data and nearby observation points

APPENDIX
DETAILS OF OBSERVATIONS
MAPS

Land at Gate Burton: Soils and ALC survey – Details of observations at each sampling point

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
1	0-30	C	2	30-70	C	xxx	70-90 90-100	SCL C	xxx xxxx	0	III	3b	W
2	0-30	HCL	1	30-45	HCL	xxx	45-55 55-90	SCL-MSL C	xxx xxx	0	III	3b	W
2A	0-28	SCL	1	28-50	SCL	xxx	50-120	MS	xxxx	0	II/III	3a	W
3	0-30	MSL	1	30-90	C+lst bands	xxx				0	III	2	W
4	0-30	MSL	<1	30-50	MSL	xxx	50-100	C	xxxx	1	III	2	W
4A	0-28	HCL	1	28-80	C	xxx				0	III	3b	W
5	0-30	HCL-SCL	2	30-50	SCL	xxx	50-70 70-100	MSL SC	xxx xxx	0	III	3a/3b	
6	0-32	LMS	1	32-70	MS	xxx	70-100	C	xxx	0	II	3b	D
7	0-28	HCL	1	28-50	C	xxx	50+	stop on lst		0	III	3b	W
8	0-30	SCL	1	30-50	LMS	xxx	50-90 90-110	MS C	xxxx xxxx	0	II	3a	D
9	0-35	LMS	0	35-50	LMS	o	50-110	MS	x	1	I/II	3b	D
9A	0-30	MSL	<1	30-50	LMS	xxx	50-90	C	xxx	1	III	2	W,D
10	0-30	SCL	0	30-45	SCL-HCL	xxx	45-90	C	xxx	1	III	3a	W
10A	0-30	HCL	1	30-50	HCL	xxx	50-60	SCL	xxx	0	III	3b	W
							60+	stop on stones					
11	0-30	SCL	1	30-50	SCL	xxx	50-110	C	xxx	1	III	3a	W
11A	0-30	HCL	1	30-50	HCL	xxx	50-70	MS	xxxx	0	III	3b	W
							70-30	C	xxxx				
12	0-30	C	0	30-90	C	XXX				0	III	3b	W
13	0-30	SCL	1	30-45	SCL	xxx	45-110	C	xxx	4	III	3a	W
14	0-30	SCL	0	30-40 40-55	LMS MS	xxx xxxx	55-110	C	xxxx	0	III	3a	W
15	0-34	LMS	0	34-40	LMS	x	40-90 90-120	MS MS	xx xxx	0	I	3b	W
16	0-26	HCL	0	26-80	C	xxxx				0	III	3b	W
17	0-40	LMS	<1	40-110	LMS	xxx				0	II	3a	D
18	0-35	LMS	1	35-50	MS	xx	50-120	MS	xxx	0	II	3b	D
19	0-26	HCL-C	0	26-80+	C	xxx				0	III	3b	W
20	0-30	LMS	0	30-120	MS	xxxx				0	II	3b	D
21	0-33	LMS	0	33-50	MS	xx	50-120	MS	xxx	0	II	3b	D
22	0-30	LMS	0	30-120	MS	xxx				0	III	3b	D
23	0-34	LMS	<1	34-60	MS	xx	60-120	MS	xxxx	0	II	3b	D
24	0-25	HCL	3	25-80	C	xxx				0	III	3b	W

25	0-35	LMS	0	35-110	MS	xxx	110-120	C	xxxx	<1	III	3b	W
26	0-30	MS-LMS	0	30-55	br MS	o	55-110	MS	xxxx	0	II	3b	D
27	0-35	MSL-LMS	0	35-110	MS	xxxx				0	II	3b	D
27A	0-30	HCL	0	30-55	C	xxx	55+	stopped on stones		1	iii	3b	W
28	0-30	C	3	30-80	C	xxx				1	III	3b	W
29	0-30	C	4	30-90	C	xxx				1	III	3b	W
30	0-30	LMS	<1	30-90	MS	xxx	90-110	C	xxxx	2	II	3b	D
30A	0-32	MSL	1	32-60	MS	xxx	60-100	C	xxxx	0	III	3a	D
31	0-30	LMS-MS	0	30-55 55-70	MS st C	xxx xxxx	70-85 85-110	LMS C	xxx xxx	0	III	3a	D
32	0-40	MS-LMS	<1	40-55	MS	xx	55-110	MS	xxx	0	II	3b	D
33	0-32	MS	1	32-55	MS	xx	55-110	MS	xxx	0	II	3b	D
34	0-30	LMS	<1	30-110	MS	xxx				0	II	3b	W
35	0-30	HCL	2	30-50	HCL	xxx	50-90	C	xxx	<1	III	3b	W
36	0-30	HCL-SCL	2	30-80	C	xxx				0	III	3b	W
36A	0-30	MSL	1	30-45	MSL	xxx	45-70 70-110	LMS C	xxx xxx	0	II	2	D
37	0-30	MSL	1	30-100	MS;	xxx	00-120	C	xxxx	0	II	2	D
38	0-32	LMS-MS	1	32-80	MS	xxx	80-120	LMS	xxxx	0	II	3b	D
39	0-33	LMS	0	33-110	MS	xxxx				0	II	3b	D
40	0-30	HCL	1	30-70	MS	xxx	70-120	C+S	xxx	0	II	3a	W/D
41	0-40	C	0	41-80	C	xxxx				0	III	3b	W
42	0-30	HCL	0	30-80	C	xxx				2	III	3b	W
43	0-30	C	2	30-80	C	xxx				0	III	3b	W
44	0-30	LMS	1	30-50	(st) LMS	xxx	50-80	C	xxxx	0	III	3a	D
45	0-40	HCL-SCL	0	40-90	C	xxxx				2	UIII	3a/3b	W
46	0-30	C	0	30-80	C	xxx				0	III	3b	W
47	0-30	C	0	30-50	C	xxxx	50-80 80-110	SCL C+S	xxxx xxxx	0	III	3b	W
48	0-30	LMS	1	30-110	MS	0				0	II	3b	D
49	0-30	MSL-LMS	0	30-90	C	xxx	90-95 95-110	MSL C	xxx xxx	1	III	2/3a	W
49A	0-30	SCL-HCL	2	30-45	HCL-SCL	xxx	45-580	C+S	xxx	2	III	3a/3b	W
50	0-30	HCL-SCL	3	30-90	C	xxx				2	III	3b	W
51	0-30	HCL	0	30-80	C	xxx				0	III	3b	W
52	0-30	C	0	30-60	dk gr C	xxxx	60-80 80-120	SCL MS	xxx xxx	0	III	3b	W
53	0-30	C	0	30-60	dk gr C	xxxx	60+	stop on stones		1	III	3b	W
53A	0-30	LMS	0	30-45	LMS	xxx	45-65	MS	xxxx	0	III	3a	D
54	0-30	SCL	1	30-45	SCL	xxx	45-90	C	xxx	1	III	3a	W
55	0-30	SCL	2	30-45	SCL	xxx	45-100	C	xxx	<1	III	3a	W
56	0-30	HCL	2	30-100	C	xxx				2	III	3b	W
57	0-30	C	1	30-80	C	xxx	80-100	ca C	xxx	0	III	3b	W
58	0-30	C	1	30-80	C	xxx				0	III	3b	W
59	0-30	C	1	30-80	C	xxx				1	III	3b	W
60	0-30	MSL	<1	30-70	MS	xxx	70-100	C	xxx	0	II	3a	D
60A	0-32	SCL-MSL	2	32-80	C	xxxx				0	III	3a	W
61	0-30	SCL	<1	30-90	C	xxx	90-120	MSL	xxx	0	III	3a	W

62	0-30	SCL	1	30-60	SCL	xxx	60-90	C	xxx	0	III	3a	W
63	0-30	C	<1	30-70	C	xxx	70-90+	ca C	xxxx	<1	III	3b	W
64	0-30	C	<1	30-80	C	xxxx				<1	III	3b	W
65	0-35	MSL	1	35-45	MSL	xxx	45-90	C	xxx	0	III	2	W
65A	0-30	SCL	2	30-40	MS	xxx	40-80	C	xxx	0	III	3a	W
66	0-35	SCL	2	35-90	C	xxx				0	III	3a	W
67	0-30	SCL	2	30-110	C	xxx				0	III	3a	W
68	0-30	SCL	2	30-70	HCL-SCL	xxx	70-120	MS	xxx	0	III	3a	W
69	0-26	SCL	2	26-40	SCL	xxx	40-80	C	xxx	0	III	3a	W
70	0-30	SCL-HCL	2	30-40	SCL-HCL	xxx	40-80	C	xxx	0	III	3a/3b	W
71	0-30	C	1	30-60	C	xxx	60-80	ca C	xxxx	<1	III	3b	W
71A	0-35	SCL	3	35-80	C	xxx				0	III	3a	W
72	0-31	SCL	2	31-50	SCL	xxx	50-100	C+SCL	xxx	0	III	3a	W
73	0-32	SCL-HCL	2	32-60	C	xxx	60+	stop on stones		0	III	3a/3b	W
74	0-30	SCL	2	30-40 40-70	C SCL-HCL	xxx xxx	70-100 100-120	MSL-SCL C	xxx xxxx	<1	III	3a	W
75	0-33	SCL-HCL	3	33-110	C	xxx				0	III	3a/3b	W
75A	0-30	HCL-SCL	1	30-40	HCL-SCL	xxx	40-60+	C	xxx	0	III	3b/3a	W
76	0-35	SCL	1	35-55	SCL	xxx	55-70	C	xxx	0	III	3a	W
							70-90+	C+S	xxx				
76A	0-30	HCL-SCL	3	30-40	SCL	xxx	40-60+	C	xxx	0	III	3b/3a	W
77	0-30	HCL-SCL	1	30-60	HCL-SCL	xxx	60-90	C	xxx	0	III	3b/3a	W
78	0-30	LMS	1	30-50	MS	o	50-120	MS	xxxx	0	II	3b	D
79	0-40	LMS	0	40-75	MS	xxxx	75-100	C	xxxx	0	II	3b	D
80	0-30	SCL	2	30-45	C	xxx	45-70 45-120	C+S MS	xxx xxxx	0	III	3a	W
81	0-30	SCL	1	30-45 45-70	SCL C	xxx xxx	70-90 90-110	MSL C	xx xxxx	0	III	3a	W
82	0-30	SCL	1	30-45	SCL	xxx	45-100	C	xxxx	<1	III	3a	W
83	0-30	HCL	4	30-80	C	xxx				1	III	3b	W
84	0-30	SCL-MCL	1	30-45	SCL	xxx	45-80	C	xxx	0	III	3a	W
85	0-30	HCL	1	30-50	HCL	xxx	50-90	C	xxx	1	III	3b	W
86	0-30	HCL	<1	30-80	C	xxx				2	III	3b	W
87	0-30	LMS	1	30-55	LMS	o	55-120	MS	xxx	1	II	3b	D
88	0-30	MSL	1	30-40	LMS	xx	40-60 60-100	MS C	xxxx xxx	2	III	3a	D
89	0-30	HCL-SCL	3	30-50	C	xxx	50-70 70-100	C+S C	2 xxxx	2	III	3b	W
90	0-30	HCL-SCL	4	30-45	SC	xxx	45-90	C	xxxx	1	III	3b	W
91	0-31	SCL	3	31-52	SCL-HCL	xxx	52-80+	C	xxxx	1	III	3b	W
92	0-35	HCL-SCL	1	35-50	HCL-SCL	xxx	50-90	C	xxx	1	III	3b/3a	W
93	0-30	SCL	5	30+	Stopped in rubble. Old Farm yard								
94	0-30	HCL	2	30-80	C	xxxx				0	III	3b	W
95	0-30	C	1	30-80	C	xxxx				1	III	3b	W
96	0-26	C	<1	26-52	C	xxx	52-80+	C	xxxx	0	III	3b	W
97	0-30	MSL	1	30-50	LMS	xxx	50-80 80-110	MS C	xxxx xxxx	0	II	3a	D
98	0-30	HCL-SCL	2	30-45	HCL-SCL	xxx	45-90	C	xxx	1	III	3b	W
99	0-30	C	2	30-80	C	xxxx				1	III	3b	W
100	0-30	C	2	30-80	C	xxx				1	III	3b	W

101	0-30	HCL	2	30-90	C	xxx				1	III	3b	W
102	0-30	SCL-HCL	3	30-55	HCL	xxx	55-100	C	xxx	2	III	3a/3b	W
103	0-28	HCL-C	2	28-60	HCL	xxx	60-90	C	xxx	1	III	3b	W
104	0-30	HCL	1	30-80	C	xxx				2	III	3b	W
105	0-28	C	<5	28-90+	C	xxx				1	III	3b	W
106	0-30	C	<5	30-85+	C	xxx				2	III	3b	W
107	0-30	HCL	0	30-60	dk gr C	xxx	60-90+	C	xxxx	<1	III	3b	W
108	0-30	md C	0	30-50	C	xxx	50-90+	HCL	xxx	0	III	3b	W
109	0-28	C	0	28-80	C	xxxx				0	III	3b	W
110	0-28	md HCL	0	28-80+	C	xxxx				0	III	3b	W
111	0-32	HCL	0	32-55	HCL	xxx	55-90	C	xxxx	<1	III	3b	W
112	0-26	C	0	26-70	C	xxx	70+	stop on lst?		0	III	3b	W
113	0-34	HCL-SCL	0	34-90	C	xxx				0	III	3b/3a	W
114	0-28	md C	0	28-90	C	xxxx				0	III	3b	W
115	0-33	md C	0	33-90+	C	xxxx				0	III	3b	W
116	0-30	md HCL	0	30-60	C	xxx	75-90	v ca HCL	xxx	0	III	3b	W
				60-75	SCL-MSL	xxx	90+	stop on lst?					
118	0-28	HCL	3	28-60	HCL	xxx	60-100	C	xxx	<1	III	3b	W
119	0-30	C	3	30-100	C	xxx				2	III	3b	W
120	0-30	HCL	3	30-55	HCL	xxx	55-100	C	xxxx	<1	III	3b	W
121	0-30	HCL-C	1	30-80	C	xxx				2	III	3b	W
122	0-30	C	0	30-60	SCL	xxx	60-90	C	xxx	0	III	3b	W
123	0-28	C	<5	28-100+	C	xxx				0	III	3b	W
124	0-26	C	<5	26-100+	C	xxx				0	III	3b	W
125	0-28	C	<5	28-90+	C	xxx				0	III	3b	W
126	0-28	C	0	28-100	C	xxxx				<1	III	3b	W
127	0-25	md C	0	25-90	C	xxxx				0	III	3b	W
128	0-30	C	0	30-90	C	xxxx				0	III	3b	W
129	0-30	C	0	30-70	C	xxx	70-75	ca C+lst	xxx	0	III	3b	W
							75+	stop on lst					
130	0-28	C	0	28-70	C	xxx	70+	stop on hard		<1	III	3b	W
131	0-25	HCL	1	25-90	C	xxx				1	III	3b	W
132	0-30	C-HCL	1	30-60	HCL	xxx	60-100	C	xxx	<1	III	3b	
133	0-30	HCL	2	30-70	C	xxx	70+	stopped on stones		1	III	3b	W
134	0-25	C	<5	25-100+	C	xxx				0	III	3b	W
135	0-32	C	<5	32-90+	C	xxx				0	III	3b	W
136	0-27	C	<5	27-91+	C	xxx				0	III	3b	W
137	0-28	C	<5	28-68	C	xxx	68-100+	C+5	xxx	0	III	3b	W
138	0-26	C	<5	26-60+	C					1	III	3b	
140	0-30	C	<5	30+	Compacted								
141	0-25	C	0	40-90	C	xxx				0	III	3b	W
	25-40	C	xx										
142	0-28	md C	0	28-45	C	xxx	45-55	HCL+lst	xxx	0	III	3b	W
							55-100	ca C	xxxx				
143	0-28	md HCL	0	28-90	ca C+lst	xxx	90-110	gr C	xxxx	0	III	3b	W
144	0-34	md HCL	0	34-75	C	xxxx	75-100	ca C+lst	xxx	0	III	3b	W
145	0-30	md HCL	0	30-50	HCL-C	xxx	50-65	C	xxx	1	III	3b	W
146	0-30	C	1	30-90	C	xxx				<1	III	3b	W

147	0-25	C	1	25-70	C	xxx	70-100	C+lst	xxx	1	III	3b	W
148	0-30	HCL	1	30-90	C	xxx				0	III	3b	W
149	0-30	HCL	1	30-45	HCL	xxx	45-100	ca C	xxxx	0	III	3a	W
150	0-30	HCL	1	30-90	C	xxx				0	III	3b	W
150A	0-28	C	<5	28-90+	C	xxx				0	III	3b	W
151	0-32	HCL	<5	32-90+	C	xxx				0	III	3b	W
152	0-30	C	<5	30-95+	C	xxx				0	III	3b	W
153	0-30	C	<5	30-90	C	xxx				0	III	3b	W
154	0-29	C	<5	29-65+	C	xxx				0	III	3b	W
155	0-30	C	<5	30-80+	C	xxx				1	III	3b	W
156	0-28	C	<5	28-85+	C	xxx				0	III	3b	W
157	0-30	C	0	30-70	C	xxx	70-100	gr C	xxxx	0	III	3b	W
158	0-30	md ca C	0	30-90	dk gr C	xxxx				0	III	3b(a)	W
159	0-30	C	0	30-70	C	xxx	70-90	C+lst	xxx	0	III	3b	W
							90+	stop on lst?					
160	0-30	C	1	30-50	C	xxx	50+	stop on hard		<1	III	3b	W
161	0-30	C	0	30-80	C	xxxx				<1	III	3b	W
164	0-30	C	1	30-80	C	xxx				1	III	3b	W
165	0-32	C	1	32-80	C	xxx				0	III	3b	W
166	0-30	C	2	30-80	C	xxxx				2	III	3b	W
167	0-30	SCL	3	30-50 50-80	HCL-SCL C	xxx xxx	80-95 95-110	br SCL C	o xxx	1	III	3a	W
168	0-31	HCL	<5	31-90+	Cr	xxx				1	III	3b	W
169	0-32	C	<5	32-60+	C	xxx				1	III	3b	W
170	0-30	C	<5	30-70+	C	xxx				0	III	3b	W
171	0-28	C	<5	28-80+	C	xxx				1	III	3b	W
172	0-30	C	<5	30-60+	C	xxx				1	III	3b	W
173	0-26	HCL	<5	26-65+	C	xxx				0	III	3b	W
174	0-28	md C	0	28-90	C	xxxx				0	III	3b	W
175	0-26	C	0	26-90+	C	xxx				0	III	3b	W
176	0-28	C	0	28-80	C	xxxx				0	III	3b	W
177	0-30	C	0	30-90	C	xxx				0	III	3b	W
178	0-20	C	0	20-69	C	xxx	69-100+	Cch	xxx	1	III	3b	W
179	0-30	C	0	30-80	C	xxx				1	III	3b	W
180	0-30	C	1	30-55	C	xxx	55+	stop on stones		0	III	3b	W
181	0-30	C	1	30-50	C	xxx	50+	stop on stones		0	III	3b	W
182	0-28	C	3	28-80	C	xxx				2	III	3b	W
183	0-30	HCL-SCL	1	30-50	HCL	xxx	50-80 80-100	C C+lst	xxx	0	III	3b	W
183A	0-30	SCL-HCL	3	30-50	SCL-HCL	xxx	50-90	C	xxx	0	III	3a	W
184	0-29	HCL	<5	29-100+	C	xxx	80-100+	Ch		0	III	3b	W
185	0-30	C	<5	30-90+	C	xxx				1	III	3b	W
186	0-30	C	<5	30-100+	C	xxx				0	III	3b	W
187	0-30	C	<5	30-90	C	xxx				1	III	3b	W
188	0-29	C	<5	29-60+	C	xxx				0	III	3b	W
189	0-25	C	<5	25-100+	C	xxx				0	III	3b	W
190	0-28	C	0	28-60	C	xxxx	60-100+	ca C	xxx	1	III	3b	W
191	0-30	md C	0	30-70	C	xxxx	70-90	ca C+lst	xxx	<1	III	3b	W

							90+	stop on lst					
193	0-30	C	<5	30-100+	C	xxx				0	III	3b	W
194	0-29	C	<5	29-90+	C	xxx	80+	ch		0	III	3b	W
195	0-30	C	1	30-90	C	xxx				2	III	3b	W
196	0-30	C	2	30-50	C	xxx	50+	stopped on stones		0	III	3b	W
197	0-20	C	2	20-80	C	xxxx				2	III	3b	W
198	0-30	HCL-C	0	30-90	C	xxx				0	III	3b	W
199	0-30	HCL-SCL	1	30-90	C	xxx				0	III	3b/3a	W
200	0-30	HCL	<5	30-100	C	xxx				1	III	3b	W
201	0-31	C	<5	31-90+	C	xxx				0	III	3b	W
202	0-31	C	<5	71-100+	C	xxx				0	III	3b	W
203	0-26	C	<5	26-64+	C	xxx				0	III	3b	W
204	0-31	C	<5	31-60+	C	xxx				0	III	3b	W
205	0-29	C	<5	29-80+	C	xxx				1	II	3b	W
206	0-30	C	<5	30-90+	C	xxx				0	III	3b	W
207	0-30	md C	0	30-100	C	xxxx		lst band 70-80		0	III	3b	W
208	0-30	md HCL	0	30-80	HCL	xxxx	80-100	gr C	xxx	0	III	3b	W
209	0-30	C	<5	30-100+	C	xxx				0	III	3b	W
210	0-30	Cslca	<5	30-52	Cca	xxx	***52***- 90+	SC+ca	xxx	0	III	3a/b	W
211	0-30	Cca	<5	30-74	C	xxx	74-100	Cca	xxx	0	III	3a/b	W
212	0-28	HCL	1	28-70	HCL	xxx	70-100	C	xxxx	1	III	3b	W
213	0-30	HCL	1	30-50	HCL-C	xxx	50-90	C	xxxx	<1	III	3b	W
214	0-30	C	2	30-45	C	xxx	45-90	C+lst	xxx	0	III	3b	W
215	0-30	HCL	<1	30-40	C	xxx	40-90 90+	C+lst stop on stones	xxx	0	III	3b	W
216	0-30	C	2	30-100	C	xxx				2	III	3b	W
217	0-30	C	1	30-70	C	xxx	70-90	C+lst	xxx	2	III	3b	W
218	0-30	C	1	30-80	C	xxx				3	III	3b	W
219	0-28	C	<5	28-90+	CHClca	xxx				2	III	3b	W
220	0-26	C	<5	26-40	C	xxx	40-100+	C	xxx	1	III	3b	W
221	0-29	C	<5	29-90+	C	xxx				0	III	3b	W
222	0-30	C	<5	30-80+	C	xxx				0	III	3b	W
223	0-29	C	<5	29-90+	Cslca	xxx				0	III	3b	W
224	0-30	C	<5	30-60+	C	xxx				1	III	3b	W
225	0-30	C	0	30-50+	C	xxx	50+	Drain Tile		1	III	3b	W
226	0-30	Cvslca	<5	30-70	Cvslca	xxx	70-100+	Cch		0	III	3b	W
227	0-24	Cca	<5	24-56	C	xxx	56-70	SCLr	xxx	0	III	3a/b	W
228	0-31	Cca	<5	31-62	Cca	xxx	62-100+	Cch	xxx	0	III	3a/b	W
229	0-30	HCL	0	30-80	C	xxx				2	III	3b	W
230	0-30	C	1	30-80	C	xxx				2	III	3b	W
231	0-30	HCL	1	30-50	C	xxx	50-80 80+	C+lst stop on stones	xxx	0	III	3b	W
232	0-30	C	3	30-70	C	xxx	70+	Stopped on lst		0	III	3b	W
233	0-30	C	<5	30-90+	ClHCL	xxx				1	III	3b	W
234	0-29	C	<5	29-91+	C	xxx				1	III	3b	W
235	0-31	C	<5	31-100+	C	xxx				0	III	3b	W
236	0-29	C	<5	29-65+	C	xxx				0	III	3b	W
237	0-28	C	<5	28-100+	C	xxx				0	III	3b	W
238	0-28	C	0	28-65+	C	xxx				1	III	3b	W

239	0-29	C	0	29-100+	C	xxx				1	III	3b	W
240	0-30+	C	0	30-95+	C	xxx				0	III	3b	W
241	0-30	Cvslca	<5	30-100	C	xxx				0	III	3b	W
242	0-31	HCh	<5	31-52	HCh	xxx	52-100+	Sca	xxx	2	II	3a	W
243	0-30	HCL	4	30-70	C	xxx	70-90	C+lst	xxx	0	III	3b	W
244	0-30	ca C	6	30-50	ca C	xxx	50-+	Stopped on lst		0	III	3a	W
245	Not recorded												
246	0-36	Ha	<5	30-50+	C	xxx				0	III	3b	W
247	0-28	C	<5	28-70+	C	xxx				1	III	3b	W
248	0-28	Cslca	<5	28-90+	Cvslca	xxx				0	III	3b	W
249	Not recorded												
250	0-29	C	<5	29-85+	C	xxx				0	III	3b	W
251	0-30	Cslca	0	30-46	Cca	xxx	46-100+	Cch		1	III	3a/b	W
252	0-30	C	<5	30-100+	C	xxx				0	III	3b	W
253	0-30	C	<5	30-100+	C	xxx				2	III	3b	W
254	0-30	Cca	<5	30-70	Cca	xxx	70-110+	Cch	xx	3	III	3a	W
255	Not recorded												
256	0-28	C	4	28-50	C	xxx	50+	Stopped on lst		0	III	3b	W
257	0-28	C	3	28-60	C	xxx	60-80	C+lst	xxx	0	III	3b	W
258	0-29	C	<5	29-100+	C	xxx				0	III	3b	W
259	0-30	C	<5	30-100+	C	xxx				0	III	3b	W
260	0-51	C	<5	31-65+	Ca	xxx				3	III	3b	W
261	0-30	C	<5	30-100+	C	xxx				0	III	3b	W
262	0-29	C	0	29-80+	C	xxx				0	III	3b	W
263	0-28	C	0	28-50	C	xxx	50+	Drain Tile		0	III	3b	W
264	0-30	C	<5	30-90+	C	xxx				2	III	3b	W
265	0-26	C	<5	26-65	C	xxx	65-100+	Cch	xx	2	III	3b	W
266	0-30	C	<5	30-60+	C	xxx				1	III	3b	W
267	0-30	C	1	60-80	C	xxxx				<1	III	3b	W
268	0-30	HCL	2	30-45 45-80	HCL C	xxx xxx	80-100 100-110	st SCL C	xx xxx	2	III	3b	W
269	0-30	C	2	30-45	C	xxx	45-80	C+lst	xxx	0	III	3b	W
270	0-30	C	3	30-50+	C+lst	xxx				0	III	3b	W
271	0-30	HCL	2	30-50	HCL	xxx	50-70 70+	C stop on stones	xxx	0	III	3b	W
272	0-28	C	<5	28-90+	C	xxx				1	III	3b	W
273	0-40	Cslst	<5	40-90+	Cca	xxx				0	III	3b	W
274	0-30	C	<5	30-95+	C	xxx				0	III	3b	W
275	0-30	C	<5	30-90+	C	xxx				0	III	3b	W
276	0-28	HCL	<5	28-50+	C	xxx				0	III	3b	W
277	0-30	C	2	30-60	C	xxx	60-90	C+lst	xxx	1	III	3b	W
277A	0-30	C	4	30-50	C	xxx				1	III	3b	W
278	0-30	HCL	3	30-80	C	xxx				1	III	3b	W
279	0-30	C	2	30-80	C+lst	xxx				0	III	3b	W
280	0-30	C	<5	30-100+	C	xxx				0	III	3b	W
281	0-28	C	<5	28-60+	C	xxx				1	III	3b	W
282	0-28	C	<5	28-80+	C	xxx				0	III	3b	W
283	0-30	C	<5	30-90+	C	xxx				0	III	3b	W
284	0-30	C	<5	30-80+	C	xxx				0	III	3b	W

285	0-30	C	2	30-80	C	xxx				0	III	3b	W
286	0-30	ca C	0	30-40	soft limestone	xx	40-80+	C	xxx	0	III	3a	W
287	0-30	C	2	30-60	C	xxx	60+	stop on stones		1	III	3b	W
288	0-28	C	2	28-90	C	xxx				0	III	3b	W
289	0-30	ca C	4	30-40	C	xxx	40-70 70+	ca C stop on stones	xxx	0	III	3a	W
290	0-28	C	<5	28-68+	C	xxx				1	III	3b	W
291	0-31	C	<5	3190+	C	xxx				0	III	3b	W
293	0-30	ca C	3	30-90	C+lst	xxx				0	III	3a	W
294	0-30	HCL-SCL	2	30-45	HCL-SCL	xxx	45-90	C	xxx	0	III	3b/3a	W
294A	0-30	SCL-HCL	4	30-40	HCL-SCL	xxx	40-80	C	xxx	0	III	3a/3b	W
295	0-30	HCL-SCL	1	30-45	HCL-SCL	xxx	45-70 70-100	C C	xxx xxxx	2	III	3b/3a	W
296	0-30	C	2	30-60	C	XXX	60-70 70-90	C+lst C	xxx xxxx	<1	III	3b	W
297	0-30	C	2	30-90	C	xxx				1	III	3b	W
298	0-29	C	<5	29-95+	C	xxx				1	III	3b	W
299	0-28	C	<5	28-80+	C	xxx				1	III	3b	W
300	0-26	C	<5	26-80+	C	xxx				1	III	3b	W
301	0-30	ca C	1	30-70	C	xxx	70-100	dk gr C	xxxx	1	III	3a	W
302	0-30	HCL-SCL	2	30-55	HCL-SCL	xxx	55-90	C	xxx	0	III	3b/3a	W
302A	0-28	SCL	2	28-45	HCL-SCL	xxx	45-90	C	xxx	0	III	3a	W
303	0-30	HCL	2	30-80	C	xxxx				2	III	3b	W
304	0-30	C	1	30-60	st C	xxx	60-90	C+S	xxx	1	III	3b	W
305	0-30	C	2	30-90	C	xxx				0	III	3b	W
305A	0-30	C	2	60	C	xxx				0	III	3b	W
306	0-30	HCL-C	1	30-70	C+lst	xxx	70+	Stopped on lst		0	III	3b	W
307	0-30	C	0	30-80	C	xxx				0	III	3b	W

Key to table

Gley indicators[1]

o	unmottled
x	a few ochreous mottles (or a few to common root mottles (topsoils))[3]
xx	common to many ochreous mottles and/or dull structure faces (slightly gleyed horizon)
xxx	greyish or pale matrix common to many ochreous mottles (gleyed horizon)
xxxx	dominantly grey or blueish matrix often with some ochreous mottles (gleyed horizon)

Slowly permeable layers[4]

a depth underlined (e.g. 50) indicates the top of a slowly permeable layer

A wavy underline (e.g. 50 indicates the top of a layer borderline to slowly permeable

Texture[2]

C - clay
ZC - silty clay
SC - sandy clay
CL - clay loam (H-heavy, M-medium)
ZCL - silty clay loam (H-heavy, M-medium)
SZL - sandy silt loam (F-fine, M-medium,C-coarse)
LS - loamy sand (F-fine, M-medium, C-coarse)
SL - sandy loam (F-fine, M-medium, C-coarse)
S - sand (F-fine, M-medium, C-coarse)
SCL - sandy clay loam
P - peat (H-humified, SF-semi-fibrous, F-fibrous)
LP - loamy peat; PL - peaty loam

Wetness Class[5]

I-VI

Limitations:

W - wetness/workability
D - droughtiness
De - depth
F - flooding
St – stoniness
Sl – slope
T – topography/microrelief

Suffixes & prefixes:

r-reddish, gn – greenish
o - organic
(v)st – (very) stony, chky-chalky
ca – calcareous: x-extremely, v-very, sl-slightly

Other abbreviations

fmn - ferri-manganiferous concentrations
dist - disturbed soil layer;
R – bedrock (CH – chalk, SST – sandstone LST – limestone, MST – Mudstone)

[1]Gley indicators in accordance with Hodgson, J.M., 1997. Soil Survey Field Handbook (third edition). Soil survey technical monograph No. 5
[2]Texture in accordance with particle size classes in Hodgson (1997)
[3] Occasionally recorded in the texture box
[4]Permeability is estimated for auger borings and must be confirmed by full pit observations in accordance with the definitions in Hodgson (1984)
[5]These classes are defined in Hodgson (1997)

A DESK REVIEW OF AGRICULTURAL QUALITY OF THE PROPOSED GATE BURTON CABLE ROUTE

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24th October, 2022

1.0 Introduction

1.1 This review provides provisional information on the agricultural quality of 172.0 ha of agricultural land south of Gate Burton, Lincolnshire. The land is proposed to be the location of the cable route for a grid connection linking a nearby solar farm to the national grid.

1.2 The agricultural land of the grid corridor will temporarily be removed from use during the laying of the cable. Predictive agricultural land quality and soil information is provided for the grid corridor.

PUBLISHED INFORMATION

1.3 The site area crosses a number of arable and grassland fields from Willingham Road at Gate Burton, running southwards through the River Trent and culminating at Cottom Power Station. The land with an average elevation of approximately 10 m AOD.

1.4 1:50,000 scale British Geological Survey information records the geology of the land as predominantly Mercia Mudstone with Scunthorpe and Penarth Mudstone in the north-east. The basal geology is overlain by Alluvium deposits flanking the River Trent and by sand and gravel deposits flanking the alluvium.

1.5 The National Soil Map (published at 1:250,000 scale) [1] shows the land to be:

- Wickham 2 Association in the north-east, comprising slowly permeable seasonally waterlogged fine loamy over clayey and clayey soils
- Blackwood Association where sand and gravel is mapped, comprising deep permeable sandy and coarse loamy soils
- Fladbury 2 Association where alluvium is mapped, comprising stoneless clayey soils variable affected by ground water

[1] Ragg, J.M., *et al.,* (1984). *Soils and their Use in Midland and Western England,* Soil Survey of England and Wales Bulletin No. 12, Harpenden.

2.0 Agricultural land quality

CLIMATE

2.1 The agricultural climate is an important factor in assessing the agricultural quality of land and has been calculated using the Climatological Data for Agricultural Land Classification[2]. The relevant site data for the sites is given below.

- Average annual rainfall: 571 mm
- January-June accumulated temperature >0°C 1418 day°
- Field capacity period (when the soils are fully replete with water) 116 days early Dec-early Apr
- Summer moisture deficits for: wheat: 115 mm potatoes: 109 mm

2.2 There are no climatic limitations to agriculture at this locality.

FLOOD RISK

2.3 Land within the site area is predominantly ditch drained and lies either side of the River Trent. EA flood maps show the majority of the land to be within flood zone 3, although flood defences are mapped alongside the river. It is likely that winter flooding when ditches may back up and flood fields, could impact land quality within the site. The significance of flooding should be confirmed by local land users for frequency and timing of flood events.

TOPOGRAPHY

2.4 There are no obvious topographic constraints to land quality.

ESTIMATION OF LAND QUALITY

2.5 This assessment considers the following published resources:

- Published soils and geology
- Climatic data for the site (which interact with soil properties to affect soil wetness and droughtiness constraints in the ALC system issued in 1988 by MAFF[3])

2.6 There are no detailed post 1988 MAFF ALC surveys conducted within the local area (5 km). Provisional ALC mapping shows the land to be grade 3 agricultural quality with an area of grade 4 along the River Trent. The semi to full detailed survey of land to the north of the

[2]Meteorological Office, (1989).*Climatological Data for Agricultural Land Classification*.
[3]MAFF, (1988).*Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

cable route (Main Site – 1901/1) has similar geology to the cable route. Within the Main Site survey area, land formed on mudstone and alluvium over mudstone was found to comprise heavy slowly permeable soils giving land of subgrade 3b agricultural quality. Similarly to the cable route, these soils are also mapped as within the Wickham 2 Association.

2.7 Land in the north of the Main Site survey area comprises soils formed on sand and gravel. This land is mapped to be within the Blackwood Association, similarly to the cable route. Areas of the site with this geology gives land of loamy and coarse sandy soils providing best and most versatile (BMV) agricultural land quality (grade 2 and subgrade 3a).

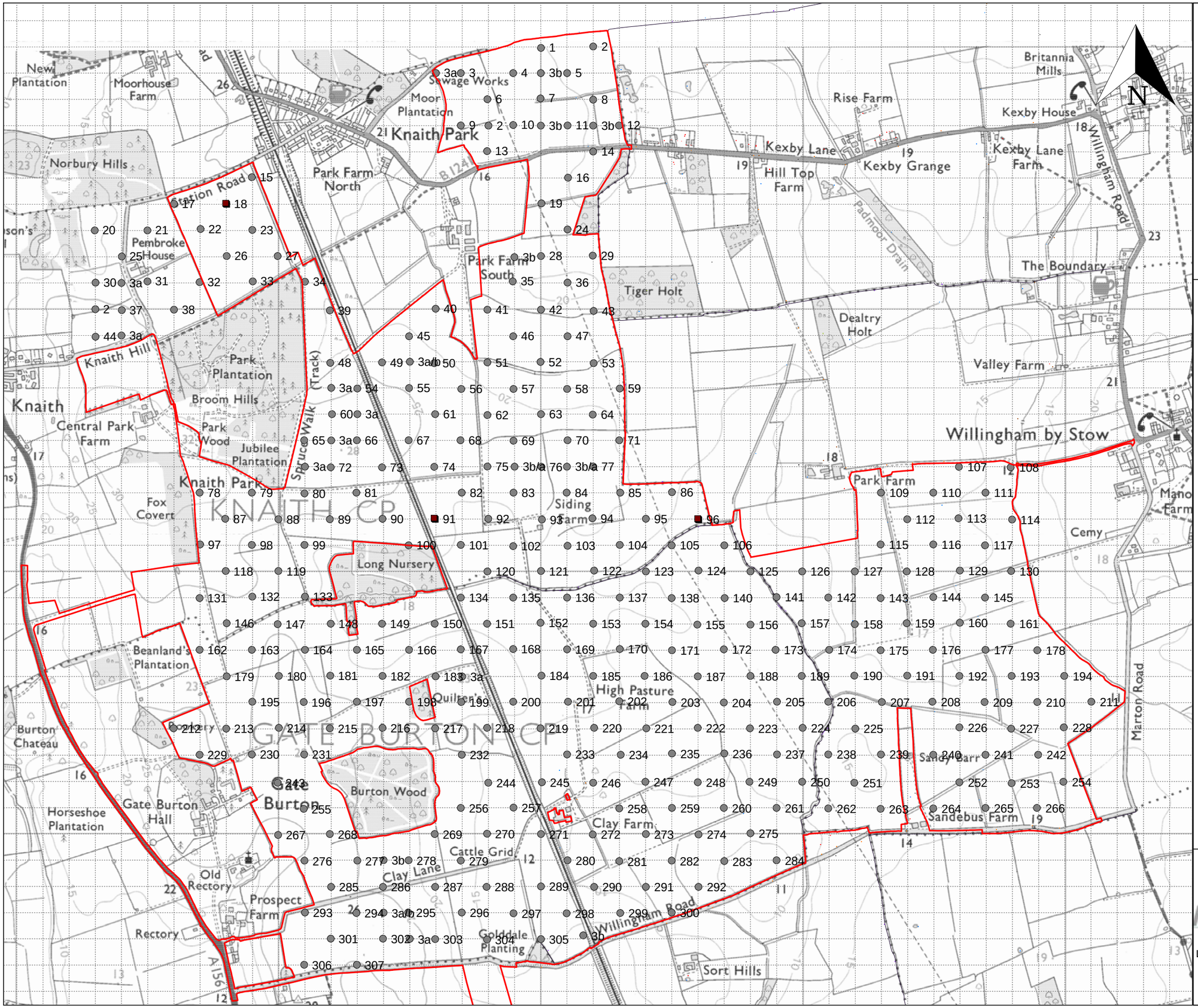
2.8 Given the similarity in geology and published soils maps, it is predicted that the land within the cable route will follow a similar pattern in land grades (see Maps 5A and 5B). The land formed in alluvium and directly over mudstone geology (see Maps 4A and 4B) will likely provide subgrade 3b agricultural land. Land formed on sand and gravel deposits is likely to give permeable loamy and coarse loamy soils of higher quality BMV land dependent on flood risk. The estimated land grade areas are provided in Table 2 below.

Table 2: Areas occupied by the different estimated land grades

Grade/subgrade	*Area (ha)*	*% of the land*
Estimated BMV	74.8	43
Estimated subgrade 3b	58.4	34
Non agricultural	38.8	23
Total	172.0	100

3.0 Conclusions

3.1 The cable route is likely to comprise a combination of BMV and poorer agricultural quality land. Land formed on sand and gravel and recorded as Blackwood Association will likely give land of best and most versatile quality, (grade 2 and subgrade 3a). Land formed in alluvial deposits and in the mudstone geology will typically give heavy slowly permeable soils of poorer subgrade 3b agricultural quality.



KEY

- Auger observation
- Soil/land grade description pit
- Survey area

Client:

low carbon

Site:

Land at Gate Burton

Map title:

Survey observations

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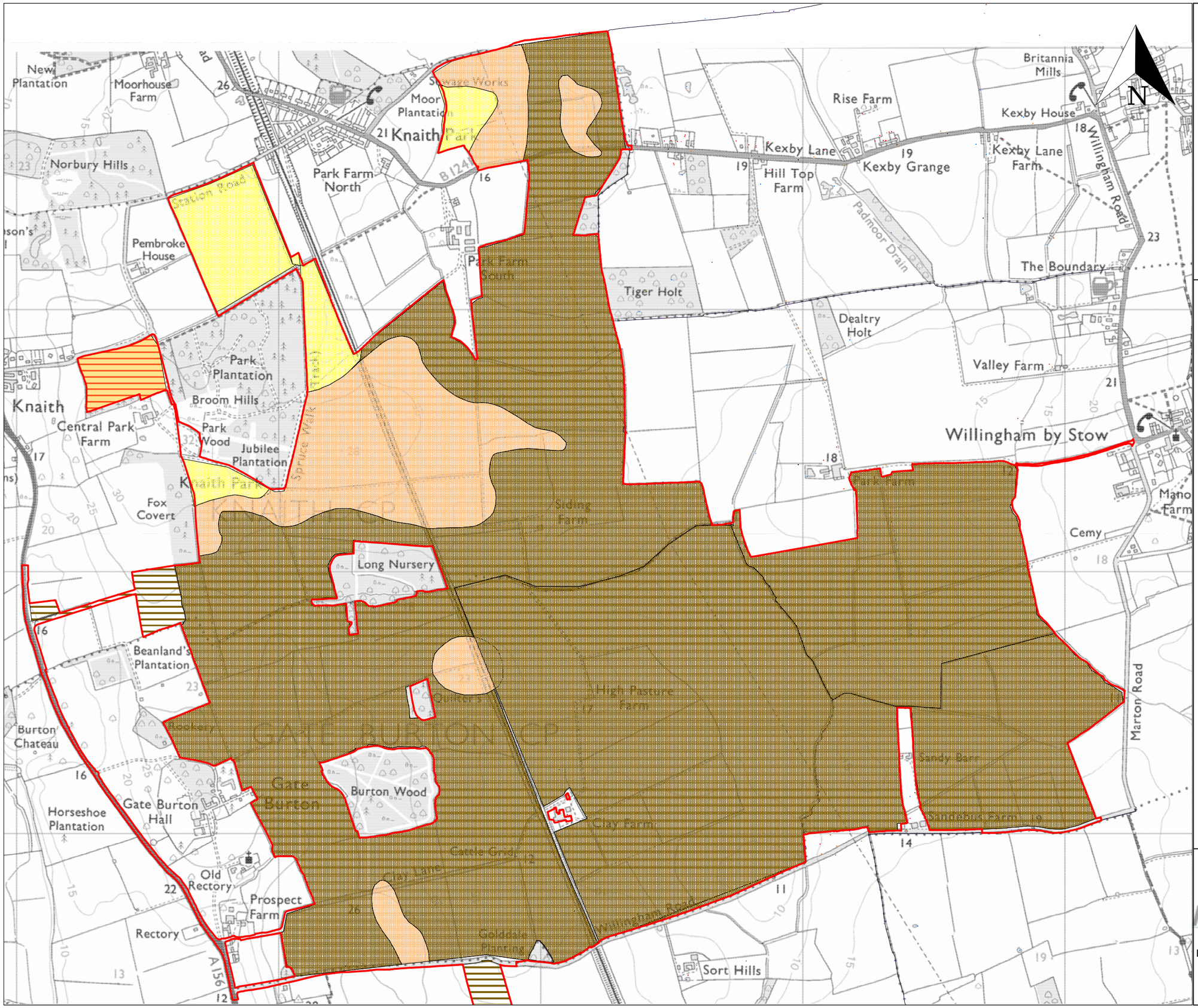
Lockington
Derby DE74 2RH
01509 670570

Scale: 1:14,000

Date: 14/12/2021



KEY

- Heavy slowly permeable soils
- Sandy soils
- Loamy over clayey soils
- Estimated lighter soils
- Estimated heavy soils
- Survey area

Client:

low carbon

Site:

Land at Gate Burton

Map title:

Map 2
Soil types

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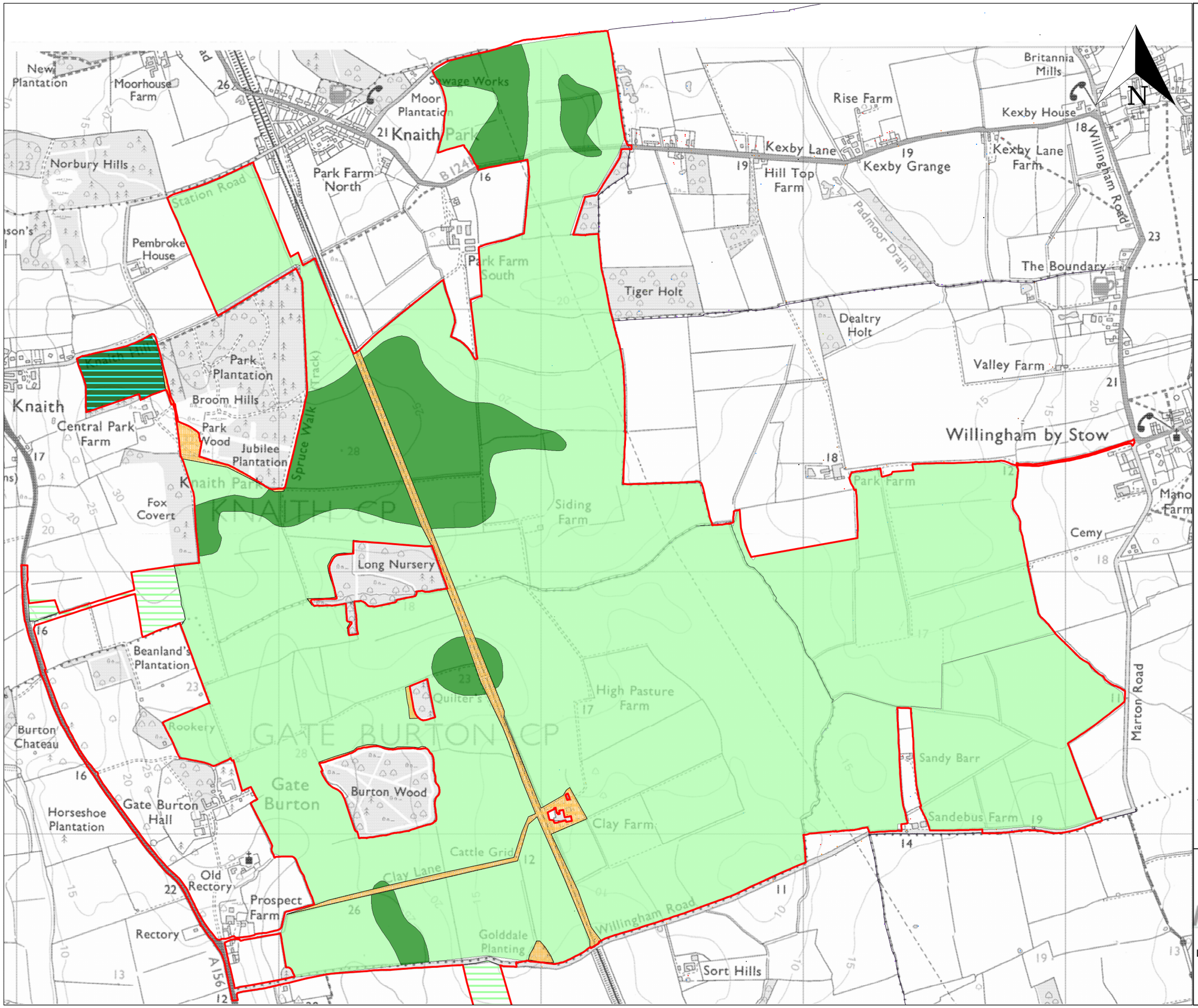
Scale: 1:14,000

Date: 07/11/2022



KEY

- Subgrade 3a
- Subgrade 3b
- Non agricultrual
- Predicted best and most versatile land
- Predicted subgrade 3b land
- Survey area

Client:

low carbon

Site:

Land at Gate Burton

Map title:

Map 3
Agricultural Land Classification

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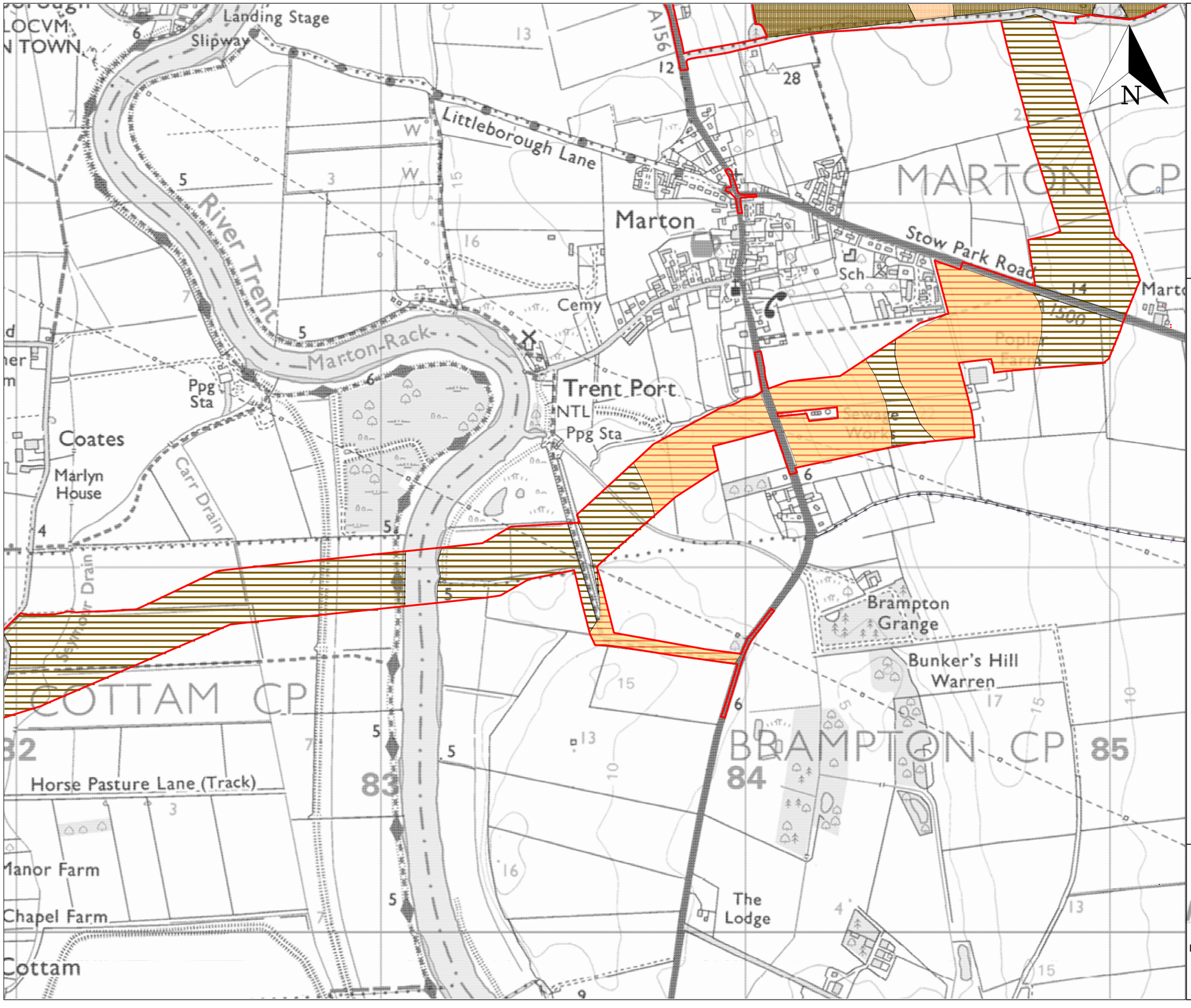
Scale: 1:14,000

Date: 24/10/2022



KEY

- Heavy slowly permeable soils
- Sandy soils
- Loamy over clayey soils
- Predicted heavy slowly permeable soils
- Predicted lighter permeable soils
- Survey area

Client:

low carbon

Site:

Land at Gate Burton

Map title:

Map 4A
Predicted soil types
(Cable Route)

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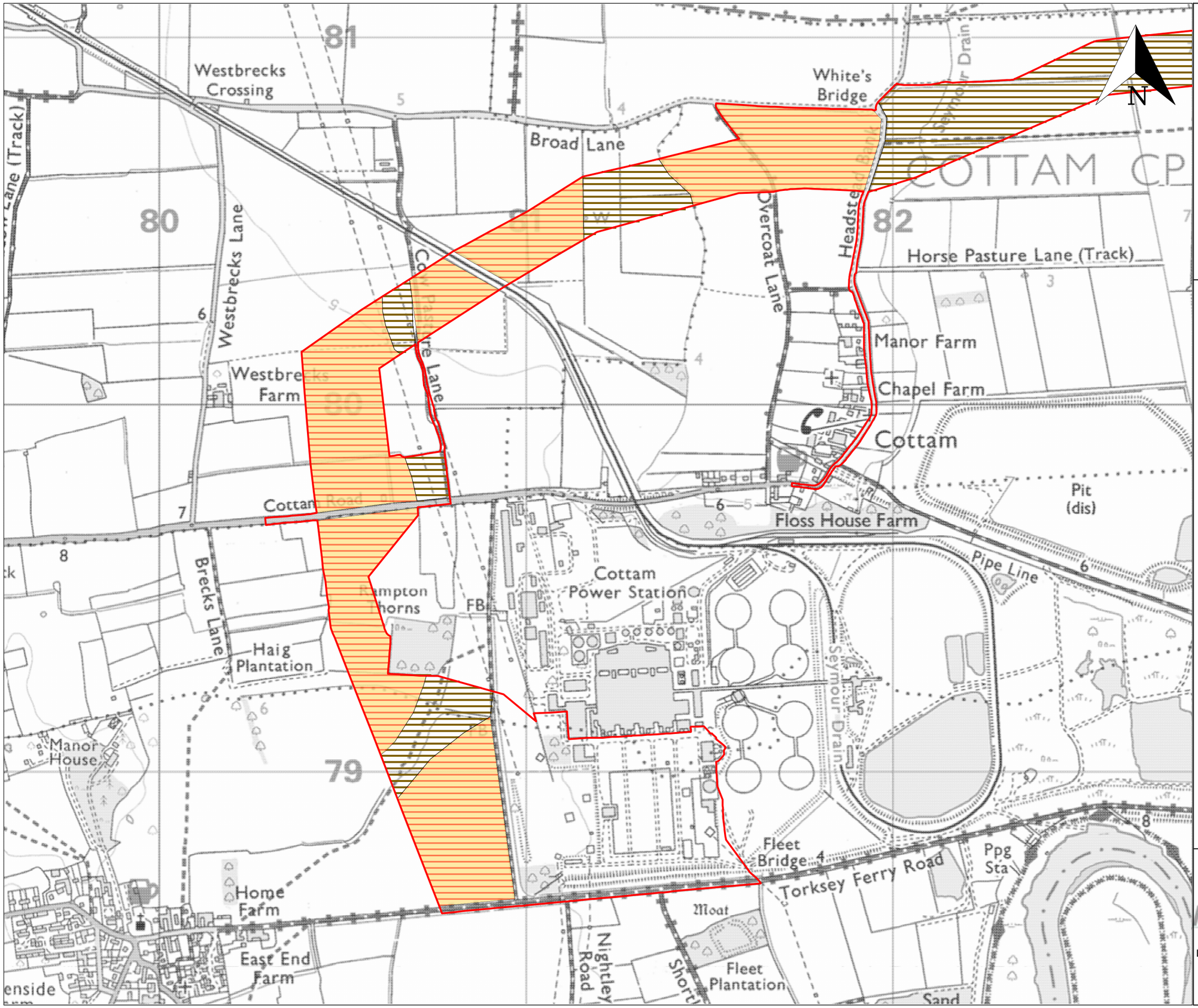
Scale: 1:10,000

Date: 24/10/2022



KEY

- Heavy slowly permeable soils
- Sandy soils
- Loamy over clayey soils
- Predicted heavy slowly permeable soils
- Predicted lighter permeable soils
- Survey area

Client:

low carbon

Site:

Land at Gate Burton

Map title:

Map 4B
Predicted soil types
(Cable Route)

Land Research Associates
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Lockington
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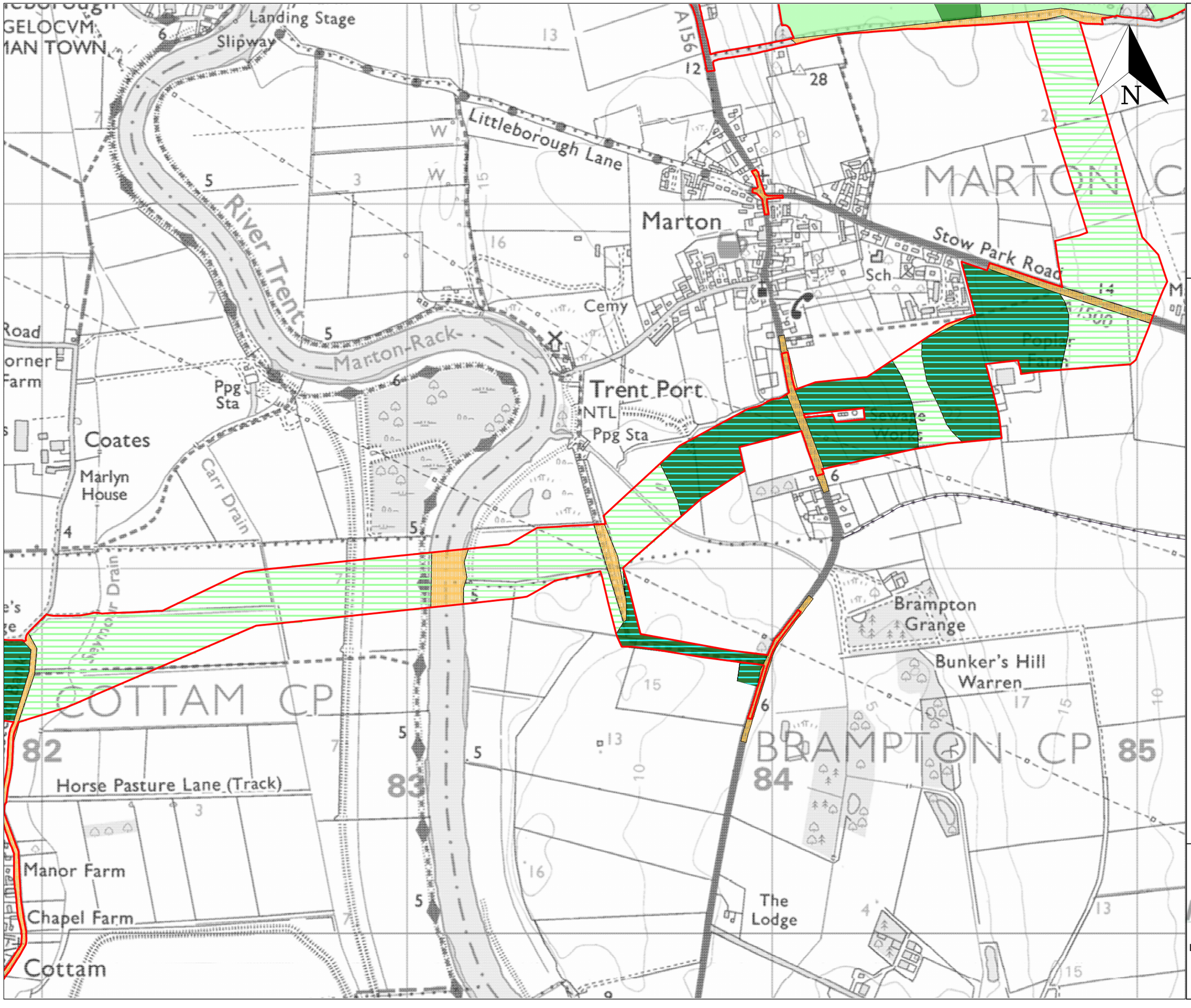
01509 670570

Scale: 1:10,000

Date: 24/10/2022



KEY

- Subgrade 3a
- Subgrade 3b
- Non agricultrual
- Predicted best and most versatile land
- Predicted subgrade 3b land
- Survey area

Client:

low carbon

Site:

Land at Gate Burton

Map title:

Map 5A
Predicted Agricultural Land Classification
(Cable Route)

Land Research Associates
Lockington Hall
Lockington
Derby DE74 2RH
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Scale: 1:10,000

Date: 24/10/2022

KEY

- Subgrade 3a
- Subgrade 3b
- Non agricultrual
- Predicted best and most versatile land
- Predicted subgrade 3b land
- Survey area

Client:

low carbon

Site:

Land at Gate Burton

Map title:

Map 5B
Predicted Agricultural Land Classification
(Cable Route)

Land Research Associates
Lockington Hall
Lockington
Derby DE74 2RH
01509 670570

Scale: 1:10,000

Date: 24/10/2022