

Rampion 2 Wind Farm Category 6: Environmental Statement Volume 4, Appendix 20.1: Detailed Agricultural Land Classification Report Date: August 2023 Revision A

Document Reference: 6.4.20.1
Pursuant to: APFP Regulation 5 (2), (a)
Ecodoc number: 004866510-01



Document revisions

Revision	Date	Status/reason for issue	Author	Checked by	Approved by
A	04/08/2023	Final for DCO Application	Land Research Associates Ltd	RED	RED

**AGRICULTURAL QUALITY
OF LAND WITHIN THE ONSHORE
ELECTRICAL CONNECTION OF
RAMPION 2**

Report 1687/1

12th July 2023

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**AGRICULTURAL QUALITY
OF LAND WITHIN THE ONSHORE ELECTRICAL
CONNECTION OF RAMPION 2**



Report 1687/1
Land Research Associates Ltd
Lockington Hall,
Lockington,
Derby
DE74 2RH
www.lra.co.uk

12th July 2023

SUMMARY

A soils and agricultural land quality survey has been undertaken of 231 hectares (ha) of land within the proposed Development Consent Order (DCO) Order Limits of Rampion 2 offshore wind farm development. The onshore (landward of mean high-water springs) cable route runs from the landfall at Climping, to the onshore substation at Oakendene, and the existing National Grid Bolney substation extension works, Mid Sussex. The survey work covers approximately 40% of the proposed DCO Order Limits. The remaining land could not be surveyed due to health and safety risks associated with an elevated (moderate or higher) risk of encountering UXO and land access restrictions. The survey was undertaken in February 2022, the maps (see appendix to this report) show all land surveyed to date including land surveyed within the original Preliminary Environmental Information Report (PEIR) (Rampion Extension Development Ltd (RED), 2021) Assessment Boundary that following design refinement is no longer included within the proposed DCO Order Limits.

The land within the proposed DCO Order Limits has mainly fine loamy over clay soils with wetness/workability restrictions to agricultural use, giving a mixture of subgrade 3a and 3b quality. Patches with deep loamy soils are of grade 2 quality, limited by slight droughtiness, stoniness and wetness. A limited area of grade 4 is encountered on steep sloping land.

Contents

1.0 Introduction	7
Site environment.....	7
Published information	7
2.0 Soils	8
Heavy slowly permeable soils.....	8
Loamy over slowly permeable soils	8
Deep permeable loams	8
Coarse loams	9
3.0 Agricultural land quality	10
Survey results.....	11
Grade 2	11
Subgrade 3a.....	11
Subgrade 3b.....	11
Grade areas	12
APPENDIX DETAILS OF OBSERVATIONS SOIL PIT DESCRIPTIONS	13
4.0 References	30

1.0 Introduction

- 1.1 This report provides information on the soils and agricultural quality of 231 ha of land within the proposed DCO Order Limits of Rampion 2. The onshore cable route runs from the cable landfall at Climping, to the onshore substation at Oakendene, and the existing National Grid Bolney substation extension, Mid Sussex. The land surveyed makes up approximately 40% of the proposed DCO Order Limits, land surveyed on the original Preliminary environmental Information Report (PEIR) Assessment Boundary is included on the maps (see appendix to this report) for information and completeness.

SITE ENVIRONMENT

- 1.2 The proposed DCO Order Limits crosses sections of arable fields, pasture and grassland paddocks. The survey area is undulating with elevation ranging from 0 m AOD at Littlehampton to over 150 m AOD where the route passes through the South Downs National Park.

PUBLISHED INFORMATION

- 1.3 1:50,000 scale British Geological Survey (BGS) (BGS, n.d) information records the underlying geology of the southern half of the of the proposed DCO Order Limits to be predominantly chalk formation with a patch of London Clay Formation, the southern half is overlain by river terrace and marine deposits. The northern part of proposed DCO Order Limits comprises Weald Clay Formation mudstone with patches of head and alluvium deposits. The northern and southern halves of the proposed DCO Order Limits are divided by a band of Folkestone and Lower Greensand sandstone.
- 1.4 The National Soil Map (published at 1:250,000 scale) records the following associations within the survey area
- The land in south is recorded to be either Newchurch Association (deep stoneless calcareous clayey and fine silty soils) or Efford 1 Association (well drained fine loamy soils over gravel) (Hodge et al., 1984);
 - The land in the centre of the survey area is recorded as Fyfield 1 Association (well drained coarse and fine loamy soils over interbedded sands and sandstones); and
 - The land in the north is recorded as predominantly Wickham 1 Association (slowly permeable seasonally waterlogged fine silty/loamy over clayey and clayey soils).

2.0 Soils

2.1 A soils and agricultural quality survey was carried out in February 2022 in accordance with the Ministry of Agriculture, Fisheries and Food (MAFF) (1988) Agricultural Land Classification guidelines. It was based on soil observations at 100 m intervals along a grid corridor, giving a density of one observation per hectare. During the Agricultural Land Classification (ALC) survey, soils were examined by hand augering and pits to a maximum depth of 1.2 m. A log of the sampling points and a map (Map 1A-G) showing their location is in an appendix to this report.

2.2 Soils were found to vary in texture and drainage, as described below.

HEAVY SLOWLY PERMEABLE SOILS

2.3 This soil type comprises heavy clay loam or clay topsoils that directly overlie dense slowly permeable clay subsoils. The subsoils are *gleyed* (pale or greyish colours with ochreous mottles), which is evidence of seasonal waterlogging. These soils are mainly judged to be poorly-draining under the local climate (Soil Wetness Class IV).

2.4 Example profiles from pits at observation points 40 and 135 (Map 1A, 1C) are described in an appendix to this report.

LOAMY OVER SLOWLY PERMEABLE SOILS

2.5 This soil type occurs extensively within the survey area. It typically comprises a fine loamy topsoil and permeable upper subsoil that overlies dense slowly permeable clay at depth. The subsoils are gleyed (pale or greyish colours with ochreous mottles), which indicate the land is seasonally waterlogged. These soils are judged to be imperfectly to moderately freely-draining (Soil Wetness Class III / II), dependent on depth to the slowly permeable layer.

2.6 Example profiles from pits at observation points 89, 226, 239 and 372 (Map 1B, 1F, 1G) are described in an appendix to this report.

DEEP PERMEABLE LOAMS

2.7 These soils occur in patches throughout the survey area. They comprise medium or fine loamy topsoils that have permeable subsoils of similar texture. They are permeable to depth although some show evidence of seasonal waterlogging at variable depth with *gleyed* horizons. These soils are freely to moderately-freely draining (Soil Wetness Class I/II).

2.8 Example profiles from pits at observation points 29, 156, 166 and 195b (Map 1A,

1D, 1E) are described in an appendix to this report.

COARSE LOAMS

- 2.9 These soils typically occur where sandstone geology is recorded. They comprise sandy loam topsoils that overlie sand subsoils. They are stoneless and freely-draining (Soil Wetness Class I).
- 2.10 An example profile is described from an observation at point 145 (see Map 1C), in an appendix to this report.

3.0 Agricultural land quality

- 3.1 To assist in assessing land quality, the MAFF (1988) 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 (1988) 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 (Meteorological Office, 1989).
- 3.3 The relevant survey area data at three locations has been included below for areas surveyed within the proposed DCO Order Limits.

Littlehampton at average elevation of 5 m AOD (grid reference: TQ 022055)

- Average annual rainfall: 769 mm
- January-June accumulated temperature >0°C 1540 day°
- Field capacity period 159 days
(when the soils are fully replete with water)
- Summer moisture deficits for: wheat: 118 mm
potatoes: 115 mm

Warningcamp at average elevation of 45 m AOD (grid reference: TQ 033073)

- Average annual rainfall: 819 mm
- January-June accumulated temperature >0°C 1494 day°
- Field capacity period 168 days
(when the soils are fully replete with water)
- Summer moisture deficits for: wheat: 110 mm
potatoes: 105 mm

Wineham at average elevation of 10 m AOD (grid reference: TQ 214205)

- Average annual rainfall: 794 mm
- January-June accumulated temperature >0°C 1524 day°
- Field capacity period 169 days
(when the soils are fully replete with water)
- Summer moisture deficits for: wheat: 114 mm
potatoes: 110 mm

- 3.4 The ALC survey described in **Section 2.1** was used in conjunction with the agro-climatic data above to classify the survey area using the revised guidelines for ALC issued in 1988 by MAFF (1988). There are no climatic limitations within the localities.

SURVEY RESULTS

- 3.5 The agricultural quality of the land is primarily determined by droughtiness, wetness/workability, stoniness, slope gradient and flooding. Other factors have been assessed but do not affect the land grade. Land of grades 2 and subgrades 3a and 3b has been identified, and a small area of grade 4.

Grade 2

- 3.6 This land grade comprises the deep permeable soils that have medium loamy topsoils and are moderately-freely draining. The soils are mainly limited by slight topsoil stoniness and wetness/workability, often in combination. The moderately high topsoil clay content under the local climate can limit the flexibility of machinery access for cultivation over winter. The topsoil stone content can impair precision crop drilling and distort root crops.
- 3.7 Also included are deep permeable soils that are freely-draining and are limited by slight droughtiness. The soils will store slightly below optimum moisture for crop uptake in dry summers under the local climate.

Subgrade 3a

- 3.8 This subgrade includes areas with moderately high topsoil clay content and imperfect drainage (Soil Wetness Class III) and areas of moderately-freely draining land (Soil Wetness Class II) with high topsoil clay content. Under the local climate this combination causes wetness/workability constraints, which limits machinery access for cultivations in winter and early spring, although late spring (as well as autumn) sowings are usually possible.

Subgrade 3b

- 3.9 This subgrade includes areas with moderately high clay content and poor-drainage (Soil Wetness Class IV) and areas with high clay content and imperfect to poor-drainage (Soil Wetness Class III/ IV). This combination causes significant wetness/ workability limitation, which means that spring access to land with cultivation machinery is rarely possible and arable use is therefore mainly limited to autumn sowings.
- 3.10 Flooding is an equally limiting factor for land near the coast with limited flood protection.

3.11 Also included are minor areas with steep slope gradients (of 8° degrees and greater), this land is limited as the slopes are not safe for the use of cultivation machinery and often have additional soil erosion risks.

Grade 4

3.12 This land grade comprises a minor area with very steep slope gradient of 12° and an area of highly undulating topography. This land could not be cultivated safely and is limited to use as grassland.

Grade areas

3.13 The grade areas of the surveyed land within the proposed DCO Order Limits are included in **Table 1** below and shown on maps 2A-G in an appendix to this report.

Table 1: Areas occupied by the different land grades within the cable route

<i>Grade/subgrade</i>	<i>Area (ha)</i>	<i>% of the land</i>
Grade 2	53.5	23
Subgrade 3a	22.1	10
Subgrade 3b	153.5	66
Grade 4	1.9	1
Total	231.0	100

**ANNEX A
DETAILS OF OBSERVATIONS
SOIL PIT DESCRIPTIONS**

Rampion 2: Details of observations at each sampling point

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
1	0-30	HCL	5-10	30-58	HCL	xx(x)	58-100+	C/SC	xxx	0	II/III	3a/b	W/FL??
2	Gravel/flood defences												
3	0-34	MC/SCL	5-10	34-40	HCL	xx	40-100+	HCL	xxx	0	II	3a	W
4	0-33	HZCL	<5	33-100+	ZCca	xxx				0	IV	3b	W
5	0-30	M/SCL	5-10	30-56	SCL	xxx	56-100+	SC	xxx	0	II/III	2/3a	W
6	0-38	MCL/SCL	5-10	38-68	HCL	xx(x)	68-100+	HCL	xxx	0	II	2	W
7	0-33	MZCL	<5	33-62	Cslca	xxx	62-100+	ZC	xxx	0	IV	3b	W
8	0-30	HZCL	<5	30-100+	ZC	xxx				0	IV	3b	W
9	0-30	SCL/HCL	<5	30-50+	SCL	xx	50+	Stopped hard		0	I	2	D
10	0-31	MSL.SCL	5-10	31-48	SCL	o	48-100+	MSL	o	0	I	2	D/St
11	0-45	HCL ca	<5	45-60+	Cca	xxx				0	IV	3b	W
12	0-32	C ca	<5	32-100+	Cca	xxx				0	IV	3b	W
13	0-30	SCL	5-10	30-51	SCL	x	51-86 86+	SCL Stopped on stones	xx	0	I	2	D/St
14	0-32	SCL	5-10	32-54	HCL	xxx	54+	Stopped on stones		2	II	2	W
15	0-31	HZCL	<5	31-100+	C	xxx				0	IV	3b	W
16	0-32	ZC	<5	32-100+	C	xxx				0	IV	3b	W
17	0-33	C	<5	33-100+	C	xxx				0	IV	3b	W
18	0-33	HCL	5-10	33-60	C	xxx	60-100+	SC	xxx	2	IV	3b	W
19	0-33	MCL	5-10	33-40	MSCL	xx	40+	Flinty		1	I	2	D
20	0-32	M/SCL	5-10	32-51	MCL	x	51-63 63-100+	HCL Cr	xxx xxx	1	II	2	W
21	0-32	SCL	<5	32-84	SCL	xx(x)	84-100+	SC	xxx	0	II	2	W
22	0-31	C ca	10-15	31-90+	C ca	xxx				0	IV	3b	W
23	Electric cable not recorded												
24	0-33	C ca	<5	33-55	C ca	xxx	55-100+	Cca	xxx	0	IV	3b	W
25	0-27	slstMCLca	5-10	27-70	slstMCLchky	o	70-90+	HCL(dist?)	xxx	0	II	2	W/D
26	0-30	Cca	0	30-90+	Cca	xxx				0	IV	3b	W
27	0-35	vslstMSL	<5	35-72	vslstMSL	x	72-100+	SCL	xx	0	I	2	D
27A	0-35	vslstSCL	<5	35-55	vslstSCL	x	55-90+	SC	xx	0	I	2	D
28	0-32	vslstSCL	<5	32-90+	vslstSCL	x				1	I	2	D
29	0-40	vslstMSL	<5	40-70	vslstSCL/MSL	x	70-90+	SCL	xx	1	I	2	D
29A	0-29	vslstSCL	<5	29-100+	vslstSCL	x				0	I	2	D
30	0-37	vslstSCL	<5	37-90+	SCL	o				0	I	2	D
31	0-37	slstSCL	<5	37-90+	vslstSCL	x				0	I	2	D
32	0-32	vslstSCL	<5	32-100+	vslstSCL	o				1	I	2	D
33	0-31	vslstSCL	<5	31-76	SCL	x	76-90+	MSL	x	1	I	2	D
34	0-33	vslstSCL	<5	33-90+	C	xxx				0	IV	3b	W
35	0-30	C	0	30-90+	C	xxx				0	IV	3b	W
36	0-31	ZC	0	31-90+	C	xxx				0	IV	3b	W
37	0-31	HZCL	0	31-60	C	xxx	60+	Waterlogged (stopped)		0	IV	3b	W

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
38	Flooded												
39	0-32	C	0	32-90+	C	xxx				0	IV	3b	W
40	0-30	C	0	30-90+	C	xxx				1	IV	3b	W
41	0-27	Cslca	0	27-90+	C	xxx				0	IV	3b	W
42	0-27	C	0	27-90+	C	xxx				0	IV	3b	W
43	0-38	C	0	38-64	MZCL	xxx	64-90+	C	xxx	0	III	3b	W
44	0-35	Cca	0	35-90+	C	xxx				0	IV	3b	W
45	0-32	C	0	32-70	C	xxx	70-90+	C	xxx	0	IV	3b	W
46	0-36	C	0	36-90+	C	xxx				0	IV	3b	W
47	0-31	HZCLca	0	37-50	ZCca	xxx	50-90+	C	xxx	0	III/IV	3b	W
48	0-26	HZCL	0	26-62	C	xxx	62-90+	C	xxx	0	IV	3b	W
49	0-33	C	0	33-90+	C	xxx				0	IV	3b	W
50	0-40	HZCLca	0	40-50	HZCL	xxx	50-90+	MZCL	xxx	1	II	3a	W
51	Bramble scrub-not accessible												
52	0-35	HZCLca	0	35-49	Cca	xxx	49-90+	C	xxx	0	III	3b	W
53	0-35	HZCLca	0	35-46	HZCL	xxx	46-90+	MZCL	xxx	0	II	3a	W
54	0-36	HZCLca	0	36-50	SCLca	xxx	50-90+	MSZL	xxx	0	II	3a	W
55	0-37	MZCLca	0	37-52	MZCL/ZL	xxx	52-100+	MS	xxx	0	II	2	D
56	0-33	Cca	0	35-58	C	xxx	58-90+	Cca	xxx	0	IV	3b	W
57	0-29	C	0	29-90+	C	xxx				0	IV	3b	W
58	0-26	C	0	26-80+	C	xxx				0	IV	3b	W
59	0-30	C	0	30-90+	C	xxx				0	IV	3b	W
60	0-23	mstMSL	5-10	23+	Stopped on stones					1	-	-	-
61	0-27	mstMSL	0	27-40	mstMSL	x	40-72 72+	mstSCL Stopped on stones	xx	1	I	2	D
62	0-18	HZCL(org)	0	18-45	C	xxx	45-80+	C	xxx	0	IV	3b	W FI?
63	0-30	HZCL	0	30-45	HZCL	xxx	45-80+	C	xxx	0	IV	3b	W FI?
64	0-13	MZCL	0	13-24	HZCL	xxx	24-50 50+	C Wet (stopped)	xxx	0	IV	3b	W FI?
65	0-30	ZC	0	30-44	Cca	xxx	44-80+	C	xxx	0	IV	3b	W FI?
66A	0-24	C	0	24-60	C(wet)	xxx	60+	Wet (stopped)		1	IV	3b	W FI?
66	0-36	C	0	36-80+	C	xxx				1	IV	3b	W
67	0-30	SCL	<5	30-39	SC	xxx	39-90+	C	xxx	1	IV	3b	W
68	0-28	SCL	<5	28-50	SC	xxx	50+	Wet (stopped)		1	IV	3b	W
69	0-28	SCL	<5	28-50	SC	xxx	50+	Wet (stopped)		2	IV	3b	W
70	0-32	SCL	<5	32-50	SCL	xxx	50-80+	SC	xxx	1	III	3a	W
71	0-28	SCL	<5	28-64	SCL	xxx	64-90+	SCL	xxx	1	III	3a	W
72	0-35	MSL	<5	35-55	MSL	-	55-90+	SCL	xxx	1	II/I	2	D
73	0-13	MZCL	0	13-30	HZCL	xxx	30-80+	C	xxx	0	IV	3b	W /FL ?
74	Reed swamp												
75	0-31	C	0	31-90+	C	xxx				1	IV	3b	W / FL?
76	0-31	C	<5	31-80+	C	xxx				0	IV	3b	W /FL?
77	0-28	C v sl ca	0	28-100+	C ca	xxx				0	IV	3b	W

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
78	0-31	HZCL	<5	31-100+	C ca	xxx				0	IV	3b	W
79	0-30	C ca	<5	30-80	C ca	xxx	80-100+	ZCL	xxx	0	IV	3b	W
80	0-30	C sl ca	0	30-100+	C chalky	xxx				0	IV	3b	W
81	0-26	C sl ca	<5	26-100+	C ca	xxx				0	IV	3b	W
82	0-24	MCL	5-10	30-70	MCL	x	70+	Stopped on stones		0	I	2	D
83	0-29	MCL	<5	29-51	SCL	xx	51-60 60-100+	SC C	xxx xxx	0	III/II	2/3a	W
84	0-28	MCL	5-10	28-61	SCL gravel	xxx				2	II	2	W
85	0-26	MCL	<5	26-44	SC/MCL	xx	44-100+	SCL	xxx	0	I	2	D
86	0-27	MCL	<5	27-61	SCL	xxx	61-100+	C	xxx	2	III	3a	W
87	0-25	MCL	<5	25-60	SCL	xx	60-100+	SCL	xxx	0	I	2	D
87b	0-30	MCL	<5	30-40+	MCL	x	40+	Stopped on stones		0	I	2	D
88	0-29	SCL	5-10	29-76	SCL	xxx	76-100+	HCL	xxx	0	II	2	W/D
89	0-32	slstSCL	<5	32-40	slstSCL	xx	40-63 63-90+	mstSCL mstSC	xxx xxx	2	II	2	W
90	0-32	MCL	5-10	32-56	SCL	xx	56+	Stopped on stones		1	I	2	D
91	0-30	slstSCL	<5	30-52	slstSCL	xxx	52-90+	mstSC	xxx	1	III	3a	W
92	0-40	MCL	<5	40-68	HCL	xxx	68-90+	SCL/gravel	xxx	0	II	2	W?
93	0-30	HCL	<5	30-54	C	xxx	54-70+	HCL/gravel	xx	1	II	3a	W
94	0-31	HCL	5-10	31-60+	C	xxx				0	IV	3b	W
95	0-28	slstHCL	<5	28-35	SCL/gravel(wet)	xxx	35+	Stopped on stones		2	-	-	-
96	0-16	HCL	0	16-30	HCL	xxx	30-68 68+	C Stopped on stones	xxx	2	IV	3b	W
97	0-15	H/MCL	<5	15-37	HCL	xxx	37-100+	C	xxx	0	IV	3b	W
98	0-30	MCL	<5	30-90+	C wet v sl ca	xxx				2	IV	3b	W
99	0-30	MCL	<5	30-100+	C	xxx				2	IV	3b	W
102	0-26	MCL	<5	26-33	MCL	xxx	33-90+	C	xxx	3	IV	3b	W
103	0-25	HZCL	<5	25-34	HZCL	xxx	34-100+	C	xxx	0	IV	3b	W
104	0-26	MZCL	<5	26-100+	C	xxx				0	IV	3b	W
105	0-32	HZCL	0	23-43	ZC	xxx	43-80+	C	xxx	1	IV	3b	W
106	0-28	MCL	<5	28-73	MCLchky	xxx	73-90+	HCL	xxx	2	II	2	W
107	0-30	mstC	10-15	30-40	mstC	x	40+	Stopped on stones		1	-	-	Flooding?
108	0-32	mstC	10-15	32-80+	slstC	xxx				3	IV	3b	W
114	0-26	HCL	<5	26-100+	C	xxx				4	IV	3b	W
115	0-26	HCL	<5	26-50	C	xxx	50-71 71-100+	SCL C grey	xxx xxx	6	IV	3b	W
116	0-28	HCL	<5	28-100+	C	xxx				5	IV	3b	W
117	0-28	HCL	<5	28-100+	C	xxx				5	IV	3b	W
118	0-2	HCL	<5	25-64	C	xxx	64+	Chalk		5	IV	3b	W
119	0-25	HCL	<5	25-100+	C	xxx				3	IV	3b	W
120	0-25	HCL	<5	25-100+	C	xxx				0	IV	3b	W
121	0-25	HCL	<5	25-95	C wet	xxx				0	IV	3b	W
122	0-22	HCL	<%	22-100+	C wet	xxx				2	IV	3b	W

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
123	0-20	HCL	0	20-90+	C	xxx				0	IV	3b	W
124	0-25	HCL	0	25-100+	C	xxx				3	IV	3b	W
125	0-20	SCL	<5	20-34	HCL grey	xxx	34-60 60-100+	SC C	xxx xxx	2	IV	3b	W
126	0-25	HZCL	<5	25-45	Cslca	xxx	45-80	ZLchalky	xx	9	II	3b	SI
127	0-20	HCL	<5	20-42	HCL	xxx	42-100+	C	xxx	8	III	3b	SI/W
128	0-30	HCL	<%	30-41	HCL	xxx	41-95+	C	xxx	3	III	3b	W
129	0-11	HCL ca	<5	11-33	Cchky	xxx	33+	Chalk		6	II		
130	0-30	HZCL ca	<5	30-40	HCca	xxx	40-65 65+	Cca Chalk	xxx	3	III	3b	W
131	0-30	HCL	0	30-100+	C	xxx				0	IV	3b	W
134	0-20	HZCL	0	20-33	C	xxx	33-90+	C	xxx	2	IV	3b	W
135	0-25	HZCL	0	25-38	C	xxx	38-100+	C	xxx	0	IV	3b	W
136	0-15	HZCL	0	15-60	C	xxx				0	IV	3b	W
137	0-29	HZCL	0	29-40	HZCL/C	xxx	40-90+	C	xxx	0	IV	3b	W
138	0-23	HZCL	0	23-72	C	xxx	72-90+	C	xxxx	0	IV	3b	W
139	0-36	HZCL	0	36-90+	C	xxx				2	IV	3b	W
140	0-33	HZCL	0	33-43	HZCL	xxx	43-90+	C	xxx	2	IV	3b	W
141	0-32	MCL	0	32-64	MCL	x	64-80+	MCL	xx	2	I	2	D
142	0-31	MSL	0	31-74	SCL	xx	74-100+	MSL	xxx	1	I	2	D
143	0-23	SCL	<5	23-41	MstSCL	xx(x)	41+	Stopped on stones		3	I/II	2	W/D
144	0-26	SCL	<5	26-90+	SCL	xx				1	I	2	D
145	0-32	CSL	0	32-62	CS	o	62-100+	CS	xx(x)	4	I	3b/4?	T
146	0-32	vslstLMS	<5	32-62	LMS	o	62-100+	MS	xx	12	I	4	SI
147	0-27	vslstMSL	<5	27-100+	vslstMSL	xx				6	I	2	D
148	0-27	SCL	0	27-58	SCL	xxx	58-90+	SC	xxx	0	III	3a	W (FL?)
149	0-22	vslstMSL	<5	22-75	vslstMSL	xx(x)	75+	Stopped on stones		6	I	2	D
150	0-30	MSL	0	30-76	SCL	xxx	76-100+	MSL	xx	3	I	2	D
151	0-26	SCL	<5	26-70	SCL	xxx	70+	Wet (stopped)		1	IV	3b	W
152	0-30	SCL	0	30-50	SCL	xxx	50-90+	SCL/SC	xxx	1	III	3a	W
153	0-28	HCL	0	28-48	C(gr)	xxx	48-80+	C(gr)	xxx	1	IV	3b	W
154	0-27	SCL	0	27-90+	SCL	xx				1	I	2	D
155	0-31	SCL	0	31-65	SCL	xx	65-90+	SCL	xxx	3	II	2	W
156	Pit									1			
157	0-30	slstSCL	<5	30-55	SCL	xxx	55-80+	SCL	xxx	2	II/III	2/3a	W
158	0-23	slstSCL	<5	23-75	SCL	o	75-90+	SCL	xx	2	I	2	D
159	0-26	vslstSCL	<5	26-54	SCL	xx	54-80+	SCL	xxx	3	II	2	W
160	0-25	vslstSCL	<5	25-55	SCL	xxx	55-80+	SCL	xxx	3	II/III	2/3a	W
161	0-30	MCL	<5	30-52	HCL	xx	52-90+	HCL/SCL	xx	2	I	2	D
162	0-27	MCL/SCL	<5	27-52	SCL	xxx	52-90+	HCL/SCL	xx	2	II/III	2/3a	W
163	0-40	SCL	<5	40-58	SCL	xxx	58-60 60+	mstSCL/SST SST	xxx	0	II	3b	D
164	Gas easement (not sampled)												

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
165	0-30	MCL	<5	30-53	MCL	o	53-68 68-90+	MCL HCL	xx xxx	1	II	2	W
166	0-31	MCL	0	31-62	MCL	xx	62-90+	HCL/SCL	xxx	1	I	2	D
167	0-33	vslstMCL/SCL	<5	33-90+	SCL	o				2	I	2	D
168													
169	0-20	MZCL	0	20-46	MZCL	xxx	46-80+	HZCL	xxx	3	III	3a	W
170	0-14	MZCL	0	14-40	MZCL	xxx	40-82 82-90+	HZCL C	xxx xxx	2	IV	3b	W
171	0-25	MZCL	0	25-50	HZCL	xxx	50-90+	C	xxx	4	III	3a	W
172	0-22	MZCL	<5	22-90+	C	xxx				5	IV	3b	W
173	0-23	MZCL	<5	23-36	HZCL	xxx	36-80+	C	xxx	4	IV	3b	W
174	0-34	slstHZCL	<5	34-50	vstSCL	xxx	50+	Stopped on stones		4			
175	0-20	MZCL	0	20-30	M/HZCL	xxx	30-90+	C	xxx	2	IV	3b	W
176	0-34	HZCL	0	34-40	HZCL	xxx	40-90+	C	xxx	2	IV	3b	W
177	0-17	MZCL	0	17-70	C	xxx				2	IV	3b	W
178	0-23	M/HZCL	0	23-90+	C	xxx				2	IV	3b	W
179	0-22	MCL	0	22-90+	C(r)	xxx				1	IV	3b	W
180	0-38	MCL	<5	38-90+	MCL	xxx				3	II	2	W
181	0-32	SCL	<5	32-42	SCL	xxx	42-90+	C	xxx	3	IV	3b	W
182	0-27	SCL	<5	27-45	SCL	xxx	45-61 61-80+	C HCL	xxx xxx	3	III	3a	W
183	0-33	SCL	<5	33-62	SCL	xxx	62-90+	SC	xxx	2	III	3a	W
184	0-25	MCL	<5	25-53	MCL	xx	53-90+	SCL/HCL	xxx	2	II	2	W
185	0-24	HZCL	0	24-35	HZCL	xxx	35-90+	C	xxx	3	IV	3b	W
186	0-30	MCL	0	30-50	MCL	xxx	50-90+	HCL	xxx	3	III	3a	W
187	0-15	MCL	<5	15-71	C	xxx	71+	Stopped on stones		3	IV	3b	W
188	0-27	HZCL	<5	27-47	HCL	xxx	47-90+	C	xxx	3	III	3b	W
189	0-31	HZCL	0	31-90+	C	xxx				1	IV	3b	W
190	0-30	HZCL	0	30-42	HZCL	xxx	42-90+	C	xxx	0	IV	3b	W
191	0-24	HZCL	0	24-29	HZCL	xxx	29-90+	C	xxx	0	IV	3b	W
192	0-27	HCL/SCL	<5	27-38	SCL	xxx	38-64 64+	HCL Stopped on stones	xxx	1	IV	3b	W
193	0-30	slstSCL	<5	30-70	slstSCL	xxx	70-90+			0	II	2	W
194	0-30	slstSCL	<5	30-70+	slstSCL(dist)	xx				0	I	2	D
195	0-25	MCL	0	25-90+	MCL	o				0	I	2	D
195b	0-29	MCL	0	29-100+	MCL	o				0	I	2	D
196	0-22	HZCL	0	22-90+	C	xxx				0	IV	3b	W/FL?
197	0-12	MZCL	<5	12-60+	C	xxx				0	IV	3b	W 200,023
198	0.31	lstSCL	<5	31-53	slstSCL	xx	53-85 85-90+	SCL C		1	I	2	D
199	0.32	slstSCL	<5	32-52	slstSCL	o	52-90+	SCL		0	I	2	D
200	0.25	MZCL	<5	25-35	HZCL	xxx	35-90+	C		1	IV	3b	W
201	0-23	MCL	0	23-90+	C	xxx				3	IV	3b	W
202	0-50+	SCL(dist)	0							0	-	-	-

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
203	Landfill												
204	0-25	MCL	0	25-90+	C	xxx				0	IV	3b	W
205	0-30	MCL	0	30-45	MCL	xxx	45-90+	C	xxx	0	III	3a	W
206	0-30	HZCL	0	30-45	HZCL	xxx	45-90+	C	xxx	0	III	3b	W
207	0-23	MCL	0	23-90+	C	xxx					IV	3b	W
208	0-25	MCL	0	25-45	SCL	xxx	45-90+	C	xxx	0	III	3a	W
209	0-28	MZCL	0	28-41	HZCL	xxx	41-90+	C	xxx	0	IV	3b	W
210	0-30	MZCL	0	30-56	MZCL	xxx	56-90+	FSZL	xxx	0	II	2	W
211	0-34	HZCL	0	34-90+	C	xxx				0	IV	3b	W
212	0-6	MZCL	0	6-35	C	xxx	35-60 60+	C Wet (stopped)	xxx	0	IV	3b	W
213	0-14	HZCL	0	14-29	C	xxx	29-90+	C	xxx	0	IV	3b	W
214	0-23	HZCL	0	23-40	HZCL	xxx	40-90+	C	xxx	1	IV	3b	W
215	Flooded												
216	0-23	MZCL	0	23-39	HZCL	xxx	39-80+	C	xxx	0	IV	3b	W
217	0-26	HZCL	0	26-38	HZCL	xxx	38-80+	C	xxx	1	IV	3b	W
218	0-28	M/HZCL	0	28-90+	C					0			
219	Disturbed												
220	0-28	HZCL	0	28-40	HZCL		40-90+	C	xxx	1	IV	3b	W
221	0-28	MCL	0	28-43	HCL		43-90+	HCL	xxx	1	III	3a	W
222	0-21	HZCL	0	21-90+	C					1	IV	3b	W
223	0-11	MZCL	0	11-90+	MZCL	xxx				2	IV	3b	W
224	0-15	MZCL	0	15-32	HZCL	xxx	32-80+	C(r)	xxx	3	IV	3b	W
225	0-23	MCL	0	23-39	MCL	xxx	39-90+	C	xxx	2	IV	3b	W
226	0-19	MZCL	0	19-38	MZCL	xxx	38-70+	C	xxx	1	IV	3b	W
227	0-21	HZCL	0	21-90+	C	xxx				1	IV	3b	W
228	0-25	MZCL	0	25-38	MCL	xxx	38-90+	C	xxx	1	IV	3b	W
229	0-26	HZCL	0	26-56	HZCL	xxx	56-80+	HZCL	xxx	0	III	3b	W
230	0-30	MZCL	0	30-38	MZCL	xxx	38-80+	C	xxx	2	IV	3b	W
231	0-20	MZCL	0	20-32	MZCL	xxx	32-90+	C	xxx	2	IV	3b	W
232	0-23	MZCL	0	23-38	MZCL	xxx	38-90+	C	xxx	1	IV	3b	W
232A	0-27	MZCL	0	27-43	HZCL	xxx	43-90+	C	xxx	2	III	3a	W
233	NOT ACCESSED												
234	NOT ACCESSED												
235	NOT ACCESSED												
236	NOT ACCESSED												
237	0-26	MZCL	0	16-51	MZCL	xxx	51-80+	HZCL	xxx	2	III	3a	W
238	0-29	MZCL	0	29-36	MZCL	xxx	36-56 56-90+	HZCL C	xxx xxx	3	IV	3b	W
239	0-23	MZCL	0	23-35	HZCL	xxx	35-90+	C	xxx	2	IV	3b	W
240	0-25	M/HCL	0	25-90+	C(r)	xxx				2	IV	3b	W
241	0-24	MZCL	0	24-42	HZCL	xxx	42-90+	C	xxx	2	IV	3b	W
242	0-27	MCL	0	27-38	MCL	xx	38-55 55-90+	MZCL MZCL	xxx xxx	2	III	3a	W

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
243	0-27	MCL	0	27-60	MCL	xxx	60-90+	MCL	xxx	3	II/III	2/3a	W
244	0-24	MZCL	0	24-46	HZCL	xxx	46-65 65+	C Stopped on stones	xxx	3	IV	3b	W
245	0-24	MCL	0	24-43	HZCL	xxx	43-90+	C(r)	xxx	4	III	3a	W
246	0-30	HZCL	0	30-55	HZCL	xxx	55-90+	C	xxx	0	III	3b	W
247	0-25	MZCL	0	25-80+	C	xxx				5	IV	3b	W
248	0-26	MZCL	0	26-90+	C	xxx				6	IV	3b	W
249	0-40	MZCL	0	40-60	HZCL	xxx	60-90+	HZCL	xxx	2	III	3a	W
250	0-27	HZCL	0	27-43	HZCL	xxx	43-90+	C	xxx	3	III	3b	W
251	0-31	MZCL	0	31-46	MZCL	xxx	46-90+	HZCL	xxx	2	III	3a	W
252	0-26	HZCL	0	26-90+	C	xxx				0	IV	3b	W
253	0-15	HZCL	0	15-80+	C	xxx				3	IV	3b	W
254	0-15	HZCL	0	15-90+	C	xxx				3	IV	3b	W
255	0-29	HCL	0	29-49	HCL	xxx	49-90+	C	xxx	0	IV	3b	W
256	0-25	MCL	0	25-45	MCL	xxx	55-80+	HCL	xxx	0	III	3a	W
257	0-50+	MCL(dist)	0							3	-	-	-
258	0-30	MCL	0	30-55	MCL	xxx	55-90+	HZCL	xxx	4	III	3a	W
259	0-30	SCL	0	30-60	SCL	xxx	60-81 81-90+	SCL C	xxx xxx	3	II/III	2/3a	W
260	0-26	MZCL	0	26-56	MZCL	xxx	56-90+	HCL	xxx	3	III	3a	W
261	0-24	MZCL	0	24-36	MZCL	xxx	36-90+	C	xxx	0	IV	3b	W
262	0-25	HZCL	0	25-33	HZCL	xxx	33-90+	C	xxx	1	IV	3b	W
263	0-23	MZCL	0	23-34	HZCL	xxx	34-80+	HZCL	xxx	2	IV	3b	W
264	0-25	MZCL	0	25-33	HZCL	xxx	33-90+	C	xxx	2	IV	3b	W
265	0-25	MZCL	0	25-61	MZCL	xxx	61-90+	HZCL	xxx	1	III	3a	W
266	0-21	MZCL	0	21-33	HZCL	xxx	33-80+	C	xxx	1	IV	3b	W
267	0-15	HZCL	0	15-28	HZCL	xxx	28-90+	C	xxx	1	IV	3b	W
268	0-15	HZCL	0	15-90+	C	xxx				3	IV	3b	W
269	0-25	HZCL	0	25-33	HZCL	xxx	33-80+	C	xxx	1	IV	3b	W
270	0-20	MZCL	0	20-43	HZCL	xxx	43-90+	C	xxx	1	III	3a	W
271	0-22	MZCL	0	22-30	M/HZCL	xxx	30-80+	C	xxx	2	IV	3b	W
272	0-25	HZCL	0	25-36	HZCL	xxx	36-80+	C	xxx	2	IV	3b	W
273	0-21	MZCL	0	22-40	HZCL	xxx	40-80+	C	xxx	2	IV	3b	W
274													
275													
276	0-15	M/HZCL	0	15-30	HZCL	xxx	30-90+	C	xxx	2	IV	3b	W
277	0-9	HZCL(org)	0	9-27	HZCL/C	xxx	27-90+	C	xxx	2	IV	3b	W
278	No access												
279	0-25	HZCL	0	25-90+	C	xxx				2	IV	3b	W
298	0-31	HZCL	0	31-50	HZCL	xxx	50-90+	C	xxx	0	IV/III	3b	W
299	0-18	HZCL	0	18-32	HZCL	xxx	32-90+	C	xxx	2	IV	3b	W
300	0-12	HZCL	0	12-45	HZCL	xxx	45-90+	C	xxx	4	III	3b	W
301	0-26	HZCL	0	26-90+	C	xxx				3	IV	3b	W
302	0-23	HZCL	0	23-35	HZCL	xxx	35-90+	C	xxx	4	IV	3b	W

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
303	0-25	MZCL	0	25-35	HZCL	xxx	35-90+	C	xxx	3	IV	3b	W
304	0-27	HZCL	0	27-50	HZCL	xxx	50-90+	C	xxx	4	III	3b	W
305	NOT ACCESSED												
309	0-21	MZCL	0	12-44	MZCL	xx(x)	44-90+	HZCL	xxx	3	III	3a	W
310	0-12	HZCL	0	12-27	HZCL	xxx	27-60+	C	xxx	3	IV	3b	W
311	0-23	HZCL	0	23-47	HZCL	xxx	47-80+	C	xxx	1	III	3b	W
314	0-25	MCL	0	25-80+	C(r)	xxx				2	IV	3b	W
314A	0-26	MZCL	0	26-42	C	xxx	42-90+	C(r)	xxx	3	IV	3b	W
315	0-23	MZCL	0	23-32	HZCL	xxx	32-90+	C	xxx	3	IV	3b	W
316	0-28	MZCL	0	28-90+	C(r)	xxx				3	IV	3b	W
317	0-19	MZCL	0	19-27	HZCL	xxx	27-80+	C	xxx	1	IV	3b	W
318	0-28	M/HZCL	0	28-40	HZCL	xxx	40-90+	C	xxx	1	IV	3b	W
319	0-25	MCL	0	25-41	MCL	xxx	41-67 67+	MZCL Stopped on stones	xxx	1	II/III	2/3a	W
320	0-29	HZCL	0	29-90+	C	xxx				4	IV	3b	W
321	0-24	HZCL	0	24-32	HZCL	xxx	32-90+	C	xxx	2	IV	3b	W
322	0-24	HZCL	0	24-35	HZCL	xxx	35-90+	C	xxx	2	IV	3b	W
323	0-24	HZCL	0	24-90+	C	xxx				1	IV	3b	W
324	0-31	MCL	0	31-52	MCL	xxx	52-90+	C	xxx	3	III	3a	W
325	0-26	HZCL	0	26-35	M/HZCL	xxx	35-90+	C	xxx	1	IV	3b	W
326	0-33	HZCL	0	33-51	HZCL	xxx	51-90+	C	xxx	0	IV/III	3b	W
327	0-21	HZCL	0	21-90+	C	xxx				1	IV	3b	W
328	0-30	HZCL	0	30-90+	C	xxx				0	IV	3b	W
329	0-27	HZCL	0	27-90+	C	xxx				1	IV	3b	W
330	0-28	HCL	0	28-78	C	xxx	78-90+	MZCL	xxx	2	IV	3b	W
331	0-27	MCL	0	27-90+	C	xxx				2	IV	3b	W
332	0-23	M/HZCL	0	23-90+	C	xxx				0	IV	3b	W
333	0-24	MZCL	0	24-90+	C	xxx				2	IV	3b	W
334	0-18	HCL	0	18-29	HCL	xxx	29-90+	C	xxx	3	IV	3b	W
335	0-20	MZCL	0	20-42	HZCL	xxx	42-90+	C	xxx	3	IV	3b	W
336	0-20	M/HZCL	0	20-38	HZCL	xxx	38-90+	C	xxx	2	IV	3b	W
337	0-19	MZCL	0	19-33	HZCL	xxx	33-90+	C	xxx	2	IV	3b	W
338	0-21	MZCL	0	21-45	HZCL	xxx	45-90+	C	xxx	2	III	3a	W
339													
340	0-26	MZCL	0	26-90+	C	xxx				1	IV	3b	W
341	0-26	MZCL	0	26-39	HZCL	xxx	39-90+	C	xxx	1	IV	3b	W
342	0-26	MZCL	0	26-65	M/HZCL	xxx	65-90+	H/MZCL	xxx	2	II/III	2/3a	W
343	No access												
344	No access												
345	0-21	HZCL	0	21-32	HZCL	xxx	32-90+	C	xxx	1	IV	3b	W
346	0-29	MZCL	0	29-90+	C	xxx				2	IV	3b	W
347	0-25	MZCL	0	25-32	MZCL	xxx	32-90+	C	xxx	2	IV	3b	W
348	0-15	MZCL	0	15-42	MZCL	xxx	42-90+	C		2	IV	3b	W

Obs No	Topsoil			Upper subsoil			Lower subsoil			Slope (°)	Wetness Class	Agricultural quality	
	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling			Grade	Main limitation
349	0-25	MZCL	0	25-36	HZCL	xxx	36-90+	C		2	IV	3b	W
350	0-24	HZCL	0	24-48	HZCL	xxx	48-90+	C		0	III	3b	W
351	0-25	HZCL	0	25-35	HZCL(wet)	xxx	35-90+	HZCL	xxx	2	IV	3b	W
352	0-21	MZCL	0	21-36	MZCL	xxx	36-62 62-90+	HZCL C	xxx xxx	1	IV	3b	W
353	0-20	HCL	0	20-35	HCL	xxx	35-50 50+	C Wet (stopped)	xxx	1	IV	3b	W
354	0-21	HZCL/HCL	0	21-28	HZCL/HCL	xxx	28-90+	C	xxx	1	IV	3b	W
355	0-25	HCL	0	25-50	HCL	xxx	50-80+	C	xxx	4	III	3b	W
356	0-25	HZCL	0	25-35	HZCL	xxx	35-80+	HZCL	xxx	3	IV	3b	W
357	0-26	MZCL	0	26-90+	MZCL	xxx				1	II	2	W
358	0-19	MZCL	0	19-30	MZCL	xxx	30-90+	HZCL	xxx	2	II/IV	2/3b	W
359	0-25	HZCL	0	25-44	HZCL	xxx	44-90+	ZC	xxx	1	III	3b	W
360	0-22	MZCL	0	22-40	HZCL	xxx	40-65 65+	HZCL Stopped on stones	xxx	1	IV	3b	W
361	0-22	MZCL	0	22-54	MZCL	xxx	54-90+	HZCL	xxx	2	III	3a	W
362	0-30	MZCL	0	30-42	HZCL	xxx	42-90+	ZC	xxx	1	IV	3b	W
363	0-28	MZCL	0	28-43	MZCL	xxx	43-90+	C	xxx	1	III	3a	W
364	0-21	MZCL	0	21-37	MZCL	xxx	37-62 62-90+	HZCL MZCL	xxx	1	IV	3b	W
365	0-25	MZCL	0	25-50	MZCL	xxx	50-90+	HZCL	xxx	1	II/III	2/3a	W
366	0-27	MZCL	0	27-43	MZCL	xxx	43-90+	HZCL	xxx	1	III	3a	W
367	0-26	MZCL	0	26-38	MZCL	xxx	38-90+	HZCL	xxx	1	IV	3b	W
368	0-28	MZCL	0	28-62	MZCL	xxx	62-90+	HZCL	xxx	1	III	3a	W
369	0-30	MZCL	0	30-40	HZCL	xxx	40-90+	ZC	xxx	0	IV	3b	W
370	0-20	MZCL	0	20-51	MCL	xxx	51-78 78+	HCL Stopped on stones	xxx	1	II/III	2/3a	W
371	0-22	MCL	0	22-90+	SCL	xxx				0	II	2	W
372	0-22	MZCL	0	22-35	M/HCL	xxx	35-90+	HCL	xxx	0	IV	3b	W
373	0-24	HZCL	0	24-35	HZCL	xxx	34-90+	ZC	xxx	0	IV	3b	W
374	0-26	MZCL	0	26-45	HZCL	xxx	45-90+	HZCL	xxx	0	II/III	2/3a	W
375	0-29	MZCL	0	29-40	HZCL	xxx	40-80+	C	xxx	2	IV	3b	W
376	0-30	MZCL	0	30-41	HZCL	xxx	41-90+	HZCL	xxx	1	IV	3b	W
377	0-28	HZCL	0	28-45	HZCL	xxx	45-80+	ZC	xxx	1	III	3b	W

Survey log key

Gley indicators¹

o	unmottled
x	1-2% ochreous mottles and brownish matrix (or a few to common root mottles (topsoils)) ³
xx	>2% ochreous mottles and brownish matrix and/or dull structure faces (slightly gleyed horizon)
xxx	>2% ochreous mottles and greyish or pale matrix (gleyed horizon) or reddish matrix and >2% greyish, brownish or ochreous mottles and pale ped faces or mottles or f-m concentrations (gleyed horizon)
xxxx	dominantly blueish matrix often with some ochreous mottles (gleyed horizon)

Slowly permeable layers⁴

a depth underlined (for example 50) indicates the top of a slowly permeable layer
A wavy underline (for example 50) indicates the top of a layer borderline to slowly permeable

¹Gley indicators in accordance with Hodgson, J.M., 1997. Soil Survey Field Handbook (third edition). Soil survey technical monograph No. 5

²Texture in accordance with particle size classes in Hodgson (1997)

³ Occasionally recorded in the texture box

⁴Permeability is estimated for auger borings and must be confirmed by full pit observations in accordance with the definitions in: Revised Guidelines for grading the quality of Agricultural Land (Maff 1988)

⁵Soil Wetness Classes are defined in Hodgson (1997)

⁷calcareous classes as defined in Hodgson (1997)

Texture²

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 Class⁵

I (freely drained) to VI (very poorly drained)

⁶stoniness classes as defined in Hodgson (1997)

Limitations:

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

Suffixes & prefixes:

r-reddish, gn – greenish
org - organic
(m, v, x)st – (moderately, very, extremely)

(vsl, sl, m, v, x)(very slightly, slightly, moderately very, extremely) calcareous

Other abbreviations

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

Soil pit descriptions

Pit 29 (see Map 1)

- 0-32 cm Greyish brown (10YR 5/2) medium sandy loam; 3% small and medium sub-angular flints; moderately developed fine sub-angular blocky structure; friable; smooth gradual boundary to:
- 32-56 cm Brown (7.5YR 5/4) medium sandy loam; very slightly stony; moderately developed coarse sub-angular blocky structure; friable; low packing density; smooth diffuse boundary to:
- 56-120 cm Brown (7.5YR 5/4) sandy clay loam with paler brown (10YR 5/3) ped faces; very slightly stony; weakly developed coarse and very coarse sub-angular blocky structure; friable; porous; medium packing density.

Pit 40 (see Map 1)

- 0-29 cm Dark greyish brown (10YR 4/2) clay; stoneless; moderately developed coarse sub-angular blocky structure; firm; calcareous; smooth clear boundary to:
- 29-47 cm Grey (10YR 6/1) clay with 15% distinct fine yellowish brown (10YR 5/8) mottles; stoneless; moderately developed coarse prismatic structure; very firm; no macropores; high packing density; non-calcareous; smooth diffuse boundary to:
- 47-100 cm+ Grey (10YR 6/1) clay with 40% distinct coarse strong brown (7.5YR 5/8) mottles; stoneless; moderately developed very coarse prismatic structure to structureless (massive); very firm; no macropores; high packing density; calcareous.

Pit 89 (see Map 1)

- 0-30 cm Dark greyish brown (10YR 4/2) sandy clay loam; 5% small and medium sub-angular flints; moderately developed coarse sub-angular blocky structure; friable; smooth clear boundary to:
- 30-55 cm Pale brown (10YR 6/3) sandy clay loam with 20% reddish yellow (7.5YR 6/8) mottles and 2-3% black ferri-manganiferous concentrations; 5-10% flints; moderately developed medium sub-angular blocky structure; friable; medium packing density; porous; smooth diffuse boundary to:

55-110 cm+ Light grey (10YR 7/1) sandy clay with 50% prominent reddish yellow (7.5YR 6/8) mottles and 20% black fine and medium ferri-manganiferous concentrations; 20% flints; weakly developed very coarse angular blocky structure; firm; no macro-pores; high packing density.

Pit 135 (see Map 1)

0-25 cm Dark grey (10YR 3/1) heavy silty clay loam; stoneless; moderately developed very coarse sub-angular blocky structure; firm; abundant fine fibrous roots; non-calcareous; smooth gradual boundary to:

25-38 cm Light greyish brown (10YR 6/2) clay with 20% distinct fine reddish yellow (7.5YR 6/8) mottles; stoneless; moderately developed coarse sub-angular blocky structure; friable; medium packing density; common fine fibrous roots; non-calcareous; smooth gradual boundary to:

38-100 cm+ Grey (10YR 5/1) clay with 10% distinct fine reddish yellow (7.5YR 6/8) mottles; stoneless; structureless (massive); very firm; no macropores; high packing density; non-calcareous.

Pit 145 (see Map 1)

0-32 cm Very dark greyish brown (10YR 3/2) coarse sandy loam; stoneless; weakly developed fine sub-angular blocky structure; very friable; smooth clear boundary to:

32-63 cm Brown (7.5YR 5/4) coarse sand; stoneless; weakly developed fine sub-angular blocky structure; very friable; smooth diffuse boundary to:

63-100 cm+ pale brown (10YR 6/3) coarse sand with 30% distinct fine yellowish brown (10YR 5/8) mottles; stoneless; structureless (single grain); loose.

Pit 156 (see Map 1)

0-28 cm Dark greyish brown (10YR 4/2) sandy clay loam to medium clay loam; 2% small and medium flints; moderately developed coarse sub-angular blocky structure; friable; smooth clear boundary to:

28-52 cm Brown (10YR 5/3) sandy clay loam with 20% distinct fine strong brown (7.5YR 5/8) mottles and greyish brown (10YR 5/2) ped faces; very slightly stony; moderately developed medium sub-angular blocky structure; friable; medium packing density; porous; smooth gradual boundary to:

52-70 cm Greyish brown (10YR 5/2) sandy clay loam with 40% distinct fine and medium strong brown (7.5YR 5/8) and reddish yellow (7.5YR 6/8) mottles; 15% small soft tabular sandstone fragments; moderately developed coarse angular blocky structure; friable; 1% fine bio-pores and worm channels; medium packing density; porous; smooth gradual boundary to:

70-100 cm+ Greyish brown (10YR 5/2) heavy clay loam with abundant distinct strong brown (7.5YR 5/8) and reddish yellow (7.5YR 6/8) mottles; 30-40% small soft tabular sandstone fragments (weathering rock bands; moderately developed coarse platy structure (possibly rock bedding structure); friable; medium packing density; no macropores.

Pit 166 (see Map 1)

0-32 cm Dark greyish brown (10YR 4/2) medium clay loam; 2% small and medium flints; moderately developed coarse sub-angular blocky structure; friable; smooth gradual boundary to:

32-52 cm Brown (10YR 5/3) medium clay loam; very slightly stony; moderately developed medium sub-angular blocky structure; friable; medium packing density; smooth diffuse boundary to:

52-100 cm+ Brownish yellow (10YR 6/6) heavy clay loam/sandy clay loam with 15% distinct medium and coarse yellowish brown (10YR 5/8) mottles and 10% pale brown (2.5Y 7/4) mottles and ped faces; stoneless; moderately developed coarse sub-angular blocky structure; friable; 1% very fine bio-pores; common worm channels; medium packing density.

Pit 195b (see Map 1)

0-29 cm Dark greyish brown (10YR 4/2) medium clay loam; stoneless; moderately developed medium and coarse sub-angular blocky structure; friable; smooth gradual boundary to:

29-45 cm Brown (7.5YR 5/3) medium clay loam; stoneless; moderately developed medium sub-angular blocky structure; friable; medium packing density; smooth diffuse boundary to:

45-100 cm+ Brown (7.5YR 5/4) medium clay loam; stoneless; weakly developed coarse sub-angular blocky structure; friable to firm (plastic); medium packing density.

Pit 239 (see Map 1)

- 0-23 cm Dark greyish brown (10YR 4/2) medium silty clay loam with 5% distinct fine yellowish red (5YR 5/6) mottles; stoneless; moderately developed very coarse sub-angular blocky structure; friable; common fine fibrous roots; smooth gradual boundary to:
- 23-37 cm Greyish brown (10YR 5/2) heavy silty clay loam with 10% distinct fine yellowish brown (10YR 5/8) mottles; stoneless; moderately developed coarse and very coarse sub-angular blocky structure; friable; 1-2% fine and medium bio-pores; medium packing density; common fine fibrous roots; smooth gradual boundary to:
- 37-52 cm Grey (10YR 5/1) clay with 10% distinct fine yellowish brown (10YR 5/8) and strong brown (7.5YR 5/8) mottles and 2% fine black ferri-manganiferous concentrations; stoneless; weakly developed very coarse angular blocky structure; very firm; <0.5% macro-pores; high packing density; smooth gradual boundary to:
- 52-100 cm+ Reddish brown (5YR 5/3) clay with grey (5YR 5/1) ped faces and 2% fine black ferri-manganiferous concentrations; stoneless; weakly developed very coarse prismatic structure to structureless (massive); very firm; no macropores; high packing density.

Pit 226 (see Map 1)

- 0-27 cm Greyish brown (2.5YR 4/2) medium silty clay loam; stoneless; strongly developed medium and fine sub-angular blocky structure; friable; abundant fine fibrous roots; smooth gradual boundary to:
- 27-37 cm Greyish brown (2.5YR 5/2) medium silty clay loam with 20% distinct fine reddish yellow (7.5YR 5/8) mottles; stoneless; moderately developed medium sub-angular blocky structure; friable; medium packing density; common fine fibrous roots; smooth gradual boundary to:
- 37-82 cm Pale brown (2.5Y 7/3) clay with 20% distinct fine yellowish brown (10YR 5/8) mottles and 5% fine black ferri-manganiferous concentrations; stoneless; weakly developed very coarse prismatic structure; very firm; no macro-pores; high packing density; few fine fibrous roots; smooth clear boundary to:
- 82 cm+ Weathering greyish siltstone; hard below 90 cm.

Pit 372 (see Map 1)

- 0-25 cm Dark greyish brown (10YR 4/2) medium silty clay loam; stoneless; moderately developed coarse sub-angular

blocky structure; friable; abundant fine fibrous roots; smooth gradual boundary to:

25-45 cm Pale brown (2.5Y 7/4) medium silty clay loam with 15% distinct fine and medium yellowish brown (10YR 5/8) mottles and light grey (10YR 7/1) ped faces; stoneless; moderately developed coarse sub-angular blocky structure; friable to firm; medium packing density; 1% fine bio-pores; common fine fibrous roots; smooth gradual boundary to:

45-100 cm+ Grey (10YR 6/1) heavy clay loam with 20% distinct medium strong brown (10YR 5/8) mottles and 2-3% black ferri-manganiferous concretions; stoneless; weakly developed very coarse sub-angular blocky structure firm; no macropores; high packing density; few fine fibrous roots.

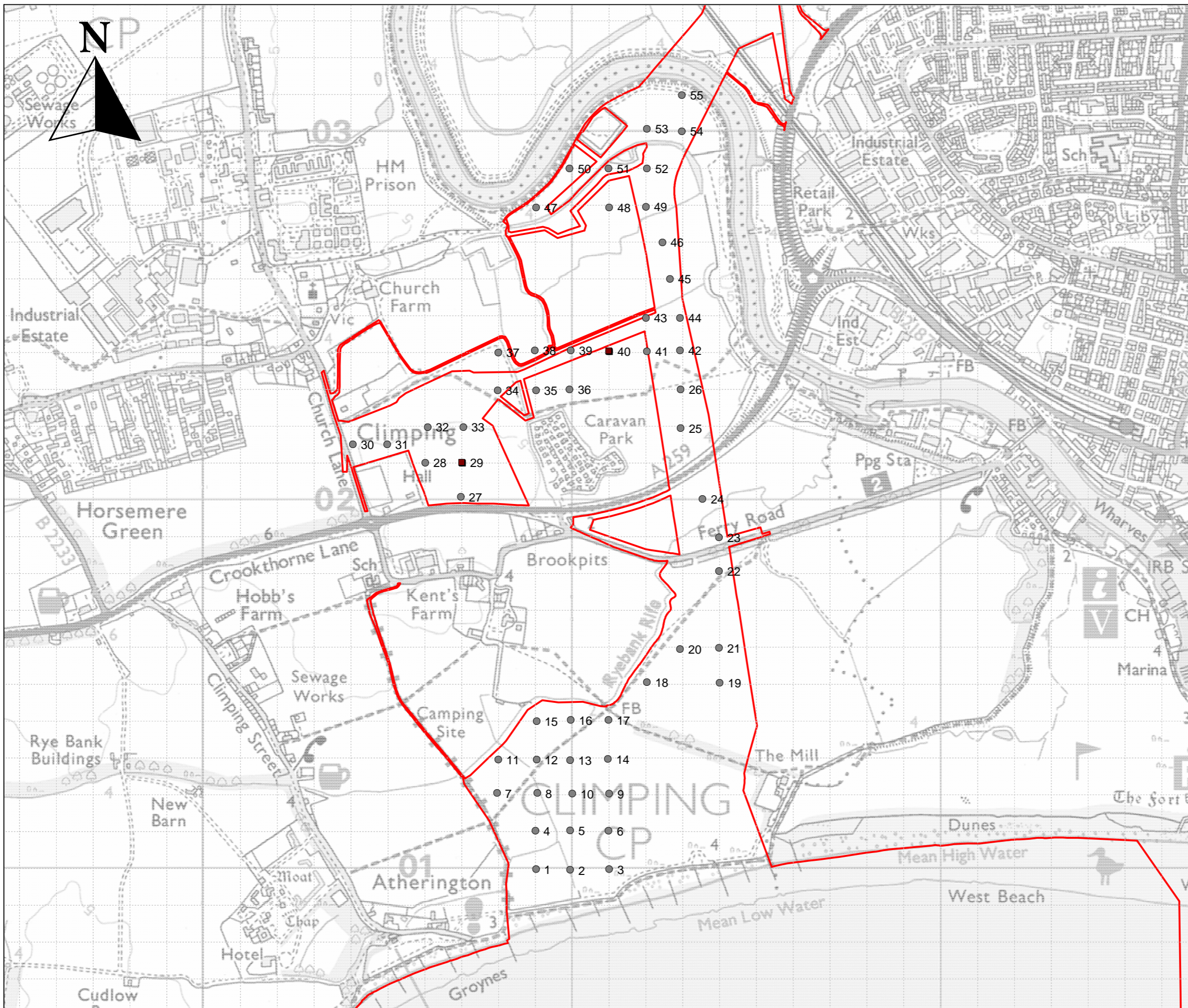
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KEY

- Auger observation
- Soil description pit
- Survey area

Site:

Rampion II

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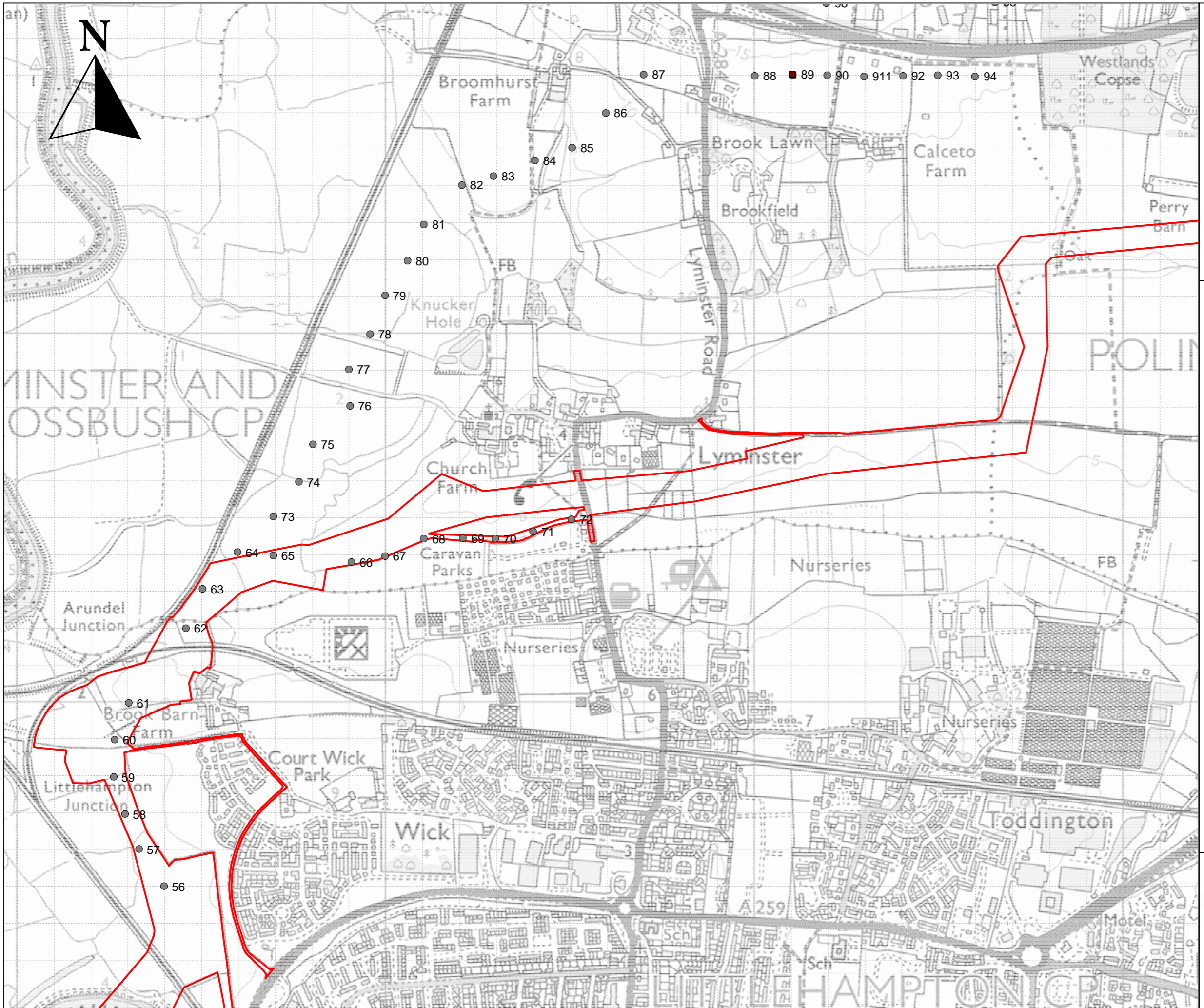
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Survey observations**



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01509 670570

Scale: 1:12,000

Date: 14/07/2023



- KEY**
- Auger observation
 - Soil description pit
 - Survey area

Site:
Rampion II

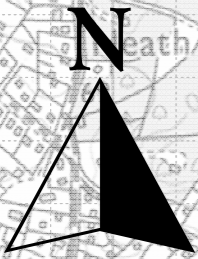
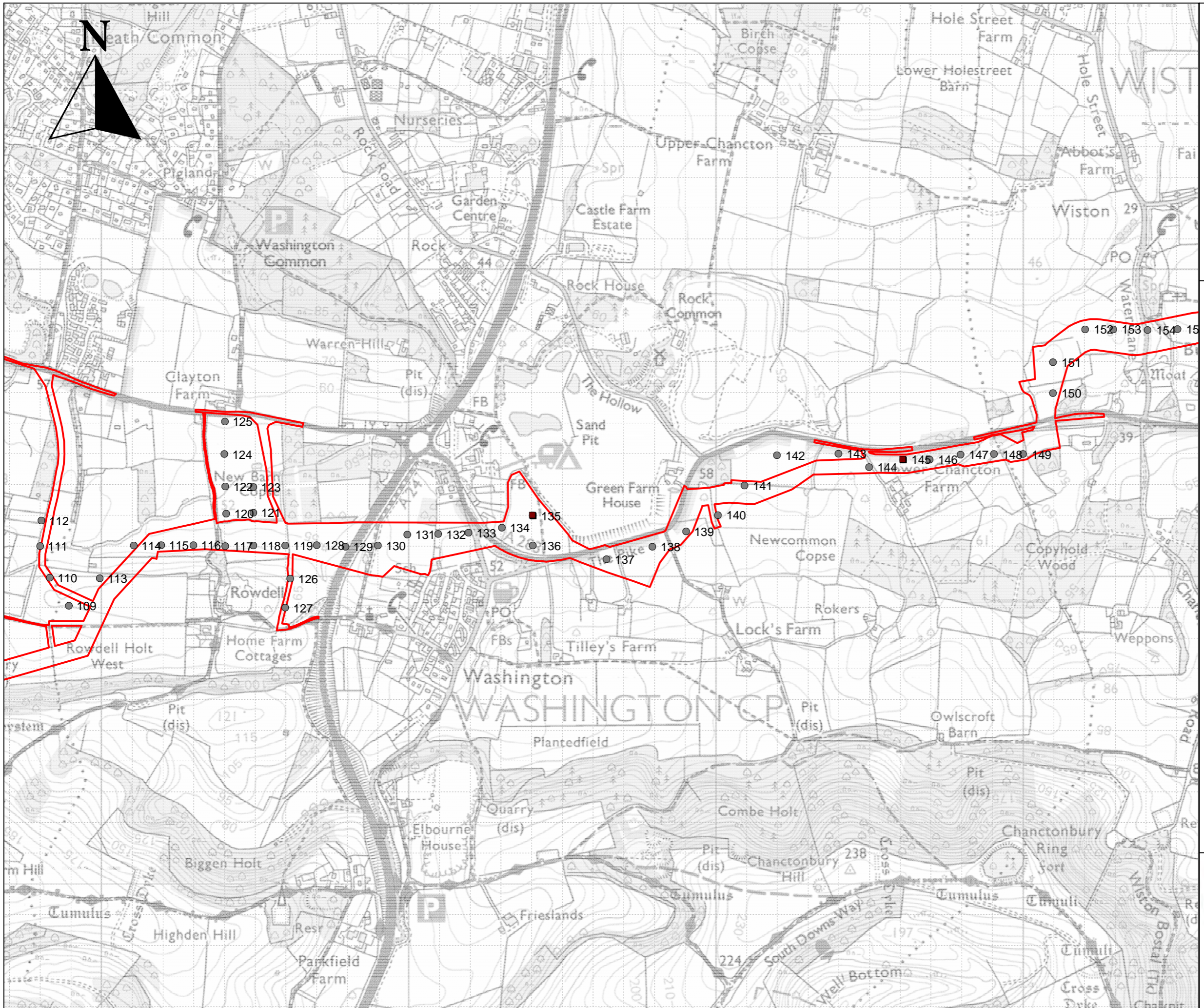
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Survey observations**



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Date: 14/07/2023



KEY

- Auger observation
- Soil description pit
- Survey area

Site:

Rampion II

Map title:

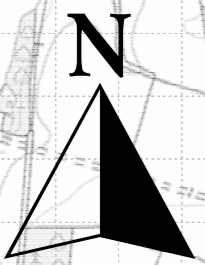
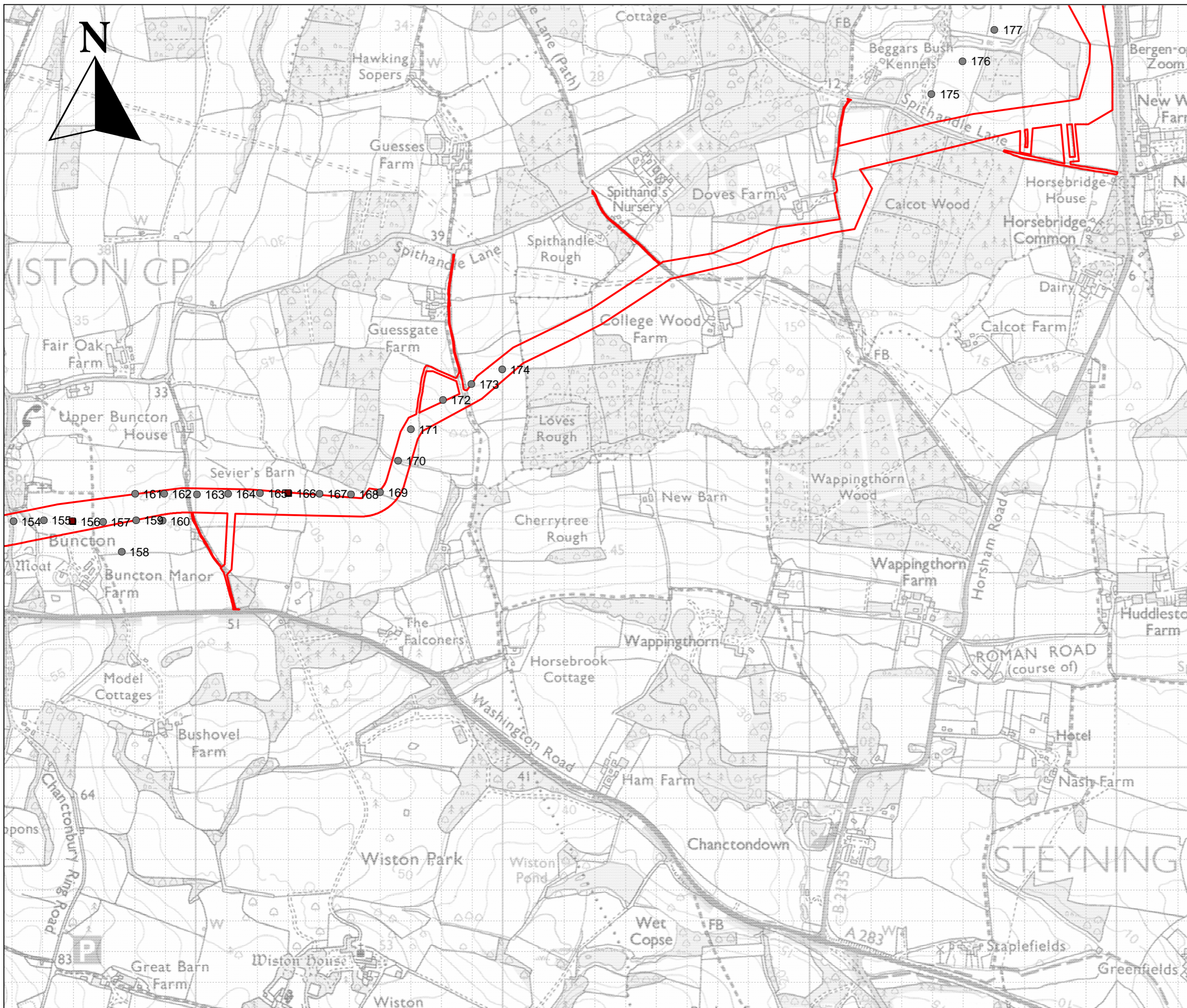
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Survey observations**



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KEY

- Auger observation
- Soil description pit
- Survey area

Site:

Rampion II

Map title:

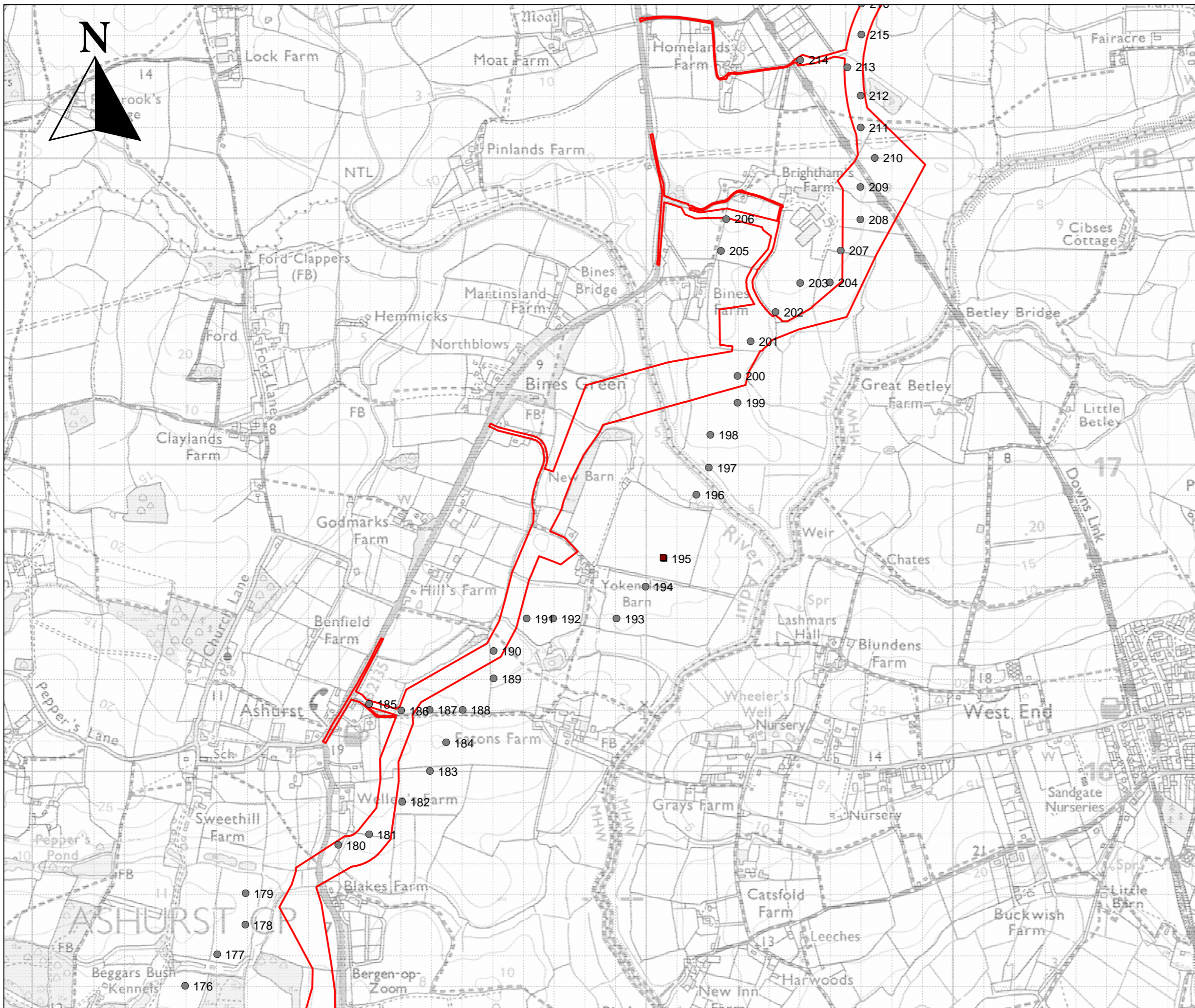
**Map 1D
Survey observations**



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Date: 14/07/2023



KEY

- Auger observation
- Soil description pit
- ▭ Survey area

Site:

Rampion II

Map title:

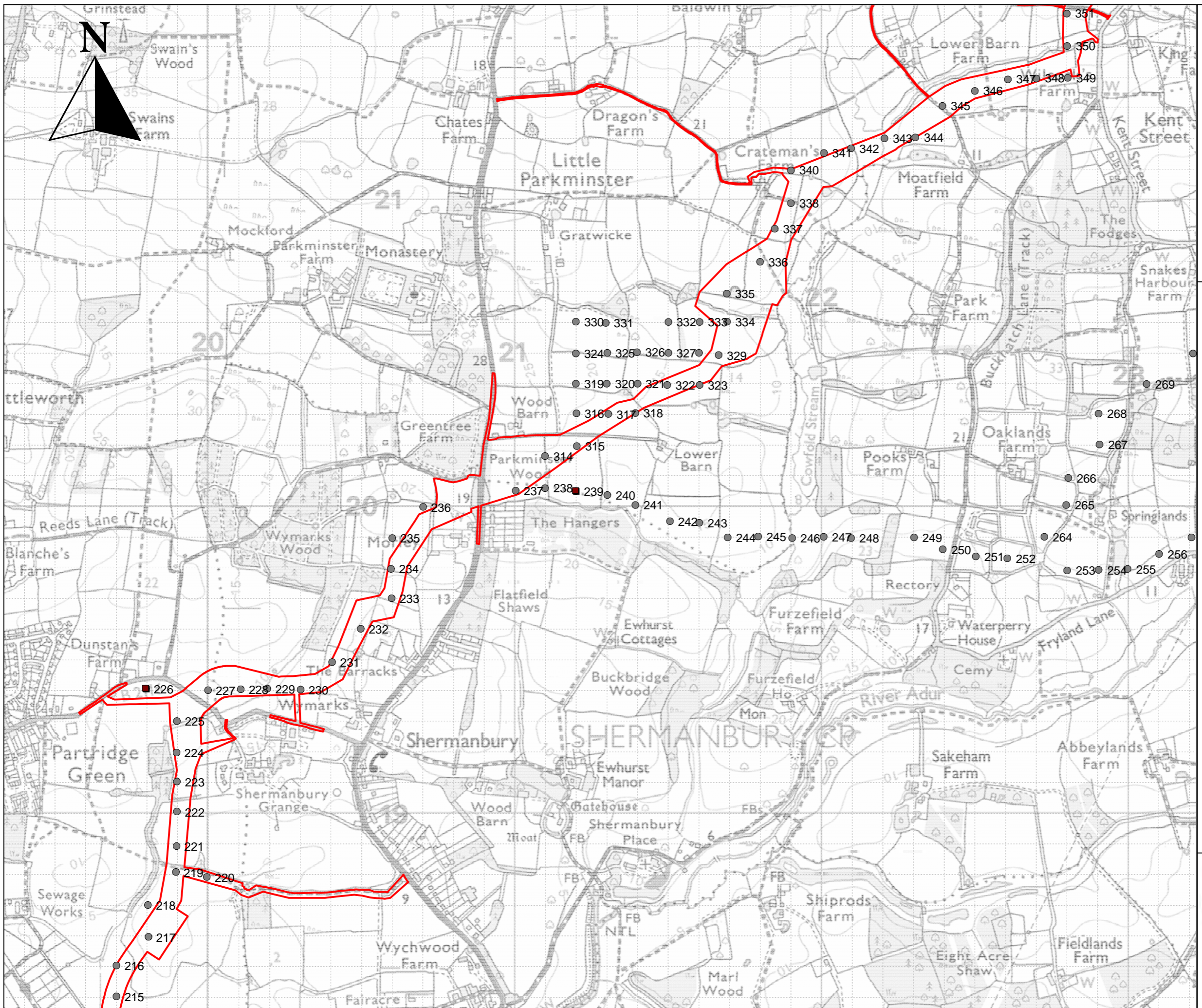
**Map 1E
Survey observations**



Scale: 1:12,000

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KEY

- Auger observation
- Soil description pit
- Survey area

Site:

Rampion II

Map title:

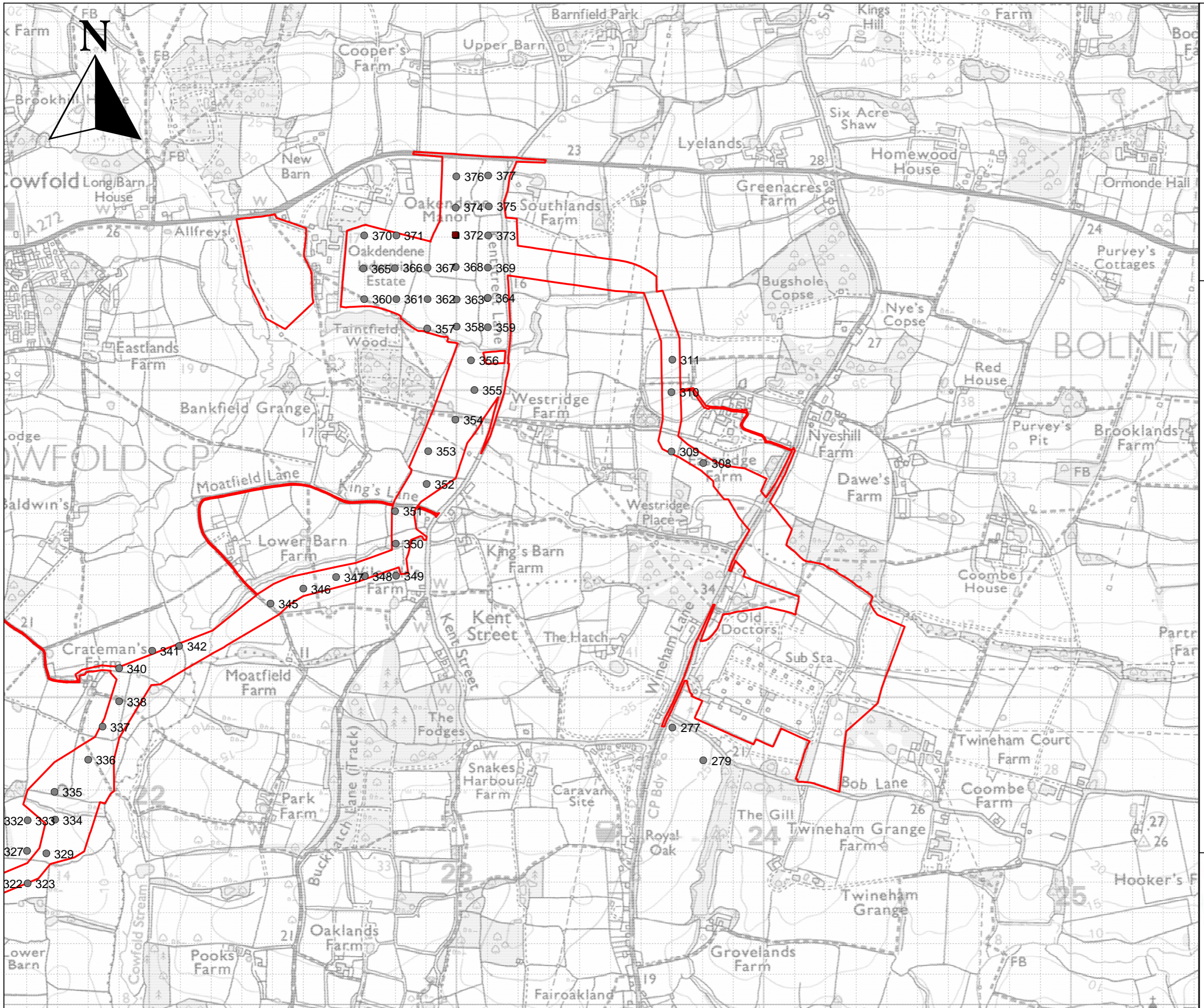
**Map 1F
Survey observations**



Scale: 1:12,000

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- KEY**
- Auger observation
 - Soil description pit
 - ▭ Survey area

Site:
Rampion II

Map title:
**Map 1G
Survey observations**



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Date: 14/07/2023



- KEY**
- Grade 2
 - Subgrade 3a
 - Subgrade 3b
 - Survey area

Site:
Rampion II

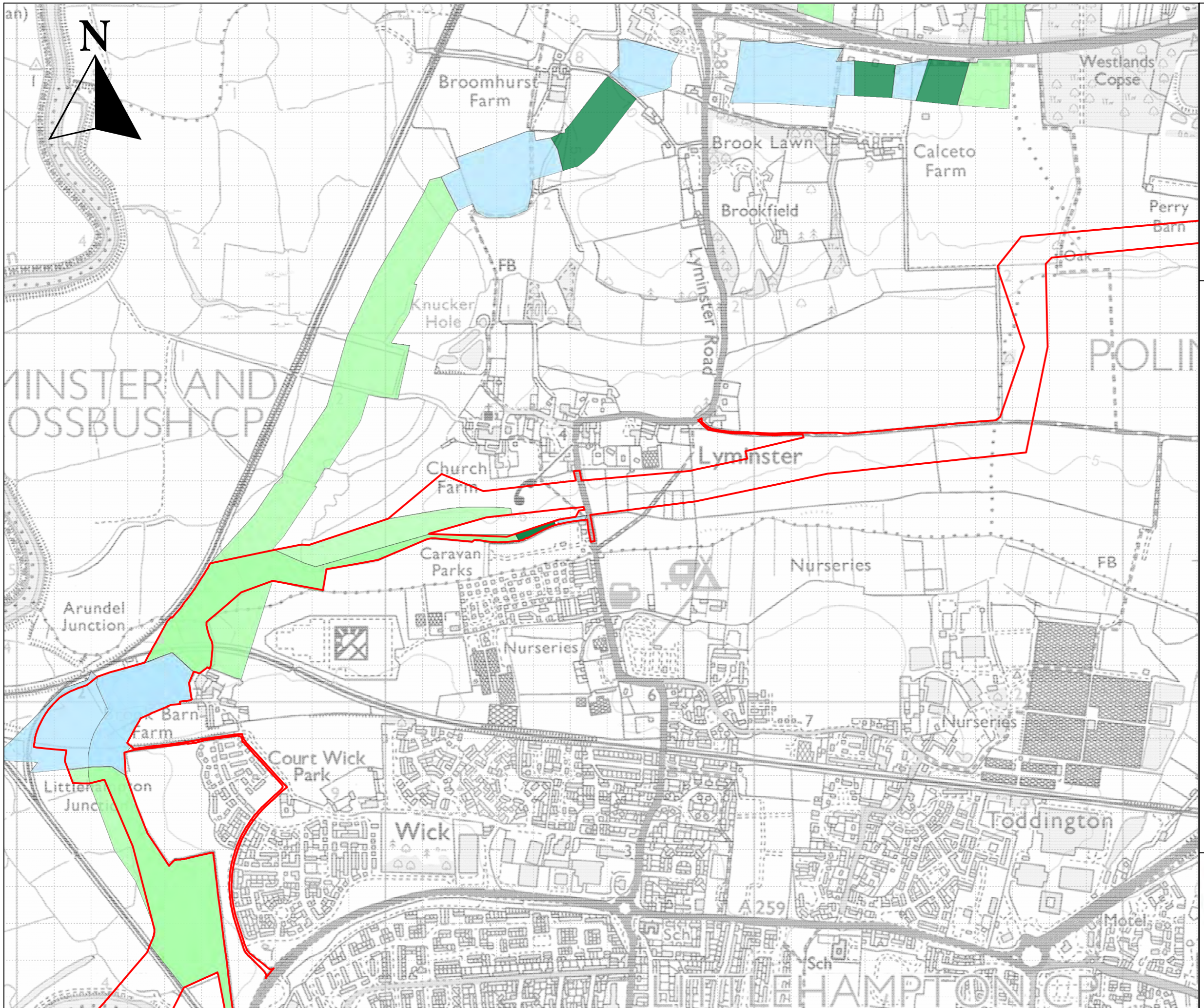
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**Map 2A
Agricultural Land Classification**



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Scale: 1:12,000

Date: 14/07/2023



- KEY**
- Grade 2
 - Subgrade 3a
 - Subgrade 3b
 - Survey area

Site:
Rampion II

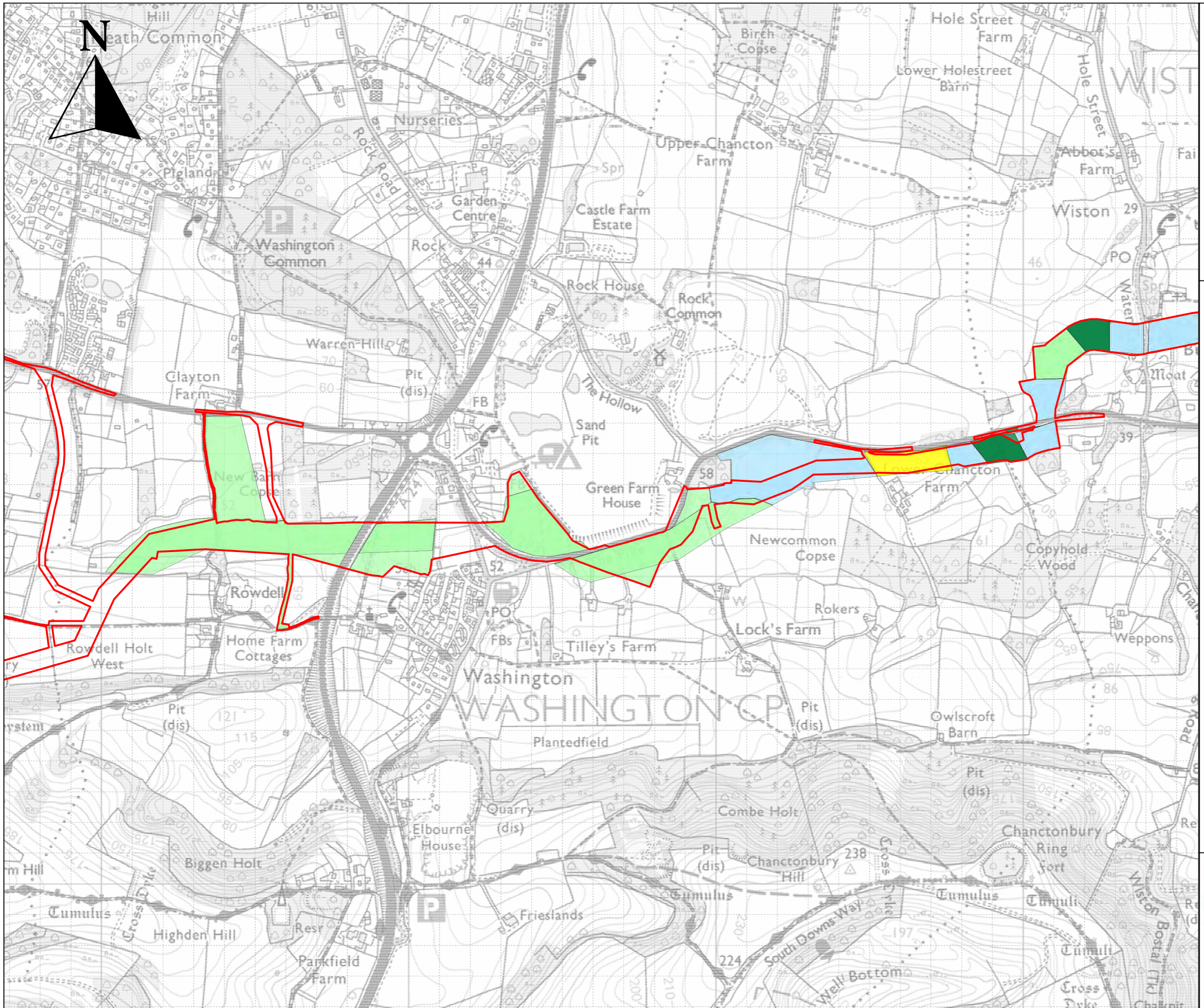
Map title:
**Map 2B
Agricultural Land Classification**



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Scale: 1:12,000

Date: 14/07/2023



KEY

- Grade 2
- Subgrade 3a
- Subgrade 3b
- Survey area

Site:

Rampion II

Map title:

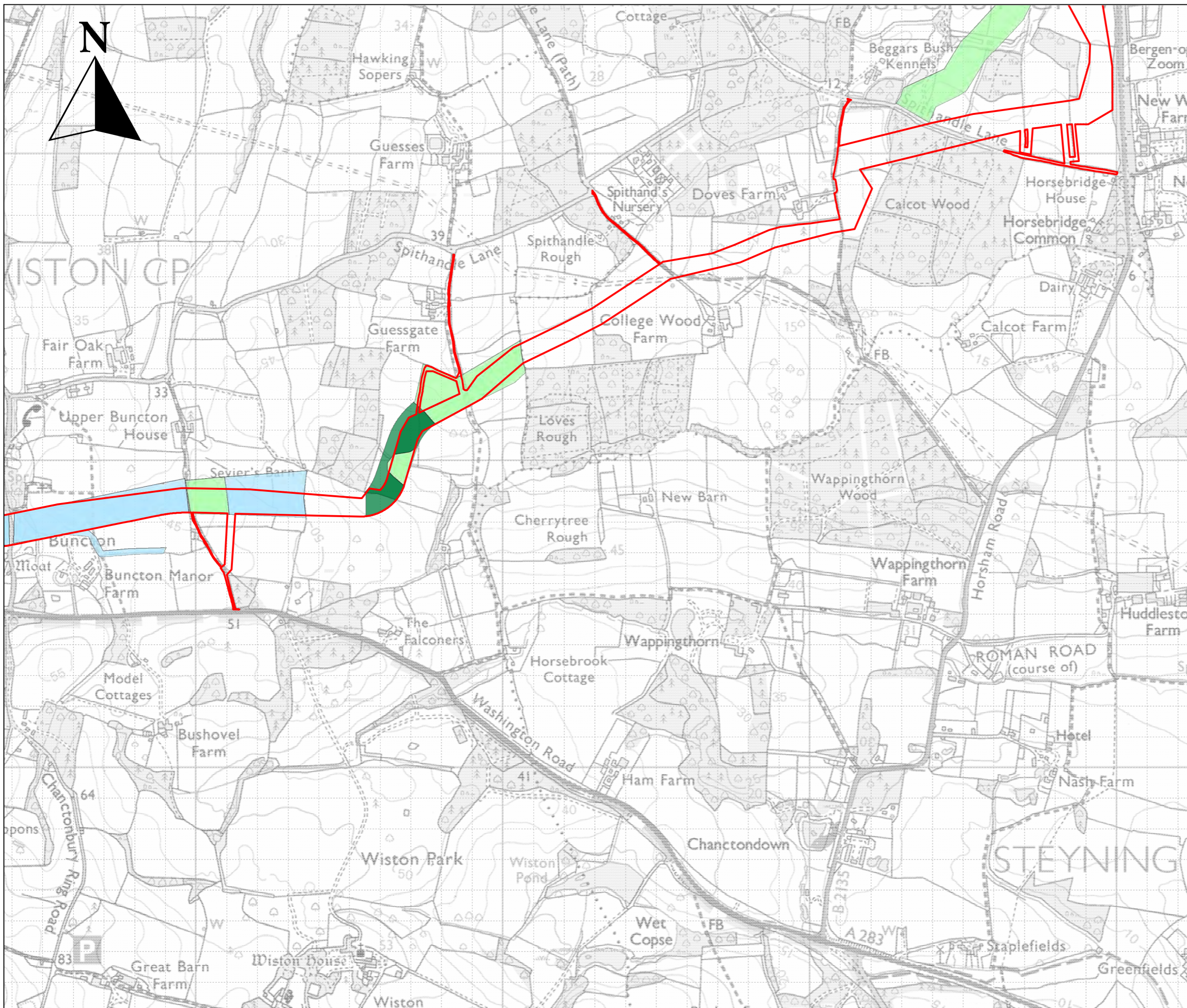
**Map 2C
Agricultural Land Classification**



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KEY

- Grade 2
- Subgrade 3a
- Subgrade 3b
- Survey area

Site:

Rampion II

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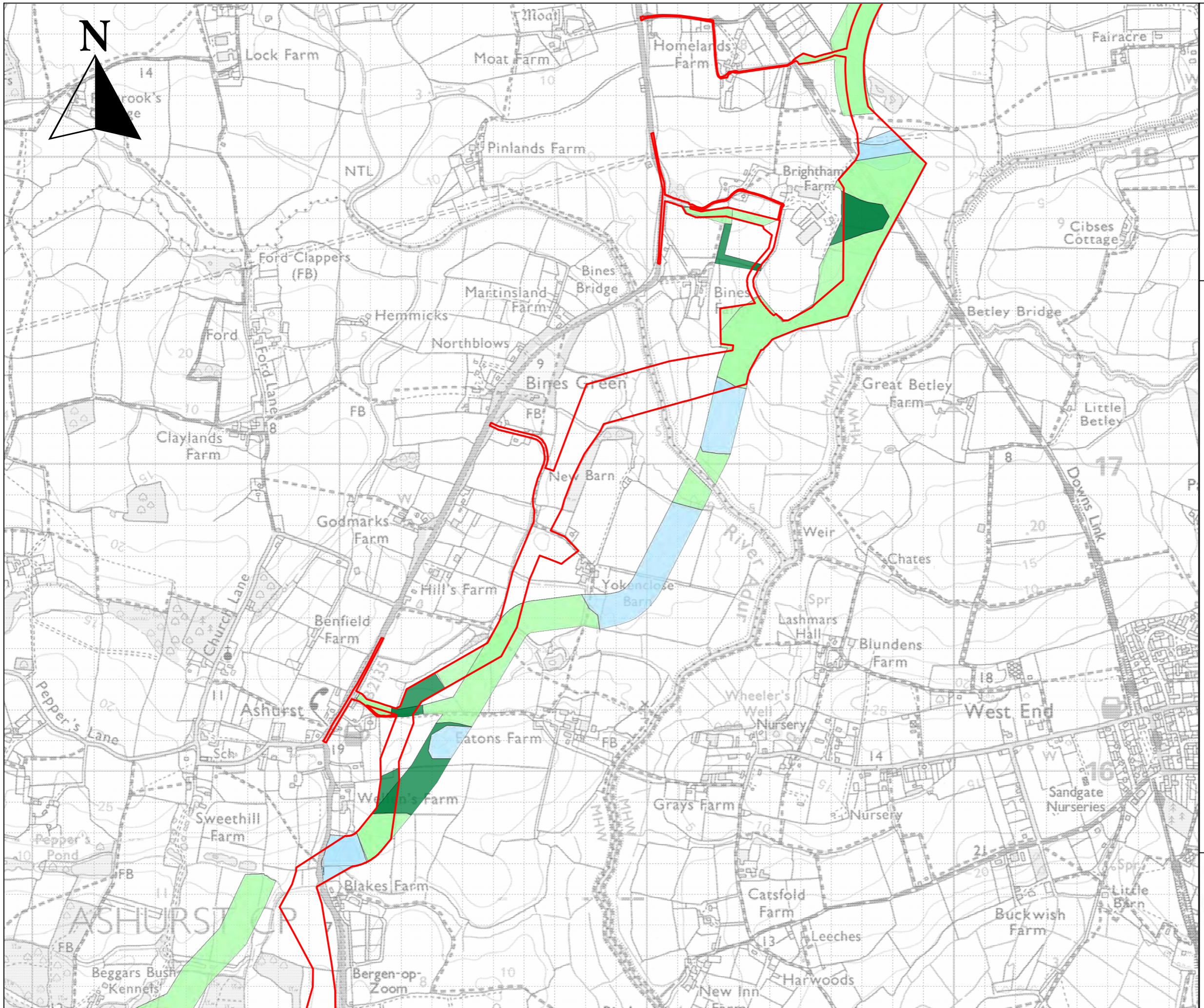
**Map 2D
Agricultural Land Classification**



Scale: 1:12,000

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- KEY**
- Grade 2
 - Subgrade 3a
 - Subgrade 3b
 - Survey area

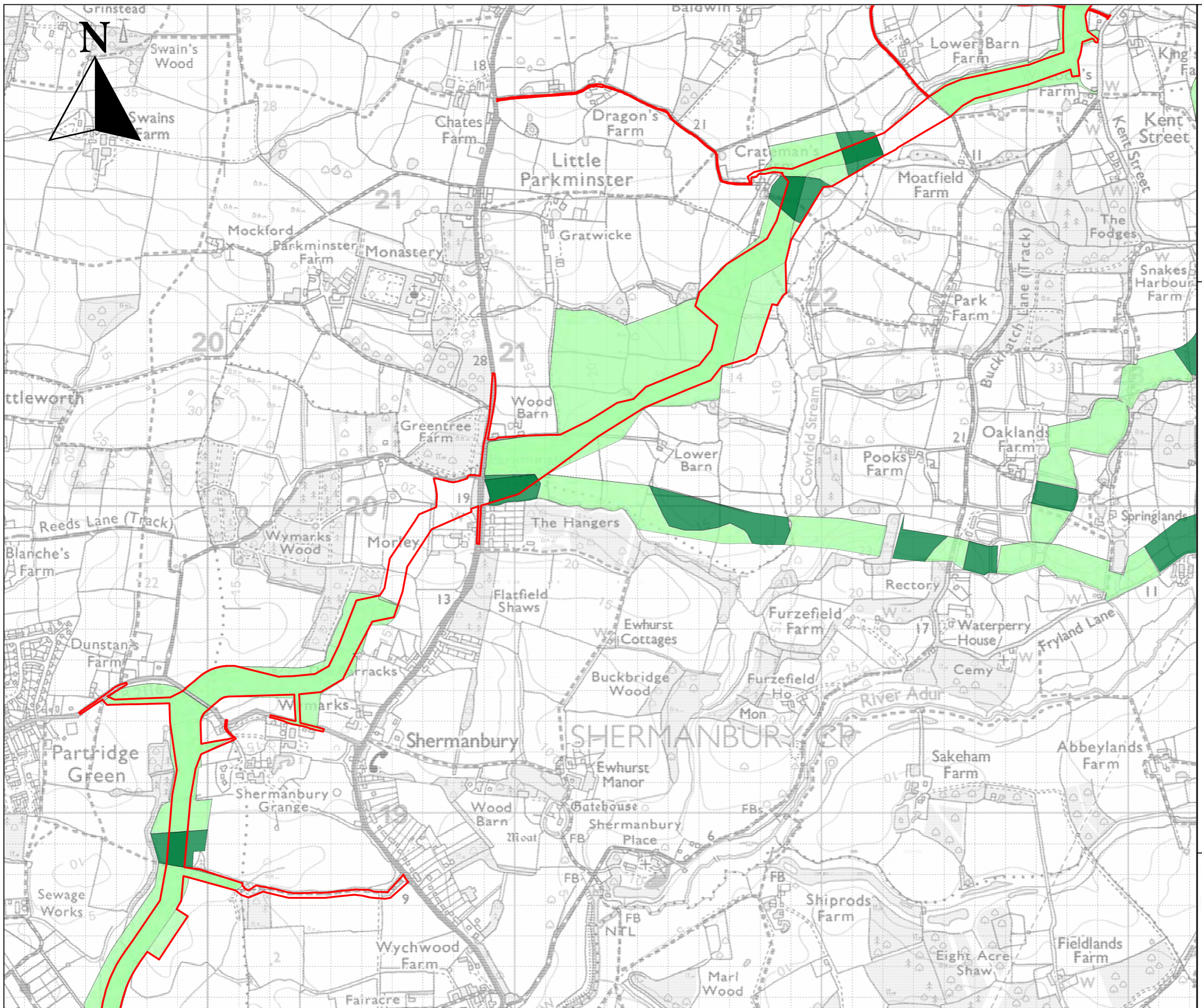
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Map title:
**Map 2E
Agricultural Land Classification**



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Scale: 1:12,000
Date: 14/07/2023



- KEY**
- Grade 2
 - Subgrade 3a
 - Subgrade 3b
 - Survey area

Site:
Rampion II

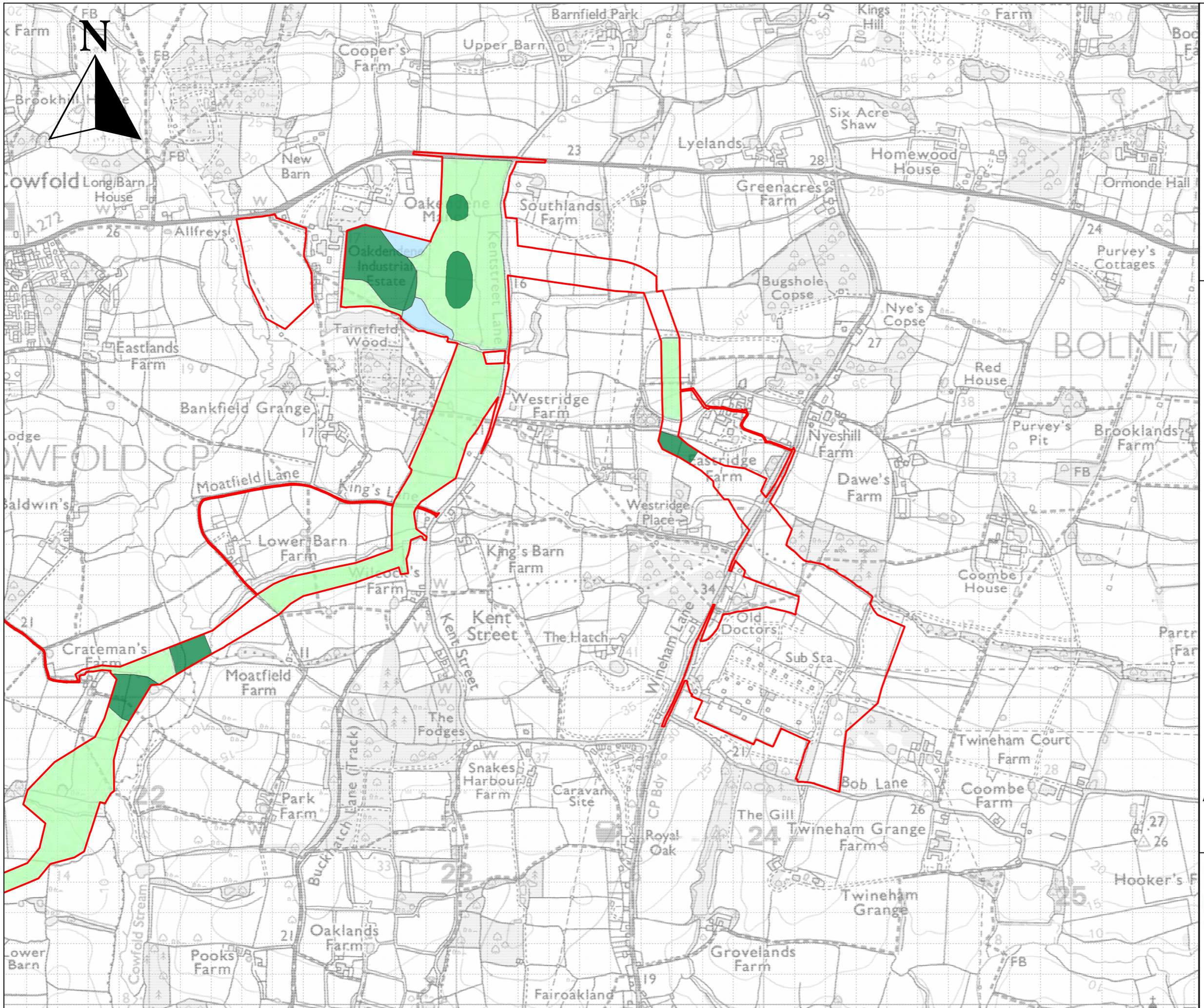
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Agricultural Land Classification**



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Date: 14/07/2023



KEY

- Grade 2
- Subgrade 3a
- Subgrade 3b
- Survey area

Site:

Rampion II

Map title:

**Map 2G
Agricultural Land Classification**



Scale: 1:12,000

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