HyNet North West Hydrogen Pipeline

Delivering clean growth

Appendix 13B
ALC and peat surveys

HyNet North West: Targeted ALC and peat survey (December 2023 - January 2024)

Point ID	Corridor	X Coordinate	Y Coordinate	GRID Ref	Target Feature Type	Target Feature Details	Peat found	Draft ES ALC Grade
9	S	360100	378101	SJ6010078101	HAGI	Central HUB HAGI	N/A	3a
10	S	359898	378003	SJ5989878003	Material Storage Area	Central Hub HAGI Material Storage Area	N/A	3b
11	S	359996	378003	SJ5999678003	Material Storage Area	Central Hub HAGI Material Storage Area	N/A	3b
12	S	360100	378003	SJ6010078003	Material Storage Area	Central Hub HAGI Material Storage Area	N/A	3b
13	S	360198	378003	SJ6019878003	HAGI Temporary Compound	Central Hub HAGI Temporary Construction Compound	N/A	3b
14	S	360298	378003	SJ6029878003	HAGI Temporary Compound	Central Hub HAGI Temporary Construction Compound	N/A	3b
15	S	359898	377898	SJ5989877898	Material Storage Area	Central Hub HAGI Material Storage Area	N/A	3b
16	S	359996	377898	SJ5999677898	Material Storage Area	Central Hub HAGI Material Storage Area	N/A	3a
17	S	360102	377898	SJ6010277898	Material Storage Area	Central Hub HAGI Material Storage Area	N/A	3b
18	S	360199	377898	SJ6019977898	HAGI Temporary Compound	Central Hub HAGI Temporary Construction Compound	N/A	3a
19	S	360296	377898	SJ6029677898	HAGI Temporary Compound	Central Hub HAGI Temporary Construction Compound	N/A	3a
20	S	359899	377801	SJ5989977801	Material Storage Area	Material Storage Area	N/A	3a
21	S	359997	377801	SJ5999777801	Material Storage Area	Material Storage Area	N/A	3b
22	S	360100	377800	SJ6010077800	Material Storage Area	Material Storage Area	N/A	3b
23	S	359997	375700	SJ5999775700	Material Storage Area	Material Storage Area	N/A	1
24	S	360077	375631	SJ6007775631	Material Storage Area	Material Storage Area	N/A	3a
25	S	360103	375498	SJ6010375498	Material Storage Area	Material Storage Area	N/A	1
26	E	365000	381101	SJ6500081101	Peat	Peat - Gale Moss / Appleton Thorn	No	2
27	E	365098	381005	SJ6509881005	Peat	Peat - Gale Moss / Appleton Thorn	No	1
28	E	365501	381304	SJ6550181304	Peat	Peat - Gale Moss / Appleton Thorn	No	2
29	E	365600	381401	SJ6560081401	Peat	Peat - Gale Moss / Appleton Thorn	No	3a
30	E	365695	381401	SJ6569581401	Peat	Peat - Gale Moss / Appleton Thorn	No	3b
31	E	365803	381498	SJ6580381498	Peat	Peat - Gale Moss / Appleton Thorn	No	3b
32	E	365899	381535	SJ6589981535	Peat	Peat - Gale Moss / Appleton Thorn	No	2
36	E	366375	381747	SJ6637581747	Peat	Peat - Gale Moss / Appleton Thorn	No	?
37	E	366430	381800	SJ6643081800	Peat	Peat - Gale Moss / Appleton Thorn	No	3b
50	E	369200	384004	SJ6920084004	Material Storage Area	Material Storage Area	N/A	1
51	E	369297	384101	SJ6929784101	Material Storage Area	Material Storage Area	N/A	1
52	E	369383	384062	SJ6938384062	BVI	Sworton Block Valve / Sworton Block Valve Temporary Compound	N/A	2
53	E	369335	383970	SJ6933583970	BVI	Block Valve option - now removed	N/A	3a
57	E	371855	388602	SJ7185588602	Material Storage Area	Material Storage Area	N/A	3b
58	E	371901	388551	SJ7190188551	Material Storage Area	Material Storage Area	N/A	3b
59	E	372201	388601	SJ7220188601	HAGI	Warburton HAGI	N/A	Made ground/ disturbed soils
60	E	372298	388563	SJ7229888563	HAGI Temporary Compound	Warburton HAGI Temporary Compound	N/A	3b
61	E	372298	388796	SJ7229888796	Material Storage Area	Material Storage Area	N/A	3a
62	E	372402	388901	SJ7240288901	Material Storage Area	Material Storage Area	N/A	3a
63	E	372646	388901	SJ7264688901	Peat	Peat - Black Moss	No	2
64	E	372703	388940	SJ7270388940	Peat	Peat - Black Moss	No	3a
65	E	372801	388901	SJ7280188901	Peat	Peat - Black Moss	No	3a
66	E	372801	388998	SJ7280188998	Peat	Peat - Black Moss	No	3a
67	E	372898	388999	SJ7289888999	Peat	Peat - Black Moss	No	3a
69	E	372898	389202	SJ7289889202	Peat	Peat - Moss Wood aka Warburton Moss	No	3a

HyNet North West: Targeted ALC and peat survey (December 2023 - January 2024)

Point ID	Corridor	X Coordinate	Y Coordinate	GRID Ref	Target Feature Type	Target Feature Details	Peat found	Draft ES ALC Grade
70	E	373003	389202	SJ7300389202	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
71	E	372894	389302	SJ7289489302	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
72	E	372997	389299	SJ7299789299	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
73	E	372898	389397	SJ7289889397	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
74	E	372995	389375	SJ7299589375	Peat	Peat - Moss Wood aka Warburton Moss	No	Made ground/ disturbed soils
75	E	372898	389502	SJ7289889502	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
76	E	373003	389502	SJ7300389502	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
77	E	372898	389608	SJ7289889608	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
78	E	372897	389697	SJ7289789697	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
79	E	372898	389801	SJ7289889801	Peat	Peat - Moss Wood aka Warburton Moss	No	2
80	E	372898	389898	SJ7289889898	Peat	Peat - Moss Wood aka Warburton Moss	No	2
82	E	373030	390006	SJ7303090006	Peat	Peat - Moss Wood aka Warburton Moss	No	2
83	E	373002	390102	SJ7300290102	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
84	E	373002	390199	SJ7300290199	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
85	E	373003	390402	SJ7300390402	Peat	Peat - Moss Wood aka Warburton Moss	No	3a
86	E	373003	390499	SJ7300390499	Peat	Peat - Moss Wood aka Warburton Moss	No	2
87	E	373040	390606	SJ7304090606	Peat	Peat - Moss Wood aka Warburton Moss	No	2
88	E	373090	390719	SJ7309090719	Peat	Peat - Moss Wood aka Warburton Moss	No	2
89	E	373198	390799	SJ7319890799	Peat	Peat - Moss Wood aka Warburton Moss	No	Made ground/ disturbed soils
91	E	373132	391044	SJ7313291044	Peat	Peat - Carrington Moss	No	Made ground/ disturbed soils
98	N	351400	390101	SJ5140090101	HAGI Temporary Compound	Clockface HAGI Temporary Compound	N/A	2
99	N	350979	389971	SJ5097989971	HAGI Temporary Compound	Clockface HAGI Temporary Compound	N/A	3b
100	N	351100	389996	SJ5110089996	HAGI Temporary Compound	Clockface HAGI Temporary Compound	N/A	3b
101	N	351198	389996	SJ5119889996	HAGI Temporary Compound	Clockface HAGI Temporary Compound	N/A	3b
102	N	351303	389996	SJ5130389996	HAGI	Clockface HAGI	N/A	Made ground/ disturbed soils
103	N	351400	389996	SJ5140089996	HAGI Temporary Compound	Clockface HAGI Temporary Compound	N/A	3a
104	N	351100	389899	SJ5110089899	HAGI Temporary Compound	Clockface HAGI Temporary Compound	N/A	3a
105	N	351304	389898	SJ5130489898	HAGI	Clockface HAGI	N/A	3b
122	S	360597	372799	SJ6059772799	Material Storage Area	Material Storage Area	N/A	3a
123	S	360690	372823	SJ6069072823	Material Storage Area	Material Storage Area	N/A	3a
124	S	361497	371364	SJ6149771364	Material Storage Area	Material Storage Area	N/A	4
125	S	361601	371299	SJ6160171299	Material Storage Area	Material Storage Area	N/A	3b
126	S	361547	371227	SJ6154771227	Material Storage Area	Material Storage Area	N/A	4
127	S	361674	371201	SJ6167471201	BVI	Block Valve / Block Valve Temporary Compound	N/A	4
128	S	361782	371062	SJ6178271062	BVI	Block Valve option - now removed	N/A	3a
129	S	362001	370795	SJ6200170795	Peat	Peat - Vale Farm / Unnamed Peatland No.1	No	4
130	S	362001	370698	SJ6200170698	Peat	Peat - Vale Farm / Unnamed Peatland No.1	**Yes**	4
131	S	362440	370505	SJ6244070505	BVI	Block Valve option - now removed	N/A	1
133	S	368997	370002	SJ6899770002	Material Storage Area	Material Storage Area	N/A	3b
134	S	369102	370001	SJ6910270001	Material Storage Area	Material Storage Area	N/A	3b
135	S	369103	370098	SJ6910370098	Material Storage Area	Material Storage Area	N/A	3b
136	S	369199	370098	SJ6919970098	Material Storage Area	Material Storage Area	N/A	4

HyNet North West: Targeted ALC and peat survey (December 2023 - January 2024)

Point ID	Corridor	X Coordinate	Y Coordinate	GRID Ref	Target Feature Type	Target Feature Details	Peat found	Draft ES ALC Grade
137	S	369200	370205	SJ6920070205	Material Storage Area	Material Storage Area	N/A	4
138	S	369296	370202	SJ6929670202	Material Storage Area	Material Storage Area	N/A	4
139	S	369199	370301	SJ6919970301	Material Storage Area	Material Storage Area	N/A	4
140	S	369597	370001	SJ6959770001	HAGI	Hydrogen Storage HAGI / Hydrogen Storage HAGI temporary compound	N/A	3b
141	S	369704	370002	SJ6970470002	HAGI Temporary Compound	Hydrogen Storage HAGI Temporary Compound	N/A	4
142	S	369597	369905	SJ6959769905	HAGI Temporary Compound	Hydrogen Storage HAGI Temporary Compound	N/A	4
143	W	345798	374943	SJ4579874943	Material Storage Area	Material Storage Area	N/A	3b
144	W	345903	374898	SJ4590374898	Material Storage Area	Material Storage Area	N/A	4
145	W	346000	374950	SJ4600074950	Material Storage Area	Material Storage Area	N/A	4
155	W	347200	375700	SJ4720075700	Peat	Peat - Frodsham, Ince & Helsby Marshes	**Yes**	?
156	W	347298	375700	SJ4729875700	Peat	Peat - Frodsham, Ince & Helsby Marshes	**Yes**	?
157	W	347402	375701	SJ4740275701	Peat	Peat - Frodsham, Ince & Helsby Marshes	**Yes**	?
158	W	347500	375701	SJ4750075701	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
159	W	347565	375676	SJ4756575676	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
160	W	347693	375671	SJ4769375671	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
161	W	347402	375797	SJ4740275797	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
162	W	347501	375798	SJ4750175798	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
163	W	347598	375797	SJ4759875797	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
164	W	347770	375720	SJ4777075720	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	Made ground/ disturbed soils
165	W	347409	375882	SJ4740975882	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
166	W	347898	375798	SJ4789875798	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
167	W	347993	375929	SJ4799375929	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
168	W	348100	375903	SJ4810075903	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
169	W	348100	376001	SJ4810076001	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
170	W	348199	376031	SJ4819976031	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
171	W	348087	376071	SJ4808776071	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
172	W	348151	376091	SJ4815176091	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
175	W	348497	376399	SJ4849776399	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
176	W	348497	376504	SJ4849776504	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
177	W	348401	376601	SJ4840176601	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
196	W	350031	377584	SJ5003177584	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
197	W	350102	377504	SJ5010277504	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
198	W	350169	377533	SJ5016977533	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
199	W	350199	377598	SJ5019977598	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
200	W	350283	377585	SJ5028377585	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
201	W	350298	377704	SJ5029877704	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
202	W	350402	377704	SJ5040277704	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
203	W	350501	377800	SJ5050177800	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
204	W	350499	377899	SJ5049977899	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
205	W	350597	377899	SJ5059777899	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
206	W	350599	377802	SJ5059977802	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
209	W	350803	377899	SJ5080377899	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?

HyNet North West: Targeted ALC and peat survey (December 2023 - January 2024)

Point ID	Corridor	X Coordinate	Y Coordinate	GRID Ref	Target Feature Type	Target Feature Details	Peat found	Draft ES ALC Grade
210	W	350898	377900	SJ5089877900	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
211	W	350883	377961	SJ5088377961	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	Made ground/ disturbed soils
212	W	350979	378030	SJ5097978030	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	Made ground/ disturbed soils
218	W	351605	378498	SJ5160578498	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
219	W	351702	378604	SJ5170278604	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
221	W	351799	378702	SJ5179978702	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
222	W	351904	378735	SJ5190478735	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
223	W	351905	378798	SJ5190578798	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
224	W	352001	378798	SJ5200178798	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
225	W	351999	378922	SJ5199978922	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
226	W	352108	378935	SJ5210878935	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
227	W	352204	379000	SJ5220479000	Peat	Peat - Frodsham, Ince & Helsby Marshes	No	?
228	W	352000	380201	SJ5200080201	HAGI Temporary Compound	Runcorn HAGI Temporary Compound	N/A	3a
229	W	352098	380201	SJ5209880201	HAGI Temporary Compound	Runcorn HAGI Temporary Compound	N/A	3a
234	E	363200	379901	SJ6320079901	Material Storage Area	Material Storage Area	N/A	3a
235	E	363296	379901	SJ6329679901	Material Storage Area	Material Storage Area	N/A	2

E - East corridor

S - South corridor

W - West corridor

N - North corridor

Hynet Soils and ALC survey (Land Research Associates, 2024) – Details of observations at soil observation points: December 2023 to January 2024

(Note: grey shading indicates planned points not completed during survey phases to date)

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
1													
2													
3													
4													
5													
6													
7													
8													
9	0-30	MCL	0	30-58	SCL	xxx	58-100+	C(r)	xxx	0	III	3a	W
10	0-20	MCL	0	20-55	C	xxx	55-90+	MST	-	0	IV	3b	W
11	0-40	MCL	0	40-90+	HCL	xxx				0	IV	3b	W
12	0-24	MCL	0	24-47	C	xxx	47-90+	MST	-	2	IV	3b	W
13	0-27	MCL/SCL	0	27-90+	C(r)	xxx				1	IV	3b	W
14	0-24	MCL	0	24-34	SCL	xxx	34-90+	C(r)	xxx	1	IV	3b	W
15	0-25	MCL	0	25-52	HCL	xxx	52-80 80+	C(r) MST	xxx	1	IV	3b	W
16	0-30	MZCL	<5	30-100+	HZCL	xxx				1	III	3a	W
17	0-27	MCL	<5	27-70+	C(r)	xxx				1	IV	3b	W
18	0-23	vslstMCL	<5	23-42	MCL(r)	xxx	42-90+	HZCL(r)	xxx	2	III	3a	W
19	0-27	vslstSCL	<5	27-55	vslstSCL	xxx	55-100+	LMS	xxx	2	II	3a	W
20	0-20	HCL	<5	20-35	HCL(r)	xx	35-55 55+	grey ZST band Stopped on stones		1	II	3a	W
21	0-22	SCL	<5	22-34	SCL(r)	xx	34-58 58-90+	C(r) HCL	xxx xxx	2	IV	3b	W
22	0-19	SCL	<5	19-42	SCL	xxx	42-90+	HCL(r)	xxx	2	IV	3b	W
23	0-32	SCL	0	32-62	SCL(r)	o	62-100+	LMS(r)	o		I	1/2	D
24	0-26	MCL	0	26-55	MCL(r)	xxx	55-100+	HCL	xxx	0	III	3a	W
25	0-30	SCL	0	30-60	MSL(r)	o	60-100+	MS(r)	o	0	I	1/2	D
26	0-30	MSL/LMS	0	30-110+	MS	xxx				0	I	2/3a	D
27	0-26	FSL	0	26-110+	LFS	xxx				0	I	1	-

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
28	0-35	SCL/MSL	<5	35-65	MSL	xxx	65-110+	HCL(r)	xx(x)	1	III	3a/2	W
29	0-35	SCL	<5	35-55	SCL	xxx	55-100+	HCL(r)	xx(x)	1	III	3a	W
30	0-25	SCL	0	25-47	MSL	xxx	47-80 80+	C(r) Stopped on stones	xxx	0	IV	3b	W
31	0-24	MCL	0	24-47	C	xxx	47-74 74-100+	LMS HCL(r)	xxx xxx	1	IV	3b	W
32	0-40	MSL	0	40-100+	LMS	xxx				1	I	2	D
33													
34													
35													
36	0-18	MSL(org)	0	18-50	MSL(r)	xx	50-100+	LMS(r)	xx	3	?		
37	0-28	SCL(org)	0	28-47	SCL(r)	xxx	47-90+	HCL(r)	xxx	3	IV/III	3b	W
38													
39													
40													
41													
42													
43													
44													
45													
46													
47													
48													
49													
50	0-30	MSL	0	30-60	MSL(r)	o	60-100+	MZCL(r)	xxx		I	1	-
51	0-28	FSL	0	28-82	LFS	o	82-110+	LFS	xxx		I	1	-
52	0-24	MCL	0	24-62	MCL(r)	x	62+	MST			I	2	W
53	0-45	SCL	0	45-80	HCL(r)	xxx	80+	Stopped on stones			II	3a	W
54													
55													
56													
57	0-35	SCL	0	35-39	SCL	xxx	39-90+	C(r)	xxx	3	IV	3b	W
58	0-29	SCL	0	29-37	SCL	xxx	37-90+	C(r)	xxx	4	IV	3b	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
59	0-50+	LMS(dist)	0							2	-	-	-
60	0-22	SCL	0	22-90+	C(r)	xx(x)				2	IV	3b	W
61	0-28	LMS	0	28-100+	MS	o				1	I	3a	D
62	0-29	LMS	0	29-110+	MS	o				2	I	3a	D
63	0-31	MSL	0	31-90+	LMS	o				2	I	2	D
64	0-24	LMS	0	24-110+	MS	o				0	I	3a	D
65	0-23	MSL	0	23-100+	MS(wet)	o				2	I?	3a	D
66	0-52	LMS	0	52-100+	LMS	o				0	I	3a	D
67	0-27	MSL	0	27-65+	MS(wet)	o				2	I?	3a	D
68	Ponds - inaccessible												
69	0-27	MSL/LMS	0	27-100+	MS	o				2	I	3a	D
70	0-52	LMS	0	52-100+	LMS	o				0	I	3a	D
71	0-25	MSL	0	25-35	MS	o	35-100+	LMS(Bh)	o	2	I	3a	D
72	0-35	MSL	0	35-100+	MS(wet)	xxx				0	I	3a	D
73	0-31	MSL	0	31-100+	MS	o				0	I	3a	D
74	0-57	MSL(dist)	0	57-100+	MS/MSL(dist)	-				0	-	-	-
75	0-25	MSL	0	25-110+	MS	xxx				2	I	3a	D
76	0-25	SCL	0	25-67	MS	o	67-75 75-100+	MS C(r)	xxx xxx	0	III/II	3a	W
77	0-33	MSL	0	33-63	MS	o	63-110+	MS	xxx	0	I	3a	D
78	0-22	MSL	0	22-78	MS	o	78-110+	MS	xxx	1	I	3a	D
79	0-31	SCL	0	31-88	PL	-	88-110+	MSL	xxx	1	I/II	2/3a	W
80	0-32	MSL	0	32-63	LMS	xxx	63-90 90-100+	MS C(r)	xxx xxx	1	II	2	D/W
81	Excluded												
82	0-30	MSL	0	30-82	MS(wet)	-	82-100+	C(r)	xxx	1	II	2	D/W
83	0-23	MSL	0	23-110+	LMS	xxx				2	I	3a	D
84	0-24	MSL	0	24-110+	MS	xxx				2	I	3a	D
85	0-28	MSL	0	28-65	LMS	xxx	65-100+	SCL(r)	xxx	2	III	3a	W
86	0-30	MCL	0	30-110+	MCL	o				0	I	2	W
87	0-34	MSL	0	34-70	LMS	xx	70-110+	MSL	xxx	1	I	2	D
88	0-25	MSL	0	25-58	LMS	o	58-100+	SCL(dist?)	-	1	I	2	D
89	0-60+	Made ground	-							0	-	-	-
90	Removed by WSP												

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
91	0-25	LMS(org)	<5	25-90+	MSL(dist)					0	-	-	-
92													
93													
94													
95													
96													
97													
98	0-35	slstSCL	<5	35-55	MSL	xxx	55+	Stopped on stones		1	I/II	2?	D/W
99	0-28	SCL	<5	28-38	SCL	xxx	38-90+	C	xxx	1	IV	3b	W
100	0-25	SCL	<5	25-76	C	xxx	76+	Stopped on stones		1	IV	3b	W
101	0-29	SCL	<5	29-90+	C	xxx				1	IV	3b	W
102	0-50+	SCL(dist)	<5							1	-	-	-
103	0-37	SCL	<5	37-62	MSL	xxx	62-100+	SC	xxx	0	III	3a	W
104	0-25	SCL	<5	25-58	SCL	xxx	58-90+	C	xxx	1	III	3a	W
105	0-33	SCL	<5	33-58	SC	xxx	58-69 69-100+	MSL SC(r)	xxx xxx	0	IV	3b	W
106													
107													
108													
109													
110													
111													
112													
113													
114													
115													
116													
117													
118													
119													
120													
121													
122	0-85	HCL	0	85-100+	SCL(r)	xx				0	II	3a	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
123	0-34	SCL	0	34-75	SCL(r)	xx	75-100+	SC	xx	0	II	3a	W
124	0-51	vslstLMS	0	51-100+	Gravel (wet)					0	V	4	W
125	0-70+	LMS TS/SS	0							10	-	3b	G
126	0-100+	LMS(dist)	0							0	V	4	W
127	0-40+	slstLMS (wet)	0							0	V	4	W
128	0-22	vslstLMS	0	22-72	LMS	o	72-110+	MS	o	1	I	3a	D
129	0-25	LMS	0	25-55	LMS(wet)	o	55-110 110+	PL Solid	-	0	V	4	W
130	0-34	LMS(org)	0	34-120	P(Om)	-				0	V	4	W
131	0-40	MSL	0	40-60	MSL	o	60-100	LMS	o	3	I	1	-
132													
133	0-34	MCL/HCL	0	34-90+	C(r)	xxx				1	IV	3b	W
134	0-30	MCL	0	30-90+	C	xxx				1	IV	3b	W
135	0-27	MCL	0	27-90+	C(r)	xxx				0	IV	3b	W
136	0-30	HCL	0	30-55	C	xxx	55-90+	C(r)	xxx	0	IV	4	W
137	0-31	HCL	0	31-58	C	xxx				1	IV	4	W
138	0-23	HCL	0	23-90+	C	xxx				0	IV	4	W
139	0-31	HCL	0	31-50	C	xxx	50-100+	C(r)	xxx	0	IV	4	W
140	0-20	MZCL	0	20-30	C	xxx	30-100+	C(r)	xxx	0	IV	3b	W
141	0-20	HCL	0	20-100+	C(r)	xxx				0	IV	4	W
142	0-22	HZCL	0	22-54	C	xxx	54-90+	C(r) fmn	xxx	0	IV	4	W
143	0-21	MCL	<5	21-38	MCL(r)	xxx	38-70 70+	HCL(r) Wet (stopped)	xxx	1	IV	3b	W
144	0-31	SCL	<5	31-44	SCL	xxx	44-120	C(r)	xxx	1	IV	4	W
145	0-19	MCL/SCL	<5	19-42	MCL/SCL(r)	xxx	42-90+	HCL/C(r)	xxx	1	IV	4	W
146													
147													
148													
149													
150													
151													
152													
153													
154													

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
155	0-10	ZC	0	10-37	ZC	xxx	37-100+	HP	-	0	?	?	W/F
156	0-20	ZC	0	20-61	ZC	xxx	61-100+	HP	-	0	?	?	W/F
157	0-20	ZC	0	20-75	ZC	xxx	75-100+	HP	-	0	?	?	W/F
158	0-25	C	0	25-100+	C	xxx				0	?	?	W/F
159	0-26	C	0	26-100+	C	xxx				0	?	?	W/F
160	0-23	C	0	23-100+	C	xxx				0	?	?	W/F
161	0-32	MZCL	0	32-100+	HZCL	xxx				0	?	?	W/F
162	0-31	C	0	31-100+	C	xxx				0	?	?	W/F
163	0-26	HZCL/ZC	0	26-100+	C	xxx				0	?	?	W/F
164	Made ground												
165	0-26	HCL	<5	26-100+	C	xxx				0	?	?	W/F
166	0-26	MZCL	0	26-85	FZSL	xxx	85-100+	MZCL	xxx	0	?	?	W/F
167	0-27	HZCL	0	27-54	SCL	xxx	54-100+	FSZL	xxx	0	?	?	W/F
168	0-25	HZCL	0	25-43	C	xxx	43-100+	C	xxx	0	?	?	W/F
169	0-28	HZCL	0	28-50	C	xxx	50-78 78-100+	MZCL HZCL	xxx xxx	0	?	?	W/F
170	0-30	ZC	0	30-100+	C	xxx				0	?	?	W/F
171	0-28	HZCL	0	28-58	HZCL	xxx	58-100+	C	xxx	0	?	?	W/F
172	0-24	ZL/MZCL	0	24-60	ZL	xxx	60-100+	HZCL	xxx	0	?	?	W/F
173	Flooded												
174	Flooded												
175	0-33	HZCL	0	33-95+	HZCL	xxx				0	?	?	W/F
176	0-28	MZCL	0	28-47	C	xxx	47-100+	MZCL	xxx	0	?	?	W/F
177	0-30	ZL	0	30-65	ZL	xxx	65-100+	LMS	xxx	0	?	?	W/F
178													
179													
180													
181													
182													
183													
184													
185													
186													

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
187													
188													
189													
190													
191													
192													
193													
194													
195													
196	0-23	HZCL	0	23-62	C	xxx	62-100+	C	xxx	0	?	?	W/F
197	0-22	LMS	0	22-94	MS	xxx	94-110+	C	xxx	1	?	?	W/F
198	0-47	HCL	0	47-110+	C	xxx				1	?	?	W/F
199	0-37	ZC	0	37-110+	C	xxx				0	?	?	W/F
200	0-28	ZC	0	28-110+	ZC	xxx				0	?	?	W/F
201	0-27	HZCL/ZC	0	27-75	C	xxx	75-110+	MZCL	xxx	0	?	?	W/F
202	0-31	HZCL	0	31-104	C	xxx	104-110+	MZCL	xxx	0	?	?	W/F
203	0-29	MZCL	0	29-54	MZCL	xxx	54-110+	C	xxx	0	?	?	W/F
204	0-30	HZCL	0	30-45	ZC	xxx	45-67 67-110+	C ZC	xxx xxx	0	?	?	W/F
205	0-17	HZCL	0	17-42	C	xxx	31-42 42-74 74-110+	C FSZL MZCL	xxx xxx xxx	0	?	?	W/F
206	0-25	C	0	25-41	C	xxx	41-100+	MZCL(wet)	xxx	0	?	?	W/F
207													
208													
209	0-22	HCL	0	22-110+	C	xxx				0	?	?	W/F
210	0-27	HZCL	0	27-48	HZCL	xxx	48-110+	MZCL	xxx	0	?	?	W/F
211	Made ground												
212	Made ground												
213													
214													
215													
216													
218	0-22	ZC	0	22-50	ZC	xxx	50-95+	MZCL	xxx	0	?	?	W/F

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
219	0-32	ZC	0	32-90+	ZC	xxx				0	?	?	W/F
220	Removed by WSP												
221	0-24	C	0	24-92	C	xxx				0	?	?	W/F
222	0-33	C	0	33-100+	C	xxx				0	?	?	W/F
223	0-34	HZCL	0	34-100+	C	xxx				0	?	?	W/F
224	0-32	HZCL	0	32-100+	HZCL	xxx				0	?	?	W/F
225	0-33	MZCL	0	33-100+	MZCL	xxx				0	?	?	W/F
226	0-34	MZCL	0	34-66	ZC	xxx	66-100+	HZCL	xxx	0	?	?	W/F
227	0-34	HZCL	0	34-100+	HZCL	xxx				0	?	?	W/F
228	0-37	MCL	0	37-77	MCL(r)	xxx	77-100+	HCL(r)	o	4	II	3a	W
229	0-30	SCL	<5	30-46	SCL(r)	o	46+	R?		5	I	3a	D
230													
231													
232													
233													
234	0-22	slstCSL	<5	22-38	slstCS	o	38-84 84-120	slstLCS vslstCS	o o	2	I	3a	D
235	0-30	slstSCL	<5	30-52	slstMSL	o	52-100+	slstCS	o	1	I	2	D
236													
237													
238													
239													
240													
241													
242													
243													
244													
245													
246													
247													
248													
249													

Soil log key

Gley indicators[1]

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
xxxx	mottles or f-m concentrations (gleyed horizon) dominantly blueish/greenish matrix, often with some reddish mottles (gleyed horizon)

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

Limitations:

W - wetness/workability
D - droughtiness
De - depth
F - flooding
St – stoniness
G - gradient
T – topography/microrelief
C - Climate

Suffixes & prefixes:

o - organic

(vsl, sl, m, v, x)**st** – (very slightly, slightly, moderately, very, extremely) **stony**[6]

(vsl, sl, m, v, x)**ca**
(very slightly, slightly, moderately, very, extremely) **calcareous**[7]

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

Wetness Class[5]

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

Other abbreviations

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

[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: Revised Guidelines for grading the quality of Agricultural Land (Maff 1988)
[5]Soil Wetness Classes are defined in Hodgson (1997)
[6]stoniness classes as defined in Hodgson (1997)
[7]calcareous classes as defined in Hodgson (1997)

Grades shown as intergrade e.g. **3a**/3b are close to the grade boundary. The estimate of which side of the boundary the grading falls is the shown first (in bold here)
grades in brackets eg. (3a) raised by one grade due to calcareous topsoil

Soil pit descriptions

Pit 29 (see Map 1)

0-35 cm	Very dark greyish brown (10YR 3/2) (fine) sandy clay loam; stoneless; weakly developed very coarse sub-angular blocky structure (compacted);
35-75 cm	Pale brown (10YR 6/3) (fine) sandy clay loam with 15% yellowish brown (10YR 5/6) mottles, becoming reddish at depth; stoneless; moderately developed coarse sub-angular blocky structure; friable; plough pan @35-45 cm;
75 cm+	Impenetrable (boulders)

Pit 62 (see Map 1)

0-29 cm	Very dark greyish brown (10YR 3/2) loamy medium sand; stoneless; weakly developed fine sub-angular blocky structure; friable; smooth clear boundary to:
29-110 cm+	Pale brown (10YR 6/3) medium sand; stoneless; structureless (single grain);loose

Pit 139 (see Map 1)

0-31 cm	Dark greyish brown (10YR 4/2) heavy clay loam; stoneless; moderately developed very coarse sub-angular blocky structure; firm; common fine fibrous roots; smooth clear boundary to:
31-50 cm	Grey (7.5YR 6/1) clay with 40% prominent medium and coarse strong brown (10YR 5/6) mottles; stoneless; moderately developed very coarse angular blocky structure; very firm; <0.5% macro-pores; smooth gradual boundary to:
50-100 cm+	Reddish brown (5YR 5/3) clay with grey (5YR 5/1) ped faces and common fine black ferri-manganiferous concentrations; stoneless; weakly developed very coarse prismatic structure to structureless (massive); very firm; <0.5% macropores.

Pit 144 (see Map 1)

0-31 cm	Dark reddish grey (5YR 4/2) sandy clay loam; 1-2% small and medium mixed hard stones; weakly developed coarse sub-angular blocky structure; friable; smooth clear boundary to:
31-44 cm	Pinkish grey (7.5YR 6/2) sandy clay loam with 5% distinct fine yellowish brown (10YR 5/6) mottles; very slightly stony; moderately developed coarse sub-angular blocky structure; friable; smooth gradual boundary to:
44-120 cm	Reddish brown (5YR 4/4) clay with grey (5YR 5/1) ped faces; very slightly stony; weakly developed very coarse angular blocky structure; very firm; <0.5% macropores..

Pit 234 (see Map 1)

0-22 cm	Brown (7.5YR 4/2) coarse sandy loam; 10% small mixed pebbles; moderately developed medium and coarse sub-angular blocky structure; friable; smooth clear boundary to:
22-38 cm	Light yellowish brown (10YR 6/4) coarse sand; 10% hard stones; structureless (single grain); loose; smooth gradual boundary to:
38-84 cm	Yellowish brown (10YR 5/4) loamy coarse sand; 10% hard stones; weakly developed fine sub-angular blocky structure; loose; smooth gradual boundary to:
84-120 cm	Pale brown (10YR 6/3) coarse sand; 5% hard stones; structureless (single grain); loose.

Pit 170 (see Map 1)

0-30 cm	Dark greyish brown (10YR 4/2) silty clay; stoneless; moderately developed coarse sub-angular blocky structure; friable; abundant fine fibrous roots; smooth gradual boundary to:
30-100 cm+	Grey (7.5YR 5/1) clay with common fine and medium strong brown (7.5YR 4/8) mottles; stoneless; moderately developed very prismatic structure, becoming coarse angular blocky at depth; firm; <0.5% macropores; medium packing density.

Pit 15 (see Map 1)

0-25 cm	Dark greyish brown (10YR 4/2) medium clay loam; <1% stones; moderately developed coarse sub-angular blocky structure; friable; smooth clear boundary to:
25-52 cm	Grey (10YR 5/1) heavy clay loam with 15% distinct fine yellowish brown (10YR 5/6) mottles; stoneless; weakly developed very coarse sub-angular blocky structure; firm; <0.5% macropores; smooth diffuse boundary to:
52-80 cm	Pale red (2.5YR 6/2) clay with coarse reddish brown (2.5YR 4/4) mottles; stoneless; weakly developed very coarse angular blocky structure, very firm:
52-80 cm+	Friable greenish grey mudstone?

Pit 24 (see Map 1)

0-26 cm	Dark reddish grey (5YR 4/2) medium clay loam; <1% stones; moderately developed coarse sub-angular blocky structure; friable; smooth clear boundary to:
26-55 cm	Reddish brown (5YR 5/3) medium clay loam with 10% faint yellowish red (5YR 5/6) mottles; stoneless; moderately developed coarse sub-angular blocky structure; friable; smooth gradual boundary to:
55-100 cm+	Reddish brown (5YR 5/3) heavy clay loam with 10% yellowish red (5YR 4/6) mottles; stoneless; moderately developed coarse angular blocky structure, firm: <0.5% macropores.

Pit 103 (see Map 1)

0-37 cm	Very dark greyish brown (10YR 3/2) sandy clay loam; 1-2% small mixed hard pebbles; moderately developed medium sub-angular blocky structure; friable; smooth gradual boundary to:
37-62 cm	Pinkish grey (7.5YR 6/2) medium sandy loam with 15% distinct fine and medium strong brown (7.5YR 5/6) mottles; 5-10% mixed hard stones; weakly

	developed coarse sub-angular blocky structure; friable; smooth gradual boundary to:
62-100 cm+	Pinkish grey (5YR 6/2) sandy clay with 20% fine and medium strong brown ad reddish yellow (7.5YR 5/8, 6/8) mottles; very slightly stony; weakly developed very coarse angular blocky structure, firm: <0.5% macropores; high packing density.

ANALYTICAL REPORT

Report Number	**17883-24**	**H579**	**MR MIKE PALMER**
Date Received	**17-JAN-2024**		**LAND RESEARCH ASSOCIATES**
Date Reported	**05-FEB-2024**		**TAPTON PARK INNOVATION**
Project	**SOIL**		**CENTRE**
Reference	**HYMET**		**BRIMINGTON ROAD**
Order Number			**CHESTERFIELD S41 0TZ**

Laboratory Reference		**SOIL674430**	**SOIL674431**
Sample Reference		**PEAT 130 35-60**	**PEAT 130 60-100**
Determinand	**Unit**	**SOIL**	**SOIL**
pH water [1:2.5]		6.2	5.9
Dry Matter (Fresh)	%	28.8	45.1
Organic Carbon by DUMAS	%	15.9	7.3
Organic Matter [calculation]	%	27.3	12.6

Notes

Analysis Notes

The sample submitted was of adequate size to complete all analysis requested.
The results as reported relate only to the item(s) submitted for testing.
The results are presented on a dry matter basis unless otherwise stipulated.

Reported by

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ANALYTICAL REPORT

Report Number	**19497-24**	**H579**	**MR MIKE PALMER**
Date Received	**31-JAN-2024**		**LAND RESEARCH ASSOCIATES**
Date Reported	**08-FEB-2024**		**TAPTON PARK INNOVATION**
Project	**SOIL**		**CENTRE**
Reference	**HYNET**		**BRIMINGTON ROAD**
Order Number			**CHESTERFIELD S41 0TZ**

Laboratory Reference		**SOIL676111**
Sample Reference		**SAMPLE 155**
Determinand	**Unit**	**SOIL**
pH water [1:2.5]		4.3
Organic Carbon by DUMAS	%	30.3
Organic Matter [calculation]	%	52.2

Notes

Analysis Notes
The sample submitted was of adequate size to complete all analysis requested.
The results as reported relate only to the item(s) submitted for testing.
The results are presented on an as received basis unless otherwise stipulated.

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Reported by *Teresa Clyne*

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