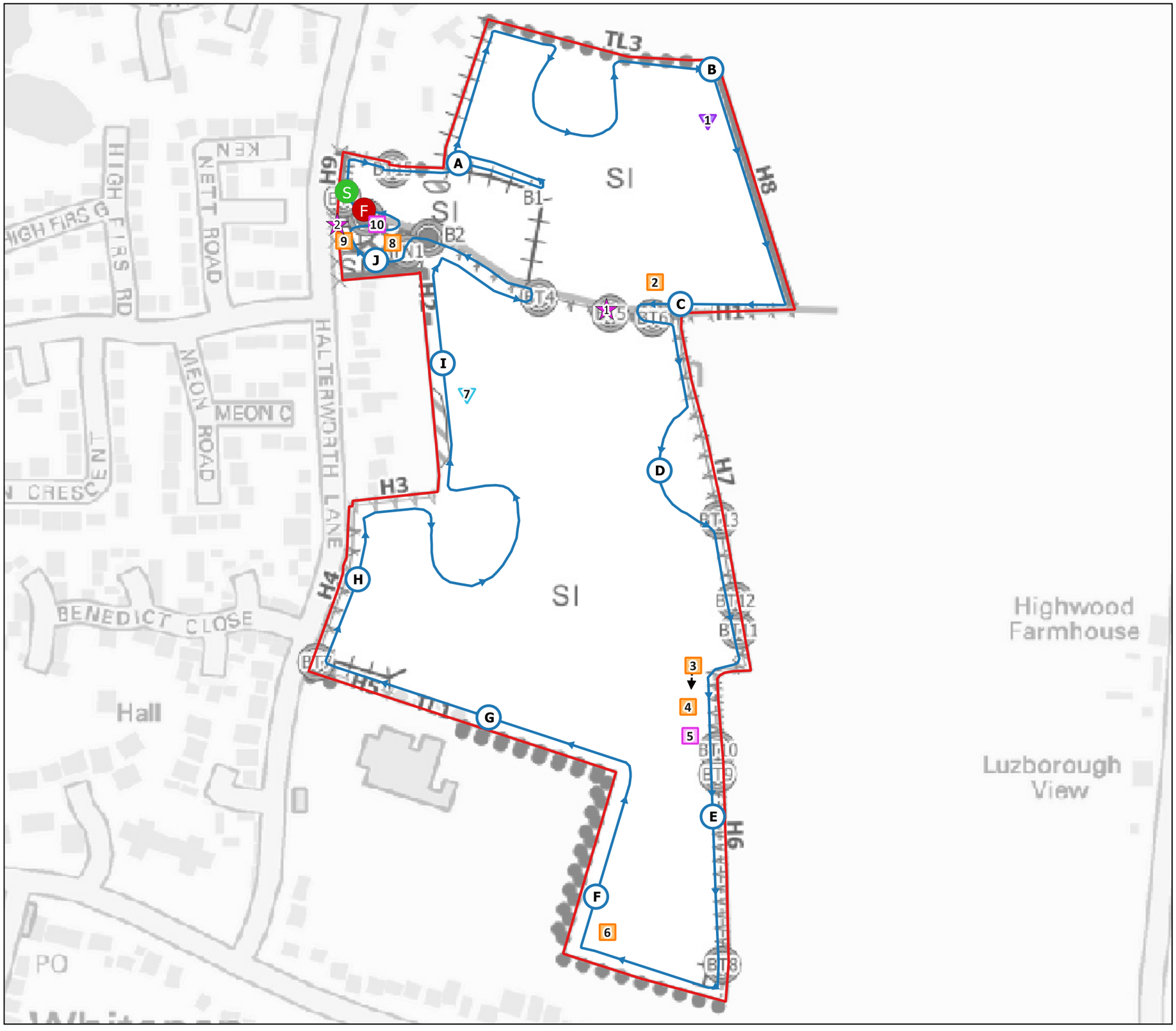

Key:

- Site Boundary

Start & Finish Points

- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Arrow

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Nyctalus Species
- Noctule

Plan Reference	Time	Species	Passes	Behaviour
Start	20:11			
PCA	20:15-20:20	No bats		
PCB	20:29-20:34	No bats		
1	20:37	Noctule	2	Commuting
PCC	20:43-20:48			
2	20:46	Common pipistrelle	2	Commuting
PCD	20:52-20:57	No bats		
3	21:01	Common pipistrelle	2	Commuting
4	21:02	Common pipistrelle	3	Foraging
5	21:02	Soprano pipistrelle	1	Commuting
PCE	21:04-21:09	No bats		
6	21:12	Common pipistrelle	1	Commuting
PCF	21:13-21:18	No bats		
PCG	21:21-21:26	No bats		
PCH	21:30-21:35	No bats		
7	21:39	Nyctalus species	2	Commuting
PCI	21:40-21:45	No bats		
PCJ	21:50-21:55	No bats		
8	21:57	Common pipistrelle	1	Commuting
9	22:01	Common pipistrelle	Continuous	Foraging
10	22:03	Soprano pipistrelle	2	Commuting
Finish	22:11			

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BAT TRANSECT PLAN (21.04.21)

scale @ A3 1:2,700.337 | drawn REM | issue 27/11/2023

drawing / figure number **Figure 2** | rev **9840-E-01**

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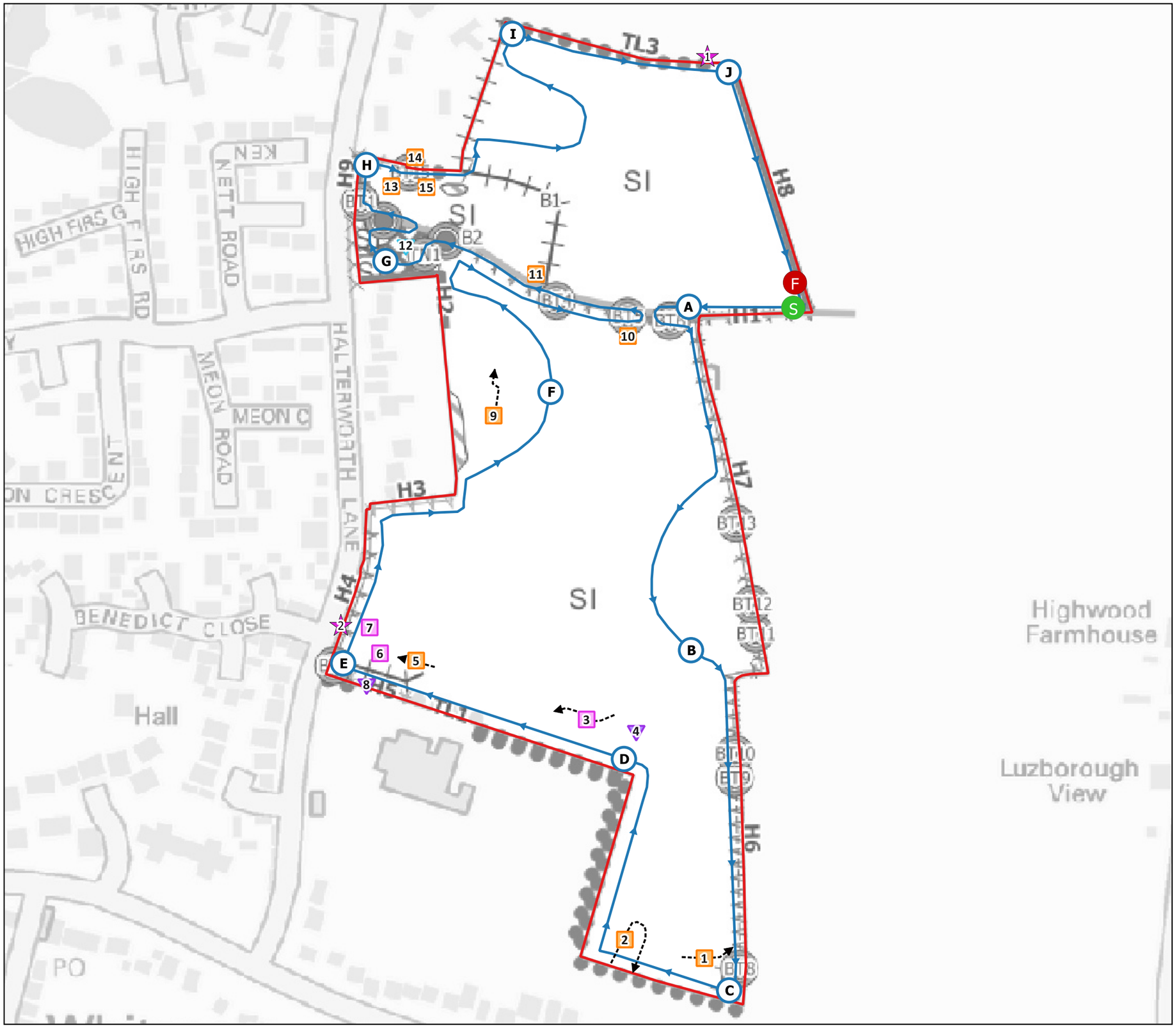

Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Arrow

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Nyctalus Species
- Noctule

Plan Reference	Time	Species	Passes	Behaviour
Start	20:44			
PCA	20:47-20:52	No bats		
PCB	20:57-21:02	No bats		
PCC	21:06-21:11	No bats		
1	21:14	Common Pipistrelle	2	Foraging
2	21:16	Common Pipistrelle	Continuous	Foraging
PCD	21:21-21:26			
3	21:21	Soprano Pipistrelle	Continuous	Foraging
4	21:26	Noctule	2	Foraging
5	21:28	Common Pipistrelle	Continuous	Foraging
6	21:32	Soprano Pipistrelle	2	Foraging
PCE	21:34-21:39			
7	21:35	Soprano Pipistrelle	1	Commuting
8	21:39	Noctule	1	Commuting
9	21:43	Common Pipistrelle	Continuous	Foraging
PCF	21:46-21:51	No bats		
10	21:57	Common Pipistrelle	1	Commuting
11	22:00	Common Pipistrelle	1	Commuting
PCG	22:06-22:11			
12	22:08	Nyctalus species	5	Foraging
PCH	22:18-22:23			
13	22:18	Common Pipistrelle	Continuous	Foraging
14	22:18	Common Pipistrelle	1	Commuting
15	22:23	Common Pipistrelle	Continuous	Foraging
PCI	22:30-22:35	No bats		
PCJ	22:38-22:43	No bats		
Finish	22:46			

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BAT TRANSECT PLAN (11.05.21)

scale @ A3: 1:2,700.897
drawn: REM
issue: 27/11/2023
drawing / figure number: **Figure 3**
rev: **9840-E-01**

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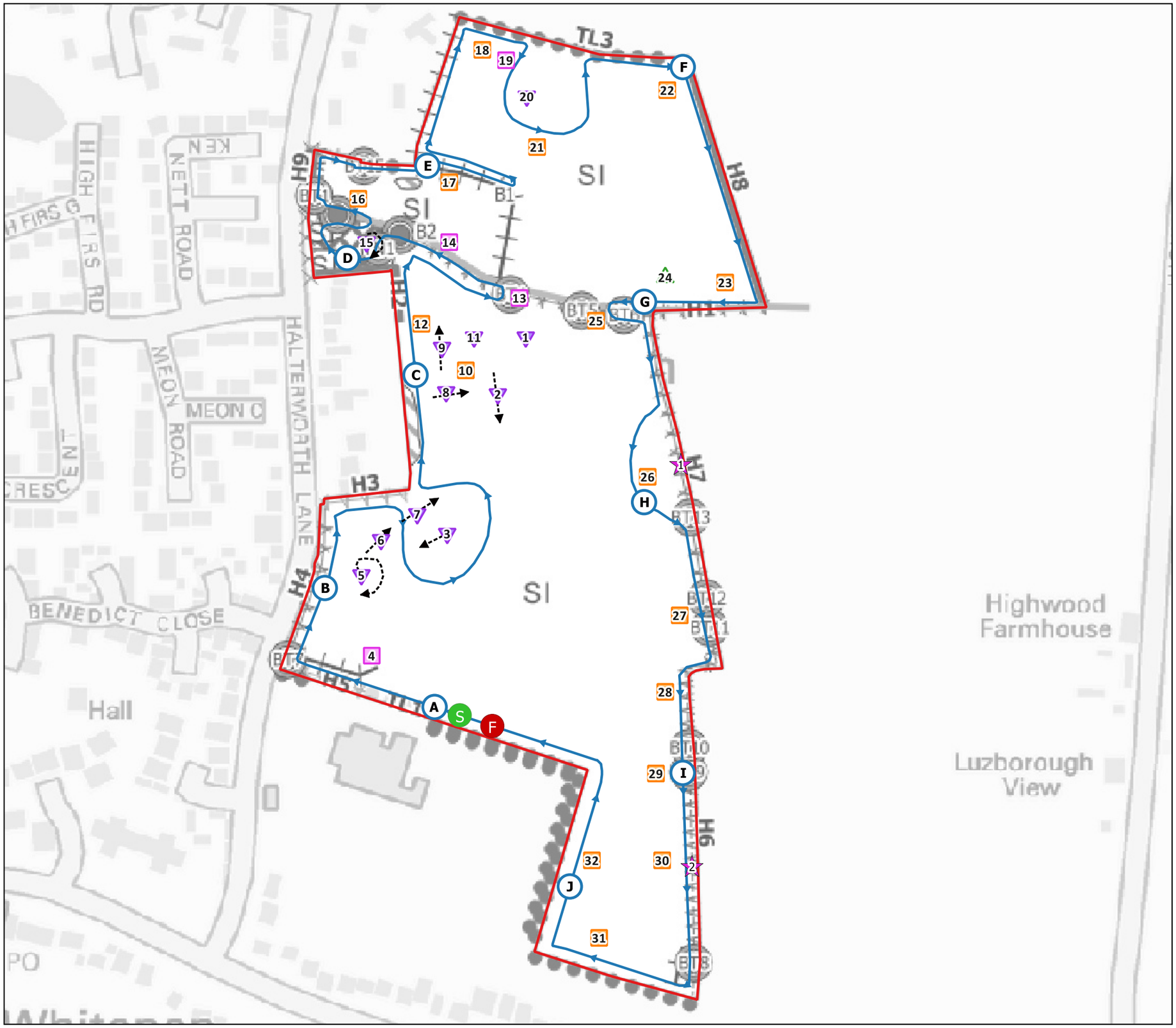

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Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Arrow

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Myotis Species
- Noctule

Plan Reference	Time	Species	Passes	Behaviour
Start	21:24			
1	21:24	Noctule	2	Foraging
2	21:26	Noctule	Continuous	Foraging
3	21:29	Noctule	Continuous	Foraging
PCA	21:32-21:37	No bats		
4	21:38	Soprano Pipistrelle	2	Foraging
PCB	21:39-21:44			
5	21:39	Noctule	2	Foraging
6	21:42	Noctule	3	Foraging
7	21:44	Noctule	4	Foraging
8	22:47	Noctule	1	Commuting
PCC	21:48-21:53			
9	21:48	Noctule	1	Commuting
10	21:49	Common Pipistrelle	3	Foraging
11	21:52	Noctule	Continuous	Foraging
12	21:53	Common Pipistrelle	2	Foraging
13	21:55	Soprano Pipistrelle	1	Commuting
14	21:58	Soprano Pipistrelle	Continuous	Foraging
PCD	22:02-22:07			
15	22:06	Noctule	Continuous	Foraging
16	22:08	Common Pipistrelle	1	Commuting
PCE	22:14-22:19			
17	22:15	Common Pipistrelle	Continuous	Foraging
18	22:20	Common Pipistrelle	3	Foraging
19	22:20	Soprano Pipistrelle	1	Commuting
20	22:22	Noctule	3	Foraging
21	22:23	Common Pipistrelle	Continuous	Foraging
PCF	22:25-22:30			
22	22:25	Common Pipistrelle	4	Foraging
23	22:34	Common Pipistrelle	1	Commuting
PCG	22:36-22:41			
24	22:36	Myotis species	1	Commuting
25	22:41	Common Pipistrelle	3	Foraging
PCH	22:45-22:50			
26	22:49	Common Pipistrelle	1	Commuting
27	22:54	Common Pipistrelle	2	Foraging
28	23:00	Common Pipistrelle	Continuous	Foraging
PCI	23:04-23:09			
29	23:04	Common Pipistrelle	Continuous	Foraging
30	23:12	Common Pipistrelle	1	Commuting
31	23:17	Common Pipistrelle	2	Foraging
PCJ	23:19-23:24			
32	23:21	Common Pipistrelle	1	Foraging
Finish	23:27			

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BAT TRANSECT PLAN (09.06.21)

scale @ A3 1:2,700 | drawn REM | issue date 27/11/2023

drawing / figure number **Figure 4** | rev **9840-E-01**

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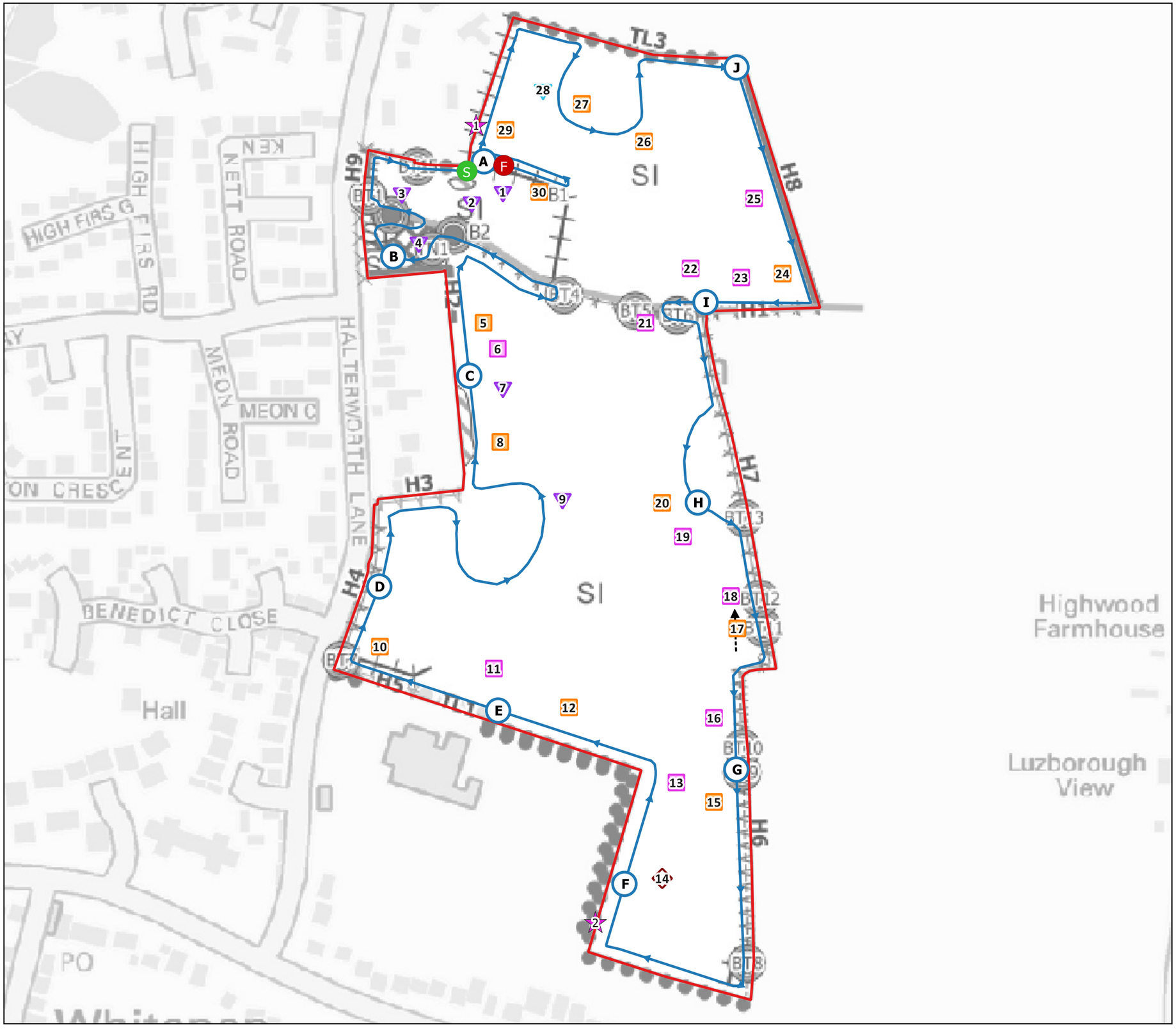

Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Arrow

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Brown Long-eared
- Noctule

Plan Reference	Time	Species	Passes	Behaviour
Start	21:00			
PCA	21:00-21:05			
1	21:01	Noctule	1	Commuting
2	21:04	Noctule	2	Foraging
3	21:07	Noctule	1	Commuting
PCB	21:10-21:15			
4	21:10	Noctule	Continuous	Foraging
5	21:22	Common Pipistrelle	1	Commuting
6	21:22	Soprano Pipistrelle	1	Commuting
PCC	21:23-21:28			
7	21:26	Noctule	2	Foraging
8	21:29	Common Pipistrelle	2	Foraging
9	21:31	Noctule	2	Foraging
PCD	21:34-21:39	No bats		
10	21:41	Common Pipistrelle	2	Foraging
PCE	21:43-21:48			
11	21:47	Soprano Pipistrelle	1	Commuting
12	21:49	Common Pipistrelle	Continuous	Foraging
13	21:51	Soprano Pipistrelle	Continuous	Foraging
PCF	21:54-21:59			
14	21:58	Long-eared species	1	Commuting
PCG	22:02-22:07			
15	22:03	Common Pipistrelle	1	Commuting
16	22:07	Soprano Pipistrelle	Continuous	Foraging
17	22:10	Common Pipistrelle	Continuous	Foraging
18	22:10	Soprano Pipistrelle	2	Foraging
PCH	22:12-22:17			
19	22:14	Soprano Pipistrelle	2	Foraging
20	22:15	Common Pipistrelle	Continuous	Foraging
21	22:21	Soprano Pipistrelle	Continuous	Foraging
PCI	22:24-22:29			
22	22:25	Soprano Pipistrelle	5	Foraging
23	22:29	Soprano Pipistrelle	1	Commuting
24	22:30	Common Pipistrelle	4	Foraging
25	22:32	Soprano Pipistrelle	1	Commuting
PCJ	22:37-22:42	No bats		
26	22:48	Common Pipistrelle	1	Commuting
27	22:51	Common Pipistrelle	3	Foraging
28	22:51	Nyctalus species	3	Foraging
29	22:53	Common Pipistrelle	Continuous	Foraging
30	22:59	Common Pipistrelle	Continuous	Foraging
Finish	23:01			

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BAT TRANSECT PLAN (27.07.21)

scale @ A3: 1:2,700
drawn: REM
issue date: 27/11/2023
drawing / figure number: **Figure 5**
rev: **9840-E-01**

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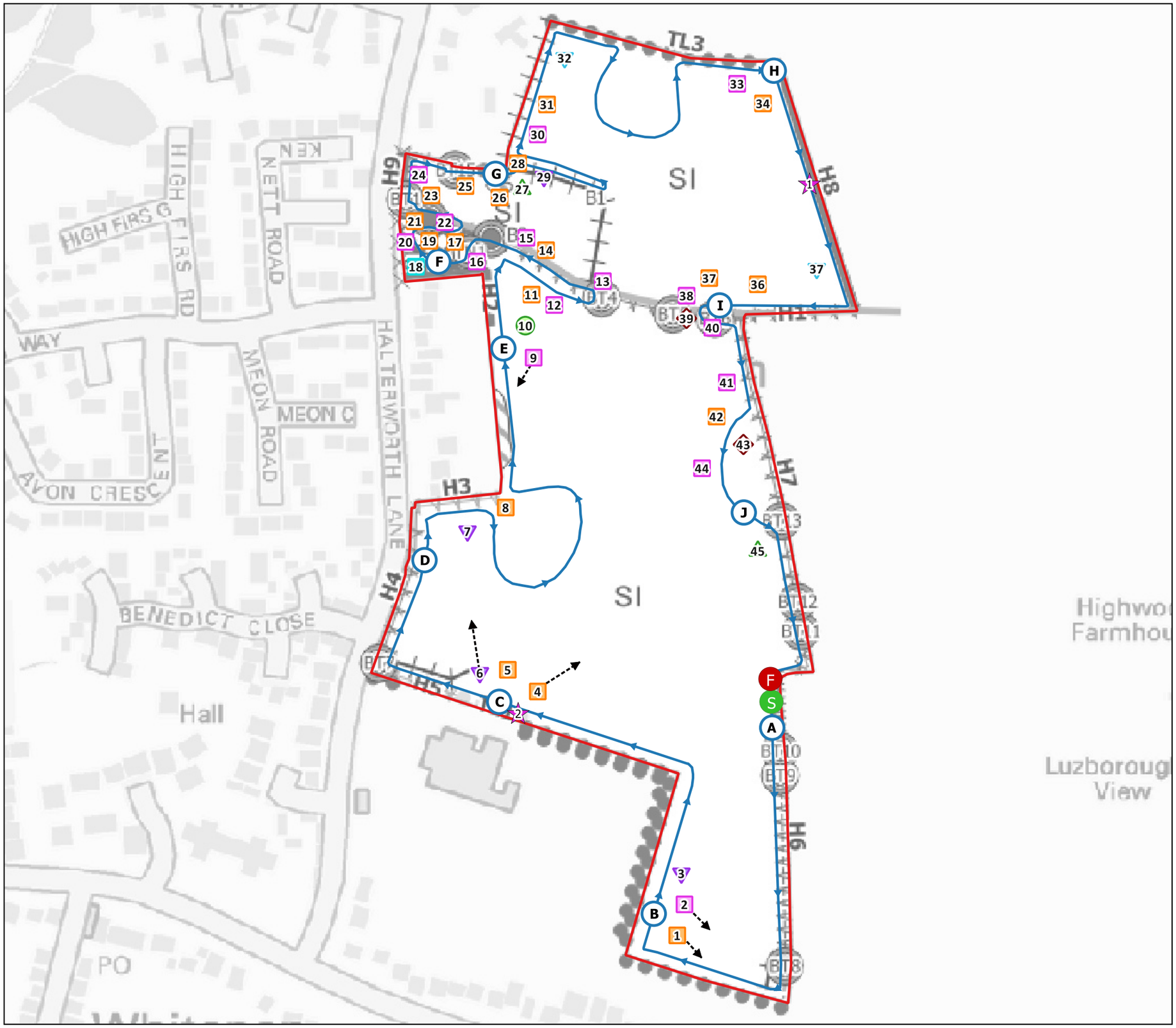

Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Arrow
- Static Bat Detector Locations

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Pipistrelle Species
- Myotis Species
- Nyctalus Species
- Noctule
- Plecotus Species
- Serotine

Plan Reference	Time	Species	Passes	Behaviour
Start	20:25			
PCA	20:25-20:30	No bats		
PCB	20:38-20:43			
1	20:40	Common pipistrelle	4	Foraging
2	20:41	Soprano pipistrelle	4	Foraging
3	20:41	Noctule	3	Commuting
PCC	20:47-20:52			
4	20:47	Common pipistrelle	2	Commuting
5	20:47	Noctule	5	Foraging
6	20:49	Noctule	Continuous	Foraging
PCD	20:55-21:00	No bats		
7	21:01	Noctule	3	Commuting
8	21:01	Common pipistrelle	4	Foraging
PCE	21:05-21:10			
9	21:07	Soprano pipistrelle	Continuous	Foraging
10	21:07	Serotine	2	Commuting
11	21:13	Common pipistrelle	Continuous	Foraging
12	21:13	Soprano pipistrelle	1	Commuting
13	21:15	Soprano pipistrelle	Continuous	Foraging
14	21:18	Common pipistrelle	2	Commuting
15	21:18	Soprano pipistrelle	3	Commuting
16	21:20	Soprano pipistrelle	3	Commuting
PCF	21:22-21:27			
17	21:22	Common pipistrelle	1	Commuting
18	21:23	Pipistrelle species	3	Commuting
19	21:24	Common pipistrelle	1	Commuting
20	21:24	Soprano pipistrelle	2	Commuting
21	21:25	Common pipistrelle	Continuous	Foraging
22	21:27	Soprano pipistrelle	1	Commuting
23	21:29	Common pipistrelle	Continuous	Foraging
24	21:29	Soprano pipistrelle	2	Commuting
25	21:33	Common pipistrelle	3	Commuting
PCG	21:34-21:39			
26	21:34	Common pipistrelle	Continuous	Foraging
27	21:34	Myotis species	1	Commuting
28	21:36	Common pipistrelle	1	Commuting
29	21:40	Noctule	1	Commuting
30	21:46	Soprano pipistrelle	3	commuting
31	21:47	Common pipistrelle	4	Foraging
32	21:48	Nyctalus species	3	Commuting
PCH	21:52-21:57			
33	21:53	Soprano pipistrelle	Continuous	Foraging
34	21:55	Common pipistrelle	3	Commuting
35	22:01	Nyctalus species	2	Commuting
36	22:03	Common pipistrelle	5	Foraging
PCI	22:04-22:09			
37	22:04	Common pipistrelle	Continuous	Foraging
38	22:05	Soprano pipistrelle	2	Commuting
39	22:07	Plecotus species	2	Commuting
40	22:08	Soprano pipistrelle	1	Commuting
41	22:12	Soprano pipistrelle	1	Commuting
42	22:13	Common pipistrelle	Continuous	Foraging
43	22:14	Plecotus species	1	Commuting
44	22:15	Soprano pipistrelle	2	Commuting
PCJ	22:17-22:22			
45	22:22	Myotis species	1	Commuting
Finish	22:25			

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BAT TRANSECT PLAN (16.08.21)

scale @ A3: 1:2,700.674
drawn: REM
issue: 27/11/2023
drawing / figure number: **Figure 6**
rev: **9840-E-01**

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B:\QGIS Projects\XXXX Job Name\QGIS 2.14\PLANS\Bat Figures\XXXX-E-XX Bat Transect Plan 1 (xx.xx.xx).qgs

Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Arrow

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Nathusius Pipistrelle
- Nyctalus Species
- Noctule

Plan Reference	Time	Species	Passes	Behaviour
Start	19:52			
PCA	19:52-19:57	No bats		
1	19:59	Soprano Pipistrelle	Continuous	Foraging
2	19:59	Noctule	3	Foraging
3	20:00	Soprano Pipistrelle	1	Commuting
PCB	20:06-20:11			
4	20:09	Soprano Pipistrelle	1	Commuting
5	20:14	Soprano Pipistrelle	1	Commuting
PCC	20:18-20:23			
6	20:18	Noctule	1	Commuting
7	20:27	Common Pipistrelle	4	Foraging
8	20:27	Noctule	3	Foraging
9	20:27	Soprano Pipistrelle	3	Foraging
PCD	20:29-20:34			
10	20:29	Common Pipistrelle x2	Continuous	Foraging
11	20:29	Soprano Pipistrelle	Continuous	Foraging
12	20:35	Soprano Pipistrelle	5	Foraging
13	20:35	Common Pipistrelle	Continuous	Foraging
PCE	20:40-20:45			
14	20:40	Common Pipistrelle	Continuous	Foraging
15	20:45	Common Pipistrelle	Continuous	Foraging
16	20:48	Common Pipistrelle	Continuous	Foraging
PCF	20:51-20:56			
17	20:51	Common Pipistrelle	Continuous	Foraging
18	20:53	Common Pipistrelle	1	Commuting
19	20:56	Common Pipistrelle x2	Continuous	Foraging
20	20:58	Soprano Pipistrelle	3	Foraging
PCG	21:02-21:07			
21	21:02	Common Pipistrelle	2	Foraging
22	21:05	Common Pipistrelle	4	Foraging
PCH	21:13-21:18			
23	21:14	Common Pipistrelle	3	Foraging
24	21:16	Common Pipistrelle	2	Foraging
PCI	21:23-21:28			
25	21:23	Common Pipistrelle	1	Commuting
26	21:24	Common Pipistrelle	4	Foraging
27	21:30	Common Pipistrelle x2	Continuous	Foraging
28	21:33	Common Pipistrelle	Continuous	Foraging
29	21:34	Soprano Pipistrelle	1	Commuting
PCJ	21:37-21:42	No bats		
30	21:46	Nyctalus species	1	Commuting
31	21:47	Common Pipistrelle x2	Continuous	Foraging
32	21:49	Common Pipistrelle	Continuous	Foraging
33	21:50	Soprano Pipistrelle	Continuous	Foraging
34	21:51	Common Pipistrelle	Continuous	Foraging
35	21:55	Soprano Pipistrelle	Continuous	Foraging
36	21:55	Common Pipistrelle	Continuous	Foraging
37	21:58	Common Pipistrelle	Continuous	Foraging
Finish	22:01			

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Land off Halterworth Lane, Romsey

BAT TRANSECT PLAN (01.09.21)

scale @ A3: 1:2,700 | drawn: REM | issue: 27/11/2023

drawing / figure number: **Figure 7** | rev: **9480-E-01**

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Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Arrow

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Pipistrelle Species
- Barbastelle
- Plecotus Species

Plan Reference	Time	Species	Passes	Behaviour
Start	04:14			
PCA	04:14-04:19			
1	04:15	Soprano Pipistrelle	2	Foraging
2	04:15	Common Pipistrelle	Continuous	Foraging
3	04:16	Barbastelle	1	Communting
4	04:18	Soprano Pipistrelle	1	Communting
5	04:19	Common Pipistrelle	3	Foraging
6	04:24	Common Pipistrelle	1	Communting
PCB	04:28-04:33	No bats		
7	04:36	Common Pipistrelle	Continuous	Foraging
PCC	04:40-04:45	No bats		
PCD	04:53-04:58			
8	04:53	Common Pipistrelle	Continuous	Foraging
9	04:53	Soprano Pipistrelle	Continuous	Foraging
10	04:59	Soprano Pipistrelle	Continuous	Foraging
PCE	05:05-05:10			
11	05:05	Soprano Pipistrelle	Continuous	Foraging
12	05:06	Long-eared bat species	1	Communting
13	05:06	Nyctalus species	1	Communting
14	05:06	Common Pipistrelle	Continuous	Foraging
15	05:12	Soprano Pipistrelle	3	Foraging
16	05:12	Common Pipistrelle	Continuous	Foraging
17	05:14	Soprano Pipistrelle	2	Foraging
PCF	05:15-05:20			
18	05:15	Common Pipistrelle	Continuous	Foraging
19	05:15	Soprano Pipistrelle	Continuous	Foraging
20	05:20	Common Pipistrelle	Continuous	Foraging
21	05:20	Soprano Pipistrelle	5	Foraging
22	05:21	Common Pipistrelle	3	Foraging
23	05:24	Long-eared bat species	1	Communting
PCG	05:28-05:33	No bats		
24	05:36	Common Pipistrelle	1	Communting
PCH	05:39-05:44			
25	05:39	Common Pipistrelle	1	Communting
26	05:48	Common Pipistrelle	4	Foraging
PCI	05:52-05:57			
27	05:55	Pipistrelle species	1	Communting
PCJ	06:03-06:08	No bats		
28	06:09	Common Pipistrelle	Continuous	Foraging
29	06:09	Common Pipistrelle	1	Communting
Finish	06:20			

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BAT TRANSECT PLAN (02.09.21 DAWN)

scale @ A3 1:2,700.248 | drawn REM | issue 27/11/2023

drawing / figure number **Figure 8** | rev **9840-E-01**

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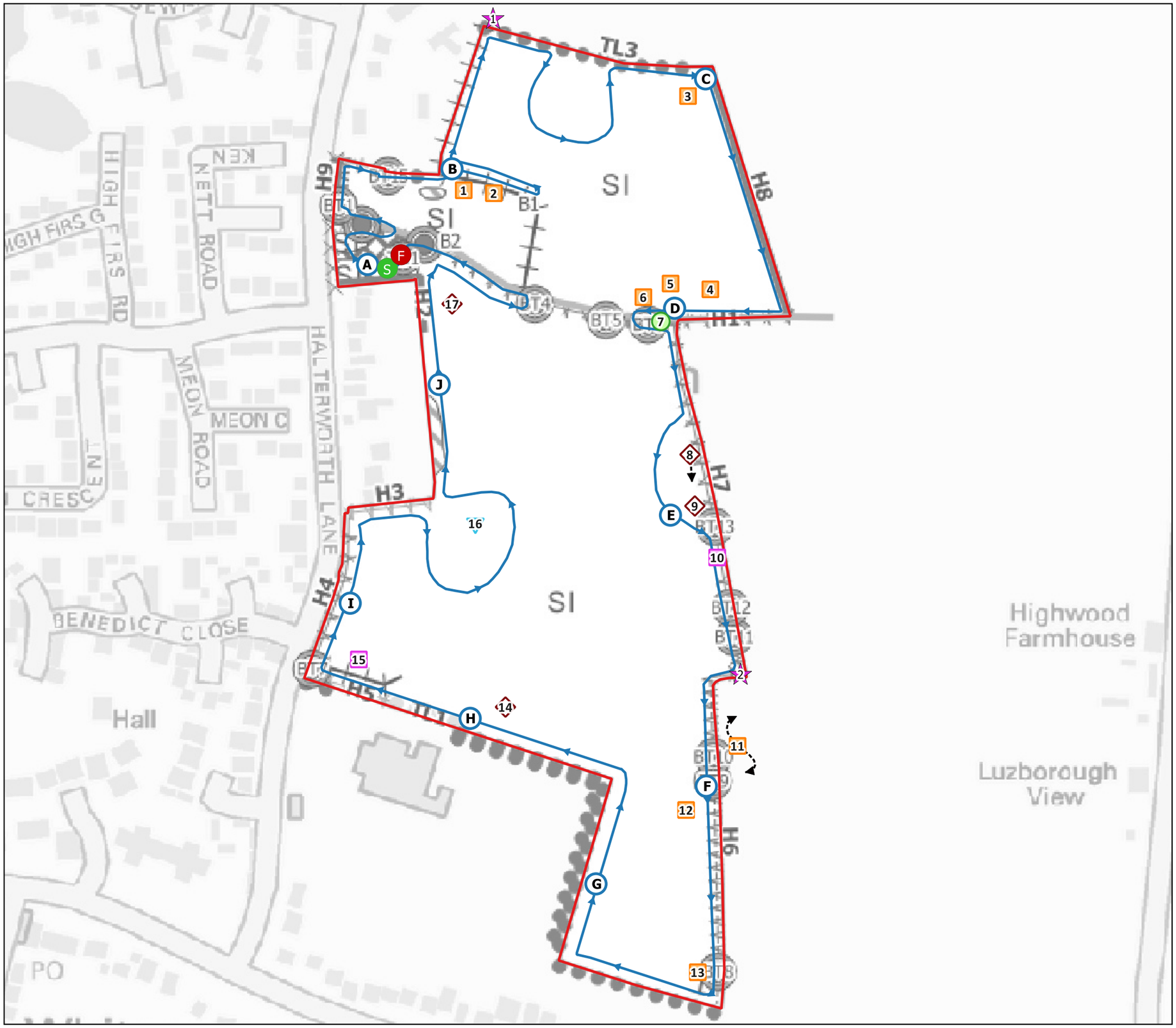

Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Path

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Plecotus Species
- Serotine

Plan Reference	Time	Species	Passes	Behaviour
Start	18:23			
PCA	18:23-18:28	No bats		
PCB	18:32-18:37			
1	18:33	Common Pipistrelle	1	Commuting
2	18:37	Common Pipistrelle	4	Foraging
PCC	18:44-18:49			
3	18:45	Common Pipistrelle	2	Foraging
4	18:53	Common Pipistrelle	1	Commuting
PCD	18:55-19:00			
5	18:55	Common Pipistrelle	6	Foraging
6	18:56	Common Pipistrelle	2	Foraging
7	18:58	Serotine	2	Foraging
8	19:01	Nyctalus species	1	Commuting
PCE	19:03-19:08			
9	19:03	Nyctalus species	1	Commuting
10	19:09	Soprano Pipistrelle	6	Foraging
PCF	19:11-19:16			
11	19:11	Common Pipistrelle	Continuous	Foraging
12	19:14	Common Pipistrelle	Continuous	Foraging
13	19:18	Common Pipistrelle	4	Foraging
PCG	19:20-19:25	No bats		
PCH	19:30-19:35			
14	19:32	Long-eared bat species	1	Commuting
15	19:38	Soprano Pipistrelle	1	Commuting
PCI	19:40-19:45	No bats		
16	19:51	Nyctalus species	2	Foraging
PCJ	19:58-20:03	No bats		
17	20:08	Long-eared bat species	1	Commuting
Finish	20:24			

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Land off Halterworth Lane, Romsey

BAT TRANSECT PLAN (11.10.21)

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rev: **9840-E-01**

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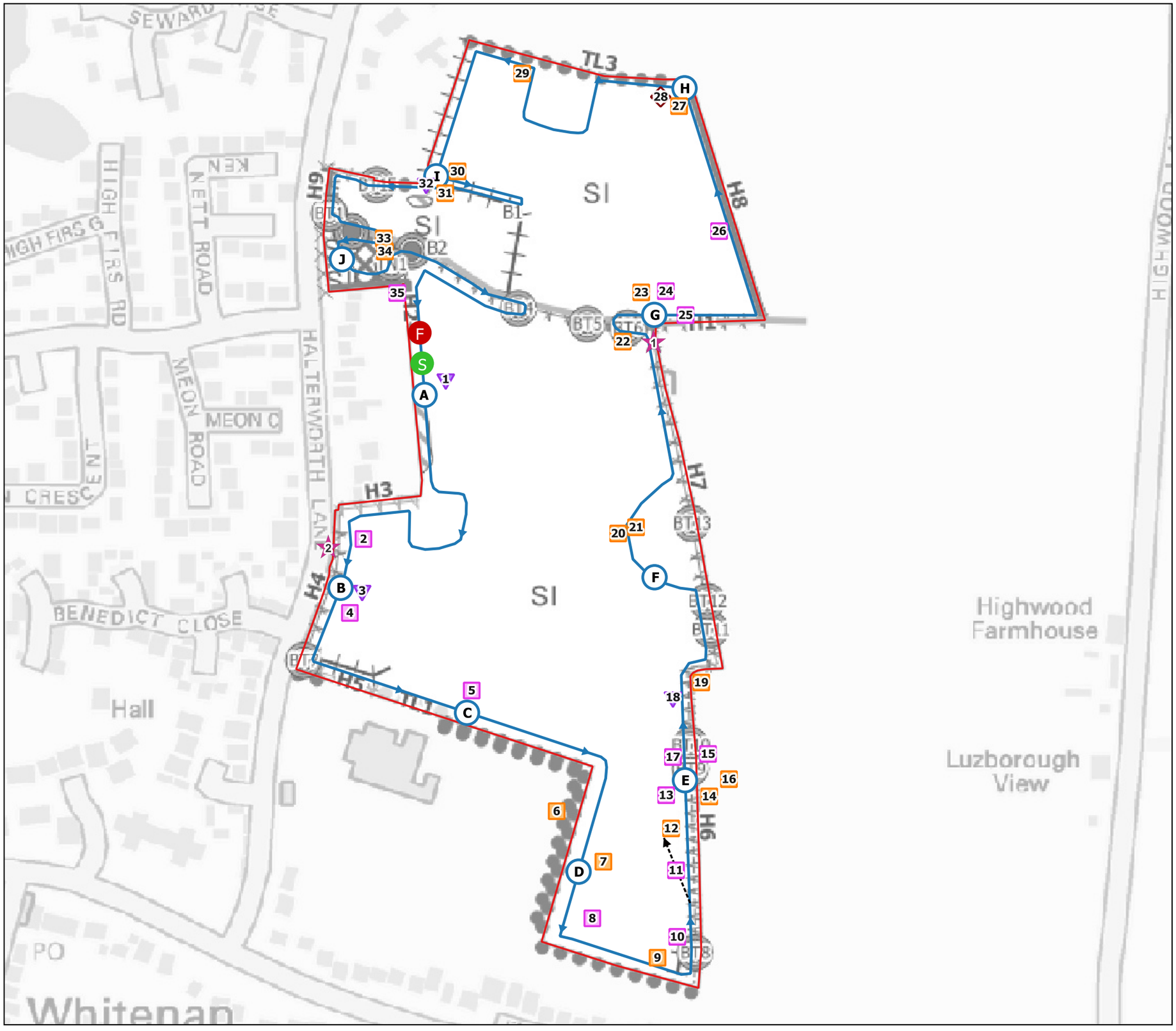

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Key:

- Site Boundary
- Start point
- Finish point
- Point Count Locations
- Flight Arrow
- Transect Route
- Static Locations

Bat Contacts

- Common Pipistrelle
- Soprano Pipistrelle
- Noctule
- Plecotus Species

Plan Reference	Time	Species	Passes	Behaviour
Start	20:10			
PCA	20:18 - 20:23			
1	20:22	Noctule		
2	20:28	S. Pip	2	Foraging
PCB	20:29 - 20:34			
3	20:31	Noctule	1	Commuting
4	20:32	S. Pip	3	Foraging
PCC	20:42 - 20:47			
5	20:44	S. Pip	1	Commuting
6	20:51	C. Pip	3	Foraging
PCD	20:52 - 20:57			
7	20:54	C. Pip	1	Commuting
8	20:58	S. Pip	2	Commuting
9	21:01	C. Pip	2	Commuting
10	21:01	S. Pip	1	Commuting
11	21:03	S. Pip	1	Commuting
12	21:04	C. Pip	1	Commuting
13	21:05	S. Pip	2	Commuting
PCE	21:06 - 21:11			
14	21:06	C. Pip	2	Commuting
15	21:06	S. Pip	2	Commuting
16	21:08	C. Pip x2	Continuous	Foraging
17	21:09	S. Pip	Continuous	Foraging
18	21:16	Noctule	1	Commuting
19	21:16	C. Pip	3	Foraging
PCF	21:18 - 21:23	No Bats		
20	21:25	C. Pip	2	Commuting
21	21:25	C. Pip	1	Commuting
22	21:27	C. Pip	Continuous	Foraging
PCG	21:29 - 21:34			
23	21:29	C. Pip x2	Continuous	Foraging
24	21:29	S. Pip	2	Commuting
25	21:32	S. Pip	1	Commuting
26	21:36	S. Pip	1	Commuting
PCH	21:39 - 21:44			
27	21:40	C. Pip	1	Commuting
28	21:46	Ple spp.	1	Commuting
29	21:50	C. Pip	1	Commuting
PCI	21:54 - 21:59			
30	21:54	C. Pip	Continuous	Foraging
31	22:00	C. Pip	Continuous	Foraging
32	22:00	Noctule	1	Commuting
PCJ	22:04 - 22:09			
33	22:04	C. Pip	3	Foraging
34	22:07	C. Pip	Continuous	Foraging
35	22:08	S. Pip	3	Foraging
Finish	22:10			

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Land off Halterworth Lane, Romsey

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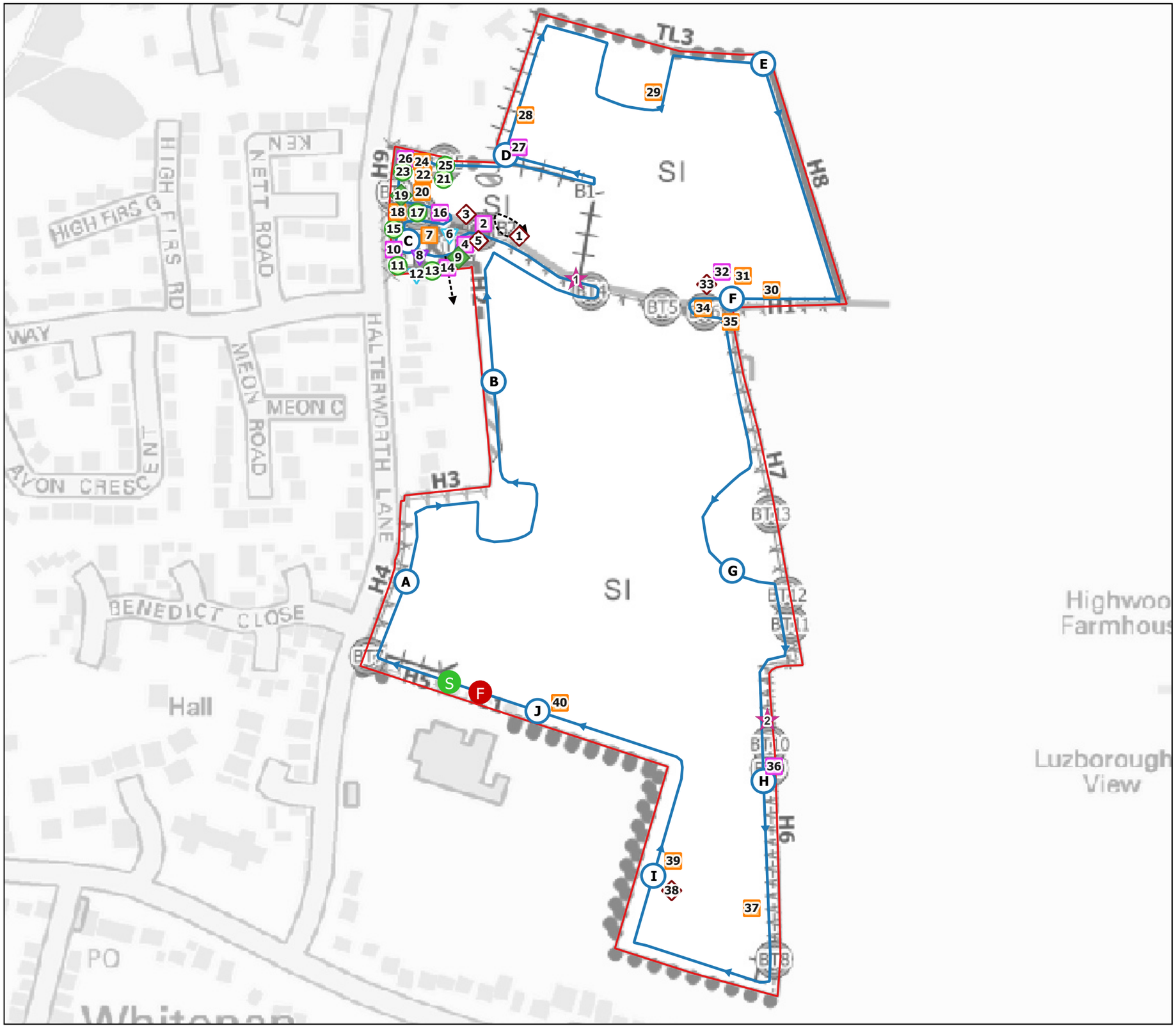

Key:

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- Point Count Locations
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- Flight Arrow
- Static Locations

Bat Contacts

- Common Pipistrelle
- Soprano Pipistrelle
- Nyctalus Species
- Noctule
- Plecotus Species
- Serotine
- Nyctalus species / Serotine

Plan Ref.	Time	Species	Behaviour	Passes
Start	18:40			
PC A	18:42-18:47			
PC B	18:50-18:55			
1	19:03	Plecotus Sp.	Foraging	3
2	19:04	S.Pip	Foraging	Cont.
3	19:04	Plecotus Sp.	Foraging	2
4	19:05	S.Pip	Foraging	Cont.
5	19:06	Plecotus Sp.	Foraging	3
PC C	19:07-19:12			
6	19:09	Nyctalus Sp.	Commuting	1
7	19:10	C.Pip	Foraging + Social	4
8	19:11	Noctule	Commuting	1
9	19:11	Nyctalus/Eptesicus Sp.	Commuting	1
10	19:11	S.Pip	Foraging + Social	4
11	19:11	Serotine	Commuting	1
12	19:12	Nyctalus Sp.	Commuting	1
13	19:12	Serotine	Foraging	2
14	12:12	S.Pip	Commuting	1
15	19:13	Serotine	Unknown	3
16	19:13	S.Pip	Foraging	Cont.
17	19:14	Serotine	Foraging	3
18	19:14	C.Pip	Foraging	3
19	19:14	Nyctalus/Eptesicus Sp.	Commuting	1
20	19:15	C.Pip	Foraging	3
21	19:15	Serotine	Foraging	3
22	21:16	C.Pip	Social	2
23	19:16	Serotine	Commuting	1
24	19:16	C.Pip	Foraging	Cont.
25	19:16	Serotine	Foraging	3
26	19:18	S.Pip	Foraging + Social	3
PC D	19:21-19:26			
27	19:25	S.Pip	Commuting	1
28	19:27	C.Pip	Foraging + Social	Cont.
29	19:28	C.Pip	Foraging	3
PC E	19:32-19:37			
30	19:42	C.Pip	Foraging + Social	Cont.
PC F	19:43-19:48			
31	19:43	C.Pip	Foraging	Cont.
32	19:43	S.Pip	Foraging + Social	2
33	19:47	Plecotus Sp.	Commuting	
34	19:47	C.pip x2	Foraging + Social	
35	19:48	C.Pip	Foraging	Cont.
PC G	19:59-20:04			
PC H	20:11-20:16			
36	20:15	S.Pip	Commuting	1
37	20:26	C.Pip	Commuting	1
PC I	20:21-20:33			
38	20:32	Plecotus Sp.	Foraging	2
39	20:33	C.Pip	Foraging	2
PC J	20:37-20:42			
40	20:40	C.Pip	Commuting	1
Finish	20:42			

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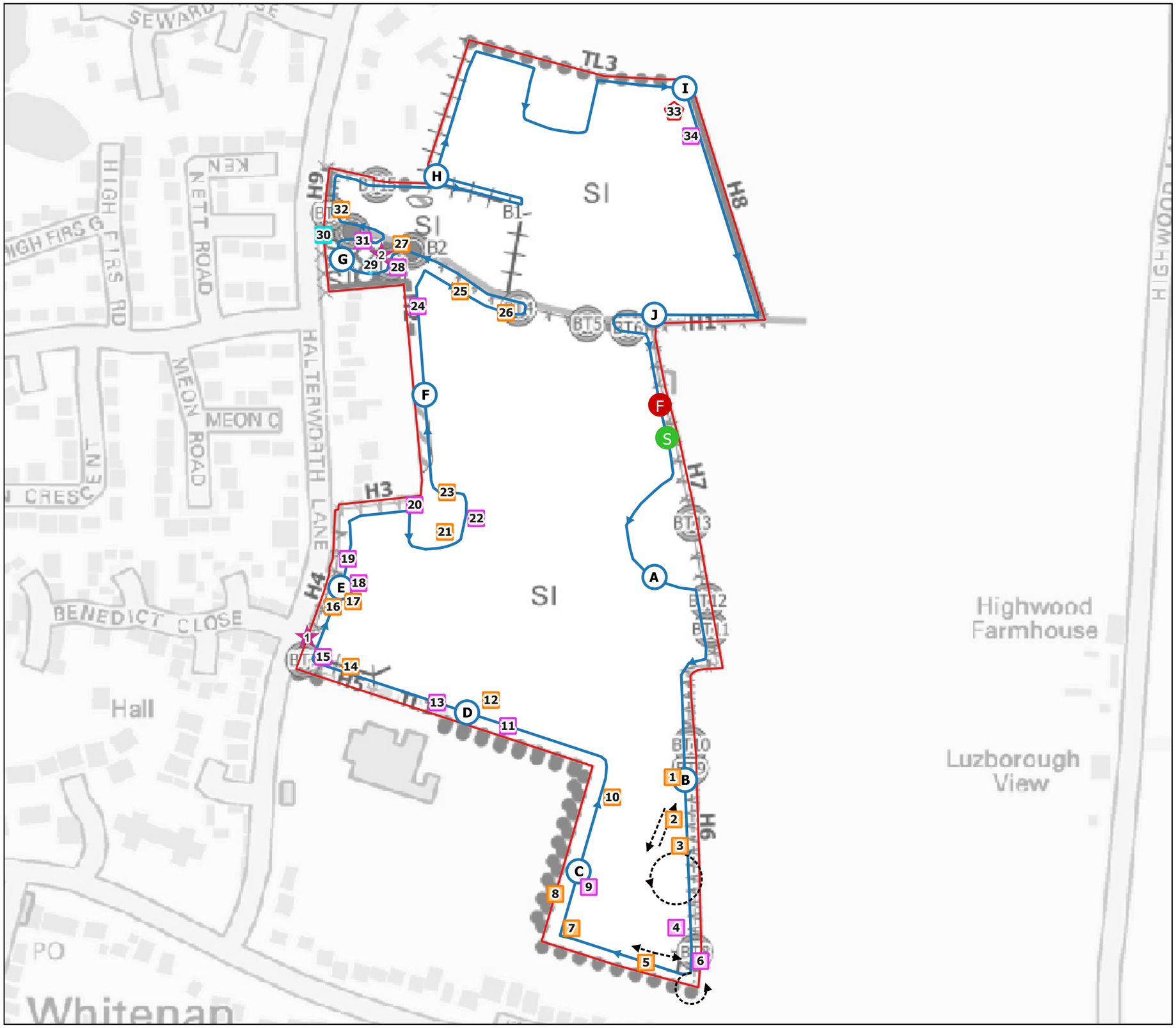

Key:

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- Finish point
- Point Count Locations
- Flight Arrow
- Transect Route
- Static Locations

Bat Contacts

- Common Pipistrelle
- Soprano Pipistrelle
- Pipistrelle Species
- Nyctalus Species
- Bat Species

Plan Ref.	Time	Species	Behaviour	"Passes"
Start	18:10			
PC A	18:14-18:19			
PC B	18:22-18:27			
1	18:24	C.Pip	Commuting	2
2	18:26	C.Pip	Foraging	Cont.
3	18:28	C.Pip	Foraging	Cont.
4	18:31	S.Pip	Commuting	1
5	18:32	C.Pip	Foraging + Social	Cont.
6	18:35	S.Pip	Foraging + Social	Cont.
7	18:37	C.Pip	Unknown	1
PC C	18:40-18:45			
8	18:40	C.Pip	Commuting	1
9	18:41	S.Pip	Foraging	2
10	18:46	C.Pip	Commuting	1
PC D	18:49-18:54			
11	18:50	S.Pip	Commuting	2
12	18:53	C.Pip	Commuting	1
13	18:54	S.Pip	Commuting	1
14	18:56	C.Pip	Commuting	2
15	18:58	S.Pip	Foraging	3
16	19:00	C.Pip	Commuting	1
17	19:01	C.Pip	Foraging	Cont.
PC E	19:01-19:06			
18	19:04	S.Pip	Commuting	2
19	19:06	S.Pip	Commuting	1
20	19:09	S.Pip	Commuting	2
21	19:10	C.Pip	Foraging	3
22	19:13	S.Pip	Commuting	1
23	19:15	C.Pip	Foraging	3
PC F	19:19-19:24			
24	19:26	S.Pip	Foraging	Cont.
25	19:30	C.Pip	Commuting	1
26	19:34	C.Pip	Commuting	1
27	19:37	C.Pip	Foraging+Social	Cont.
28	19:37	S.Pip	Foraging	Cont.
PC G	19:39-19:44			
29	19:42	Nyc. Sp.	Unknown	1
30	19:42	Pip sp.	Social	1
31	19:44	S.Pip	Foraging	2
32	19:46	C.Pip	Commuting	1
PC H	19:49-19:54			
PC I	19:57-20:02			
33	20:00	Unknown	Unknown	1
34	20:02	S.Pip	Commuting	1
PC J	20:05-20:10			
Finish	20:12			

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Land off Halterworth Lane, Romsey

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Appendix 7.5
Breeding Bird Surveys

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Gladman Developments Ltd.

Land West off Halterworth Lane, Romsey

APPENDIX 7.5 - BREEDING BIRD SURVEYS

January 2024

FPCR Environment and Design Ltd
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Rev	Issue Status	Prepared / Date	Approved/Date
-	Draft 1	REM / 25.11.23	DJC / 29.11.23
A		AU 13.12.23	
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CONTENTS

TABLES

FIGURE

APPENDIX

1.0 INTRODUCTION

1.1 The following report has been prepared by FPCR Environment and Design Ltd on behalf of Gladman Developments Ltd to present the results of breeding bird surveys at land off Halterworth Lane, Romsey (central OS Grid Reference SU 37454 21271), here after referred to as the 'SSite'.

1.2 The scope and objectives of the report are to:

- present the findings of the breeding bird surveys undertaken between April, May and June 2021;
- assess the relative importance of the survey area for the breeding bird assemblage; and
- review the Site proposals and provide recommendations for mitigation, compensation, and enhancement where required.

Site Context

1.3 The Site is approximately 12.8ha in size, located on the easter extent of Romsey, Hampshire. The Site comprised of large modified grassland compartments used for sheep grazing, bound by hedgerows, mature treelines and scrub boundaries. A public footpath bisects Site in the northern extent connecting Halterworth Lane and Highwood Lane.

1.4 Large expanses of residential housing are located to the south and west of the Site, including a primary school and associated greenspace on the south-western boundary. To the north and east, the land is comprised of further grassland with broadleaved woodland parcels present.

Development Proposals

1.5 Outline planning application for demolition of existing buildings and the erection of up to 270 dwellings, including affordable housing, with land for the potential future expansion of Halterworth Primary School, public open space, structural planting and landscaping, sustainable drainage system (SuDS) and vehicular access points. All matters reserved except for means of vehicular access.

2.0 LEGISLATION AND POLICY

2.1 The Wildlife and Countryside Act (WCA) 1981 (as amended)[1] is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to recklessly or intentionally:

- Kill, injure or take any wild bird;
- Take, damage, or destroy the nest of any wild bird, while in use or being built; and
- Take or destroy the egg of any wild bird.

2.2 Species listed on Schedule 1 of the WCA are protected from disturbance on the nest or with while young.

2.3 Several bird species are also included on the list of species of principal importance for the conservation of biodiversity in England as required under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006[2]. The S41 list is used to guide decision-makers, including local planning authorities, in implementing their duty under section 40 of the Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

2.4 In addition to statutory protection, some bird species are classified according to their conservation status, such as their inclusion on the Red and Amber lists of Birds of Conservation Concern (BoCC) in the UK[3]:

- Red List (high conservation concern) species are those that are Globally Threatened according to IUCN (International Union for the Conservation of Nature) criteria; those whose population has declined rapidly (50% or more) in recent years; and those that have declined historically and not shown a substantial recent recovery.
- Amber List (medium conservation concern) species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately (between 25% and 49%) in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
- Green List (low conservation concern) species that fulfil none of the above criteria.

[1] http://www.legislation.gov.uk/ukpga/1981/69 [Accessed August 2021]

[2] http://www.legislation.gov.uk/ukpga/2006/16/contents [Accessed August 2021]

[3] Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the Unity Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds*, 114: p25.

3.0 METHODOLOGY

Desk Study

3.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:

- Hampshire Biodiversity Information Centre (HBIC)
- Multi Agency Geographic Information for the Countryside (MAGIC)[4]

3.2 When handling data, species records were filtered to those from the previous ten years. Older records were reviewed but only included where they were considered relevant to the Site assessment.

Breeding Bird Survey

3.3 Three breeding bird surveys (BBS) were undertaken in 2021; one survey per month in April, May, and June. The survey methodology employed was broadly based on that of territory mapping, as developed by the British Trust for Ornithology (BTO)[5]. All birds encountered (seen or heard) were recorded on a field survey plan using standard BTO species codes and symbols, which denote bird sex, age and behaviour (where appropriate).

3.4 The Site was walked over by experienced ecologists between sunrise and 11:00am. A route was mapped out prior to the survey, with particular attention paid to linear features, such as hedgerows and tree lines, and other natural features, such as scrub or waterbodies.

3.5 The criteria used in the assessment of breeding birds has been adapted from the standard criteria proposed by the European Ornithological Atlas Committee (EOAC 1979)[6] and are grouped into four categories:

- **Non-breeder** – flyover, or observed in unsuitable habitat
- **Possible breeder** – birds observed in suitable habitat, or a singing male recorded
- **Probable breeder** – a pair observed in suitable habitat, territory defence behaviour, agitated behaviour, or nest building; and
- **Confirmed breeder** – active nest with chicks, recently fledged young, adult birds carrying food/faecal material for/from young.

3.6 The surveys were conducted to ascertain the Sites' potential to support breeding populations of bird species that have been assessed to be of some conservation importance, including those included on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and/or Birds of Conservation Concern (BoCC) Red or Amber lists. These species are likely to be at greatest threat in relation to further decline and are commonly referred to as 'notable' species.

3.7 The surveys were not undertaken in unfavourable conditions such as heavy rain or strong wind, which may negatively affect the results (*Table 1*).

[4] MAGIC - https://magic.defra.gov.uk/ [Accessed 20.09.2021]
[6] Bibby, C.J., N.D. Burgess & D.A. Hill (2000) *Bird Census Techniques*: 2nd Edition. London: Academic Press
[6] EOAC (1979) *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

Table 1: Survey Dates and Weather Conditions

Date	Cloud Cover (%)	Rain	Wind (Beaufort scale)	Visibility
23rd April 2021	70	0	1	Very Good
20th May 2021	100	0	1	Excellent
23rd June 2021	0	0	0	Excellent

Assessment Methodology

3.8 The value of bird populations was measured using two separate approaches: nature conservation value and conservation status.

3.9 The CIEEM guidance on Ecological Impact Assessment (EcIA)[7] assesses nature conservation value within a geographical context. To attain each level of value, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in *Table 2*. In some cases, professional judgement may be required to increase or decrease the allocation of the specific value, based upon local knowledge.

3.10 In order for a species to obtain a conservation value as Local Level or higher, they must regularly occur in sustainable populations within the Site boundaries.

3.11 The most recent annual bird report for Hampshire[8] was then consulted to inform the conservation status of species within the county.

[7] CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (version 1.1).* Chartered Institute of Ecology and Environmental Management, Winchester.
[8] Hampshire Ornithological Society (2019) *Hampshire Bird Report 2019*

Table 2: Evaluation Criteria

Nature Conservation Value	Selection Criteria
International	• A species which is part of the cited interest of a SPA, and which regularly occurs in internationally, or nationally important numbers. • A species present in internationally important numbers (>1% of international population).
National	• A species which is part of the cited interest of a SSSI, and which regularly occurs in nationally or regionally important numbers. • A nationally important assemblage of breeding or over-wintering species. • A species present in nationally important numbers (>1% UK population). • Rare breeding species (<300 breeding pairs in the UK).
Regional	• Species listed as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), which are not covered above, and which regularly occurs in regionally important numbers. • Species present in regionally important numbers (>1% of regional population). • Sustainable populations of species that are rare or scarce within a region. • Species on the BoCC Red List and which regularly occurs in regionally important numbers.
County	• Species listed as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), which are not covered above, and which regularly occurs in county important numbers • Species present in county important numbers (>1% of county population). • Sustainable populations of species that are rare or scarce within a county or listed as priority species for nature conservation under S41 of the NERC Act. • A site designated for its county important assemblage of birds (e.g., a SINC Site). • Species on the BoCC Red List and which regularly occur in county important numbers.
Local	• Other species of conservation interest (e.g., all other species on the BoCC Red and Amber List or listed as Priority Species under Schedule 41 of the NERC Act (2006) which are not covered above) regularly occurring in locally sustainable populations. • Sustainable populations of species which are rare or scarce within the locality.
Site	• Species that are common and widespread

4.0 RESULTS

Desk Study

Designated Sites

4.1 There are two international designations within 15km of the Site related to birds. The Solent and Southampton Water Ramsar and SPA lies approximately 5.7km south. This is an important Site due to its estuaries, harbours, extensive mudflats and saltmarsh habitats. These habitats support a diverse assemblage of invertebrates, which in turn provides important summer and wintering grounds for a number of wading bird species including Dark-bellied Brent Goose *Branta b.bernicla*, Mediterranean gull *Larus melanocephalus*, and Roseate Tern *Sterna dougallii*. The area regularly supports at least 20,000 waterfowl.

4.2 The New Forest Ramsar, SPA and SAC lies approximately 7.4km south-west of the Site. This Site qualifies as an SPA as it supports populations of European Importance of breeding birds, including Dartford warbler *Sylvia undata*, nightjar *Caprimulgus europaeus* and woodlark *Lullula arborea*, in addition to wintering populations of European importance for Hen Harrier *Circus cyaneus*.

Notable Bird Records

4.3 Consultation data from HBIC included various protected and notable bird species within 1km of the Site boundaries; summarised in *Table 3* and *Figure 1*.

Table 3: Notable and Protected Bird Species Records within 1km of Site

Species	Conservation Status	Dates	Approximate Location Relative to Site Boundary
Kingfisher *Alcedo atthis*	EU_Bird_1 WCA_s1p1	2009 - 2017	Three records, 390m west
Red kite *Milvus milvus*	EU_Bird_1 WCA_s1p1 CR	2013 - 2017	Multiple records, 190m west
Osprey *Pandion haliaetus*	EU_Bird_1 WCA_s1p1	2012	Single record, 250m south
House sparrow *Passer domesticus*	BOCC_Red NERC_s41	2009 - 2013	Three records, 390m west
Black redstart *Phoenicurus ochruros*	BOCC_Red WCA_s1p1 CR	2014	Single record, 300m south
Starling *Sturnus vulgaris*	BOCC_Red	2013	Single record, 390m west
Redwing *Turdus iliacus*	BOCC_Amber WCA_s1p1	2017	Single record, 470m north-east
Song thrush *Turdus philomelos*	BOCC_Amber	2013 - 2018	Multiple records, 390m west
Barn owl *Tyto alba*	WCA_s1p1	2012	Single record, 285m south-east
Common (Mealy) redpoll *Acanthis flammea*	CI, BOCC_Red	2009	Single record, 280m north-east
Fieldfare *Turdus pilaris*	BOCC_Red WCA_s1p1	2018	Single record, 610m north

Field Surveys

Breeding Bird Survey in 2021

4.4 Over the course of three BBS, a total of 32 bird species were recorded within Site. A full table of results is provided in *Appendix A*.

4.5 Of the 32 recorded bird species, twelve were found to be of conservation importance due to their inclusion under WCA Schedule 1, NERC Section 41 and/or the BoCC Red or Amber lists, these are listed below, detailed in *Table 4* and *Figure 2*:

- Confirmed breeders – starling *Sturnus vulgaris,* woodpigeon *Columba palumbus*
- Probable breeders – wren *Trogolodytes trogolodytes,* house sparrow *Passer domesticus,* dunnock *Prunella modularis* and greenfinch *Chloris chloris*
- Possible breeders – rook *Corvus frugilegus,* willow warbler *Phylloscopus trochilus,* song thrush *Turdus philomelos,* and linnet *Linaria cannabina*
- Non-breeders – swift *Apus apus,* stock dove *Columba oenas,*

4.6 The remaining twenty species were common and widespread and, as such, were not of conservation concern due to their inclusion on the BoCC green list. These include blackbird *Turdus merula*, robin *Erithacus rubecula,* great spotted woodpecker *Dendrocopos major*, several tit species (blue *Cyanistes caeruleus,* great *Parus major* and coal *Periparus ater*) and non-native species collared dove *Streptopelia decaocto* and feral pigeon *Columba livia*.

4.7 Woodpigeon were not included in *Figure 2* due to number of bird records which would have cluttered the plan. The woodpigeons Amber List status is associated with their international population and the relative significance of the UK population comparative to other countries. This is not due to a decline in the UK population and woodpigeon remain common and widespread across both Hampshire and the United Kingdom.

4.8 No species identified within the Site boundaries or surrounding area during the BBS were recorded in significant numbers.

Table 4: Species of Conservation Importance On-Site with Breeding Status

Species	Conservation Status	Survey Area Breeding Status	Breeding Status in Hampshire
Swift *Apus apus*	Amber List	*Non-breeder* Swifts were only observed during the June survey visit, with two individuals flying over the Site.	Common but declining summer visitor and passage migrant.
Stock dove *Columba oenas*	Amber List	*Non-breeder* A single stock dove was recorded during the May survey visit, flying over the Site from north to south.	Numerous resident and winter visitor.
Woodpigeon *Columba palumbus*	Amber List	*Confirmed breeder* Woodpigeon were recorded on all three survey visits with both low numbers on Site (between ten and twenty-three) and flying over (between four to ten). Woodpigeon were mostly recorded along the Site boundaries and in groups of no more than three individuals. Multiple juveniles were recorded during the June survey visit, one in the northern field and two along the eastern boundary. This confirms breeding.	Abundant resident, passage migrant and winter visitor.
Rook *Corvus frugilegus*	Amber List	*Possible breeder* Low numbers (between three and five on Site) of rook were recorded during all survey visits within the fields and along the Site boundary. Rooks were recorded in groups of no more than three and most often singly.	Numerous resident and probable winter visitor.
Willow warbler *Phylloscopus trochilus*	Amber List	*Possible breeder* A single male willow warbler was recorded during the April survey visit, singing from the southern treeline to the north of the school. This was the only individual of this species recorded, however it is a possible breeder due to the presence of the singing male.	Common but declining summer visitor and passage migrant.
Wren *Trogolodytes trogolodytes*	Amber List	*Probable breeder* Wren were recorded on all survey visits in low numbers (between two and four individuals) in the hedgerows bordering the Site. Three males to the north-west (along hedgerows H1 and H10 and in the scrub compartment) of the Site were all recorded singing on two survey occasions,	Abundant resident.

Species	Conservation Status	Survey Area Breeding Status	Breeding Status in Hampshire
		defending territory. The other two individuals were also singing males recorded in hedgerow H6 and the southern tree-line, however these individuals were only recorded on single occasions.	
Song thrush *Turdus philomelos*	Amber List NERC S41	*Possible Breeder* A single song thrush was heard calling from the western boundary of the Site in April. The species was not encountered during subsequent surveys.	Numerous resident, passage migrant and winter visitor.
Starling *Sturnus vulgaris*	Red List NERC S41	*Confirmed Breeder* Starlings were recorded on each survey with between twenty and thirty-five individuals recorded from within the hedgerows bordering the Site. A smaller number of starlings were also recorded as flyovers, passing across the Site individually, or in small groups, with a peak of six observed during the April survey. An individual was recorded carrying food during the April survey visit and seven juveniles were recorded during the June visit, confirming breeding of this species.	Numerous but declining resident, passage migrant and winter visitor.
House sparrow *Passer domesticus*	Red List NERC S41	*Probable Breeder* House sparrows were encountered on all surveys (with up to 25 individuals) with a colony recorded were hedgerow H3 and H4 meet on the western Site boundary. In April an individual was seen carrying nesting material and in May a pair was noted in the south-east corner of the Site, both indicate that this species probably breeds on Site. Two individuals were also recorded as flyovers during the May survey visit.	Abundant but declining resident.
Dunnock *Prunella modularis*	Amber List NERC S41	*Probable Breeder* Low numbers of dunnock were noted on all three survey visits, with between three and six individuals recorded. Two males in the scrub compartment, and a third male along the southern treeline, were recorded singing on both he April and May visits, indicating that they were defending territories. Several other males were also heard singing from hedgerows, although not on more than one occasion.	Abundant resident.
Linnet *Carduelis cannabina*	Red List NERC S41	*Possible Breeder* A single linnet was recorded in the scrub compartment during the April survey visit as well as a single flyover. Excluding a single flyover in the May survey visit, linnet were not recorded on subsequent surveys.	Common but declining resident, passage migrant and winter visitor.

Species	Conservation Status	Survey Area Breeding Status	Breeding Status in Hampshire
Greenfinch *Chloris chloris*	Red List	*Probable Breeder* A single male greenfinch was recorded on the April and May survey visits, singing just to the south of the Site, behind the southern treeline. Again, this indicates that the male was holding territory and so may have been breeding.	Numerous but declining resident, passage migrant and winter visitor.

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5.0 DISCUSSION AND RECOMMENDATIONS

5.1 The overall breeding bird assemblage recorded within the Site is typical of edge-of-settlement farmland. It provides suitable nesting and foraging habitat for a range of bird species, in the form of hedgerows, scrub and grassland, with most species recorded in association with one or more of these features.

5.2 Most species observed within the survey area are common and widespread, both nationally and within the county of Hampshire. As such, their occurrence during the surveys is considered typical and would be expected on a site of this nature. Those species recorded on the Site that are vulnerable to impacts resulting from the proposed development are the confirmed, probable, and possible breeding notable species; in this case, starling, woodpigeon, wren, house sparrow, dunnock, greenfinch, rook, willow warbler, song thrush, and linnet.

5.3 The notable non-breeding species, which were almost entirely flyovers, are considered unlikely to be negatively impacted by the proposals, since they do not appear to utilise the Site as a breeding resource.

Impact Assessment

5.4 The most likely impacts from the development on the assemblage recorded would be:

- Direct loss/change of breeding habitat.
- Disturbance during construction and/or operation.

Farmland Species

5.5 Linnet, a notable species typically associated with farmland habitats, was documented within the Site. However, only a single individual was recorded over the three surveys (in April), apart from two flyovers. Therefore, the population of this species is considered of no more than local conservation value.

5.6 It is likely that a linnet will be displaced from Site post-development, as a direct result of the land use change from arable to residential, and therefore will be adversely impacted at a local level. However, the area of scrub where the linnet was recorded will be retained and may be enhanced by the addition of a SuDS feature which could further improve the habitat. In addition, the neighbouring areas of farmland to the north and east will remain, providing suitable habitat.

Urban Edge Species

5.7 Starling, greenfinch, and house sparrow are species typically found near human habitation, with house sparrow particularly favouring hedgerows and gardens. The network of gardens, hedgerows, and buildings to be created post-development, along with new grassland buffers, will continue to support these species.

Hedgerow and Woodland Species

5.8 Song thrush, dunnock, and willow warbler (possible or probable breeders) typically breed in association with thick hedgerows, dense scrub, and/or broadleaved woodland habitats and as such their presence is not unexpected within Site. In the context of Hampshire, none of these species were recorded in exceptional numbers, with only a single willow warbler and song thrush recorded

on a single survey each, while dunnocks were recorded on each survey, peaking at six individuals in April. The populations of these species are considered of no more than local conservation value.

5.9 Under the current proposals, the existing hedgerows and tree lines are to be retained and buffered, with linear expanses of green infrastructure that will pass along the boundaries of the Site. These areas will comprise new tree and shrub planting that will benefit each of these species.

Mitigation and Compensation

5.10 Measures to ensure that breeding birds are not disturbed during construction will be provided within a Construction and Environmental Management Plan (CEMP) at the Reserved Matters stage. This will ensure that no offenses are committed under the Wildlife and Countryside Act 1981 (as amended). Recommendations will include:

- Removal of any vegetation suitable for nesting birds will take place outside of the bird breeding season (March to August inclusive) to protect nesting birds.
- If vegetation removal is required during the bird breeding season, it should first be inspected by a suitably qualified ecologist. If an active nest is discovered, the vegetation containing the nest will remain in situ and an appropriate buffer adopted, as stipulated by the ecologist. The removal of vegetation can only be undertaken once young birds have fledged.
- Retained hedgerows and other woody habitats should be protected with Heras fencing or similar to protect them from accidental damage or disturbance.

5.11 The retention of suitable breeding habitats, particularly the boundary hedgerows and tree lines, as well as the surrounding scrub, will ensure continued use of the Site by local bird populations.

5.12 New habitat creation, new native tree and scrub planting, SuDS with associated marginal planting and species-rich grassland buffers will increase foraging and nesting resources available for local bird populations, while appropriate management of existing, retained habitat will help protect nesting/roosting birds from predation.

5.13 The proposed development will not be able to replicate farmland habitats lost during the proposed development, but the overall adverse effects on the breeding farmland bird assemblage can be reduced and offset by appropriate mitigation and management of the retained areas that will benefit breeding birds in general.

5.14 Where feasible, hedgerows will benefit from the creation of wide headlands to ensure they are buffered from the development. Strips of species-rich grassland will be sown in front of the hedgerows, where possible, to separate the hedgerows from the development footprint. These will be allowed to form a diverse tussock-forming structure, which, once established, would increase the value of the hedgerows as wildlife corridors.

5.15 An appropriate management regime should be implemented to maximise the nature conservation of habitats on Site. This can be secured through appropriate planning conditions for a Landscape and Ecological Management Plan (LEMP) or Habitat Management and Monitoring Plan (HMMP). Recommendations include:

- Hedgerow cutting on a three-year rotational basis, once established, to form a thick A-shape structure with dense bases. This provides protection against predation and additional nesting opportunities.

- Supplementary planting of native species within newly created hedgerows and tree lines, where required, to prevent gaps forming and maintain corridors of movement across the Site and into the wider landscape.

Enhancements

5.16 Proposals for the Site include the provision of new habitats within the GI, which will benefit a range of bird species. This includes:

- The creation of dense patches of native scrub/shrubs within grassland mosaics may also attract species such as bullfinch, mistle thrush and spotted flycatcher.
- Buffered areas adjacent to hedgerows and within larger areas of green space can be planted with a species-rich meadow grassland mix, incorporating vetch species, common bird's-foot-trefoil *Lotus corniculatus*, white and red clover *Trifolium repens/pratense*, black medick *Medicago lupulina* and common fumitory *Fumaria officinalis*. This would provide a valuable foraging resource for seed specialists and will support a diverse invertebrate assemblage for insectivorous migrant species, such as warblers.
- Marginal planting, including both herbaceous and woody species, around the margins of the SuDS features, including reed where appropriate, will create habitat for wetland species and increased foraging opportunities for other bird species.

5.17 A mixture of bird boxes should be installed within retained habitats. Specialised boxes can also be designed into the built environment. Recommendations include:

- A mixture of small hole (26mm and 32mm) boxes placed throughout the Site on suitable trees and buildings to provide nesting opportunities for blue tit and great tit. These boxes generally have a high uptake rate.
- Larger nest boxes with a 45mm hole should be placed under the eaves of buildings or approximately 2.5m above ground in trees to provide nesting opportunities for starling.
- Terraced-style or multiple single-holed 32mm nest boxes should be placed on buildings to attract house sparrows.
- Small open fronted nest boxes should be placed throughout the Site, especially on trees that support a climber such as ivy *Hedera helix,* which provides a degree of concealment for the nest. These boxes typically attract robin.
- A mixture of more specialised nest boxes should be placed on retained trees and new buildings particularly on the edge of new residential areas and should include boxes suitable for stock dove *Columba oenas*, kestrel, swallow *Hirundo rustica*, and swift *Apus apus*.

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Key

- Site Boundary
- 1 km buffer
- Adder
- August Thorn
- Barn Owl
- Bats
- Beaded Chestnut
- Black Redstart
- Blood-vein
- Brindled Beauty
- Brown Long-eared Bat
- Brown-spot Pinion
- Buff Ermine
- Cinnabar
- Common (Mealy) Redpoll
- Common Pipistrelle
- Common Toad
- Daubenton's Bat
- Deep-brown Dart
- Dingy Skipper
- Dot Moth
- Dusky Brocade
- Dusky Thorn
- Eurasian Badger
- European Water Vole
- Fieldfare
- Figure of Eight
- Garden Tiger
- Ghost Moth
- Grass Snake
- Green-brindled Crescent
- Grey Dagger
- House Sparrow
- Indian Balsam (Himalayan Balsam)
- Kingfisher
- Knot Grass
- Large Nutmeg
- Latticed Heath
- Long-eared Bat species
- Mottled Rustic
- Mouse Moth
- Noctule Bat
- Oak Hook-tip
- Osprey
- Pipistrelle Bat species
- Polecat
- Red Kite
- Redwing
- Rhododendron
- Rosy Minor
- Rustic
- Sallow
- Serotine
- Shoulder-striped Wainscot
- Slow-worm
- Small Phoenix
- Small Square-spot
- Song Thrush
- Soprano Pipistrelle
- Spinach
- Stag Beetle
- Starling
- Three-cornered Garlic
- Unidentified Bat
- White Ermine
- Western Barbastelle
- West European Hedgehog
- White-letter Hairstreak

CONFIDENTIAL

Gladman

Land off Halterworth Lane, Romsey

CONSULTATION PLAN

scale 1:10500 | drawn OMS/HG | issue 29/3/2021

drawing / figure number **Figure 1** | rev **9840-E-01**

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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

B:\GIS Projects\9840 Romsey\PLANS\Consultation Plans\9840-E-01 Consultation Plan.qgs

Key

- Site Boundary
- Fly over only 1

BoCC Red List Species

- HS House Sparrow
- LI Linnet
- SG Starling
- GR Greenfinch
- SI Swift

BoCC Amber List Species

- D Dunnock
- SD Stock Dove
- WW Willow Warbler
- RO Rook
- ST Song Thrush
- WP Woodpigeon
- WR Wren

Additional Protections

- NERC Species of Principal Importance
- Schedule 1 Species
- LBAP Species (underlined)

Breeding Status

- Confirmed Breeder
- Probable Breeder
- Possible Breeder
- Breeding Status

client: Gladman Developments Ltd.

project: Land off Halterworth Lane, Romsey

drawing title: BREEDING BIRD SURVEY RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES

scale @ a3: 1:2,750 | drawn: REM / EB / AU | issue date: 24/11/2023

drawing / figure number: **Figure 2** | rev: **9840-E-01**

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masterplanning environmental assessment landscape design ecology architecture arboriculture

K:\9800\9840\ECO\QGIS\QGIS 2.14\Plans\Bird Figures\BoCC5 - BBS Plan Template\BoCC5 - BBS Plan Template\XXXX-E-XX Breeding Bird Survey Results Plan - Distribution of Notable Species.qgs

Appendix F-1: Land off Halterworth Land - 2021 Breeding Bird Survey Results & EOAC Criteria for Categorisation of Breeding Status

Survey	Surveyor	Date	Cloud (%)	Rain	Wind	Visibility
1	OGJ	23.04.21	70	0	1	Very good
2	OGJ	20.05.21	100	0	1	Excellent
3	LC	23.06.21	0	0	0	Excellent

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Survey 3	Conservation Status & Protection	Breeding status[1]
Swift	*Apus apus*	-	-	(2 flyovers)	Red List	Non-breeder - F
Feral Pigeon	*Columba livia f. domestica*	2 (+ 5 flyovers)	(7 flyovers)	(18 flyovers)	*Not Listed*	Possible breeder - H
Stock Dove	*Columba oenas*	-	(1 flyover)	-	Amber List	Non-breeder - F
Woodpigeon	*Columba palumbus*	10 (+ 6 flyovers)	15 (+ 4 flyovers)	23 (+ 10 flyovers)	Amber List	Confirmed breeder - FL
Collared Dove	*Streptopelia decaocto*	3 (+ 1 flyover)	2	(1 flyover)	Green List	Possible breeder - H
Great Spotted Woodpecker	*Dendrocopos major*	-	-	(1 flyover)	Green List	Non-breeder - F
Magpie	*Pica pica*	6	10 (+ 1 flyover)	13 (+ 2 flyovers)	Green List	Confirmed breeder - FL
Jackdaw	*Coloeus monedula*	5 (+ 6 flyovers)	20 (+ 1 flyover)	2 (+ 4 flyovers)	Green List	Probable breeder - B
Rook	*Corvus frugilegus*	3 (+ 1 flyover)	5	3 (+ 4 flyovers)	Amber List	Possible breeder - H
Carrion Crow	*Corvus corone*	1 (+ 1 flyover)	5	-	Green List	Possible breeder - H
Blue Tit	*Cyanistes caeruleus*	11	6	12	Green List	Confirmed breeder - FL
Great Tit	*Parus major*	5	2	2	Green List	Possible breeder – H, S
Coal tit	*Periparus ater*	1	-	-	Green list	Possible breeder - H
Long-tailed Tit	*Aegithalos caudatus*	2	-	-	Green List	Possible breeder - H
Willow Warbler	*Phylloscopus trochilus*	1	-	-	Amber List	Possible breeder – H, S
Chiffchaff	*Phylloscopus collybita*	-	1	-	Green List	Possible breeder – H, S

[1]European Ornithological Atlas Committee, 1979. *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Survey 3	Conservation Status & Protection	Breeding status[1]
Blackcap	*Sylvia atricapilla*	-	1	-	Green List	Possible breeder - H
Nuthatch	*Sitta europaea*	1	-	-	Green list	Possible breeder - H
Goldcrest	*Regulus regulus*	2	1	1	Green List	Possible breeder - H
Wren	*Trogolodytes trogolodytes*	3	4	2	Amber List	Probable breeder - T
Treecreeper	*Certhia familiaris*	-	-	1	Green List	Confirmed breeder – FL
Starling	*Sturnus vulgaris*	35 (+ 6 flyovers)	23 (+ 2 flyovers)	20 (+ 4 flyovers)	Red List NERC S.41	Confirmed breeder – FL
Song Thrush	*Turdus philomelos*	-	-	1	Amber List NERC S.41	Possible breeder - H
Blackbird	*Turdus merula*	14	9	11 (+ 1 flyovers)	Green List	Confirmed breeder – FF, FL
Robin	*Erithacus rubecula*	11	10	7	Green List	Probable breeder - T
House Sparrow	*Passer domesticus*	25	28 (+ 2 flyovers)	9 + 1 colony	Red List NERC S.41	Probable breeder - B
Dunnock	*Prunella modularis*	6	4	3	Amber List NERC S.41	Probable breeder - T
Pied Wagtail	*Motacilla alba*	2	-	(1 flyover)	Green List	Possible breeder - H
Chaffinch	*Fringilla coelebs*	4	5	2	Green List	Probable breeder - T
Greenfinch	*Chloris chloris*	1	1	-	Red List	Probable breeder - T
Linnet	*Linaria cannabina*	1 (+ 1 flyover)	(1 flyover)	-	Red List NERC S.41	Possible breeder - H
Goldfinch	*Carduelis carduelis*	5 (+ 1 flyover)	2 (+ 1 flyover)	4 (+ 2 flyovers)	Green List	Probable breeder - T
Total No. Species		**25**	**23**	**22**	(32 Species total)	

Breeding Status evidence can be broken down into four sections, each with their own codes, as defined by the European Ornithological Atlas Committee:

Confirmed breeder
DD – distraction display or injury feigning
UN – used nest or eggshells found from this season
FL – recently fledged young or downy young
ON – adults entering or leaving nest-site in circumstances indicating occupied nest
FF – adult carrying faecal sac or food for young
NE – nest containing eggs
NY – nest with young seen or heard

Probable breeder - Evidence accumulated during the survey indicates that the bird species is breeding on site.
P – pair in suitable nesting habitat
T – permanent territory (defended over at least 2 survey occasions)
D – courtship and display
N – visiting probable nest site
A – agitated behaviour
I – brood patch of incubating bird (from bird in hand)
B – nest building or excavating nest-hole

Possible breeder - Evidence accumulated during the survey indicates that the bird species could be breeding on site, but the evidence is less conclusive than that obtained for probable breeders.
H – observed in suitable nesting habitat
S – singing male

Non-breeder
F – flying over
M – migrant
U – summering non-breeder
UH – observed in unsuitable nesting habitat

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Appendix 7.6

Hazel Dormouse Survey Report

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Gladman Developments Ltd.

Land Off Halterworth Lane, Romsey

Appendix 7.6 - Hazel Dormouse Survey Report

January 2024

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	Draft	EB / 21.11.2023	DJC / 29.11.23
A		AU / 10.01.24	
B		AU / 22.01.24	

CONTENTS

TABLE

FIGURE

1.0 NON-TECHNICAL SUMMARY

1.1 Suitable dormouse habitat was present within the survey area in the form of network of hedgerows and mature trees. A range of species were present which could provide a foraging resource for dormice, including bramble, oak, hazel and hawthorn.

1.2 Presence / likely absence dormouse surveys were undertaken by FPCR between May and October 2021, where by no evidence of dormice was identified within the survey area.

1.3 The proposals include the retention and enhancement of existing hedgerows and treelines onsite, which will benefit hazel dormice as well as other species.

2.0 INTRODUCTION

2.1 The following report has been prepared by FPCR Environment and Design Ltd (FPCR) on behalf of Gladman Developments Ltd to present the results of hazel dormouse *Muscardinus avellanarius* surveys completed on Land at Halterworth Lane, Romsey (central OS Grid Reference: SU 37454 21271). Herein referred to as 'the Site'.

2.2 This report has been produced as part of an EcIA and the scope and objectives of the report are to:

- present the findings of the dormouse surveys undertaken in 2021.
- assess the relative importance of the survey area for dormice.
- review the site proposals and provide recommendations for mitigation, compensation and enhancement (if required).

Site Location and Context

2.3 The site is approximately 12.8ha in size, located on the easter extent of Romsey, Hampshire. The site comprised a large modified grassland compartments used for sheep grazing, bound by hedgerows, mature treelines and treelines. A public footpath bisects site in the northern extent connecting Halterworth Lane and Highwood Lane.

2.4 Large expanses of residential housing are located to the south and west of the site, including a primary school and associated greenspace on the south-western boundary. To the north and east, the land is comprised of further grassland with broadleaved woodland parcels present.

Development Proposals

2.5 Outline planning application for demolition of existing buildings and the erection of up to 270 dwellings, including affordable housing, with land for the potential future expansion of Halterworth Primary School, public open space, structural planting and landscaping, sustainable drainage system (SuDS) and vehicular access points. All matters reserved except for means of vehicular access.

3.0 LEGISLATION AND POLICY

3.1 The hazel dormouse is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is a European Protected Species (EPS) under the Conservation of Habitats & Species Regulations 2019 (EU Exit) (as amended). It is also a species of principal importance for the conservation of biodiversity under section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

3.2 In summary, it is an offence to:

- intentionally or deliberately kill, injure or capture dormice.
- intentionally, deliberately or recklessly disturb dormice in such a way as to significantly affect their ability to survive, breed, rear/nurture their young or significantly affect their local distribution or abundance.
- intentionally or recklessly damage, destroy or obstruct access to places used by dormice for shelter or protection (whether occupied or not).
- intentionally or recklessly disturb a dormouse whilst occupying a place of shelter or protection.
- damage or destroy a dormouse breeding site or resting place.
- possess or transport a dormouse (or any part thereof) unless under licence.
- sell or exchange dormice.

3.3 Proposals which could lead to any of the above would require a derogation licence from Natural England alongside appropriate avoidance, mitigation and compensation measures.

4.0 METHODOLOGY

Desk Study

4.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:

- Hampshire Biodiversity Information Centre (HBIC);
- Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.defra.gov.uk); and

4.2 When handling data, species records were filtered to those within the last ten years, unless considered relevant to the site assessment.

Presence/Likely Absence Surveys

4.3 Dormouse surveys were undertaken in accordance with current good practice guidelines[1] by suitably qualified ecologists. Surveys involved placing standard dormouse nest tubes every 20m in suitable habitat, approximately 1.5m above ground. In 2021 a total of 77 tubes were installed onsite on 24th March 2021 (*Figure 1*), with surveys completed on 14th May, 23rd June, 16th August, 1st September and 11th October 2021.

4.4 The survey results are compared with an index of probability, which indicates the likelihood of finding dormice during this period (*Table 1*). The final survey score is calculated by multiplying the sum of the months that tubes were checked by the number of tubes used, based on 50 tubes as a standard (i.e. 50=1). Fewer tubes reduce the overall score (i.e. 25 tubes = 0.5) and more tubes increase the score (i.e. 100 tubes = 2). A survey effort score of 20 or above is required to provide confidence in the survey results. A final score of 30.8 was achieved following the 2021 surveys.

Table 1: Index of probability for nest tube surveys

Month	Index of Probability
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

[1] Bright, P., Morris, P. & Mitchell-Jones, T. (2006) The dormouse conservation handbook (2nd ed). English Nature, Peterborough.

5.0 RESULTS

Desk Study

Designated Sites

5.1 There were no sites designated for supporting hazel dormice within the Desktop Study Area.

Dormice records

5.2 Hazel dormice are widespread across suitable habitats throughout Hampshire but there were no recent records close to Site identified.

Habitat Suitability

5.3 Suitable dormouse habitat was present within the survey area in the form of a network of hedgerows and treelines which provide suboptimal commuting and nesting opportunities. A range of species were present which also provide a foraging resource for dormice, including bramble, oak, hazel and hawthorn.

5.4 The hedgerows onsite varied in species composition, but in general were comprised of suitable species to provide foraging and nesting opportunities for dormice, including but not limited to bramble and hawthorn.

5.5 Dormouse tubes were spread along the boundary and internal hedgerows onsite.

Presence/Absence Surveys

5.6 In the 2021 surveys no dormouse nests were identified.

6.0 DISCUSSION

6.1 The evidence collected during the desktop study and field surveys demonstrates that this species is currently absent from the habitats onsite. It is therefore considered that there is no constraint to the development proposals. The Application Site supported native and non-native hedgerows and treelines which was considered to provide foraging and nesting opportunities for hazel dormice. However, there was a general absence of hazel within the hedgerows and connectivity with other suitable habitat in the wider area is limited. No evidence of dormice was recorded and so this species is not considered a constraint to the development.

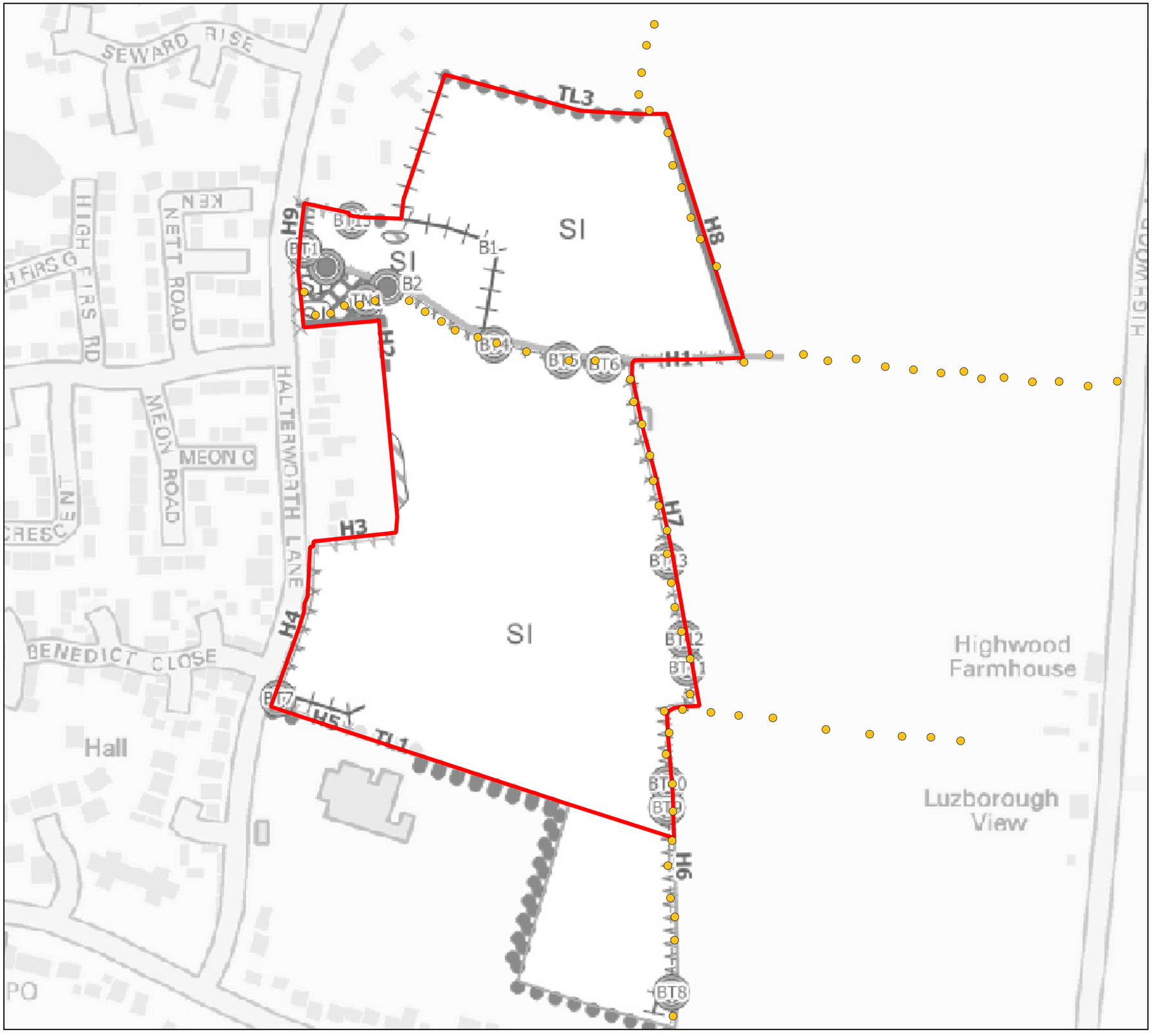
6.2 The boundary hedgerows and treelines are largely to be retained within the scheme, along with the provision of native, fruit and nut-bearing species planting, which over time will enhance the habitat value for small mammals such as dormice, along with birds and invertebrates.

6.3 The proposals will retain and enhance the hedgerows and treelines existing onsite, improving foraging, commuting and resting habitats for this species.

Key

Site Boundary

Dormouse Tube Location



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masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

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client
Gladman Developments Ltd.

project
Halterworth Lane, Romsey

drawing title
Dormouse Survey Plan

scale @ A3
1:2800

drawn
DS / EB / AU

issue date
22/11/2023

drawing / figure number
Figure 1

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Appendix 7.7

Reptile Survey Report

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Gladman Developments Ltd.

Land off Halterworth Lane, Romsey

Appendix 7.7 - Reptile Survey Report

January 2024

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Rev	Issue Status	Prepared / Date	Approved / Date
	Draft	EB / 21.11.2023	DJC / 29.11.23
A		AU 10.01.24	
B		AU 22.01.24	

CONTENTS

TABLES

FIGURE

1.0 NON -TECHNICAL SUMMARY

1.1 FPCR were commissioned by Gladman Developments Ltd to undertake reptile surveys at Land at Halterworth Lane, Romsey, 'the Site' to provide an ecological baseline for the Site and determine presence / likely absence of reptiles.

1.2 The habitats on the Site comprise large modified grassland compartments, bound by hedgerows, treelines and residential boundaries.

1.3 Presence / likely absence reptile surveys were undertaken between May and September 2021 and no evidence of reptile species were recorded.

2.0 INTRODUCTION

2.1 The following Reptile Survey report has been prepared by FPCR Environment and Design Ltd (FPCR) on behalf of Gladman Developments Ltd. on Land at Halterworth Lane, Romsey (central OS Grid Reference: SU 37454 21271). Herein referred to as 'the Site'.

2.2 A suite of ecological surveys have been undertaken on the Site and this report forms an Appendix to the ES Chapter.

Site Location and Context

2.3 The Site is approximately 12.8ha in size, located on the eastern extent of Romsey, Hampshire. The Site is comprised of large modified grassland compartments used for pastoral farming, bound by hedgerows, mature treelines and scrub boundaries. A public footpath bisects the Site in the northern extent connecting Halterworth Lane and Highwood Lane.

2.4 Large expanses of residential housing are located to the south and west of the site, including a primary school and associated greenspace on the south-western boundary. To the north and east, the land is comprised of further grassland with broadleaved woodland parcels present.

Site Proposals

2.5 Outline planning application for demolition of existing buildings and the erection of up to 270 dwellings, including affordable housing, with land for the potential future expansion of Halterworth Primary School, public open space, structural planting and landscaping, sustainable drainage system (SuDS) and vehicular access points. All matters reserved except for means of vehicular access.

3.0 LEGISLATION AND POLICY

Reptile Legislation

3.1 All widespread reptile species, including slow-worm *Anguis fragilis*, adder *Vipera berus*, common lizard *Zootoca vivipara* and grass snake *Natrix helvetica* are partially protected under Sections 9(1) and 9(5) of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation protects these animals from:

- intentional killing and injury;
- selling, offering for sale, possessing, or transporting for the purpose of sale or publishing advertisements to buy or sell a protected species.

3.2 The impact that this legislation has on the Planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, this states:

'The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult English Nature [now Natural England] *before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned.'*

3.3 This partial protection does not directly protect the habitat of these reptile species. Where these animals are present on land that is to be affected by development, the implications of legislation are that providing that killing can reasonably be avoided then an operation is legal. Guidance provided by Natural England[1] and the Amphibian and Reptile Groups of the UK[2] recommends that this should be achieved by ensuring that:

- the animals are protected from injury or killing;
- mitigation is provided to maintain the conservation status of the species;
- population monitoring is carried out subsequent to operations.

[1] Reptiles: guidelines for developers, English Nature (2004). http://publications.naturalengland.org.uk/publication/76006?category=31018

[2] Maintaining best practise in reptile mitigation/translocation programmes: Herpetofauna Groups of Britain and Ireland. http://www.arguk.org/index.php?option=com_docman&task=cat_view&gid=13&Itemid=17

4.0 METHODOLOGY

Desk Study

4.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:

- Hampshire Biodiversity Information Centre (HBIC);
- Multi Agency Geographic Information for the Countryside (MAGIC) website (www.magic.defra.gov.uk); and
- Test Valley Borough Council planning portal[3].

4.2 When handling data, species records were filtered to those within the last ten years, unless considered relevant to the site assessment.

4.3 Further inspection of colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

Reptile Survey

4.4 Strategic reptile presence/absence surveys were undertaken within the survey area following current guidance[4,5,6].

4.5 Methods involved a search for basking reptiles on/under naturally occurring and strategically positioned artificial refugia. The artificial refugia used were 0.5m^2 sections of bitumen roofing felt with a black upper side. These were placed in areas of suitable habitat on 24th March 2021 and allowed to 'bed down' prior to the first survey visit. *Figure 1 Reptile Survey Plan* provides the locations of the refugia.

4.6 In line with guidance, refugia were installed at a minimum density of five refugia per hectare of suitable habitat (a greater density than this was used to further increase the likelihood of detection).

4.7 Seven survey visits were undertaken by experienced FPCR ecologists in suitable weather conditions. These include air temperatures between 10-19°C in the absence of strong wind and heavy rain. The surveys also followed the guidelines recommendations by approaching refugia from downwind and avoiding casting a shadow and with care so as to not to harm or disturb basking animals when checking.

Timings/Conditions

4.8 The following are the weather conditions and timings for reptile surveys on site, provided in *Table 1* below. Surveys were conducted before 10:30am (AM survey) or after 16:30pm (PM survey), however when there were high temperatures in the survey period the finish or start time was moved to ensure the temperature was never over 19°C.

3 Ashford Borough Council Planning Portal - https://planning.ashford.gov.uk/ [Accessed 20.09.2021]

4 Gent, T. & Gibson, S. (eds) (2003) *Herpetofauna Workers' Manual*. JNCC, Peterborough.

5 Froglife (2016) *Surveying for reptiles: Tips, techniques and skills to help you survey for reptiles*. Froglife, Peterborough.

6 Natural England & Defra (2015) *Reptiles: surveys and mitigation for development and projects* - https://www.gov.uk/guidance/reptiles-protection-surveys-and-licences [Accessed 18.10.2021]

Table 1: Reptile Survey Weather Conditions

Survey Occasion	Date	AM or PM survey	Weather conditions
1	21.04.2021	AM	50-60% cloud cover, 15°C, 2-3 BF
2	14.05.2021	AM	90-100% cloud cover, 10°C, 1-2 BF, cloudy
3	17.05.2021	AM	60-70% cloud cover, 13°C, 1-2 BF
4	26.05.2021	AM	50-60% cloud cover, 12°C, 2-3 BF, bright, sunny, clear
5	24.06.2021	AM	0-10% cloud cover, 16°C, 1-2 BF, clear
6	07.09.2021	AM	0-10% cloud cover, 13°C, 0 BF, clear, bright, sunny
7	22.09.2021	PM	50-60% cloud cover, 18°C, 1-2 BF, bright, sunny

Population Assessment

4.9 Reptile populations are assessed in accordance with population level criteria as stated in the Key Reptile Site Register[7]. This system classifies populations of individual reptile species into three population categories assessing the importance of the population (*Table 2*). These categories are based on the total number of adult animals observed during individual survey occasions.

Table 2: Key Reptile Site Survey Assessment Categories (HGBI 1998)

Species	Low Population (No. of individuals)	Good Population (No. of individuals)	Exceptional Population (No. of individuals)
Adder	<5	5 - 10	>10
Common lizard	<5	5 - 20	>20
Grass snake	<5	5 - 10	>10
Slow worm	<5	5 - 20	>20

Limitations/notes

4.10 The majority of the surveys were undertaken within the peak survey period (April-May and September) with one survey undertaken in June and one in October. However, these surveys were carried out during the months when reptiles are active and weather conditions were suitable, so this is not considered to be a significant constraint.

[7] HGBI (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practices and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). Herpetofauna Groups of Britain and Ireland, c/o Froglife, Halesworth.

5.0 RESULTS

Desk Study

Designated Sites

5.1 There were no sites designated for reptiles within the Desktop Study Area.

Reptile Records

5.2 HBIC returned reptile records from the last 10 years within 1km of the site. These included a single record of adder 200m north of the Site, a single record of grass snake 970m south and multiple records of slow worm, with the closest at 190m north.

Habitats

5.3 The modified grassland that dominates the Site was heavily sheepgrazed and generally unsuitable for reptiles. However, small areas of bare ground, field margins and a small area of unmanaged grassland and scrub at the northwest of the Site were considered suitable for supporting common reptile species.

Reptile Survey

5.4 No reptiles were observed during the reptile surveys, nor incidentally during other protected species surveys on Site. The locations of refugia and reptile sightings shown on *Figure 1.*

6.0 DISCUSSION

6.1 The habitats suitable for reptiles within the Site boundary included small areas of unmanaged grassland, scrub, and hedgerow bases. Despite some suitable habitat onsite, no reptiles were identified during the seven surveys in 2021.

6.2 Therefore, reptile species are not considered to pose a constraint on the proposed development on Site. Furthermore, it is unlikely that reptiles would colonise the site in large numbers given the absence identified during onsite surveys.

6.3 The habitats within the proposed green infrastructure of the development will provide suitable habitat for reptiles onsite in the future. Species-rich grassland planting, unmanaged grassland within SuDs and a wildlife pond, as well as hedgerow creation and enhancement along and within the Site boundary will create extended foraging and commuting opportunities from adjacent off-site habitats.

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Key

- Site Boundary
- Reptile Tin Location

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project
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Figure 1

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Appendix 7.8

Biodiversity Net Gain Report

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Gladman Developments Ltd

Land at Halterworth Lane, Romsey

APPENDIX 7.8 - BIODIVERSITY NET GAIN REPORT

January 2024

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TABLES

FIGURES

APPENDIX

1.0 INTRODUCTION

1.1 This Biodiversity Net Gain report has been prepared by FPCR Environment and Design Ltd on behalf of Gladman Developments Ltd., for land off Halterworth Lane, Romsey (central OS Grid Reference SU 37454 21271), here after referred to as the 'Site'.

1.2 This report has been prepared to accompany an Environmental Statement (FPCR 2023) and should therefore be read in conjunction with that report.

Site Location and Context

1.3 The Site is approximately 12.8ha in size, located on the eastern extent of Romsey, Hampshire. The Site comprises a large species poor semi-improved grassland compartments used for pastoral farming, bound by hedgerows, mature treelines and scrub boundaries. A public footpath bisects the Site in the northern extent connecting Halterworth Lane and Highwood Lane.

1.4 Large expanses of residential housing are located to the south and west of the Site, including a primary school and associated greenspace on the south-western boundary. To the north and east, the land is comprised of further grassland with broadleaved woodland parcels present in the wider area.

Aims and Objectives

1.5 This Biodiversity Net Gain Report is based on the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance[1]. The scope and objectives of this report are to:

- Summarise the results of the baseline UKHab Survey undertaken on the Site and to present the results of habitat condition assessment surveys following the Defra Biodiversity Metric 4.0 Technical Guidance.
- Provide an overview of the proposed habitats following completion of the scheme.
- Present the results of the Defra Biodiversity Metric 4.0 assessment completed for the proposals.
- Assess the feasibility of the proposals to achieve a net gain in biodiversity through the Defra Biodiversity metric 4.0.
- Recommendations for the proposals to maximise their biodiversity potential.

1.6 This report provides only a summary description of the habitat baseline and this report should be read in conjunction with the Habitat Assessment report Appendix 7.2 (FPCR, 2024).

Legislative and Policy Context

1.7 The UK Government, as a signatory to the Rio Convention on Biological Diversity, is committed to conserving and enhancing biodiversity. This commitment is further enforced in the Natural Environment and Rural Communities Act (NERC) 2006 and the Natural Environment White Paper (June 2011).

1.8 DEFRAs 25 Year Environment Plan (2018) seeks to embed a 'net environmental gain' principle for development to deliver environmental improvements locally and nationally. Current policy is

[1] CIEEM (2021) Biodiversity Net Gain Report and Audit Templates Chartered institute of Ecology and Environmental Management, Winchester, UK.

that the planning system should provide biodiversity net gains where possible; however, this is moving towards a mandatory requirement.

1.9 The NPPF (2023) in particular seeks to ensure that the planning system contributes to and enhances the natural and local environment, protect and enhance biodiversity and geodiversity by:

"180 d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

185. b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

The Environment Bill

1.10 The proposed Environment Bill states that "the relevant percentage is 10%" as a biodiversity net gain target for all developments (Schedule 7A, Part 1, 2(3)). It should be noted that this has not yet passed into law at the time of the writing of this report but is proposed at some point in January 2024.

Measurable Net Gain

1.11 A key point in the current legislative context is that although the term "measurable net gain" is stated under the NPPF, there is currently no agreed definition in local or UK policy relating to a net gain target figure. Whilst a figure of 10% is widely viewed as best practice following the Environment Act gaining royal assent, it currently has no adopted policy support at either a local or national level, and is therefore considered an aspirational target, and not a mandatory requirement at the time of writing.

2.0 METHODOLOGY

Baseline Habitat Assessment

2.1 Baseline habitats were identified and mapped by using the UKHab Classification system[2] which is used to determine broad habitat types in the wider countryside. This involved a systematic walk over of the Site during which an associated plant species lists were compiled for each habitat mapped along with additional notes regarding the current 'condition' of the habitat, based on the criteria outlined within The Biodiversity Metric 4.0 Technical Annex[3]. Vascular plant nomenclature followed Stace (2019)[4].

Biodiversity Net Gain Calculation

2.2 Natural England's published biodiversity net gain metric is an MS Excel spreadsheet that is used to quantify the predicted net-change in biodiversity value ("biodiversity units") of a proposed development site before and after development. It treats the area-based habitats and linear features such as hedgerows and lines of trees separately, and is based on pre-determined values, along with published written guidance set by a Natural England-led team of experts. The latest version of the metric, 4.0, has been used for this assessment.

2.3 The development Site was surveyed and mapped, as described above. Habitats were defined using the UK Habitat Classification, with each habitat parcel described by its location, area, distinctiveness and condition. This information was then imported into Biodiversity Metric 4.0 QGIS template, with the existing habitats identified and areas automatically generated.

2.4 On-Site post-development habitats were determined from a framework/masterplan, with proposed habitats mapped and digitised into the Biodiversity Metric 4.0 QGIS template to generate areas for each of the habitats proposed for enhancement.

2.5 These pre- and post-enhancement habitat areas were then inputted into the 4.0 Metric Calculation tool. The metric then provides a habitat distinctiveness score for each of the baseline and proposed habitats which are pre-assigned scores based on the habitat type.

2.6 The metric then assigns a range of pre-assigned factors to each of the proposed habitats. These have been advised by subject knowledge experts and are universal multipliers generated by the metric itself for the following variables relevant to habitat creation, enhancement or restoration proposals:

- difficultly of creating or restoring/enhancing a habitat: This pre-assigned score is based on how difficult a particular habitat type is to create or restore/enhance.
- temporal risk: this is the 'time to target condition' for any particular habitat and determines how long a particular habitat type is likely to take to reach the condition score that the desired condition score assigned to it.
- spatial risk: this score is based on the distance between the site of habitat loss and any habitats creation or enhancement proposals at any offsite offsetting solutions.

[2] UK Habitat Classification Working Group (2018). UK Habitats Classification User Manual at https://ukhab.org/

[3] Natural England (2023). "The Biodiversity Metric 4.0 -Technical Annex 1: Condition Assessment Sheets and Methodology March 2023 Natural England Joint Publication JP039 ISBN 978-1-7393362-2-6 Access [online] Available at: https://publications.naturalengland.org.uk/publication/6049804846366720)

[4] Stace, C (2019) New Flora of the British Isles. 4th edn. C&M Floristics

2.7 Full details of the calculation methodology are provided in Biodiversity Metric 4.0 – User Guide[5].

Limitations

2.8 The UKHab habitat map has been reproduced from detailed field notes and informed by aerial imagery, OS mapping and site maps provided by the client. The accuracy of this figure is ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.

2.9 The aim of biodiversity offsetting is to compensate for significant adverse impacts on biodiversity identified after appropriate avoidance, minimisation and on-site rehabilitation measures have been taken, according to the mitigation hierarchy as required by the NPPF.

[5] Natural England (2023). Natural England Joint Publication JP039 Biodiversity metric 4.0 User Guide. Natural England. (https://publications.naturalengland.org.uk/publication/6049804846366720)

3.0 BASELINE CONDITIONS

Desktop Study

Strategic Significance

3.1 The Site does not sit within any nature/green corridors identified within the Local Plan. The Site is therefore considered to be of **low strategic significance**.

Biodiversity Units

Habitats

3.2 The Site is dominated by modified grassland with areas of bare ground and ruderal/ephemeral vegetation also present. Descriptions of the habitats present are provided in the accompanying Habitat Assessment Report (2023) produced for the proposals. *Table 1* provides an overview of the habitats present and their distinctiveness, discussed in the context of the biodiversity net gain metric.

Table 1: Summary of Baseline Habitats

Habitat	Description	Area (ha)	Condition	Distinctiveness	Biodiversity Units
Modified Grassland	Modified grassland covers the majority of the Site. It is intensively grazed by sheep resulting a short, tight swards. This habitat was in poor condition due there being less than six species per square metre. The grassland also failed the condition criteria relating to sward height variety and evidence of physical damage. Grass species content included perennial rye grass *Lolium perenne*, creeping bent *Agrostis stolonifera* and rough meadow grass, with tussocks of cock's-foot *Dactylis glomerata* and Yorkshire fog *Holcus lanatus* indicating grassland improvement. A limited herbaceous composition was concentrated around the field margins including creeping buttercup *Ranunculus repens*, white clover *Trifolium repens,* cats ear *Hypochaeris radicata* and ragwort *Senecio sp*	10.962	Poor	Low	21.92
Other Neutral Grassland	An area of unmanaged grassland and was present at the western extent of the Site. This compartment supported a tall sward dominated by grass species including cock's foot, red fescue *Festuca rubra*, rough meadow grass *Poa trivialis* and Yorkshire fog. This habitat achieved moderate condition as the average number of species per square metre was less than ten, and the cover of scrub was greater than 5%.	0.1161	Moderate	Medium	0.93
Bramble Scrub	Dense patches of bramble scrub were present in the unmanaged compartment at the western extent of the site.	0.0809	N/A	Medium	0.32
Tall Forbs	Areas of tall ruderal vegetation were sporadically recorded throughout the grassland compartments and featured species such as common nettle *Urtica dioica*, white dead nettle *Lamium album*, and common hogweed *Heracleum sphondylium.* These areas scored 'poor' condition as they lacked variation in structure and species.	0.12	Poor	Low	0.24
Bare Ground	Patches of bare ground were present adjacent to the public footpath which bisects the Site and at the southeastern extent.	0.0859	Poor	Low	0.17
Developed Land; Sealed Surface	Two built structures were identified in the northern western field compartment, associated with areas of hard-standing and bare ground	0.0262	N/A	Very Low	0.00

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Hedgerows

3.3 A number of hedgerows border the field compartments and are connected to further hedgerow networks in the wider area. The majority of the hedgerows were lacking in structure and woody species diversity. *Table 2* provides a summary of the hedgerows in the context of the biodiversity net gain assessment.

Table 2: Summary of Baseline Hedgerows

Hedgerow Type	Length (km)	Condition	Distinctiveness	Hedgerow Units
Line of trees	0.225	Moderate	Low	0.90
Native hedgerow with trees	0.09	Poor	Medium	0.36
Native hedgerow	0.048	Good	Low	0.29
Native hedgerow	0.267	Poor	Low	0.53
Non-native and ornamental hedgerow	0.134	Poor	V. Low	0.13
Species-rich native hedgerow with trees	0.374	Moderate	High	4.49
Species-rich native hedgerow	0.28	Moderate	Medium	2.24

4.0 PROPOSED DESIGN

Habitats

Habitat Creation

4.1 Habitat creation is shown in *Figure 2* and habitat retention is displayed in *Figure 3.*

4.2 The proposals for the Site include the creation of new habitats to boost the biodiversity unit score of the scheme and will include native scrub planting around the peripheries, areas of species rich grassland, a wildlife pond and SuDS basins.

4.3 The biodiversity units for the created habitat on the Site have been calculated from the Development Framework Plan (drawing number 09840-FPCR-ZZ-ZZ-DR-L-0002 P09) and are presented in *Table 2*, along with a description of the management recommendations which will be employed to achieve the target conditions for each habitat type.

Table 2: Summary of Proposed Habitat Creation

Development Framework Plan Habitat	UKHab Category	Description	Area (ha)	Target Condition	Distinctiveness	Biodiversity Units
Residential Development Area and Internal Roads	Developed Land, Sealed Surface	The majority of the Site will be developed to create up to 270 dwellings. A ratio of 70:30 of houses and vegetated gardens (see below) has been assumed.	5.32408	N/A	Very Low	0.00
Residential Development Area	Vegetated Garden	The gardens of the properties will be privately owned and managed , therefore will not form part of a management plan for the wider Site. However, these areas will still hold some ecological value and benefit for wildlife.	1.94025	N/A	Low	3.74
Play (LEAP)	Artificial, Unvegetated, Unsealed Surface	The play area will be made of a semi-permeable surface.	0.0398	N/A	Very Low	0.00
SuDS Basin	Sustainable Drainage System	Wetland grassland species will be used within the basins and managed appropriately. The structure of the vegetation and species will be varied to provide foraging and sheltering opportunities for a range of different fauna. Invasive non-native species and those detrimental to native wildlife will cover less than 5% of the total area.	0.2898	Moderate	Low	0.70
Area of Open Space, Footpaths	Modified Grassland	The road verges, footpaths and areas of open space around the play areas will consist of modified grassland. This should be sown with an appropriate seed mix so that there are between six and eight species per square metre. The grassland should be mown no more than once a month to allow for a varied sward height but also to prevent encroachment of scrub and bracken.	1.8596	Moderate	Low	6.44
Public Open Space	Other Neutral Grassland	Areas of more diverse grassland will be featured around the SuDs basins and at the peripheries of the Site. These areas will feature more than ten species per square meter, which will be achieved by sewing an appropriate seed mix and planting wetland species around the SuDS basins. Regular mowing will prevent encroachment of scrub and bracken.	0.7884	Moderate	Medium	5.31

Structural Landscape Woodland / Trees / Hedgerow	Mixed Scrub	Mixed scrub has been proposed around the boundaries of the Site. Planting should include a minimum of five native woody species in each block of scrub, to allow a diverse mix to establish. The areas of scrub should be managed by pruning and rotational coppicing every three years. Monitoring should take place to ensure that invasive non-native species do become established.	1.1342	Moderate	Medium	7.59
Ecology Pond	Pond (non-priority habitat)	The pond will target good condition which will be achieved through the following methods: • The pond will be designed so that it is not artificially connected to other waterbodies and water levels should be able to fluctuate naturally throughout the year. • It should be allowed to fill naturally with rainwater to reduce the risk of pollution or eutrophication. • It will be surrounded by natural habitats and no more than 5% should be shaded by woody vegetation. • It will be kept free from duckweed or filamentous algae which will be achieved through banning the use of fertilizer within 30m of the pond and monitoring establishment of this plant. • The pond will not contain any non-native plants or animals and should not be artificially stocked with fish. No non-native plants will be included in the planting scheme and regular monitoring for these species should be implemented and remedial action should be taken when needed.	0.0177	Good	Moderate	0.18
Tree Planting	Individual Trees	Individual tree planting has been proposed around the SuDS basins, in the area of public open space, along roads and footpaths. These trees should be native species and be planted in a sufficient area so they are not competing with neighbouring trees or scrub, allowing a full and continuous canopy to form.	0.6677	Moderate	Medium	2.04

Hedgerow Creation and Enhancement

4.4 A total of 0.213 km of species-rich native hedgerows and 0.338 km of species-rich native hedgerow with trees will be planted around the Site. These will target moderate condition and result in an additional 4.27 hedgerow units.

4.5 These should be planted with a minimum of seven native species per 30m. The hedgerows with trees should support at least two prominent trees, spaced an average of 20m apart. It is recommended that the hedgerow is planted using whips and trees are planted using larger standard specimens. For the hedgerows located in areas of natural habitat the bases of the hedgerows should be sown with a native species-rich grassland mix that is tolerant of shading.

4.6 Several of the existing hedgerows will be enhanced to good condition resulting in an additional 15.25 hedgerow units. These enhancements are summarised in *Table 3* and locations are shown in *Figure 3*.

4.7 Existing hedgerows will be enhanced by filling in gaps by planting new woody species and implementing a new cutting regime whereby hedges will be cut back every two years and should be cut gradually wider and higher to allow the hedge to grow in size. The 1m boarder at the base of these hedgerows will also be improved and will support herbaceous vegetation which should be kept free from damage.

Table 3: Summary of Hedgerow Enhancements

Baseline Habitat	Length (km)	Change in Condition	Hedgerow Units Derived
Species-rich native hedgerow with trees	0.123	Moderate to Good	2.12
Species rich native hedgerow	0.267	Moderate to Good	3.13

Additional Enhancements

4.8 Additional mitigation measures will be implemented to contribute to a biodiversity net gain within the proposed development. This will focus on the provision of faunal enhancements that are not captured within the BNG metric. To achieve this, external bat boxes will be installed on houses as well as bird nest boxes designed for urban species. These will include boxes suitable for house sparrow *Passer domesticus,* starling *Sturnus vulgaris* and swift *Apus apus.* Bat boxes will also be added to existing mature trees where possible.

5.0 BNG METRIC

5.1 *Table 4* provides a summary of the headline results of the biodiversity metric assessment completed for the proposals. The full metric has been provided in *Appendix A*.

Table 4: Biodiversity Metric 3.1 Headline Results

Baseline	Habitat Units	23.59
	Hedgerow Units	8.94
Post-Intervention	Habitat Units	25.97
	Hedgerow Units	10.91
Total Net Unit Change	Habitat Units	**+2.39**
	Hedgerow Units	**+1.97**
Total Net Percentage Change	Habitat Units	**+10.11%**
	Hedgerow Units	**+22.01%**

5.2 The assessment has demonstrated proposals will lead to a gain of 2.39 habitat units, representing a 10.11% net gain. The enhancement of existing hedgerows and the creation of new hedgerows will lead to a gain of 1.97 hedgerow units which represents a gain of 22.01%.

Habitat Trading

5.3 The trading rules have been satisfied as the loss of low and medium distinctiveness habitats have been replaced by habitats of the same or higher distinctiveness in the proposed scheme.

6.0 CONCLUSION

6.1 The calculations undertaken using the DEFRA 4.0 metric show that the proposed scheme will lead to a net gain in both habitat and hedgerow units, which is in accordance with NPPF.

6.2 The results of the assessment demonstrate that the habitats proposed within the Development Framework Plan will currently lead to a 10.11% gain of habitat units and 22.01% gain in hedgerow units. This will achieve the minimum 10% net gain that will likely be mandatory in January 2024.

Key

Site Boundary

Baseline Habitats

- **Bramble scrub**
- **Developed land; sealed surface**
- **Modified grassland**
- **Other neutral grassland**
- **Tall forbs**
- **Bare ground**

Hedgerow Baseline

- **Non-native and ornamental hedgerow (h2NE3)**
- **Line of trees (w1g6NE2)**
- **Native hedgerow (h2NE5)**
- **Native hedgerow with trees (h2NE4)**
- **Species-rich native hedgerow (h2NE2)**
- **Species-rich native hedgerow with trees (h2NE1)**

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0 100 200 m

client
Gladman Developments

project
Land off Halterworth Lane, Romsey

drawing title
Baseline Habitats

drawing number	scale @ A3	drawn	issue date
Figure 1	**1:2,500**	**HG**	**7/12/2023**

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Key

- Site Boundary

Proposed Habitats

- Artificial unvegetated, unsealed surface
- Developed land; sealed surface
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Ponds (non-priority habitat)
- Sustainable drainage system
- Residential (70:30 split of developed land and vegetated garden)

Hedgerow Proposed

- Non-native and ornamental hedgerow (h2NE3)
- Line of trees (w1g6NE2)
- Native hedgerow (h2NE5)
- Native hedgerow with trees (h2NE4)
- Species-rich native hedgerow (h2NE2)
- Species-rich native hedgerow with trees (h2NE1)

Individual Tree Proposed

- Proposed Medium Urban Tree
- Small urban tree

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client: Gladman Developments

project: Land off Halterworth Lane, Romsey

drawing title: Proposed Habitats

drawing number	scale @ A3	drawn	issue date
Figure 2	1:2,500	HG	9/1/2024

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Key

Site Boundary

Habitat Retention

Lost

Hedgerow Retention

Created

Enhanced

Retained

Lost

Individual Tree Retention

Created

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client
Gladman Developments

project
Land off Halterworth Lane, Romsey

drawing title
Habitat Retention

drawing number	scale @ A3	drawn	issue date
Figure 3	**1:2,500**	**EH / HG**	**7/12/2023**

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Appendix 7.9
Shadow Habitats Regulations Assessment

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Gladman Developments Ltd

Land off Halterworth Lane, Romsey

Appendix 7.9 - Shadow Habitats Regulations Assessment

January 2024

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Rev	Issue Status	Prepared / Date	Approved / Date
-	Draft	AU/ 27/11/23	DAH / 07.12.23
A		AU/ 18/12/23	KG / 20.12.23
B		AU/ 10.01.24	
C		AU / 22.01.24	

CONTENTS

TABLES

APPENDICES

1.0 INTRODUCTION

1.1 The following shadow Habitats Regulations Assessment (sHRA) has been provided by FPCR Environment and Design Ltd ("FPCR") on behalf of Gladman Development Ltd. It relates to the proposed residential development on land off Halterworth Lane, Romsey, Hampshire referred to as 'the Site'. It provides information to assist Test Valley Borough Council, who are acting as the 'competent authority' under the Habitat Regulations, to either a) conduct their own HRA as is their legal obligation or b) adopt this document or an amended version as the official Habitat Regulations Assessment for this scheme.

Site Context & Proposals

1.2 The Site is approximately 12.8ha in size, located on the eastern extent of Romsey, Hampshire. The Site comprised large, modified grassland compartments used for sheep grazing, which are largely bounded by hedgerows and treelines, with some boundaries partially denoted by residential fences and scrub habitats. A public footpath bisects the Site in the northern extent connecting Halterworth Lane and Highwood Lane, after which there are no longer PRoW, other than walks along Green Lane road that eventually runs into a footpath network in Emer Bog SAC, which is approximately a 2.3km walk from the Site boundary.

1.3 Large expanses of residential housing are located to the south and west of the site, including a primary school and associated greenspace on the south-western boundary. To the north and east, the land is comprised of further grazed grassland with broadleaved woodland parcels present in the wider landscape.

1.4 The outline planning application is accompanied by ecological survey work from 2021 and 2023 as detailed in the Environmental Statement (ES, FPCR 2023).

Development Proposals

1.5 Outline planning application for demolition of existing buildings and the erection of up to 270 dwellings, including affordable housing, with land for the potential future expansion of Halterworth Primary School, public open space, structural planting and landscaping, sustainable drainage system (SuDS) and vehicular access points. All matters reserved except for means of access.

Legislation

1.6 The Conservation of Habitats and Species Regulations (CHSR) 2017 (as amended) ratifies into UK law the Habitats Directive (92/43/EEC) and the Birds Directive (79/409/EEC) and the 2019 amendment ensures the habitat and species protection derived from EU law continues to apply after Brexit. The CHSR requires the compilation and maintenance of a register of European protected sites, which include:

- Special Areas of Conservation (SAC), designated for important species listed in Annex I and II of the Habitats Directive.
- Special Protection Areas (SPA), designated for important bird populations and/or assemblages.
- Ramsar sites, designated for internationally important wetlands.

1.7 The SAC and SPA designations form a network of internationally protected sites known as UK National Site Network, this excludes RAMSARs.

The HRA Process

1.8 The following assessment provides the information necessary for the competent authority, Test Valley Borough Council, to fulfil their duty as required in Regulation 63 of the Conservation of Habitats & Species Regulation 2017 (as amended) (the Habitat Regulations). It provides sufficient information to conclude that the proposals, along with appropriate mitigation, will not adversely affect the integrity of any National Site Network (NSN) or Ramsar Wetlands within the zones of influence.

1.9 The HRA process has developed into four stages, as summarised here:

- **Stage One: Screening** - also known as the Test of Likely Significant Effect (TOLSE). If a *likely significant effect* cannot be scoped out, then an Appropriate Assessment (Stage Two) is required.
- **Stage Two: Appropriate Assessment** - the Competent Authority will only agree to plans or projects that will not affect the *integrity* of a European site, also known as the "Integrity Test".
- **Stage Three: Alternative Solutions** - assesses any alternative solutions of a potentially damaging plan or project that failed the Integrity Test, and if it is determined there are no alternative solutions, the project cannot be agreed, and it will either need to be changed or refused.
- **Stage Four: The final stage -** may allow a plan or project to proceed after failing stage three if it is for Imperative Reasons of Overriding Public Interest (IROPI), and only if suitable compensatory measures are secured.

1.10 In accordance with the 'People Over Wind' ruling (High Court of Justice for European Union, Case 323/17), the screening of likely significant effects takes place in the absence of any mitigation measures that would avoid or reduce any effects on any NSN or Ramsar sites.

1.11 This report identifies and considers ecological pathways between the Site and each NSN and/or Ramsar site within their allocated zone of influence (if available). Each was screened with a TOLSE for alone effects, and then the in-combination effect with other plans or projects. Where there are any ecological pathways that could not be screened without mitigation alone or in-combination, a Stage 2 Appropriate Assessment was conducted and included in this sHRA.

Zone of Influence and National Site Networks Considered

1.12 The Site falls within the zone of influence of two NSN and Ramsar sites:

- New Forest Ramsar/SPA/SAC, approximately 7.4km to the south-west.
- Solent and Southampton Water SPA and Ramsar Site approximately 5.7km to the south

1.13 Research completed by Footprint Ecology[1] concluded that residential development within 13.4km radius to the New Forest SPA/SAC is likely to result in an increase in recreational disturbance to the habitats and birds associated with its designation. The Site falls within this recognised zone of

[1]Footprint Ecology research reports published in 2020 and 2021 available at https://www.newforestnpa.gov.uk/conservation/managing-recreation/managing-recreation/research-intorecreational-use-of-the-new-forests-protected-habitats-footprint-ecology-2020/

influence (7.4km) and therefore further assessment of the potential impacts has been made in Stage 1 below.

1.14 Natural England has provided advice on the impacts of nutrients from new development on the group of Special Protection Areas (SPA) and Special Areas of Conservation (SAC) and Ramsar site designations, within and around the Solent. The Site lies within the catchment of the River Test, which flows into the Solent and therefore further assessment of the potential impacts has been made in Stage 1 below.

1.15 There are high levels of nitrogen and phosphorous entering the water environment and these excessive levels of nutrients are causing eutrophication, resulting in dense mats of green algae impacting on the protected habitats and species.

1.16 The following additional international sites located within 15km of the Site are considered unlikely to be affected by proposals, owing to the distance and / or lack of connectivity and are therefore scoped out of any further evaluation within this document:

Mottisfont Bats SAC

1.17 The Mottisfont Bats SAC (7.5km from Site) has been designated due to its internationally important breeding grounds for UK bat species, notably Annex II barbastelle. A report from Natural England concluded[2] that a development within 7.5km zone of influence (ZoI) from the designated site could impact upon the habitats used by the Mottisfont barbastelles.

1.18 The main threat of habitat deterioration through fragmentation within the SAC, loss of supporting habitats in the surroundings and a decline in water quality and resources. The National trust own the majority of the SAC and undertaken regular management; owing to the distance the application site is from the SAC there will be no direct damage/loss of the habitats within the SAC. The Site is on the the 7.5km ZoI and is largely isolated away from a direct linear flight line from the SAC by the residential area of Romsey town. There are a number of ancient woodland and other woodland compartments that run around the north and eastern parts of Romsey, which are separated by arable/pastures with a hedgerow network, for individual Barbastrelles to migrate this far would result in a distance of 14km, which is within the higher limits their range. A route to the south of Romsey is possible, but this would entail bats flying over a number of A roads and residential parcels to gain access to the Site, which is around 10km.

1.19 The development's position on the eastern edge of the urban setting of Romsey will not cause any loss of linkage habitats between Mottisfont SAC the wider area, as most of the woodland habitats, which barbastelle are normally associated with, are in the north and east, where the Site does not fall within potential linkage corridors. The bat surveys have identified a low number of barbastelles which only made up 0.69% of the total bat registrations recorded on the Site, with a peak of 59 registrations in September 2021 along the PROW.

1.20 The scheme will strengthen these linear features within which barbastelle were recorded, and new hedgerows and tree lines will be created with areas of GI along the PROW and boundary, thus enhancing linkages rather than having a detrimental effect, therefore effects have been assessed as being negligible.

2 Greenaway F (2004) Advice for the management of flightlines and foraging habitats of the Barbastelle Bat *Barbastella barbastellus*, English Nature Research Report 657

Emer Bog SAC

1.21 Emer Bog SAC lies approximately 1.4km east of the Site boundary. This designated bog habitat is situated within a wet hollow, supporting scattered willow *Salix sp.* scrub as well as open bogland supporting species including bottle sedge *Carex rostrata,* marsh cinquefoil *Potentilla palustris,* common cotton grass *Eriophorum angustifolium* and bogbean *Menyanthes trifoliata.* Rush pastures on the edges of the bog support White sedge *Carex curta,* soft rush *Juncus effuses* and sharp flowered rush *J. acutiflorus*, as well as the two bog moss species *Sphagnum fimbriatum and S. squarrosum*.

1.22 The main threats to Emer Bog SAC have been identified as hydrological which includes retention of levels and unpolluted water, this area mentioned within The Emer Bog and Baddesley Common Hydrological Desk Study[3]. Other threats include maintenance of grazing and air quality levels This study has identified that the catchment area is restricted to approximately 500m around the SAC, since this Site is 1.4km away, the effects on hydrology can be scoped out.

1.23 As the crow flies Emer Bog SAC is approximately 1.4km, however to access Emer Bog SAC on foot would require a 2.3km walk one way, which will use the PROW that bisects the northern part of the Site, which then continues to Highwood Lane, which has no footpaths, so is largely too dangerous for future residents to safely navigation north towards Green Lane; which is again along a road with no footpaths and a single carriageway, again dangerous for people to safely access.

Left: Green Lane, connected to Highwood Lane from which residents would have to travel approximately 1.35km along before reaching PROW into Emer Bog. Right: This shows the official four car park spaces at the start of the PROW in Emer Bog and parking taking place on the road.

1.24 Research done for the Nutburn Road, North Baddesley appeal (10/00494/OUTS) identified that the majority of the visitors that access this SAC came from an average of 560m away on foot with 97% of these visitors doing so for dog walks. This research was based on a limited data set, so the accuracy of these findings has been questioned.

1.25 It is noted that due to the complications of accessing Emer Bog SAC, due to the dangers of no public footpaths and the distance that people will need to walk, that this SAC will not regularly

3 Allen R.H (2017). Emer Bog and Baddesley Common – Hydrological Desk Study. Prepared on behalf of Hampshire and Isle of Wight Wildlife Trust and Test Valley Borough Council. [Online]. Available at < https://www.testvalley.gov.uk/planning-and-building/guidance/solent-southampton-water-special-protection-area>. [Accessed 18.03.21].

visited by the new residents. There are also areas before the SAC, which fall within the SINC / NNR Emer Bog & Baddesley Common, which would provide additional areas of recreation before reaching the SAC boundary. There are also areas to the south of the Site within Luzborough Plantation that can provide alternative areas of recreation.

1.26 Owing to the separation through lack of ease of access to the Emer Bog and the surrounding alternative open spaces, along with the onsite GI it is assessed that there will be no likely significant effect from hydrological as there are no links and that recreation pressures are unlikely.

Solent Maritime SAC

1.27 The Solent Maritime SAC lies approximately 6km south of the closest area of the Solent Maritime SAC on the River Hamble. The SAC is designated a large number of Annex I habitats, primarily estuaries; Spartina swards; and Atlantic salt meadows. Qualifying Annex I habitats also include Sandbanks which are slightly covered by sea water all the time; Mudflats and sandflats not covered by seawater at low tide; Coastal lagoons; Annual vegetation of drift lines; Perennial vegetation of stony banks; Salicornia and other annuals colonizing mud and sand; and "Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")". The Annex II Desmoulin's whorl snail *Vertigo moulinsiana* is also a qualifying feature.

1.28 The threats to this SAC are;

- existing and proposed flood defence and coast protection works;
- coastal squeeze of intertidal habitats due to coastal erosion / sea level rise and seawalls / development in the hinterland;
- developments pressures including ports, marinas, jetties etc. Proposals often involve capital / maintenance dredging to provide / improve deep water access, and land-claim of coastal habitats;
- potential accidental pollution from shipping, oil/chemical spills, heavy industrial activities, former waste disposal sites and waste-water discharge; and
- introduction of non-native species e.g. from shipping activity.

1.29 This SAC has been screened out from all ecological pathways due to distance and a lack of public access to the qualifying features that would cause the direct damage to the ecological resources. The proposed development is outside of the Impact Risk Zone for the SSSI units that the SAC area encompasses. There will be No Likely Significant Effect on this SAC as a result of the proposed development, and it will no longer be discussed.

2.0 STAGE 1: TEST OF LIKELY SIGNIFICANT EFFECT (SCREENING)

Solent and Southampton Water SPA and Ramsar

2.1 The Solent and Southampton Water SPA and Ramsar Site is 5.7km south of the Site, and thus outside the 5.6km radius for likely significant effects from recreation[4]. This designated area stretches along the southern coastline, comprising estuaries, harbours, extensive mudflats and saltmarsh habitats. These habitats support a diverse assemblage of invertebrates, which in turn provides important summer and wintering grounds for a number of wading birds.

Qualifying Features

2.2 The SPA qualifies under Article 4.1 of the Birds Directive for nationally important breeding bird species, and under Article 4.2 for internationally and nationally important populations of wintering bird species, and under Article 4.2 for the presence of an internationally important wintering bird assemblage. The SPA is designated for the following bird species and assemblages:

- Black-tailed godwit *Limosa limosa islandica* - Non-breeding
- Common tern *Sterna hirund* - Breeding
- Dark-bellied brent goose *Branta bernicla bernicla* - Non-breeding
- Little tern *Sternula albifrons* - Breeding
- Mediterranean gull *Ichthyaetus melanocephalus*,- Breeding
- Ringed plover *Charadrius hiaticula* - Non-breeding
- Roseate tern *Sterna dougallii* - Breeding
- Sandwich tern *Thalasseus sandvicensis* - Breeding
- Teal *Anas crecca* - Non-breeding
- Waterbird assemblage - Non-breeding

Conservation Objectives

2.3 The conservation objectives for each of the Solent SPA sites are identical and listed below. The objectives are to ensure that, subject to natural change, the integrity of the SPA is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the populations of each of the qualifying features
- the distribution of qualifying features within the site

[4] Test Valley Borough Council – Approach to certain International Nature Conservation Designation. Approach to certain International Nature Conservation Designations | Test Valley Borough Council

2.4 The Site is 5.7km from the nearest section of the Solent and Southampton Water SPA to the south. This designated area stretches along the southern coastline, comprising estuaries, harbours, extensive mudflats and saltmarsh habitats. These habitats support a diverse assemblage of invertebrates, which in turn provides important summer and wintering grounds for a number of wading bird species including Dark-bellied Brent Goose *Branta b.bernicla,* Mediterranean gull *Larus melanocephalus*, and Roseate Tern *Sterna dougallii.* It additionally qualifies under Article 4.2 of the Directive (79/409/EEC), as the area regularly supports at least 20,000 waterfowl species.

Threats and Pressures

2.5 Site Improvement Plans (SIPs) were developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 sites (IPENS). *Table 1* below shows the threats and pressures identified in the Solent Site Improvement Plan 2015[5].

Table 1: Threats and Pressures for the Solent sites

Priority & Issue	Measure
Public access/disturbance	Reduce disturbance through access management, awareness raising and wardening
Coastal squeeze	Investigate options to create alternative habitat
Fisheries: Commercial marine and estuarine	Introduce appropriate management measures where required and ensure compliance
Water Pollution	Implement actions in the Diffuse Water Pollution Plan, and investigate further pollution
Changes in species distributions	Investigate the causes of change
Climate change	Investigate the effects of climate change
Change to site conditions	Investigate the reasons for change
Invasive species	Implement the management options to control invasive non-native species (INNS)
Direct land take from development	Option appraisal for private coastal defences
Biological resource use	Appropriate egg collection licensing
Change in land management	Ensure appropriate ditch management, and assess the effects of tidal sluice operation
Inappropriate pest control	Increase control of foxes
Air Pollution: impact of Pressure Not yet determined atmospheric nitrogen deposition	Reduce the impacts of air pollution
Hydrological changes	Review abstraction licenses
Direct impact from 3rd Threat party	Assess the activities and their effects

2.6 The Solent Mitigation Strategy[6] provides a summary of the current effects of human disturbance. It was concluded that there is evidence from survey or monitoring that shows that recreational disturbance levels are having a likely significant effect on the features of the Solent SPAs. The supplementary advice concludes for every species that is a qualifying feature of the Solent SPA's, that a significant effect from new housing within 5.6 kilometres of these sites cannot be ruled out:

"*The Solent Disturbance and Mitigation Project found that a significant effect on the SPA arising from new housing development around the Solent could not be ruled out (Stillman et al., 2009[7]), (Liley et al., 2010[8]) and (Stillman et al., 2012[9]). Therefore, avoidance and mitigation measures are required for all residential development within 5.6 km of the Solent SPAs to ensure there is no*

[5] Natural England (2014) Improvement Programme for England's Natura 2000 Sites (IPENS) Site Improvement Plan Solent
[6] https://birdaware.org/solent/wp-content/uploads/sites/2/2021/10/Solent_Recreation_Mitigation_Strategy.pdf
[7] Stillman, R. A., Cox, J., Liley, D., Ravenscroft, N., Sharp, J. and Wells, M. (2009). *Solent disturbance and mitigation project: Phase 1 report*. Report to the Solent Forum.
[8] Liley, D., Stillman, R. and Fearnley, H. (2010). *The Solent Disturbance and Mitigation Project Phase II: Results of Bird Disturbance Fieldwork 2009/10*: Footprint Ecology.
[9] Stillman, R. A., West, A. D., Clarke, R. T. and Liley, D. (2012). *Solent Disturbance and Mitigation Project Phase II: Predicting the impact of human disturbance on overwintering birds in the Solent*.: Footprint Ecology.

adverse effect on the integrity of the SPAs from the in-combination effects of new housing development. Avoidance and mitigation measures can be put in place individually in response to each single development or, alternatively, a contribution can be made to the strategic solution provided by the Solent Recreation Mitigation Partnership, or Bird Aware Solent as it is now known."

2.7 With reference to the Test Valley Borough Council Solent and Southampton Water SPA 5.6km buffer map[10], the Site falls just outside of the buffer zone and therefore the development / developer is not required to make financial contributions to mitigate for recreational impacts.

2.8 Ecological pathways for the Solent SPA have been identified based on those typically associated with residential development sites of this nature (*Table 2*). Some ecological pathways are more readily addressed than others but nonetheless have been included for completion.

Table 2: Ecological Pathways and HRA Screening Conclusions for Solent and Southampton Water SPA

Ecological Pathway	Assessment Applied	Likely Significant Effect
Habitat Loss	Not loss, damage or fragmentation of habitat actually within the SPA itself. Supporting habitats for the SPA designated bird species has not been identified when referring to the Bird Aware Solent – Wader and Brent Goose Networks[11] No habitat will be lost. Site 5.7 km from the SPA.	**Screened out alone or in combination**
Air Pollution	Nitrogen deposition from traffic only likely pathway. Natural England 4 step Guidance on traffic emissions applied as follows: Step 1: Does the proposal give rise to emissions which are likely to reach a European site? **No.** Step 2: Are the qualifying features of sites within 200m of a road sensitive to air pollution? **Yes. B3334 at Stubbington adjacent to SPA.** Step 3: Could the sensitive qualifying features of the site be exposed to emissions? **No, this is not a route likely to be used by traffic arising from the development.** Step 4: Application of screening thresholds. Use of the 1000 Annual Average Daily Traffic. **The project's transport consultants, screened this location out as being unlikely to carry any regular daily traffic from the proposed development.**	**Screened out as below the threshold.**

[10]https://www.testvalley.gov.uk/planning-and-building/guidance/solent-southampton-water-special-protection-area
[11] The Solent Waders & Brent Goose Network https://hiwwt.maps.arcgis.com/apps/instant/minimalist/index.html?appid=f4bbd6fe517647cba8bf0f3b8cfb7c1b

Noise and Light	Precautionary assumption that the effects of noise, vibration and light are most likely to be significant within a distance of 500 metres. Site 5.7km from the SPA	**Screened out alone or in combination.**
Water Quality and Quantity	Is the Site hydrologically linked to the SPA and is the SPA sensitive / qualifying features sensitive to water quality? **Yes. The Site falls within the Solent SPA/SAC catchment for nutrient neutrality**[12]	**Screened in alone or in combination**
Recreational Pressure	Natural England Interim advice is a 5.6km zone-of-influence to be applied for consideration of alone or in combination impacts as a result of recreational pressure on the SPA. Site is 5.7km from the SPA	**Screened out alone or in combination**

New Forest SAC

2.9 In accordance with advice from Natural England and as the HRA of the Test Valley Borough Local Plan DPD, a net increase in housing development within 13.6km of the New Forest SAC and SPA[13,11] is likely to result in impacts to the integrity of those sites through a consequent increase in recreational disturbance. The Site falls within this recognised zone of influence for the New Forest SPA / SAC, thus further assessment of the potential impacts has been made below.

Qualifying Features

2.10 The closest boundary of the protected sites is found approximately 7.4km southwest of the Site. A detailed description of each protected sites qualifying features can be found in Footprint Ecology's recreation impacts and mitigation approaches report[14] from 2020. A summary from that report is shown below for reference;

"The New Forest is one of the largest tracts of semi-natural vegetation in the country, and as such is one of our most important wildlife sites. The area hosts three international wildlife site designations and is closely located to other international wildlife sites such as the Solent and Southampton Water.

The New Forest is classified as an SPA for its breeding and overwintering bird species of European importance, in accordance with the European Birds Directive. The designation relates to internationally significant breeding populations of Dartford Warbler Sylvia undata, Nightjar Caprimulgus europaeus, Woodlark Lullula arborea, Honey Buzzard Pernis apivorus, Hobby Falco

[12] Test Valley Borough Council. European protected species requiring nutrient neutrality strategy. https://testvalley.gov.uk/assets/attach/16095/Solent-SPAs-SACs-catchment-map.pdf
[13] A map indicating the extent of this area is available at: http://www.testvalley.gov.uk/assets/attach/2424/pt4-1-141001-NF-Interim-Framework-website.pdf
[14] 3 Lake, S., Liley, D. & Saunders, P. (2020). Recreation use of the New Forest SAC/SPA/Ramsar: Impacts of recreation and potential mitigation approaches. Footprint Ecology, Wareham, Dorset.

subbuteo and Wood Warbler Phylloscopus sibilatrix and over-wintering Hen Harrier Circus cyaneus.

The New Forest is also designated as an SAC for its habitats and non-avian species of European importance, in accordance with the European Habitats Directive. This designation reflects the unique mosaic of habitats across the New Forest, which includes eight Annex 1 heathland, grassland, woodland, wetland, bog and open water habitats, together with three Annex 2 species, Stag Beetle Lucanus cervus, and Southern Damselfly Coenagrion mercuriale, and Great Crested Newt Triturus cristatus.

Also relevant is the New Forest's listing as a Ramsar site, under the Ramsar Convention. This recognises the international importance of the site as a wetland, supporting wetland flora and fauna of international importance, and adding to the global network of Ramsar listed wetlands."

Conservation Objectives

New Forest SAC

2.11 The conservation objectives are taken from the Natural England European Site Conservation Objectives site and those for the New Forest SAC[15] are listed below:

"With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- *The extent and distribution of qualifying natural habitats and habitats of qualifying species*
- *The structure and function (including typical species) of qualifying natural habitats*
- *The structure and function of the habitats of qualifying species*
- *The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely*
- *The populations of qualifying species, and,*
- *The distribution of qualifying species within the site."*

New Forest SPA

2.12 The conservation objectives are taken from the Natural England European Site Conservation Objectives pages and those for the New Forest SPA are listed below:

"With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

• The extent and distribution of the habitats of the qualifying features

[15] European Site Conservation Objectives for The New Forest Special Area of Conservation Site Code: UK0012557. Naturalengland.org.uk

- *The structure and function of the habitats of the qualifying features*
- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site."*

New Forest Ramsar

2.13 Conservation objectives are not specified for Ramsar sites, however as this designation relates to important wetland features and the boundaries of the sites are identical, the SAC and SPA conservation objectives are relevant and should be applied.

Threats and Pressures

2.14 Site Improvement Plans (SIPs) were developed for each Natura 2000 site (now known as the National sites Newtwork) in England by Natural England as part of the Improvement Programme for England's Natura 2000 sites (IPENS), please note that Natura 2000 has now been replaced by National Site Networks, although the principals still remain the same. There are many pressures and threats to the condition of the New Forest SAC and SPA the main ones being[16]:

- *"A significant long term reduction in grazing pressure through loss of commoning. This would lead to a dramatic change in the flora and fauna of the New Forest and the impoverishment of the special features for which it was designated.*
- *Impacts of recreation including disturbance to qualifying Natura 2000 species and compaction, abrasion and other modifications to vegetation, soils and watercourses.*
- *Historic drainage of wetlands which leads to a loss of extent of wetland habitats such as wet heath, mire, riverine and bog woodland.*
- *Sylviculture plantations with recognisable remnants of SAC Annex 1 habitats such as heathland, mire, lawn, riverine and bog woodland.*
- *Loss of traditional management practices which can lead to a loss of extent and diversity of open habitats".*

Ecological Pathways

2.15 The ecological pathways have been identified based on those typically associated with residential developments of this nature. Those scoped out for the SPA can also be scoped out for the SAC and Ramsar and are not discussed further. *Table 3* summarises the pathways for potential effects on the SPA and SAC.

Table 3: Ecological Pathways and HRA Screening Conclusions for New Forest SPA

Ecological Pathway	Assessment applied	Likely Significant Effect

[16] file:///C:/Users/avu1/Downloads/SIP141124FINALv1%200%20New%20Forest%20(3).pdf

Habitat Loss	Any loss, damage or fragmentation of habitat actually within the SPA/SAC itself. No habitat will be lost. The development Site is approximately 7.4km away from the New Forest SPA.	**Screened out alone or in combination**
Air Pollution	Nitrogen deposition from traffic only likely pathway. Natural England 4 step Guidance on traffic emissions applied as follows: Step 1: Does the proposal give rise to emissions which are likely to reach a European site? **No.** Step 2: Are the qualifying features of sites within 200m of a road sensitive to air pollution? **No** Step 3: Could the sensitive qualifying features of the site be exposed to emissions? **No** Step 4: Application of screening thresholds. Use of the 1000 Annual Average Daily Traffic. **The project's transport consultants, screened this location out as being unlikely to carry any regular daily traffic from the proposed development.**	**Screened out as below the threshold alone and in combination**
Noise and Light	Precautionary assumption that the effects of noise, vibration and light are most likely to be significant within a distance of 500 metres. Site 7.4 km from the SPA	**Screened out alone or in combination.**
Water Quality and Quantity	Is the Site hydrologically linked to the SAC/SPA and is it sensitive/ qualifying features sensitive to water quality? **No** The Site is not hydrologically linked with the New Forest SPA/SAC.	**Screened out alone or in combination**
Recreational Pressure	The proposed development has been identified as within the 13.6km zone of influence (ZOI) for the New Forest SPA/SAC/Ramsar site – the development must be considered alone and in combination impacts as a result of recreational pressure on the SPA.	**Screened in alone and in combination following Local Plan and supplementary planning document**

3.0 STAGE 2: APPROPRIATE ASSESSMENT

Solent and Southampton Water SPA – Nutrient Neutrality

3.1 The screening stage detailed above has concluded that a likely significant effect may arise upon the Solent and Southampton Water SPA due to an increase in nutrient pollution as a result of the proposed development. This is contrary to Policy E2 *Protect, Conserve and Enhance the Landscape Character of the Borough* and E5 *Biodiversity* of the Local Plan[17].

3.2 No other impacts are expected during the construction or operational phases of development. To avoid and mitigate for an adverse effect on the SPA, the development proposal has been subject to a Nutrient Neutral Assessment and Mitigation strategy provided by Nutrient Neutral (NNAMS/329, 2023). the Nutrient Neutrality Assessment provides full details on the nutrient output calculated from the proposed development and how this will be properly mitigated. A summary of the assessment is provided below.

Mitigation Measures

Financial Contributions

3.3 The proposed development will result in a net increase of 270 dwellings within the catchment of tributaries of the River Test, which flows into the Solent.

3.4 After some recent court rulings (Court of Justice of the European Union (CJEU) judgements), Natural England has advised on the impact of nutrients from new developments on the group of SPAs, SACs, and Ramsars around the Solent. These areas are being negatively affected by high levels of nitrogen and phosphorus entering the water environment. To comply with the Habitats Regulations, it is, therefore, recommended that specific new developments aim for nutrient neutrality, which ensures that they do not add to existing nutrient loading.

3.5 A development scheme's nutrient budget is calculated according to Natural England's guidelines, taking into account both wastewater and land use change. This will determine if the development could harm protected areas, or if mitigation is needed to prevent any adverse impact.

3.6 The Solent Region SPAs, SACs and Ramsar sites- Nutrient Neutrality Test Valley Off-Site Mitigation Framework[18] details the mitigation options available for developments within the borough:

"Where a net gain in residential development is proposed within the catchment of the River Test, having calculated the development's nutrient budget, one of the below options would need to be used, which would need to be agreed with the Council and be subject to an Appropriate Assessment:

a) Evidence through the calculation that the development would not lead to an increase in nutrient loading and would achieve nutrient neutrality on-site.

b) Provide and secure in perpetuity a bespoke off-site mitigation package for the development which would enable it to achieve nutrient neutrality.

[17] Test Valley Borough Revised Local Plan (Adopted Local Plan 2011 – 2029)
[18] //www.testvalley.gov.uk/planning-and-building/guidance/solent-southampton-water-special-protection-area

c) Provide a financial contribution…to secure the use of land to provide off-site mitigation measures for the development, which would enable it to achieve nutrient neutrality.

Financial contributions under option c) will be used to secure the use of land to provide off-site mitigation solutions in order to achieve nutrient neutral development. This will be in the form of the purchase of land and/or credits derived from the reduced nitrogen load resulting from changes from existing land use from identified sites, for example through the ceasing of agricultural use and the creation of woodland or wetland. This will be used to offset equivalent increased load from the relevant development.

In the case of a bespoke off-site mitigation package under option b) the Council would need to agree the proposed approach to mitigation, including the arrangements for long term management and monitoring arrangements. A contribution towards monitoring would be required (payable upon occupation)."

3.7 As a result, the Nutrient Neutral Assessment and Mitigation Strategy[19] has been produced in support of the planning application, which details the nutrient budget and mitigation proposals. The nitrogen budget has been calculated at 169.19kgTN. The strategy states the following:

3.8 "To support this outline application, nutrient neutrality for the development pre- and post- 2030 is achievable by relying on existing foul water assets, the Levelling-Up Regeneration Act and the purchase of nutrient offsetting credits. Regardless, the nutrient budget is expected to change as part of any detailed Reserved Matters submission. As such, it is expected a Condition will be applied to the outline consent, requiring a scheme for nutrient neutrality to be approved prior to the occupation of any phase 2.

3.9 It is therefore confirmed that the above proposed development will not prevent the Conservation Objectives of the Solent Marine Catchment being achieved".

New Forest SPA, SAC, Ramsar – Recreational Impacts

3.10 The screening stage detailed above has concluded that a likely significant effect may arise upon the New Forest SPA, SAC and Ramsar site due to disturbance effects from increased recreational disturbance from the proposed development. This is contrary to Policy E2 and E5 of the Local Plan[20]

3.11 No other impacts pathways are expected during the construction or operational phases of development, including those from changes in air quality and hydrology. To avoid and mitigate for an adverse effect on the SPA / SAC and Ramsar sites by recreational uses, the development proposals include a number of mitigation components that have been designed and incorporated to avoid and/or reduce potential harmful effects on the internationally designated site.

3.12 The project being assessed will result in a net increase of dwellings within 13.6km of the New Forest SPA site. As established in the HRA of the Test Valley Borough Revised Local Plan DPD, a permanent significant effect on the New Forest SPA due to increase in recreational disturbance

[19] Nutrientneutral 2023

[20] Test Valley Borough Revised Local Plan (Adopted Local Plan 2011 – 2029)

as a result of the new development, is likely. As such, in order to lawfully be permitted, the proposed development will need to include a package of avoidance and mitigation measures.

Mitigation Measures

Financial Contributions

3.13 Test Valley Borough Council approved the New Forest SPA Mitigation – Interim Framework for implementation from 1 October 2014[21]. This framework provides a strategic solution to ensure the requirements of the Habitats Regulations are met with regard to the in-combination effects of increased recreational pressure on the New Forest SPA site arising from new residential development in Test Valley.

3.14 The Interim framework has since been superseded by the Draft New Forest Recreation Mitigation Framework[22]. The Supplementary Planning Document (SPD) was prepared by Test Valley Borough Council as part of its planning policy framework and it supplements the policies of the Test Valley Revised Local Plan 2011-2029. The purpose of the SPD is to provide an updated framework for mitigation in relation to recreational impacts on the New Forest international nature conservation designations arising from certain new developments. It does not seek to consider mitigation for other potential impacts on these and other internationally designated nature conservation sites.

3.15 As outlined in section 5 of the Draft New Forest Recreation Mitigation Framework :

Overview of Options 5.1

Where it is identified that a proposal is likely to result in a significant effect on the New Forest designations as a result of recreational impacts (either alone or in combination), mitigation would need to be provided to ensure there would be no adverse impacts on the integrity of any of the designated sites. As such, one of the below options (our emphasis) would need to be delivered.

a) Develop a bespoke mitigation package;

b) Provide Suitable Alternative Natural Greenspace (SANG) to be designed to divert visitors from the New Forest international nature conservation designations; or

c) Provide a contribution of £1,540 per unit of additional residential accommodation towards off-site mitigation measures.

The Council and Natural England would need to agree both the proposed approach and specific mitigation measures. The secured mitigation could include measures within and / or outside the designation. The Council's preference is for any financial contribution to be used to aid in delivering SANG and other off-site measures in the first instance. In addition to mitigation measures, a contribution towards monitoring measures would be required (payable on occupation); this has been factored into the figure provided for option c).

5.13: The approach to mitigation would need to be satisfactorily secured prior to the grant of planning permission. The mechanism would need to be agreed with the Council.

[21] https://www.testvalley.gov.uk/assets/attach/2424/pt4-1-141001-NF-Interim-Framework-website.pdf
[22] Test Valley Borough Council, New Forest International Nature Conservation, Designations: Recreational Mitigation, Framework Supplementary Planning Document, Nov 2021

3.16 As the provision of SANG is not feasible within the development framework, the development will seek to provide a financial contribution per unit, towards the offsite mitigation measures. As stated in the SPD, the mitigation measures would be secured and agreed with the Council and Natural England. To secure the financial contributions, Section 106 agreements will be required.

Open Space

3.17 Open space and green infrastructure are included as part of the development, this comprises a mix of formal and informal public open space, an equipped children's play area, new recreational routes and areas for habitat enhancement associated with the protected species currently found within the Site. The open space will be easily accessible from any new residential dwelling and will also be used by other residents in the surrounding area, thus potentially reducing further visits to European Sites. A suitable management regime will be implemented to ensure that the integrity of this open space is maintained in perpetuity (secured by a condition), to ensure continued use by new and existing residents.

3.18 Walking routes around the Site will allow for onsite dog exercise, which will alleviate the need for residents to go off-site for frequent and regular walks, such as those needed in the early morning and late evening.

Information Packages

3.19 To further minimise potential likely significant effects, information packs will be provided to residents, which will detail information about the European Sites, but will also provide alternative routes and maps to encourage residents to use other public rights of way (PRoW) away from sensitive areas. This will include the importance of ensuring that when accessing the New Forest SPA, dogs should be kept on a lead to limit the disturbance.

4.0 IN-COMBINATION EFFECTS

4.1 The effects of the development should be considered 'in-combination' with the effects of other developments or projects on the same internationally designated sites. With regards to the Site in isolation, all effects have been scoped out or adequately mitigated so that the proposals will not significantly impact the integrity of any of the nearby internationally designated sites. As such, the Site would not be considered to result in any in-combination effects with other plans or projects.

5.0 CONCLUSION

5.1 A Nutrient Neutrality Assessment has been undertaken which details the nutrient budget that the development is required to mitigate for the Solent and Southampton Water SPA. This will be mitigated for off-site by the purchase of nutrient credits, this would be secured in a Section 106 agreement. This financial contribution is considered as sufficient mitigation to ensure that the proposals will have no likely significant effect on the SPA either individually or in combination.

5.2 A financial contribution towards the New Forest Recreation Mitigation Framework, which is sufficient mitigation to ensure no likely significant effect on the nearby New Forest SPA and Ramsar site. Onsite GI will provide local recreational opportunities, which will lessen the reliance on the New Forest but also other international designations such as Emer Bog and also local designated sites.

5.3 It is concluded that the additional financial contributions, will result in no likely significant effect on nutrients in the Solent and recreational effects on the New Forest, so the derogation tests can be avoided. The application of these measures is also in accordance with the requirements of National and Local Planning Policy and relevant guidance documents.

APPENDIX A: THE HABITATS REGULATIONS ASSESSMENT PROCESS AND LEGISLATION

Legislative Background

5.1 The Conservation of Habitats and Species Regulations 2017 consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive (the Habitats Directive) 92/43/EEC, and EC Directive on Wild Birds (the Birds Directive) (Council Directive) 2009/147/EEC, into national UK law. The Regulations require the compilation and maintenance of a register of European sites that includes Special Areas of Conservation, as well as Special Protection Areas designated for birds and sites designated as internationally important wetlands under the Ramsar Convention known as "Ramsar Sites". These three designations form a collective Europe wide network of internationally protected sites known as Natura 2000.

The Habitats Directive

5.2 Article 6(3) of the Habitats Directive requires an Appropriate Assessment of any plans that could affect a Natura 2000 site:

> *"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of Paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

5.3 Article 6(4) of the Habitats Directive discusses alternative solutions, the test of "imperative reasons of overriding public interest" (IROPI) and compensatory measures (transposed to Regulation 60):

5.4 "If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted."

5.5 A "likely significant effect" is defined as: "any effect that may reasonably be predicted...that may affect the conservation objectives of the features for which the site was designated, but excluding trivial or inconsequential effects."

5.6 The "integrity of a site" is defined as: "the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and / or the level of populations of the species for which it was classified."

The Habitats Regulations

5.7 In relation to undertaking and consenting plans or projects, the due consideration of Natura 2000 sites is outlined in regulation 61 of the Habitats Regulations, which has led to the HRA process, as follows.

5.8 *"61. 1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which - (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.*

5.9 *(2) A person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable them to determine whether an appropriate assessment is required.*

5.10 *(3) The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specify.*

5.11 *(4) They must also, if they consider it appropriate, take the opinion of the general public, and if they do so, they must take such steps for that purpose as they consider appropriate.*

5.12 *(5) In the light of the conclusions of the assessment, and subject to regulation 62 (considerations of overriding public interest), the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).*

5.13 *(6) In considering whether a plan or project will adversely affect the integrity of the site, the authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which they propose that the consent, permission or other authorisation should be given."*

Habitats Regulations Assessment Process

5.14 The HRA process has developed into a four-stage process as follows:

5.15 Stage One: Screening - also known as the Test of Likely Significant Effect (TOLSE). If the Competent Authority cannot screen out a *likely significant effect,* an Appropriate Assessment is required.

5.16 Stage Two: Appropriate Assessment - the Competent Authority will only agree to plans or projects that will not affect the *integrity* of a European site also known as the "Integrity Test".

5.17 Stage Three: Alternative Solutions - assesses any alternative solutions of a potentially damaging plan or project that failed the Integrity Test, and if it is determined there are no alternative solutions, the project cannot be agreed to and it will either need to be changed or refused.

5.18 Stage Four: The final stage may allow a plan or project to proceed if after failing stage three if it is for Imperative Reasons of Overriding Public Interest, and only if suitable compensatory measures are secured.

Key Case law in relation to Test of Likely Significant Effect

5.19 The following are some relevant case law judgement quotes in relation to "likely Significant Effect" which are of relevance for a Stage 1 screening.

5.20 EC Case C-127/02 - Waddenvereniging and Vogelsbeschermingvereniging – the "Waddenzee Judgement" (paras 45, 47 and 48) – 7th September 2004:

5.21 "…any plan or project … is to be subject to an appropriate assessment … if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects."

5.22 "Where plan or project has an effect on that site but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on that site."

5.23 "In assessing the potential effects of a plan or project, the significance must be established in the light, inter alia, of the characteristics and specific environmental conditions of the site concerned by that plan or project"

5.24 R (Hart District Council) v Secretary of State for the Communities and Local Government [2008] EWHC 1204 (Para 55 and 76) – 1st May 2008:

5.25 "If the competent authority does not agree with the proponents' view as to the likely efficacy of the proposed mitigation measures, or is left in some doubt as to the efficacy, then it will require an appropriate assessment because it will not have been able to exclude the risk of a significant effect on the basis of objective information ..."

5.26 "The competent authority is not considering the likely effect of some hypothetical project in the abstract. The exercise is a practical one which requires the competent authority to consider the likely effect of the particular project for which permission is being sought. If certain features …have been incorporated into that project, there is no sensible reason why those features should be ignored at the initial, screening, stage merely because they have been incorporated into the project in order to avoid, or mitigate, any likely effect...."

5.27 Boggis v Natural England [2009] EWCA Civ 1061 20th October 2009 (para 36 and 37)

5.28 "Notwithstanding the word "likely" …is not that significant effects are probable, a risk is sufficient."

5.29 "…a claimant who alleges that there was a risk which should have been considered by the authorising authority so that it could decide whether that risk could be "excluded on the basis of objective information", must produce credible evidence that there was a real, rather than a hypothetical, risk which should have been considered."

5.30 Ec Case C-258-11 Reference for a preliminary Ruling, Opinion of Advocate General Sharpston 'Sweetman' (Para 48) – 22nd November 2012:

5.31 "The requirement that the effect in question be "significant" lays down a de minimis threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by article 6(1), activities on or near the site would risk being impossible by reason of legislative overkill."

5.32 Bagmoor Wind Ltd v Scottish Ministers [2012] CSIH 93 7th December 2012 (para 45):

5.33 *"The requirement for objective information at the preliminary examination is not to be equated with a need for scientific knowledge. The Court only refers to "the best scientific knowledge" in the context of the appropriate assessment (para [61]). "Objective", in this context, means information based on clear verifiable fact rather than subjective opinion."*

5.34 R (on application of An Taisce) v SoS [2014] EWCA Civ 1111 1st August 2014 (paras 38 and 39)

5.35 *"The word "likely" …implies at least some degree of flexibility. There comes a point when the probability…of a significant effect is so remote that it ceases to be "likely", however broad the concept of likelihood."*

5.36 *"The competent authority does not have to be satisfied that there is no risk, however remote…"*

Note of Functional Linkage

5.37 "Functional linkage" is a term that refers to the potential for habitat away from the designation boundaries of a Natura 2000 site, that is considered to have a "role" or "function" for a qualifying feature "beyond the boundary". This is covered in the Guidance document on the strict protection of animal species of Community interest under Habitats Directive 92/43/EEC 2007. Paragraph 7 sates:

5.38 *"Assessing and evaluating the conservation status of habitats and species within the Natura 2000 network is therefore not always enough, especially when the occurrences of habitats or species are only partly covered by the network, maybe even in some cases only to a relatively small extent."*

5.39 A case law example of where the concept of Functionally Linked Land (FLL) has been applied was RSPB and others v SoS and London Ashford Airport Ltd [2014] EWHC 1523 16th May 2014 (para 27):

5.40 *"There is no authority on the significance of the non-statutory status of the FLL. However, the fact that the FLL was not within a protected site does not mean that the effect which a deterioration in its quality or function could have on a protected site is to be ignored. The indirect effect was still protected. Although the question of its legal status was mooted, I am satisfied, as was the case at the Inquiry, that while no particular legal status attaches to FLL, the fact that land is functionally linked to protected land means that the indirectly adverse effects on a protected site, produced by effects on FLL, are scrutinised in the same legal framework just as are the direct effects of acts carried out on the protected site itself. That is the only sensible and purposive approach where a species or effect is not confined by a line on a map or boundary fence. This is particularly important where the boundaries of designated sites are drawn tightly as may be the UK practice."*

5.41 Paragraph 40 of The Holohan and others versus An Bord Pleanála C-461/17 [7th November 2018] judgement states "an 'appropriate assessment' must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found **outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site**." i.e. the boundary for the AA may extend beyond the Natura 2000 site boundary.

Note on the Sweetman ruling "People over Wind" and definition of "mitigation"

5.42 The *People Over Wind* judgement (Peter Sweetman v Coillte Teoranta (C-323/17)), in April 2018, changed the way mitigation is viewed during the HRA Stage One screening i.e. the Test of Likely Significant Effect. The ruling was based on the view that allowing mitigation measures to be considered at the screening stage allows projects to avoid an Appropriate Assessment (Stage Two). The ruling stated:

5.43 "Taking account of such measures at the screening stage would be liable to compromise the practical effect of the Habitats Directive in general, and the assessment stage in particular, as the latter stage would be deprived of its purpose and there would be a risk of circumvention of that stage, which constitutes, however, an essential safeguard provided for by the directive." (paragraph 37 of the judgment)"

5.44 This has made what constitutes "mitigation" directly in relation to the European site, and what is considered "integrated" into the scheme for other reasons, a question that carries some uncertainty. The PINS Note 05/2018 *Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman v Coillte Teoranta* provides some clarification as follows:

5.45 "The implication of the CJEU judgment is that competent authorities cannot take account of any integrated or additional avoidance or reduction measures when considering at the HRA screening stage whether the plan or project is likely to have an adverse effect on a European Site.

5.46 The screening stage must be undertaken on a precautionary basis without regard to any proposed integrated or additional avoidance or reduction measures. Where the likelihood of significant effects cannot be excluded, on the basis of objective information the competent authority must proceed to carry out an AA to establish whether the plan or project will affect the integrity of the European site, which can include at that stage consideration of the effectiveness of the proposed avoidance or reduction measures."

PINS Note 05/2018 goes on to further explain:

5.47 "It should be noted that there is no authoritative definition of what constitutes an integrated or additional avoidance or reduction measure and this should be considered on a case by case basis. If a measure is being introduced to avoid or reduce an effect on a European site then it can be viewed as mitigation. It may be helpful to consider whether a proposal could be considered integral to a plan or whether it is a measure to avoid harm. For instance, the HRA report could identify European sites whose designated features are vulnerable to disturbance caused by people visiting the site. If evidence presented in the HRA report and during the examination demonstrates that the housing allocation is too far from the European site to lead to increased visitor numbers then it could be concluded that there is no pathway for likely significant effects to occur. However if the HRA report determines that the housing allocation would be likely to increase visitor use of the European site and relies on measures which reduce visitor pressure (such as securing land to provide a buffer to the European site or ensuring footpaths and car parks are located away from the site) to avoid or reduce likely significant effects an AA will be required to assess whether the plan will affect the integrity of the European site."

5.48 The interpretation of the above being taken by legal professionals appears to be that if it can be argued that mitigation, whether integrated or additional, is an "avoidance or reduction" measure

directly due to an ecological pathway to a Natura 2000 site, then an Appropriate Assessment is required. If it is truly integrated into the proposals for other reasons, for example green space due to an unrelated protected species mitigation licence, as was the case with UK High Court ruling in August 2018 (R (on the application of Langton) v Secretary of State for Environment, Food and Rural Affairs, Natural England [2018] EWHC 2190 Admin) in relation to mitigation within a badger cull licence, then the mitigation is fully integrated and would not automatically trigger the requirement for an Appropriate Assessment. However, in many cases, such a judgement would carry the risk of conflicting views within the planning process, and often it may be simpler to take a precautionary approach by progressing to Appropriate Assessment where there is room for doubt.

Local Planning Policy

5.49 The adopted Test Valley Local Plan[23] contains the following policy of relevance to this assessment:

Policy E2: Protect, Conserve and Enhance the Landscape Character of the Borough

To ensure the protection, conservation and enhancement of the landscape of the Borough development will be permitted provided that:

a) it does not have a detrimental impact on the appearance of the immediate area and the landscape character of the area within which it is located;

b) it is designed and located to ensure that the health and future retention of important landscape features is not likely to be prejudiced;

c) the existing and proposed landscaping and landscape features enable it to positively integrate into the landscape character of the area;

d) arrangements for the long term management and maintenance of any existing and proposed landscaping have been made; and

e) it conserves the landscape and scenic beauty of the New Forest National Park or the North Wessex Downs Area of Outstanding Natural Beauty where applicable; and

f) does not result

Policy E5: Biodiversity

Development in the Borough that will conserve, and where possible restore and / or enhance biodiversity will be permitted.

Development that is likely to result in a significant effect, either alone or in combination, on an international or European nature conservation designation, or a site proposed for such designation, will need to satisfy the requirements of the Habitat Regulations98.

Development likely to result in the loss, deterioration or harm to habitats or species of importance to biodiversity or geological conservation interests, either directly or indirectly, will not be permitted unless:

[23] Test Valley Borough Adopted, Local Plan 2011-2019. January 2016. Test Valley Council

a) the need for, and benefits of, the development in the proposed location outweighs the adverse effect on the relevant biodiversity interest;

b) it can be demonstrated that it could not reasonably be located on an alternative site that would result in less or no harm to the biodiversity interests; and

c) measures can be provided (and secured through planning conditions or legal agreements), that would avoid, mitigate against or, as a last resort, compensate for the adverse effects likely to result from development.

The habitats and species of importance to biodiversity and sites of geological interest considered in relation to points a) to c) comprise:

• Sites of Special Scientific Interest (SSSIs);

• legally protected species;

• Sites of Importance for Nature Conservation (SINCs) and Local Nature Reserves (LNRs);

• priority habitats and species listed in the national and local Biodiversity Action Plans99;

• habitats and species of principal importance for the conservation of biodiversity in England100;

• trees, woodlands, ancient woodland (including semi-natural and replanted woodland), aged and veteran trees, and hedgerows; and

• features of the landscape that function as 'stepping stones' or form part of a wider network of sites by virtue of their coherent ecological structure or function or are of importance for the migration, dispersal and genetic exchange of wild species.

5.50 *The level of protection and mitigation should be proportionate to the status of the habitat or species and its importance individually and as part of a wider network.*

Policy E6: Green Infrastructure Development will be permitted provided that:

a) it protects, conserves and where possible, enhances the Borough's Green Infrastructure network;

b) it avoids the loss, fragmentation, severance or a negative impact on the function of the Green Infrastructure network;

c) mitigation is provided where there would be an adverse impact on the Green Infrastructure network; and

d) where it is necessary for development to take place on identified areas of Green Infrastructure an appropriate replacement is provided.

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Appendix 7.10
Ecology Figures

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Key

- Site Boundary
- 2km Buffer
- Local Nature Reserve (LNR)
- Site of Special Scientific Interest (SSSI)
- Special Area of Conservation (SAC)
- Site of Importance for Nature Conservation (SINC)
- Ancient Woodland Inventory Sites

Hillier's Arboretum (7 Sites)
Ganger Farm Fields
Chivers Land
Fishlake & Ashley Meadows
South Holmes Copse
Grosvenor Farm Wooded Meadow
Ganger Farm Marsh & Woodland
Ganger Wood
Ganger Wood Strip
Ganger Farm Meadow
Small Copse, Romsey Extra
Oxlease Copse, Crampmoor, Ampfield
Ganger Swamp
Ganger Wood Meadow
Crampmoor Glebe
Cramp Moor
Woodley Grange Eastern Meadow
Woodley Grange Western Meadow
Gypsy's Copse
Baddesley Common West
Baddesley Common and Emer Bog
Tadburn Stream Woodland and Meadow
Warren Farm Copse
Body Farm Field 3
Airfield Field
Lights Copse
ROMSEY
Scrag Hill Copse
Baddesley Common Meadow
Scrag Hill
Lights Copse Meadow
Baddesley Close Meadow & Woodland
Nutburn Meadow
Beggarspath Wood
Parkers Moor/Luzborough Plantation
River Test
Ashfield Lodge Wet Meadow

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STATUTORY AND NON-STATUTORY DESIGNATED SITES PLAN

scale	drawn	issue
1:18500	OMS	16/2/2021

drawing / figure number **Figure 1**

rev **9840-E-01**

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Key

- Site Boundary
- 1 km buffer
- Adder
- August Thorn
- Barn Owl
- Bats
- Beaded Chestnut
- Black Redstart
- Blood-vein
- Brindled Beauty
- Brown Long-eared Bat
- Brown-spot Pinion
- Buff Ermine
- Cinnabar
- Common (Mealy) Redpoll
- Common Pipistrelle
- Common Toad
- Daubenton's Bat
- Deep-brown Dart
- Dingy Skipper
- Dot Moth
- Dusky Brocade
- Dusky Thorn
- Eurasian Badger
- European Water Vole
- Fieldfare
- Figure of Eight
- Garden Tiger
- Ghost Moth
- Grass Snake
- Green-brindled Crescent
- Grey Dagger
- House Sparrow
- Indian Balsam (Himalayan Balsam)
- Kingfisher
- Knot Grass
- Large Nutmeg
- Latticed Heath
- Long-eared Bat species
- Mottled Rustic
- Mouse Moth
- Noctule Bat
- Oak Hook-tip
- Osprey
- Pipistrelle Bat species
- Polecat
- Red Kite
- Redwing
- Rhododendron
- Rosy Minor
- Rustic
- Sallow
- Serotine
- Shoulder-striped Wainscot
- Slow-worm
- Small Phoenix
- Small Square-spot
- Song Thrush
- Soprano Pipistrelle
- Spinach
- Stag Beetle
- Starling
- Three-cornered Garlic
- Unidentified Bat
- White Ermine
- Western Barbastelle
- West European Hedgehog
- White-letter Hairstreak

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Land off Halterworth Lane, Romsey

CONSULTATION PLAN

scale 1:10500 | drawn OMS/HG | issue 29/3/2021

drawing / figure number **Figure 2** | rev **9840-E-01**

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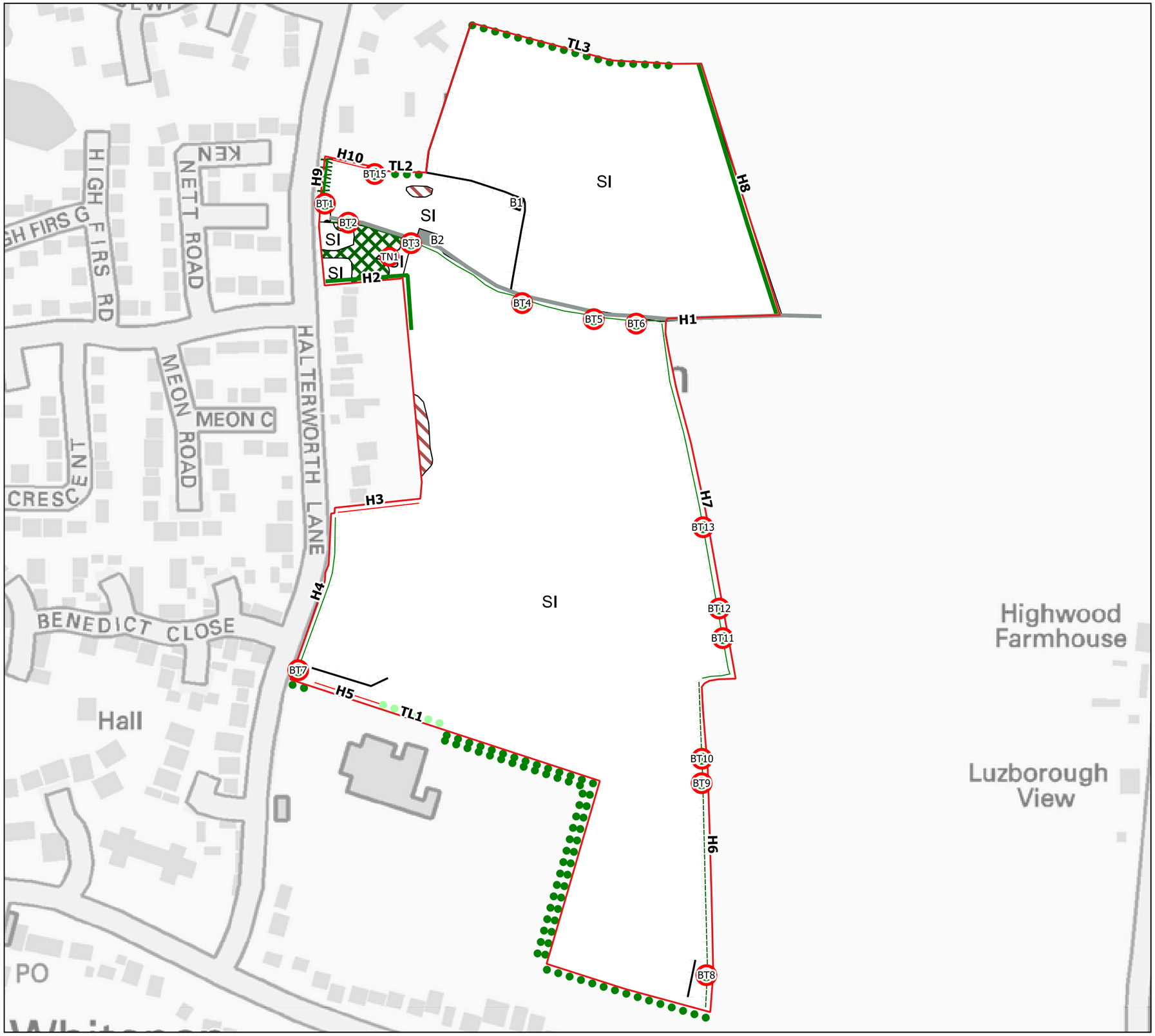

Key

- Site Boundary

Phase 1 Points

- Tree with bat potential
- Target note

Phase 1 Lines

- Fence
- Path
- Hedges: Introduced shrub
- Intact hedge - species-poor
- Native species hedgerow
- Hedge with trees - native species-rich
- Defunct hedge - native species-rich
- Broadleaved trees
- Coniferous trees
- Scrub - scattered line

Phase 1 Habitats

- Built Environment: hardstanding
- Buildings
- Bare ground
- Scrub - dense/continuous
- Other tall herb and fern - ruderal
- SI Poor semi-improved grassland

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Land off Halterworth Lane, Romsey

PHASE 1 HABITAT PLAN

scale 1:2,700 | drawn HG | issue date 5/12/2023

drawing / figure number **Figure 3** | rev **9840-E-01**

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Appendix 8.1
Legislation and Policy

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Appendix 8.1 – Legislation and Policy

National Policy & Legislation

At a national level, the central government strategy document 'A Better Quality of Life – A Strategy for Sustainable Development for the United Kingdom' recognises the fundamental importance of good water quality to health and the environment and identifies the major challenges to water quality which it states are; growing demand for water supplies, pollution pressures from new Development, diffuse inputs, changed weather patterns and loss of habitats.

These have been taken into consideration in assessing the hydrological impacts of the proposed Development.

National Planning Policy Framework

The National Planning Policy Framework (NPPF) was adopted in March 2012, and last updated in December 2023, and sets out the Government's planning policies and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate, and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.

Planning Practice Guidance Flood Risk and Coastal Change (2022), ID: 7

Provides additional guidance to local planning authorities to ensure effective implementation of the planning policy set out in the National Planning Policy Framework on Development in areas of flooding.

Making Space for Water

In March 2005, the Department for Environment Food and Rural Affairs (DEFRA) published 'Making Space for Water'. The overarching theme of this document is the management of flood risk and the identification of a strategic direction to control it. The document also identifies the influence of the changing coast together with the uncertain impacts of climate change in terms of the management processes and flood risk. It underlines that planning policy should be designed to minimise flood risk and stated that the preparation of Catchment Flood Management Plans (CFMPs) and Shorelines Management Plans (SMPs) should provide a broad management matrix.

The Pitt Review

In June 2008 Sir Michael Pitt published his final report into the summer 2007 flooding across the UK. The report examined both how to reduce the risk and impact of floods, and the emergency response to the floods in June and July 2007.

Flood and Water Management Act 2010

The Flood and Water Management Act 2010 provides better, more comprehensive management of flood risk for people, homes and businesses. It gives the Environment Agency an overview of all flood and coastal erosion risk management and unitary and county councils the lead in managing the risk of all local floods and introduce an improved risk-based approach to reservoir safety. The Act also encourages the uptake of sustainable drainage systems (SUDS) by removing the automatic right to connect to sewers and providing for unitary and county councils to adopt SUDS for new Developments and redevelopments.

Land Drainage Act and Water Resources Act 1991

In addition to the national planning policy the application is liable for consideration by the Environment Agency under the Land Drainage Act (1991) and the Water Resources Act (1991). Consent from the Environment Agency is required for any proposed discharges to controlled waters. Consent would also be required for any Development within 8m of a designated main river under the Environment Agency's Land Drainage Byelaws.

CIRIA Report C624 – Development and Flood Risk – Guidance for the Construction Industry

This report provides practical guidance to assist the construction industry meet the challenge of achieving sustainable communities that consider flood risk. It recommends a tiered approach to flood risk assessment. Three levels of assessment are defined:

- Level 1: Screening study to identify whether there are any flooding issues related to the Development site which need further consideration.
- Level 2: Scoping study to be undertaken if the Level 1 assessment indicated that the site may lie within an area which is at risk of flooding or may increase flood risk elsewhere. A level 2 assessment is also used to confirm possible sources of flooding that may affect the site.
- Level 3: Detailed study to be undertaken if the Level 2 assessment concludes that quantitative analysis is required to assess fully the flood risk issues related to the Development site,

CIRIA Environmental Good Practice on Site (C741) (2015), CIRIA Control of Water Pollution from Construction Sites (C532) (2001), provide guidance on hydrology, flood risk and water quality for consultants and contractors.

Appendix 8.2
Risk Assessment Methodology

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Appendix 8.2 – Risk Assessment Methodology

Table 1 – Definition of Sensitivity of the Receiving Environment

Sensitivity	Definition
Very High	High quality and rarity, regional or national scale and limited potential for substitution/replacement • Site of Special Scientific Interest (SSSI) or Special Area of Conservation (SAC) • Excellent water quality • Large scale industrial agricultural abstractions >1000m^3/day within 2km downstream, or abstractions for public drinking water supply • Designated salmonid fishery and/or salmonid spawning grounds present • Watercourse widely used for recreation, directly related to watercourse quality (e.g. swimming, salmon fishery etc.) within 2km downstream • Conveyance of flow and material, main river >10m wide • Active floodplain area (important in relation to flood defence)

Sensitivity	Definition
High	Receptor with a high quality and rarity, local scale and limited potential for substitution/replacement or receptor with a medium quality and rarity, regional or national scale and limited potential for substitution/replacement • Good water quality • Large scale industrial agricultural abstractions 500-1000m^3/day within 2km downstream • Surface water abstractions for private water supply for more than 15 people • Designated salmonid fishery and/or cyprinid fishery • Watercourse used for recreation, directly related to watercourse quality (e.g. swimming, salmon fishery etc.) • Conveyance of flow and material, main river >10m wide • Active floodplain area (important in relation to flood defence)

Sensitivity	Definition
Moderate	Receptor with a medium quality and rarity, local scale and limited potential for substitution/replacement or receptor with a low quality and rarity, regional or national scale and limited potential for substitution/replacement • Fair water quality • Industrial/agricultural abstractions 50-499m^3/day within 2km downstream • Designated cyprinid fishery or undesignated for fisheries - Occasional or local recreation (e.g. local angling clubs) • Conveyance of flow and material, main river <10m wide or ordinary watercourse 5m wide • Existing flood defences, may be subject to improvement plans • Groundwater abstractions 50-499m^3/day - Private water supplies present • Designated cyprinid[1] fishery, salmonid species may be present and catchment locally important for fisheries • Watercourse not widely used for recreation, or recreation use not directly related to watercourse quality
Low	Receptor with a low quality and rarity, local scale and limited potential for substitution/replacement • Environmental equilibrium stable and resilient to changes that are greater than natural fluctuations, without detriment to its present character • Polluted/poor water quality • Industrial/agricultural abstractions < 50m^3/day within 2km downstream • Fish sporadically present or restricted, no designated fisheries; not used for recreation • Watercourse < 5m wide • Area does not flood • Receptor heavily engineered or artificially modified and may dry up during summer months

Table 2 – Magnitude of Impacts

Magnitude	Criteria	Description and Example
Major	Results in loss of attribute	Fundamental (long term or permanent) changes to the hydrology or water quality • Loss of EC designated Salmonid fishery • Loss of designated species/habitats • Change in water quality status of river reach • Compromise employment source • Loss of flood storage/increased flood risk • Pollution of potable source of abstraction
Moderate	Results in effect on integrity of attribute or loss of part of attribute	Material but non-fundamental and short to medium term changes to the hydrology or water quality • Loss in productivity of a fishery • Contribution of a significant proportion of the effluent in the receiving water, but insufficient to change its water quality status • Reduction in the economic value of the feature
Minor	Result in minor effect on attribute	Detectable but non-material and transitory changes to the hydrology or water quality • Measurable change in attribute, but of limited size and/or proportion
Negligible	Results in an effect on attribute but of insufficient magnitude to affect the use / integrity	No perceptible changes to hydrology or water quality • Discharges to watercourse but no loss in quality, fishery productivity or biodiversity • No significant effect on the economic value of the receptor • No increase in flood risk

Table 3 – Significance Criteria

Magnitude of Impact	Sensitivity			
	Very High	**High**	**Medium**	**Low**
Major	Major	Major	Moderate	Minor
Moderate	Moderate	Moderate	Moderate	Minor
Minor	Minor	Minor	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Appendix 8.3
Flood Risk Assessment Drawings

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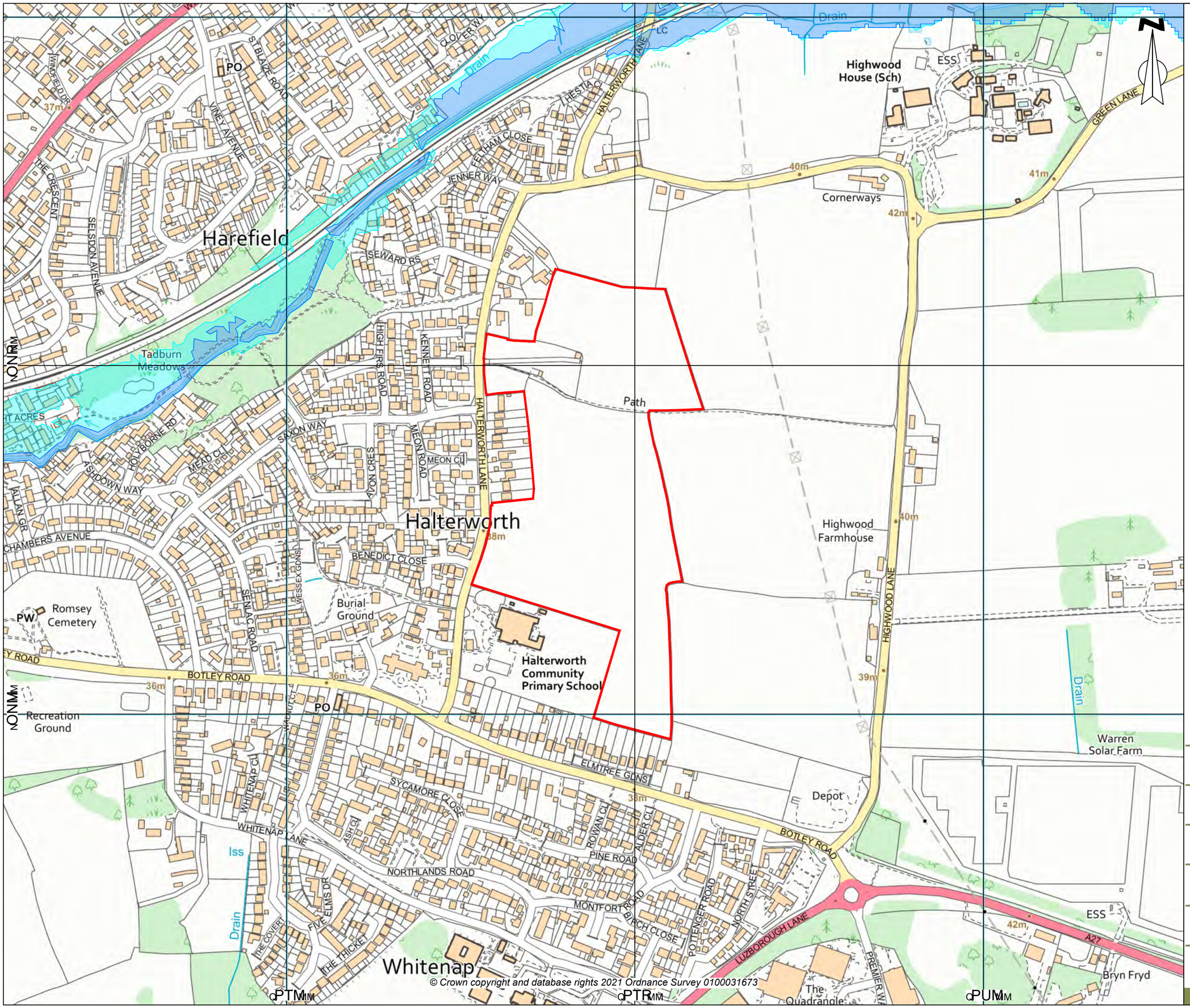

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