

Appendix 8A.4
Breeding Season VP Survey Results (2017 – 2020)

Hen Harrier Observations

Hen Harrier Observations, Breeding Season 2017 Survey.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
1	21.04.17	16.15 - 16.35	5 & 6	1,200	0	Foraging, Commuting	Conifer plantation, scrub, rough grassland, improved grassland	Adult male Hen Harrier flying low (mostly 0-5m above ground level) over trees/scrub. Partly foraging, partly commuting. Flew over conifer plantation, rough grassland & willow scrub, down a river valley with improved agricultural fields and back up the hill where it foraged again. Lost sight behind tall conifers.
2	16.06.17	10.15	6	0	40	Foraging	Heath	Male Hen Harrier hunting over heath-covered section of Dooneens mountain to the east of VP6 (off site). Flight height of 0-5m above ground level.
3	16.06.17	13.08 - 13.09	6	0	90	Commuting, Carrying prey	Heath, Conifer Plantation	Male Hen Harrier (probably the same individual as flightline no. 2) heading south, carrying prey and flying directly. Flight height 5-25m. Flew up over conifer plantation to the south of VP6 and was lost from sight.
4a	16.06.17	16.33	6	0	30	Commuting	Heath	Male Hen Harrier flying south, quickly and directly (no prey). Flight height 5-25m.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
4b	16.06.17	16.40	6	0	40	Flying	Conifer Plantation	Male Hen Harrier (presumed the same individual as flightline no. 4a) gliding slowly through conifer treetops to the south of VP6, c.15m flight height. Lost from sight to the south.
5a	12.07.17	14.14 - 14.20	6	0	360	Flying	Bog, rough grassland	Female Hen Harrier flying in from Laney River Valley 25-100m AGL initially. Mobbed by small passerines. Then gradually ascended higher, circling all the time (well above 100m) and lost from sight in clouds.
5b	12.07.17	14.44 - 14.45	6	0	40	Foraging	Bog, rough grassland	Adult female Hen Harrier (same individual as 5a) flying west across VP6 area. Foraging 0-5m AGL initially and then 5-25m AGL. Mobbed by small passerines. Lost sight as she flew towards the Laney River Valley.
6	23.08.17	13.49	5	70	20	Flying	Improved grassland	Juvenile Hen Harrier (this year's bird) flew southwest and then south at 2-4m height

Hen Harrier Observations, Breeding Season 2018.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
1	16.03.18	10.11	4	15	0	Foraging	Bog	Brief sighting of ringtail Hen Harrier flying low <5m AGL. Probably foraging. Lost from view due to topography.
2	16.03.18	11.06	3	5	5	Flying	Conifer Plantation, Bog	Male Hen Harrier flew over forest and then over moor at 1-2m AGL. Veered south and flew over hill out of view.
3	22.03.18	12.55 - 12.57	6	0	180	Flying, carrying prey	Bog, Conifer Plantation	Male Hen Harrier carrying food in talons, being mobbed by a Raven (but out-maneuvred it). Continued south with prey flying c. 25-100m AGL.
4	11.04.18	12.47	3	15	17	Flying	Conifer Plantation, Bog	Male Hen Harrier flying over forestry south of VP3 down hill. Flew up over the brow of the hill to the west at 2-10m AGL.
5	10.05.18	10.24 - 10.35	4	660	0	Foraging, Flying	Heath, Conifer Plantation, Rough Grassland	Male Hen Harrier foraging low over heath, conifer plantation & rough grassland habitat c. 5m AGL (15m AGL over trees).

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
6	10.05.18	13.06 - 13.13	1	360	50	Foraging, Consuming Prey	Heath, Conifer Plantation, Rough Grassland	Male Hen Harrier hunting, dropped to ground (point A) for 20 seconds and caught prey (possibly frog) and flew low to point B to consume it. After three minutes he climbed up and soared eastwards, dropping a little and flew southwards along a similar path to observation no. 5 (may be same bird), c. 80m AGL.
7	08.06.18	12.51	4	115	0	Foraging	Rough Grassland, Conifer Plantation	Male Hen Harrier hunting at 0-5m AGL over rough grassland before rising to 25m and flying east over post-thicket forestry.
8	06.07.18	12.07	3	15	5	Foraging	Heath/Bog	Male Hen Harrier hunting over heath bog at a height of 0-5m AGL.
9	06.07.18	12.33 - 12.37	4	210	30	Flying	Grassland, Conifer Plantation	Male Hen Harrier flying over grassland in valley below VP4. Flight height 1-3m AGL over grassland and just above trees in Conifer Plantation.
10a	06.07.18	14.07	3	15	0	Foraging	Heath/Bog	Male Hen Harrier hunting over heath bog at a height of 0-5m AGL.
10b	06.07.18	14.09	3	0	40	Flying	Rough Grassland	Male Hen Harrier (almost certainly same individual as observation no. 10a), flying over rough grassland at 5-25m AGL.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
10c	06.07.18	14.10	3	0	240	Flying (two males together briefly)	Grassland, Conifer Plantation	Male Hen Harrier (from observation no. 10a/b) joined by a second male Hen Harrier and flew together for a few seconds. One bird lost from view. The remaining bird flew over grassland and Conifer Plantation at a height of 5-25m AGL.
11	06.07.18	14.53 - 15.03	2, 6	240	330	Flying with prey	Grassland, Conifer Plantation, Heath	Male Hen Harrier flying with prey, initially c. 10m AGL, circling higher up to 500m north of VP5. Reduced height again to 5-25m AGL to fly along ridge over heath near VP6.

Hen Harrier Observations, Summer Season 2019 Survey.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
1	28.03.19	15.39	6	0	149	Foraging	Heath/Bog	Ringtail Hen Harrier hunting low (1-3m AGL) over heath/bog northeast of VP6.
2	13.05.19	09.20	8	30	0	Flying	Conifer Plantation	Male Hen Harrier flying over forest at a height of 5-25m AGL.
3	12.06.19	12.15	6	0	125	Foraging	Conifer Plantation, Rough Grassland	Male Hen Harrier initially flying at 20m AGL over spruce forestry. Dropped to 1-2m AGL, hunting over rough grassland.
4a	12.06.19	13.20	6	20	0	Commuting	Pasture	Male Hen Harrier flying at a height of 15m AGL over pasture/treelines.
4b	12.06.19	13.22	6	120	0	Foraging	Conifer Plantation, Scrub	Male Hen Harrier hunting at a height of 3-10m AGL. Same individual as 4a.
4c	12.06.19	13.27	6	70	0	Commuting	Conifer Plantation	Male Hen Harrier commuting flight across spruce forestry, then dropped behind it, c. 15m AGL.

Casual Hen Harrier Observations, Summer Season 2019 Survey.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
A	27.03.19	11.58	RG TR1	10	0	Flying	Heath/Bog	Male Hen Harrier flying with Buzzard over heather at 10-20m AGL.
B	27.03.19	12.16	RG TR1	10	0	Resting/Flying	Heath/Bog	Male Hen Harrier flushed up from heather during transect. Flew over heather for 10 seconds.
C	27.05.19	08.28	PC1	5	0	Flying	Conifer Plantation	Male Hen Harrier flying over young conifer plantation at a height of 5m AGL.

Hen Harrier Observations, Breeding Season 2020 Survey.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
1	18.03.20	10.28	7 & 3	103	15	Foraging	Conifer Plantation	Male Hen Harrier hunting over bog and pre-thicket forestry at a height of 1-25m.
2	18.03.20	11.26	1	50	0	Foraging	Young Forestry, Scrub, Rush, Grassland	Male Hen Harrier rose out of scrub/new forestry south of VP1, foraged over new forestry and rushy grassland, zig zagging over habitat as it hunted, then flew south towards VP3 over mature forestry, flying low at all times
3	20.03.20	11.36	8	240	0	Foraging	Conifer Plantation, Improved Grassland	Male flying low over spruce forest, then hunting over rushy pasture before circling upwards to 40m height.
4	27.04.20	09.23	6	0	60	Carrying prey	Grassland	Male Hen Harrier carrying prey and flying over grassland at a height of 50-120m above ground level.
5	10.06.20	10.05	4	20	0	Flying	Heath/Bog	Male Hen Harrier flying west at a height of 5-25m.
6	10.06.20	10.49	1	68	0	Flying	Forestry	Adult Male Hen Harrier circling over Forestry at a height of 10-30m.
7a	12.06.20	08.40	5	8	0	Flying	Bog, Rough Grassland	Ringtail Hen Harrier flew east past ridge at VP5 at a height of 10-30m, then flew back west.

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4a	12.06.19	13.20	6	20	0	Commuting	Pasture	Male Hen Harrier flying at a height of 15m AGL over pasture/treelines.
4b	12.06.19	13.22	6	120	0	Foraging	Conifer Plantation, Scrub	Male Hen Harrier hunting at a height of 3-10m AGL. Same individual as 4a.
4c	12.06.19	13.27	6	70	0	Commuting	Conifer Plantation	Male Hen Harrier commuting flight across spruce forestry, then dropped behind it, c. 15m AGL.

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B	27.03.19	12.16	RG TR1	10	0	Resting/Flying	Heath/Bog	Male Hen Harrier flushed up from heather during transect. Flew over heather for 10 seconds.
C	27.05.19	08.28	PC1	5	0	Flying	Conifer Plantation	Male Hen Harrier flying over young conifer plantation at a height of 5m AGL.

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2	18.03.20	11.26	1	50	0	Foraging	Young Forestry, Scrub, Rush, Grassland	Male Hen Harrier rose out of scrub/new forestry south of VP1, foraged over new forestry and rushy grassland, zig zagging over habitat as it hunted, then flew south towards VP3 over mature forestry, flying low at all times
3	20.03.20	11.36	8	240	0	Foraging	Conifer Plantation, Improved Grassland	Male flying low over spruce forest, then hunting over rushy pasture before circling upwards to 40m height.
4	27.04.20	09.23	6	0	60	Carrying prey	Grassland	Male Hen Harrier carrying prey and flying over grassland at a height of 50-120m above ground level.
5	10.06.20	10.05	4	20	0	Flying	Heath/Bog	Male Hen Harrier flying west at a height of 5-25m.
6	10.06.20	10.49	1	68	0	Flying	Forestry	Adult Male Hen Harrier circling over Forestry at a height of 10-30m.
7a	12.06.20	08.40	5	8	0	Flying	Bog, Rough Grassland	Ringtail Hen Harrier flew east past ridge at VP5 at a height of 10-30m, then flew back west.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
7b	12.06.20	08.42	5	10	0	Flying	Bog, Rough Grassland	Ringtail Hen Harrier flying east at a height of 10-30m.
8	16.07.20	12.02	8	5	0	Flying		Brief view of probable male Hen Harrier flying at a height of 5-25m.
9	26.08.20	13.25	8	45	0	Foraging	Heath/Bog	Ringtail Hen Harrier hunting over bog at a height of <20m.
10	26.08.20	13.44	3	5	0	Foraging	Forestry	Ringtail Hen Harrier flying along the edge of forestry at a height of <5m.
11	26.08.20	13.56	8	22	0	Foraging	Heath/Bog	Ringtail Hen Harrier hunting over bog at a height of <20m.
12	26.08.20	14.02	2	65	0	Circling	Heath/Bog	Ringtail Hen Harrier circling at a height of 15-50m, flew towards VP8 where it started hunting at a height of 1-2m.
13	26.08.20	14.08	2 & 5	99	0	Foraging	MF/HB	Ringtail Hen Harrier hunting between VP8 and VP2 flying low 1-2m height.

Observation	Date	Time	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
7b	12.06.20	08.42	5	10	0	Flying	Bog, Rough Grassland	Ringtail Hen Harrier flying east at a height of 10-30m.
8	16.07.20	12.02	8	5	0	Flying		Brief view of probable male Hen Harrier flying at a height of 5-25m.
9	26.08.20	13.25	8	45	0	Foraging	Heath/Bog	Ringtail Hen Harrier hunting over bog at a height of <20m.
10	26.08.20	13.44	3	5	0	Foraging	Forestry	Ringtail Hen Harrier flying along the edge of forestry at a height of <5m.
11	26.08.20	13.56	8	22	0	Foraging	Heath/Bog	Ringtail Hen Harrier hunting over bog at a height of <20m.
12	26.08.20	14.02	2	65	0	Circling	Heath/Bog	Ringtail Hen Harrier circling at a height of 15-50m, flew towards VP8 where it started hunting at a height of 1-2m.
13	26.08.20	14.08	2 & 5	99	0	Foraging	MF/HB	Ringtail Hen Harrier hunting between VP8 and VP2 flying low 1-2m height.

Golden Plover Observations

Golden Plover Observations, Breeding Season 2018

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
11.04.18	09.55 - 09.56	1	4	75	0	Flying	Bog	Flock of 22 Golden Plover flying low above bog (<5m AGL initially) away from VP4 observer, rose in height to >100m AGL. Considered likely that they were disturbed from roost.
11.04.18	09.56 - 10.46	2	3	0	3,000	Flying, Resting on Bog	Bog	Flock of 22 Golden Plover just off site, heard calling at first. Likely to be the flock from observation no. 1 above. Wide movements and different flight formations. Flight height varying from 5-150m AGL. Landed on bog out of sight at 10.01am. Flew up again at 10.46 and flew quickly downhill to the southeast at 20m AGL

Golden Plover Observations, Summer Season 2019 Survey.

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
28.03.19	10.23	1	6	0	45	Flying	Heath/bog/scrub & improved grassland	Flock of 18 Golden Plover flying over heath/bog/scrub/improved grassland at a height of 150-170m above ground level (AGL).
28.03.19	13.00	2	4	30	0	Flying	Rough Grassland, Improved Grassland	Flock of 10 Golden Plover flying at a height of 5-25m AGL.
29.03.19	11.00	3	7	600	0	On ground	Heath/Bog	Flock of 25 Golden Plover on the ground
29.03.19	11.05	4	7	300	0	On ground	Heath/Bog	Flock of 3 Golden Plover on the ground
17.04.19	11.31	5	2	3	0	Flying	Heath/Bog	Flock of 15 Golden Plover flying over heath/bog at a height of 80-100m AGL.
17.04.19	13.37	6	2	20	0	Flying	Heath/Bog	Flock of 15 Golden Plover flying over heath/bog at a height of 80-100m AGL.

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Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
18.03.20	8.58	1	4	120	0	Flying		Flock of 40 GP flying at a height of 25-100m.
18.03.20	9.10	2	4	20	0	Flying		Flock of 30 GP flying at a height of 5-25m.
18.03.20	9.29	3	2	45	0	Flying		Flock of 10 GP flew southeast at a height of 80m. Dipped below ridge out of sight.
18.03.20	9.50 - 12.08	4	4	8,280	0	Roosting, Flying		Flock of 54 GP roosting in front of VP4 for a few hours. Some feeding, mostly roosting. Flew off to north at 12.08 at a height of 5-25m.
18.03.20	9.55	5	7	60	0	Flying	Heath/Bog	8 GP flying over bog at a height of <50m.
18.03.20	11.25	6	7	180	60	Flying	Heath/Bog	7 GP flying over bog at a height of 50-150m.
18.03.20	11.48	7	4	10	20	Flying		Flock of at least 200 GP flying - distant observation.
18.03.20	12.40	8	1	4	0	Flying	Forestry	Flock of 20 GP. Very brief appearance before disappearing into cloud. Flying south of VP7 in a southerly direction towards VP4.
18.03.20	12.49	9	7	170	20	Flying	Heath/Bog	Flock of 40 GP flying over bog at a height of 25-200m.

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18.03.20	12.54	10	2	30	0	Flying		Flock of 40 GP flying at a height of over 200m.
18.03.20	13.15	11	4	0	120	Flying		Flock of c. 100 GP flying at a height of 25-100m.
18.03.20	14.55	12	1	40	0	Flying	Forestry, Agricultural land, Bog	Flock of 150 GP flying high in four distinct groups which split and merged as they flew. Flew from VP2 over centre of the site in a southerly direction then flew in a south westerly direction before disappearing out of view
18.03.20	15.07	13	1	60	0	Flying	Forestry	Flock of 38 GP flew from the west between VP1 and VP7, flying high, turning and flying in a south/south easterly direction before disappearing out of view.
18.03.20	13.50	14	2	55	0	Flying		Flock of 30 GP flying south/southeast, then circled east of VP1 and then headed east/northeast out of sight.
20.03.20	12.25	15	6	0	60	Flying	Pasture	Flock of 29 GP flying over grassland at a height of 25-100m.

Peregrine Falcon Observations

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16.06.17	13.06	1	6	0	30	Foraging	Heath and Improved agricultural grassland	Peregrine Falcon hunting over improved agricultural grassland and heath, well off site. Flight height of 5-25m above ground level. Lost from sight over hill to north.
12.07.17	14.10 - 14.12	2	5	150	0	Foraging	Conifer Plantation and Improved agricultural grassland	Peregrine Falcon came into view from the east, hunting high and lazily over conifer plantation. Veered southwest, still hunting over improved grassland and eventually veered off to the southeast. Flight height 25-100m above ground level.
23.08.17	14.52	3	2	22	0	Circling/Flying	Agricultural Grassland	Peregrine Falcon seen circling over fields before flying quickly down the valley. Seen again for two seconds 2 mins later circling over fields.

Peregrine Falcon Observations, Breeding Season 2018

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
08.06.18	14.55 - 15.10	1	1	0	900	Soaring	Rough Grassland, Conifer Plantation	Peregrine Falcon flying to the northeast of VP1. Flight height low at first (20m AGL), mobbed by Swallows. Then circled upwards soaring at 25-100m AGL and finally >100m AGL.

Peregrine Falcon Observations, Summer Season 2019 Survey.

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
13.05.19	09.59	1	3	0	94	Flying	Heath/Bog	Peregrine Falcon flying north to south from Musheramore western flank over heath/bog. Dropped behind hill out of view. Flying at a height of 40-50m AGL.
21.08.19	10.38	2	1	40	0	Flying	Pasture, Conifer Plantation	Adult Peregrine Falcon flying at a height of 10-20m AGL over pasture. Then skimmed across spruce forest.

Peregrine Falcon Observations, Summer Season 2020 Survey

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
12.06.20	12.51	1	5	6	4	Flying	Bog and Improved Grassland	Peregrine Falcon flew east past VP5 at a height of 20-30m.

Merlin Observations

Merlin Observations, Breeding Season 2019

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
16.03.18	9.17	1	6	0	28	Perched, Flying	Rough Grassland	Female/immature Merlin perched on Hawthorn for 20 secs, then flew over rough grassland at a height of 20-30m for 8 secs.

Merlin Observations, Breeding Season 2020

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
26.08.20	12.08	1	3	15	0		heath/bog	Merlin flying and interacting with Hooded Crow at a height of 5-25m.

Marsh Harrier Observations

Marsh Harrier Observations, Breeding Season 2019.

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
13.05.19	11.55	1	8	120	0	Flying	Heath/Bog	Female Marsh Harrier chased by Hooded Crow. Flying at a height of 5-25m AGL for one minute and 25-100m AGL for one minute.

White-tailed Sea Eagle Observations

White-tailed Sea Eagle Observations, Breeding Season 2020.

Date	Time	Observation No.	VP	On Site Observation Time (secs)	Off Site Observation Time (secs)	Activity	Habitat	Details
20.03.20	11.17 - 11.26	1	9	420	120	Flying	Heath/Bog & Forestry	Juvenile White-tailed Sea Eagle flew from the east over forestry to the east of VP9, being mobbed by crow, flew in a west/northwesterly direction over bog near VP9, circled over forestry north west of VP9 before turning south and flying over the centre of the site in a south westerly direction circling and flying, circling over the peak of Musheramore, then flying off to the west/south west out of sight. Red tag on eagle's wing, numbers not decipherable, appeared to be juvenile as no distinct white tail apparent. Flight height 40-250m.

Figure 1 Summer 2017 Hen Harrier

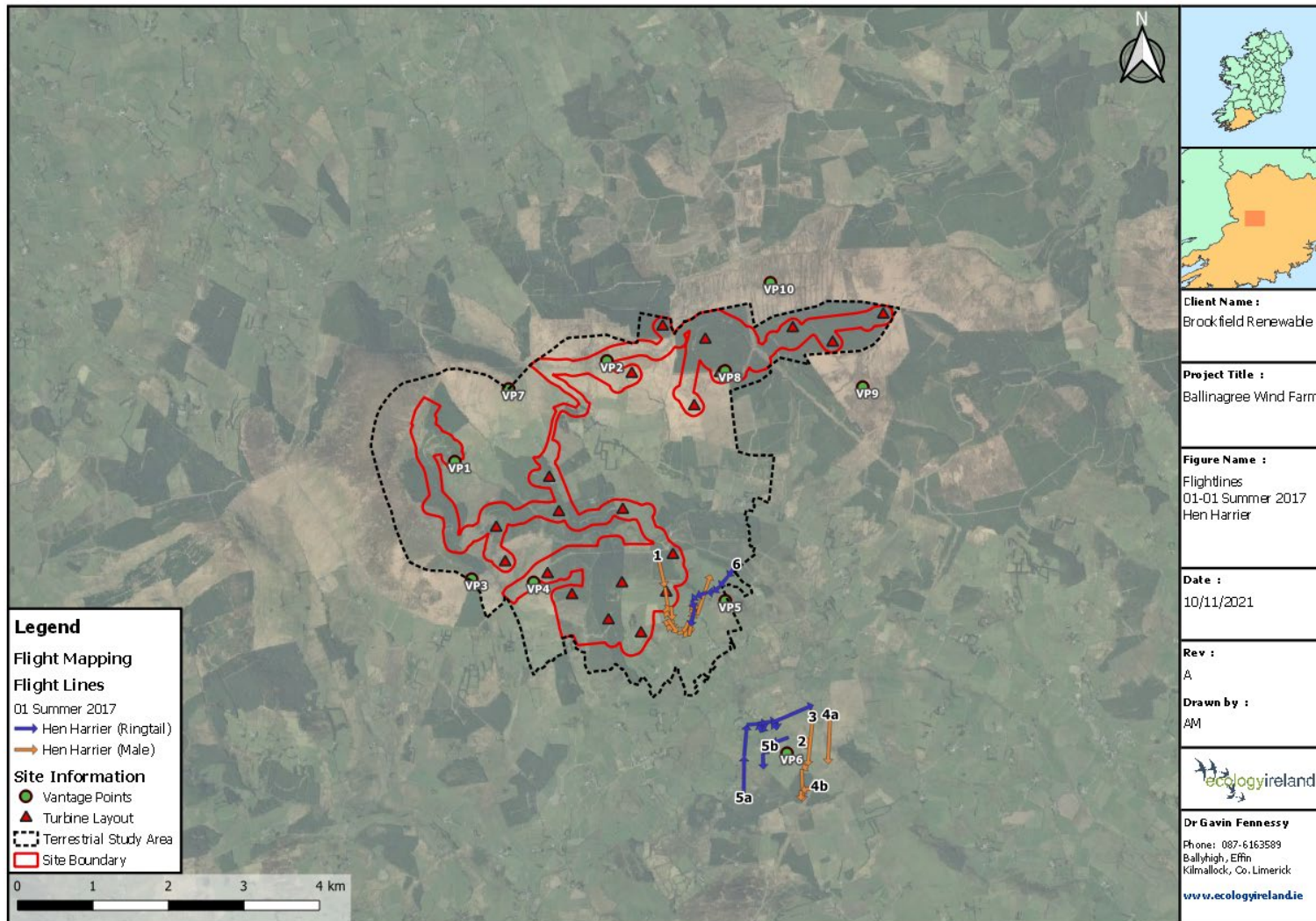


Figure 2 Summer 2017 Peregrine

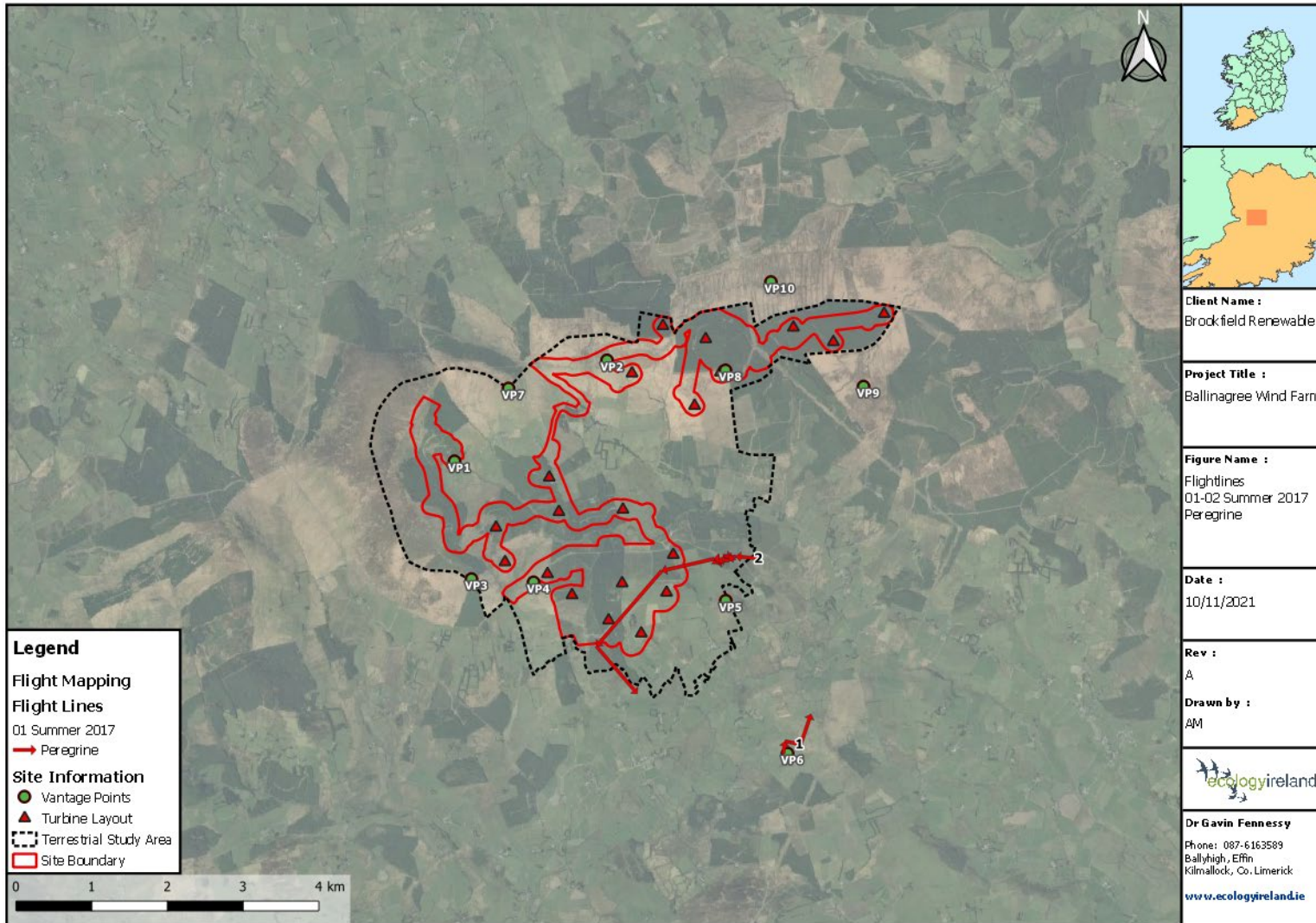


Figure 3 Summer 2018 Golden Plover

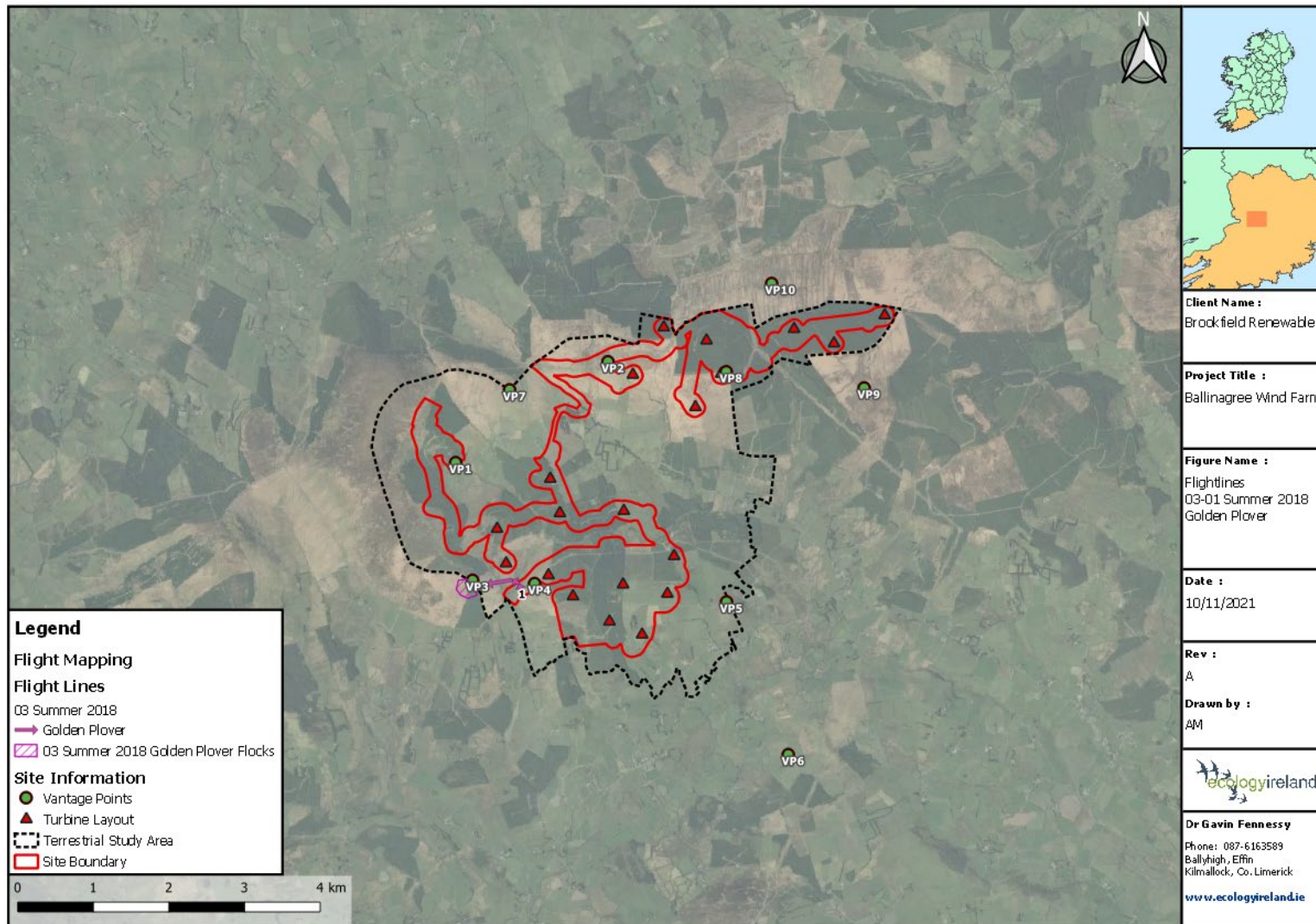


Figure 4 Summer 2018 Hen Harrier

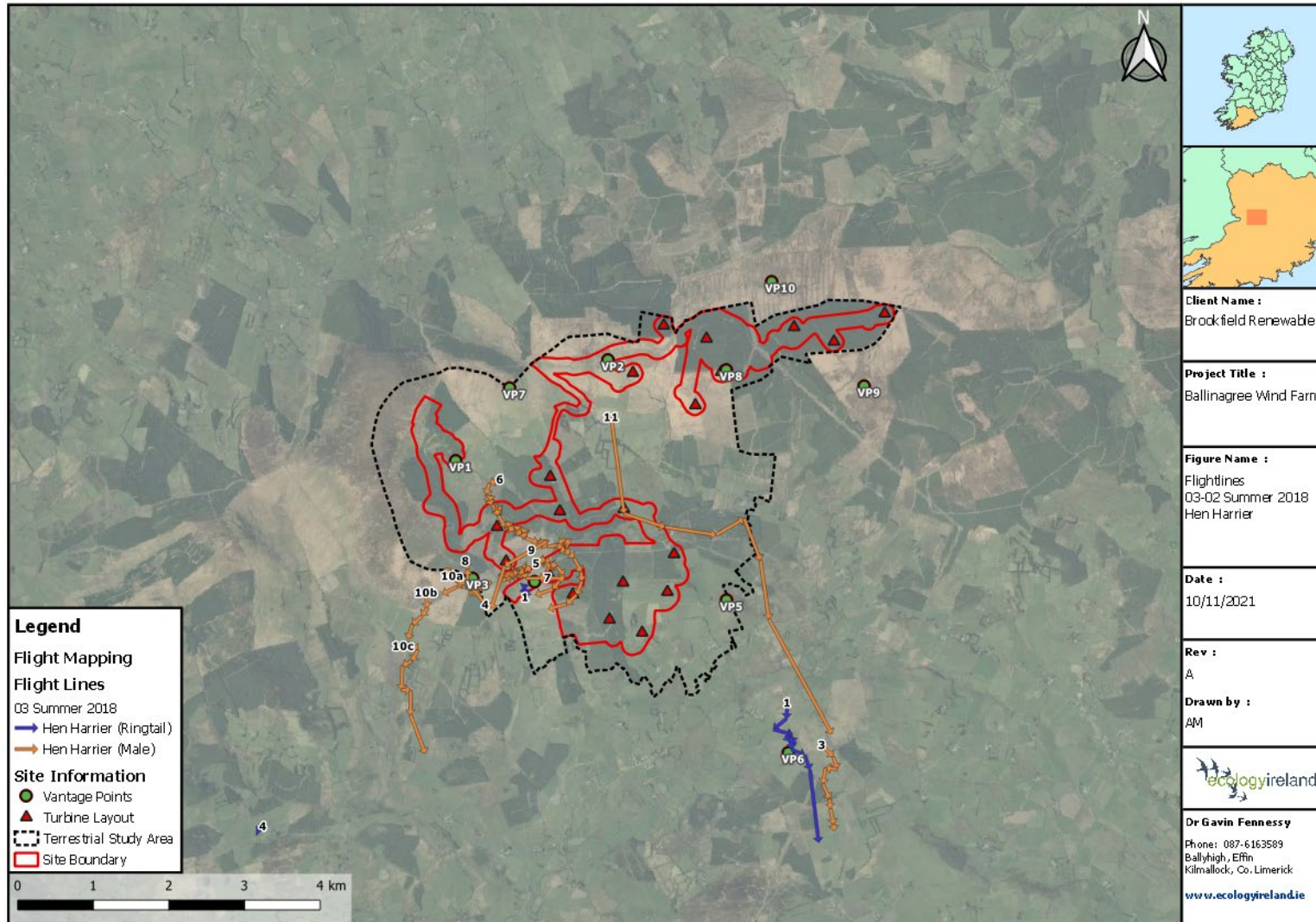


Figure 5 Summer 2018 Peregrine

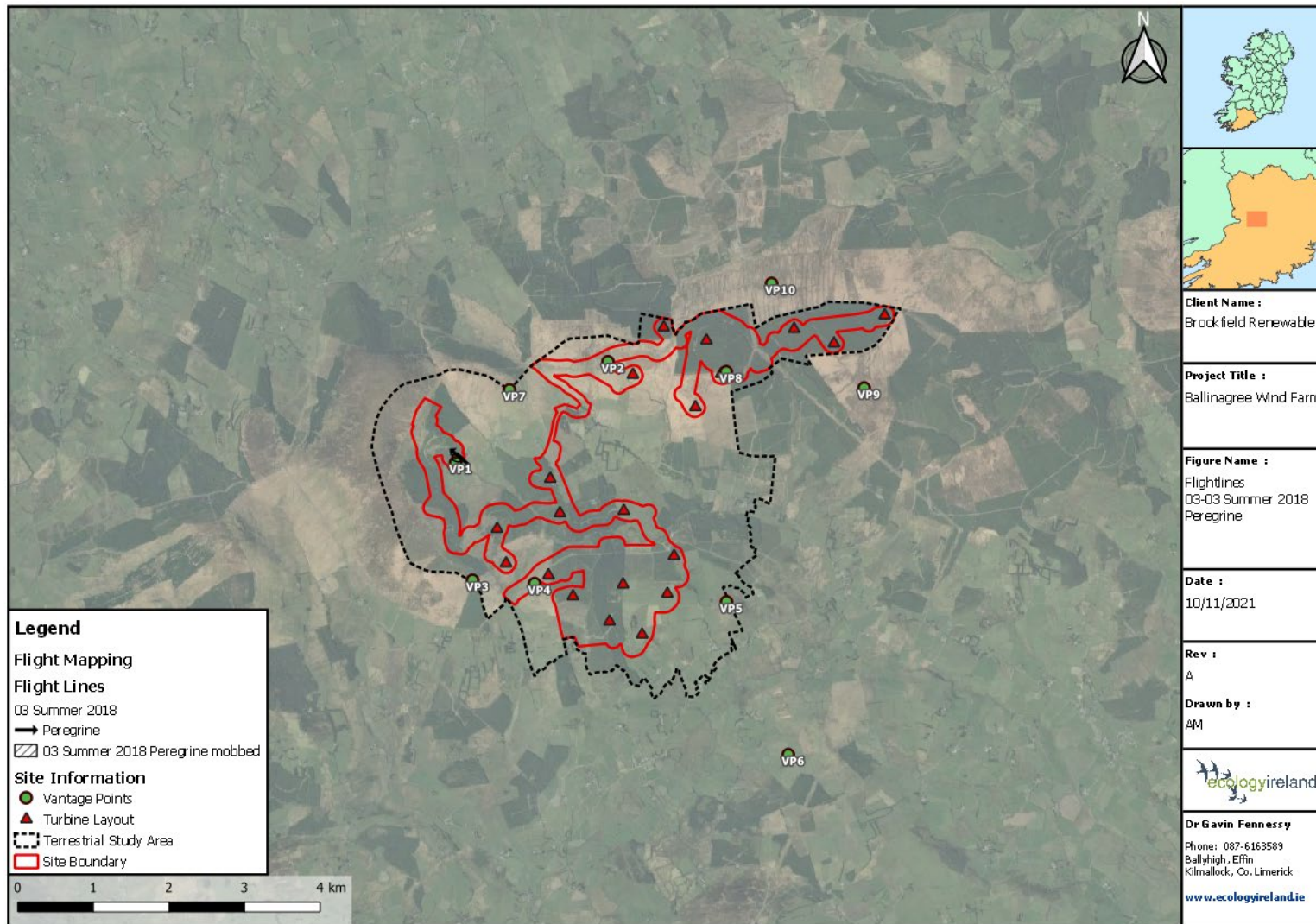


Figure 6 Summer 2018 Kestrel

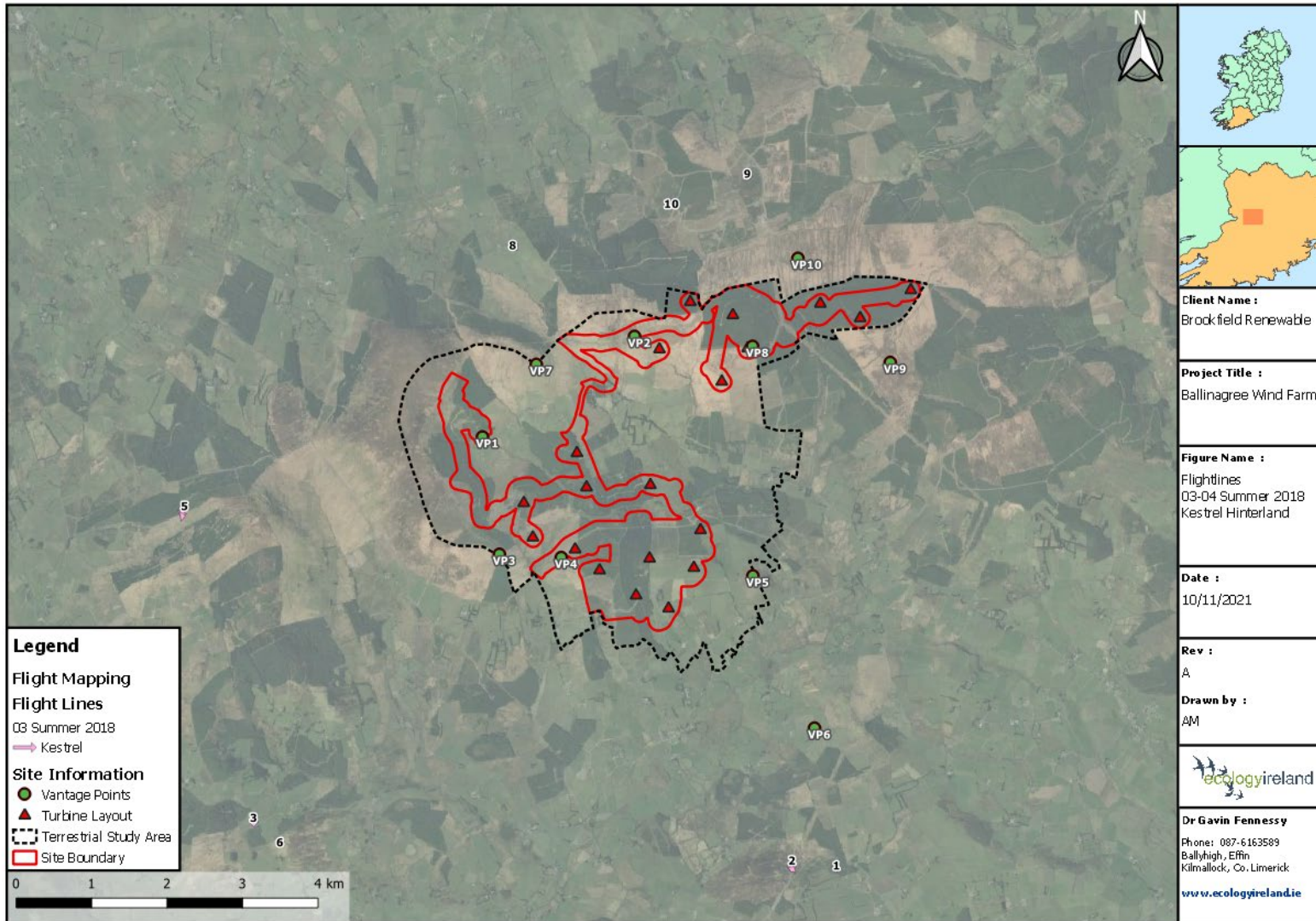


Figure 7 Summer 2019 Golden Plover

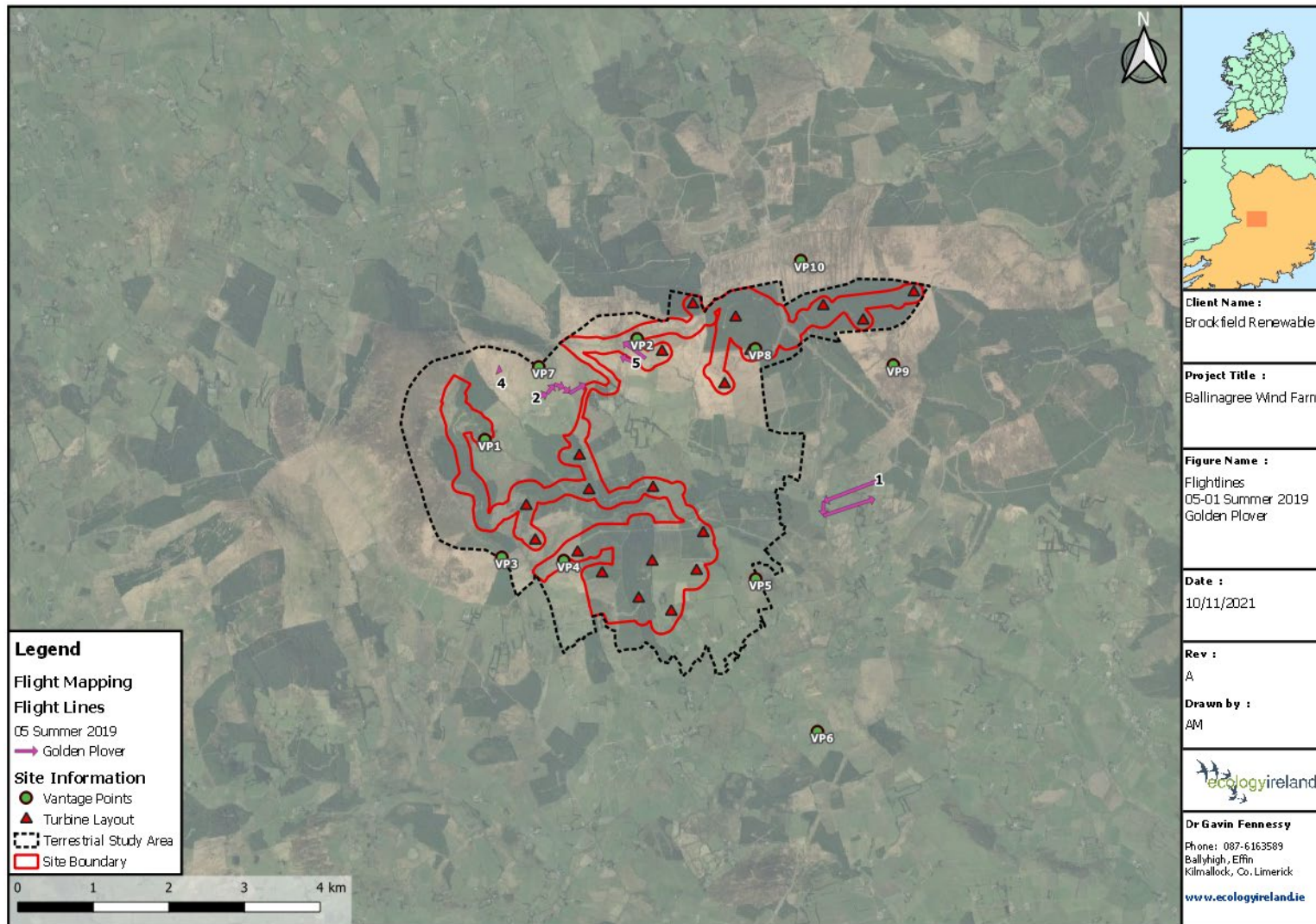


Figure 8 Summer 2019 Hen Harrier

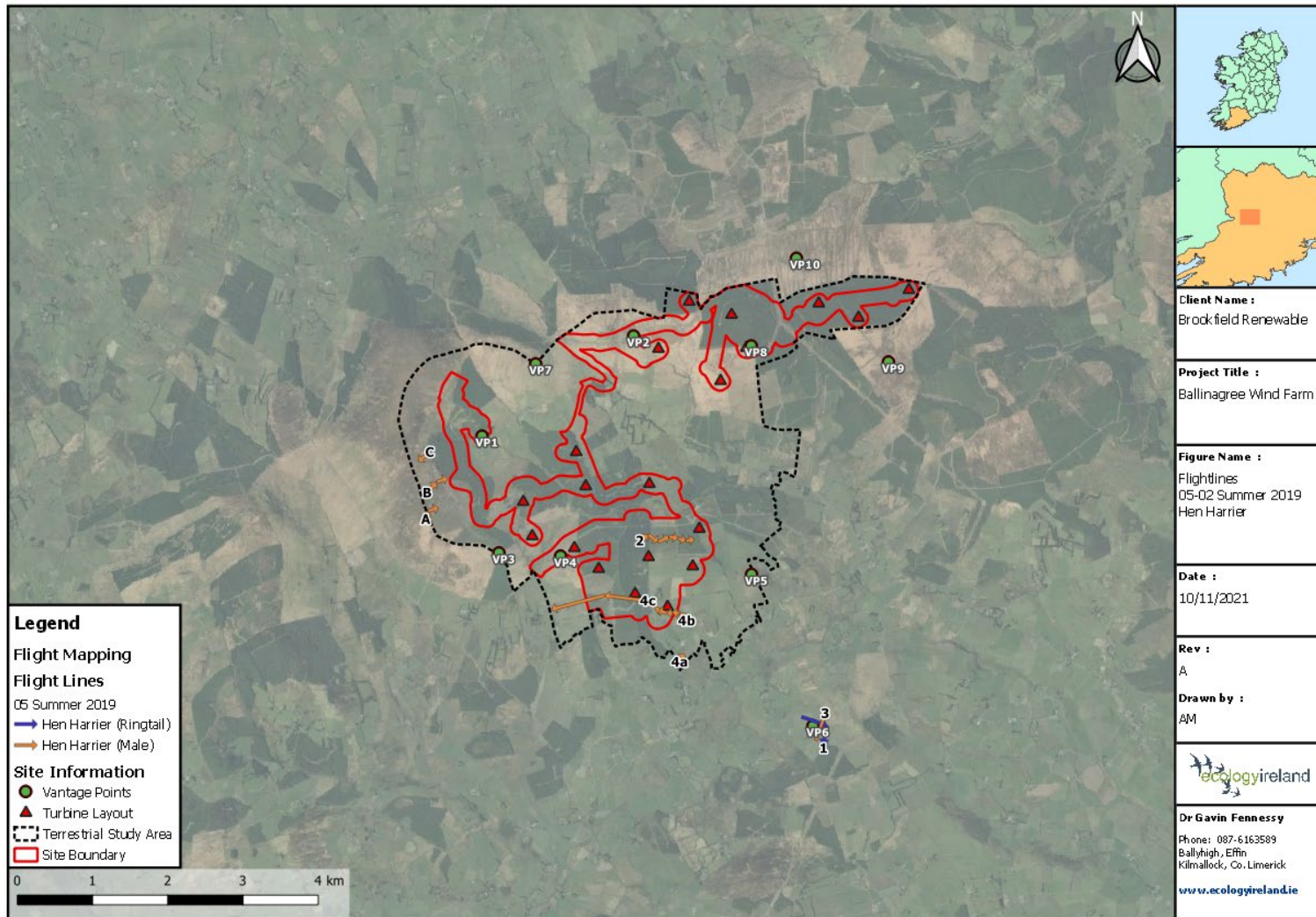


Figure 9 Summer 2019 Peregrine

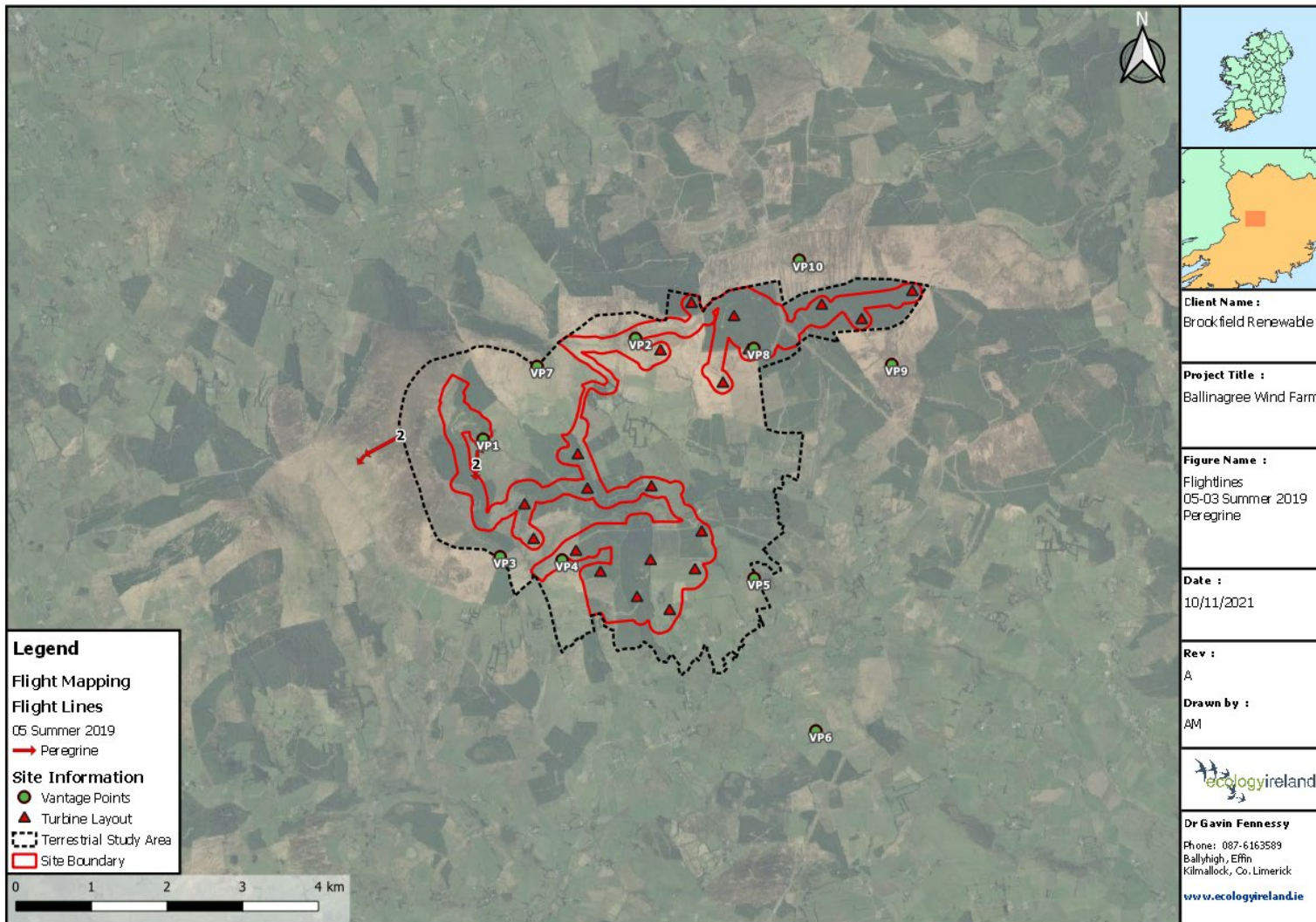


Figure 10 Summer 2019 Marsh Harrier

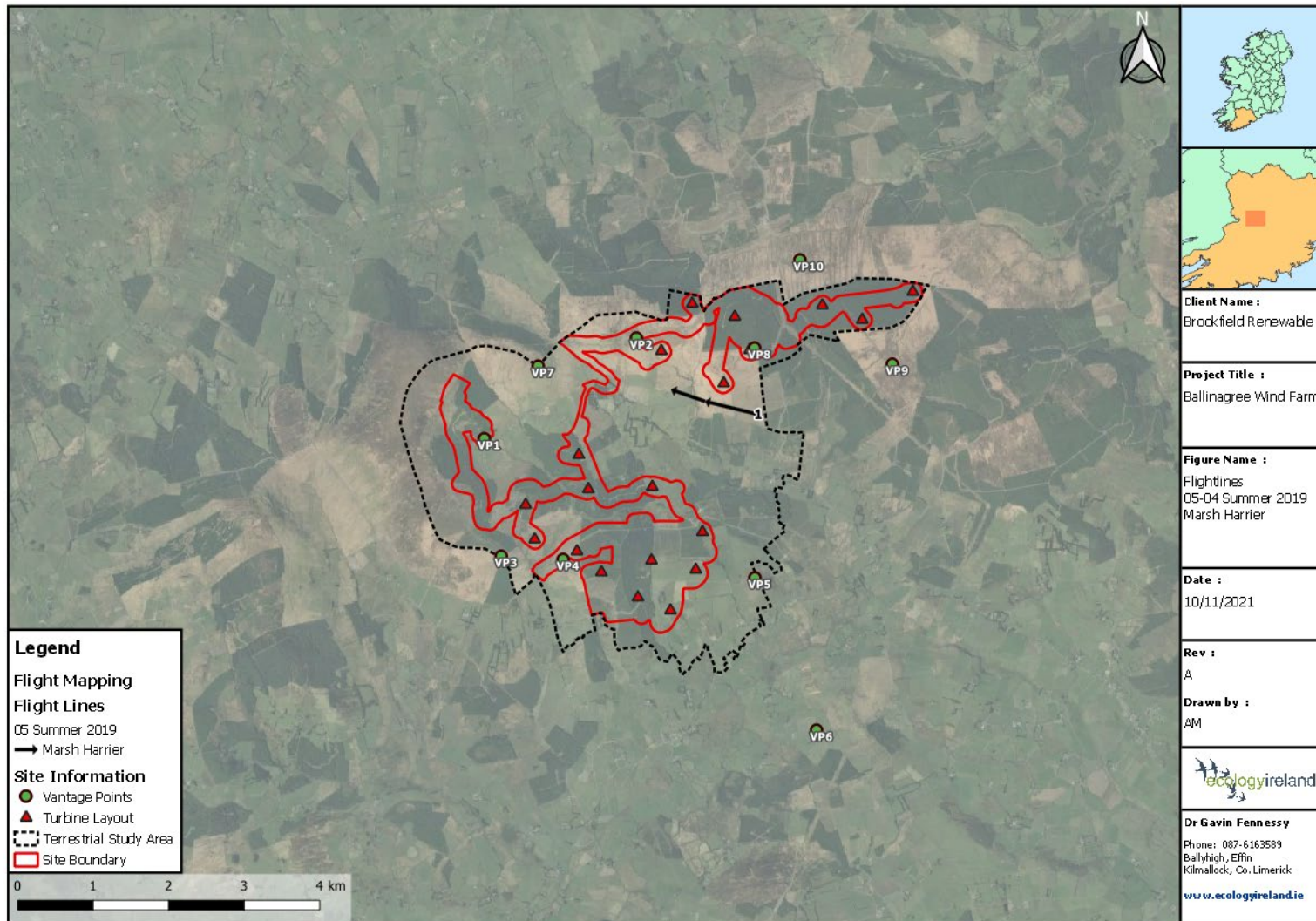


Figure 11 Summer 2019 Red Grouse

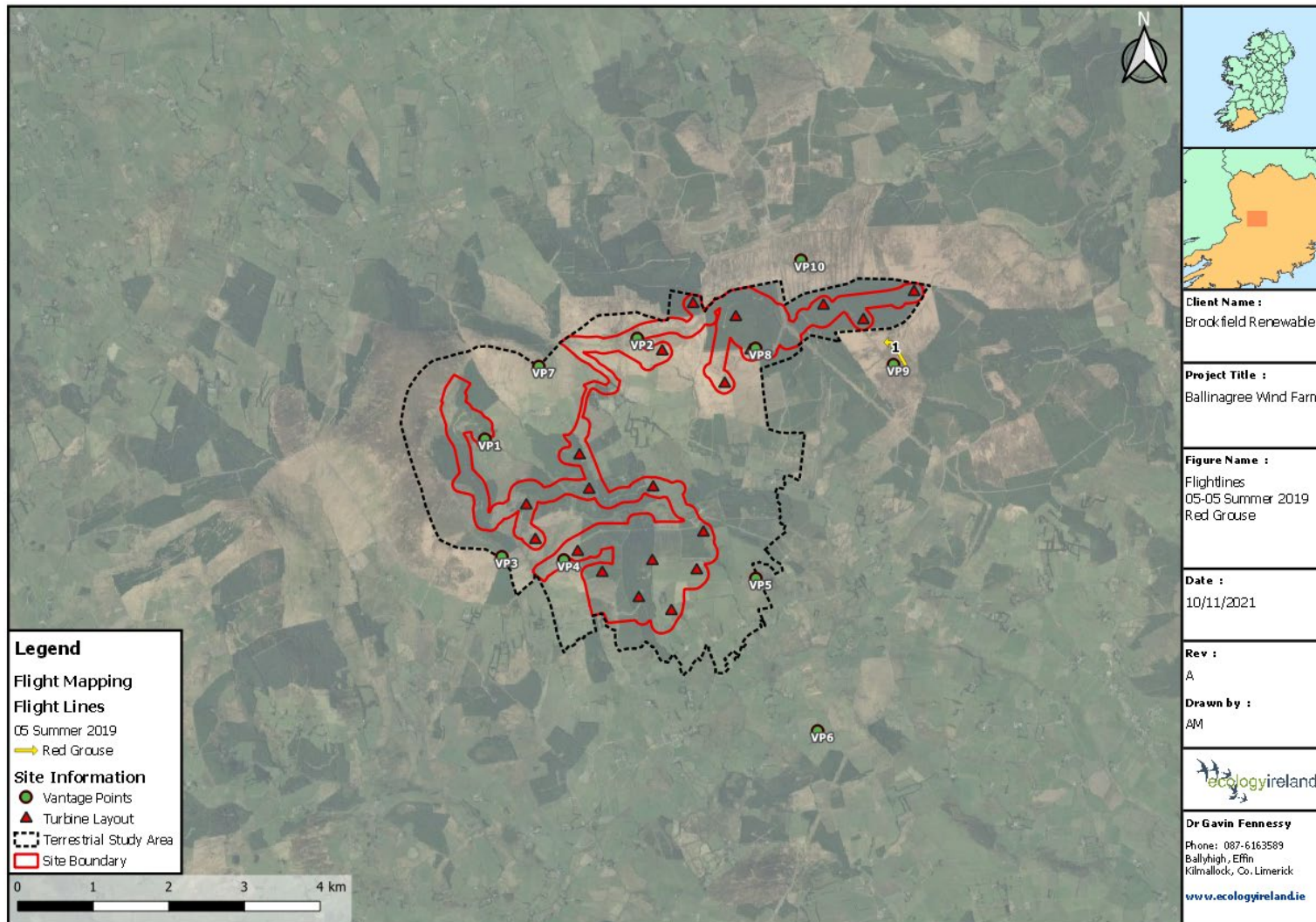


Figure 12 Summer 2020 Hen Harrier

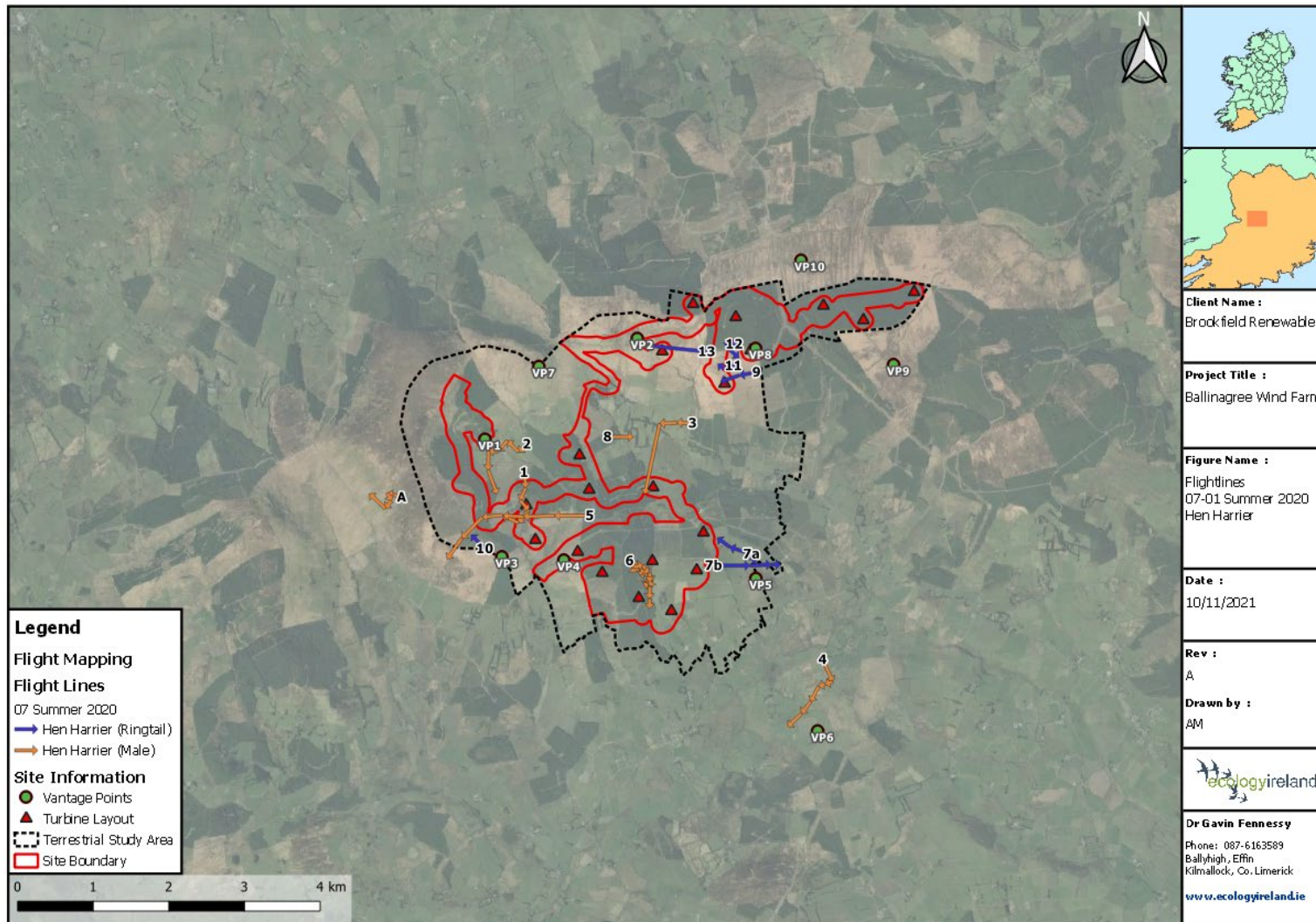


Figure 13 Summer 2020 Peregrine

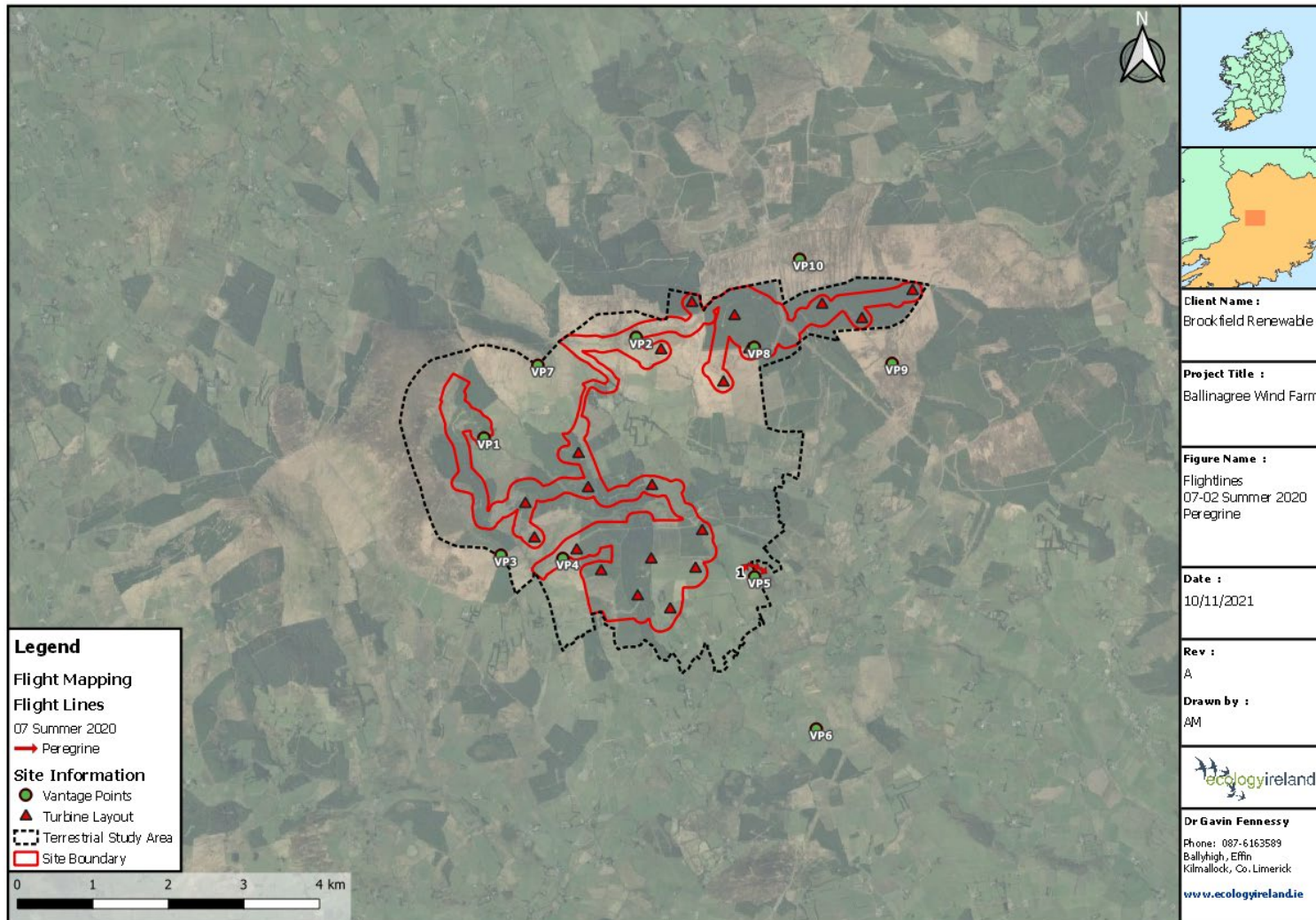


Figure 14 Summer 2020 Merlin

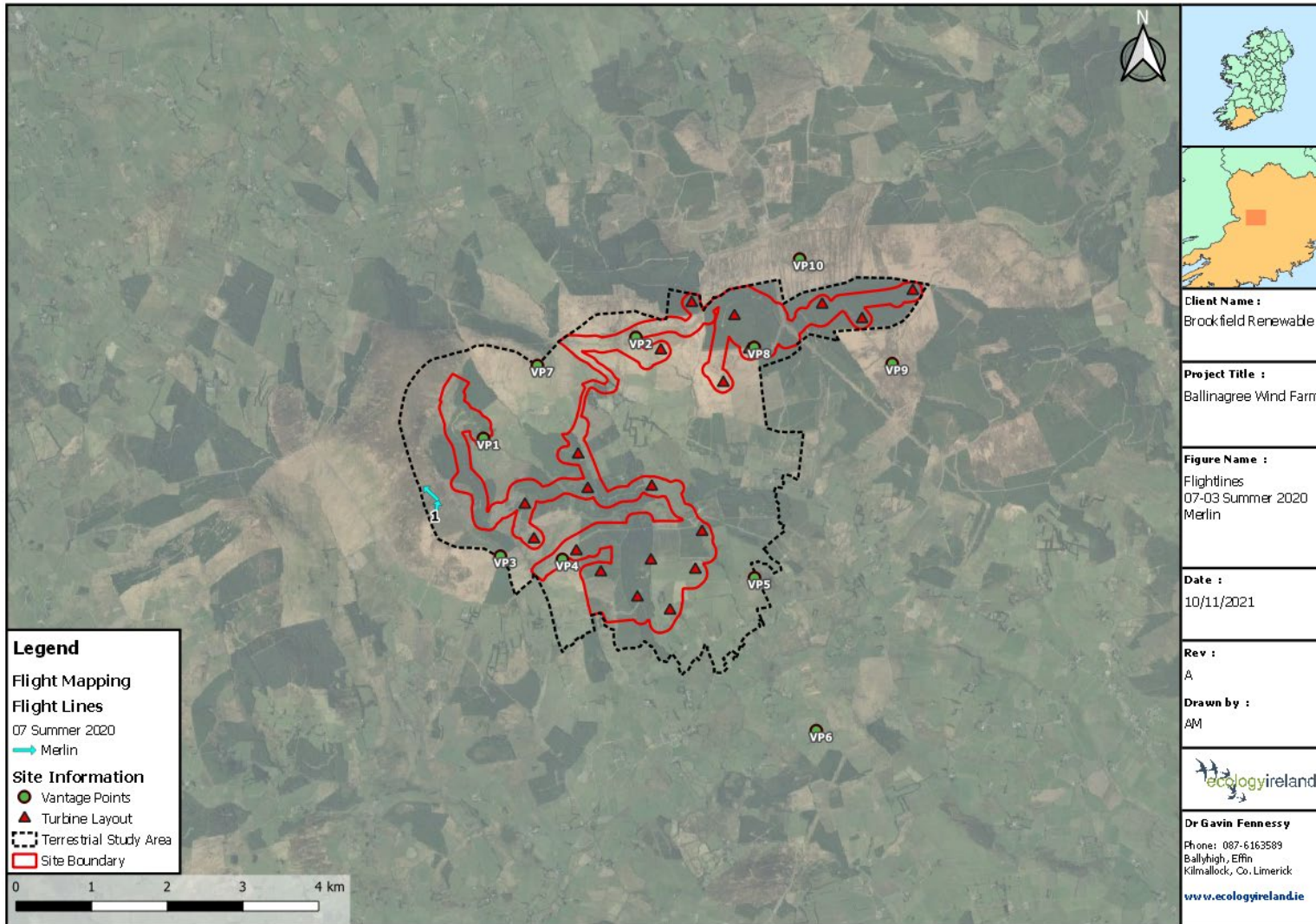


Figure 15 Summer 2020 White Tailed Sea Eagle

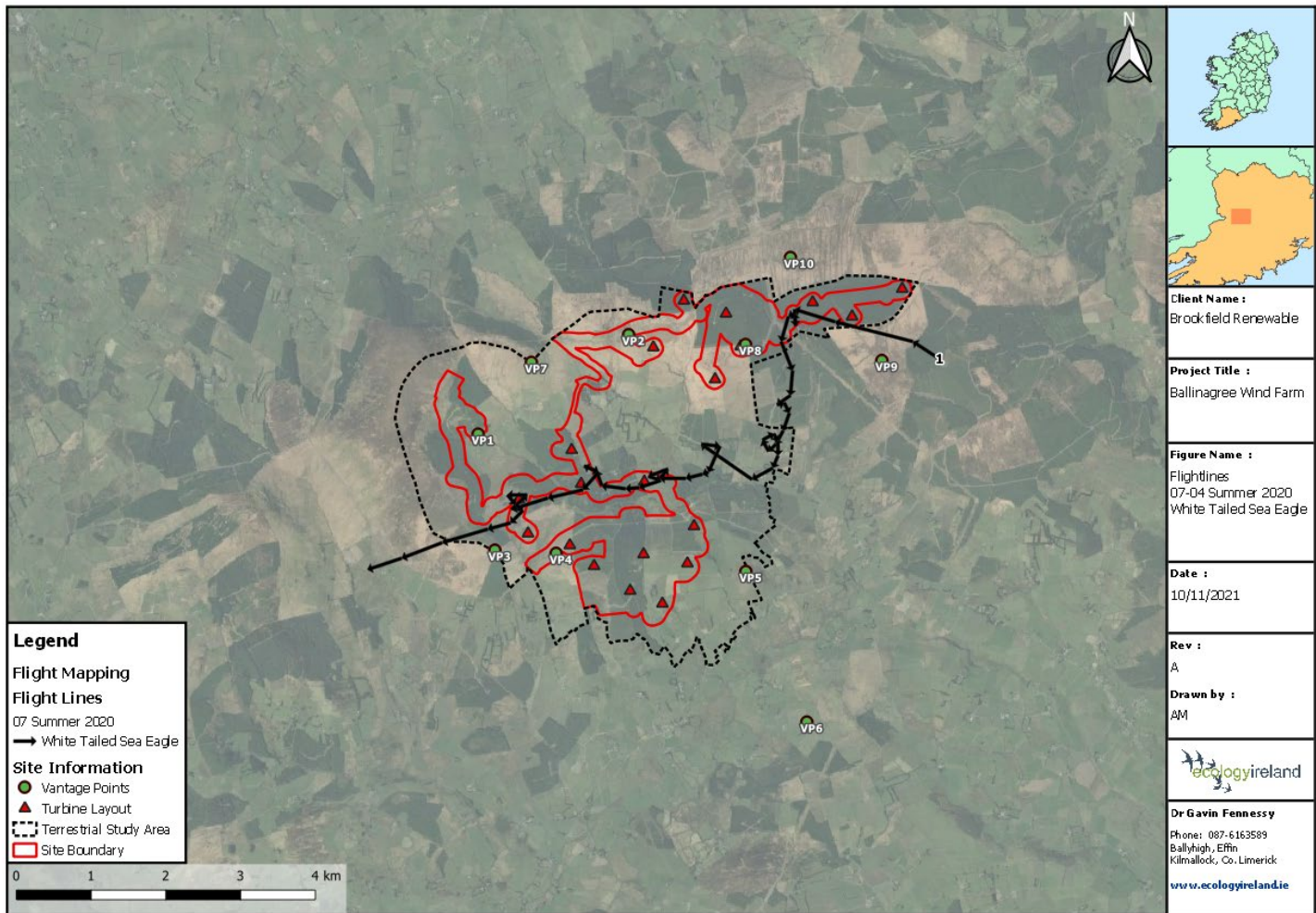


Figure 16 Summer 2020 Red Grouse

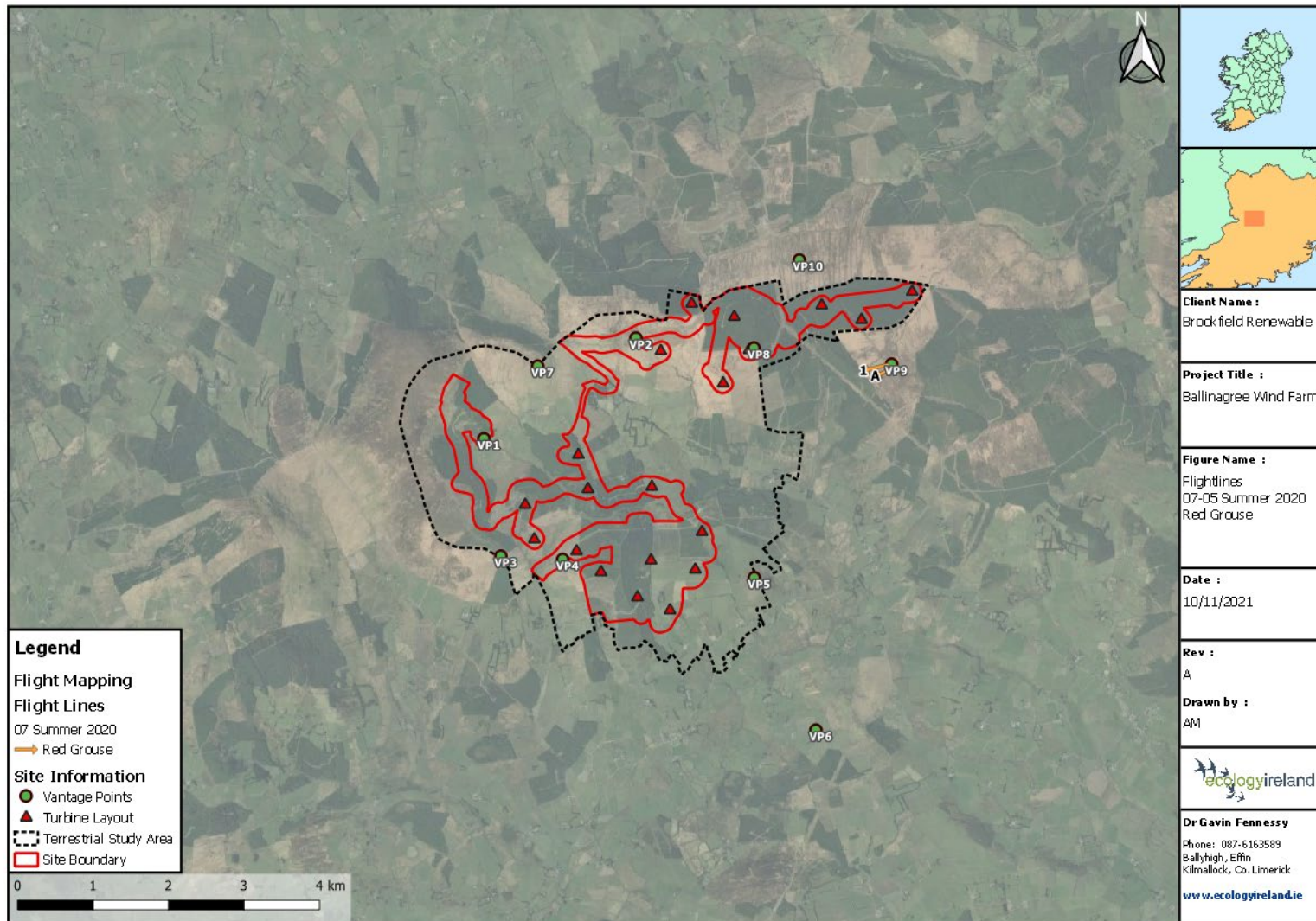


Figure 17 Summer 2020 Golden Plover

