



APPENDIX 7-4

**SURVEY DATA & FIGURES (I.E.
FLIGHTLINE MAPS)**

Table of Contents

- 1. WHOOPER SWAN 6
- 2. GOLDEN PLOVER.....11
- 3. PEREGRINE FALCON15
- 4. LAPWING19
- 5. TUFTED DUCK.....28
- 6. BLACK-HEADED GULL30
- 7. LITTLE GREBE39
- 8. MALLARD.....41
- 9. TEAL.....51
- 10. SNIPE56
- 11. KESTREL.....65
- 12. BUZZARD.....78
- 13. SPARROWHAWK.....103

TABLE OF TABLES

<i>Table 7 - 4 - 1 Whooper Swan Vantage Point Survey</i>	6
<i>Table 7 - 4 - 2 Whooper Swan Winter Walkover Survey</i>	7
<i>Table 7 - 4 - 3 Whooper Swan Waterbird Distribution Survey</i>	7
<i>Table 7 - 4 - 4 Golden Plover Vantage Point Survey</i>	11
<i>Table 7 - 4 - 5 Golden Plover Winter Walkover Survey</i>	12
<i>Table 7 - 4 - 6 Peregrine Vantage Point Survey</i>	15
<i>Table 7 - 4 - 7 Peregrine Winter Walkover Survey</i>	16
<i>Table 7 - 4 - 8 Lapwing Vantage Point Survey</i>	19
<i>Table 7 - 4 - 9 Lapwing Winter Walkover Survey</i>	21
<i>Table 7 - 4 - 10 Lapwing Breeding Walkover Survey</i>	21
<i>Table 7 - 4 - 11 Lapwing Waterbird Distribution Survey</i>	21
<i>Table 7 - 4 - 12 Lapwing Incidental Records</i>	22
<i>Table 7 - 4 - 13 Tufted Duck Waterbird Distribution Surveys</i>	28
<i>Table 7 - 4 - 14 Black-headed Gull Vantage Point Survey</i>	30
<i>Table 7 - 4 - 15 Black-headed Gull Breeding Walkover Survey</i>	32
<i>Table 7 - 4 - 16 Black-headed Gull Waterbird Distribution Survey</i>	32
<i>Table 7 - 4 - 17 Black-headed Gull Incidental Records</i>	32
<i>Table 7 - 4 - 18 Black-headed Gull Supplementary Data</i>	33
<i>Table 7 - 4 - 19 Little Grebe Waterbird Distribution Surveys</i>	39
<i>Table 7 - 4 - 20 Mallard Vantage Point Survey</i>	41
<i>Table 7 - 4 - 21 Mallard Vantage Point Survey (non-flights)</i>	42
<i>Table 7 - 4 - 22 Mallard Winter Walkover Survey</i>	43
<i>Table 7 - 4 - 23 Mallard Breeding Walkover Survey</i>	43
<i>Table 7 - 4 - 24 Mallard Waterbird Distribution Survey</i>	43
<i>Table 7 - 4 - 25 Mallard Incidental Records</i>	45
<i>Table 7 - 4 - 26 Teal Vantage Point Survey</i>	51
<i>Table 7 - 4 - 27 Teal Winter Walkover Survey</i>	51
<i>Table 7 - 4 - 28 Teal Waterbird Distribution Survey</i>	52
<i>Table 7 - 4 - 29 Snipe Vantage Point Survey</i>	56
<i>Table 7 - 4 - 30 Snipe Winter Walkover Survey</i>	57
<i>Table 7 - 4 - 31 Snipe Waterbird Distribution Survey</i>	58
<i>Table 7 - 4 - 32 Snipe Incidental Records</i>	60
<i>Table 7 - 4 - 33 Kestrel Vantage Point Survey</i>	65
<i>Table 7 - 4 - 34 Kestrel Winter Walkover Survey</i>	70
<i>Table 7 - 4 - 35 Kestrel Breeding Raptor Survey</i>	70
<i>Table 7 - 4 - 36 Kestrel Incidental Records</i>	71
<i>Table 7 - 4 - 37 Kestrel Supplementary Data</i>	71
<i>Table 7 - 4 - 38 Buzzard Vantage Point Survey (flights)</i>	78
<i>Table 7 - 4 - 39 Buzzard Vantage Point Survey (non-flight)</i>	87
<i>Table 7 - 4 - 40 Buzzard Winter Walkover Survey</i>	88



<i>Table 7 - 4 - 41 Buzzard Breeding Walkover Survey.....</i>	<i>89</i>
<i>Table 7 - 4 - 42 Buzzard Breeding Raptor Survey.....</i>	<i>90</i>
<i>Table 7 - 4 - 43 Buzzard Incidental Records.....</i>	<i>93</i>
<i>Table 7 - 4 - 44 Buzzard Supplementary Data.....</i>	<i>93</i>
<i>Table 7 - 4 - 45 Sparrowhawk Vantage Point Survey.....</i>	<i>103</i>
<i>Table 7 - 4 - 46 Sparrowhawk Winter Walkover Survey.....</i>	<i>104</i>
<i>Table 7 - 4 - 47 Sparrowhawk Breeding Raptor Survey.....</i>	<i>105</i>
<i>Table 7 - 4 - 48 Sparrowhawk Incidental Records.....</i>	<i>105</i>
<i>Table 7 - 4 - 49 Sparrowhawk Supplementary Data.....</i>	<i>106</i>

TABLE OF FIGURES

<i>Figure 7 - 4 - 1 Whooper Swan Vantage Point Survey.....</i>	<i>8</i>
<i>Figure 7 - 4 - 2 Whooper Swan Winter Walkover Survey.....</i>	<i>9</i>
<i>Figure 7 - 4 - 3 Whooper Swan Waterbird Distribution Survey.....</i>	<i>10</i>
<i>Figure 7 - 4 - 4 Golden Plover Vantage Point Survey.....</i>	<i>13</i>
<i>Figure 7 - 4 - 5 Golden Plover Winter Walkover Survey.....</i>	<i>14</i>
<i>Figure 7 - 4 - 6 Peregrine Falcon Vantage Point Survey.....</i>	<i>17</i>
<i>Figure 7 - 4 - 7 Peregrine Falcon Winter Walkover Survey.....</i>	<i>18</i>
<i>Figure 7 - 4 - 8 Lapwing Vantage Point Survey.....</i>	<i>23</i>
<i>Figure 7 - 4 - 9 Lapwing Winter Walkover Survey.....</i>	<i>24</i>
<i>Figure 7 - 4 - 10 Lapwing Breeding Walkover Survey.....</i>	<i>25</i>
<i>Figure 7 - 4 - 11 Lapwing Waterbird Distribution Survey.....</i>	<i>26</i>
<i>Figure 7 - 4 - 12 Lapwing Incidental Records.....</i>	<i>27</i>
<i>Figure 7 - 4 - 13 Tufted Duck Waterbird Distribution Survey.....</i>	<i>29</i>
<i>Figure 7 - 4 - 14 Black-headed Gull Vantage Point Surveys.....</i>	<i>34</i>
<i>Figure 7 - 4 - 15 Black-headed Gull Vantage Point Breeding Walkover Surveys.....</i>	<i>35</i>
<i>Figure 7 - 4 - 16 Black-headed Gull Waterbird Distribution Surveys.....</i>	<i>36</i>
<i>Figure 7 - 4 - 17 Black-headed Gull Incidental Records.....</i>	<i>37</i>
<i>Figure 7 - 4 - 18 Black-headed Gull Supplementary Data.....</i>	<i>38</i>
<i>Figure 7 - 4 - 19 Little Grebe Waterbird Distribution Surveys.....</i>	<i>40</i>
<i>Figure 7 - 4 - 20 Mallard Vantage Point Survey.....</i>	<i>46</i>
<i>Figure 7 - 4 - 21 Mallard Winter Walkover Survey.....</i>	<i>47</i>
<i>Figure 7 - 4 - 22 Mallard Breeding Walkover Survey.....</i>	<i>48</i>
<i>Figure 7 - 4 - 23 Mallard Waterbird Distribution Survey.....</i>	<i>49</i>
<i>Figure 7 - 4 - 24 Mallard Incidental Records.....</i>	<i>50</i>
<i>Figure 7 - 4 - 25 Teal Vantage Point Survey.....</i>	<i>53</i>
<i>Figure 7 - 4 - 26 Teal Winter Walkover Survey.....</i>	<i>54</i>
<i>Figure 7 - 4 - 27 Teal Waterbird Distribution Survey.....</i>	<i>55</i>
<i>Figure 7 - 4 - 28 Snipe Vantage Point Survey.....</i>	<i>61</i>
<i>Figure 7 - 4 - 29 Snipe Winter Walkover Survey.....</i>	<i>62</i>
<i>Figure 7 - 4 - 30 Snipe Waterbird Distribution Survey.....</i>	<i>63</i>
<i>Figure 7 - 4 - 31 Snipe Incidental Records.....</i>	<i>64</i>
<i>Figure 7 - 4 - 32 Kestrel Vantage Point Survey.....</i>	<i>73</i>
<i>Figure 7 - 4 - 33 Kestrel Winter Walkover Survey.....</i>	<i>74</i>
<i>Figure 7 - 4 - 34 Kestrel Breeding Raptor Survey.....</i>	<i>75</i>
<i>Figure 7 - 4 - 35 Kestrel Incidental Records.....</i>	<i>76</i>
<i>Figure 7 - 4 - 36 Kestrel Supplementary Data.....</i>	<i>77</i>
<i>Figure 7 - 4 - 37 Buzzard Vantage Point Survey.....</i>	<i>97</i>
<i>Figure 7 - 4 - 38 Buzzard Winter Walkover Survey.....</i>	<i>98</i>
<i>Figure 7 - 4 - 39 Buzzard Breeding Walkover Survey.....</i>	<i>99</i>
<i>Figure 7 - 4 - 40 Buzzard Breeding Raptor Survey.....</i>	<i>100</i>



<i>Figure 7 - 4 - 41 Buzzard Incidental Records.....</i>	<i>101</i>
<i>Figure 7 - 4 - 42 Buzzard Supplementary Data.....</i>	<i>102</i>
<i>Figure 7 - 4 - 43 Sparrowhawk Vantage Point Survey.....</i>	<i>108</i>
<i>Figure 7 - 4 - 44 Sparrowhawk Winter Walkover Survey.....</i>	<i>109</i>
<i>Figure 7 - 4 - 45 Sparrowhawk Breeding Raptor Survey.....</i>	<i>110</i>
<i>Figure 7 - 4 - 46 Sparrowhawk Incidental Records.....</i>	<i>111</i>
<i>Figure 7 - 4 - 47 Sparrowhawk Supplementary Data.....</i>	<i>112</i>

1.

WHOOPER SWAN

Table 7-4-1 Whooper Swan Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	¹ Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
WS001	VP1	04/11/2020	08:15	Whooper Swan	5	35	35	0	0	0	improved agricultural grassland and hedgerows; travelled north to south across the viewshed past the vp.	PC
WS002	VP3	05/11/2020	08:50	Whooper Swan	2	48	0	0	48	0	improved agricultural grassland, hedgerows and conifer plantation; travelled north to south across the viewshed past the vp.	PC
WS003	VP3	05/11/2020	09:45	Whooper Swan	3	97	0	0	97	0	improved agricultural grassland, hedgerows and conifer plantation; travelled north to south across the viewshed past the vp. initially heard calling then picked up straight after 1009.	PC
WS004	VP3	23/03/2021	08:27	Whooper Swan	21	72	0	0	72	0	improved grassland and active quarries and mines; flew across viewshed heading nw in classic v formation	PDC

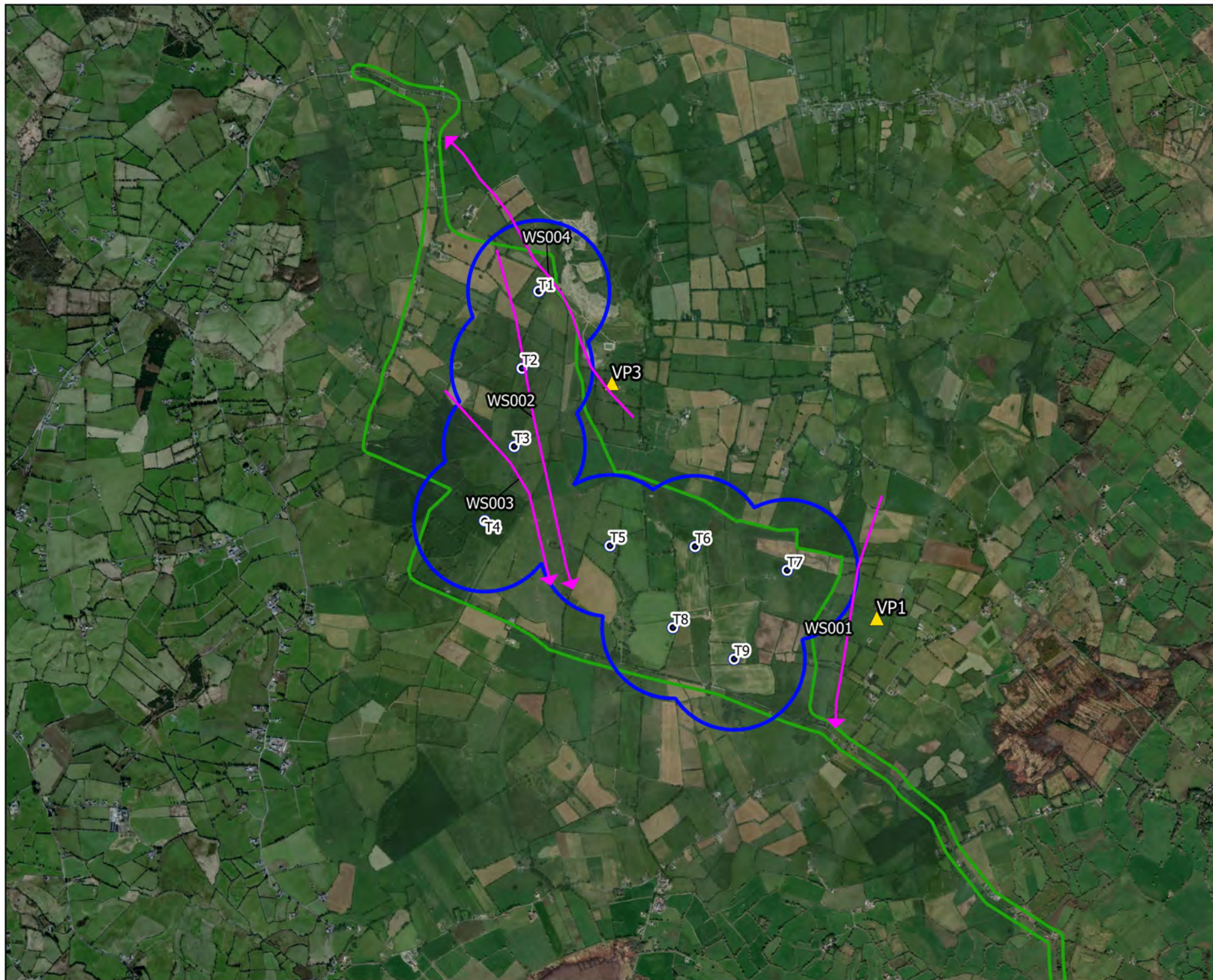
¹ Note: Throughout this document, for Vantage Point surveys undertaken between October 2019 and January 2020, only flight durations within 500m of the Wind Farm Site are shown for each height band. For all other Vantage Point Surveys, total flight durations (both inside and outside 500m radius) are shown for each height band.

Table 7 - 4 - 2 Whooper Swan Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
WS001	27/10/2020	10:10	Whooper Swan	9	improved agricultural grassland and hedgerows; flew off site and over the road, heading south west, calling, flew off site and over the road, heading south west, calling (wintering)	PC

Table 7 - 4 - 3 Whooper Swan Waterbird Distribution Survey

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
WS001	Lough Sewdy	19/11/2020	10:00	Whooper Swan	7	limestone/marl lakes and improved agricultural grassland; flew over lake from behind island off to north east	PC



Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title

**Whooper Swan Vantage Point
Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

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Checked By

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201050

Drawing No.

Fig. 7-4-1

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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title
**Whooper Swan Winter Walkover
Survey Observations**

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Map Legend

-  EIAR Site Boundary
-  Turbine Layout
-  5km Survey Radius
-  Observation



Drawing Title: Whooper Swan Waterbird Distribution Survey Observations	
Project Title: Umma More Renewable Energy Development	
Drawn By: D. Woods	Checked By: P. Cregg
Project No.: 201050	Drawing No.: Fig. 7-4-3
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2.

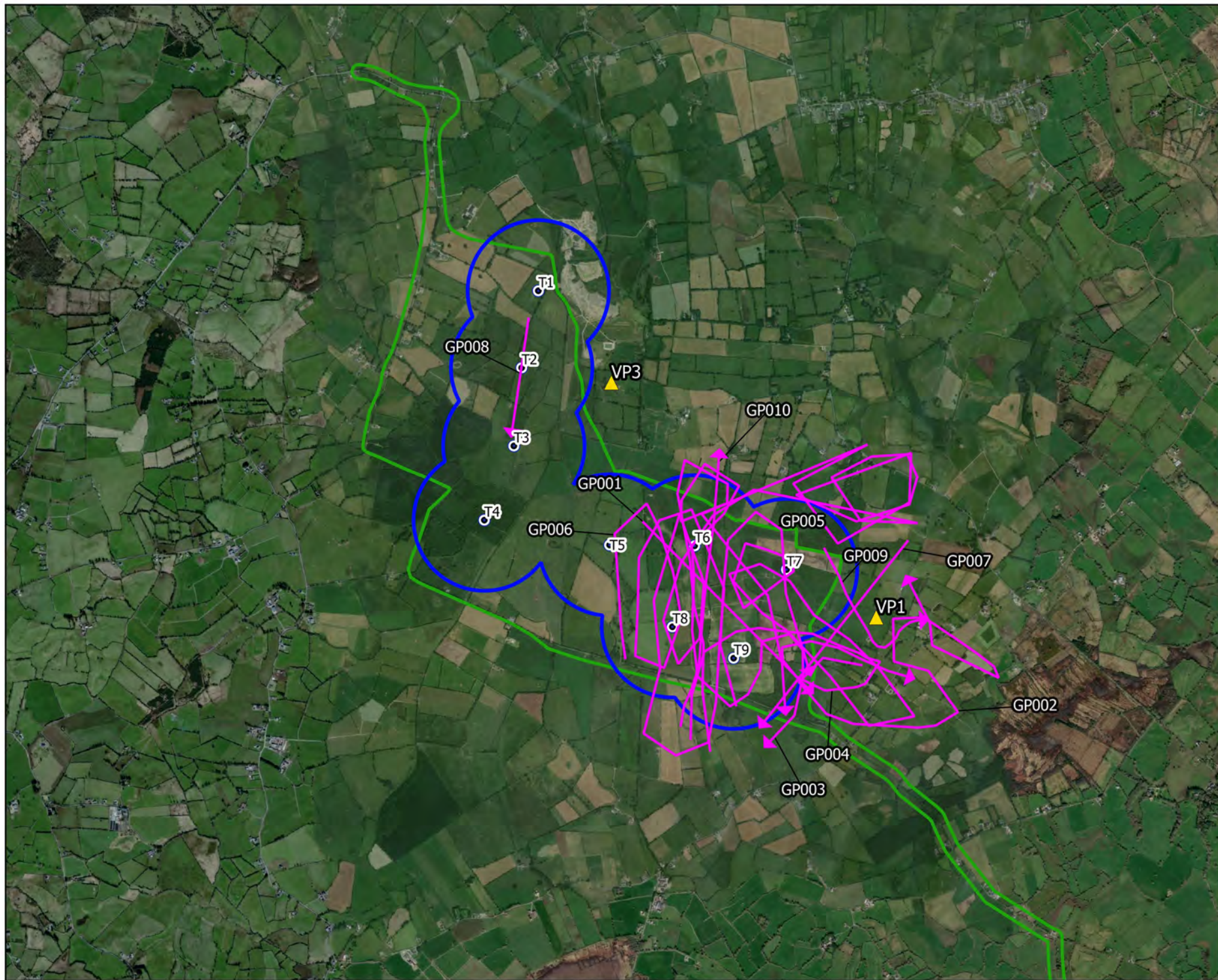
GOLDEN PLOVER

Table 7 - 4 - 4 Golden Plover Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
GP001	VP1	16/10/2019	16:57	Golden Plover	32	105	0	0	105	0	improved agricultural grassland; travelling	PM
GP002	VP1	16/10/2019	17:05	Golden Plover	32	311	0	0	30	0	improved agricultural grassland; traveling/circling	PM
GP003	VP1	16/10/2019	17:24	Golden Plover	23	732	0	0	682	0	improved agricultural grassland; circling/travelling	PM
GP004	VP1	16/10/2019	17:38	Golden Plover	29	158	0	0	120	0	improved agricultural grassland; travelling	PM
GP005	VP1	16/10/2019	17:57	Golden Plover	48	141	0	0	141	0	improved agricultural grassland; travelling	PM
GP006	VP1	16/10/2019	18:31	Golden Plover	58	1731	0	200	1000	0	improved agricultural grassland; circling	PM
GP007	VP1	16/10/2019	18:38	Golden Plover	16	100	0	0	85	0	improved agricultural grassland; travelling	PM
GP008	VP3	24/10/2019	18:39	Golden Plover	5	20	0	20	0	0	improved agricultural grassland; travelling; calling	PM
GP009	VP1	18/09/2020	08:40	Golden Plover	4	26	26	0	0	0	improved agricultural grassland; came up, calling, from below vp, not sure where exactly. flew over vp heading east.	PC
GP010	VP1	12/10/2020	15:00	Golden Plover	c60	35	0	0	35	0	improved agricultural grassland and conifer plantation; flock flying south to north over viewshed. count is approximate due to distance between me and birds. lost in distance.	PC

Table 7 - 4 - 5 Golden Plover Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
GP001	27/10/2020	09:20	Golden Plover	20	improved agricultural grassland and hedgerows; in flight in distance, approximate number. in flight in distance (wintering)	PC



Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title

**Golden Plover Vantage Point
Survey Observations**

Project Title

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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title

Golden Plover Winter Walkover
Survey Observations

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3.

PEREGRINE FALCON

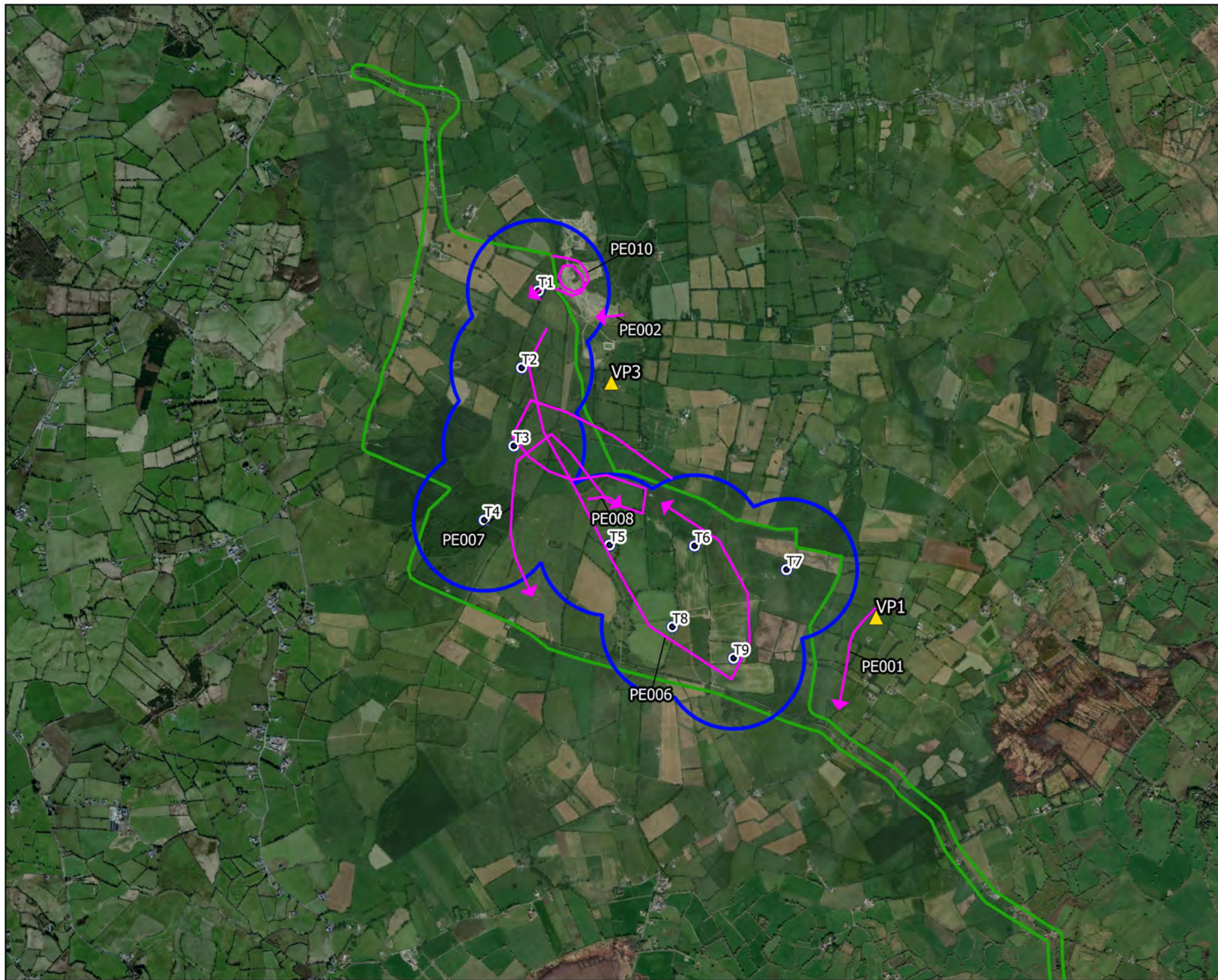
Table 7 - 4 - 6 Peregrine Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
PE001	VP1	16/07/2019	19:52	Peregrine Falcon	1	98	0	0	98	0	improved agricultural grassland and hedgerows; pe flew with prey over gal with w11. lost from view behind trees.	PW
PE002	VP3	17/07/2019	17:54	Peregrine Falcon	1	23	0	23	0	0	active quarries and mines; flew for 23 seconds and perched on a gravel spoil head in the quarry. preened and defecated. this pe was still present on finishing the survey at 18:30. at 18:11 another falcon was seen for 1 second flying in the quarry behind an ash tree. , present perched for 35 minutes	PW
PE003	VP1	16/10/2019	15:26	Peregrine Falcon	1	158	0	0	0	0	improved agricultural grassland; travelling/hunting	PM
PE004	VP3	24/10/2019	16:51	Peregrine Falcon	1	15	0	15	0	0	active quarries and mines; juvenile; travelling; landed on gravel pile for about 20mins	PM
PE005	VP3	24/10/2019	17:15	Peregrine Falcon	1	10	10	0	0	0	active quarries and mines; juvenile flew from gravel pile	PM
PE006	VP3	13/02/2020	14:12	Peregrine Falcon	1	264	0	0	264	0	improved agricultural grassland and wet grassland; travelling/hunting; flight ended in stoop	PM
PE007	VP3	13/02/2020	14:35	Peregrine Falcon	1	354	0	0	354	0	improved agricultural grassland; hunting	PM

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
PE008	VP3	14/05/2020	06:35	Peregrine Falcon	1	20	20	0	0	0	tilled land and cultivated land; flew down from perch , suspected pe, however not a positive id	NG
PE009	VP3	26/08/2020	16:07	Peregrine Falcon	1	205	0	0	180	0	improved agricultural grassland and wet grassland; hunting; stooped at end of flight; juvenile	PM
PE010	VP3	23/03/2021	08:10	Peregrine Falcon	2	36	0	15	21	0	active quarries and mines and improved grassland; display over quarry, birds flipping over going talon to talon, stooping and chasing each other, headed west low over fields, lost against background	PDC

Table 7 - 4 - 7 Peregrine Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
PE001	08/01/2021	15:15	Peregrine Falcon	1	improved agricultural grassland and active quarries and mines; perching, gliding, perching on a tree, then gliding towards a quarry (wintering)	KOC



Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title

Peregrine Vantage Point Survey Observations

Project Title

Umma More Renewable Energy Development

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Project No.

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Map Legend

-  EIA Site Boundary
-  Turbine Layout
-  500m Survey Radius
-  Flight Observation



Drawing Title:
**Peregrine Winter Walkover Survey
Observations**

Project Title:
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LAPWING

Table 7 - 4 - 8 Lapwing Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
L001	VP1	16/10/2019	13:46	Lapwing	22	125	0	0	125	0	improved agricultural grassland; travelling	PM
L002	VP1	13/11/2019	08:25	Lapwing	16	207	0	0	100	0	improved agricultural grassland; travelling	PM
L003	VP1	16/01/2020	11:36	Lapwing	1	66	0	66	0	0	improved agricultural grassland and wet grassland; travelling; landed in wet field	PM
L004	VP1	16/01/2020	11:48	Lapwing	103	508	58	250	200	0	wet grassland and improved agricultural grassland; circling; landed in wet field	PM
L005	VP1	16/01/2020	12:55	Lapwing	103	386	100	286	0	0	wet grassland and improved agricultural grassland; circling before landing again	PM
L006	VP1	16/01/2020	13:33	Lapwing	12	34	34	0	0	0	wet grassland; circling before landing again	PM
L007	VP3	13/02/2020	14:05	Lapwing	150	657	0	0	350	150	improved agricultural grassland, wet grassland and mixed broadleaved/conifer woodland; circling/travelling	PM
L008	VP3	05/11/2020	08:50	Lapwing	3	11	0	11	0	0	improved agricultural grassland, hedgerows and conifer plantation; picked up whilst following ws005. watched briefly then went back to ws so timing is the length of time i watched them as i was still timing ws005. also heard calling.	PC
L009	VP3	05/11/2020	09:40	Lapwing	40	251	41	0	210	0	improved agricultural grassland, hedgerows and conifer plantation; circling over site, apparently looking for	PC

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
											somewhere to land. eventually came down in field with standing water in it.	
L010	VP3	05/11/2020	10:44	Lapwing	37	37	0	0	37	0	improved agricultural grassland and hedgerows; flew south over viewshed, coming from behind vp. lost against low cloud.	PC
L011	VP3	05/11/2020	11:19	Lapwing	12	22	0	0	22	0	improved agricultural grassland and hedgerows; picked up this flock when scanning in front of vp. heading west over viewshed. lost against clouds.	PC
L012	VP1	02/12/2020	14:01	Lapwing	100	125	0	0	125	0	improved agricultural grassland; travelled across viewshed, south to north. count is approximate., not sure if they were on the ground in the viewshed as spotted them in the air.	PC
L013	VP3	07/01/2021	11:25	Lapwing	13	116	0	16	100	0	improved agricultural grassland; travelling; flew down behind treeline, possibly landed in field	PM
L014	VP1	21/01/2021	09:43	Lapwing	18	73	0	73	0	0	improved agricultural grassland and wet grassland; travelling	PM
L015	VP1	21/01/2021	13:00	Lapwing	80	20	0	0	20	0	wet grassland; circling before dropping into field	PM
L016	VP1	21/01/2021	13:20	Lapwing	79	183	0	0	183	0	improved agricultural grassland and wet grassland; travelling/circling	PM
L017	VP1	21/01/2021	13:44	Lapwing	80	128	0	0	128	0	improved agricultural grassland and wet grassland; travelling	PM

Table 7 - 4 - 9 Lapwing Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
L001	16/12/2019	13:21	Lapwing	24	wet grassland; feeding in field (wintering)	PM
L002	08/01/2021	12:40	Lapwing	6	improved agricultural grassland; foraging (wintering)	KOC

Table 7 - 4 - 10 Lapwing Breeding Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
L001	17/05/2020		Lapwing	1	grassland and marsh; heard call but not seen, heard but not seen (suitable nesting habitat; possible breeder)	NG
L002	06/06/2020		Lapwing	20	improved agricultural grassland; flew into field, foraging, 8 flew away (suitable nesting habitat; possible breeder)	NG
L003	31/07/2020	08:57	Lapwing	18	improved agricultural grassland; roosting in long grass, flushed by observer, resettled at other end of field (suitable nesting habitat; possible breeder)	PM

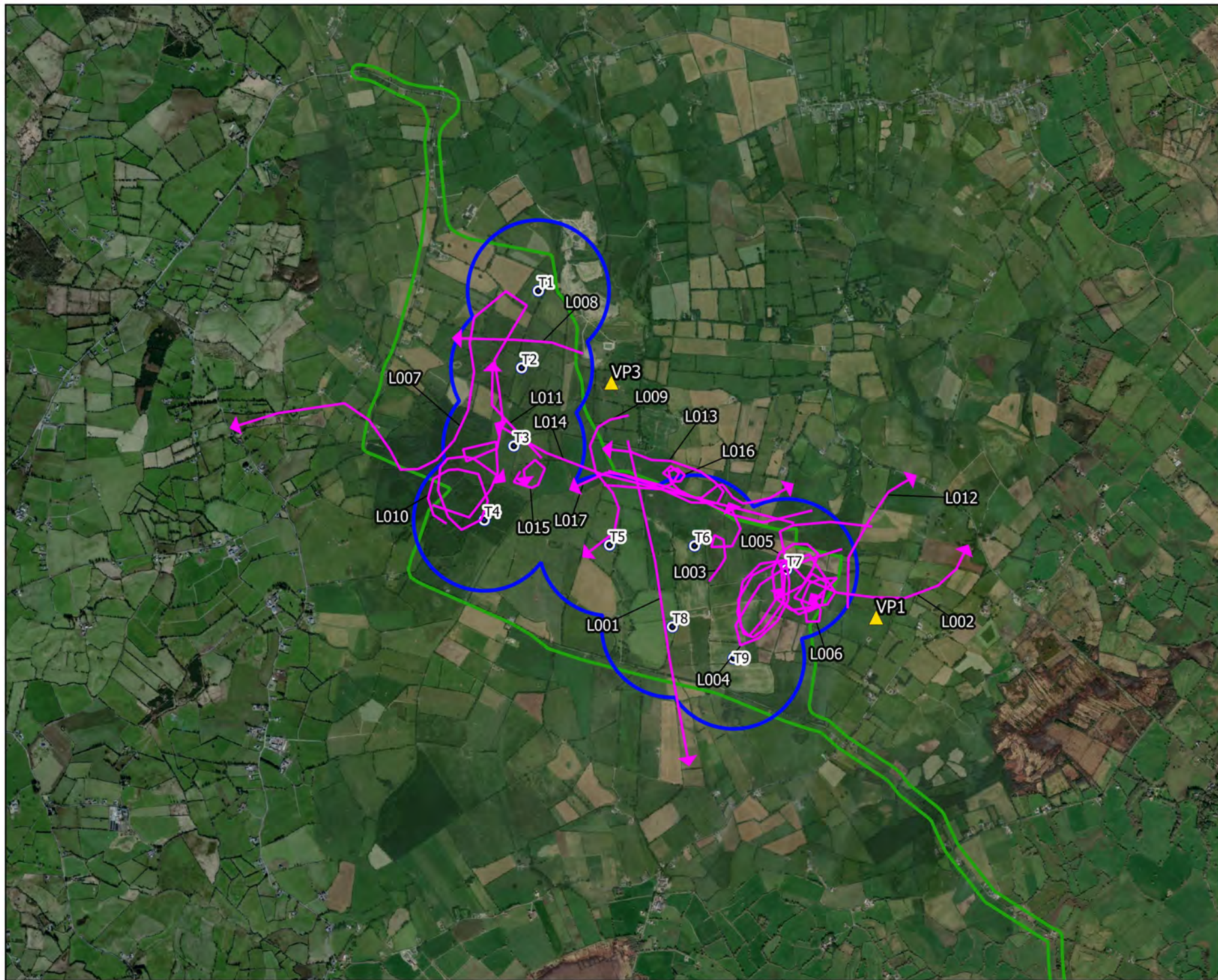
Table 7 - 4 - 11 Lapwing Waterbird Distribution Survey

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
L001	Lough Sewdy	05/10/2020	09:00	Lapwing	1	improved agricultural grassland; flying over fields north east of lake. marked as l001 on the map.	PC

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
L002	Lough Sewdy	19/11/2020	10:00	Lapwing	2	limestone/marl lakes and non-calcareous springs; flew over lake from north west to south east.	PC
L003	Lough Sewdy	19/11/2020	10:30	Lapwing	1	improved agricultural grassland; flew out of fields behind car park, circled then headed north east	PC
L004	Lough Sewdy	28/01/2021	11:56	Lapwing	23	improved agricultural grassland and eutrophic lakes; flying flock	KOC
L005	Lough Sewdy	01/02/2021	10:32	Lapwing	67	lakes and ponds and improved grassland; circling over lake, presumably looking for somewhere to land., circled for over 10 minutes so i moved from the car park, in case i was stopping them from landing.	PC

Table 7 - 4 - 12 Lapwing Incidental Records

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
L001	Vantage Point Survey; VP1	15/02/2021	10:35	Lapwing	100	improved grassland; in flight in the distance. lost behind treeline., couldn't count accurately, too far away. 100 is best estimate.	PDC



Map Legend

- EIAR Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title

Lapwing Vantage Point Survey Observations

Project Title

Umma More Renewable Energy Development

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-8

Scale

1:35000

Date

31.01.23



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Map Legend

- EIAR Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title:
Lapwing Winter Walkover Survey Observations

Project Title:
Umma More Renewable Energy Development

Drawn By:
D. Woods

Checked By:
P. Cregg

Project No.:
201050

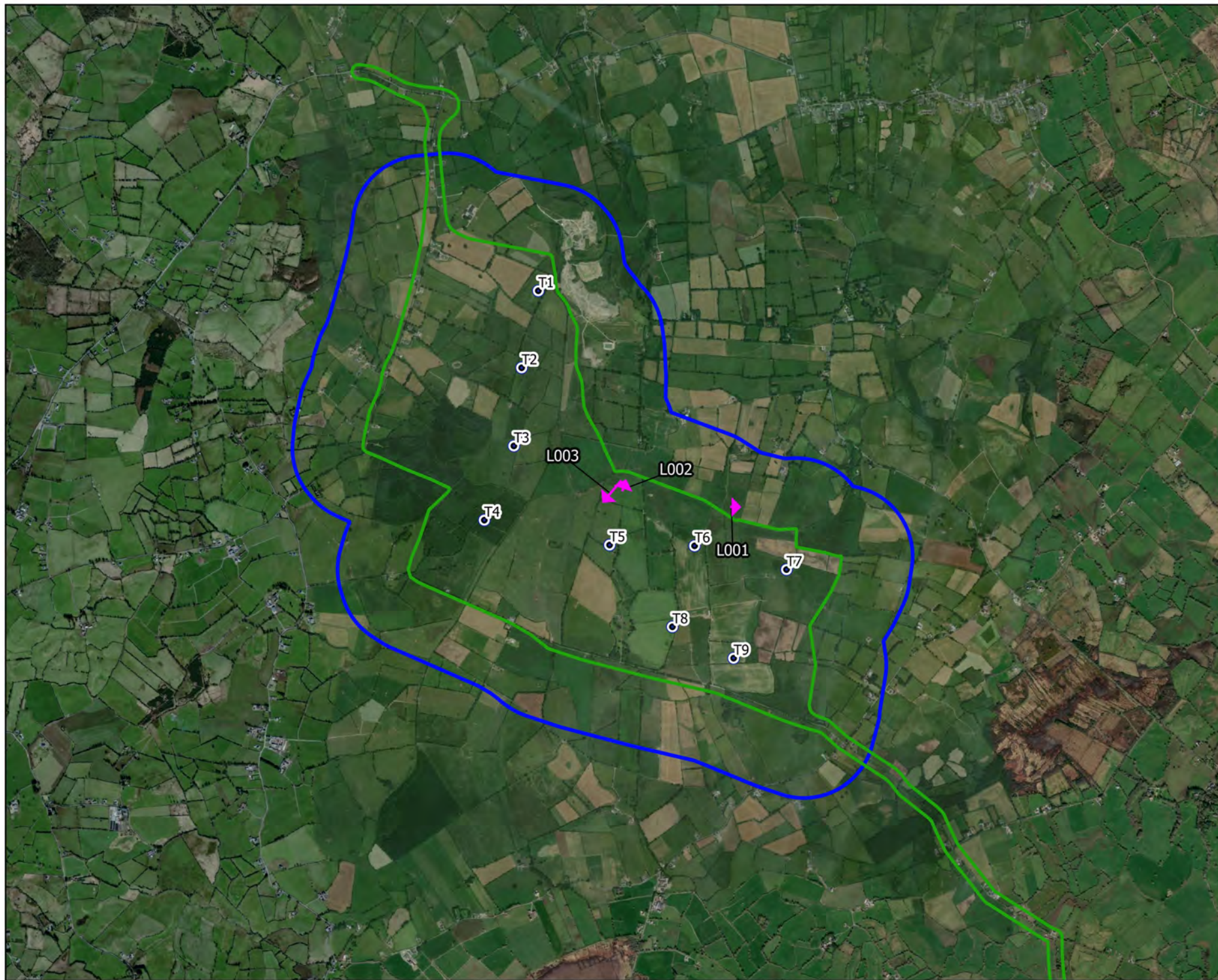
Drawing No.:
Fig. 7-4-9

Scale:
1:35000

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Map Legend

- EIAR Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title

**Lapwing Breeding Walkover
Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-10

Scale

1:35000

Date

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Map Legend

-  EIAR Site Boundary
-  Turbine Layout
-  5km Survey Radius
-  Observation



Drawing Title

**Lapwing Waterbird Distribution
Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-11

Scale

1:75000

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31.01.23



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Map Legend


-  EIAR Site Boundary
-  Turbine Layout
-  Flight Observation



Drawing Title:
Lapwing Incidental Observations

Project Title:
Umma More Renewable Energy Development

Drawn By: D. Woods	Checked By: P. Cregg
Project No.: 201050	Drawing No.: Fig. 7-4-12
Scale: 1:50000	Date: 31.01.23

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5.

TUFTED DUCK

Table 7 - 4 - 13 Tufted Duck Waterbird Distribution Surveys

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
TU001	5km Radius	25/02/2020	10:50	Tufted Duck	2	lakes and ponds; feeding	PM
TU002	Lough Sewdy	25/02/2021	10:36	Tufted Duck	2	lakes and ponds; diving at back of lake	PC
TU003	Lough Sewdy	22/03/2021	09:30	Tufted Duck	2	lakes and ponds; pair on water, male and female	PDC



Map Legend

-  EIAR Site Boundary
-  Turbine Layout
-  5km Survey Radius
-  Observation



Drawing Title

**Tufted Duck Waterbird
Distribution Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-13

Scale

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Date

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6.

BLACK-HEADED GULL

Table 7 - 4 - 14 Black-headed Gull Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BH001	VP3	24/06/2019	13:57	Black-headed Gull	28	350	0	0	200	150	improved agricultural grassland; soaring	JC
BH002	VP3	24/06/2019	16:24	Black-headed Gull	19	100	0	20	80	0	improved agricultural grassland and treelines; circling	JC
BH003	VP3	24/06/2019	16:43	Black-headed Gull	210	300	0	0	200	100	improved agricultural grassland; circling	JC
BH004	VP1	27/06/2019	13:42	Black-headed Gull	2	95	15	40	40	0	improved agricultural grassland and hedgerows; flying	JC
BH005	VP3	31/08/2019	20:11	Black-headed Gull	21	40	10	0	30	0		JC
BH006	VP3	17/01/2020	10:17	Black-headed Gull	75	1145	0	500	0	0	improved agricultural grassland; circling; still circling at end of survey	PM
BH007	VP3	17/01/2020	11:41	Black-headed Gull	77	894	0	400	0	0	improved agricultural grassland; circling	PM
BH008	VP3	17/01/2020	12:29	Black-headed Gull	75	227	0	0	227	0	improved agricultural grassland; circling before landing in field	PM
BH009	VP3	17/01/2020	12:47	Black-headed Gull	75	278	0	78	200	0	improved agricultural grassland; circling before landing in field	PM
BH010	VP3	17/01/2020	12:59	Black-headed Gull	75	501	0	300	201	0	improved agricultural grassland; circling then landed in field	PM
BH011	VP1	16/04/2020	15:45	Black-headed Gull	2	120	0	120	0	0	wet grassland; travelling through	TR
BH012	VP3	29/06/2020	06:37	Black-headed Gull	1	41	0	41	0	0	improved agricultural grassland and active quarries and mines; appeared to come from same area as bz003. travelled over vp heading nw.	PC

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BH013	VP3	29/06/2020	07:05	Black-headed Gull	1	8	8	0	0	0	improved agricultural grassland and active quarries and mines; came from in front of vp, not sure exactly where. travelled over vp and off nw.	PC
BH014	VP3	29/06/2020	07:22	Black-headed Gull	3	8	0	8	0	0	improved agricultural grassland; spotted these three flying towards vp after watching ma007. flight timing is approximate.	PC
BH015	VP3	29/06/2020	07:38	Black-headed Gull	27	32	0	32	0	0	improved agricultural grassland; travelling across viewshed from south to north.	PC
BH016	VP3	29/06/2020	08:00	Black-headed Gull	1	28	8	20	0	0	improved agricultural grassland; travelled from behind vp in a semi-circle in front of vp then off behind vp again.	PC
BH017	VP3	29/06/2020	08:35	Black-headed Gull	26	260	260	0	0	0	improved agricultural grassland; flock feeding in fields, rising and settling constantly and flying from one field to another then back again. i think this flock then flew over vp at 8:45 whilst on my break, with another 10 birds coming from behind the vp to join them.	PC
BH018	VP3	29/06/2020	09:38	Black-headed Gull	2	119	9	110	0	0	improved agricultural grassland; travelled across viewshed, lost against background.	PC
BH019	VP3	29/06/2020	11:25	Black-headed Gull	5	42	0	42	0	0	improved agricultural grassland and conifer plantation; travelled across viewshed from south to north.	PC
BH020	VP3	08/07/2020	10:33	Black-headed Gull	1	67	0	67	0	0	improved agricultural grassland; one bird with lb010, following them north to south.	PC
BH021	VP3	07/01/2021	11:50	Black-headed Gull	1	98	0	0	98	0	improved agricultural grassland; travelling	PM

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BH022	VP3	16/02/2021	10:06	Black-headed Gull	2	82	0	0	82	0	improved grassland; flew across viewshed east to west. lost against clouds in distance.	PDC

Table 7 - 4 - 15 Black-headed Gull Breeding Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
BH001	06/06/2020	09:00	Black-headed Gull	1	tilled land; flew into field, foraging (summering; non-breeding)	NG

Table 7 - 4 - 16 Black-headed Gull Waterbird Distribution Survey

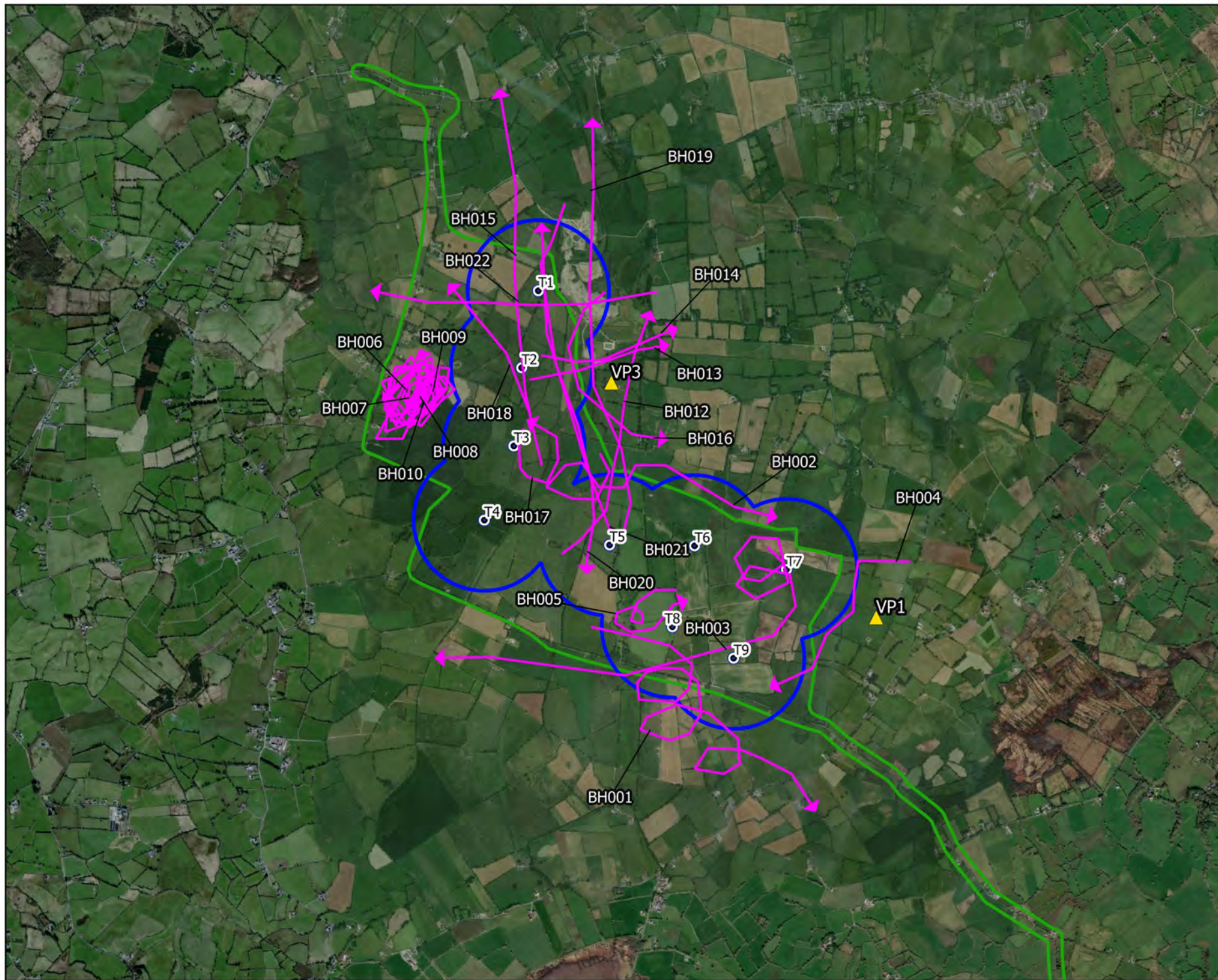
Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
BH001	Lough Sewdy	01/02/2021	10:25	Black-headed Gull	14	lakes and ponds; flying over lake heading south west	PC

Table 7 - 4 - 17 Black-headed Gull Incidental Records

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
BH001	Breeding Raptor Survey; RVP4	26/06/2020	08:45	Black-Headed Gull	1	improved agricultural grassland; travelling	JK

Table 7 - 4 - 18 Black-headed Gull Supplementary Data

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BH001	VP4a	25/06/2019	10:54	Black-headed Gull	4	180	0	0	100	80	improved agricultural grassland, treelines and buildings and artificial surfaces; flying, soaring	JC
BH002	VP2	26/06/2019	10:47	Black-headed Gull	8	40	0	10	30	0	improved agricultural grassland and treelines; circling	JC



Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title:
**Black-headed Gull Vantage Point
Survey Observations**

Project Title:
**Umma More Renewable Energy
Development**

Drawn By	Checked By
D. Woods	P. Cregg
Project No.	Drawing No.
201050	Fig. 7-4-14
Scale	Date
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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title

**Black-headed Gull Breeding
Walkover Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-15

Scale

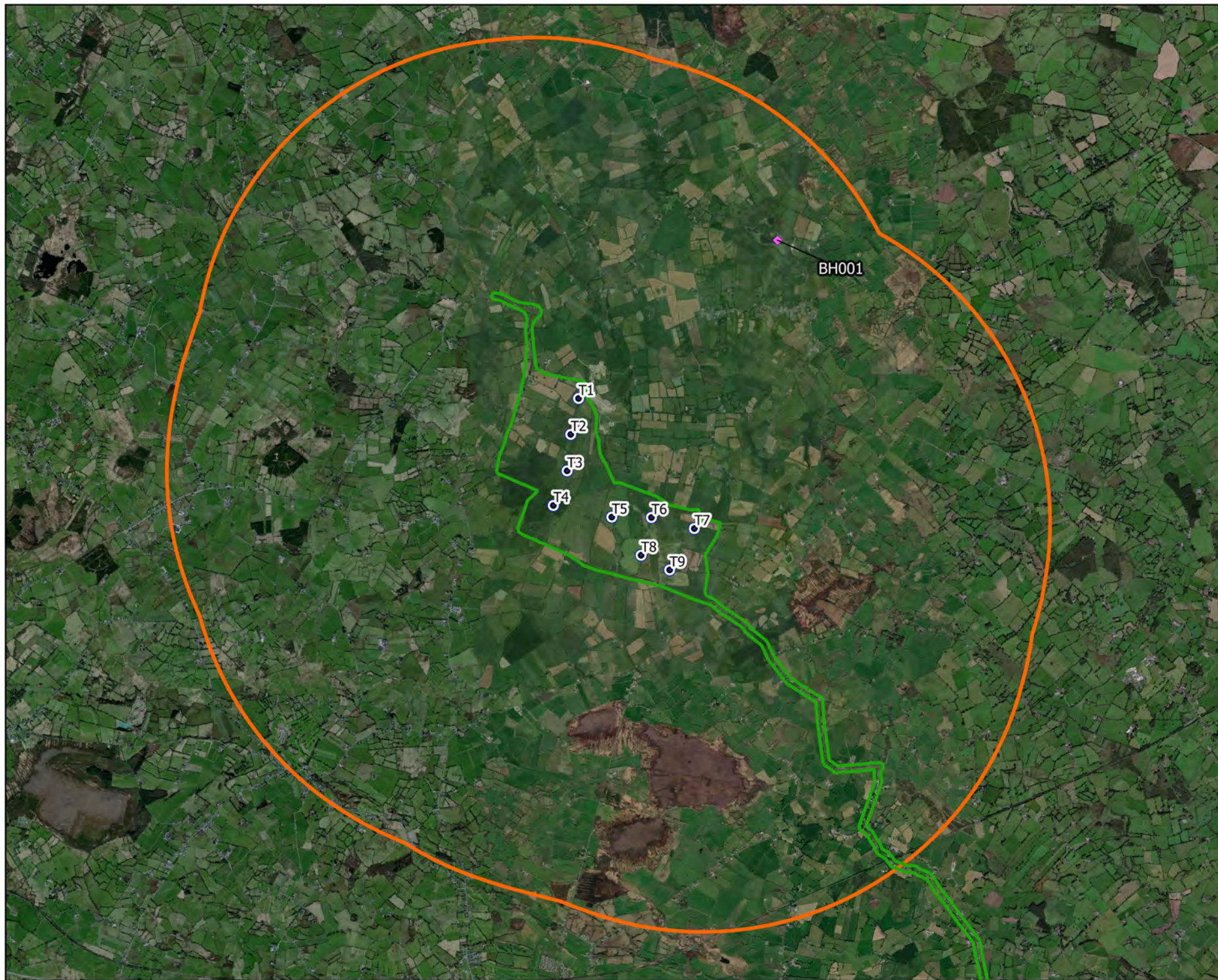
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Date

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Map Legend

-  EIA Site Boundary
-  Turbine Layout
-  5km Survey Radius
-  Observation



Drawing Title:
**Black-headed Gull Waterbird
Distribution Survey Observations**

Project Title:
**Umma More Renewable Energy
Development**

Drawn By:
D. Woods

Checked By:
P. Cregg

Project No.:
201050

Drawing No.:
Fig. 7-4-16

Scale:
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Date:
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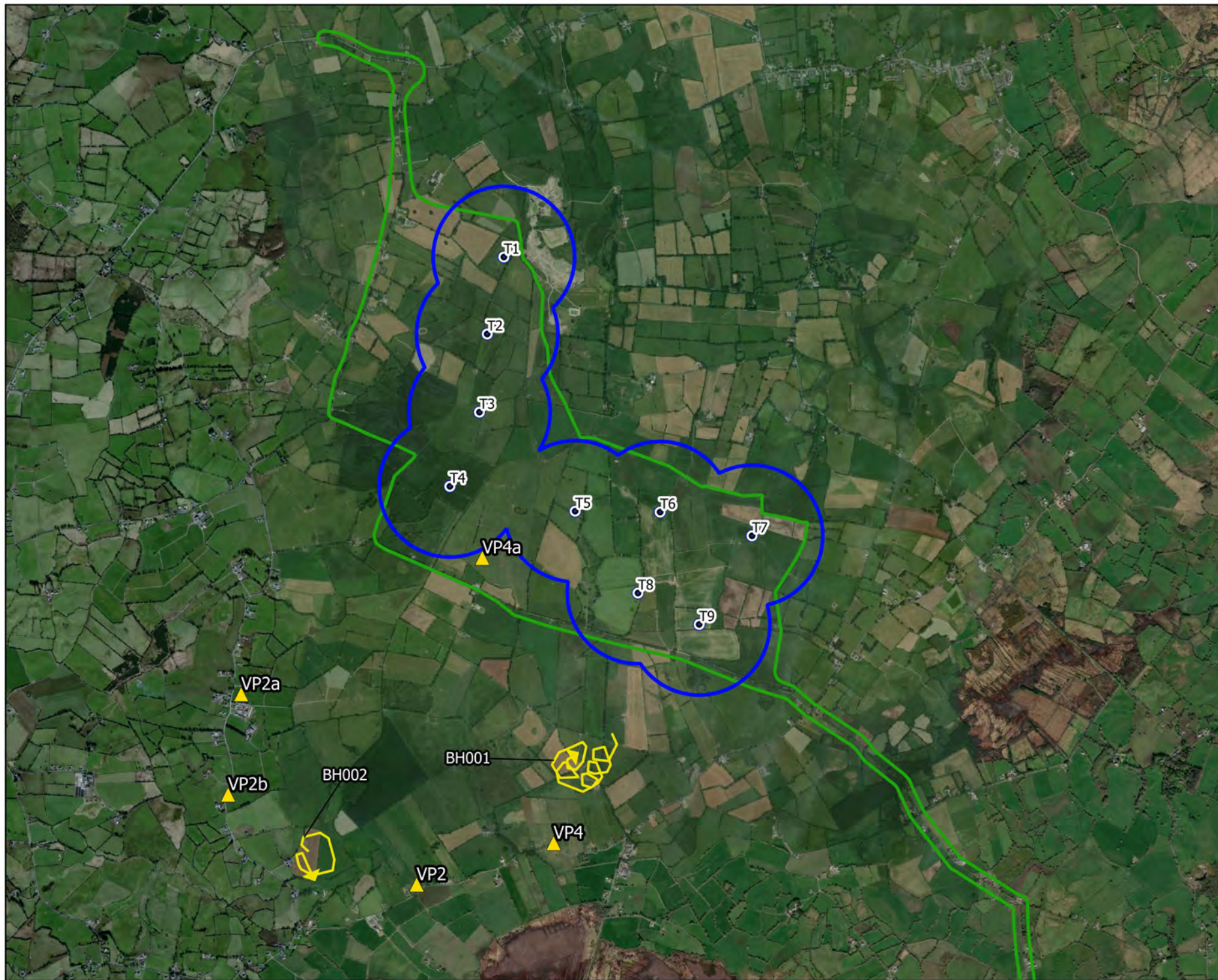


Map Legend

-  EIA Site Boundary
-  Turbine Layout
-  Flight Observation



Drawing Title	
Black-headed Gull Incidental Records	
Project Title	
Umma More Renewable Energy Development	
Drawn By	Checked By
D. Woods	P. Cregg
Project No.	Drawing No.
201050	Fig. 7-4-17
Scale	Date
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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- Flight Observation



Drawing Title:
Black-headed Gull Supplementary Data

Project Title:
Umma More Renewable Energy Development

Drawn By	Checked By
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Project No.	Drawing No.
201050	Fig. 7-4-18
Scale	Date
1:35000	09.02.23



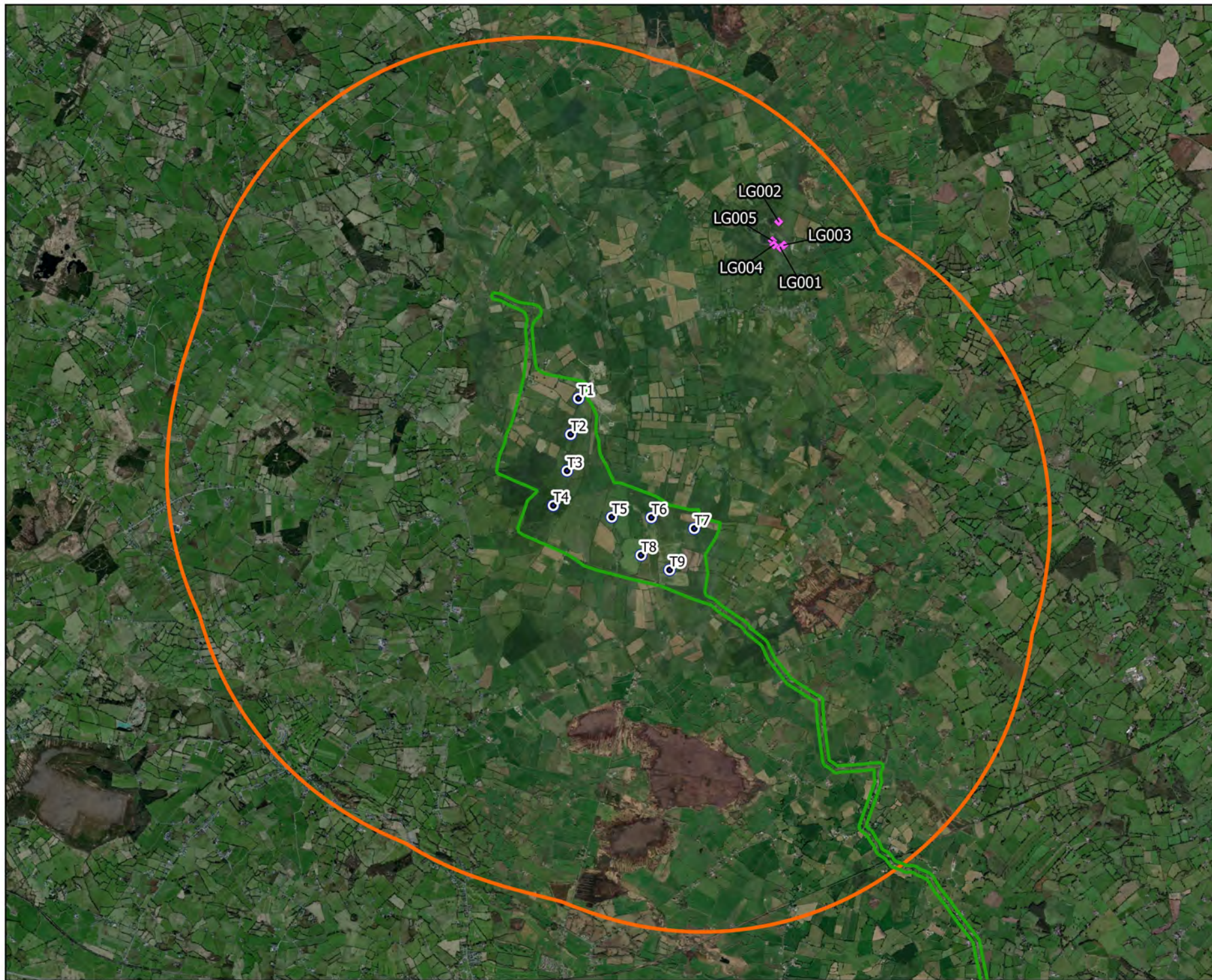
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7.

LITTLE GREBE

Table 7 - 4 - 19 Little Grebe Waterbird Distribution Surveys

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
LG001	Lough Sewdy	22/11/2019	10:33	Little Grebe	1	lakes and ponds; calling from reeds	PM
n/a	Lough Sewdy	25/02/2020	10:49	Little Grebe	1	lakes and ponds; calling, heard. not mapped	PM
LG002	Lough Sewdy	10/03/2020	14:00	Little Grebe	1	lakes and ponds; feeding/roosting	ED
LG003	Lough Sewdy	12/05/2020	09:55	Little Grebe	1	lakes and ponds; calling	PM
LG004	Lough Sewdy	12/05/2020	09:56	Little Grebe	1	lakes and ponds; calling	PM
LG005	Lough Sewdy	14/01/2021	15:14	Little Grebe	1	eutrophic lakes; diving, not sure if lg or some other small diving bird, seen once	KOC



Map Legend

-  EIA Site Boundary
-  Turbine Layout
-  5km Survey Radius
-  Observation



Drawing Title:
**Little Grebe Waterbird Distribution
Survey Observations**

Project Title:
**Umma More Renewable Energy
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Drawn By:
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Checked By:
P. Cregg

Project No.:
201050

Drawing No.:
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8.

MALLARD

Table 7 - 4 - 20 Mallard Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
MA001	VP3	17/07/2019	13:09	Mallard	1	60	0	0	60	0	improved agricultural grassland and hedgerows; flying northeast before lost behind trees.	PW
MA002	VP1	16/04/2020	17:07	Mallard	2	70	0	0	70	0	arable crops; travelling and landing on site	TR
MA003	VP1	16/04/2020	19:15	Mallard	1	40	0	0	40	0	wet grassland and arable crops; travelling male	TR
MA004	VP1	16/04/2020	20:00	Mallard	1	10	10	0	0	0	wet grassland and improved agricultural grassland; travelling low	TR
MA005	VP3	17/04/2020	17:15	Mallard	3	70	0	0	70	0	conifer plantation and wet grassland; chasing, breeding area	TR
MA006	VP3	17/04/2020	17:45	Mallard	5	40	40	0	0	0	disturbed ground; chasing, breeding nearby	TR
MA007	VP3	29/06/2020	07:20	Mallard	4	32	0	32	0	0	improved agricultural grassland; came from behind vp at same time as bz006 came up. travelled over viewshed disappearing to south.	PC
MA008	VP3	29/06/2020	08:12	Mallard	4	32	5	27	0	0	improved agricultural grassland; travelled across viewshed from behind vp. lost against background of trees.	PC
MA009	VP3	08/07/2020	06:05	Mallard	1	37	0	37	0	0	improved agricultural grassland; spotted flying east from in front of vp. travelled across viewshed, direct flight.	PC
MA010	VP3	08/07/2020	06:10	Mallard	1	42	42	0	0	0	improved agricultural grassland and conifer plantation; picked up flying low over viewshed, heading south. hard to	PC

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
											track against plantations, visibility not great looking down.	
MA011	VP3	08/07/2020	06:50	Mallard	1	5	5	0	0	0	improved agricultural grassland; seemed to come up from field in front of vp. headed east behind vp.	PC
MA012	VP1	25/08/2020	16:56	Mallard	6	20	0	20	0	0	improved agricultural grassland; travelling	PM
MA013	VP3	26/08/2020	20:22	Mallard	2	50	0	0	50	0	improved agricultural grassland; travelling; 2 drakes	PM
MA014	VP3	05/11/2020	08:55	Mallard	2	16	16	0	0	0	improved agricultural grassland, hedgerows and watercourses; flew from behind vp to north low over viewshed and settled on river, as far as i could tell.	PC
MA015	VP3	23/03/2021	08:42	Mallard	2	39	0	39	0	0	watercourses, improved grassland and active quarries and mines; flying low across viewshed following river s to n. lost near quarry.	PDC

Table 7 - 4 - 21 Mallard Vantage Point Survey (non-flights)

Map Ref.	VP	Date	Time	Species	Number	Habitat and activity	Surveyor
n/a	VP3	24/10/2019	18:49	Mallard	1	improved agricultural grassland; heard only, heard from fields to south of vp. not mapped.	PM
MA016	VP3	13/02/2020	18:10	Mallard	1	depositing/lowland rivers and wet grassland; heard calling from river	PM

Table 7 - 4 - 22 Mallard Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
MA001	22/01/2020	09:34	Mallard	2	depositing/lowland rivers and wet grassland; flushed off river (wintering)	PM
MA002	27/10/2020	09:45	Mallard	3	improved agricultural grassland and hedgerows; in flight, came off site and flew over road heading west, in flight, came off site and flew over road heading west (wintering)	PC
MA003	24/03/2021	10:15	Mallard	2	watercourses and improved grassland; spotted in flight (wintering)	PDC

Table 7 - 4 - 23 Mallard Breeding Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
n/a	30/05/2019	13:18	Mallard	1	watercourses; flying, not mapped (suitable nesting habitat; possible breeder)	JC
MA001	17/05/2020	-	Mallard	2	grassland and marsh; flying over (flyover; non-breeding)	NG
MA002	24/05/2020	-	Mallard	11	grassland and marsh and watercourses; adult with 10 ducklings swimming in river, swam for cover (fledged young; confirmed breeding)	NG

Table 7 - 4 - 24 Mallard Waterbird Distribution Survey

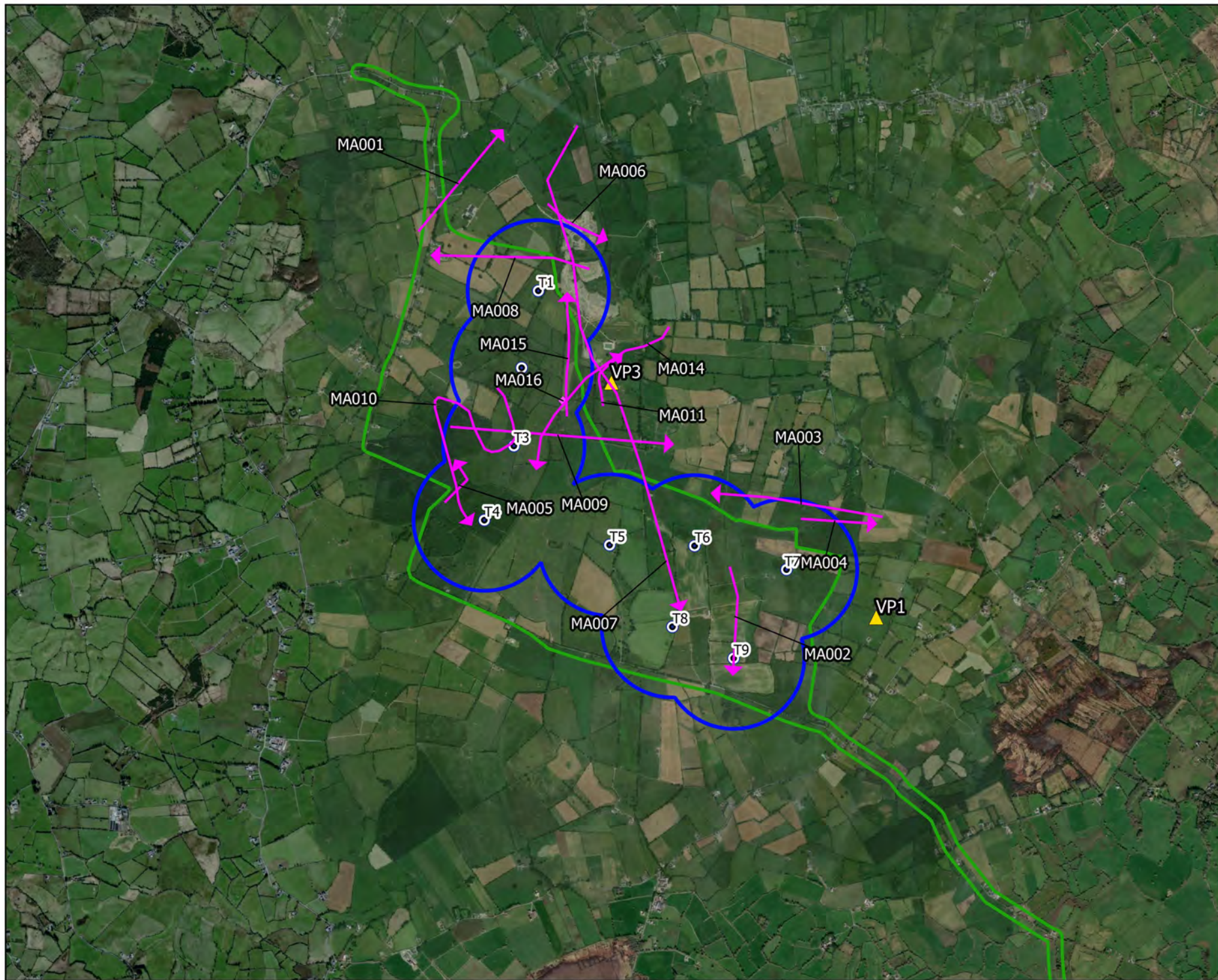
Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
MA001	Lough Sewdy	16/09/2019	10:22	Mallard	8	lakes and ponds; on water, north section quiet see map	JK

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
MA002	Lough Sewdy	08/11/2019	09:54	Mallard	2	lakes and ponds; on water	PM
MA003	Lough Sewdy	10/02/2020	08:08	Mallard	3	lakes and ponds; flew from lake	PM
MA004	Lough Sewdy	25/02/2020	10:50	Mallard	9	lakes and ponds; feeding	PM
MA005	Moyvoughly Bog	25/02/2020	12:20	Mallard	2	raised bog; flying	PM
MA006	Lough Sewdy	10/03/2020	14:00	Mallard	2	lakes and ponds; feeding/roosting, flying over site at 20m high	ED
MA007	Lough Sewdy	24/03/2020	14:00	Mallard	4	lakes and ponds; feeding/roosting	ED
MA008	Pond near Calliaghstown	24/03/2020	15:00	Mallard	2	turloughs; feeding/roosting	ED
MA009	Moyvoughly Bog	12/05/2020	11:27	Mallard	3	raised bog; travelling, 3 drakes	PM
MA010	Lough Sewdy	17/09/2020	07:30	Mallard	1	lakes and ponds and reed and large sedge swamps; male flew in over reeds and landed on lake out of sight	PC
MA011	Lough Sewdy	23/10/2020	09:30	Mallard	2	lakes and ponds; feeding on water at back of lough. marked as ma002 on map.	PC
MA012	Lough Sewdy	19/11/2020	09:34	Mallard	4	limestone/marl lakes and non-calcareous springs; at least 4 calling from behind reedbeds; not visible	PC
MA013	Lough Sewdy	19/11/2020	10:22	Mallard	4	limestone/marl lakes; two males and two females feeding in pairs on far side of lake	PC
MA014	Lough Sewdy	09/12/2020	10:21	Mallard	2	lakes and ponds; flew across lake, landing out of site behind reeds	PC
MA015	Lough Sewdy	18/12/2020	10:15	Mallard	1	reed and large sedge swamps and lakes and ponds; heard calling but not visible, presumably on bank behind reeds	PC

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
MA016	Lough Sewdy	14/01/2021	15:06	Mallard	3	eutrophic lakes; swimming	KOC
MA017	Ballinderry Bog	28/01/2021	10:16	Mallard	12	cutover bog and improved agricultural grassland; flying, ducks, most likely ma	KOC
MA018	Dungolman river, Lecade	28/01/2021	12:59	Mallard	6	improved agricultural grassland; swimming , swimming in a flooded field close to the river	KOC
MA019	Lough Sewdy	01/02/2021	10:27	Mallard	5	lakes and ponds; on water of lake	PC
MA020	Lough Sewdy	25/02/2021	10:40	Mallard	1	lakes and ponds; in flight over lake and island	PC
MA021	Lough Sewdy	10/03/2021	09:15	Mallard	3	lakes and ponds; flew over then landed on lake	PDC
MA022	Lough Sewdy	22/03/2021	09:32	Mallard	4	lakes and ponds; flew in and settled on lake	PDC
MA023	Lough Sewdy	22/03/2021	09:55	Mallard	2	lakes and ponds; flew in from behind island and settled on lake	PDC

Table 7 - 4 - 25 Mallard Incidental Records

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
n/a	Vantage Point Survey; VP3	05/11/2020		Mallard	1	improved agricultural grassland; female heard calling, sounded like it was in front of vp but couldn't see it., not mapped	PC
MA001	Breeding Raptor Survey; RVP2	20/04/2019		Mallard	3	cutover bog; flying away	JC



Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation
- ◆ Non-Flight Observation



Drawing Title

**Mallard Vantage Point Survey
Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-20

Scale

1:35000

Date

09.02.23



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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title:
Mallard Winter Walkover Survey Observations

Project Title:
Umma More Renewable Energy Development

Drawn By	Checked By
D. Woods	P. Cregg
Project No.	Drawing No.
201050	Fig. 7-4-21
Scale	Date
1:35000	31.01.23

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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title:
**Mallard Breeding Walkover Survey
Observations**

Project Title:
**Umma More Renewable Energy
Development**

Drawn By:
D. Woods

Checked By:
P. Cregg

Project No.:
201050

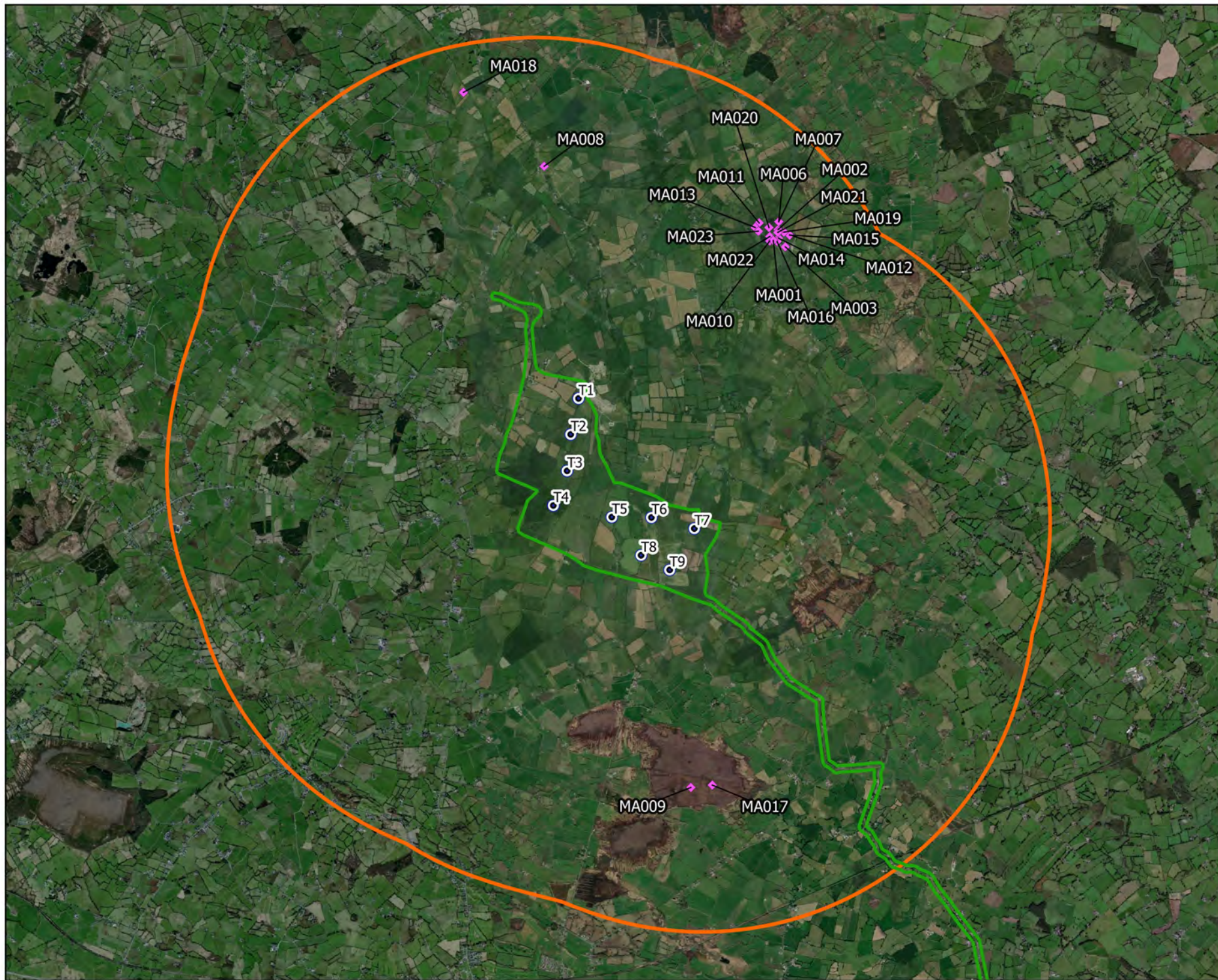
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Fig. 7-4-22

Scale:
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Date:
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Map Legend

- EIA Site Boundary
- Turbine Layout
- 5km Survey Radius
- ◆ Observation



Drawing Title

**Mallard Waterbird Distribution
Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-23

Scale

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Map Legend

-  EIAR Site Boundary
-  Turbine Layout
-  Flight Observation



Drawing Title	
Mallard Incidental Records	
Project Title	
Umma More Renewable Energy Development	
Drawn By	Checked By
D. Woods	P. Cregg
Project No.	Drawing No.
201050	Fig. 7-4-24
Scale	Date
1:50000	31.01.23
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9.

TEAL

Table 7 - 4 - 26 Teal Vantage Point Survey

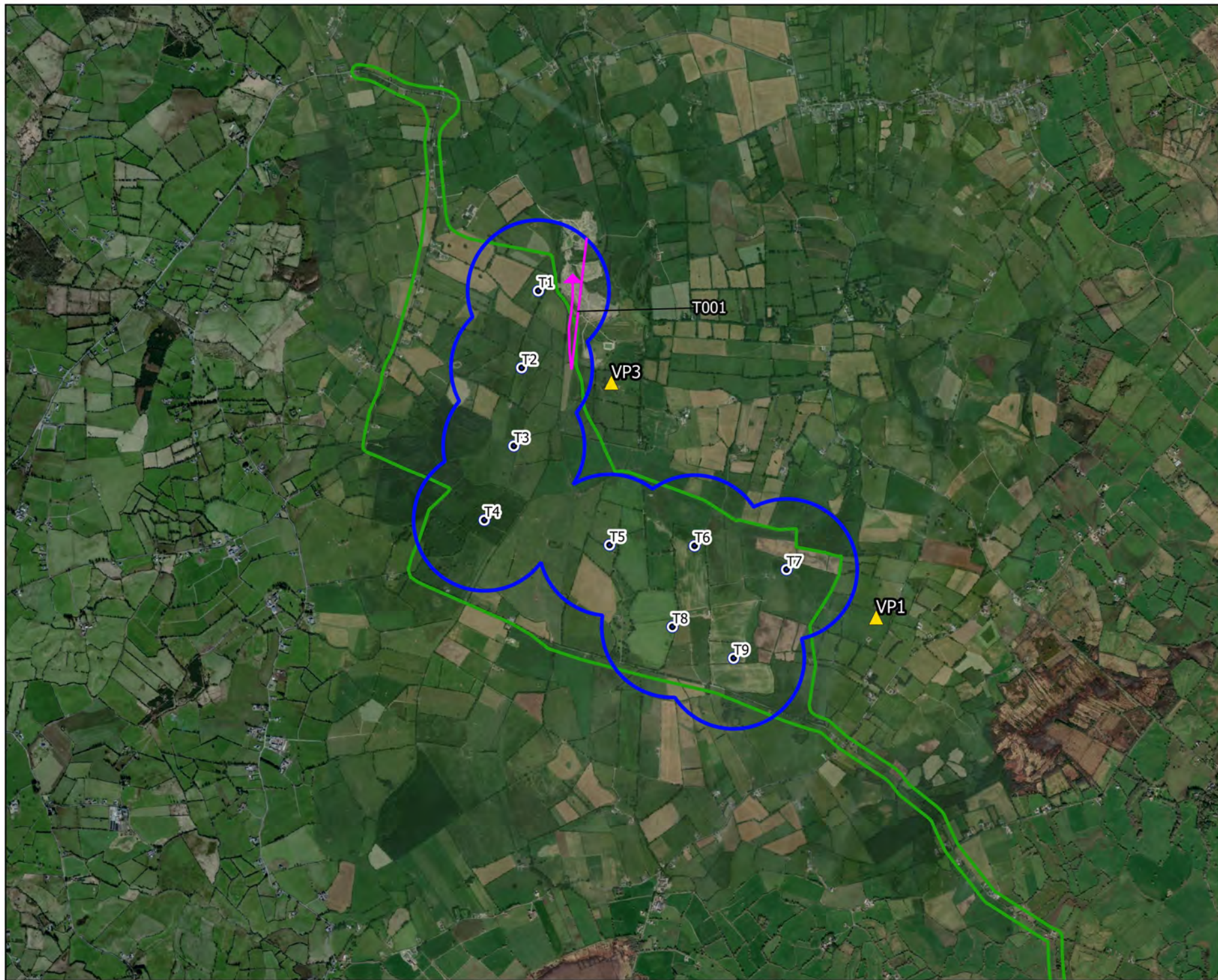
Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
T001	VP3	23/03/2021	09:11	Teal	4	16	0	0	16	0	watercourses, improved grassland and active quarries and mines; flew across viewshed heading north. not sure where they came from. lost over quarry.	PDC

Table 7 - 4 - 27 Teal Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
T001	16/12/2019	09:52	Teal	2	wet grassland; flushed from river (wintering)	PM
T002	22/01/2020	14:30	Teal	7	depositing/lowland rivers and wet grassland; flushed (wintering)	PM
T003	08/01/2021	16:01	Teal	8	depositing/lowland rivers; flew away, flushed from a river (wintering)	KOC
T004	08/01/2021	16:14	Teal	3	depositing/lowland rivers; flew away, flushed (wintering)	KOC

Table 7 - 4 - 28 Teal Waterbird Distribution Survey

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
T001	Lough Sewdy	09/12/2020	10:45	Teal	1	lakes and ponds and non-calcareous springs; flew across lake and settled in reeds, near where ma settled	PC
T002	Pond near Calliaghstown	14/01/2021	14:04	Teal	32	eutrophic lakes; swimming	KOC
T003	Lough Sewdy	14/01/2021	15:36	Teal	1	reed and large sedge swamps; calling, calling in reeds	KOC
T004	Raheen	22/03/2021	10:29	Teal	5	improved grassland; feeding on floodwater in field at side of moyvoughly road	PDC



Map Legend

-  EIA Site Boundary
-  Turbine Layout
-  500m Radius of Turbines
-  VP Locations
-  Flight Observation



Drawing Title

**Teal Vantage Point Survey
Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-25

Scale

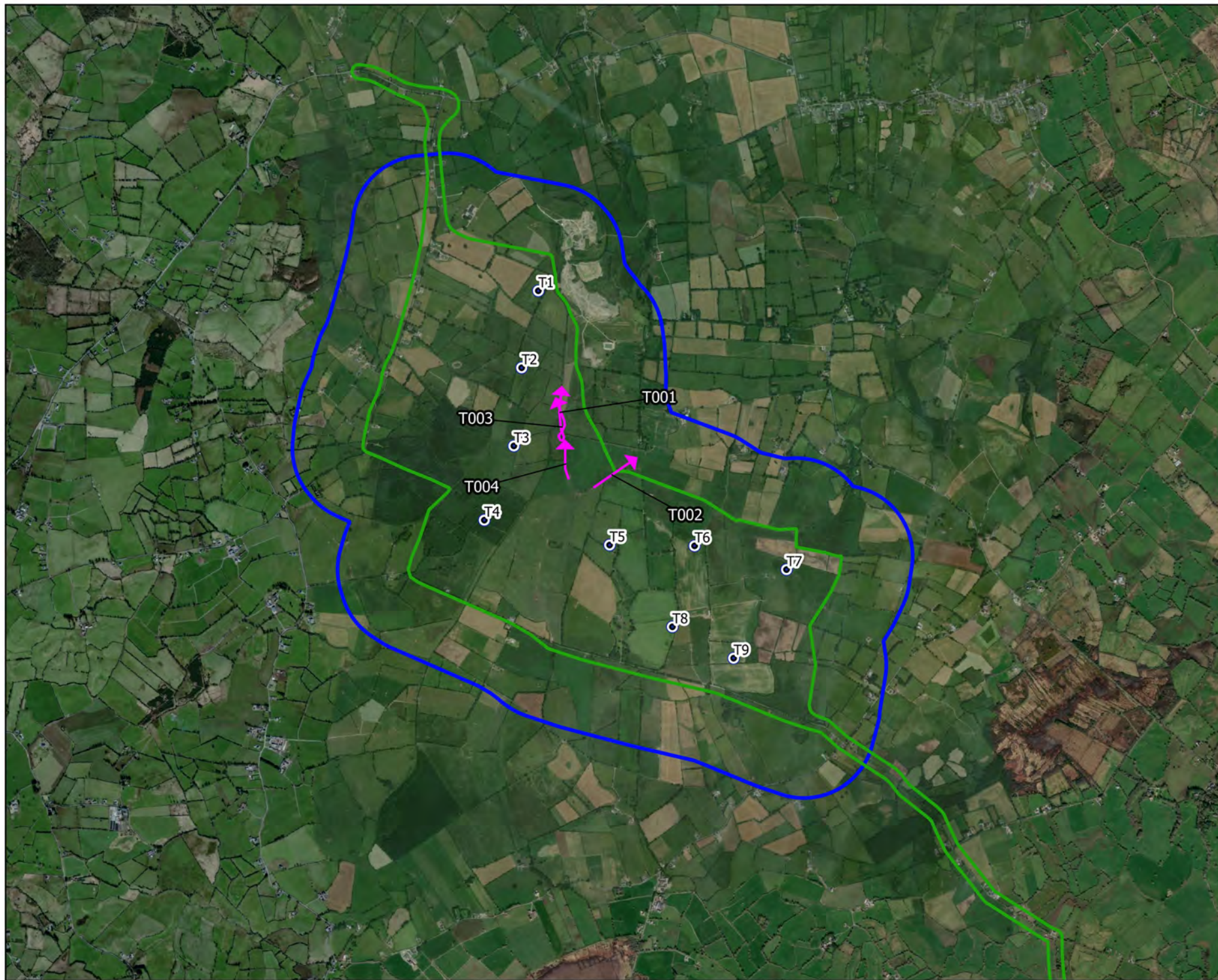
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Map Legend

-  EIA Site Boundary
-  Turbine Layout
-  500m Survey Radius
-  Flight Observation



Drawing Title

**Teal Winter Walkover Survey
Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-26

Scale

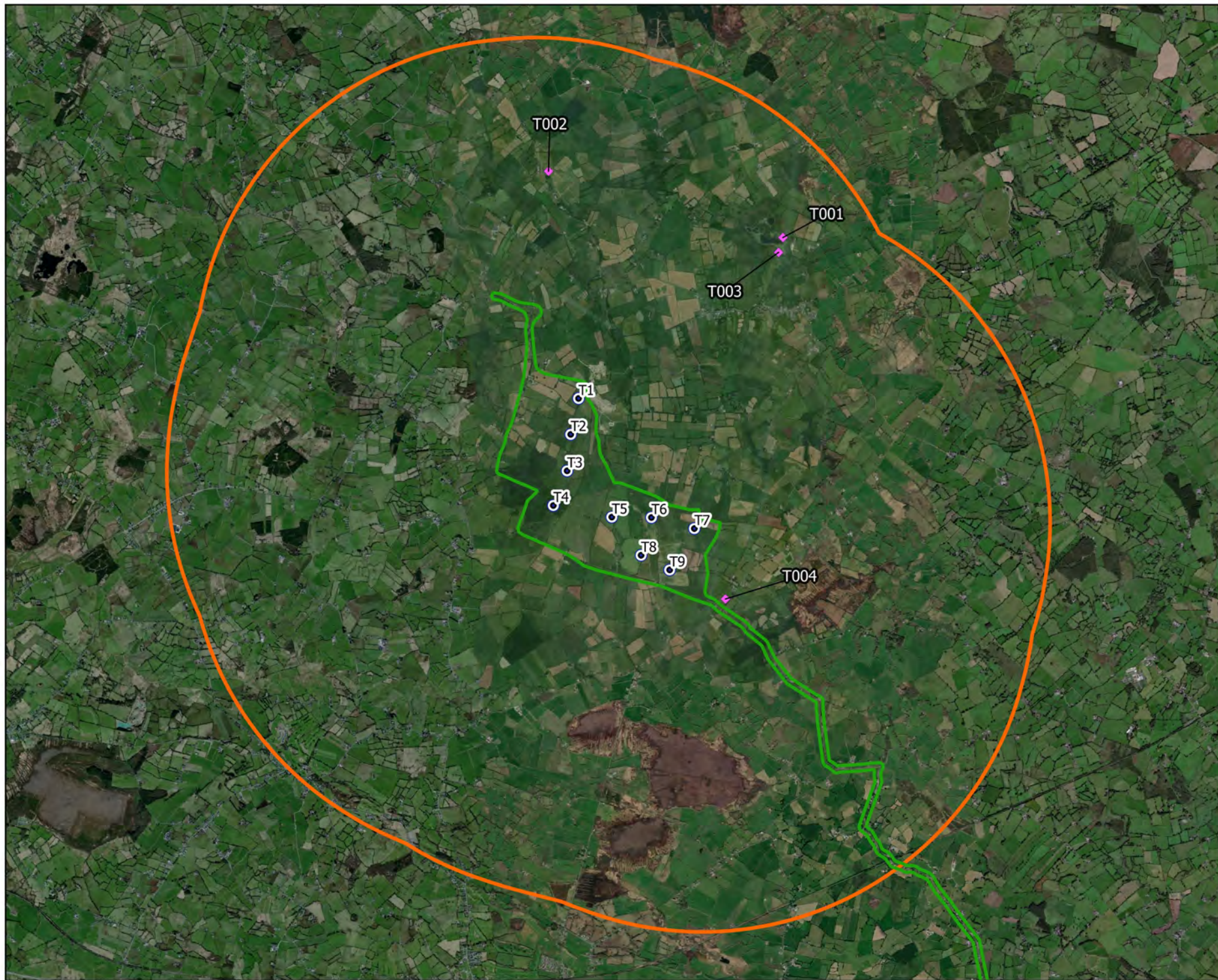
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Map Legend

-  EIA Site Boundary
-  Turbine Layout
-  5km Survey Radius
-  Observation



Drawing Title	
Teal Waterbird Distribution Survey Observations	
Project Title	
Umma More Renewable Energy Development	
Drawn By	Checked By
D. Woods	P. Cregg
Project No.	Drawing No.
201050	Fig. 7-4-27
Scale	Date
1:75000	31.01.23
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10.

SNIPE

Table 7 - 4 - 29 Snipe Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
SN001	VP1	16/10/2019	19:15	Snipe	1	10	0	0	0	0	improved agricultural grassland; calling/travelling	PM
SN002	VP3	24/10/2019	18:54	Snipe	1	10	10	0	0	0	improved agricultural grassland; travelling; calling	PM
SN003	VP1	13/11/2019	07:18	Snipe	1	20	20	0	0	0	improved agricultural grassland; flew from field	PM
SN004	VP1	10/12/2019	11:02	Snipe	1	99	9	10	80	0	improved agricultural grassland; flew from field	PM
SN005	VP1	10/12/2019	11:03	Snipe	1	15	0	0	0	0	improved agricultural grassland; flushed by observer	PM
SN006	VP1	10/12/2019	11:26	Snipe	1	46	0	0	46	0	improved agricultural grassland; travelling high	PM
SN007	VP1	10/12/2019	17:02	Snipe	1	5	5	0	0	0	improved agricultural grassland; travelling low	PM
SN008	VP1	10/12/2019	17:03	Snipe	3	10	0	10	0	0	improved agricultural grassland; travelling	PM
SN009	VP1	10/12/2019	17:07	Snipe	1	5	0	0	0	0	improved agricultural grassland; travelling	PM
SN010	VP3	07/01/2021	13:04	Snipe	1	125	0	125	0	0	improved agricultural grassland; circling	PM
SN011	VP3	07/01/2021	13:36	Snipe	1	173	0	0	173	0	improved agricultural grassland; travelling	PM

Table 7 - 4 - 30 Snipe Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
SN001	25/10/2019	10:19	Snipe	3	wet grassland; flushed (wintering)	PM
SN002	25/10/2019	11:53	Snipe	1	wet grassland; flushed (wintering)	PM
SN003	25/10/2019	13:36	Snipe	2	wet grassland; flushed (wintering)	PM
SN004	25/10/2019	13:39	Snipe	2	wet grassland; flushed (wintering)	PM
SN005	16/12/2019	11:49	Snipe	8	wet grassland; flushed (wintering)	PM
SN006	16/12/2019	12:39	Snipe	3	wet grassland; flushed (wintering)	PM
SN007	16/12/2019	13:21	Snipe	1	wet grassland; flushed (wintering)	PM
SN008	22/01/2020	13:01	Snipe	1	wet grassland; flushed (wintering)	PM
SN009	22/01/2020	13:04	Snipe	2	wet grassland; flushed (wintering)	PM
SN010	22/01/2020	13:14	Snipe	7	wet grassland; flushed (wintering)	PM
SN011	08/01/2021	13:01	Snipe	1	improved agricultural grassland and hedgerows; flew away, flushed (wintering)	KOC
SN012	08/01/2021	13:06	Snipe	1	improved agricultural grassland; flew away, flushed (wintering)	KOC
SN013	08/01/2021	13:07	Snipe	1	improved agricultural grassland; flying calling (wintering)	KOC
SN014	08/01/2021	13:51	Snipe	1	improved agricultural grassland; flew away, flushed (wintering)	KOC

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
SN015	08/01/2021	14:03	Snipe	2	improved agricultural grassland; flew away to another field, flushed (wintering)	KOC
SN016	08/01/2021	14:06	Snipe	1	improved agricultural grassland; flew away, flushed (wintering)	KOC
SN017	08/01/2021	15:35	Snipe	1	drainage ditches; flew away, flushed from a ditch (wintering)	KOC
SN018	08/01/2021	16:05	Snipe	1	depositing/lowland rivers; flew away, flushed from icy river shore (wintering)	KOC

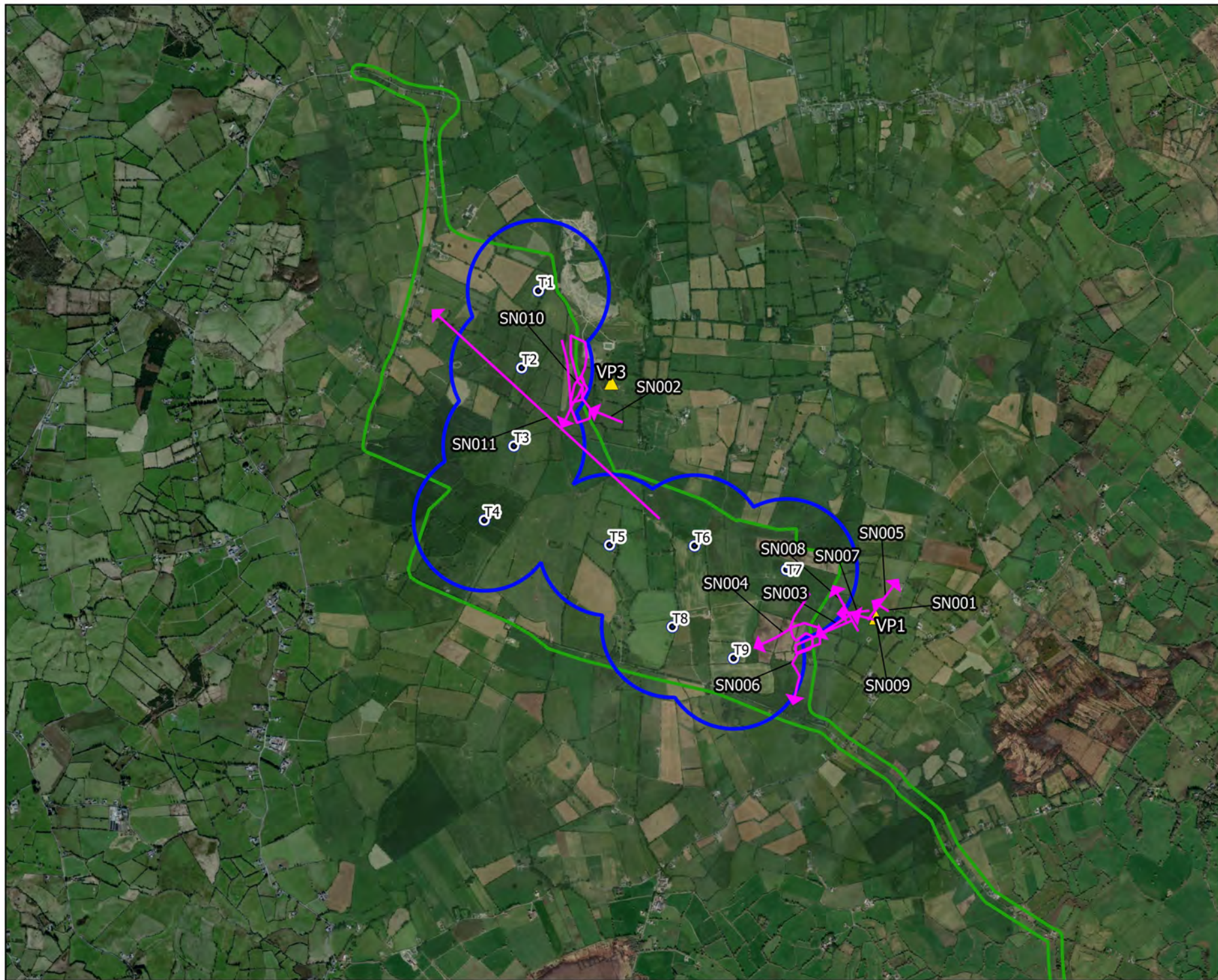
Table 7 - 4 - 31 Snipe Waterbird Distribution Survey

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
SN001	Lough Sewdy	12/05/2020	09:56	Snipe	1	poor fen and flush; flushed	PM
SN002	Lough Sewdy	12/05/2020	09:58	Snipe	1	poor fen and flush; drumming	PM
SN003	Lough Sewdy	17/09/2020	07:30	Snipe	1	reed and large sedge swamps; flew up from behind reeds, 30 second flight and settled in field to right of car park	PC
SN004	Kilnahinch Bog	17/09/2020	08:30	Snipe	1	bogs; flushed from bog, flew into bog and landed following very brief flight	PC
SN005	Lough Sewdy	02/11/2020	09:50	Snipe	6	limestone/marl lakes and improved agricultural grassland; flying low over the lake, south west to north east then back again, repeated a number of times. something obviously spooked them but i didn't see what. lost off to the north east.	PC
SN006	Lough Sewdy	19/11/2020	10:20	Snipe	3	non-calcareous springs; flushed from alongside footpath leading into reeds on south side of car park	PC

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
SN007	Lough Sewdy	18/12/2020	10:19	Snipe	30	improved grassland; flew in from south east and settled on grassland to east. lots of calling., count is approximate as flock caught me by surprise.	PC
SN008	Ballinderry Bog	14/01/2021	10:21	Snipe	1	cutover bog; flew away flushed	KOC
SN009	Ballinderry Bog	14/01/2021	10:29	Snipe	1	cutover bog; flew away flushed	KOC
SN010	Ballinderry Bog	14/01/2021	11:20	Snipe	1	cutover bog; flew away flushed	KOC
SN011	Gortnadoofa Bog	14/01/2021	12:02	Snipe	1	cutover bog; flew away flushed	KOC
SN012	Lough Sewdy	14/01/2021	15:32	Snipe	2	tall-herb swamps; flushed	KOC
SN013	Lough Sewdy	14/01/2021	15:34	Snipe	1	tall-herb swamps; flushed	KOC
SN014	Lough Sewdy	28/01/2021	11:58	Snipe	1	reed and large sedge swamps; flushed	KOC
SN015	Lough Sewdy	28/01/2021	12:08	Snipe	3	reed and large sedge swamps; flushed	KOC
SN016	Gortnadoofa Bog	28/01/2021	14:38	Snipe	1	cutover bog; flushed	KOC
SN017	Lough Sewdy	01/02/2021	10:22	Snipe	1	wet grassland; flushed from wet grassland, footpath leads out into reeds through wet grassland	PC
SN018	Moyvoughly Bog	22/03/2021	11:10	Snipe	1	bogs; flushed from side of bog road	PDC

Table 7 - 4 - 32 Snipe Incidental Records

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
n/a	Breeding Raptor Survey; RVP7	23/07/2020	08:45	Snipe	1	bogs; flushed from edge of bog, not mapped	PC
SN001	Vantage Point Survey; VP1	21/01/2021	07:33	Snipe	1	improved agricultural grassland; flushed	PM
SN002	Breeding Raptor Survey; RVP2	20/04/2019	16:49	Snipe	1	cutover bog;	JC
SN003	Breeding Raptor Survey; RVP4	26/06/2020	08:49	Snipe	1	improved agricultural grassland; chipping	JK
SN004	Breeding Raptor Survey; RVP7	26/06/2020	10:15	Snipe	1	cutover bog; drumming	JK



Map Legend

- Eiar Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title

Snipe Vantage Point Survey Observations

Project Title

Umma More Renewable Energy Development

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-28

Scale

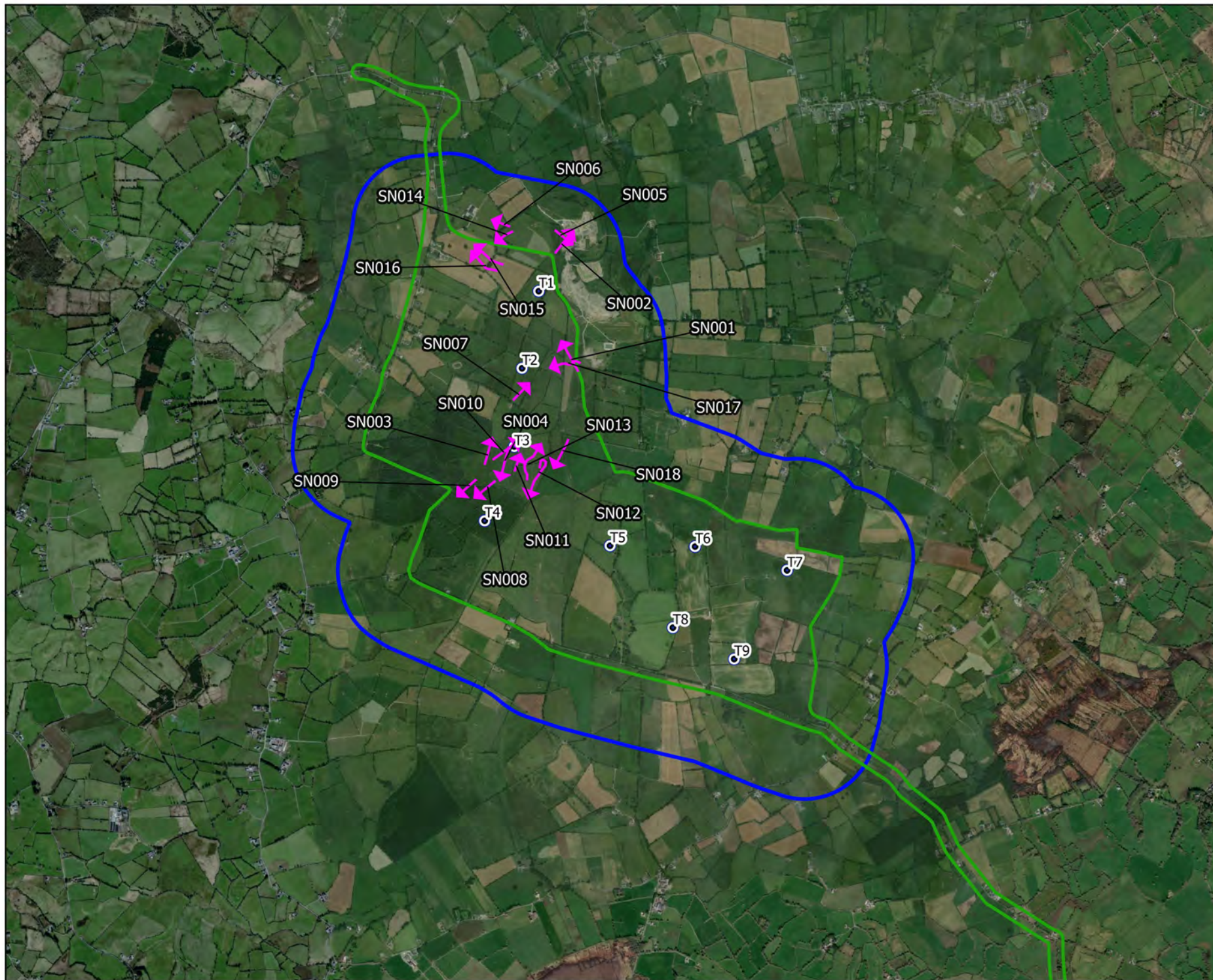
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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title

Snipe Winter Walkover Survey Observations

Project Title

Umma More Renewable Energy Development

Drawn By

D. Woods

Checked By

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Project No.

201050

Drawing No.

Fig. 7-4-29

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Map Legend

- EIA Site Boundary
- Turbine Layout
- 5km Survey Radius
- ◆ Observation



Drawing Title

**Snipe Waterbird Distribution
Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

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Project No.

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Drawing No.

Fig. 7-4-30

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Map Legend

- EIA Site Boundary
- Turbine Layout
- Flight Observation



Drawing Title	
Snipe Incidental Records	
Project Title	
Umma More Renewable Energy Development	
Drawn By	Checked By
D. Woods	P. Cregg
Project No.	Drawing No.
201050	Fig. 7-4-31
Scale	Date
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11.

KESTREL

Table 7 - 4 - 33 Kestrel Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
K001	VP1	16/07/2019	18:40	Kestrel	2	540	0	10	530	0	improved agricultural grassland and hedgerows; flying, gliding north. these k met another unknown raptor at the hill and both k descended. then one was followed until 18:49 when it was lost.	PW
K002	VP3	17/07/2019	12:32	Kestrel	1	80	0	10	70	0	active quarries and mines; flying at first then hovering. then dropped down and flew behind a clay bank when lost from view.	PW
K003	VP3	17/07/2019	12:46	Kestrel	1	65	0	35	30	0	active quarries and mines and scrub; flying, hovering, hunting. dropped and flew behind clay bank. disappeared briefly before that too and lost behind bank.	PW
K004	VP3	17/07/2019	12:55	Kestrel	1	810	5	405	400	0	scrub and active quarries and mines; hunting by hovering over scrub gorse and grass in quarry where machinery was working. dropping down multiple times and coming back up again. it perched at 12:59:25 for 5 seconds.	PW
K005	VP3	17/07/2019	13:21	Kestrel	1	210	0	10	200	0	active quarries and mines and scrub; seen hunting and hovering. lost from view at 13:25.	PW
K006	VP3	17/07/2019	13:15	Kestrel	1	180	0	30	150	0	active quarries and mines and scrub; hovering and hunting.	PW
K007	VP3	17/07/2019	13:58	Kestrel	1	120	0	0	120	0	active quarries and mines and hedgerows; back hunting in quarry.	PW

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
K008	VP3	17/07/2019	15:40	Kestrel	1	270	0	10	260	0	active quarries and mines and scrub; hovering and hunting.	PW
K009	VP3	17/07/2019	15:55	Kestrel	1	110	0	0	110	0	active quarries and mines and scrub; hovering and flying.	PW
K010	VP3	17/07/2019	16:30	Kestrel	10	10	0	10	0	0	active quarries and mines; flying	PW
K011	VP3	17/07/2019	17:47	Kestrel	1	150	0	0	150	0	improved agricultural grassland, hedgerows and active quarries and mines; flying, hovering, hunting.	PW
K012	VP3	17/07/2019	18:23	Kestrel	1	20	0	20	0	0	active quarries and mines; mobbing a bz that was perched on quarry wall . calling, then flew down into quarry to southwest.	PW
K013	VP1	18/07/2019	11:40	Kestrel	1	295	0	0	295	0	improved agricultural grassland, hedgerows and conifer plantation; flying, gliding and hanging in wind. soaring, lost when it descended behind wd4.	PW
K014	VP1	29/08/2019	16:31	Kestrel	1	120	10	110	0	0	improved agricultural grassland; flying	JC
K015	VP1	29/08/2019	18:34	Kestrel	1	40	40	0	0	0	improved agricultural grassland; flying, juvenile	JC
K016	VP3	18/09/2019	09:51	Kestrel	1	68	0	68	0	0	improved agricultural grassland; hunting	JK
K017	VP3	18/09/2019	10:34	Kestrel	1	77	0	77	0	0	improved agricultural grassland; hunting	JK
K018	VP1	16/10/2019	13:18	Kestrel	1	217	0	0	217	0	improved agricultural grassland; hunting	PM

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
K019	VP3	12/11/2019	11:13	Kestrel	1	25	0	0	25	0	wet grassland; hunting; female-type	PM
K020	VP3	12/11/2019	11:40	Kestrel	1	139	0	39	100	0	wet grassland and improved agricultural grassland; hunting; landed on dead tree; female-type	PM
K021	VP3	12/11/2019	11:43	Kestrel	1	30	30	0	0	0	improved agricultural grassland; travelling low; took off from dead tree; female-type	PM
K022	VP3	12/11/2019	12:08	Kestrel	1	228	0	128	100	0	improved agricultural grassland; hunting; female-type	PM
K023	VP3	12/11/2019	12:49	Kestrel	1	51	0	0	51	0	improved agricultural grassland; hunting; female-type	PM
K024	VP3	11/12/2019	14:37	Kestrel	1	108	0	108	0	0	wet grassland; hunting	PM
K025	VP3	17/01/2020	12:20	Kestrel	1	35	0	35	0	0	mixed broadleaved/conifer woodland; travelling; landed in tree out of view	PM
K026	VP1	17/02/2020	12:46	Kestrel	1	81	0	0	81	0	wet grassland and improved agricultural grassland; hunting	PM
K027	VP1	16/04/2020	16:50	Kestrel	1	5	5	0	0	0	arable crops and hedgerows; brief low flight	TR
K028	VP3	17/04/2020	15:50	Kestrel	1	300	0	90	210	0	improved agricultural grassland and exposed sand, gravel or till; high circling, female	TR
K029	VP3	17/04/2020	15:55	Kestrel	1	420	0	60	360	0	exposed sand, gravel or till; high circling female, sign of display behaviour	TR
K030	VP3	17/04/2020	17:05	Kestrel	1	60	0	0	60	0	disturbed ground; male, high display type flight	TR

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
K031	VP3	17/04/2020	17:33	Kestrel	1	300	0	100	200	0	wet grassland; high circle and stoop indicating display and breeding territory, hunting also	TR
K032	VP3	17/04/2020	19:05	Kestrel	1	30	0	30	0	0	wet grassland; hunting	TR
K033	VP3	17/04/2020	19:45	Kestrel	1	25	0	25	0	0	conifer plantation; low over trees travelling on	TR
K034	VP3	17/04/2020	20:30	Kestrel	1	90	0	90	0	0	wet grassland; hunting	TR
K035	VP1	25/08/2020	19:09	Kestrel	1	35	0	35	0	0	improved agricultural grassland; hunting	PM
K036	VP1	25/08/2020	20:10	Kestrel	1	27	0	0	27	0	improved agricultural grassland; travelling	PM
K037	VP3	15/09/2020	07:40	Kestrel	1	18	18	0	0	0	improved agricultural grassland and active quarries and mines; flew across in front of vp and settled in dead tree used by bz001. chased by corvids into next tree. still in tree at 7:50, but gone by 8:00. didn't see bird leave or where it went. young male just moulting into adult plumage.	PM
K038	VP3	15/09/2020	11:35	Kestrel	1	10	10	0	0	0	improved agricultural grassland; very brief low flight across front of vp. came out from behind trees right in front of vp, flew north and disappeared behind big tree to right of vp. strange as trees are close to vp but no sign of bird once it had gone behind tree., 11:50 - bird located again near cattle pen to right and just behind vp. chased by corvids and heard calling but not seen again.	PM

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
K039	VP1	18/09/2020	08:50	Kestrel	1	12	12	0	0	0	improved agricultural grassland; juvenile bird perched on the chimney of the house to left of vp then flew off heading south. lost behind trees	PM
K040	VP1	18/09/2020	09:02	Kestrel	1	10	10	0	0	0	improved agricultural grassland; brief view of bird in flight below vp, probably same bird as k003.	PM
K041	VP1	18/09/2020	09:50	Kestrel	1	11	11	0	0	0	improved agricultural grassland; flew up from field next to vp, settled briefly in tree then flew off heading north. lost behind hedgerow.	PM
K042	VP1	18/09/2020	10:48	Kestrel	1	86	0	86	0	0	improved agricultural grassland; hunting in front of vp, heading north to south. dropped below vp, didn't see where it went.	PM
K043	VP1	12/10/2020	16:21	Kestrel	1	165	45	120	0	0	improved agricultural grassland; spotted hovering north of vp. hunted over viewshed heading south before turning north again. lost behind vp over fields on opposite side of road to vp.	PC
K044	VP3	16/02/2021	11:14	Kestrel	1	136	0	97	39	0	improved agricultural grassland and hedgerows; hunting over fields. came from south below sun, lost in brightness under sun, couldn't tell sex as i was looking towards sun. very bright sky.	PDC

Table 7 - 4 - 34 Kestrel Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
K001	27/10/2020	08:30	Kestrel	1	improved agricultural grassland and hedgerows; perched on telegraph pole at side of road (wintering)	PC
K002	24/03/2021	12:01	Kestrel	1	improved grassland and treelines; brief view in flight (wintering)	PDC
K003	24/03/2021	12:57	Kestrel	1	improved agricultural grassland; female hunting over field (wintering)	PDC

Table 7 - 4 - 35 Kestrel Breeding Raptor Survey

Map Ref.	BRVP	Date	Time	Species	Number	Habitat and activity	Breeding status	Surveyor
K001	RVP4	30/04/2019	14:41	Kestrel	1	conifer plantation and improved agricultural grassland, hunting	suitable nesting habitat; possible breeder	JC
K002	RVP4	31/05/2019	10:11	Kestrel	1	semi-natural woodland, scrub and improved agricultural grassland, hunting	suitable nesting habitat; possible breeder	JC
K003	RVP4	26/06/2019	15:58	Kestrel	1	improved agricultural grassland and hedgerows, hunting male, perched for a minute by rvp	suitable nesting habitat; possible breeder	JC
K004	RVP1	12/06/2020	07:15	Kestrel	1	wet willow-alder-ash woodland and bog woodland, flight	suitable nesting habitat; possible breeder	NG
K005	RVP2	12/06/2020	15:45	Kestrel	1	raised bog, mixed conifer woodland and wet willow-alder-ash woodland, hunting	suitable nesting habitat; possible breeder	NG

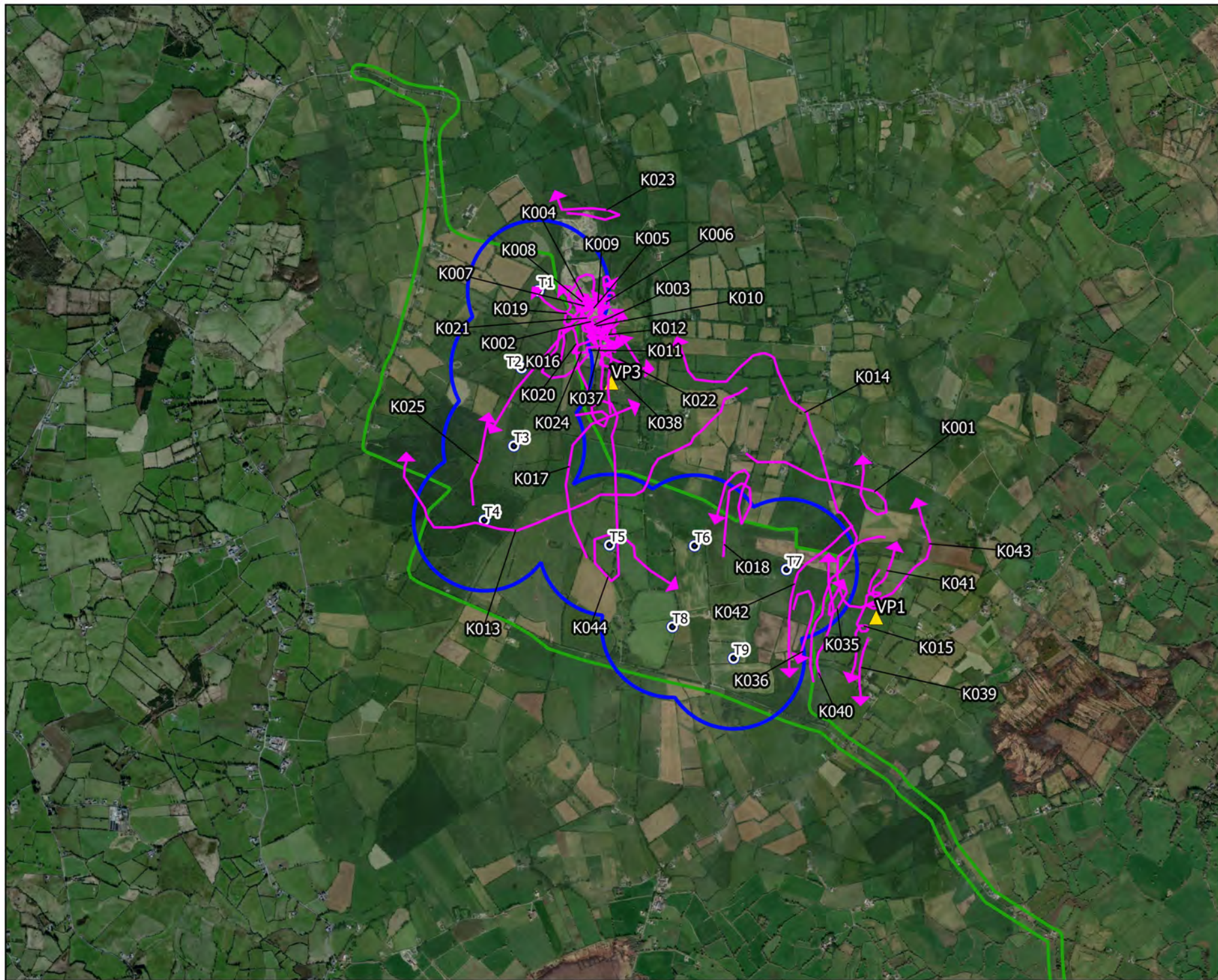
Table 7 - 4 - 36 Kestrel Incidental Records

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
K001	Waterfowl Distribution Survey; Moyvoughly Bog	10/08/2020	11:22	Kestrel	2	cutover bog; travelling, incidental - 2 females	PM
K002	Waterfowl Distribution Survey; Dungolman River	02/11/2020	-	Kestrel	1	improved agricultural grassland; male flew across road and settled in roadside tree.	PC
K003 & K004	Waterfowl Distribution Survey; Rosemount	02/11/2020	-	Kestrel	2	improved agricultural grassland; one in flight over road to rosemount from ballymore and one in flight nearer to rosemount.	PC
K005	Waterfowl Distribution Survey; Farmland near Raheen	14/01/2021	12:54	Kestrel	1	improved agricultural grassland and hedgerows; perching	KOC
K006	Waterfowl Distribution Survey; Moyvoughly Bog	28/01/2021	10:16	Kestrel	1	cutover bog; flying	KOC
K007	Waterfowl Distribution Survey; Moyvoughly Bog	28/01/2021	10:37	Kestrel	1	cutover bog; flying, hunting	KOC
K008	Waterfowl Distribution Survey; Moyvoughly Bog	22/03/2021	11:11	Kestrel	1	treelines and bogs; perched in tree at side of road then flew off towards bog	PDC
K009	Waterfowl Distribution Survey; Moyvoughly Bog	22/03/2021	11:49	Kestrel	1	improved agricultural grassland; flying alongside road	PDC
K010	Waterfowl Distribution Survey; Raheen	22/03/2021	11:52	Kestrel	2	improved agricultural grassland and treelines; one in flight seemed to flush second bird from field.	PDC

Table 7 - 4 - 37 Kestrel Supplementary Data

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
K001	VP2b	22/07/2019	17:44	Kestrel	1	40	0	40	0	0	improved agricultural grassland and hedgerows; flew low across fields after	PW

											flushing a flock of goldfinches, mobbed by swallows and house martins.	
K002	VP4	27/08/2019	16:36	Kestrel	1	600	100	100	400	0	improved agricultural grassland, hedgerows and conifer plantation; hunting	JC
K003	VP4	27/08/2019	16:51	Kestrel	1	15	0	5	10	0	conifer plantation; hunting	JC
K004	VP4	27/08/2019	17:32	Kestrel	1	40	0	5	35	0	improved agricultural grassland and hedgerows; hunting	JC
K005	VP4	27/08/2019	18:03	Kestrel	1	60	0	20	40	0	improved agricultural grassland and hedgerows; hunting, mobbed	JC
K006	VP4	27/08/2019	20:17	Kestrel	1	40	5	0	35	0	improved agricultural grassland; hunting	JC



Map Legend

- EIAR Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title

**Kestrel Vantage Point Survey
Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-32

Scale

1:35000

Date

31.01.23



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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title

Kestrel Winter Walkover Survey Observations

Project Title

Umma More Renewable Energy Development

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-33

Scale

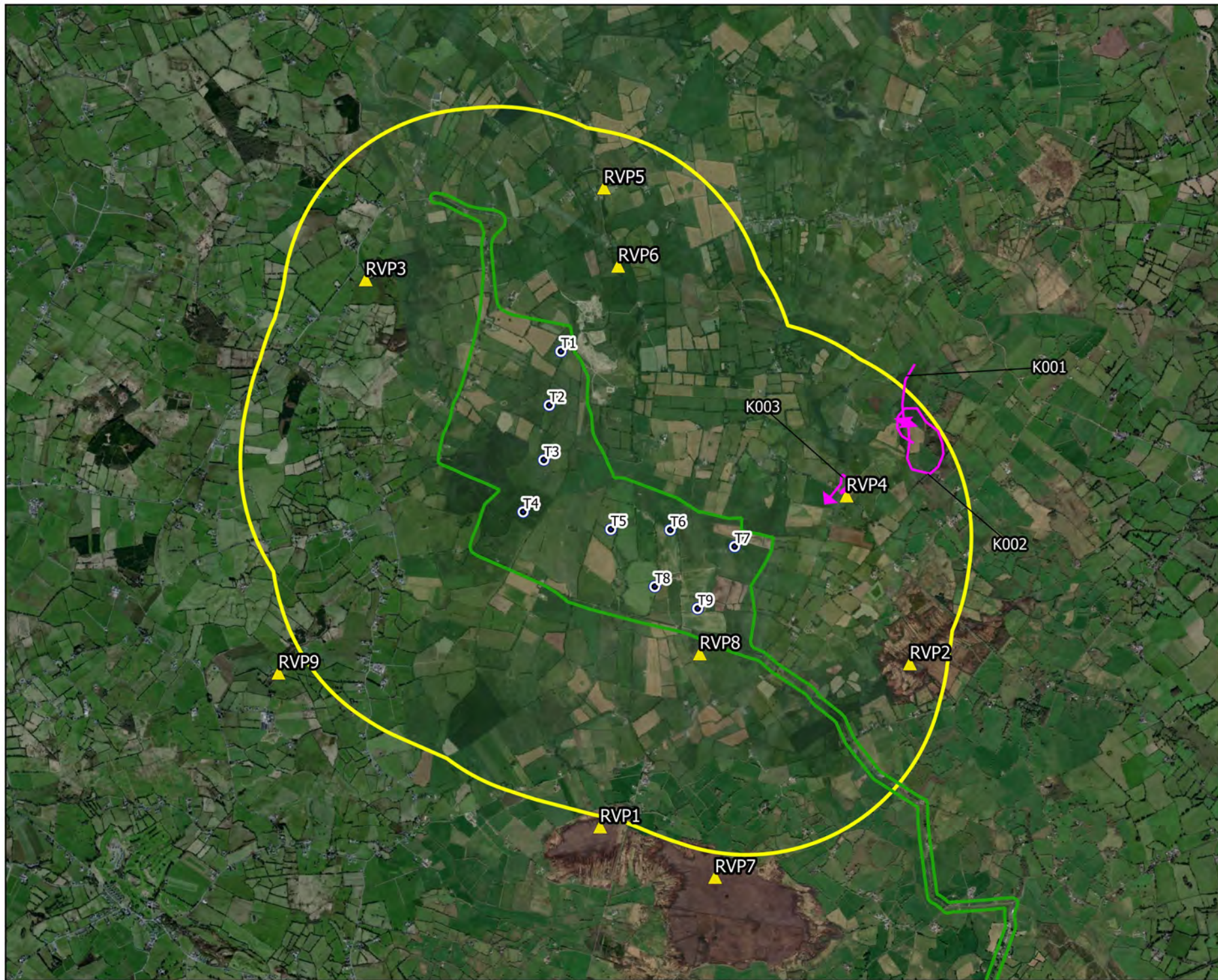
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Date

31.01.23



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Map Legend

- EIA Site Boundary
- Turbine Layout
- 2km Survey Radius
- RVP Locations
- Flight Observation

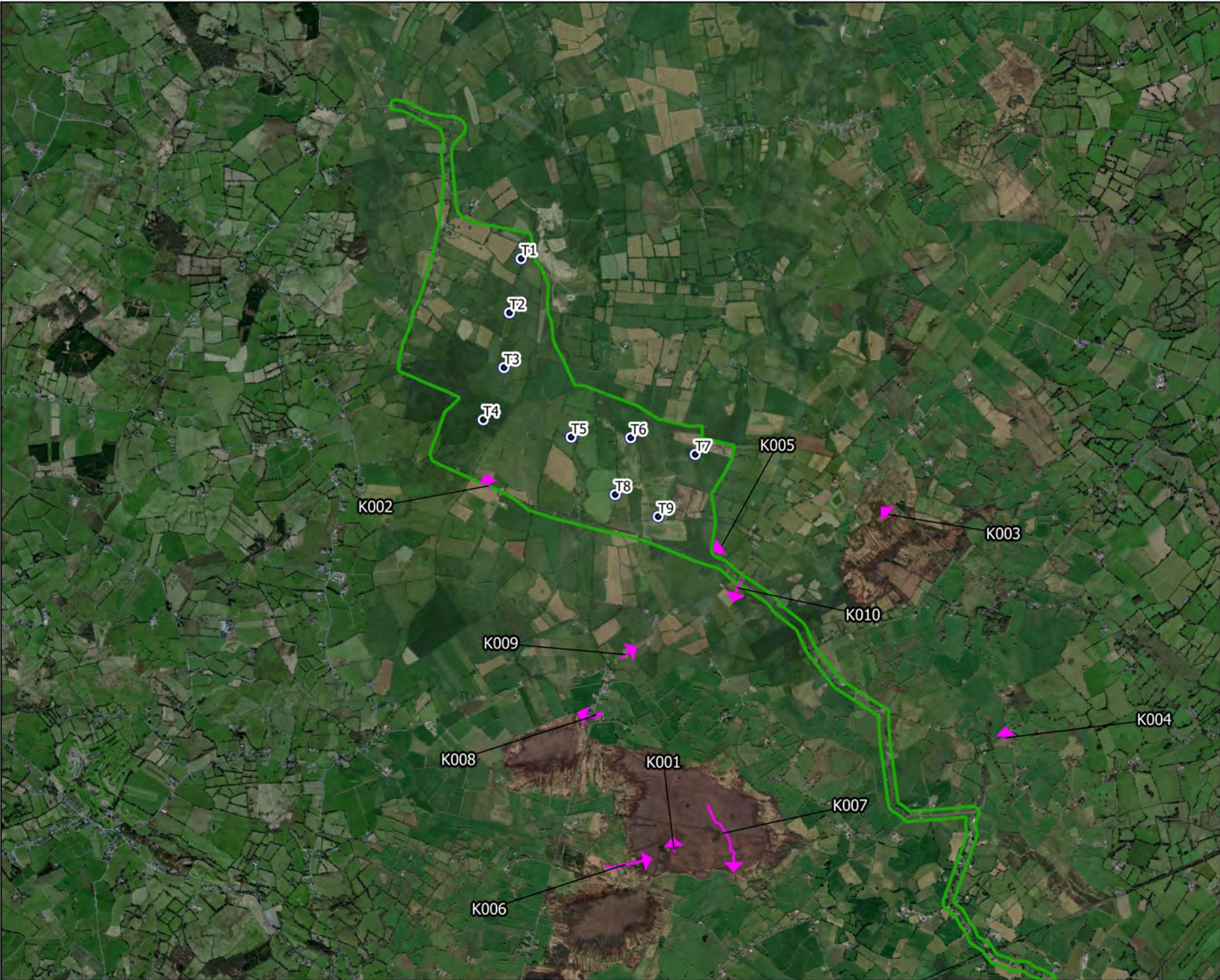


Drawing Title:
**Kestrel Breeding Raptor Survey
Observations**

Project Title:
**Umma More Renewable Energy
Development**

Drawn By	Checked By
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Project No.	Drawing No.
201050	Fig. 7-4-34
Scale	Date
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Map Legend

- EIA Site Boundary
- Turbine Layout
- Flight Observation



Drawing Title

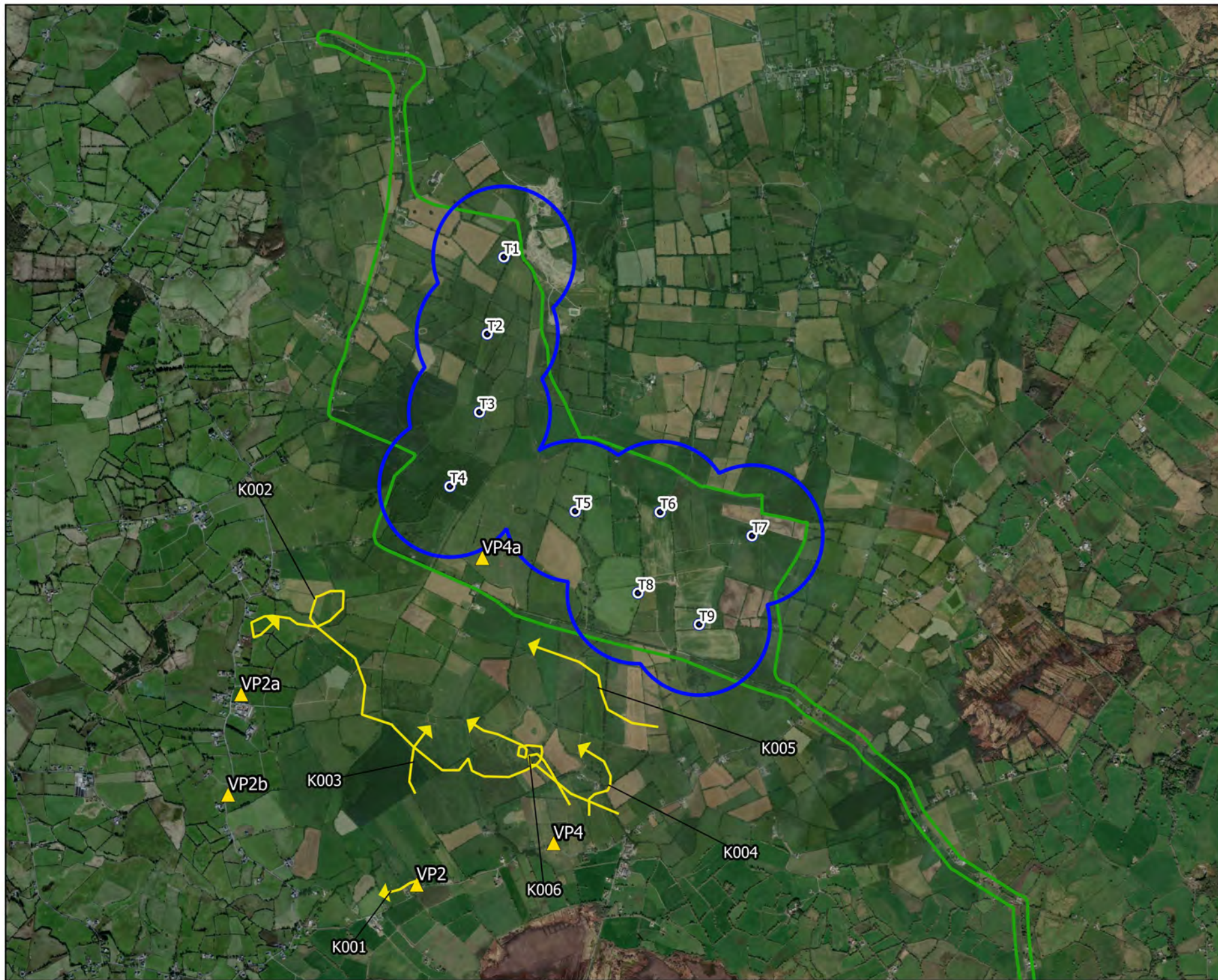
Kestrel Incidental Records

Project Title

Umma More Renewable Energy Development

Drawn By	Checked By
D. Woods	P. Cregg
Project No.	Drawing No.
201050	Fig. 7-4-35
Scale	Date
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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- Flight Observation



Drawing Title

Kestrel Supplementary Data

Project Title

Umma More Renewable Energy Development

Drawn By

D. Woods

Checked By

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Project No.

201050

Drawing No.

Fig. 7-4-36

Scale

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Date

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12.

BUZZARD

Table 7 - 4 - 38 Buzzard Vantage Point Survey (flights)

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ001	VP3	29/04/2019	17:23	Buzzard	1	25	0	25	0	0	improved agricultural grassland, hedgerows and conifer plantation; flying, mobbed by ro's, flying s	JC
BZ002	VP3	21/05/2019	10:01	Buzzard	1	360	0	0	150	210	conifer plantation, improved agricultural grassland and hedgerows; hunting	JC
BZ003	VP3	21/05/2019	10:11	Buzzard	1	20	0	10	10	0	improved agricultural grassland; flying, a different bird to previous	JC
BZ004	VP1	22/05/2019	09:23	Buzzard	1	25	0	0	25	0	improved agricultural grassland and treelines; flying	JC
BZ005	VP3	24/06/2019	13:09	Buzzard	1	20	0	0	20	0	improved agricultural grassland and treelines; mobbed, mobbed by several hundred ro and jd offsite	JC
BZ006	VP3	24/06/2019	13:32	Buzzard	1	120	0	0	120	0	improved agricultural grassland and treelines; soaring, moved off site	JC
BZ007	VP3	24/06/2019	14:10	Buzzard	1	20	0	20	0	0	improved agricultural grassland; flying	JC
BZ008	VP3	24/06/2019	14:36	Buzzard	2	120	0	20	100	0	improved agricultural grassland; pair flying and soaring. calling repeatedly	JC
BZ009	VP1	27/06/2019	10:11	Buzzard	1	360	20	40	300	0	conifer plantation, improved agricultural grassland and wet grassland; hunting	JC
BZ010	VP1	27/06/2019	10:12	Buzzard	1	20	0	0	20	0	conifer plantation; circling, noticed while observing other	JC

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ011	VP1	27/06/2019	11:36	Buzzard	1	20	0	0	20	0	conifer plantation and improved agricultural grassland; flying	JC
BZ012	VP1	27/06/2019	12:21	Buzzard	1	30	0	20	10	0	treelines and improved agricultural grassland; flying	JC
BZ013	VP1	27/06/2019	15:06	Buzzard	1	180	5	35	100	40	improved agricultural grassland, hedgerows and conifer plantation; flying	JC
BZ014	VP1	16/07/2019	21:03	Buzzard	1	300	300	0	0	0	improved agricultural grassland and hedgerows; perched on a tree in w11. dropped off perch at 21:08 and lost from view down the slope to the west.	PW
BZ015	VP3	17/07/2019	14:04	Buzzard	2	120	0	20	100	0	conifer plantation; one bz flying met another bz at area marked on map, both bz dropped and were lost from view.	PW
BZ016	VP3	17/07/2019	16:00	Buzzard	1	30	0	5	25	0	conifer plantation; soaring before dropping down and flying/gliding over trees and lost from view.	PW
BZ017	VP3	17/07/2019	16:14	Buzzard	1	270	0	0	270	0	improved agricultural grassland, hedgerows and active quarries and mines; soaring and calling over quarry, then ga1 and w11.	PW
BZ018	VP3	17/07/2019	17:58	Buzzard	1	60	0	0	60	0	improved agricultural grassland and hedgerows; soaring over farmland	PW
BZ019	VP3	17/07/2019	18:23	Buzzard	1	15	0	0	15	0	conifer plantation; soaring	PW
BZ020	VP3	17/07/2019	18:23	Buzzard	1	15	0	15	0	0	improved agricultural grassland, hedgerows and active quarries and mines; perched and then flying, mobbed by k and then flew to ga1, lost behind w11 to east.	PW

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ021	VP1	18/07/2019	10:02	Buzzard	1	145	0	15	130	0	improved agricultural grassland, hedgerows and arable crops; soaring and gliding over maize crop.	PW
BZ022	VP1	18/07/2019	11:20	Buzzard	1	60	0	5	55	0	improved agricultural grassland and hedgerows; soaring, dropped down and was lost from view.	PW
BZ023	VP1	18/07/2019	12:20	Buzzard	2	450	0	0	450	0	improved agricultural grassland and hedgerows; soaring	PW
BZ024	VP1	29/08/2019	15:54	Buzzard	1	25	10	15	0	0	improved agricultural grassland; flying	JC
BZ025	VP3	31/08/2019	15:21	Buzzard	1	35	0	35	0	0	conifer plantation; flying	JC
BZ026	VP3	31/08/2019	15:55	Buzzard	2	180	30	30	120	0	conifer plantation, improved agricultural grassland and treelines; hunting, one juvenile	JC
BZ027	VP3	31/08/2019	20:56	Buzzard	1	220	10	10	200	0	conifer plantation and improved agricultural grassland; hunting	JC
BZ028	VP1	11/09/2019	11:37	Buzzard	1	118	0	0	118	0	improved agricultural grassland; soaring / travelling, male	JK
BZ029	VP3	18/09/2019	07:20	Buzzard	1	42	0	42	0	0	improved agricultural grassland; travelling	JK
BZ030	VP3	18/09/2019	11:48	Buzzard	2	237	0	0	237	0	improved agricultural grassland; soaring / travelling	JK
BZ031	VP1	16/10/2019	16:01	Buzzard	2	165	0	0	150	0	improved agricultural grassland; soaring	PM
BZ032	VP1	16/10/2019	16:46	Buzzard	2	123	0	33	90	0	improved agricultural grassland; circling/travelling	PM

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ033	VP3	24/10/2019	14:49	Buzzard	1	45	45	0	0	0	improved agricultural grassland; travelling low	PM
BZ034	VP1	13/11/2019	12:42	Buzzard	1	135	0	0	75	0	improved agricultural grassland; travelling	PM
BZ035	VP1	10/12/2019	12:44	Buzzard	1	12	12	0	0	0	improved agricultural grassland; travelling low near hedge	PM
BZ036	VP3	11/12/2019	11:03	Buzzard	1	45	45	0	0	0	wet grassland; hunting low	PM
BZ037	VP1	11/12/2019	11:13	Buzzard	1	24	24	0	0	0	improved agricultural grassland; travelling low	PM
BZ038	VP3	11/12/2019	11:18	Buzzard	1	12	12	0	0	0	wet grassland; travelling low; landed in trees	PM
BZ039	VP3	11/12/2019	11:36	Buzzard	1	68	68	0	0	0	wet grassland; hunting low; landed in tree	PM
BZ040	VP3	11/12/2019	13:33	Buzzard	1	45	0	45	0	0	wet grassland and mixed broadleaved/conifer woodland; travelling; mobbed by corvids	PM
BZ041	VP3	17/01/2020	09:20	Buzzard	1	65	65	0	0	0	improved agricultural grassland; travelling low	PM
BZ042	VP3	17/01/2020	10:25	Buzzard	1	10	0	10	0	0	improved agricultural grassland; travelling	PM
BZ043	VP3	13/02/2020	12:17	Buzzard	1	419	0	319	100	0	improved agricultural grassland; soaring/travelling	PM
BZ044	VP3	13/02/2020	14:00	Buzzard	5	286	0	0	286	0	mixed broadleaved/conifer woodland; circling	PM

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ045	VP3	13/02/2020	14:57	Buzzard	1	15	0	15	0	0	improved agricultural grassland; travelling; landed in tree	PM
BZ046	VP1	17/02/2020	13:43	Buzzard	2	315	0	0	315	0	wet grassland and improved agricultural grassland; soaring	PM
BZ047	VP1	17/02/2020	13:57	Buzzard	1	15	0	0	15	0	improved agricultural grassland; hunting	PM
BZ048	VP1	23/03/2020	12:06	Buzzard	1	120	0	0	120	0	improved agricultural grassland; soaring , soaring over same area as obs no1 c100m-150m	ED
BZ049	VP3	27/03/2020	10:20	Buzzard	1	35	0	0	35	0	improved agricultural grassland; soaring , short flight	ED
BZ050	VP1	16/04/2020	15:41	Buzzard	2	215	0	0	215	0	improved agricultural grassland and hedgerows; circling area	TR
BZ051	VP1	16/04/2020	16:56	Buzzard	1	90	0	0	90	0	hedgerows, improved agricultural grassland and hedgerows; gliding and circling area	TR
BZ052	VP1	16/04/2020	17:25	Buzzard	1	110	0	0	110	0	wet grassland and improved agricultural grassland; displaying briefly	TR
BZ053	VP1	16/04/2020	17:30	Buzzard	1	65	0	0	65	0	wet grassland and hedgerows; slow glide	TR
BZ054	VP3	17/04/2020	15:45	Buzzard	1	240	0	0	240	0	improved agricultural grassland and hedgerows; circling	TR
BZ055	VP3	17/04/2020	17:28	Buzzard	1	20	0	20	0	0	improved agricultural grassland and highly modified/non-native woodland; gliding on wind	TR
BZ056	VP3	17/04/2020	18:50	Buzzard	1	300	0	0	300	0	conifer plantation; circling and gliding on wind, good breeding habitat	TR

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ057	VP3	17/04/2020	19:05	Buzzard	1	15	15	0	0	0	mixed broadleaved woodland and conifer plantation; low over trees landing on tree	TR
BZ058	VP3	17/04/2020	19:23	Buzzard	2	20	20	0	0	0	hedgerows; landing on ash tree	TR
BZ059	VP3	14/05/2020	09:10	Buzzard	1	60	0	0	60	0	mixed conifer woodland; soaring	NG
BZ060	VP3	14/05/2020	11:25	Buzzard	1	35	5	0	30	0	tilled land and cultivated land; circling, then landed in mown field	NG
BZ061	VP1	24/06/2020	10:21	Buzzard	2	34	5	29	0	0	improved agricultural grassland; came up from just north of vp, circled over vs a couple of times then travelled behind vp. lost behind treeline.	PC
BZ062	VP3	29/06/2020	06:31	Buzzard	1	69	64	0	0	0	improved agricultural grassland; flew up from trees in front of vp. circled then travelled west.	PC
BZ063	VP3	29/06/2020	06:35	Buzzard	2	95	28	67	0	0	improved agricultural grassland; pair came up calling from where bz002 went. circled low then travelled behind vp to south	PC
BZ064	VP3	29/06/2020	07:20	Buzzard	1	142	12	130	0	0	improved agricultural grassland; came from behind vp, circled into viewshed then out again, hanging in wind and circling behind vp to nw.	PC
BZ065	VP3	29/06/2020	09:20	Buzzard	1	0	0	0	0	0	improved agricultural grassland; spotted feeding on the ground in same field as bh012 had been feeding in. watched for couple of minutes, no flight. lost behind hedgerow. marked on map with x inside a circle.	PC
BZ066	VP3	26/08/2020	15:35	Buzzard	1	466	0	66	400	0	improved agricultural grassland, wet grassland and active quarries and mines; travelling	PM

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ067	VP3	26/08/2020	16:05	Buzzard	3	1295	0	0	695	600	improved agricultural grassland, wet grassland and active quarries and mines; soaring together	PM
BZ068	VP3	26/08/2020	16:18	Buzzard	2	82	0	0	82	0	improved agricultural grassland; travelling	PM
BZ069	VP3	26/08/2020	17:23	Buzzard	1	150	0	0	150	0	improved agricultural grassland; travelling	PM
BZ070	VP3	26/08/2020	17:36	Buzzard	1	249	0	0	249	0	improved agricultural grassland and active quarries and mines; soaring/travelling	PM
BZ071	VP3	26/08/2020	21:19	Buzzard	1	20	20	0	0	0	active quarries and mines; flew from gravel pile, low across quarry	PM
BZ072	VP3	15/09/2020	06:45	Buzzard	2	21	21	0	0	0	improved agricultural grassland; appeared to be feeding in field next to vp, which had been mowed recently. flew up out of field and settled in dead tree near quarry. not sure where they went from the tree, but seemed to be chased off by mixed corvids.	PM
BZ073	VP3	15/09/2020	10:37	Buzzard	1	194	95	79	20	0	improved agricultural grassland and conifer plantation; came up out of copse opposite vp, circled to gain height then travelled south following ridge. eventually lost against sky, but heard calling. sounded close but unable to locate calling bird. not sure if it was another buzzard or same bird.	PM
BZ074	VP3	08/10/2020	11:35	Buzzard	1	242	242	0	0	0	improved agricultural grassland and active quarries and mines; came up from near quarry, circling over and behind vp. flushed bz002 from behind vp. disappeared with bz002 behind vp.	PC

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ075	VP3	08/10/2020	11:37	Buzzard	1	35	35	0	0	0	improved agricultural grassland and active quarries and mines; joined bz001 from behind vp, circling briefly over vp then headed east behind vp.	PC
BZ076	VP3	08/10/2020	11:45	Buzzard	1	62	17	45	0	0	improved agricultural grassland; came from south of vp, circled in front of vp climbing. lost against clouds.	PC
BZ077	VP3	08/10/2020	12:06	Buzzard	1	151	0	35	116	0	improved agricultural grassland; came from behind vp heading west. lots of calling. eventually lost against clouds.	PC
BZ078	VP3	08/10/2020	12:25	Buzzard	1	71	0	0	71	0	improved agricultural grassland and conifer plantation; picked up in the distance to south. travelled east to west at height over viewshed.	PC
BZ079	VP3	08/10/2020	15:32	Buzzard	1	164	0	36	128	0	improved agricultural grassland and active quarries and mines; travelled from behind vp over viewshed before heading back east whilst gaining height. lost against clouds.	PC
BZ080	VP1	12/10/2020	12:38	Buzzard	1	69	0	69	0	0	improved agricultural grassland; came up from below vp, didn't see exactly where from. circled then travelled south over viewshed.	PC
BZ081	VP1	12/10/2020	14:55	Buzzard	1	91	91	0	0	0	improved agricultural grassland; came up from north below vp. hanging almost stationary in air at times by flying into wind, then headed south. lost low over viewshed.	PC
BZ082	VP1	04/11/2020	12:30	Buzzard	1	13	13	0	0	0	improved agricultural grassland and hedgerows; seen briefly in flight being mobbed and chased off to the east by 2 rooks. lost behind hedgerows.	PC
BZ083	VP1	04/11/2020	12:40	Buzzard	1	28	28	0	0	0	improved agricultural grassland and hedgerows; came from behind vp and travelled north over viewshed. lost	PC

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
											behind trees. probably same bird as bz003 as it came from the general direction z3 had gone.	
BZ084	VP3	05/11/2020	07:45	Buzzard	1	0	0	0	0	0	improved agricultural grassland, hedgerows and active quarries and mines; perched in tree in front of vp calling. didn't see it arrive. , i assume bz001 and bz002 are the usual pair of buzzards that are around vp3.	PC
BZ085	VP3	05/11/2020	07:45	Buzzard	1	21	21	0	0	0	improved agricultural grassland, hedgerows and active quarries and mines; flew behind other bz. short low flight then settled in tree, calling.	PC
BZ086	VP3	05/11/2020	11:06	Buzzard	1	27	27	0	0	0	improved agricultural grassland and hedgerows; brief flight low to ground over viewshed. lost bird entered small copse and hedgerow.	PC
BZ087	VP3	15/12/2020	11:44	Buzzard	1	38	38	0	0	0	improved agricultural grassland; flew low towards vp before alighting in tree calling.	PC
BZ088	VP3	15/12/2020	11:47	Buzzard	2	51	51	0	0	0	improved agricultural grassland and conifer plantation; flew out of plantation to south west of vp, heading north. lost when they flew close to sun., calling in response to single bird which appeared just before this pair.	PC
BZ089	VP3	07/01/2021	08:27	Buzzard	1	56	0	0	56	0	improved agricultural grassland; travelling; calling	PM
BZ090	VP1	21/01/2021	13:37	Buzzard	1	25	0	0	25	0	improved agricultural grassland; travelling	PM
BZ091	VP3	16/02/2021	11:58	Buzzard	2	61	0	50	11	0	improved grassland and treelines; flew out of viewshed heading east., third bird heard calling opposite quarry	PDC

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ092	VP3	16/02/2021	12:17	Buzzard	1	23	0	23	0	0	improved grassland; flew out of viewshd heading east, following course of other 2 bz	PDC
BZ093	VP3	16/02/2021	12:56	Buzzard	1	41	0	0	41	0	improved grassland; flew into viewshed from north. lost behind trees., presumably same bird as previous sighting. calling a lot.	PDC
BZ094	VP3	23/03/2021	07:15	Buzzard	1	44	44	0	0	0	improved grassland and treelines; flew out of trees below vp heading west then settled in trees opposite vp, calling.	PDC
BZ095	VP3	23/03/2021	09:34	Buzzard	1	19	0	0	19	0	improved grassland and highly modified/non-native woodland; flew across viewshed heading south. lost against dark background, hard to hold bins steady due to wind	PDC
	VP3	17/07/2019	13:27	Buzzard	1	1230	0	0	0	0		PW
	VP3	05/11/2020	07:45	Buzzard	2	0	0	0	0	0	improved agricultural grassland, hedgerows and active quarries and mines; calling from 7:45 to about 8:30, but i couldn't see either due to the poor light., not mapped	PC

Table 7 - 4 - 39 Buzzard Vantage Point Survey (non-flight)

Map Ref.	VP	Date	Time	Species	Number	Habitat and activity	Surveyor
BZ096	VP3	13/02/2020	12:24	Buzzard	1	treelines; perched in tree	PM
BZ097	VP3	08/07/2020	07:55	Buzzard	1	improved agricultural grassland and active quarries and mines; perched in dead tree near quarry, silent. presumably same bird that was in another tree behind vp at 5:20am.	PC

BZ098	VP3	16/02/2021	12:01	Buzzard	1	hedgerows and improved grassland; heard calling when other 2 bz were in flight. couldn't locate it, this is best guess of location	PC
BZ099	VP3	16/02/2021	13:53	Buzzard	1	improved grassland; lots of calling but bird isn't visible. assume it's the other side of the hill behind the quarry	PC

Table 7 - 4 - 40 Buzzard Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
BZ001	25/10/2019	12:56	Buzzard	1	wet grassland; travelling; calling (wintering)	PM
BZ002	16/12/2019	09:55	Buzzard	2	improved agricultural grassland; chasing/fighting, fell to ground, talon in talon (wintering)	PM
BZ003	16/12/2019	10:29	Buzzard	2	improved agricultural grassland; circling before flying down field and landing in tree (wintering)	PM
BZ004	16/12/2019	10:38	Buzzard	1	improved agricultural grassland and mixed broadleaved/conifer woodland; flew into tree (wintering)	PM
BZ005	16/12/2019	11:44	Buzzard	1	wet grassland; travelling (wintering)	PM
BZ006	16/12/2019	14:46	Buzzard	1	improved agricultural grassland; travelling (wintering)	PM
BZ007	22/01/2020	10:20	Buzzard	1	improved agricultural grassland; circling/calling (wintering)	PM
BZ008	01/03/2020	10:47	Buzzard	1	improved agricultural grassland; in flight c 40m (wintering)	ED
BZ009	27/10/2020	09:25	Buzzard	1	improved agricultural grassland and hedgerows; perched on small tree in hedgerow with wings drooping like a tired cormorant!, perched on small tree in hedgerow with wings drooping like a tired cormorant! (wintering)	PC
BZ010	27/10/2020	11:25	Buzzard	1	improved agricultural grassland and hedgerows; perched in tree in hedgerow alongside track. flushed and flew off in easterly direction., perched in tree in hedgerow alongside track. flushed and flew off in easterly direction. (wintering)	PC
BZ011	27/10/2020	13:00	Buzzard	1	improved agricultural grassland, hedgerows and active quarries and mines; in flight over fields and quarry next to vp3. there's always a buzzard or two here., in flight over fields and quarry next to vp3. there's always a buzzard or two here. (wintering)	PC

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
BZ012	25/02/2021	11:43	Buzzard	2	improved grassland; flew across from nw and headed off to the east. lots of calling. (wintering)	PDC
BZ013	25/02/2021	11:45	Buzzard	1	improved grassland; third bird soaring above other 2 bz. lost as it headed east. (wintering)	PDC
BZ014	25/02/2021	11:46	Buzzard	2	improved grassland; pair came back from east, heading west cycling and calling (wintering)	PDC
BZ015	25/02/2021	12:04	Buzzard	1	improved grassland; circling over an esker, being mobbed by hc (wintering)	PDC
BZ016	24/03/2021	10:44	Buzzard	3	improved grassland and conifer plantation; circling together over fields and plantation (wintering)	PDC
BZ017	24/03/2021	12:02	Buzzard	1	improved grassland and treelines; flew up from field and settled in tree (wintering)	PDC

Table 7 - 4 - 41 Buzzard Breeding Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
n/a	19/04/2019	12:01	Buzzard	1	scrub, improved agricultural grassland and treelines; perched into tree (suitable nesting habitat; possible breeder)	JC
n/a	19/04/2019	13:30	Buzzard	1	conifer plantation; soaring, hunting (suitable nesting habitat; possible breeder)	JC
n/a	19/04/2019	-	Buzzard	2	disturbed ground, scrub and semi-natural grassland; pair, circling (pair; probable breeding)	JC
BZ001	25/04/2019	-	Buzzard	2	conifer plantation, wet grassland and treelines; pair circled calling(pair; probable breeding)	JC
BZ002	30/05/2019	-	Buzzard	1	treelines, improved agricultural grassland and wet grassland; agitated behaviour (agitated behaviour; probable breeding)	JC

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
BZ003	28/06/2019	13:42	Buzzard	3	treelines; recently fledged (fledged young; confirmed breeding)	JC
BZ004	17/05/2020	-	Buzzard	1	improved agricultural grassland and semi-natural woodland; flying, perching in trees (suitable nesting habitat; possible breeder)	NG
BZ005	24/05/2020	-	Buzzard	1	cultivated land; soaring (suitable nesting habitat; possible breeder)	NG
BZ006	31/07/2020	09:13	Buzzard	2	improved agricultural grassland and treelines; travelling, calling, landed in tree (suitable nesting habitat; possible breeder)	PM
BZ007	31/07/2020	09:18	Buzzard	1	improved agricultural grassland; travelling (suitable nesting habitat; possible breeder)	PM

Table 7 - 4 - 42 Buzzard Breeding Raptor Survey

Map Ref.	BRVP	Date	Time	Species	Number	Habitat and activity	Breeding status	Surveyor
BZ001	RVP3	30/04/2019	10:22	Buzzard	1	conifer plantation and improved agricultural grassland, soaring	suitable nesting habitat; possible breeder	JC
BZ002	RVP1	24/05/2019	09:35	Buzzard	1	linear woodland/scrub, flying to s, mobbed by ro	suitable nesting habitat; possible breeder	JC
BZ003	RVP7	24/05/2019	11:45	Buzzard	1	raised bog and semi-natural woodland, flying	suitable nesting habitat; possible breeder	JC
BZ004	RVP3	24/05/2019	15:30	Buzzard	2	raised bog and semi-natural woodland, pair flying	pair; probable breeding	JC
BZ005	RVP4	31/05/2019	11:28	Buzzard	1	semi-natural woodland, scrub and improved agricultural grassland, hunting	suitable nesting habitat; possible breeder	JC

Map Ref.	BRVP	Date	Time	Species	Number	Habitat and activity	Breeding status	Surveyor
BZ006	RVP4	31/05/2019	11:41	Buzzard	1	semi-natural woodland, scrub and improved agricultural grassland, hunting	suitable nesting habitat; possible breeder	JC
BZ007	RVP7	25/06/2019	15:45	Buzzard	1	bogs, scrub and semi-natural woodland, hunting, 5 min	suitable nesting habitat; possible breeder	JC
BZ008	RVP8	26/06/2019	17:25	Buzzard	1	improved agricultural grassland and treelines,	suitable nesting habitat; possible breeder	JC
BZ009	RVP7	15/07/2019	12:45	Buzzard	1	wet grassland and treelines, flying, off-site s	suitable nesting habitat; possible breeder	JC
BZ010	RVP3	15/07/2019	16:24	Buzzard	1	mixed broadleaved woodland, juvenile, perched on branch, flew to ground. breeding	fledged young; confirmed breeding	JC
BZ011	RVP9	15/07/2019	17:21	Buzzard	1	conifer plantation and improved agricultural grassland, hunting	suitable nesting habitat; possible breeder	JC
BZ012	RVP1	11/05/2020	12:48	Buzzard	1	cultivated land, soaring above agri land	suitable nesting habitat; possible breeder	NG
BZ013	RVP1	11/05/2020	12:00	Buzzard	1		suitable nesting habitat; possible breeder	NG
BZ014	RVP4	11/05/2020	17:35	Buzzard	1	cultivated land, mobbed by corvid	suitable nesting habitat; possible breeder	NG
BZ015	RVP5	11/05/2020	18:15	Buzzard	1	cultivated land, soaring above agri land	suitable nesting habitat; possible breeder	NG
BZ016	RVP6	11/05/2020	18:30	Buzzard	1	cultivated land, soar then flight	suitable nesting habitat; possible breeder	NG
BZ017	RVP3	13/05/2020	12:00	Buzzard	1	cultivated land and dry meadows and grassy verges, soar	suitable nesting habitat; possible breeder	NG

Map Ref.	BRVP	Date	Time	Species	Number	Habitat and activity	Breeding status	Surveyor
BZ018	RVP3	13/05/2020	07:12	Buzzard	1	cultivated land and dry meadows and grassy verges, mobbed, mobbed	suitable nesting habitat; possible breeder	NG
BZ019	RVP1	12/06/2020	08:00	Buzzard	1		suitable nesting habitat; possible breeder	NG
BZ020	RVP1	12/06/2020	09:00	Buzzard	1	#N/A	suitable nesting habitat; possible breeder	NG
BZ021	RVP2	12/06/2020	15:45	Buzzard		#N/A	suitable nesting habitat; possible breeder	NG
BZ022	RVP2	12/06/2020	16:40	Buzzard	1	#N/A	suitable nesting habitat; possible breeder	NG
BZ023	RVP4	26/06/2020	08:20	Buzzard	1	improved agricultural grassland, hunting	suitable nesting habitat; possible breeder	JK
BZ024	RVP7	26/06/2020	10:25	Buzzard	1	cutover bog, hunting	suitable nesting habitat; possible breeder	JK
BZ025	RVP5	26/06/2020	15:00	Buzzard	2	cutover bog, hunting	suitable nesting habitat; possible breeder	JK
	RVP7	23/07/2020	No flight	Buzzard	1	bogs and mixed broadleaved/conifer woodland, , heard calling from the woodland near the end of bog road.	suitable nesting habitat; possible breeder	PC
BZ026	RVP8	28/07/2020	06:10	Buzzard	1	improved agricultural grassland, mixed broadleaved woodland and treelines, , flew across road, not sure where from, settling in tree in treeline.	suitable nesting habitat; possible breeder	PC
BZ027	RVP8	28/07/2020	06:11	Buzzard	1	improved agricultural grassland, mixed broadleaved/conifer woodland and treelines, , followed bz001, settled in same tree. both calling, watched in tree for a few minutes, didn't see them leave.	pair; probable breeding	PC
BZ028	RVP8	28/07/2020	06:25	Buzzard	2	#N/A	pair; probable breeding	PC

Table 7 - 4 - 43 Buzzard Incidental Records

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
BZ001	Waterfowl Distribution Survey; Flying NE into southern section of site	12/05/2020		Buzzard	1	improved agricultural grassland; , travelling ne across farmland	PM
n/a	Waterfowl Distribution Survey; Ballymore	23/10/2020		Buzzard	1	improved agricultural grassland; in flight, mobbed by corvids, as you come into town from lough sewdy, not mapped	PC
BZ002	Waterfowl Distribution Survey; Farmland near Cartroncooragh	14/01/2021	13:31	Buzzard	1	improved agricultural grassland; circling	KOC
BZ003	Waterfowl Distribution Survey; Cooleen	28/01/2021	16:04	Buzzard	1	improved agricultural grassland; gliding, perching	KOC
BZ004	Waterfowl Distribution Survey;	25/02/2021	10:57	Buzzard	1	improved agricultural grassland; in low flight over fields	PDC
BZ005	Waterfowl Distribution Survey; Moyvoughly bog	22/03/2021	10:50	Buzzard	1	bogs; soaring over bog	PDC
BZ006	Waterfowl Distribution Survey; Moyvoughly bog	22/03/2021	11:00	Buzzard	1	improved agricultural grassland; brief view of bird low in flight over field	PDC

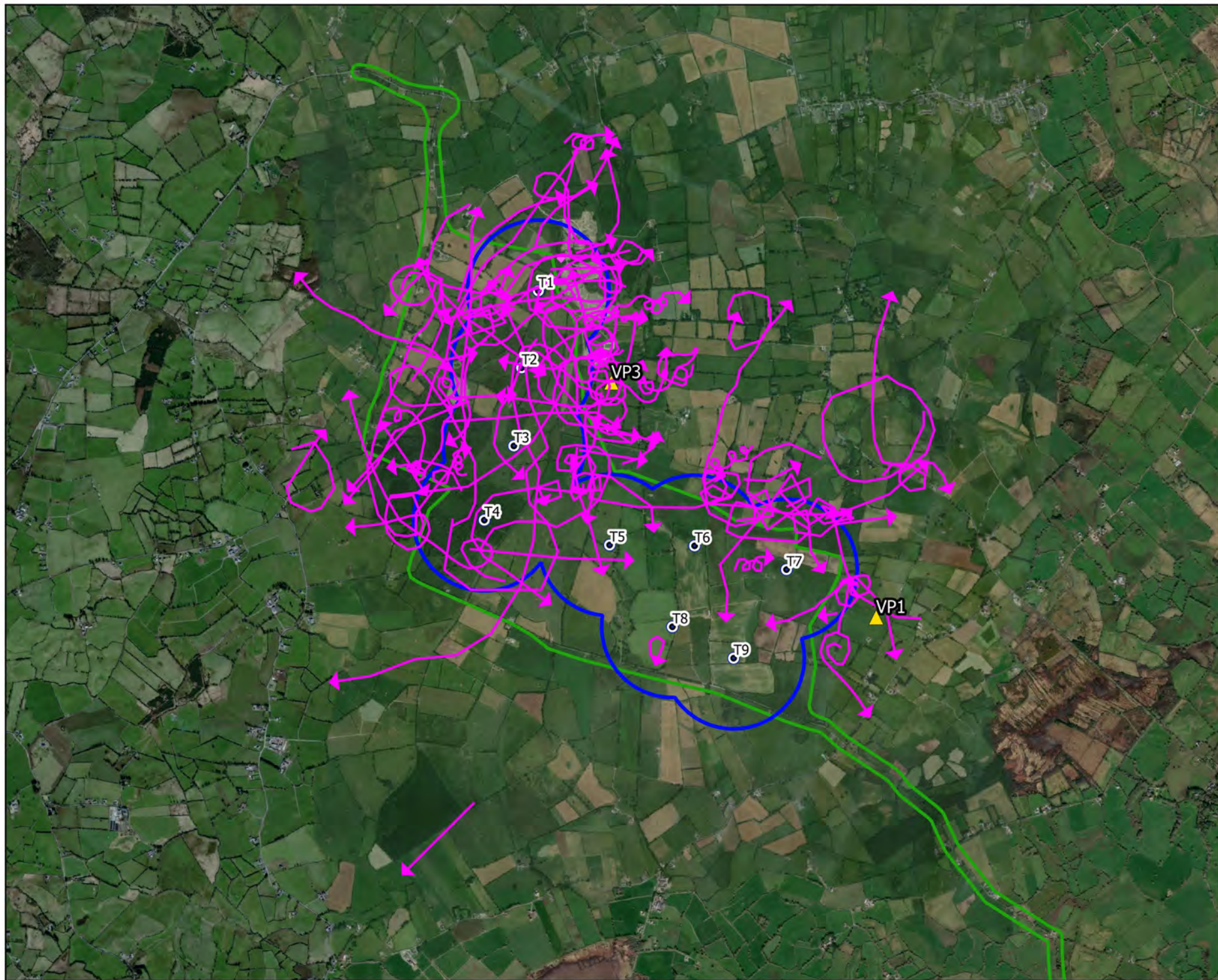
Table 7 - 4 - 44 Buzzard Supplementary Data

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ001	VP4a	30/05/2019	09:51	Buzzard	1	450	0	0	0	450	conifer plantation and improved agricultural grassland; soaring	JC
BZ002	VP4a	30/05/2019	10:10	Buzzard	1	30	0	0	30	0	improved agricultural grassland; flying	JC
BZ003	VP4a	25/06/2019	11:34	Buzzard	1	150	0	0	110	40	improved agricultural grassland, treelines and buildings and artificial surfaces; flying, mobbed, soaring	JC

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
BZ004	VP4a	25/06/2019	14:10	Buzzard	1	150	0	30	90	30	conifer plantation and mixed broadleaved woodland; hunting	JC
BZ005	VP2	26/06/2019	13:10	Buzzard	1	180	0	0	100	80	improved agricultural grassland and treelines; hunting, finally dived	JC
BZ006	VP4	16/07/2019	10:06	Buzzard	1	242	0	0	74	168	improved agricultural grassland; soaring	PW
BZ007	VP4	16/07/2019	10:28	Buzzard	1	75	15	60	0	0	hedgerows, improved agricultural grassland and active quarries and mines; flying across quarry and farmland, mobbed by 2x hc.	PW
BZ008	VP4	16/07/2019	11:06	Buzzard	1	134	0	0	134	0	improved agricultural grassland; soaring, then flew east, southeast.	PW
BZ009	VP4	16/07/2019	12:14	Buzzard	1	70	20	50	0	0	improved agricultural grassland and hedgerows; flew west and down into field or hedge and was lost behind treeline.	PW
BZ010	VP4	16/07/2019	12:30	Buzzard	2	395	0	0	365	30	improved agricultural grassland and hedgerows; soaring, one followed until lost from view in cloud.	PW
BZ011	VP4	16/07/2019	12:45	Buzzard	2	40	0	0	40	0	improved agricultural grassland and hedgerows; soaring over behind treeline. lost from view below treeline.	PW
BZ012	VP4	16/07/2019	12:46	Buzzard	1	40	0	40	0	0	improved agricultural grassland and hedgerows; calling first (12:45:50) then seen flying across gal when lost from view below treeline at 12:47.	PW
BZ013	VP4	16/07/2019	12:52	Buzzard	3	380	0	20	30	330	improved agricultural grassland and hedgerows; 1x bz soaring, joined by 2nd bz at 12:54. at 12:56 one bz began diving and up and diving (6 times) then lost behind the trees. a third bz	PW

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
											was observed as this one dived. then at 12:58 one bz began diving.	
BZ014	VP4	16/07/2019	13:34	Buzzard	1	5	0	0	5	0	improved agricultural grassland and hedgerows; soaring up through trees at 40m, briefly seen.	PW
BZ015	VP4	16/07/2019	13:43	Buzzard	2	570	0	110	290	170	improved agricultural grassland and hedgerows; 2x bz located when heard calling, first flying low among hedgerows and fields. one moved east and looked like it may have landed as it disappeared behind an ash tree at 13:44:50. the other bz was now soaring. at 13:47 2x bz were soaring together, possibly first one re-joining the second or maybe a third bz. disappeared at 13:52:30.	PW
BZ016	VP4	16/07/2019	14:27	Buzzard	1	180	0	0	180	0	improved agricultural grassland and hedgerows; bz flew east and soared a bit before lost from view.	PW
BZ017	VP4	16/07/2019	14:31	Buzzard	3	15	0	0	15	0	improved agricultural grassland and hedgerows; 3x bz soaring low over trees. lost below trees on far side.	PW
BZ018	VP4	16/07/2019	14:36	Buzzard	1	5	0	0	0	5	improved agricultural grassland and hedgerows; seen briefly soaring and flying.	PW
BZ019	VP4	16/07/2019	14:59	Buzzard	3	1200	0	10	730	460	improved agricultural grassland, hedgerows and conifer plantation; 3 bz over wd4/ga1	PW
BZ020	VP4	16/07/2019	15:15	Buzzard	1	240	0	90	150	0	improved agricultural grassland and hedgerows; flew low and east while calling, lost in trees near hill.	PW
BZ021	VP4	16/07/2019	15:19	Buzzard	3	720	0	215	405	100	improved agricultural grassland and hedgerows; at 15:19 2x bz observed over the hill. 15:22:20 a third bz joins	PW

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
											until 15:23:55. 15:25:10 only two bz visible now, one visible flying at 15:28.	
BZ022	VP4	16/07/2019	16:21	Buzzard	1	367	0	7	360	0	improved agricultural grassland and hedgerows; bz soaring and gliding, dropped disappearing in farmland among wll.	PW
BZ023	VP2b	22/07/2019	14:40	Buzzard	1	15	0	0	15	0	improved agricultural grassland and hedgerows; soaring before dropping below horizon when lost from view.	PW
BZ024	VP2b	22/07/2019	16:20	Buzzard	1	15	0	0	15	0	improved agricultural grassland and hedgerows; flying	PW
BZ025	VP2b	22/07/2019	16:42	Buzzard	1	100	0	20	80	0	improved agricultural grassland and hedgerows; soaring in wind over hillside before dropping down from view below the horizon.	PW
BZ026	VP2b	22/07/2019	18:37	Buzzard	1	340	0	0	340	0	improved agricultural grassland and hedgerows; gliding, flying, hovering, hunting.	PW
BZ027	VP2b	22/07/2019	20:16	Buzzard	1	60	0	20	40	0	improved agricultural grassland and hedgerows; soaring and gliding	PW
BZ028	VP4	27/08/2019	17:36	Buzzard	1	7	2	5	0	0	improved agricultural grassland; mobbed	JC
BZ029	VP4	27/08/2019	17:44	Buzzard	1	30	10	20	0	0	improved agricultural grassland, hedgerows and treelines; flying	JC
BZ030	VP2	28/08/2019	16:55	Buzzard	1	25	0	25	0	0	improved agricultural grassland; flying	JC



Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title

**Buzzard Vantage Point Survey
Observations**

Project Title

Umma More Renewable Energy
Development

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-37

Scale

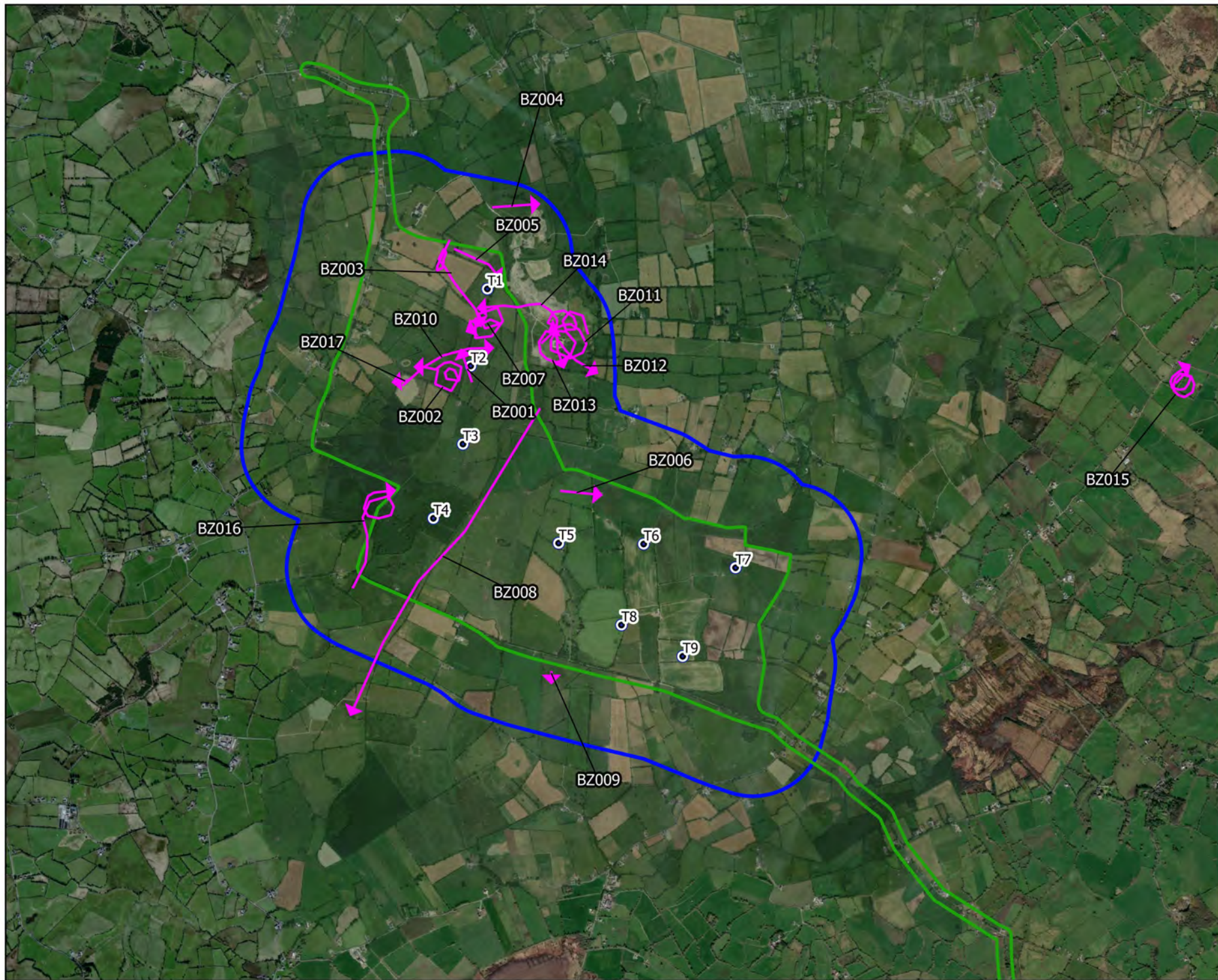
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Map Legend

- EIAR Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



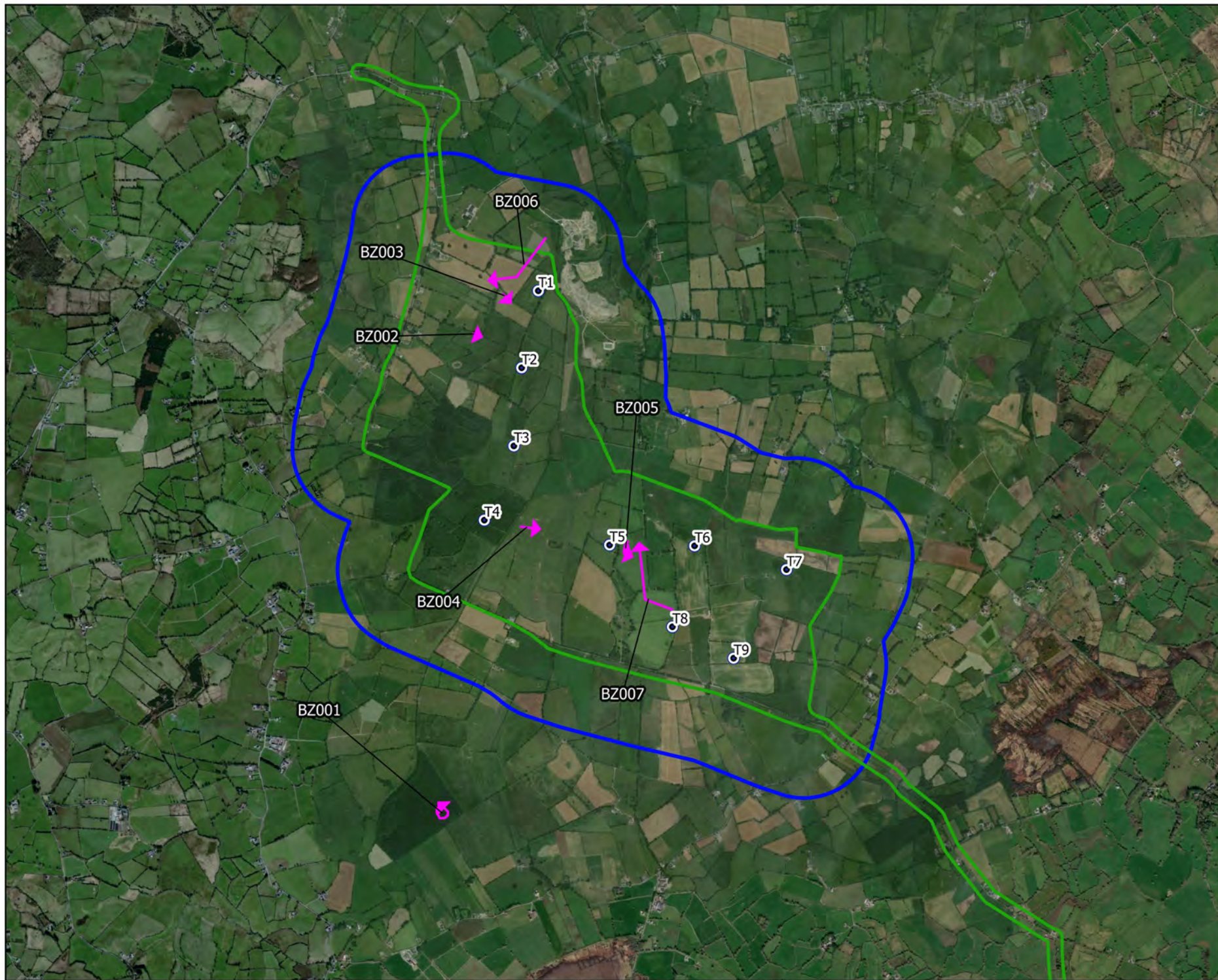
Drawing Title:
Buzzard Winter Walkover Survey Observations

Project Title:
Umma More Renewable Energy Development




Drawn By	Checked By
D. Woods	P. Cregg
Project No.	Drawing No.
201050	Fig. 7-4-38
Scale	Date
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Map Legend

-  EIA Site Boundary
-  500m Survey Radius
-  Flight Observation



Drawing Title:
**Buzzard Breeding Walkover Survey
Observations**

Project Title:
**Umma More Renewable Energy
Development**

Drawn By:
D. Woods

Checked By:
P. Cregg

Project No.:
201050

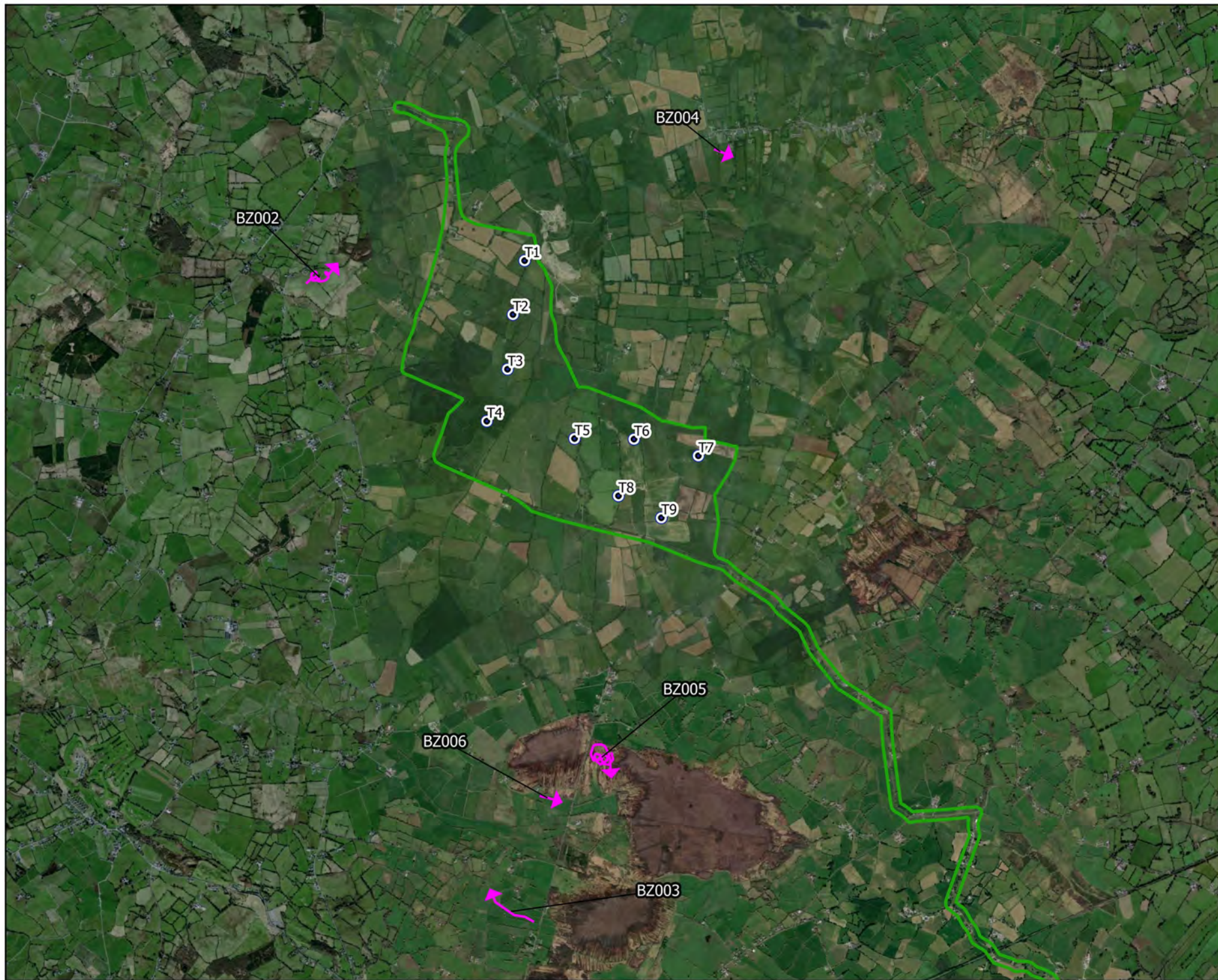
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Map Legend

-  EIA Site Boundary
-  Turbine Layout
-  Flight Observation



Drawing Title

Buzzard Incidental Records

Project Title

Umma More Renewable Energy Development

Drawn By

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Project No.

201050

Drawing No.

Fig. 7-4-41

Scale

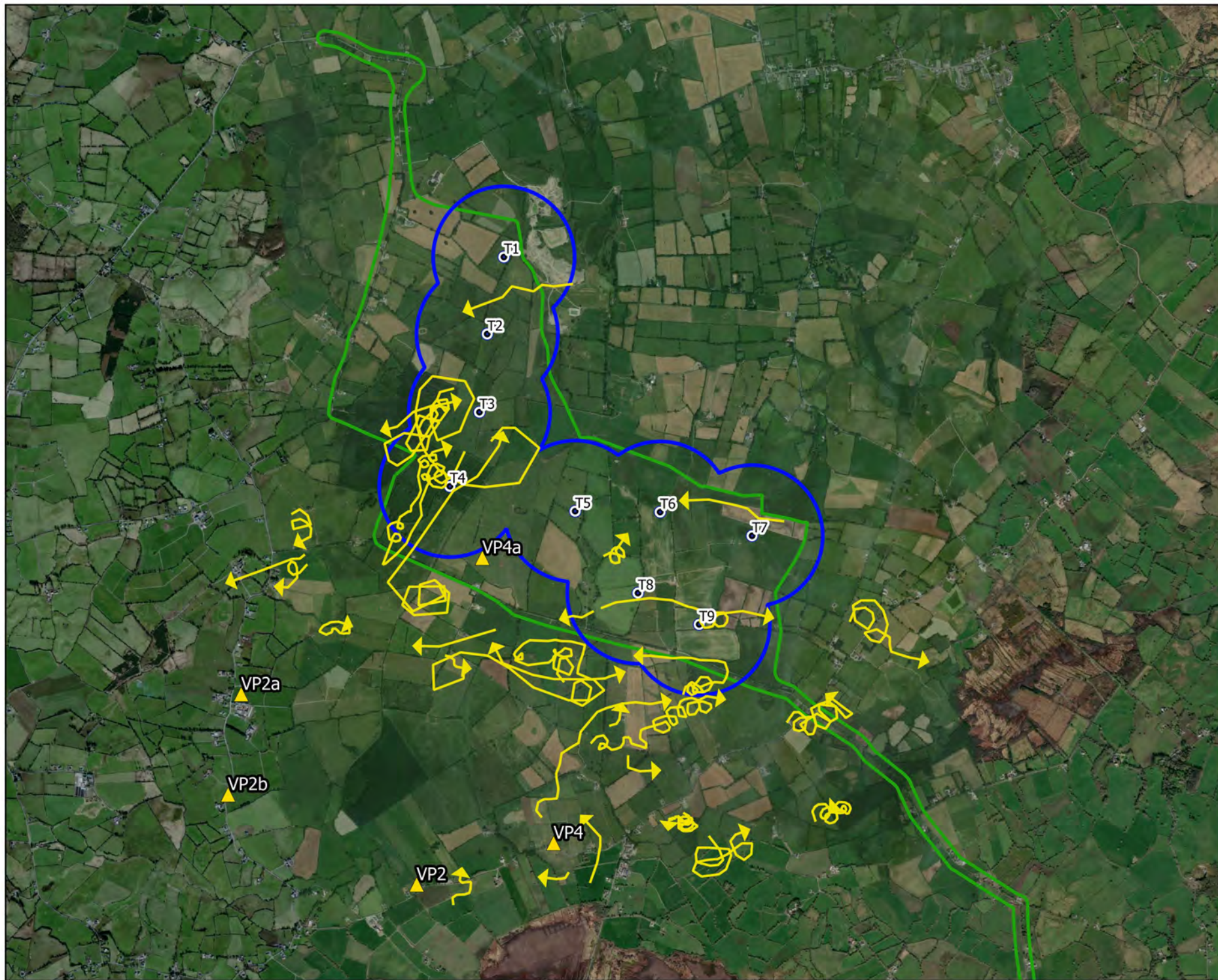
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Date

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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- Flight Observation



Drawing Title

Buzzard Supplementary Data

Project Title

Umma More Renewable Energy Development

Drawn By

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Drawing No.

Fig. 7-4-42

Scale

1:35000

Date

09.02.23



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13.

SPARROWHAWK

Table 7 - 4 - 45 Sparrowhawk Vantage Point Survey

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
SH001	VP3	17/07/2019	16:53	Sparrowhawk	1	240	140	100	0	0	improved agricultural grassland and hedgerows; hunting goldfinch flock, chased one bird for 10 seconds, missed it and landed in a lone hawthorn tree briefly. it then flew low to hawthorn hedgerow where it perched for 60 seconds. last seen on hedgerow at 16:57 when lost from view.	PW
SH002	VP1	18/07/2019	11:31	Sparrowhawk	1	110	0	0	110	0	improved agricultural grassland and hedgerows; flying and soaring when lost from view as it glided down behind ash down slope.	PW
SH003	VP1	18/07/2019	12:28	Sparrowhawk	1	260	0	0	260	0	improved agricultural grassland and hedgerows; female sh gliding and soaring in wind, gradually moving south along slope, then moved southeast quickly, flying and gliding. it had prey in its talons.	PW
SH004	VP1	11/09/2019	10:27	Sparrowhawk	1	76	0	76	0	0	improved agricultural grassland; soaring / travelling, female	JK
SH005	VP3	13/02/2020	12:39	Sparrowhawk	1	20	0	20	0	0	wet grassland; travelling	PM
SH006	VP1	23/03/2020	11:40	Sparrowhawk	1	300	0	0	300	0	improved agricultural grassland; soaring, soaring in circles/display over area c55m-150m	ED
SH007	VP3	14/05/2020	08:50	Sparrowhawk	1	5	5	0	0	0	tilled land and cultivated land; flew from perch in tree to ground	NG

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
SH008	VP3	05/11/2020	12:21	Sparrowhawk	1	12	12	0	0	0	improved agricultural grassland and hedgerows; very brief sighting. picked up just below vp. travelled east past vp and disappeared in fields behind hedgerow behind vp.	PC
SH009	VP1	15/02/2021	13:11	Sparrowhawk	1	18	0	0	18	0	improved grassland; circling then mobbed by 2 hc. seemed to drop but not sure., hard to track against background as i was looking down on it. hard to judge height of flight.	PDC
SH010	VP1	11/03/2021	07:42	Sparrowhawk	1	15	15	0	0	0	improved agricultural grassland and hedgerows; flew low over fields coming from behind vp. lost behind hedgerow., very brief view as she was below me. hard to spot against muddy background.	PDC

Table 7 - 4 - 46 Sparrowhawk Winter Walkover Survey

Map Ref.	Date	Time	Species	Number	Habitat and activity	Surveyor
SH001	27/10/2020	11:35	Sparrowhawk	1	improved agricultural grassland and hedgerows; in flight low over field before entering conifer plantation, in flight low over field before entering conifer plantation (wintering)	PC
SH002	25/02/2021	11:05	Sparrowhawk	1	improved grassland and hedgerows; flew out of hedgerow along road in front of me chasing passerines, male (wintering)	PDC

Table 7 - 4 - 47 Sparrowhawk Breeding Raptor Survey

Map Ref.	BRVP	Date	Time	Species	Number	Habitat and activity	Breeding status	Surveyor
SH001	RVP2	20/04/2019	16:28	Sparrowhawk	1	cutover bog and recently-felled woodland, flying ne across bog at 10m	suitable nesting habitat; possible breeder	JC
SH002	RVP2	20/04/2019	16:55	Sparrowhawk	1	scrub/transitional woodland and cutover bog, flew from willow, birch flying e	suitable nesting habitat; possible breeder	JC
SH003	RVP7	24/05/2019	11:49	Sparrowhawk	1	raised bog and semi-natural woodland, male, flying	suitable nesting habitat; possible breeder	JC
SH004	RVP7	24/05/2019	11:51	Sparrowhawk	1	raised bog and semi-natural woodland, flying	suitable nesting habitat; possible breeder	JC
SH005	RVP7	25/06/2019	15:01	Sparrowhawk	1	bogs, scrub and semi-natural woodland, hunting, male	suitable nesting habitat; possible breeder	JC
SH006	RVP7	25/06/2019	15:13	Sparrowhawk	1	semi-natural woodland, flying, female flying into trees	suitable nesting habitat; possible breeder	JC
SH007	RVP7	25/06/2019	17:10	Sparrowhawk	1	semi-natural woodland and improved agricultural grassland, female flying low allowing edge of woods	suitable nesting habitat; possible breeder	JC
SH008	RVP9	15/07/2019	17:26	Sparrowhawk	1	improved agricultural grassland, male flying	suitable nesting habitat; possible breeder	JC

Table 7 - 4 - 48 Sparrowhawk Incidental Records

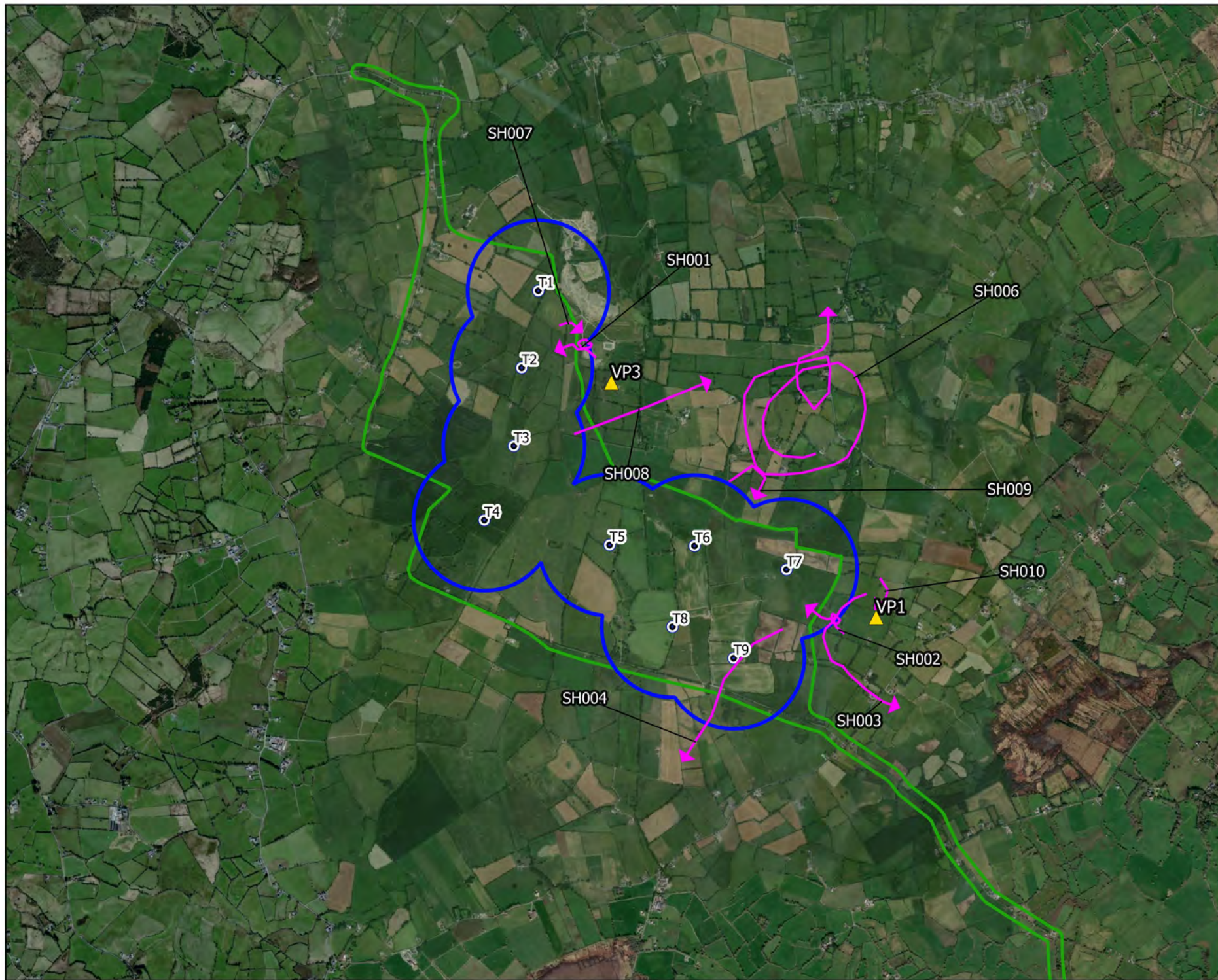
Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
n/a	Vantage Point Survey; VP3	08/10/2020		Sparrowhawk	1	improved agricultural grassland; female behind vp at 14:30, heading north to south. attempted to catch mistle thrush in bush before heading off behind vp, not mapped	PC
n/a	Waterfowl Distribution Survey; Ballymore	23/10/2020		Sparrowhawk	1	improved agricultural grassland; in flight over the road to moate just as you leave ballymore., not mapped	PC
n/a	Waterfowl Distribution Survey; Ballynalone	09/12/2020	11:21	Sparrowhawk	1	improved agricultural grassland; male flew over road, not mapped	PC

Map Ref.	Location	Date	Time	Species	Number	Habitat and activity	Surveyor
n/a	Vantage Point Survey; VP3, Mullenmeehan	15/12/2020	08:45	Sparrowhawk	2	improved agricultural grassland; male and female flew across road near mullenmeehan at about 8:45am., not mapped	PC
SH001	Vantage Point Survey; VP3	16/02/2021	13:51	Sparrowhawk	1	improved agricultural grassland; female mobbed and chased off by 2 hc. lost behind vp	PDC
SH002	Waterfowl Distribution Survey; Moyvoughly bog	22/03/2021	11:35	Sparrowhawk	1	improved agricultural grassland; female appeared to be hunting. flushed mixed flock of sg and thrushes. chased by hc into next field.	PDC

Table 7 - 4 - 49 Sparrowhawk Supplementary Data

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
SH001	VP2	26/06/2019	10:47	Sparrowhawk	1	15	0	2	13	0	improved agricultural grassland and treelines; flying	JC
SH002	VP2	26/06/2019	14:35	Sparrowhawk	1	65	5	10	50	0	improved agricultural grassland and treelines; hunting	JC
SH003	VP2	26/06/2019	14:46	Sparrowhawk	1	240	0	0	240	0	improved agricultural grassland and buildings and artificial surfaces; circling	JC
SH004	VP4	16/07/2019	10:36	Sparrowhawk	2	491	0	0	120	371	improved agricultural grassland and hedgerows; first spotted flying and soaring, coming together at least three times, interacting. gradually climbing higher and soaring, when they stopped coming together. lost from view in cloud.	PW
SH005	VP4	16/07/2019	11:55	Sparrowhawk	1	390	0	120	180	90	improved agricultural grassland and hedgerows; flying through trees and over ga1 mobbed by calling swallows. it flew across open farmland climbing	PW

Map Ref.	VP	Date	Time	Species	Number	Duration of flight (s)	Band 1 (0-10m)	Band 2 (10-25m)	Band 3 (25-175m)	Band 4 (>175m)	Habitat and activity	Surveyor
											and began soaring south of vp4. it gained height to the west of vp4 and soared north still mobbed by calling swallows before it was lost in the clouds as it soared higher. , adult female	
SH006	VP4	16/07/2019	14:32	Sparrowhawk	1	470	0	50	300	120	improved agricultural grassland and hedgerows; chased by calling swallows. flew across grass fields and hedges gradually gaining height.	PW
SH007	VP2b	22/07/2019	14:20	Sparrowhawk	1	110	0	0	110	0	improved agricultural grassland and hedgerows; soaring	PW
SH008	VP2b	22/07/2019	15:03	Sparrowhawk	1	20	0	18	2	0	improved agricultural grassland, hedgerows and conifer plantation; flying, lost behind trees in w11.	PW
SH009	VP2b	22/07/2019	16:45	Sparrowhawk	1	5	0	0	5	0	improved agricultural grassland and hedgerows; gliding and soaring in the wind, lost behind a tree.	PW
SH010	VP2b	22/07/2019	16:48	Sparrowhawk	1	2	0	0	2	0	improved agricultural grassland and hedgerows; gliding	PW
SH011	VP2	28/08/2019	16:06	Sparrowhawk	1	90	0	90	0	0	improved agricultural grassland; flying	JC
SH012	VP2	28/08/2019	17:00	Sparrowhawk	1	40	0	40	0	0	improved agricultural grassland and conifer plantation; hunting	JC



Map Legend

- EIAR Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- ▲ VP Locations
- Flight Observation



Drawing Title

**Sparrowhawk Vantage Point
Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

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Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-43

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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Survey Radius
- Flight Observation



Drawing Title

**Sparrowhawk Winter Walkover
Survey Observations**

Project Title

**Umma More Renewable Energy
Development**

Drawn By

D. Woods

Checked By

P. Cregg

Project No.

201050

Drawing No.

Fig. 7-4-44

Scale

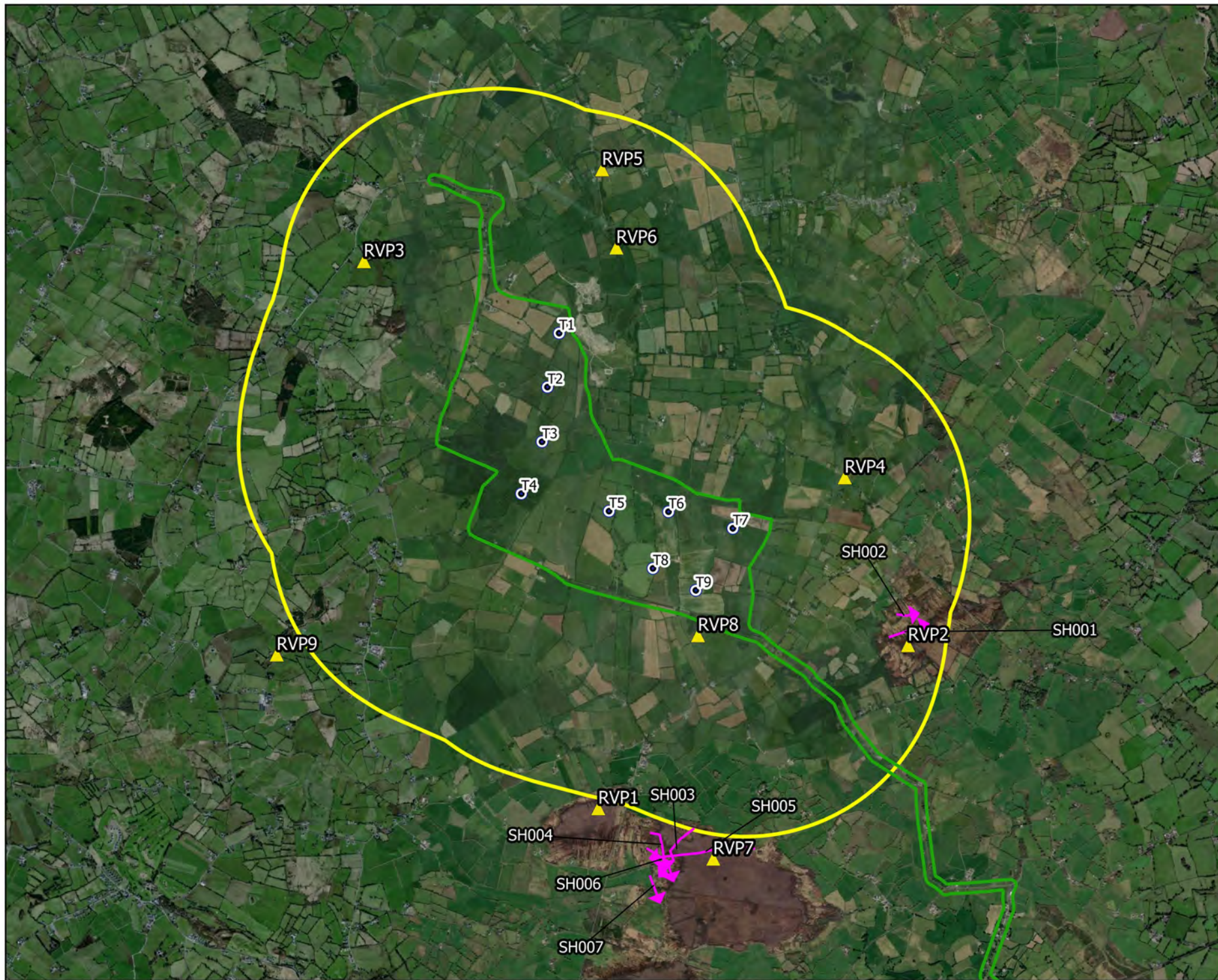
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Map Legend

- EIA Site Boundary
- Turbine Layout
- 2km Survey Radius
- RVP Locations
- Flight Observation



Drawing Title

Sparrowhawk Breeding Raptor
Survey Observations

Project Title

Umma More Renewable Energy
Development

Drawn By

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Checked By

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Project No.

201050

Drawing No.

Fig. 7-4-45

Scale

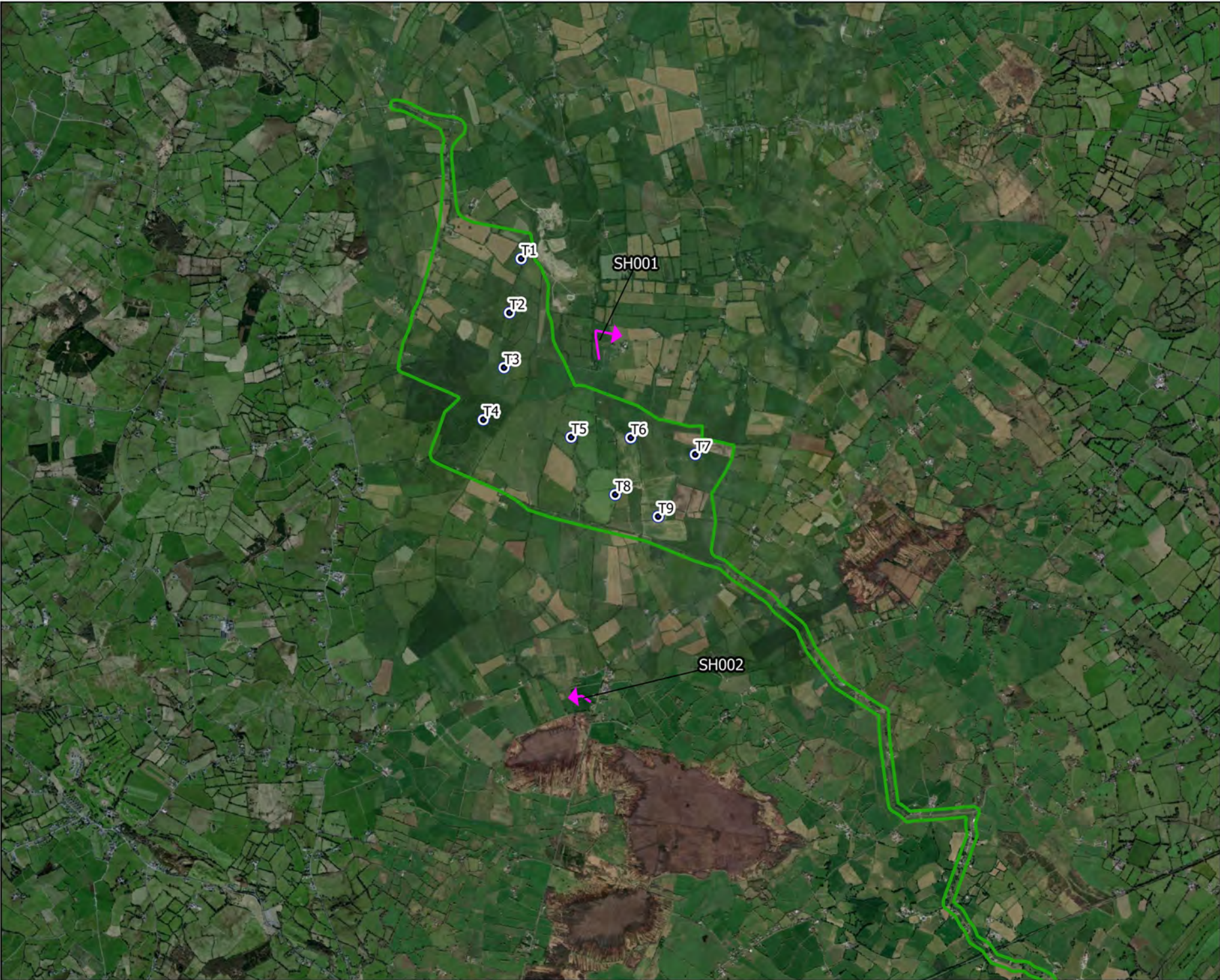
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Map Legend


-  EIA Site Boundary
-  Turbine Layout
-  Flight Observation



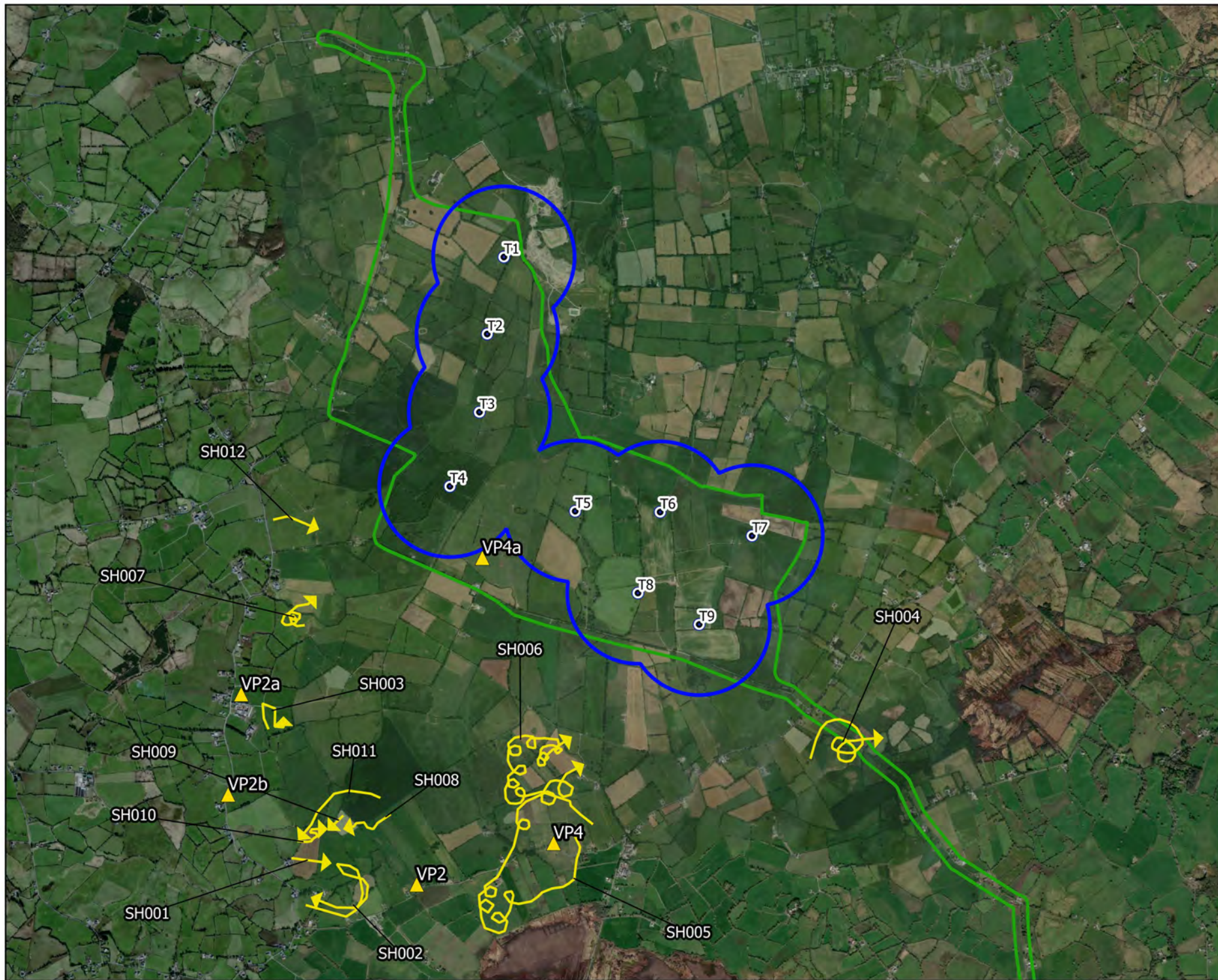
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Project Title
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Map Legend

- EIA Site Boundary
- Turbine Layout
- 500m Radius of Turbines
- Flight Observation



Drawing Title

Sparrowhawk Supplementary Data

Project Title

Umma More Renewable Energy Development

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Fig. 7-4-47

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