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## **APPENDIX 7-4a**

***SURVEY DATA***

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1.

# HEN HARRIER

Table 7-4- 1 Hen Harrier Vantage Point Survey Data

| Ref.  | VP   | Date       | Time  | Species     | Number | Duration of flight (s) | Band 1 (0-15m) | Band 2 (15-25m) | Band 3 (25-200m) | Band 4 (>200m) | Habitat and activity                                                                                                                                     | Surveyor |
|-------|------|------------|-------|-------------|--------|------------------------|----------------|-----------------|------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| HH001 | VP4  | 15/12/2020 | -     | Hen Harrier | 1      | 5                      | 5              | 0               | 0                | 0              | improved agricultural grassland; travelling, unconfirmed raptor, possible Hen Harrier ringtail. seen momentarily before being obstructed from view       | JK       |
| HH002 | VP3  | 17/12/2020 | 11:30 | Hen Harrier | 1      | 10                     | 10             | 0               | 0                | 0              | improved agricultural grassland; travelling, male                                                                                                        | TR       |
| HH003 | VP3  | 17/12/2020 | 11:33 | Hen Harrier | 1      | 95                     | 60             | 35              | 0                | 0              | improved agricultural grassland and conifer plantation; travelling flight, circling, travelling through farmland heading for upland bog area, adult male | TR       |
| HH004 | VP5  | 27/04/2021 | 16:45 | Hen Harrier | 1      | 15                     | 10             | 5               | 0                | 0              | conifer plantation and improved agricultural grassland; flying, flying along treeline, female                                                            | CMC      |
| HH005 | VP2  | 23/07/2021 | 06:10 | Hen Harrier | 1      | 30                     | 30             | 0               | 0                | 0              | bogs; hunting                                                                                                                                            | JG       |
| HH006 | VP1  | 23/07/2021 | 16:05 | Hen Harrier | 1      | 250                    | 160            | 60              | 30               | 0              | upland blanket bog, improved agricultural grassland and cutover bog; travelling flight, hunting, female, was hunting on far ridge                        | JG       |
| HH007 | VP3a | 24/05/2022 | 16:37 | Hen Harrier | 1      | 31                     | 31             | 0               | 0                | 0              | upland blanket bog and conifer plantation; hunting, male                                                                                                 | JG       |
| HH008 | VP3a | 24/05/2022 | 18:40 | Hen Harrier | 1      | 418                    | 390            | 28              | 0                | 0              | upland blanket bog and improved agricultural grassland; hunting, male, hunting in top of the ridge, headed ne                                            | JG       |
| HH010 | VP3a | 28/06/2022 | 19:03 | Hen Harrier | 1      | 177                    | 177            | 0               | 0                | 0              | scrub and upland blanket bog; hunting, male                                                                                                              | JG       |
| HH011 | VP3a | 28/06/2022 | 20:47 | Hen Harrier | 1      | 312                    | 60             | 252             | 0                | 0              | improved agricultural grassland and conifer plantation; hunting                                                                                          | JG       |
| HH012 | VP4a | 05/07/2022 | 17:39 | Hen Harrier | 1      | 206                    | 0              | 0               | 176              | 30             | improved agricultural grassland; soaring, travelling flight, ringtail                                                                                    | JG       |
| HH013 | VP2  | 18/07/2022 | 16:29 | Hen Harrier | 1      | 354                    | 300            | 54              | 0                | 0              | improved agricultural grassland, conifer plantation and hedgerows; hunting,                                                                              | JG       |

| Ref.  | VP   | Date       | Time  | Species     | Number | Duration of flight (s) | Band 1 (0-15m) | Band 2 (15-25m) | Band 3 (25-200m) | Band 4 (>200m) | Habitat and activity                                                                                             | Surveyor |
|-------|------|------------|-------|-------------|--------|------------------------|----------------|-----------------|------------------|----------------|------------------------------------------------------------------------------------------------------------------|----------|
|       |      |            |       |             |        |                        |                |                 |                  |                | possibly catching prey, female, seen go to ground but didn't see come back up                                    |          |
| HH014 | VP3a | 02/09/2022 | 17:25 | Hen Harrier | 1      | 510                    | 100            | 250             | 160              | 0              | upland blanket bog and conifer plantation; hunting, mobbed, ringtail mobbed by two Kestrel for 4mins, flew north | JG       |
| HH015 | VP3a | 03/03/2023 | 13:12 | Hen Harrier | 1      | 250                    | 100            | 50              | 100              | 0              | upland blanket bog, improved agricultural grassland and conifer plantation; hunting, male                        | JG       |

Table 7-4- 2 Hen Harrier Breeding Walkover Survey Data

| Ref.  | Date       | Time  | Species     | Number | Habitat and activity                                                           | Surveyor |
|-------|------------|-------|-------------|--------|--------------------------------------------------------------------------------|----------|
| HH001 | 27/06/2022 | 11:40 | Hen Harrier | 1      | upland blanket bog; hunting, male (suitable nesting habitat; possible breeder) | JG       |

Table 7-4- 3 Hen Harrier Breeding Raptor Survey Data

| Ref.  | BR    | Date       | Time  | Species     | Number | Habitat and activity                                                               | Breeding status                            | Surveyor |
|-------|-------|------------|-------|-------------|--------|------------------------------------------------------------------------------------|--------------------------------------------|----------|
| HH001 | BRVP2 | 14/04/2021 | 11:58 | Hen Harrier | 1      | conifer plantation, flying, adult female. flying and circling slowly               | flyover; non-breeding                      | CMC      |
| HH004 | BRVP8 | 29/04/2021 | 14:50 | Hen Harrier | 1      | conifer plantation, flying, flying quickly over the conifers                       | suitable nesting habitat; possible breeder | CMC      |
| HH005 | BRVP3 | 17/05/2021 | 15:23 | Hen Harrier | 1      | conifer plantation and upland blanket bog, flying, female                          | flyover; non-breeding                      | CMC      |
| HH006 | BRVP2 | 16/06/2021 | 11:56 | Hen Harrier | 1      | conifer plantation, flying, adult male. flying around conifers                     | flyover; non-breeding                      | CMC      |
| HH007 | BRVP5 | 19/07/2021 | 17:44 | Hen Harrier | 1      | bogs and conifer plantation, flying, young bird                                    | suitable nesting habitat; possible breeder | CMC      |
| HH008 | BRVP8 | 29/04/2022 | 14:07 | Hen Harrier | 1      | upland blanket bog, hunting, calling, female hunting low (<15m) also heard calling | suitable nesting habitat; possible breeder | JG       |
| HH009 | BRVP3 | 25/05/2022 | 15:44 | Hen Harrier | 1      | conifer plantation and upland blanket bog, hunting, male                           | suitable nesting habitat; possible breeder | JG       |
| HH010 | BRVP2 | 25/05/2022 | 19:06 | Hen Harrier | 1      | upland blanket bog and conifer plantation, hunting, perched in tree, male          | suitable nesting habitat; possible breeder | JG       |

Table 7-4- 4 Hen Harrier Winter Walkover Survey Data

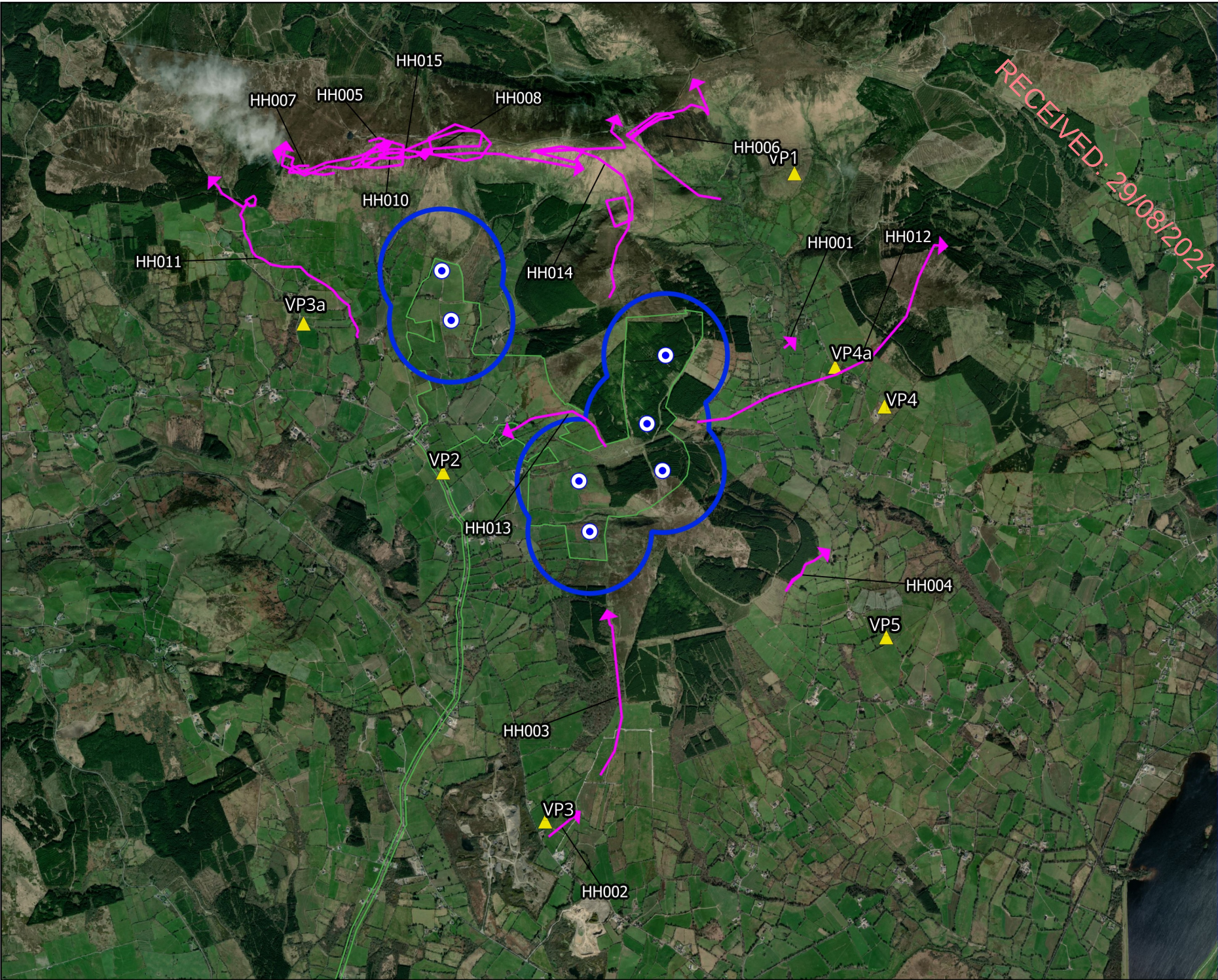
| Ref.  | Date       | Time  | Species     | Number | Habitat and activity                                                                                                                                                                           | Surveyor |
|-------|------------|-------|-------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| HH001 | 23/03/2022 | 12:07 | Hen Harrier | 1      | wet grassland, scrub and conifer plantation; hunting, ringtail hen harrier came from above forestry flying northeast, swooped down lower and flew across hillside close to ground. (wintering) | SOB      |

Table 7-4- 5 Hen Harrier Roost Survey Data

| Ref.  | HHVP  | Date       | Time  | Species     | Number | Habitat and activity                                                                                                                                                                               | Surveyor |
|-------|-------|------------|-------|-------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| HH001 | HHVP2 | 23/10/2020 | 17:50 | Hen Harrier | 1      | scrub and semi-natural grassland, flying                                                                                                                                                           | AR       |
| HH002 | HHVP3 | 11/10/2022 | 18:07 | Hen Harrier | 1      | scrub, upland blanket bog and conifer plantation, hunting, ringtail                                                                                                                                | JG       |
| HH003 | HHVP2 | 27/10/2022 | 17:14 | Hen Harrier | 1      | scrub, improved agricultural grassland and conifer plantation, hunting, ringtail hunting over scrubland for 7mins approx., flushed 2 Snipe, lost sight of it far side of hill heading east to site | JG       |
| HH005 | HHVP6 | 06/03/2023 | 17:50 | Hen Harrier | 1      | upland blanket bog, conifer plantation and scrub, travelling flight, landing, male                                                                                                                 | JG       |

Table 7-4- 6 Hen Harrier Incidental Observation Data

| Ref.  | Location                                          | Date       | Time  | Species     | Number | Habitat and activity                               | Surveyor |
|-------|---------------------------------------------------|------------|-------|-------------|--------|----------------------------------------------------|----------|
| HH001 | Waterbird Distribution Survey; SPA                | 08/12/2020 | 10:27 | Hen Harrier | 1      | depositing/lowland rivers; hunting, ringtail       | TR       |
| HH002 | Breeding Red Grouse Survey; track adjacent to bog | 08/02/2021 | 12:30 | Hen Harrier | 1      | bogs; flying, flushed. Not mapped.                 | JC       |
| HH003 | Breeding Woodcock Survey; WKT3                    | 11/06/2021 | 19:57 | Hen Harrier | 1      | bogs; flying, male hen harrier flew up from ground | JG       |

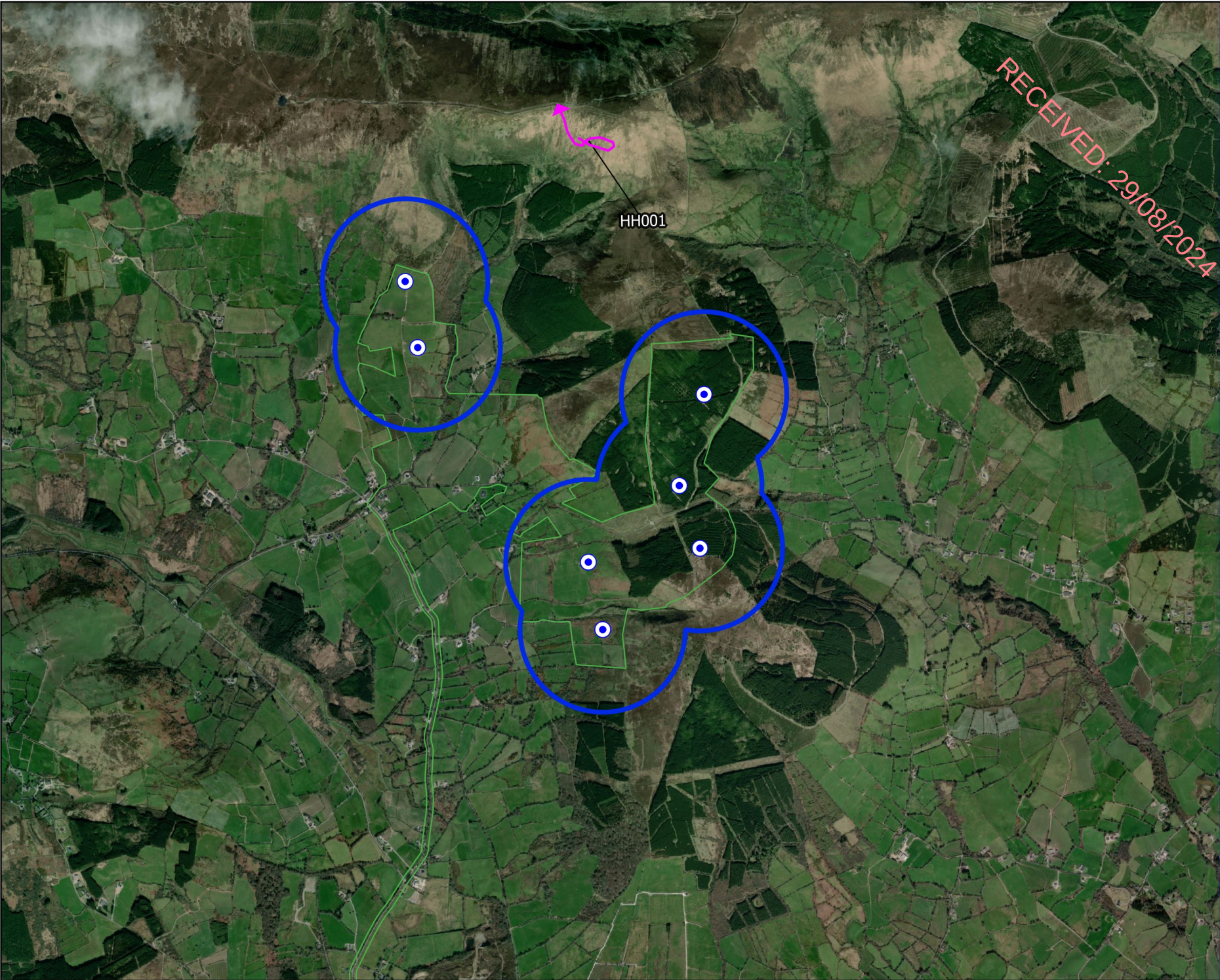


Map Legend

- EIA Site Boundary
- 500m Radius of Turbines
- VP Locations
- Turbine Locations
- Flightline



|                                                                                                                                                                                                                                                                                          |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Drawing Title                                                                                                                                                                                                                                                                            |             |
| Hen Harrier Observations<br>Vantage Point Surveys                                                                                                                                                                                                                                        |             |
| Project Title                                                                                                                                                                                                                                                                            |             |
| Lackareagh Wind Farm,<br>Co. Clare                                                                                                                                                                                                                                                       |             |
| Drawn By                                                                                                                                                                                                                                                                                 | Checked By  |
| SA                                                                                                                                                                                                                                                                                       | KS          |
| Project No.                                                                                                                                                                                                                                                                              | Drawing No. |
| 220245                                                                                                                                                                                                                                                                                   | Fig. 7-4-1  |
| Scale                                                                                                                                                                                                                                                                                    | Date        |
| 1:40,000                                                                                                                                                                                                                                                                                 | 14/05/2024  |
|  <div>MKO<br/>Planning and<br/>Environmental<br/>Consultants<br/>Tuam Road, Galway<br/>Ireland, H91 VV84<br/>+353 (0) 91 735611<br/>email: info@mkofireland.ie<br/>Website: ww.mkofireland.ie</div> |             |

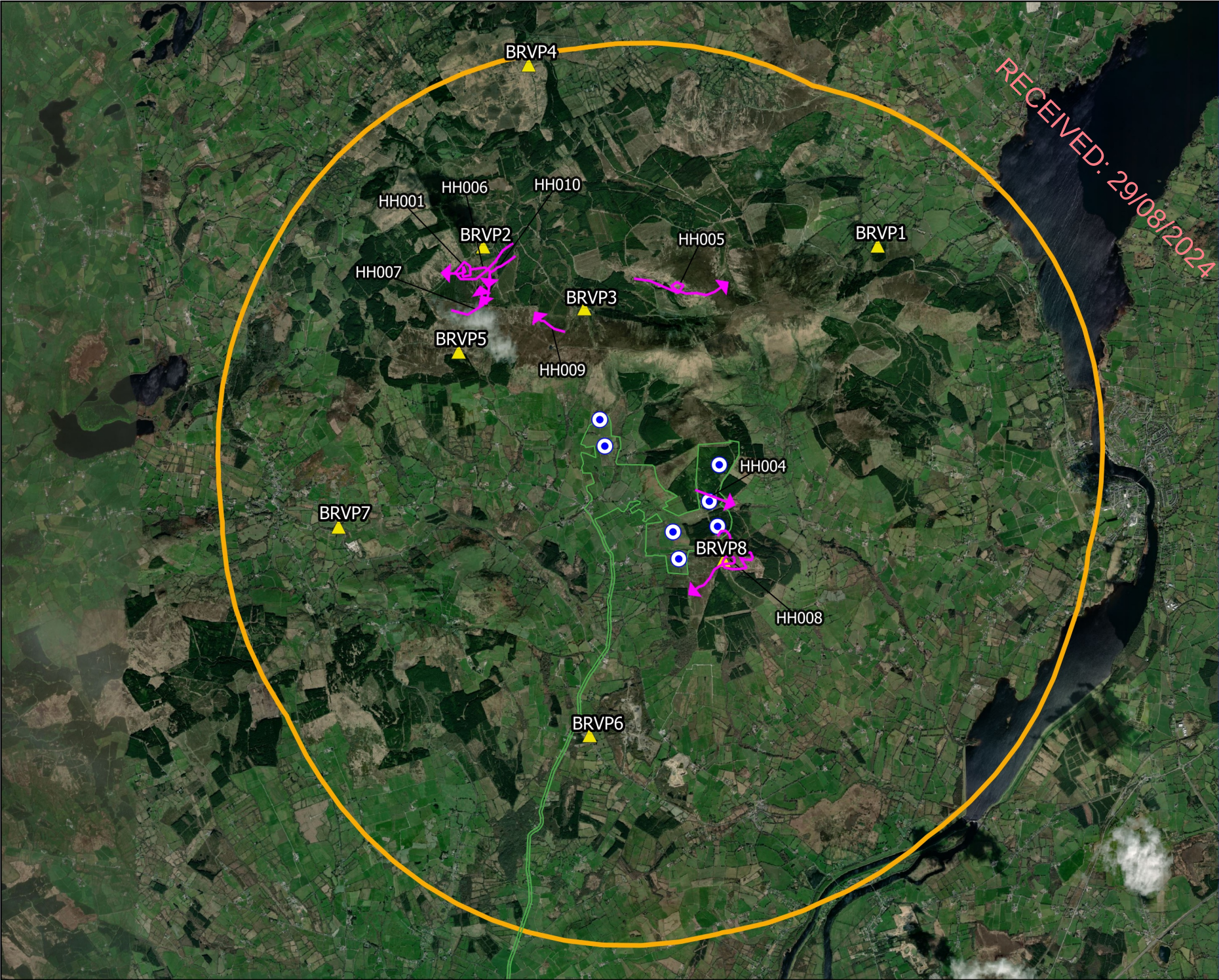


Map Legend

- EIA Site Boundary
- 500m Radius of Turbines
- Turbine Locations
- Flightline



|                                                                                                                                                                                 |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Drawing Title                                                                                                                                                                   |             |
| Hen Harrier Observations<br>Breeding Walkover Surveys                                                                                                                           |             |
| Project Title                                                                                                                                                                   |             |
| Lackareagh Wind Farm,<br>Co. Clare                                                                                                                                              |             |
| Drawn By                                                                                                                                                                        | Checked By  |
| SA                                                                                                                                                                              | KS          |
| Project No.                                                                                                                                                                     | Drawing No. |
| 220245                                                                                                                                                                          | Fig. 7-4-2  |
| Scale                                                                                                                                                                           | Date        |
| 1:30,000                                                                                                                                                                        | 14/05/2024  |
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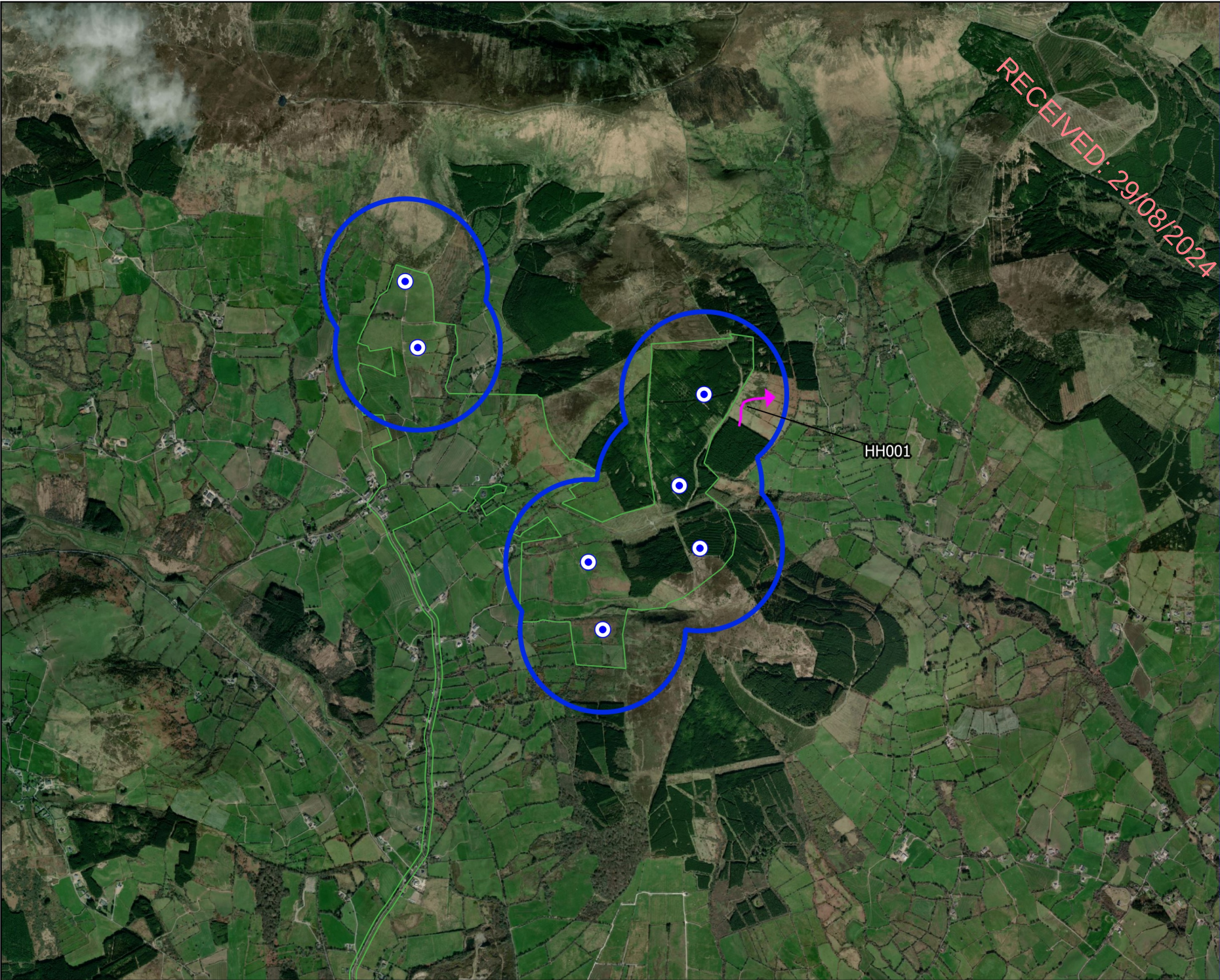


Map Legend

- EIA Site Boundary
- 5km Survey Radius
- Breeding Raptor VP Locations
- Turbine Locations
- Flightline



|                                                                                                                                                                            |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Drawing Title                                                                                                                                                              |             |
| Hen Harrier Observations<br>Breeding Raptor Surveys                                                                                                                        |             |
| Project Title                                                                                                                                                              |             |
| Lackareagh Wind Farm,<br>Co. Clare                                                                                                                                         |             |
| Drawn By                                                                                                                                                                   | Checked By  |
| SA                                                                                                                                                                         | KS          |
| Project No.                                                                                                                                                                | Drawing No. |
| 220245                                                                                                                                                                     | Fig. 7-4-3  |
| Scale                                                                                                                                                                      | Date        |
| 1:75,000                                                                                                                                                                   | 14/05/2024  |
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Map Legend

- EIA Site Boundary
- 500m Radius of Turbines
- Turbine Locations
- Flightline



Drawing Title  
Hen Harrier Observations  
Winter Walkover Surveys

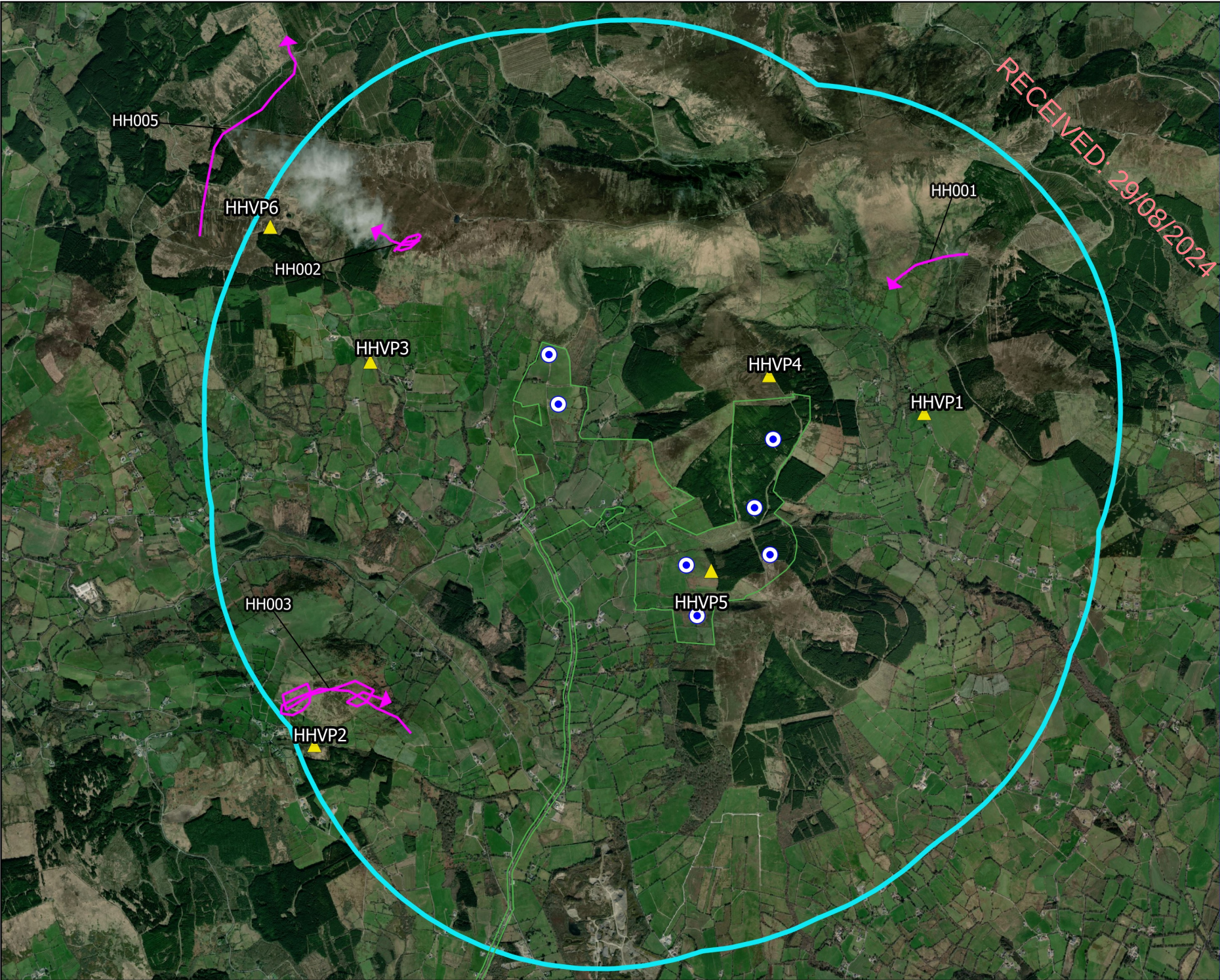
Project Title  
Lackareagh Wind Farm,  
Co. Clare

|                |                  |
|----------------|------------------|
| Drawn By<br>SA | Checked By<br>KS |
|----------------|------------------|

|                       |                           |
|-----------------------|---------------------------|
| Project No.<br>220245 | Drawing No.<br>Fig. 7-4-4 |
|-----------------------|---------------------------|

|                   |                    |
|-------------------|--------------------|
| Scale<br>1:30,000 | Date<br>14/05/2024 |
|-------------------|--------------------|

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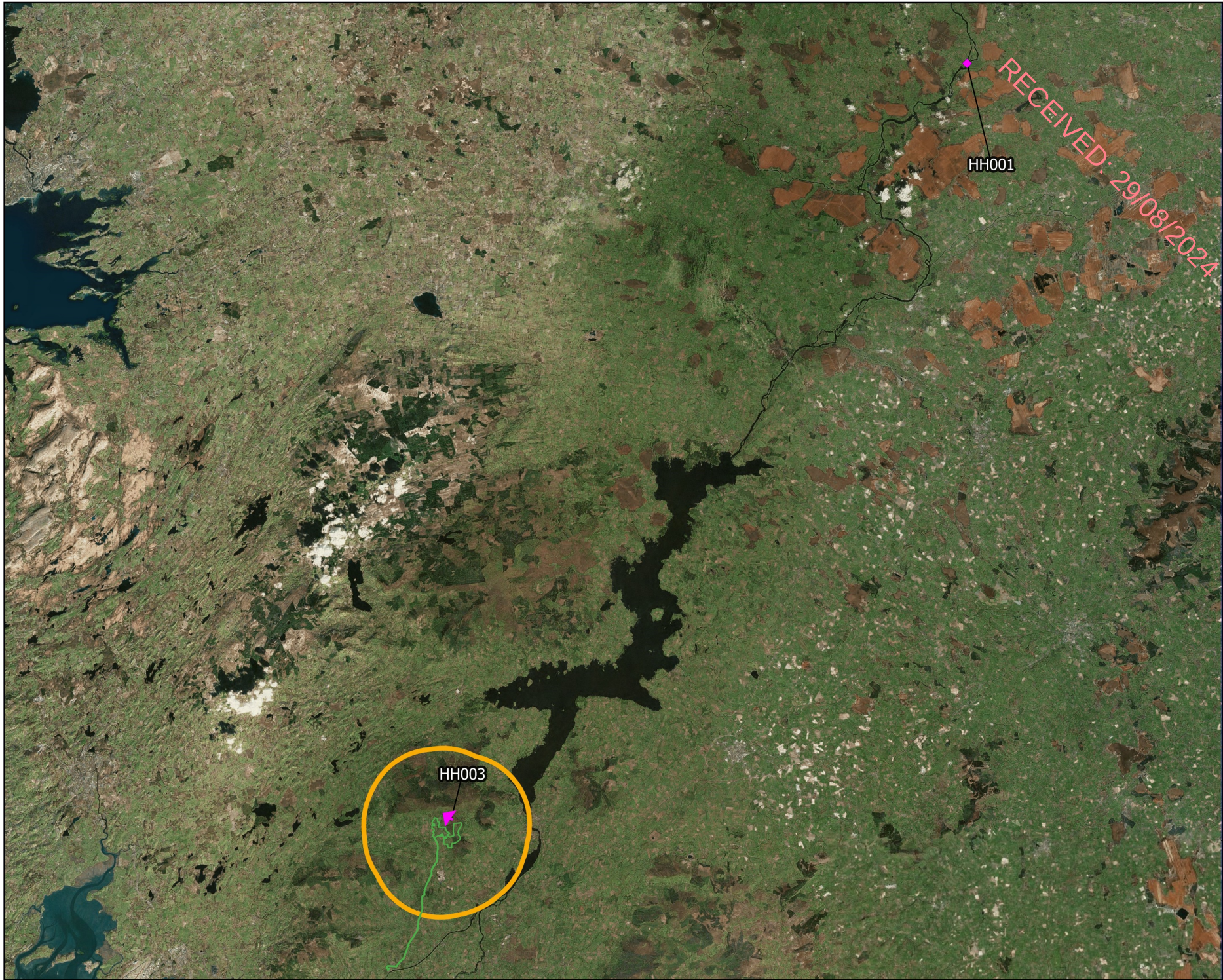


Map Legend

- EIA Site Boundary
- 2km Survey Radius
- Hen Harrier VP Locations
- Turbine Locations
- Flightline



|                                                                                                                                                                                 |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Drawing Title                                                                                                                                                                   |             |
| Hen Harrier Observations<br>Hen Harrier Roost Surveys                                                                                                                           |             |
| Project Title                                                                                                                                                                   |             |
| Lackareagh Wind Farm,<br>Co. Clare                                                                                                                                              |             |
| Drawn By                                                                                                                                                                        | Checked By  |
| SA                                                                                                                                                                              | KS          |
| Project No.                                                                                                                                                                     | Drawing No. |
| 220245                                                                                                                                                                          | Fig. 7-4-5  |
| Scale                                                                                                                                                                           | Date        |
| 1:40,000                                                                                                                                                                        | 14/05/2024  |
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Map Legend

- EIA Site Boundary
- 5km Survey Radius
- Flightline
- Observation



|                                                                                                                                                                               |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Drawing Title                                                                                                                                                                 |             |
| Hen Harrier<br>Incidental Observations                                                                                                                                        |             |
| Project Title                                                                                                                                                                 |             |
| Lackareagh Wind Farm,<br>Co. Clare                                                                                                                                            |             |
| Drawn By                                                                                                                                                                      | Checked By  |
| SA                                                                                                                                                                            | KS          |
| Project No.                                                                                                                                                                   | Drawing No. |
| 220245                                                                                                                                                                        | Fig. 7-4-6  |
| Scale                                                                                                                                                                         | Date        |
| 1:400,000                                                                                                                                                                     | 14/05/2024  |
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