# APPENDIX 7.2

Tirawley Wind Farm:
Bird Survey Flight Line
Data, 2021-23

## Tirawley Wind Farm Site - Bird Survey Flightline Data 2021-2023

| VP no. | Obser-ver | Date | Mapnote / Flightline No. | Common Name | Species Quantity | Time of Obs. | Total Duration (s) | 0-25 m (s) | 25-50 m (s) | 50-100 m (s) | 100-180 m (s) | >180 m (s) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Summer 2021** | | | | | | | | | | | |
| 2 | MH | 23/04/2021 | 1 | Kestrel | 1 | 10:08 | 30 | 30 | 30 | 0 | - | - | Hunting |
| 1 | BM | 24/04/2021 | 2 | Buzzard | 1 | 11.13 | 180 | 0 | 0 | 0 | 180 | 0 | Circling |
| 5 | BM | 25/04/2021 | 3 | Kestrel | 1 | 09.17 | 90 | 0 | 60 | 30 | 0 | 0 | Male Flying / Hunting low |
| 3 | CR | 29/04/2021 | 4 | Kestrel | 1 | 08.58 | 60 | 60 | 0 | 0 | 0 | 0 | Flying low |
| 3 | CR | 29/04/2021 | 5 | Lesser black-backed gull | 1 | 12.56 | 120 | 120 | 0 | 0 | 0 | 0 | Flew over VP area |
| 3 | CR | 29/04/2021 | 6 | Lesser black-backed gull | 1 | 04:16 | 40 | 0 | 40 | 0 | 0 | 0 | Flying |
| 4 | CR | 30/04/2021 | 7 | Lesser black-backed gull | 3 | 18.11 | 35 | 0 | 0 | 15 | 30 | 0 | Flying / soaring |
| 4 | CR | 30/04/2021 | 8 | Lesser black-backed gull | 26 | 18.53 | 60 | 0 | 0 | 0 | 30 | 30 | Flock flying high |
| 1 | BM | 09/05/2021 | 9 | Buzzard | 1 | 15.22 | 180 | 0 | | 120 | 6 | 0 | Flying steadily NE |
| 4 | CR | 16/05/2021 | 10 | Lesser black-backed gull | 2 | 09.37 | 75 | 0 | 0 | 75 | 0 | 0 | Flying |
| 4 | CR | 16/05/2021 | 11 | Kestrel | 1 | 10.57 | 25 | 25 | 0 | 0 | 0 | 0 | Flying |
| 5 | BM | 20/05/2021 | 12 | Kestrel | 1 | 08.43 | 120 | 0 | 90 | 30 | 0 | 0 | Hunting |
| 4 | CR | 03/06/2021 | 13 | Lesser black-backed gull | 3 | 10.02 | 140 | 0 | 20 | 120 | 0 | 0 | Drifting |
| 4 | CR | 03/06/2021 | 14 | Kestrel | 1 | 11.00 | 60 | 60 | 0 | 0 | 0 | 0 | Flying / hunting low |
| 2 | MH | 07/06/2021 | 15 | Lesser black-backed gull | 3 | 09.10 | 150 | 0 | 50 | 100 | 0 | 0 | Flying |
| 2 | MH | 07/06/2021 | 16 | Lesser black-backed gull | 5 | 14.24 | 135 | 35 | 40 | 60 | 0 | 0 | Flying |
| 1 | BM | 12/06/2021 | 17 | Kestrel | 1 | 08.55 | 180 | 40 | 90 | 50 | 0 | 0 | Male hunting edge of forest |
| 1 | BM | 12/06/2021 | 18 | Buzzard | 1 | 10.11 | 45 | 0 | 45 | 0 | 0 | 0 | Flying NE |
| 5 | BM | 13/06/2021 | 19 | Lesser black-backed gull | 5 | 18.05 | 75 | 0 | 0 | 0 | 75 | 0 | Loose flock flying |
| 3 | MH | 25/06/2021 | 20 | Lesser black-backed gull | 1 | 13.35 | 60 | 0 | 0 | 60 | 0 | 0 | Flying |
| 2 | MH | 12/07/2021 | 21 | Kestrel | 1 | 14.30 | 45 | 0 | 45 | 0 | 0 | 0 | Hunting near forest edge |
| 2 | MH | 12/07/2021 | 22 | Lesser black-backed gull | 4 | 15.16 | 120 | 0 | 70 | 50 | 0 | 0 | Flying NNW |
| 1 | JA | 14/07/2021 | 23 | Kestrel | 1 | 14.09 | 90 | 30 | 60 | 0 | 0 | 0 | Hovering, then dropped |
| 3 | MH | 22/07/2021 | 24 | Sparrowhawk | 1 | 09.15 | 50 | 50 | 0 | 0 | 0 | 0 | Hunting |
| 2 | MH | 11/08/2021 | 25 | Sparrowhawk | 1 | 10.10 | 300 | 150 | 150 | 0 | 0 | 0 | Flying / hunting |
| 2 | MH | 11/08/2021 | 26 | Lesser black-backed gull | 1 | 11.10 | 30 | 0 | 30 | 0 | 0 | 0 | Flying |
| 5 | JA | 13/08/2021 | 27 | Sparrowhawk | 1 | 10.18 | 20 | 20 | 0 | 0 | 0 | 0 | Hunting |
| 1 | BM | 27/08/2021 | 28 | Buzzard | 2 | 15.51 | 400 | 0 | 120 | 240 | 40 | 0 | Two interacting |
| 4 | CR | 31/08/2021 | 29 | Hen harrier | 1 | 11.50 | 45 | 45 | 0 | 0 | 0 | 0 | Male flying / hunting |
| 4 | CR | 31/08/2021 | 30 | Kestrel | 1 | 14.40 | 45 | 45 | 0 | 0 | 0 | 0 | Flying |
| 3 | CR | 09/09/2021 | 31 | Kestrel | 1 | 12.07 | 30 | 30 | 0 | 0 | 0 | 0 | Flew into quarry |
| 3 | CR | 09/09/2021 | 32 | Kestrel | 1 | 14.49 | 120 | | 50 | 50 | 0 | 0 | Flying / Hunting |

| VP no. | Obser-ver | Date | Mapnote / Flightline No. | Common Name | Species Quantity | Time of Obs. | Total Duration (s) | 0-25 m (s) | 25-50 m (s) | 50-100 m (s) | 100-180 m (s) | >180 m (s) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | MH | 10/09/2021 | 33 | Hen harrier | 1 | 13.23 | 60 | 60 | 0 | 0 | 0 | 0 | Ringtail - flying then settled on bare branch for c.10 min |
| 2 | MH | 10/09/2021 | 34 | Buzzard | 1 | 14.31 | 40 | 20 | 20 | 0 | 0 | 0 | Mobbed by pigeons |
| 1 | JA | 15/09/2021 | 35 | Sparrowhawk | 1 | 09.09 | 20 | 20 | 0 | 0 | 0 | 0 | Male hunting |
| 1 | JA | 16/09/2021 | 36 | Hen harrier | 1 | 16.20 | 60 | 40 | 20 | 0 | 0 | 0 | Ringtail hunting rough fields |
| | | **Winter 2021-22** | | | | | | | | | | | |
| 1 | JA | 10/10/2021 | 37 | Buzzard | 1 | 13.47 | 90 | 0 | 0 | 90 | 0 | 0 | Flying |
| 2 | MH | 14/10/2021 | 38 | Kestrel | 1 | 13.41 | 150 | 0 | 50 | 100 | 0 | 0 | Male hunting |
| 2 | MH | 14/10/2021 | 39 | Buzzard | 1 | 13.59 | 85 | 0 | 0 | 85 | 0 | 0 | Adult flying |
| 4 | CR | 22/10/2021 | 40 | Kestrel | 1 | 14.05 | 480 | 100 | 180 | 200 | 0 | 0 | Flying / Hovering / hunting |
| 4 | CR | 22/10/2021 | 41 | Kestrel | 1 | 14.16 | 400 | 160 | 100 | 140 | 0 | 0 | Hunting - dropped and got prey item |
| 4 | CR | 22/10/2021 | 42 | Buzzard | 1 | 15.37 | 70 | 0 | 30 | 40 | 0 | 0 | Soaring |
| 5 | BM | 22/10/2021 | 43 | Buzzard | 1 | 10.34 | 120 | 0 | 60 | 60 | 0 | 0 | Flying |
| 3 | HK | 31/10/2021 | 44 | Hen harrier | 1 | 12.06 | 75 | 0 | 75 | 0 | 0 | 0 | Ad male flying, appeared to land on bog, not seen again |
| 1 | BM | 24/11/2021 | 45 | Kestrel | 1 | 11.53 | 120 | 20 | 30 | 70 | 0 | 0 | Hovering / hunting - female |
| 5 | JA | 24/11/2021 | 46 | Sparrowhawk | 1 | 13.12 | 30 | 0 | 30 | 0 | 0 | 0 | Hunting edge forest - male |
| 2 | BM | 25/11/2021 | 47 | Buzzard | 1 | 10.44 | 90 | 0 | 0 | 90 | 0 | 0 | Circling over forest |
| 2 | BM | 25/11/2021 | 48 | Kestrel | 1 | 11.06 | 75 | 0 | 75 | 0 | 0 | 0 | Hunting |
| 3 | JA | 25/11/2021 | 49 | Kestrel | 1 | 13.15 | 60 | 0 | 60 | 0 | 0 | 0 | Flying over bog, male |
| 4 | JA | 30/11/2021 | 50 | Sparrowhawk | 1 | 10.38 | 30 | 30 | 0 | 0 | 0 | 0 | Hunting |
| 5 | JA | 10/12/2021 | 51 | Buzzard | 1 | 13.06 | 180 | 0 | 0 | 100 | 80 | 0 | Soaring |
| 1 | BM | 10/12/2021 | 52 | Sparrowhawk | 1 | 10.43 | 25 | 25 | 0 | 0 | 0 | 0 | Hunting |
| 3 | HK | 21/12/2021 | 53 | Peregrine | 1 | 09.45 | 32 | 0 | 32 | 0 | 0 | 0 | Adult flying low |
| 3 | HK | 21/12/2021 | 54 | Kestrel | 1 | 13.47 | 40 | 0 | 40 | 0 | 0 | 0 | Hunting |
| 3 | HK | 21/12/2021 | 55 | Hen harrier | 1 | 14.35 | 98 | 98 | 0 | 0 | 0 | 0 | Ad male - actively hunting |
| 4 | HK | 30/12/2021 | 56 | Kestrel | 1 | 09.02 | 110 | 20 | 30 | 60 | 0 | 0 | Hovering |
| 4 | HK | 30/12/2021 | 57 | Sparrowhawk | 3 | 11.06 | 90 | 0 | 40 | 50 | 0 | 0 | 2 male, 1 female rising |
| 4 | HK | 30/12/2021 | 58 | Hen harrier | 1 | 13.28 | 120 | 120 | 0 | 0 | 0 | 0 | Ad male flying low |
| 2 | MH | 04/01/2022 | 59 | Hen harrier | 1 | 16.30 | 90 | 90 | 0 | 0 | 0 | 0 | Flying low |
| 1 | BM | 20/01/2022 | 60 | Peregrine | 1 | 10.09 | 70 | 0 | 0 | 70 | 0 | 0 | Flying steadily |
| 5 | JA | 24/01/2022 | 61 | Sparrowhawk | 1 | 11.02 | 25 | 25 | 0 | 0 | 0 | 0 | Chasing prey item |
| 3 | HK | 25/01/2022 | 62 | Sparrowhawk | 1 | 09.28 | 40 | 0 | 20 | 20 | 0 | 0 | Female flying |
| 3 | HK | 25/01/2022 | 63 | Peregrine | 1 | 13.53 | 150 | 70 | 80 | 0 | 0 | 0 | Flying |
| 5 | BM | 15/02/2022 | 64 | Buzzard | 2 | 10.56 | 220 | 0 | 50 | 100 | 70 | 0 | Pair circling |
| 3 | HK | 22/02/2022 | 65 | Hen harrier | 1 | 08.54 | 65 | 50 | 15 | 0 | 0 | 0 | Ad male actively hunting |
| 3 | HK | 22/02/2022 | 66 | Kestrel | 1 | 10.10 | 45 | 20 | 25 | 0 | 0 | 0 | Male flying |
| 4 | HK | 27/02/2022 | 67 | Hen harrier | 1 | 09.50 | 70 | 10 | 60 | 0 | 0 | 0 | Ad male got up from bog, flew over forest and landed again on bog |

| VP no. | Obser-ver | Date | Mapnote / Flightline No. | Common Name | Species Quantity | Time of Obs. | Total Duration (s) | 0-25 m (s) | 25-50 m (s) | 50-100 m (s) | 100-180 m (s) | >180 m (s) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | HK | 27/02/2022 | 68 | Kestrel | 1 | 10.34 | 75 | 50 | 25 | 0 | 0 | 0 | Hovering |
| 2 | MH | 14/03/2022 | 69 | Buzzard | 2 | 14.36 | 650 | 150 | 300 | 150 | 50 | 0 | Pair in display |
| 1 | JA | 15/03/2022 | 70 | Buzzard | 1 | 13.42 | 80 | 0 | 80 | 0 | 0 | 0 | Flying |
| 3 | HK | 19/03/2022 | 71 | Hen harrier | 1 | 06.34 | 22 | 22 | 0 | 0 | 0 | 0 | Emerged from bog and flew east over quarry area - roost |
| 4 | HK | 24/03/2022 | 72 | Kestrel | 1 | 10.44 | 110 | 60 | 30 | 20 | 0 | 0 | Hunting actively |
| 5 | BM | 27/03/2022 | 73 | Kestrel | 1 | 10.18 | 120 | 0 | 40 | 80 | 0 | 0 | Flying / hunting |
| | | **Summer 2022** | | | | | | | | | | | |
| 2 | MH | 08/04/2022 | 74 | Sparrowhawk | 1 | 13.47 | 10 | 10 | 0 | 0 | 0 | 0 | Male hunting |
| 2 | MH | 08/04/2022 | 75 | Kestrel | 1 | 14.09 | 60 | 0 | 0 | 60 | 0 | 0 | Hovering |
| 2 | MH | 08/04/2022 | 76 | Buzzard | 2 | 15.05 | 80 | 0 | 0 | 80 | 0 | 0 | Pair interacting |
| 1 | JA | 09/04/2022 | 77 | Buzzard | 2 | 14.18 | 170 | 0 | 0 | 120 | 50 | 0 | Pair circling |
| 5 | BM | 24/04/2022 | 78 | Lesser black-backed gull | 9 | 10.43 | 180 | 0 | 0 | 0 | 100 | 80 | Loose flock high |
| 5 | BM | 24/04/2022 | 79 | Sparrowhawk | 1 | 16.08 | 30 | 30 | 0 | 0 | 0 | 0 | Male hunting |
| 4 | HK | 25/04/2022 | 80 | Kestrel | 1 | 09.26 | 50 | 20 | 30 | 0 | 0 | 0 | Flying / hunting |
| 1 | JA | 17/05/2022 | 81 | Buzzard | 1 | 11.11 | 70 | 0 | 70 | 0 | 0 | 0 | Flying |
| 5 | JA | 18/05/2022 | 82 | Sparrowhawk | 1 | 09.17 | 90 | 0 | 0 | 90 | 0 | 0 | Circling / soaring |
| 2 | MH | 19/05/2022 | 83 | Lesser black-backed gull | 3 | 08.40 | 45 | 0 | 45 | 0 | 0 | 0 | Adults |
| 3 | DM | 21/05/2022 | 84 | Sparrowhawk | 1 | 14.56 | 30 | 30 | 0 | 0 | 0 | 0 | Male hunting |
| 3 | DM | 04/06/2022 | 85 | Buzzard | 2 | 16.18 | 240 | 0 | 100 | 100 | 40 | 0 | Pair interacting / rising |
| 2 | MH | 09/06/2022 | 86 | Sparrowhawk | 1 | 15.55 | 40 | 40 | 0 | 0 | 0 | 0 | Flying |
| 2 | MH | 09/06/2022 | 87 | Lesser black-backed gull | 2 | 16.10 | 25 | 25 | 0 | 0 | 0 | 0 | Flying |
| 1 | BM | 15/06/2022 | 88 | Kestrel | 1 | 09.17 | 45 | 0 | 45 | 0 | 0 | 0 | Hunting edge of forest |
| 5 | JA | 22/06/2022 | 89 | Sparrowhawk | 1 | 11.00 | 90 | 0 | 45 | 45 | 0 | 0 | Bird circling - prob female |
| 2 | MH | 07/07/2022 | 90 | Lesser black-backed gull | 2 | 09.44 | 65 | 0 | 65 | 0 | 0 | 0 | Flying - adults |
| 2 | MH | 07/07/2022 | 91 | Buzzard | 2 | 11.30 | 305 | 0 | 0 | 0 | 305 | 0 | Pair interacting |
| 3 | DM | 10/07/2022 | 92 | Kestrel | 1 | 16.14 | 85 | 85 | 0 | 0 | 0 | 0 | Hunting |
| 4 | DM | 11/07/2022 | 93 | Lesser black-backed gull | 1 | 14.33 | 45 | 5 | 40 | 0 | 0 | 0 | Flying low |
| 4 | DM | 11/07/2022 | 94 | Kestrel | 2 | 14.35 | 210 | 60 | 60 | 90 | 0 | 0 | Two hunting |
| 1 | JA | 20/07/2022 | 95 | Kestrel | 1 | 10.48 | 120 | 30 | 60 | 30 | 0 | 0 | Male hunting |
| 5 | JA | 21/07/2022 | 96 | Sparrowhawk | 2 | 09.43 | 180 | 0 | 60 | 40 | 80 | 0 | Pair rising |
| 3 | DM | 11/08/2022 | 97 | Sparrowhawk | 1 | 17.39 | 10 | 5 | 5 | 0 | 0 | 0 | Juvenile flying along forest |
| 3 | DM | 11/08/2022 | 98 | Kestrel | 1 | 18.40 | 20 | 20 | 0 | 0 | 0 | 0 | Male |
| 4 | DM | 12/08/2022 | 99 | Buzzard | 2 | 12.33 | 90 | 0 | 90 | 40 | 50 | 0 | Two Soaring |
| 2 | MH | 13/08/2022 | 100 | Merlin | 1 | 10.13 | 12 | 12 | 0 | 0 | 0 | 0 | Female after bird (pipit?) - then landed on fence post for 6 min, and flew again |
| 2 | MH | 13/08/2022 | 101 | Merlin | 1 | 12.25 | 10 | 10 | 0 | 0 | 0 | 0 | Flying along ditch & cross road - not sexed but probably same as earlier |

| VP no. | Obser-ver | Date | Mapnote / Flightline No. | Common Name | Species Quantity | Time of Obs. | Total Duration (s) | 0-25 m (s) | 25-50 m (s) | 50-100 m (s) | 100-180 m (s) | >180 m (s) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | BM | 14/08/2022 | 102 | Buzzard | 1 | 14.54 | 70 | 0 | 70 | 0 | 0 | 0 | Flying |
| 1 | JA | 24/08/2022 | 103 | Sparrowhawk | 1 | 10.23 | 75 | 0 | 75 | 0 | 0 | 0 | Circling over forest |
| 1 | BM | 17/09/2022 | 104 | Peregrine | 1 | 10.09 | 60 | 0 | 40 | 20 | 0 | 0 | Flying direct - prob female |
| 1 | BM | 17/09/2022 | 105 | Lesser black-backed gull | 13 | 18.12 | 180 | 0 | 120 | 60 | 0 | 0 | Loose flock - ads & imms |
| | | **Winter 2022-23** | | | | | | | | | | | |
| 1 | JA | 10/10/2022 | 106 | Kestrel | 1 | 11.09 | 60 | 0 | 60 | 0 | 0 | 0 | Flying / hunting |
| 1 | JA | 10/10/2022 | 107 | Buzzard | 2 | 14.47 | 160 | 0 | 80 | 40 | 40 | 0 | Pair rising |
| 3 | DM | 11/10/2022 | 108 | Hen harrier | 1 | 12.38 | 55 | 55 | 0 | 0 | 0 | 0 | Male hunting over wet field / bog |
| 3 | DM | 11/01/2022 | 109 | Kestrel | 1 | 13.05 | 210 | 0 | 110 | 100 | 0 | 0 | Male hunting |
| 5 | BM | 18/10/2022 | 110 | Buzzard | 1 | 13.14 | 75 | 0 | 75 | 0 | 0 | 0 | Flying |
| 5 | JA | 12/11/2022 | 111 | Kestrel | 1 | 13.09 | 90 | 60 | 30 | 0 | 0 | 0 | Hovering |
| 1 | JA | 13/11/2022 | 112 | Hen harrier | 1 | 10.12 | 75 | 75 | 0 | 0 | 0 | 0 | Male hunting fields |
| 3 | DM | 22/11/2022 | 113 | Hen harrier | 1 | 14.43 | 5 | 5 | 0 | 0 | 0 | 0 | Male seen briefly |
| 4 | DM | 23/11/2022 | 114 | Kestrel | 1 | 11.36 | 50 | 40 | 10 | 0 | 0 | 0 | Female hovering |
| 5 | BM | 13/12/2022 | 115 | Buzzard | 1 | 11.11 | 90 | 30 | 60 | 0 | 0 | 0 | Hunting |
| 1 | JA | 16/12/2022 | 116 | Kestrel | 1 | 10.16 | 110 | 30 | 30 | 50 | 0 | 0 | Male hunting on bog |
| 2 | MH | 19/12/2022 | 117 | Kestrel | 1 | 14.57 | 120 | 60 | 60 | 0 | 0 | 0 | Male hunting |
| 2 | MH | 02/01/2023 | 118 | Kestrel | 1 | 09.32 | 50 | 50 | 0 | 0 | 0 | 0 | Male hunting / flying |
| 1 | JA | 11/01/2023 | 119 | Buzzard | 1 | 09.45 | 90 | 0 | 90 | 0 | 0 | 0 | Flying low over wet fields |
| 5 | JA | 12/01/2023 | 120 | Kestrel | 1 | 13.22 | 120 | 40 | 80 | 0 | 0 | 0 | Hunting |
| 4 | DM | 23/01/2023 | 121 | Kestrel | 1 | 14.04 | 20 | 0 | 20 | 0 | 0 | 0 | Hovering |
| 4 | DM | 23/01/2023 | 122 | Hen harrier | 1 | 14.14 | 23 | 23 | 0 | 0 | 0 | 0 | Male along edge of forest, then dropped onto bog |
| 4 | DM | 23/01/2023 | 123 | Hen harrier | 1 | 15.09 | 88 | 88 | 0 | 0 | 0 | 0 | Male hunting - same as above |
| 5 | BM | 15/02/2023 | 124 | Buzzard | 2 | 15.13 | 200 | 0 | 0 | 50 | 150 | 0 | Pair in display rising |
| 3 | DM | 18/02/2023 | 125 | Kestrel | 1 | 11.22 | 10 | 10 | 0 | 0 | 0 | 0 | Flying across quarry |
| 5 | JA | 24/02/2023 | 126 | Sparrowhawk | 2 | 14.58 | 240 | 0 | 0 | 120 | 120 | 0 | Pair in display |
| 5 | JA | 19/03/2023 | 127 | Sparrowhawk | 1 | 11.08 | 20 | 20 | 0 | 0 | 0 | 0 | Hunting |
| 5 | JA | 19/03/2023 | 128 | Buzzard | 1 | 16.21 | 90 | 0 | 90 | 0 | 0 | 0 | Flying |
| 1 | JA | 20/03/2023 | 129 | Sparrowhawk | 1 | 10.32 | 120 | 0 | 0 | 120 | 0 | 0 | Soaring |
| 3 | DM | 25/03/2023 | 130 | Buzzard | 2 | 14.16 | 220 | 0 | 0 | 160 | 60 | 0 | Pair rising |
| 4 | DM | 28/03/2023 | 131 | Kestrel | 1 | 09.30 | 75 | 25 | 50 | 0 | 0 | 0 | Hunting - male |