



REVISED NIS APPENDIX 5A

***REVISED COLLISION RISK
ASSESSMENT***

Revised NIS Appendix 5a- Revised Collision Risk Assessment

Laurclavagh Wind Farm –
Further Information





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*Table 1 Model input values are largely unchanged, the key updates are the recorded seconds at possible collision height (PCH), number of survey seconds and bird availability. Please refer to the EIAR Appendix 7-6 for further discussion on model inputs.*2

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Table 1 Model input values are largely unchanged, the key updates are the recorded seconds at possible collision height (PCH), number of survey seconds and bird availability. Please refer to the EIAR Appendix 7-6 for further discussion on model inputs.

Species	Model	Period	Updated PCH sec. (Total)
Golden Plover	Random	October to April	194,136
Hen Harrier	Random	September to March	30
Peregrine Falcon	Random	All	917
Whooper Swan	Random	Winter	3,225
Black-headed Gull	Random	Winter	20,740
Black-headed Gull	Random	Breeding	10,447
Common Gull	Random	Winter	90,296
Lesser Black-backed Gull	Random	Winter	25,724
Lesser Black-backed Gull	Random	Breeding	60,225
Kestrel	Random	All	10,056
Lapwing	Random	Winter	4,029
Snipe	Random	Winter	3,912
Buzzard	Random	All	16,861
Sparrowhawk	Random	All	410

Updated Population Estimate for Wintering Lesser black-backed gull

Lesser black-backed gull are an SCI species for Lough Mask SPA however, given the large separation distance between the Proposed Wind Farm and Lough Mask and the proximity of Lough Corrib (3.7km), it is more likely that the birds observed at the Proposed Wind Farm are associated with Lough Corrib. Lesser black-backed gull is not an SCI species for Lough Corrib; however, it does support a population of wintering birds.

The national population of lesser black-backed gull is estimated to be 11,842 for the Republic of Ireland (ROI) (Lewis *et al.* (2019a)) Therefore, a regularly occurring population of 118 birds is required for classification as National Importance. There are no published figures for the County Galway wintering population of lesser black-backed gull. Using the distribution of lesser black-backed gull across Ireland from the wintering bird atlas¹ (2007-2011) the County population of lesser black-backed gull is estimated to be 592 birds. Taking a precautionary approach and using the above as a guide; a regularly occurring population of five birds is required for classification of County Importance.

Lesser black-backed gull were observed within, or partially within, the Proposed Wind Farm on 23 occasions during the winter season. The maximum number of birds recorded within the Proposed Wind Farm from the winter seasons surveyed was 6 birds. Thus, this species is considered to be a population of **County Importance**.

¹ Bird Atlas data from the National Biodiversity Data Centre was used to estimate the county population. Presence/absence hectad data was used to estimate the proportion of the national population that occurs in the county. The national population was then multiplied by this percentage to give a county population estimate.



2.

RESULTS

The predicted number of transits per year and the collision risk is presented in Table 2, along with the final predicted number of collisions per year. Note that for birds that both flap and glide, the average collision risk percentage between flapping and gliding is taken.

Table 2 Results of the CRM

Species	Survey Period	Model	Transits	Collision Risk			Collision Rate			One Bird Collision
				flapping	gliding	overall	without avoidance	avoidance factor	with avoidance	
Black-headed Gull	Winter	random	1190.6	4.89%	4.7%	4.79%	57.05	98%	1.141	1 year
Black-headed Gull	Breeding	random	843.5	4.89%	4.7%	4.79%	40.42	98%	0.808	1 year
Common Gull	Winter	random	5791.4	4.99%	4.75%	4.87%	282.19	98%	5.644	<1 year
Golden Plover	October to April	random	18042.8	4.22%	no gliding flight	4.22%	762.27	99.6%	3.049	<1 year
Hen Harrier	September to March	random	1	5.79%	5.69%	5.74%	0.06	99%	0.001	1683 years
Lesser Black-backed Gull	Winter	random	1477.1	5.75%	5.52%	5.64%	83.28	98%	1.666	1 years
Lesser Black-backed Gull	Breeding	random	4856.2	5.75%	5.52%	5.64%	273.8	98%	5.476	<1 year
Peregrine Falcon	All	random	55.1	5.14%	4.97%	5.06%	2.79	98%	0.056	18 years
Whooper Swan	Winter	random	279	7.51%	no gliding flight	7.51%	20.96	99.5%	0.105	10 years
Kestrel	All	random	506.2	4.89%	4.8%	4.85%	24.54	95%	1.227	1 year
Lapwing	Winter	random	251.6	4.54%	no gliding flight	4.54%	11.44	98%	0.229	4 years
Snipe	Winter	random	328.7	4.05%	no gliding flight	4.05%	13.31	98%	0.266	4 years
Buzzard	All	random	973.6	5.58%	5.41%	5.5%	53.52	98%	1.07	1 year
Sparrowhawk	All	random	20.2	4.85%	4.79%	4.82%	0.97	98%	0.019	51 years



Table 3 below provides a comparison of the collision risk model as outlined in the EIAR as lodged, compared to the updated collision risk model which includes the most up to date survey data (from April 2020 to March 2022 and April 2023 to March 2025). The impact assessment for each species listed in the table below is provided in Section 7.5.2 of the EIAR as lodged. The effect of the collision mortality from the Wind Farm Site was assessed in relation to the county population and the background mortality for each species. The percentage increase in background mortality as outlined in the EIAR, as lodged, and updated increase in background mortality are presented in Table 3 below. This change is then assessed to establish if there is a significant change in the collision risk impact for each species.

Table 3 Comparison of Results

Species	Survey Period	Collision Risk (April 2020 – March 2022; April 2023 – September 2023) (birds per year)	Updated Collision Risk (April 2020 – March 2022; April 2023 – March 2025) (birds per year)	Difference (birds per year)	Change in Background Mortality (Original → Updated Collision Risk)	Change to Impact Assessment
Golden Plover	October to April	0.787	3.049	+2.262	0.07% → 0.23%	No significant change (low (Percival, 2003)/long-term slight negative (EPA, 2022))
Hen Harrier	September to March	0.001	0.001	0	No change	No significant change (low (Percival, 2003)/long-term slight negative (EPA, 2022))
Peregrine Falcon	All	0.034	0.056	+0.022	0.5% → 0.9%	No significant change (very low (Percival, 2003)/long-term imperceptible negative (EPA, 2022))
Whooper Swan	Winter	0.051	0.105	+0.054	0.02% → 0.04%	No significant change (low (Percival, 2003)/long-term slight negative (EPA, 2022))
Black-headed Gull	Winter	1.103	1.141	+0.038	No change	No significant change (very low (Percival, 2003)/long-term imperceptible negative (EPA, 2022))
Black-headed Gull	Breeding	0.501	0.808	+0.307	0.26% → 0.4%	No significant change (low (Percival, 2003)/long-term slight negative (EPA, 2022))
Common Gull	Winter	5.837	5.644	-0.193	2.3% → 2.2%	No significant change (low (Percival, 2003)/long-term slight negative (EPA, 2022))
Lesser Black-backed Gull	Winter	0.198	1.666	+1.468	3.7% → 3.1%	No significant change (low (Percival, 2003)/long-term slight negative (EPA, 2022))



Species	Survey Period	Collision Risk (April 2020 – March 2022; April 2023 – September 2023) (birds per year)	Updated Collision Risk (April 2020 – March 2022; April 2023 – March 2025) (birds per year)	Difference (birds per year)	Change in Background Mortality (Original → Updated Collision Risk)	Change to Impact Assessment
Lesser Black-backed Gull	Breeding	2.681	5.476	+2.795	3.9% → 7.9%	No significant change (low (Percival, 2003)/long-term slight negative (EPA, 2022))
Kestrel	All	0.968	1.227	+0.259	0.5% → 0.7%	No significant change (very low (Percival, 2003)/long-term imperceptible negative (EPA, 2022))
Lapwing	Winter	0.234	0.229	-0.005	No change	No significant change (very low (Percival, 2003)/long-term imperceptible negative (EPA, 2022))
Snipe	Winter	0.037	0.266	+0.229	0.03% → 0.87%	No significant change (very low (Percival, 2003)/long-term imperceptible negative (EPA, 2022))
Buzzard	All	0.575	1.07	+0.495	NA	No significant change (low (Percival, 2003)/long-term slight negative (EPA, 2022))
Sparrowhawk	All	0.009	0.019	+0.01	NA	No significant change (very low (Percival, 2003)/long-term imperceptible negative (EPA, 2022))