

Environmental Impact Assessment Report (EIAR)

Volume 6 of 6: Appendices

(Appendix 8.21) Breeding Bird Survey Report

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1. Introduction

1. The Lower River Shannon at Parteen Basin, downstream of Lough Derg (County Tipperary), is the preferred abstraction location and option for a new water supply source for the Eastern and Midlands Region of Ireland. The Water Supply Project Eastern and Midlands Region (the Proposed Project) will involve raw water abstraction from Parteen Basin at the Raw Water Intake and Pumping Station (RWI&PS) site, followed by pumping to a Water Treatment Plant (WTP) approximately 2.6km north-east of the village of Birdhill in County Tipperary. Following treatment, the treated water will be pumped to a Break Pressure Tank (BPT) at the highest elevation of the pipeline, where the water pressure will be managed. From the BPT the water will flow by gravity through the midlands to a Booster Pumping Station (BPS) in the townland of Coagh Upper in County Offaly. The BPS will be required when the demand for water increases above approximately 170 million litres per day (Mld). From the BPS the treated water will continue via a Flow Control Valve (FCV) in the townland of Commons Upper, County Kildare, to a Termination Point Reservoir (TPR) at Peamount in County Dublin. A Construction Working Width will be temporarily required for the period of construction of the Raw Water Rising Mains, Treated Water Pipeline and their subsequent reinstatement. It will generally be 50m in width but will be locally wider near features such as crossings, access and egress points from the public road network, Construction Compounds, and Pipe Storage Depots.
2. This Proposed Project will also involve the upgrade of an Electric Supply Board (ESB) 38 kV powerline from Ardnacrusha to Birdhill, County Tipperary. This proposed line upgrade is to facilitate the Proposed Project, and specifically to provide for power connections to the proposed RWI&PS and WTP sites. The 38 kV powerline runs in a north-east direction, across predominantly wet grassland, dry calcareous and neutral grassland, and improved agricultural grassland. The powerline also crosses the Lower River Shannon, which is, at this location, designated as a Special Area of Conservation (SAC) and is of international importance.
3. This report has been prepared to provide a summary on all the key bird species encountered within the study area during breeding bird surveys undertaken between 2016 and 2024 (excluding the breeding bird season of 2023, when no surveys were undertaken). No targeted breeding bird surveys were undertaken in 2025, however relevant incidental records, observed during ecological multidisciplinary walkover surveys have been included.

2. Methodology

2.1 Desktop Study

4. The desktop study aimed to collect information on the distribution and abundance of key bird species within the study area and the wider surroundings. The Wildlife Act (as amended) is the principal national legislation for the protection of birds in Ireland. In a European context, certain birds are afforded additional protection under Annex I of the European Union (EU) Birds Directive (79/409/EEC, amended 2009/147/EC). Of the 500 species of wild birds which occur in Europe, 194 species and sub-species are threatened. Member States must designate Special Protection Areas (SPAs) for their protection and the protection of all migratory birds. In Ireland bird species are also classified as Red (conservation priority), Amber (lesser priority) or Green (least priority) status by the Birds of Conservation Concern in Ireland (BoCCI) report 2020-2026 (Gilbert *et al.* 2021), formally 2014-2019 (Colhoun and Cummins 2013). This traffic light system places species in one of three categories, as an understandable mechanism to identify conservation priority. A species is classed as Red Listed if it fulfils one of the following criteria; their breeding range or population has declined by more than 50% in the last 25 years, their breeding population has undergone significant declines since 1990, or the species is of global conservation concern. Birds which were recorded during the 2016 to 2020 breeding bird survey seasons, were previously classified using the 2014-2019 BoCCI report. These records have since been updated to the newer 2020-2026 classifications for this summary report.
5. A desktop study of published (including bird atlas records) and unpublished literature and existing datasets (records held by the National Biodiversity Data Centre (NBDC), BirdWatch Ireland (BWI) and the National Parks and Wildlife Service (NPWS)) was undertaken for key species of conservation concern. Target species selection and survey design were undertaken following consideration of the desktop study results and based on the typical bird communities likely to be found in the habitats within the study area.

2.2 Consultation

6. Consultation with various state agencies and environmental Non-Governmental Organisations (NGOs) was undertaken to inform the Environmental Impact Assessment Report (EIAR) and Appropriate Assessment (AA). All project consultation in relation to biodiversity is detailed in Chapter 8 (Biodiversity) of the EIAR. Both the NPWS and BWI raised concerns regarding potential impacts of the Proposed Project on key species of conservation concern.
7. A meeting was held with An Bord Pleánála and NPWS on 6 April 2013. It was indicated by NPWS that specific bird studies should be conducted for the Proposed Project and best practice dictates that these surveys ought to be conducted over two seasons.
8. A second meeting was held with NPWS ecologists on 16 April 2014. Of relevance regarding the bird study in the Lough Derg (Shannon) SPA was that NPWS advised that the Natura Impact Statement for the Proposed Project needs to clearly assess the significance of the effects on European sites, needs to be based on objective and scientific information, be well-referenced and substantiated, and address the issue of cumulative effects and alternatives.
9. In October 2014 NPWS referenced bird species, the wetlands and reed beds, and possible shelter areas in winter storms with respect to the Lough Derg SPA. They noted species will have different feeding strategies at different times of year, that water level variation would need to be considered, and that under the Birds Directive, the issue of protecting the Lough Derg SPA should (where relevant) include connected habitat outside the designated footprint of the SPA. In addition to this, in a consultation letter from February 2017, NPWS stated where there are impacts on birds and their nests then licences under the Wildlife Acts (as amended) and/or derogations under the European Communities (Birds and Natural Habitats) Regulations 2011 to 2015, may be required.

10. Further consultation was undertaken with NPWS in 2019, 2022, and 2024. The information obtained in relation to these consultations was in respect to wintering birds and is therefore detailed in Appendix A8.22 (Winter Bird Surveys Summary Report 2015 to 2024).
11. On 14 February 2017 BWI sent a submission detailing their concerns regarding possible impacts to birds and their habitats as a result of the Proposed Project:
 - BWI expressed the need to protect the quality of the water within the Proposed Project and that the proposed works should not impact on the ability of the waterbody to meet the requirements of the Water Framework Directive
 - Potential for impacts under Article 6(4) of the Habitats Directive should be planned in advance to ensure that compensatory measures are put in place and functioning before any work is undertaken on the ground
 - The Proposed Project should meet the requirements of Article 6(4) of the Birds Directive, i.e. care should be taken to avoid impacts to Annex I species outside of designated areas, with particular reference to hen harrier (*Circus cyaneus*). Furthermore, impacts to Red and Amber Listed species (BoCCI) should be adequately assessed with particular reference to curlew (*Numenius arquata*) (Section 3.1.3)
 - Detailed habitat mapping should be completed to avoid the loss of important breeding, roosting and foraging habitat for birds
 - The impacts on drainage related to construction, needs to be assessed for impacts on waders, related to loss of wet grasslands
 - Cumulative impacts should not be overlooked
 - Avoid the destruction of mature hedgerows where possible and employ compensatory measures, as appropriate
 - Employ strict bio-security measures.
12. The NPWS and BWIs concerns were duly considered during survey design, in particular species-specific surveys were undertaken, where appropriate.
13. While reviewing available information on breeding barn owls in Ireland, a report by Lusby *et al.* (2022) highlighted areas of high barn owl breeding activity in proximity to the Zone of Influence (ZoI) for the Proposed Project in County Offaly, based on a 2021 national barn owl survey. To better understand the potential for breeding barn owls within the ZoI of the Proposed Project, a data request was submitted to BWI. Following this engagement, BWI confirmed they could provide breeding records for use solely in informing the ecological baseline and impact assessment, with the condition that specific location data remain confidential.
14. Despite initial discussions, the requested data had not been received at the time of writing this chapter. The absence of this dataset prohibited the ability to incorporate BWI's most recent records into the assessment. Thus, the evaluation presented herein is based primarily on published sources of information, as well as the results of the baseline surveys undertaken for the Proposed Project. This is not considered to be a limitation as multiple years of survey data have been acquired for the Proposed Project.

2.3 Study Areas

2.3.1 Parteen Basin

15. The study area included the entire Parteen Basin reservoir (Counties Clare and Tipperary), which is located south of Lough Derg. Breeding birds were surveyed on Parteen Basin using a boat and land-based Vantage Point (VP) surveys. Breeding bird surveys were conducted at Parteen Basin from 2016 to 2024, with the exception of 2023.

2.3.2 Route of the Treated Water Pipeline

16. In 2016, during a walkover survey of the “Preferred 200m Pipeline Corridor” at the time, all notable bird observations were recorded. Using this data, locations of suitable breeding bird habitat and possible target species were identified, which informed the breeding bird surveys in subsequent years.
17. The Treated Water Pipeline study area extended from the RWI&PS site on the north-eastern shore of Parteen Basin, heading north easterly, staying north of the Slieve Bloom Mountains, and continuing across the midlands to the TPR. The focus of the surveys along the Treated Water Pipeline was to survey suitable habitat for target species including lowland waders and woodcock, identify known/potential breeding bird sites, and conduct counts of water bird populations.
18. The surveys were focussed on wetland habitats such as wet grassland, marsh, fens, river valleys, raised bog, degraded raised bog, cutover bog and blanket bog for target species.

2.3.3 38 kV Uprate Works

19. In 2019, the study area was extended to include the 38 kV Uprate Works as part of the Proposed Project. The study area for the Proposed 38 kV Uprate Works was defined by the boundary area for works required to uprate the existing Ardnacrusha – Birdhill 38 kV overhead line (OHL), which runs from Ardnacrusha substation in County Limerick, in a north-easterly direction, terminating at Birdhill substation in County Tipperary. A minimum 30 metre (m) wide buffer along the length of the existing line and associated infrastructure (occasionally areas up to 50m from the existing lines were surveyed and where land access agreements were issued), a 15m wide corridor along the proposed access tracks, and any watercourse crossed by the Proposed 38 kV Uprate Works or within the 30m buffer of the existing lines, were surveyed to record locations of suitable breeding bird habitat and possible target species.
20. In subsequent years, the study area was refined to the existing 38 kV OHL, where it crosses the Lower River Shannon SAC in Kildoorus, south-west of O’Briensbridge County Clare (Annex A). A single VP was selected at Kildoorus to view and record flightlines of target species commuting along the Lower River Shannon SAC, and to determine if there could be a collision risk with the OHL. This VP was surveyed from 2019 to 2024.

2.4 Target Species

21. Target species are defined using a number of criteria. Species may be assessed against a variety of quantitative criteria, e.g., range and population sizes. Red Listed species are those of highest conservation priority, being globally threatened, declining rapidly in abundance or range, or having undergone historic declines from which they have not recently recovered. Amber Listed species have an unfavourable status in Europe, have moderately declined in abundance or range, a very small population size, a localised distribution, or occur in internationally important numbers. Target species were identified as species sensitive to the Proposed Project. Consideration was also given to common species which were identified as relatively sensitive to potential impacts from this type of development. In addition, species listed as special conservation interest (SCI) species for SPAs in the Zol of the Proposed Project (as detailed in the Natura Impact Statement and Biodiversity Chapter of the EIAR) were also selected as target species. The target species identified as part of this Proposed Project are listed in Table 2.1.

Table 2.1: Waterfowl, Waders, Sea Birds, Raptors and Passerines with their 1% National and 1% International Percentages, Birds of Conservation Concern (BoCCI) Red and Amber Listed Species, and the International Union for the Conservation of Nature (IUCN) Rating.

Species	Scientific Name	BoCCI (Gilbert et al., 2021)	1% National ^{1,2,3 *}	1% International ⁴	IUCN Globally Threatened ^{**}
Waterfowl					
Coot	<i>Fulica atra</i>	Amber	35 bp	53000-65000	LC
Cormorant	<i>Phalacrocorax carbo</i>	Amber	47 bp	No data	LC
Great crested grebe	<i>Podiceps cristatus</i>	Amber	25 bp	6099-9970	LC
Mallard	<i>Anas platyrhynchos</i>	Amber	154 i	28,500-46,100 bp	LC
Mute swan	<i>Cygnus olor</i>	Amber	35 bp	No data	LC
Teal	<i>Anas crecca</i>	Amber	9 bp	28000	LC
Tufted duck	<i>Aythya fuligula</i>	Amber	8 bp	No data	LC
Wigeon	<i>Mareca penelope</i>	Amber	505 i	No data	LC
Wader					
Curlew	<i>Numenius arquata</i>	Red	1 bp	No data	NT
Golden plover	<i>Pluvialis apricaria</i>	Red	1 bp	13000-17500	LC
Lapwing	<i>Vanellus vanellus</i>	Red	5 bp	No data	NT
Redshank	<i>Tringa totanus</i>	Red	3 bp	No data	LC
Ringed plover	<i>Charadrius hiaticula</i>	Amber	10 bp	No data	LC
Snipe	<i>Gallinago gallinago</i>	Red	43 bp	150000-290000	LC
Water rail	<i>Rallus aquaticus</i>	Green	20 bp	6000-14999	LC
Woodcock	<i>Scolopax rusticola</i>	Red	No data	No data	LC
Sea Birds					
Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber	78 bp	No data	LC
Common tern	<i>Sterna hirundo</i>	Amber	51 bp	No data	LC
Great black-backed gull	<i>Larus marinus</i>	Green	31 bp	No data	LC
Herring gull	<i>Larus argentatus</i>	Amber	103 bp	10600-12200	LC
Lesser black-backed gull	<i>Larus fuscus</i>	Amber	71 bp	No data	LC
Raptors					
Barn owl	<i>Tyto alba</i>	Red	7 bp	40000-99999	LC
Buzzard	<i>Buteo buteo</i>	Green	19 bp	20000-35000	LC
Hen harrier	<i>Circus cyaneus</i>	Amber	2 bp	3300-5120	LC
Kestrel	<i>Falco tinnunculus</i>	Red	135 i	43000-67000	LC
Sparrowhawk	<i>Accipiter nisus</i>	Green	119 i	20000-32000	LC
Passerines and others					
Grey partridge	<i>Perdix perdix</i>	Red	1 bp	39000-76000	LC
Grey wagtail	<i>Motacilla cinerea</i>	Red	508 i	50000-199999	LC
Kingfisher	<i>Alcedo atthis</i>	Amber	10 bp	7000-13999	LC
Meadow pipit	<i>Anthus pratensis</i>	Red	13520 i	240000-330000	LC
Sand martin	<i>Riparia riparia</i>	Amber	4602 i	100000-5000000	LC

¹ Wetlands International (2019). "Waterbird Population Estimates". Retrieved from wpe.wetlands.org

² Olivia Crowe, Andy J. Musgrove & John O'Halloran (2014) Generating Population Estimates for Common and Widespread Breeding Birds in Ireland, *Bird Study*, 61:1, 82-90.

³ National Parks and Wildlife Service (NPWS) (2019) Annex B – Bird species' status and trends report format (Article 12) for the period 2013 – 2018. Available on EIONET Central Data Repository – refer to: <https://bit.ly/34jqBx2> [Accessed: November 2024]

⁴ Bird Life International, Data Zone. Available at: <http://datazone.birdlife.org/home> [Accessed: November 2024]

Species	Scientific Name	BoCCI (Gilbert et al., 2021)	1% National ^{1,2,3 *}	1% International ⁴	IUCN Globally Threatened ^{**}
Skylark	<i>Alauda arvensis</i>	Amber	3018 i	2900000-5299999	LC
Yellowhammer	<i>Emberiza citrinella</i>	Red	2173 i	400000-699999	LC

Note: * bp = Breeding Pairs, i = individuals. ** LC = Least Concern, NT = Near Threatened

2.5 Field Surveys

22. A number of survey methods were employed during the breeding seasons between 2016 and 2024 (excluding 2023, when no surveys were undertaken) and are discussed herein. Due to the evolving nature of the Proposed Project, following recommendations during consultation, updates of guidelines, identification of important bird areas during previous surveys or implications from the COVID-19 pandemic, additional survey methods were adopted, and new survey areas selected or discontinued. A summary of the survey methods used each year, is provided in Table 2.2.

23. Survey methods were selected based on evidence from the desktop study, previous survey results, and consideration of the consultation responses. The survey methods aimed to principally target species of conservation concern, with particular reference to breeding waders, woodcock, and raptors.

Table 2.2: Summary of Survey Methods Conducted Between the Breeding Seasons of 2016 and 2024

Year	Breeding Bird Walkover Survey	Breeding Woodcock Survey	Breeding Water Bird Counts	Gull Population Count	Vantage Point Surveys
2016	✓	X	✓	✓	✓
2017	✓	✓	✓	✓	X
2018	✓	✓	✓	✓	X
2019	✓	✓	✓	✓	✓
2020	X	X	X	X	✓
2021	✓	✓	✓	✓	✓
2022	✓	✓	✓	✓	✓
2024	✓	✓	✓	✓	✓

2.5.1 Breeding Birds Walkover Survey

24. The breeding bird walkover survey method used followed an adapted O'Brien and Smith (1992) method for censusing lowland breeding wader populations. This adapted method was designed to survey a number of species simultaneously and is a generic methodology, rather than species-specific. Thus it allowed surveyors to also survey for other target species, including passerines and raptors.

25. During the multidisciplinary walkover survey in 2016 of the 'Preferred 200m Pipeline Corridor' at the time a habitat assessment and bird surveys were undertaken to detect the presence, or likely presence of breeding birds and suitable habitat for breeding birds. From this, potentially suitable breeding habitats for target species were identified and were selected for specific breeding bird walkover surveys between 2017 and 2024 (with the exception of 2020, due to the COVID-19 pandemic and 2023 when no breeding bird surveys were undertaken). Three visits were made to selected locations from April to June inclusive (as per O'Brien and Smith (1992)). The number of individuals was recorded, and a breeding bird status assigned based on a British Trust for Ornithology (BTO) classification (Table 2.3).

26. As noted, breeding raptor activity was also recorded during the course of breeding bird walkover surveys. It was considered that the breeding bird walkover survey methods were sufficiently similar to breeding raptor survey methods as described by Hardey *et al.* (2013) to allow both species groups to be surveyed simultaneously without difficulty, i.e. initial breeding raptor survey visits involve a broadly similar walkover

methodology to O'Brien and Smith (1992). However, where breeding raptors of conservation concern were recorded during the walkover survey, subsequent visits to the location included VP watches, as appropriate. Raptor survey methods involved surveying all areas of suitable habitat for visual registrations and/ or physical signs (feathers, pellets, prey remains or white-washing) on prominent features in the landscape. The location of any breeding behaviour was noted for further investigation. Nest sites were located by conducting watches of potential nest sites from a distance which would not cause disturbance. Observations of any of the following confirmed breeding; a food pass between two adults, adults carrying prey, nest with eggs or young found and/or recently fledged young.

27. The timing of watches was tailored to the ecology of the target species. Field information recorded included: dates, location, weather, survey start and end time, species observed, time of observation, number of individuals per observation, reference number to flightline. All flightlines of target species were mapped on field sheets or iPads. Behavioural observations were also recorded.
28. The aim of these surveys was to establish the distribution, breeding status and abundance of breeding birds within the Proposed Project.

Table 2.3: Breeding Status with Code, Description, and Status

Breeding Status Code	Breeding Status Description	Breeding Status
DD	Distraction display	Confirmed breeding
FF	Adults carrying faecal sac or food for young	Confirmed breeding
FL	Recently fledged young/downy young	Confirmed breeding
NE	Nest containing eggs	Confirmed breeding
NY	Nest with young seen or heard	Confirmed breeding
ON	Adults entering/leaving nests or seen incubating	Confirmed breeding
UN	Used nest or eggshells found	Confirmed breeding
A	Agitated behaviour or anxiety calls	Probable breeding
B	Nest building or excavating nest hole	Probable breeding
D	Courtship and display	Probable breeding
I	Brood patch on adult in hand	Probable breeding
N	Visiting probable nest site	Probable breeding
P	Pair observed in suitable nesting habitat in breeding season	Probable breeding
T	Established permanent territory	Probable breeding
H	Suitable nesting habitat	Possible breeder
S	Singing male present in breeding season in suitable breeding habitat	Possible breeder
F	Flying over	Non-breeding
M	Species observed but suspected to be still on Migration	Non-breeding
U	Summering non-breeder	Non-breeding

2.5.2 Breeding Woodcock Survey

29. During the 2017, 2018, 2019, 2021, 2022 and 2024 breeding seasons woodcock surveys were undertaken in areas of suitable habitat along the Proposed Project. Suitable habitat is defined as woodland of all types and extensive areas of bracken in upland areas.
30. The survey methodology followed the recommendations of Gilbert *et al.* (1998) for surveying woodcock. Three survey visits were undertaken between May and June. Surveyors were in position from an hour before sunset until an hour after sunset. The aim of the survey was to record the presence of roding (displaying) male woodcock and thereby establish the distribution and abundance of the species in the study area. Counts of roding woodcock were converted to density estimates. The highest of three densities of roding males provides an index of the peak density of breeding pairs. Some of these surveys were located in habitats that

have potential to support owl species, which presented opportunities for surveyors to record ad-hoc observations. Evening visits between May and July can be useful in detecting calling juveniles which can prove useful in detecting successful pairs (Harley *et al.* 2013).

2.5.3 Breeding Water Bird Boat Surveys

31. Parteen Basin was surveyed by boat over three visits during the breeding seasons between April and June. When surveying large stretches of standing water from a boat, two observers are essential to ensure an accurate count of the birds present on the waterbody. Particular attention was paid to ditches, reedbed edges and small bays. The survey was conducted in the mornings and followed a course which passed as close to suitable habitat as was (safely) possible. Surveyors split the tasks of observing and recording. The species and the sex of individuals and groups were recorded. The results of the census were interpreted as follows; lone females, lone males and each male of a group (of less than five) were counted as breeding pairs, as per Gilbert *et al.* (1998). Large groups and flocks were considered non-breeding or wintering flocks. A breeding bird status was also assigned based on a BTO classification (Table 2.3). The number of pairs was calculated per visit, with the maximum number of pairs used for comparisons between years.

2.5.4 Gull Population Counts

32. Where surveyors encountered a colony of breeding species such as breeding gulls, survey methods were further adapted to ensure the most accurate count data was produced. A breeding colony of black-headed gulls was recorded during breeding bird surveys at Lough Ourna, County Tipperary each year between 2016 and 2024 (with the exception of 2020 when no survey was undertaken due to COVID-19 pandemic and 2023 when no breeding bird surveys were undertaken) and from 2022 new colonies were located on recently re-wetted bog complexes in Counties Offaly and Kildare. The assemblage was counted from an elevated VP location, with the surveyor aiming to count the maximum number of individuals and pairs at the site, as per Gilbert *et al.* (1998).

2.5.5 Vantage Point Surveys

33. The VP survey methodology broadly followed guidelines issued by the Scottish Natural Heritage (SNH 2017). Vantage Point surveys aim to quantify the level of flight activity, pattern of use and its distribution over the survey area. Vantage Points are fixed locations, which are strategically positioned to provide a maximum viewshed of the survey area from a minimum number of locations. The viewshed of a given VP should extend to a distance of no greater than 2km and include an arc of no greater than 180 degrees (as per SNH (2017)). The timing of watches was tailored to the ecology of the target species present on site, including dawn, day, and dusk surveys. Field information recorded included dates, VP location, weather, survey start and end time, species observed, time of observation, number of individuals per observation, reference number to flightline and flight height. All flightlines of target species were mapped on field sheets. Behavioural observations, sex and breeding status were also recorded.
34. The VP surveys were undertaken on a monthly basis (six hours per VP) from fixed locations. Vantage Point surveys at Clarisford Park, Flanagans and Ardclony (Annex A) were undertaken between July and September in 2016, 2019, 2020, 2021, 2022 and 2024 and overlooked at Parteen Basin, where the RWI&PS is proposed. These surveys were conducted over a three-month period at the end of the breeding season to determine post-breeding success and locations of bird congregations within Parteen Basin. In addition, VP surveys were undertaken from July to September in order to have a full breeding bird survey season data set (i.e. other breeding bird surveys at or near VP sites (such as those described in Section 2.5.1 and Section 2.5.3) covered the months from April to June, and VPs covered July to September).
35. Vantage Point surveys at Kildoorus on the Lower River Shannon were undertaken between April and September from 2019 to 2024 and overlooked the existing 38 kV OHL where it crosses the Shannon (as shown in Annex A). These surveys were conducted to observe the current interactions and flightlines at the existing powerlines.

36. In 2022 additional VP surveys were conducted at the remaining four proposed infrastructure sites. These included the WTP, BPT, BPS and TPR. These surveys were undertaken between April and September 2022 and overlooked the areas where the proposed infrastructure will be positioned (as shown in Annex A). These surveys were conducted to observe the current interactions and flightlines at the proposed infrastructure locations.
37. The results of the census were interpreted as follows; lone females, lone males and each male of a group (of less than five) were counted as breeding pairs, as per Gilbert *et al.* (1998). The number of pairs was calculated per visit, with the maximum number of pairs used for comparisons between years. For the VP at Kildoorus an additional observation was recorded, noting whether a species was flying above or below the existing OHL at the site.
38. Maps displaying the location of VPs and flightlines that were recorded are available in Annex E of this report.
39. Weather conditions during all surveys were adequate for surveys. No surveys were conducted during windy (> force five)/very wet conditions, which can affect visibility.

2.5.6 Survey Constraints

40. Counts recorded at Parteen Basin are minimum estimates for duck, rail, wader, and other smaller waterfowl species due to the behaviour of many duck/smaller wildfowl, which often concentrate in dense reedbeds/vegetation along the shore, especially during the breeding season when species are more cryptic around nest sites and cannot be accurately counted.
41. The sites surveyed along the route of the Treated Water Pipeline were selected each year based on desktop study results, feedback from consultation, and a review of available data from previous years surveys. Due to the large scale of the study area, priority areas that are likely to be regularly used by breeding target species were selected to be surveyed. There is a potential some target species breeding sites were not surveyed; for example, kestrel and buzzard may opportunistically occupy old corvid nests, which can occur in many habitats, along the entire length of the Proposed Project, or waders such as snipe may nest in low numbers on wet agricultural grassland that may not have been identified as a priority site. However, the potential risks of this having occurred are low and the results obtained from surveyed sites are deemed robust, to provide an accurate usage of the route of the Treated Water Pipeline by breeding target species.
42. 46. Throughout the survey period human disturbance was noted at VPs. Parteen Basin recorded several records of fishing and leisure boats as well as kayakers traveling up and down the waterbody, some of which caused disturbance to roosting and feeding bird species. On the Lower River Shannon, the VP for this location was situated near a local rowing club, where rowing activity was recorded on numerous occasions. These disturbance events did not impact on the results obtained and showed that bird communities regularly experienced some form of disturbances. The severity of which depended on what caused the disturbance event. Some habituation behaviours were observed.
43. During the 2019 VP surveys at Kildoorus, overlooking the existing 38kV OHLs, the number of birds within the area and their respective flightlines were recorded. From 2020 onwards, notes were also taken on whether a species was recorded flying above or below the existing OHLs to gain a better understanding of the current interactions with these lines.
44. Due to national restrictions as a result of the COVID-19 pandemic, surveys which were carried out previous years (e.g. breeding bird walkover surveys, breeding woodcock surveys, breeding waterbird counts via a boat and a breeding gull population count), could not be carried out during the 2020 breeding bird season.

3. Results

3.1 Desktop Study Results

3.1.1 Designated European Sites

45. An AA, which will focus on potential adverse effects of the Proposed Project on designated European sites, will be completed and submitted with the Planning Application. However, for the purposes of identifying sensitive areas for breeding birds within the Zol of the Proposed Project to inform the breeding bird surveys, a high-level desktop study was carried out to determine the potential areas and species of concern.
46. The review found the proposed RWI&PS site at Parteen Basin is within the boundaries of the Lower River Shannon SAC. There are no other sites designated under the EU Habitats Directive or the EU Birds Directive (i.e., SACs or SPAs) located within the footprint of the Proposed Project. In total, nine SPAs were found to be located within the potential Zol of the Proposed Project (Table 3.1) and were considered in this report (Section 4).

Table 3.1: Special Protection Areas within the Potential Zone of Influence of the Proposed Project

European Site	Special Conservation Interest Species	Description of Location and Connectivity with the Proposed Project
Slievefelim to Silvermines Mountains SPA	<ul style="list-style-type: none"> Hen harrier (<i>Circus cyaneus</i>) [A082] 	This SPA is located 1.5km south-east of the Proposed Project. The site is designated for hen harrier. The core foraging range of breeding hen harrier is 2km, with a maximum range of 10km (SNH 2016).
Slieve Bloom Mountains SPA	<ul style="list-style-type: none"> Hen harrier (<i>Circus cyaneus</i>) [A082] 	This SPA is located 2.5km south-east of the Proposed Project. The site is designated for hen harrier. The core foraging range of breeding hen harrier is 2km, with a maximum range of 10km (SNH 2016).
Lough Derg (Shannon) SPA	<ul style="list-style-type: none"> Cormorant (<i>Phalacrocorax carbo</i>) [A017] (Breeding & Wintering) Tufted duck (<i>Aythya fuligula</i>) [A061] (Wintering) Goldeneye (<i>Bucephala clangula</i>) [A067] (Wintering) Common tern (<i>Sterna hirundo</i>) [A193] (Breeding) 	This SPA is located 4km north of the Proposed Project and will not be directly impacted. However, Parteen Basin hosts a large assemblage of winter water birds annually. This site regularly supports nationally important numbers of wintering tufted duck (370 birds constitute a flock of national importance; Boland and Crowe (2012)), a special conservation interest species of the Lough Derg (Shannon) SPA. Other special conservation interest species, including cormorant and goldeneye were also recorded at Parteen Basin, albeit in numbers of lower significance.
Dovegrove Callows SPA	<ul style="list-style-type: none"> Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>) [A395] 	This SPA is located 7km northwest of the Proposed Project. The core foraging range of Greenland white-fronted goose is 5-8km (SNH 2016). Therefore, connectivity could exist between the Proposed Project and this European site. This site is also a support site to the River Little Brosna Callows SPA.
River Little Brosna Callows SPA	<ul style="list-style-type: none"> Whooper swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Pintail (<i>Anas acuta</i>) [A054] Shoveler (<i>Anas clypeata</i>) [A056] Golden plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Black-tailed godwit (<i>Limosa limosa</i>) [A156] Black-headed gull (<i>Chroicocephalus ridibundus</i>) [A179] 	This SPA is located 10km north of the Proposed Project and is not directly connected to it; however, habitat within the Proposed Project could potentially provide supporting habitat to special conservation interest species for which this site is designated. Lapwing and golden plover regularly range to a distance of 15km between foraging locations (Gillings <i>et al.</i> 2005). Similarly, black-headed gulls have a maximum foraging distance of 18.5km during the breeding season (Gorke and Brandl 1986). Conversely dabbling ducks typically forage at lesser distances of 1-2km from roosts (Legagneux <i>et al.</i> 2009).

European Site	Special Conservation Interest Species	Description of Location and Connectivity with the Proposed Project
	<ul style="list-style-type: none"> Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and waterbirds [A999] 	
Slieve Aughty Mountains SPA	<ul style="list-style-type: none"> Hen harrier (<i>Circus cyaneus</i>) [A082] Merlin (<i>Falco columbarius</i>) [A098] 	This SPA is located 12.5km north-west of the Proposed Project. The site is designated for hen harrier and merlin. The core foraging range of breeding hen harrier is 2km, with a maximum range of 10km and the core foraging range for merlin is within 5km (SNH 2016).
River Boyne and River Blackwater SPA	<ul style="list-style-type: none"> Kingfisher (<i>Alcedo atthis</i>) [A229] 	This SPA is located 13.1km north and downstream of the Proposed Project.
Poulaphouca Reservoir SPA	<ul style="list-style-type: none"> Greylag goose (<i>Anser anser</i>) [A043] Lesser black-backed gull (<i>Larus fuscus</i>) [A183] 	This SPA is located 14.6km south of the Proposed Project; however, habitat within the Proposed Project could potentially provide supporting habitat to special conservation interest species for which this site is designated. The Proposed Project is located within the connectivity distance for wintering greylag geese, which have a core foraging range of 15-20km (SNH 2016). Similarly, lesser black-backed gulls are known to forage over large distances (Lloyd <i>et al.</i> 2010). These species utilise improved grassland for foraging, a habitat type which is common throughout the Proposed Project and wider surrounding landscape.

3.1.2 Bird Atlas 2007-2011

47. A review of Bird Atlas 2007-2011 distribution maps was carried out for certain key species of conservation concern. Based on the distribution of each species a professional judgement was made by a qualified TOBIN Ornithologist on the likelihood of a breeding population existing within the Proposed Project (Table 3.2).

Table 3.2: Details on the Distribution of Key Species of Conservation Concern Likely to be Found Within the Proposed Project, as per Bird Atlas 2007-2011 Distribution Maps

Species	Conservation Status	Distribution
Hen harrier	Birds Directive Annex I	Infrequent, population confined to designated sites and isolated bogs in the midlands.
Peregrine	Birds Directive Annex I	Infrequent but widespread. Breeding likely to be confined to ruined buildings (castles) and quarries.
Merlin	Birds Directive Annex I	Infrequent. Breeding likely to be confined to isolated bogs and islands on Lough Derg.
Barn owl	BoCCI Red Listed	Midlands and south-west stronghold for the species.
Curlew	BoCCI Red Listed	Very infrequent as a breeding species in Ireland.
Lapwing	BoCCI Red Listed	Sporadic distribution throughout the study area. Breeding typically associated with peatland and wet grassland habitats.
Golden plover	BoCCI Red Listed	Breeding confined to west and north-west within Ireland.
Redshank	BoCCI Red Listed	Sporadic distribution throughout the study area. Breeding typically associated with peatland and wet grassland habitats.
Woodcock	BoCCI Red Listed	Infrequent, confined to woodland for breeding.
Red grouse	BoCCI Red Listed	Breeding confined to peatland habitats with heather.

Species	Conservation Status	Distribution
Kingfisher	Birds Directive Annex I	Widespread distribution throughout the study area, typically associated with water bodies.
Tufted duck	BoCCI Red Listed	Widespread distribution throughout the study area, however the species is likely to be infrequently encountered as a breeding species.
Yellowhammer	BoCCI Red Listed	Distribution for this species is strongly biased toward the eastern portion of the study area.
Black-headed gull	BoCCI Red Listed	Sporadic distribution throughout the study area, breeding typically associated with peatland and wet grassland habitats.

3.1.3 NPWS Curlew Data for Study Area

48. On the 18 August 2017 a request was made of NPWS for known curlew breeding locations. Curlew breeding data was subsequently received from NPWS on the 31 August 2017 and is presented in Table 3.3 below. A subsequent request was submitted on the 6 January 2025, however, data has not been received to date.

Table 3.3: Breeding Curlew Records from 2015 and 2016 Provided by NPWS for the Proposed Project and Wider Surroundings

Year	Breeding Outcome	Surveyor	10 km Square*
2015	Unknown	BWI contract to NPWS	N30
2015	Successful	BWI contract to NPWS	N30
2015	Unknown	BWI contract to NPWS	N30
2015	Unknown	BWI contract to NPWS	S39
2015	Unknown	BWI contract to NPWS	S39
2015	Unknown	BWI contract to NPWS	S39
2015	Unknown	BWI contract to NPWS	S39
2015	Failed	Alex Copland	S49
2016	Failed	BWI contract to NPWS	S09
2016	Successful	BWI contract to NPWS	N20
2016	Failed	Alex Copland	R99
2016	Failed	Alex Copland	R99

Note: *The absence of a breeding record from a given 10km grid square does not confirm that breeding did not occur.

3.1.4 Historical Survey Data

49. The cutaway bog habitat in the midlands of Ireland has been shown to provide valuable habitat for breeding birds, such as breeding waders. In an effort to quantify the distribution and abundance of these breeding waders, Bord na Móna commissioned a study. The findings of this study are detailed in Copland (2011). In this report ten sites were visited in the midlands of Ireland, five of which are within the wider surroundings of the Proposed Project (Table 3.4). All sites were visited in the summers of 2010 and 2011.

Table 3.4: Locations of Sites Visited by Copland (2011), their Approximate Distance from the Proposed Project and their Maximum Breeding Status

Site	Approximate Distance from Proposed Project	Species and Maximum Breeding Status
Ballycon, County Offaly	<1km south	Confirmed: ringed plover, lapwing. Probable: redshank, black-headed gull
Lullymore, County Kildare	2.8km south	Probable: lapwing
Timahoe, County Kildare	<0.5km south	No records of key species of conservation concern.
Cavemount, County Offaly	<0.5km north	Probable: ringed plover, lapwing, snipe

Site	Approximate Distance from Proposed Project	Species and Maximum Breeding Status
Ballybeg, County Offaly	4.8km north	No records of key species of conservation concern.

50. Additionally, an updated request was made to NPWS in 2025, which provided records on protected breeding bird species, namely barn owl and golden plover. The data received included a small number of records for these species; however, the majority of these were historic and considered outdated and all records occurred outside the Zol of the Proposed Project.

3.2 Field Survey Results

51. The main findings of the breeding bird surveys carried out between 2016 and 2024 are summarised herein for each of the target species recorded within the study area of the Proposed Project. This includes the results from the breeding bird walkover survey, breeding woodcock survey, breeding water bird survey, gull population counts, and VP surveys. While no targeted breeding bird surveys were undertaken in 2025, relevant incidental records, observed during ecological multidisciplinary walkover surveys have been included herein.

52. The focus of the surveys was to establish the distribution and abundance of target species which are at potential risk from impacts associated with the Proposed Project. Species sensitivity to the Proposed Project was determined using information gathered from the desktop study, consultation with relevant stakeholders, and field surveys. Sensitivity factors include one or more of the following: risk of disturbance, displacement, and species distribution within the study area.

53. A comprehensive list of birds recorded within the study area is provided in Table 3.5. The breeding bird species list details conservation status and provides comments as appropriate. Bird species assemblages vary between seasons (breeding and non-breeding/winter). This variation is typically due to the migration rates of individual species. The level of conservation concern was drawn from two lists: the Birds of Conservation Concern in Ireland and from Annex I of the EU Birds Directive.

Table 3.5: Full Species List for the Breeding Bird Surveys Between 2016 and 2024

Species Name	Conservation Status	Comment
Barn owl (<i>Tyto alba</i>)	Red Listed	Resident
Blackbird (<i>Turdus merula</i>)	Green Listed	Resident
Blackcap (<i>Sylvia atricapilla</i>)	Green Listed	Summer visit & small wintering pop.
Black-headed gull (<i>Chroicocephalus ridibundus</i>)	Amber Listed	Resident
Black-tailed godwit (<i>Limosa limosa</i>)	Red Listed	Very rare breeder
Blue tit (<i>Cyanistes caeruleus</i>)	Green Listed	Resident
Bullfinch (<i>Pyrrhula pyrrhula</i>)	Green Listed	Resident
Buzzard (<i>Buteo buteo</i>)	Green Listed	Resident
Canada goose (<i>Branta canadensis</i>)	NA	Introduced species
Chaffinch (<i>Fringilla coelebs</i>)	Green Listed	Resident
Chiffchaff (<i>Phylloscopus collybita</i>)	Green Listed	Summer visit & small wintering pop.
Coal tit (<i>Periparus ater</i>)	Green Listed	Resident
Coot (<i>Fulica atra</i>)	Amber Listed	Resident
Cormorant (<i>Phalacrocorax carbo</i>)	Amber Listed	Resident
Common tern (<i>Sterna hirundo</i>)	Amber Listed	Summer visitor
Cuckoo (<i>Cuculus canorus</i>)	Green Listed	Summer visitor
Curlew (<i>Numenius arquata</i>)	Red Listed	Resident/ Winter visitor

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Species Name	Conservation Status	Comment
Dipper (<i>Cinclus cinclus</i>)	Green Listed	Resident
Duncock (<i>Prunella modularis</i>)	Green Listed	Resident
Goldcrest (<i>Regulus regulus</i>)	Amber Listed	Resident
Goldfinch (<i>Carduelis carduelis</i>)	Green Listed	Resident
Goshawk (<i>Accipiter gentilis</i>)	Amber Listed	Resident (rare)
Grasshopper warbler (<i>Locustella naevia</i>)	Green Listed	Summer visitor
Great crested grebe (<i>Podiceps cristatus</i>)	Amber Listed	Resident
Great tit (<i>Parus major</i>)	Green Listed	Resident
Great Spotted Woodpecker (<i>Dendrocopus major</i>)	Green Listed	Resident
Greenfinch (<i>Carduelis chloris</i>)	Amber Listed	Resident
Grey heron (<i>Ardea cinerea</i>)	Green Listed	Resident
Greylag goose (<i>Anser anser</i>)	Amber Listed	Winter visitor (plus resident feral pop.)
Grey partridge (<i>Perdix perdix</i>)	Red Listed	Rare resident
Grey wagtail (<i>Motacilla cinerea</i>)	Red Listed	Resident
Herring gull (<i>Larus argentatus</i>)	Amber Listed	Resident
Hooded crow (<i>Corvus cornix</i>)	Green Listed	Resident
House martin (<i>Delichon urbicum</i>)	Amber Listed	Summer visitor
House sparrow (<i>Passer domesticus</i>)	Amber Listed	Resident
Jackdaw (<i>Corvus monedula</i>)	Green Listed	Resident
Jay (<i>Garrulus glandarius</i>)	Green Listed	Resident
Kestrel (<i>Falco tinnunculus</i>)	Red Listed	Resident
Kingfisher (<i>Alcedo atthis</i>)	Amber Listed, Annex I	Resident
Lapwing (<i>Vanellus vanellus</i>)	Red Listed	Resident
Lesser black-backed gull (<i>Larus fuscus</i>)	Amber Listed	Resident
Linnet (<i>Carduelis cannabina</i>)	Amber Listed	Resident
Little egret (<i>Egretta garzetta</i>)	Green Listed	Resident
Little grebe (<i>Tachybaptus ruficollis</i>)	Green Listed	Resident
Long-tailed tit (<i>Aegithalos caudatus</i>)	Green Listed	Resident
Magpie (<i>Pica pica</i>)	Green Listed	Resident
Mallard (<i>Anas platyrhynchos</i>)	Amber Listed	Resident
Meadow pipit (<i>Anthus pratensis</i>)	Red Listed	Resident
Merlin (<i>Falco columbarius</i>)	Amber Listed	Resident
Mistle thrush (<i>Turdus viscivorus</i>)	Green Listed	Resident
Moorhen (<i>Gallinula chloropus</i>)	Green Listed	Resident
Mute swan (<i>Cygnus olor</i>)	Amber Listed	Resident
Peregrine falcon (<i>Falco peregrinus</i>)	Green Listed, Annex I	Resident
Pheasant (<i>Phasianus colchicus</i>)	Green Listed	Resident
Pied wagtail (<i>Motacilla alba</i>)	Green Listed	Resident
Raven (<i>Corvus corax</i>)	Green Listed	Resident
Redshank (<i>Tringa totanus</i>)	Red Listed	Resident
Redpoll (<i>Carduelis flammea</i>)	Green Listed	Resident
Reed bunting (<i>Emberzia schoenichus</i>)	Green Listed	Resident
Ringed Plover (<i>Charadrius hiaticula</i>)	Amber Listed	Resident

Species Name	Conservation Status	Comment
Robin (<i>Erithacus rubecula</i>)	Green Listed	Resident
Rook (<i>Corvus frugilegus</i>)	Green Listed	Resident
Sand martin (<i>Riparia riparia</i>)	Amber Listed	Summer visitor
Sedge warbler (<i>Acrocephalus schoenobaenus</i>)	Green Listed	Summer visitor
Shelduck (<i>Tadorna tadorna</i>)	Amber Listed	Resident
Skylark (<i>Alauda arvensis</i>)	Amber Listed	Resident
Siskin (<i>Carduelis spinus</i>)	Green Listed	Resident
Snipe (<i>Gallinago gallinago</i>)	Red Listed	Resident
Song thrush (<i>Turdus philomelos</i>)	Green Listed	Resident
Sparrowhawk (<i>Accipiter nisus</i>)	Green Listed	Resident
Spotted flycatcher (<i>Muscicapa striata</i>)	Amber Listed	Summer visitor
Starling (<i>Sturnus vulgaris</i>)	Amber Listed	Resident
Stonechat (<i>Saxicola torquatus</i>)	Green Listed	Resident
Swallow (<i>Hirundo rustica</i>)	Amber Listed	Summer visitor
Swift (<i>Apus apus</i>)	Red Listed	Summer visitor
Teal (<i>Anas crecca</i>)	Amber Listed	Resident
Tufted duck (<i>Aythya fuligula</i>)	Amber Listed	Resident
Wigeon (<i>Anas penelope</i>)	Amber Listed	Winter visitor
Willow warbler (<i>Phylloscopus trochilus</i>)	Amber Listed	Summer visitor
Whitethroat (<i>Sylvia communis</i>)	Green Listed	Summer visitor
Whooper swan (<i>Cygnus cygnus</i>)	Amber Listed	Winter visitor
Woodcock (<i>Scolopax rusticola</i>)	Red Listed	Resident
Woodpigeon (<i>Columba palumbus</i>)	Green Listed	Resident
Wren (<i>Troglodytes troglodytes</i>)	Green Listed	Resident
Yellowhammer (<i>Emberiza cintrinella</i>)	Red Listed	Resident

3.2.1 Infrastructure Sites and the Route of the Treated Water Pipeline

3.2.1.1 Key Species of Conservation Concern

3.2.1.1.1 Barn Owl (Red Listed BoCCI)

54. Barn owl was recorded infrequently during breeding bird surveys. A summary of barn owl recordings between 2016 and 2024 is included in Table 3.6. No barn owl activity was recorded during the breeding bird surveys in 2018, 2020 and 2021. In 2022 during a woodcock survey, a single barn owl was recorded hunting at Incha Beg, County Tipperary near the location of the proposed WTP. This record consisted of an adult bird hunting during the breeding season, indicating a possible breeding record within the area. In addition, in 2022 and 2024 during breeding bird walkovers and multidisciplinary walkover surveys (as discussed in EIAR Chapter 8: Biodiversity), old barns and buildings, within or near the Proposed Project were surveyed for evidence of barn owl usage (e.g. white-wash, old feathers, pelts). Some old signs of barn owls were observed at some of the survey locations, but it is unknown if these locations were used as roost or nest sites. As there were limited signs of recent usage, a possible breeding status was given to these observations. While no targeted breeding bird surveys were undertaken in 2025, an incidental record for breeding barn owl was recorded while conducting a bat survey for the Proposed Project. The observation consisted of a breeding pair with chicks within a tree cavity in County Offaly. The location of all barn owl observations is shown in Annex B and are listed in the results dataset in Annex D.

Table 3.6: Barn Owl Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	1	0	1	-	-	-	-
2017	1	0	1	-	-	-	-
2019	1	0	1	-	-	-	-
2022	2	2	0	-	-	1	Gallbally, Co. Offaly (Annex C – Figure 10)
				-	-	1	Incha Beg, Co. Tipperary (Annex C - Figure 2)
2024	2	2	0	-	-	1	Incha Beg, Co. Tipperary (Annex C - Figure 2),
				-	-	1	Ballyanny, Co. Tipperary (Annex C - Figure 4)
2025*	1	1	0	1	-	-	Ballyhugh or Springfield County Offaly (Annex C – Figure 23)

* = Incidental record observed while conducting a bat survey.

3.2.1.1.2 Black-headed Gull (Amber Listed BoCCI)

55. Black-headed gull was recorded frequently during breeding bird surveys between 2016 and 2024. Records were largely confined to Parteen Basin, County Clare/Tipperary and Lough Ourna, County Tipperary. Breeding activity was recorded in multiple years at Lough Ourna, County Tipperary. In 2022 a new colony of breeding black-headed gull was observed on a recently rewetted Bord na Móna cutover bog at Island, County Offaly. Several pairs and chicks were recorded on small islands on recently formed pool/ponds where rewetting works have stopped water flow. In 2024, two additional colonies were recorded on rewetted bogs in County Offaly, where they were not recorded previously. A summary of black-headed gull recordings between 2016 and 2024 is included in Table 3.7. All observations of black-headed gull can be seen in Annex B and the breeding status and locations of breeding attempts can be seen in Table 3.7 and Annex C.

Table 3.7: Black-headed Gull Records Observed During Breeding Bird Surveys between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	194	150	44	150	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
2017	406	234	172	234	-	-	
2018	409	230	179	230	-	-	
2019	369	300	69	300	-	-	
2020	166	0	166	-	-	-	
2021	455	270	185	270	-	-	
2022	507	431	76	50	-	-	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
				381	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
2024	356	193	163	93	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
				69	-	-	Ballinvalley, Co. Offaly (Annex C - Figure 17)
				6	-	-	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
				25	-	-	Ballycon, Co. Offaly (Annex C - Figure 23)

3.2.1.1.3 Black-tailed Godwit (Red Listed BoCCI)

56. Black-tailed godwit was recorded rarely during breeding bird surveys. They were recorded once during the 2022 breeding season; at Lough Ourna, County Tipperary along the route of the Treated Water Pipeline from the WTP to the BPT, where a flock was recorded feeding and likely on migration. A summary of black-tailed godwit recordings between 2016 and 2024 is included in Table 3.9. No evidence of breeding black-tailed godwit was recorded during any of the survey seasons between 2016 and 2024. The location of black-tailed godwit observations is shown on Annex B and are listed in the results dataset in Annex D.

Table 3.8: Black-tailed Godwit Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2022	18	0	18	-	-	-	-

3.2.1.1.4 Common Sandpiper (Amber Listed BoCCI)

57. Common sandpiper was recorded infrequently during breeding bird surveys. They were recorded during the 2021 and 2022 breeding season, at Parteen Basin and once along the route of the Treated Water Pipeline. A summary of common sandpiper recordings between 2016 and 2024 is included in Table 3.9. No evidence of breeding common sandpiper was recorded during any of the survey seasons between 2016 and 2024. The location of common sandpiper observations is shown on Annex B and are listed in the results dataset in Annex D.

Table 3.9: Common Sandpiper Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2021	3	0	3	-	-	-	-
2022	4	0	4	-	-	-	-

3.2.1.1.5 Common Tern (Amber Listed BoCCI)

58. Common tern were recorded infrequently during breeding bird surveys between 2016 and 2024. They were only recorded to the north and south of Parteen Basin during the 2019, 2020 and 2022 breeding season. No evidence of breeding common tern was recorded during any of the survey seasons between 2016 and 2024. A summary of common tern recordings between 2016 and 2024 is included in Table 3.10. The locations and flightlines of common tern over the breeding season can be seen in Annex B and are listed in the results dataset in Annex D.

Table 3.10: Common Tern Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2019	1	0	1	-	-	-	-
2020	8	0	8	-	-	-	-
2022	12	0	12	-	-	-	-

3.2.1.1.6 Cormorant (Amber Listed BoCCI)

59. Cormorant were consistently recorded at Parteen Basin and were infrequently recorded elsewhere along the study areas of the Proposed Project during the 2016 to 2024 breeding seasons. Counts within Parteen Basin reached a maximum of 50 in 2016, 33 in 2017, 30 in 2019, 14 in 2021, 31 in 2022, and 10 in 2024. Cormorant were located throughout Parteen Basin and were recorded feeding, roosting, and commuting. No evidence of breeding was recorded through any of the survey periods. A summary of cormorant recordings between 2016 and 2024 is included in Table 3.11. The locations and flightlines of cormorant over the breeding season can be seen in Annex B and are listed in the results dataset in Annex D.

Table 3.11: Cormorant Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	14	0	14	-	-	-	-
2017	70	0	70	-	-	-	-
2018	59	0	59	-	-	-	-
2019	76	0	76	-	-	-	-
2020	93	0	93	-	-	-	-
2021	95	0	59	-	-	-	-
2022	72	0	72	-	-	-	-
2024	19	0	19	-	-	-	-

3.2.1.1.7 Coot (Amber Listed BoCCI)

60. Coot was recorded frequently during the breeding bird surveys. The majority of records were recorded at Parteen Basin, Drumminascart and Lough Ourna in County Tipperary. A summary of coot recordings between 2016 and 2024 is included in Table 3.12. Evidence of breeding coot were regularly recorded during the survey seasons between 2016 and 2021 the locations of which can be seen in Annex C. No breeding was recorded in 2022. The location of all coot observations over the breeding season can be seen in Annex B and are listed in the results dataset in Annex D.

Table 3.12: Coot Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	17	14	3	11	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
				3	-	-	Drumminascart, Co. Tipperary (Annex C - Figure 5)
2017	18	2	16	-	2	-	Derryvarroge, Co. Kildare (Annex C - Figure 32)
2018	3	2	1	2	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
2019	15	11	4	4	7	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2021	1	1	0	-	-	1	Drumminascart, Co. Tipperary (Annex C - Figure 5)
				-	-	1	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2024	11	6	5	1	-	2	Drumminascart, Co. Tipperary (Annex C - Figure 5)
				2	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)

3.2.1.1.8 Curlew (Red Listed BoCCI)

61. Curlew was recorded infrequently during the breeding bird surveys. A summary of curlew recordings between 2016 and 2024 is included in Table 3.13. No evidence of breeding curlew activity was recorded during any of the survey seasons between 2016 and 2024. Return visits to sites where curlew were recorded did not find curlew in residence at these locations, therefore breeding is unlikely. The location of curlew observations is shown in Annex B and are listed in the results dataset in Annex D.

Table 3.13: Curlew Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	33	0	33	-	-	-	-
2017	2	0	2	-	-	-	-
2020	2	0	2	-	-	-	-

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2021	5	0	5	-	-	-	-
2022	2	0	2	-	-	-	-

3.2.1.1.9 Golden Plover (Red Listed BoCCI)

62. Golden plover was recorded rarely during the breeding seasons between 2016 and 2024. Golden plover had not previously been recorded in the 2016, 2017, 2018, 2019 or 2020 surveys. These golden plover were likely to be on migration as they were not found in suitable breeding habitat or recorded in subsequent visits. A summary of golden plover recordings between 2016 and 2024 is included in Table 3.14. The location of golden plover over the breeding season can be seen in Annex B and can be seen listed in Annex D.

Table 3.14: Golden Plover Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2021	1	0	1	-	-	-	-
2022	220	0	220	-	-	-	-

3.2.1.1.10 Great Crested Grebe (Amber Listed BoCCI)

63. Great crested grebe were consistently recorded at Parteen Basin and were infrequently recorded elsewhere along the study areas of the Proposed Project during the 2016 to 2024 breeding seasons. A summary of great crested grebe recordings between 2016 and 2024 is included in Table 3.15. Evidence of breeding great crested grebe were regularly recorded during the survey seasons between 2016 and 2024, the locations of which can be seen in Annex C. The location of all other great crested grebe observations is shown in Annex B and are listed in the results dataset in Annex D.

Table 3.15: Great Crested Grebe Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	12	2	10	2	-	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2017	16	0	16	-	-	-	-
2018	6	0	6	-	-	-	-
2019	17	3	14	1	2	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2020	3	0	3	-	-	-	-
2021	11	4	7	1	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
				-	-	1	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2022	3	2	1	-	-	2	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2024	3	0	3	-	-	-	-

3.2.1.1.11 Grey Partridge (Red Listed BoCCI)

64. Grey partridge was recorded twice at the same location; near Graiguepottle, County Kildare during the 2016 breeding bird season. There was no evidence breeding took place at this location in 2016. Grey partridge

was not recorded again during subsequent breeding bird surveys. A summary of Grey Partridge recordings between 2016 and 2024 is included in Table 3.16. The location of grey partridge can be seen in Annex B and is listed in Annex D.

Table 3.16: Grey Partridge Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	2	0	2	-	-	-	-

3.2.1.1.12 Hen Harrier (Amber Listed BoCCI)

65. Hen harrier was recorded rarely during the breeding bird seasons between 2016 and 2024. A summary of hen harrier recordings between 2016 and 2024 is included in Table 3.17. There was no evidence of breeding hen harrier during the survey seasons between 2016 and 2024. The location of hen harrier observations is shown in Annex B and are listed in the results dataset in Annex D.

Table 3.17: Hen Harrier Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2018	1	0	1	-	-	-	-
2019	1	0	1	-	-	-	-

3.2.1.1.13 Herring Gull (Amber Listed BoCCI)

66. Herring gull was recorded rarely during the breeding bird surveys between 2016 and 2024. There were eight records of herring gulls foraging and commuting around Parteen Basin in the 2019 breeding bird season and two recorded at the TPR during the 2022 breeding bird season, but no evidence of breeding was recorded. Herring gull was not recorded during the 2016, 2017, 2018, 2020 or 2021 breeding bird surveys. A summary of herring gull recordings between 2016 and 2024 is included in Table 3.18. The locations of herring gull observations are shown in Annex B, and are listed in the results dataset in Annex D.

Table 3.18: Herring Gull Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2019	8	0	8	-	-	-	-
2022	2	0	2	-	-	-	-

3.2.1.1.14 Kestrel (Red Listed BoCCI)

67. Kestrels were frequently recorded during the breeding bird surveys between 2016 and 2024. The majority of recorded related to hunting, commuting or roosting individuals, however some evidence of breeding activity was recorded in 2016 and 2018 when mobbing behaviour and food carrying was observed around potential nest sites. A summary of kestrel recordings between 2016 and 2024 is included in Table 3.19. The locations

of all kestrel observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.19: Kestrel Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	12	0	12	1	-	-	-
2017	24	0	24	-	-	-	-
2018	5	2	3	1	-	-	Ballyanny, Co. Tipperary (Annex C - Figure 4)
				1	-	-	Derrycrib, Co. Kildare (Annex C - Figure 32)
2019	4	0	4	-	-	-	-
2020	3	0	3	-	-	-	-
2021	4	0	4	-	-	-	-
2022	22	0	22	-	-	-	-
2024	4	0	4	-	-	-	-

3.2.1.1.15 Kingfisher (Amber Listed BoCCI, Annex I EC Birds Directive)

68. Kingfisher were frequently recorded during the breeding bird surveys between 2016 and 2024. The majority of records related to feeding, commuting, or roosting individuals, however some evidence of breeding activity was recorded in 2016, 2017 and 2022 when nest sites were found and/or breeding behaviour was noted. A summary of kingfisher recordings between 2016 and 2024 is included in Table 3.20. The locations of all kingfisher observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.20: Kingfisher Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	5	1	4	1	-	-	Friarstown, Co. Kildare (Annex C - Figure 33)
2017	11	2	10	1	-	-	Munny, Co. Offaly (Annex C - Figure 13)
2018	5	0	5	-	-	-	-
2019	5	0	5	-	-	-	-
2020	4	0	4	-	-	-	-
2021	15	0	15	-	-	-	-
2022	14	5	9	-	2	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
				-	-	1	Cloncant, Co. Offaly (Annex C – Figure 26)
				-	-	1	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
				-	-	1	Derries, Co. Offaly (Annex C – Figure 15)
2024	1	0	1	-	-	-	-

3.2.1.1.16 Lapwing (Red Listed BoCCI)

69. Lapwing were frequently recorded during the breeding bird surveys between 2016 and 2024. The majority of records related to feeding, commuting, or roosting individuals, however some evidence of breeding activity was recorded in a few locations where adults were observed in pairs in suitable habitat, displaying or with chicks. A summary of lapwing recordings between 2016 and 2024 is included in Table 3.21. The locations of

all lapwing observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.21: Lapwing Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	57	3	54	1	2	-	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
2017	238	14	224	1	7	-	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
				-	5	-	Rathlumber, Co. Offaly (Annex C - Figure 24)
2018	12	4	8	-	4	-	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
2019	14	6	8	-	1	1	Gortmore, Co. Tipperary (Annex C - Figure 3)
				-	1	-	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	2	-	Cloona, Co. Kildare (Annex C - Figure 31)
2021	10	9	1	-	3	-	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	3	-	Cloona, Co. Kildare (Annex C - Figure 31)
				-	3	-	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
2022	59	46	13	-	14	1	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
				-	6	-	Clonarrow, Co. Offaly (Annex C - Figure 20)
				-	22	-	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	-	3	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
2024	52	45	7	-	2	1	Ballinvalley, Co. Offaly (Annex C - Figure 17)
				-	7	4	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
				-	13	1	Ballycon, Co. Offaly (Annex C - Figure 23)
				4	5	3	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	2	-	Ballynakill, Co. Offaly (Annex C - Figure 25)
				2	-	1	Ticknevin Bog, Co. Kildare (Annex C - Figure 29)

3.2.1.1.17 Lesser Black-backed Gull (Amber Listed BoCCI)

70. Lesser black-backed gull was recorded frequently during the breeding bird surveys. The majority of records were recorded at Parteen Basin, County Tipperary/Clare and around Drehid Landfill at Timahoe, County Kildare. A summary of lesser black-backed gull recordings between 2016 and 2024 is included in Table 3.22. There was no evidence of breeding lesser black-backed gull recorded during the survey seasons between 2016 and 2024. The location of lesser black-backed gull observations is shown in Annex B and are listed in the results dataset in Annex D.

Table 3.22: Lesser Black-Backed Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	3	0	3	-	-	-	-
2017	16	0	16	-	-	-	-
2018	17	0	17	-	-	-	-
2019	62	0	62	-	-	-	-
2020	40	0	40	-	-	-	-
2021	10	0	10	-	-	-	-
2022	12	0	12	-	-	-	-
2024	5	0	5	-	-	-	-

3.2.1.1.18 Mallard (Amber Listed BoCCI)

71. Mallard were frequently recorded during the 2016 to 2024 breeding seasons often on large waterbodies or ponds and near wetland areas along the Proposed Project. A summary of mallard recordings between 2016 and 2024 is included in Table 3.23. Evidence of breeding mallard were regularly recorded during the survey seasons between 2016 and 2024, often with an adult seen with young. The location of mallard observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.23: Mallard Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	44	0	44	-	-	-	-
2017	109	0	109	-	-	-	-
2018	138	23	111	-	16	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
				7	-	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2019	249	10	239	1	4	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
				-	1	-	Gortmore, Co. Tipperary (Annex C - Figure 3)
				-	1	-	Island, Co. Offaly (Annex C - Figure 21)
				1	-	-	Cloona, Co. Kildare (Annex C - Figure 31)
2021	189	17	172	-	9	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
				-	1	-	Ballycommon, Co. Tipperary (Annex C - Figure 4)
				-	1	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
				-	1	-	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
				1	-	-	Esker Beg, Co. Offaly (Annex C - Figure 21)
				-	1	-	Ballycon, Co. Offaly (Annex C - Figure 23)
				-	1	-	Drehid, Co. Kildare (Annex C - Figure 30)
				-	1	1	Cloona, Co. Kildare (Annex C - Figure 31)
2022	99	42	57	4	-	17	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
				-	-	2	Cloncant, Co. Offaly (Annex C - Figure 26)
				-	-	1	Cushling, Co. Offaly (Annex C - Figure 27)
				17	-	1	Cloona, Co. Kildare (Annex C - Figure 31)
2024	86	66	20	6	-	14	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
				-	-	7	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
				-	-	4	Gorteenkeel Co. Offaly (Annex C - Figure 21)
				-	-	3	Clonarrow, Co. Offaly (Annex C - Figure 21)
				-	-	4	Ballycon, Co. Offaly (Annex C - Figure 23)
				-	-	10	Rathlumber, Co. Offaly (Annex C - Figure 24)
				16	2	-	Cloona, Co. Kildare (Annex C - Figure 31)

3.2.1.1.19 Merlin (Amber Listed BoCCI)

72. Merlin was rarely recorded during the breeding bird surveys between 2016 and 2024, with only one record during the 2021 breeding season, in June. This record was located near Cushaling, County Offaly, and was recorded commuting; no breeding behaviour was noted. A summary of merlin recordings between 2016 and 2024 is included in Table 3.24. The location of the merlin record can be seen in Annex B and is listed in Annex D.

Table 3.24: Merlin Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2021	1	0	1	-	-	-	-

3.2.1.1.20 Mute Swan (Amber Listed BoCCI)

73. Mute swan was consistently recorded at Parteen Basin and were infrequently recorded elsewhere within the study area of the Proposed Project during the 2016 to 2024 breeding seasons. A summary of mute swan recordings between 2016 and 2024 is included in Table 3.25. Evidence of breeding mute swan were regularly recorded during the survey seasons between 2016 and 2024. The location of mute swan observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.25: Mute Swan Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	67	2	65	1	-	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
				1	-	-	Ardcrony, Co. Tipperary (Annex C - Figure 6)
2017	156	9	147	7	2	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2018	100	3	97	2	1	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2019	163	16	147	9	5	2	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2020	83	0	83	-	-	-	-
2021	199	5	194	1	4	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2022	206	46	160	38	2	6	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2024	133	38	95	21	-	2	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
				2	-	-	Drumminascart, Co. Tipperary (Annex C - Figure 5)
				2	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
				-	-	2	Ballinvalley, Co. Offaly (Annex C - Figure 17)
				-	-	5	Gorteenkeel Co. Offaly (Annex C - Figure 21)
				-	-	1	Esker Beg, Co. Offaly (Annex C - Figure 22)
-	2	1	Cloona, Co. Kildare (Annex C - Figure 31)				

3.2.1.1.21 Peregrine Falcon (Green Listed BoCCI, Annex I EC Birds Directive)

74. Peregrine falcon was recorded infrequently during the breeding bird surveys between 2016 and 2024. A summary of peregrine falcon recordings between 2016 and 2024 is included in Table 3.26. The majority of peregrine falcon recordings related to commuting or hunting individuals; however, breeding activity was recorded breeding at Edenderry Power station in 2021, 2022 and 2024. The locations of peregrine falcon observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.26: Peregrine Falcon Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2017	1	0	1	-	-	-	-
2018	1	0	1	-	-	-	-
2019	1	0	1	-	-	-	-
2021	4	1	4	1	-	-	Edenderry Power Station, Co. Offaly (Annex C - 25)
2022	5	2	3	2	-	-	Edenderry Power Station, Co. Offaly (Annex C - 25)
2024	1	1	0	-	1	-	Edenderry Power Station, Co. Offaly (Annex C - 25)

3.2.1.1.22 Redshank (Red Listed BoCCI)

75. Redshank was recorded infrequently during the breeding bird surveys between 2016 and 2024. No evidence of breeding redshank activity was recorded during any of the survey seasons between 2016 and 2024. Return visits to sites where redshank were recorded did not find redshank in residence at these locations, therefore breeding is unlikely. A summary of redshank recordings between 2016 and 2024 is included in Table 3.27. The location of redshank observations are shown in Annex B and are listed in the results dataset in Annex C.

Table 3.27: Redshank Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2017	1	0	1	-	-	-	-
2018	1	0	1	-	-	-	-
2021	3	0	3	-	-	-	-
2024	1	0	1	-	-	-	-

3.2.1.1.23 Ringed Plover (Amber Listed BoCCI)

76. Ringed plover was infrequently recorded during breeding bird surveys between 2016 and 2024. Ringed plover was recorded on one occasion during the 2021 breeding season, in May, but was recorded several times and at several locations during the 2022 breeding season, often on or near rewetted Bord na Móna cutover bog. Breeding was confirmed at one location when a pair of ringed plover performed a distraction display on a hooded crow. The pair led the hooded crow a distance away from the original location and flew away. This type of behaviour is indicative of a confirmed breeding pair, although no nest or young were recorded. A summary of ringed plover recordings between 2016 and 2024 is included in Table 3.28. The location of the ringed plover observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.28: Ringed Plover Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2021	2	2	0	-	2	-	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
2022	10	10	0	-	5	-	Gorteenkeel, Co. Offaly (Annex C - Figure 21)

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2024	14	14	0	-	-	2	Clonarrow, Co. Offaly (Anne C – Figure 21)
				2	-	-	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	-	1	Derryvarroge, Co. Kildare (Annex C – Figure 32)
				2	-	-	Ballinvalley, Co. Offaly (Annex C - Figure 17)
				-	-	3	Gorteenkeel Co. Offaly (Annex C - Figure 21)
				4	5	-	Ballycon, Co. Offaly (Annex C - Figure 23)

3.2.1.1.24 Sand Martin (Amber Listed BoCCI)

77. Sand martin were frequently recorded during the breeding bird surveys between 2016 and 2024. The majority of records related to feeding or commuting individuals often over large waterbodies at Parteen Basin and Lough Ourna in County Tipperary; however, some breeding activity was recorded in a few locations where adults were observed in pairs in suitable habitat, displaying or nesting colonies were found. A summary of sand martin recordings between 2016 and 2024 is included in Table 3.29. The locations of sand martin observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.29: Sand Martin Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	76	75	1	-	-	75	Munny, Co. Offaly (Annex C - Figure 13)
2017	40	33	7	-	1	25	Ardcrony, Co. Tipperary (Annex C - Figure 6)
				6	-	-	Island, Co. Offaly (Annex C - Figure 21)
				-	-	1	Ballycon, Co. Offaly (Annex C - Figure 23)
2018	120	18	102	9	7	-	Island, Co. Offaly (Annex C - Figure 21)
				-	2	-	Ardcrony, Co. Tipperary (Annex C - Figure 6)
2019	102	101	1	100	-	-	Kilcolman, Co. Offaly (Annex C - Figure 11)
				-	-	1	Island, Co. Offaly (Annex C - Figure 21)
2020	50	0	50	-	-	-	-
2021	80	40	40	-	-	40	Island, Co. Offaly (Annex C - Figure 21)
2022	13	13	0	13	-	-	Island, Co. Offaly (Annex C - Figure 21)
2024	117	71	46	30	-	-	Island, Co. Offaly (Annex C - Figure 21)
				-	16	-	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	25	-	Cushling, Co. Offaly (Annex C - Figure 27)

3.2.1.1.25 Shoveler (Red Listed BoCCI)

78. Shoveler were rarely recorded during breeding bird surveys between 2016 and 2024. The species was only recorded on two occasions during the 2021 breeding season, in April. Shoveler were recorded in Parteen Basin and in Lough Ourna, County Tipperary, and were recorded feeding and commuting. No breeding activity was recorded. A total of five shoveler were recorded with a maximum site count of three. A summary of shoveler recordings between 2016 and 2024 is included in Table 3.30. The locations of shoveler over the 2021 breeding season can be seen in Annex B and is listed in Annex D.

Table 3.30: Shoveler Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2021	5	0	5	-	-	-	-

3.2.1.1.26 Snipe (Red Listed BoCCI)

79. Snipe were regularly encountered in wet grassland and peatland habitats throughout the study area during the breeding season between 2016 and 2024. Records often related to flushed or commuting individuals, however evidence of breeding activity was regularly recorded where adults were observed in suitable habitat, seen displaying/drumming or heard calling/chipping. A summary of snipe recordings between 2016 and 2024 is included in Table 3.31. The locations of snipe observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.31: Snipe Records Observed During Breeding Bird Surveys Between The 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	44	22	22	-	3	3	Cloona, Co. Kildare (Annex C - Figure 31)
				-	-	5	Drehid/Loughnacrusa, Co. Kildare (Annex C - Figure 30)
				-	-	3	Derrycrib, Co. Kildare (Annex C - Figure 32)
				-	-	1	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	-	6	Cushaling, Co. Offaly (Annex C - Figure 27)
				-	-	1	Ardcrony, Co. Tipperary (Annex C - Figure 6)
2017	108	72	36	-	-	2	Drehid/Loughnacrusa, Co. Kildare (Annex C - Figure 30)
				1	-	23	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
				-	-	3	Cloona, Co. Kildare (Annex C - Figure 31)
				-	-	10	Derryvaroge, Co. Kildare (Annex C - Figure 32)
				-	-	1	Derrycrib, Co. Kildare (Annex C - Figure 32)
				-	-	15	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	-	4	Cushaling, Co. Offaly (Annex C - Figure 27)
				-	-	8	Island, Co. Offaly (Annex C - Figure 21)
				-	-	1	Island, Co. Offaly (Annex C - Figure 21)
				-	-	2	Incha Beg, Co. Tipperary (Annex C - Figure 2)
2018	103	10	93	-	-	5	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
				-	-	3	Island, Co. Offaly (Annex C - Figure 21)
				-	-	1	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
2019	5	1	4	-	-	1	Cloona, Co. Kildare (Annex C - Figure 31)
2020	2	0	2	-	-	-	-
2021	22	21	1	-	1	6	Derryvaroge, Co. Kildare (Annex C - Figure 32)
				-	1	4	Drehid/Loughnacrusa, Co. Kildare (Annex C - Figure 30)
				-	3	1	Island, Co. Offaly (Annex C - Figure 21)
				-	3	-	Incha Beg, Co. Tipperary (Annex C - Figure 2)
				-	-	2	Ballycommon, Co. Tipperary (Annex C - Figure 4)
2022	27	23	4	-	-	2	Incha Beg, Co. Tipperary (Annex C - Figure 2)
				-	2	1	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
				-	-	1	Esker Beg, Co. Offaly (Annex C - Figure 22)
				-	-	3	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	-	2	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
				-	10	2	Cloona, Co. Kildare (Annex C - Figure 31)

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2024	17	17	0	-	-	4	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
				-	-	3	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
				-	-	1	Esker Beg, Co. Offaly (Annex C - Figure 22)
				-	3	-	Rathlumber, Co. Offaly (Annex C - Figure 24)
				-	1	2	Ticknevin Bog, Co. Kildare (Annex C - Figure 27 & 29)
				-	-	1	Drehid/Loughnacrusha, Co. Kildare (Annex C - Figure 30)
				-	-	2	Cloona, Co. Kildare (Annex C - Figure 31)

3.2.1.1.27 Teal (Amber Listed BoCCI)

80. Teal was rarely recorded during breeding bird surveys between 2016 and 2024. The species was only recorded on two occasions during the 2021 breeding season, in April. Teal was recorded in Parteen Basin and in Timahoe, County Kildare, and were recorded feeding and commuting. No breeding activity was recorded. A total of five teal were recorded with a maximum site count of four individuals. A summary of teal recordings between 2016 and 2024 is included in Table 3.32. The locations of teal over the 2021 breeding season can be seen in Annex B and are listed in Annex D.

Table 3.32: Teal Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2021	2	0	2	-	-	-	-

3.2.1.1.28 Tufted Duck (Amber Listed BoCCI)

81. Tufted duck were recorded infrequently during the breeding bird surveys between 2016 and 2024. A summary of tufted duck recordings between 2016 and 2024 is included in Table 3.33. Tufted duck were mostly recorded at Parteen Basin and Lough Ourna in County Tipperary and often in low numbers. The breeding status of these records were unknown. In 2019, three pairs of tufted duck were recorded on Parteen Basin. All pairs recorded were foraging in areas of suitable breeding habitat. Two pairs were noted as probably breeding (one pair was located approximately 300m northeast of the RWI&PS) and one pair noted as unknown. The locations of tufted duck observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.33: Tufted Duck Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	27	0	27	-	-	-	-
2017	12	0	12	-	-	-	-
2018	91	0	91	-	-	-	-
2019	7	4	3	-	4	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2021	26	5	21	-	-	5	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
2022	48	0	48	-	-	-	-

3.2.1.1.29 Woodcock (Red Listed BoCCI)

82. Woodcock was regularly recorded at survey sites during the breeding bird surveys between 2016 and 2024. The majority of records related to breeding woodcock, which were observed displaying/roding. This breeding activity was only confined to sites surveyed. A summary of woodcock recordings between 2016 and 2024 is included in Table 3.34. The locations of woodcock observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.34: Woodcock Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	12	7	5	-	2	-	Drehid/Loughnacrusa, Co. Kildare (Annex C – Figure 30)
				-	5	-	Derrycrib, Co. Kildare (Annex C - Figure 32)
2017	10	10	0	-	10	-	Derrycrib, Co. Kildare (Annex C - Figure 32)
2018	15	15	0	-	1	-	Drehid/Loughnacrusa, Co. Kildare (Annex C – Figure 30)
				-	7	-	Cloona, Co. Kildare (Annex C - Figure 31)
				-	7	-	Derrycrib, Co. Kildare (Annex C - Figure 32)
2019	12	12	0	-	5	-	Cloona, Co. Kildare (Annex C - Figure 31)
				-	7	-	Derrycrib, Co. Kildare (Annex C - Figure 32)
2021	8	8	0	-	1	-	Incha Beg, Co. Tipperary (Annex C - Figure 2)
				-	2	-	Drehid/Loughnacrusa, Co. Kildare (Annex C – Figure 30)
				-	2	-	Cloona Co. Kildare (Annex C - Figure 31)
				-	3	-	Derrycrib, Co. Kildare (Annex C - Figure 31)
2022	48	48	0	-	2	-	Incha Beg, Co. Tipperary (Annex C – Figure 2)
				-	24	-	Drehid/Loughnacrusa, Co. Kildare (Annex C – Figure 30)
				-	17	-	Cloona, Co. Kildare (Annex C - Figure 31)
				-	5	-	Derrycrib, Co. Kildare (Annex C - Figure 32)
2024	58	58	0	-	1	-	Geashill Co. Offaly (Annex C - Figure 19)
				-	21	-	Drehid/Loughnacrusa, Co. Kildare (Annex C – Figure 30)
				-	25	-	Cloona, Co. Kildare (Annex C - Figure 31)
				-	11	-	Derrycrib, Co. Kildare (Annex C - Figure 32)

3.2.1.1.30 Passerines of High Conservation Concern

83. Yellowhammer was frequently encountered during breeding bird surveys between 2016 and 2024. In previous years recordings, yellowhammer were mostly confined to the eastern regions of the Proposed Project; however, yellowhammer were recorded evenly throughout the extent of the Proposed Project. Numbers seen were low, typically one to two individuals, with birds recorded in a wide range of habitats. Breeding was likely to have occurred in each year.

84. Meadow pipit was frequently encountered in peatland habitats and wet grassland, during breeding bird surveys between 2016 and 2024. Evidence of breeding was regularly encountered with calling or displaying males often found in suitable breeding habitat.
85. Grey wagtail was frequently encountered in along riparian habitat, during breeding bird surveys between 2016 and 2024. Evidence of breeding was regularly encountered with calling or displaying males often found in suitable breeding habitat or adults seen with fledglings.
86. The locations of passerines of High Conservation Concern are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

3.2.1.2 Other Species of Low Conservation Concern/Green Listed

3.2.1.2.1 Buzzard (Green Listed BoCCI)

87. Buzzard were frequently recorded during the breeding bird surveys between 2016 and 2024. The majority of records related to commuting, hunting or roosting buzzards; however, some evidence of breeding was recorded with adult pairs seen in suitable habitat or displaying observed. A summary of buzzard recordings between 2016 and 2024 is included in Table 3.35. The locations of buzzards observations are shown in Annex B along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.35: Buzzard Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	4	0	4	-	-	-	-
2017	17	0	17	-	-	-	-
2018	19	0	19	-	-	-	-
2019	35	4	31	-	1	-	Esker Beg, Co. Offaly (Annex C – Figure 22)
				-	1	-	Gorteenkeel, Co. Offaly (Annex C – Figure 21)
				-	2	-	Lullymore, Co. Kildare (Annex C – Figure 28)
2021	30	8	22	-	-	1	Rathlumber, Co. Offaly (Annex C – Figure 24)
				-	1	2	Esker Beg, Co. Offaly (Annex C – Figure 22)
				-	-	1	Cloona, Co. Kildare (Annex C – Figure 31)
				-	-	3	Derrycrib, Co. Kildare (Annex C – Figure 32)
2022	75	3	72	-	1	-	Derrycrib, Co. Kildare (Annex C – Figure 32)
				-	-	2	Gorteenkeel, Co. Offaly (Annex C – Figure 21)
2024	36	16	20	-	-	1	Drumminascart, Co. Tipperary (Annex C - Figure 5)
				-	-	2	Knockanacree, Co. Tipperary (Annex C - Figure 8)
				-	3	-	Rathlumber, Co. Offaly (Annex C – Figure 24)
				-	3	1	Ticknevin Bog, Co. Kildare (Annex C – Figure 27)
				-	-	1	Drehid/Loughnacrusa, Co. Kildare (Annex C – Figure 30)
				-	1	2	Cloona, Co. Kildare (Annex C – Figure 31)
2025*	1	1	0	1	-	-	Derrycrib, Co. Kildare (Annex C – Figure 32)

* = Incidental record observed while conducting an ecological multidisciplinary walkover survey.

3.2.1.2.2 Goshawk (Amber Listed BoCCI, Breeding Rarity)

88. In May 2016 a goshawk (Amber Listed in the BoCCI) juvenile was recorded at Carrigatogher, County Tipperary. A goshawk recorded with juvenile plumage in early May, such as this one, is likely to be a bird in its second (calendar) year, which has not yet developed adult markings. The habitat at this location was not considered to be suitable for breeding goshawk. A summary of goshawk recordings between 2016 and 2024

is included in Table 3.36. The locations of goshawk over the breeding seasons can be seen in Annex B and is listed in Annex D.

Table 3.36: Goshawk Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	1	0	1	-	-	-	-

3.2.1.2.3 Grey Heron (Green Listed BoCCI)

89. Grey heron was observed frequently during the 2016 to 2024 breeding seasons often near wetlands, rivers drains or ponds along the Proposed Project. A summary of grey heron recordings between 2016 and 2024 is included in Table 3.37. There was no evidence of breeding grey heron recorded during the survey seasons between 2016 and 2024. The locations of grey heron observations are shown in Annex B and are listed in the results dataset in Annex D.

Table 3.37: Grey Heron Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	6	0	6	-	-	-	-
2017	28	0	28	-	-	-	-
2018	39	0	39	-	-	-	-
2019	24	0	24	-	-	-	-
2021	9	0	9	-	-	-	-
2022	8	0	8	-	-	-	-
2024	19	0	18	-	-	-	-

3.2.1.2.4 Little Grebe (Green Listed BoCCI)

90. Little grebe were frequently recorded during the 2016 to 2024 breeding seasons often on large waterbodies or ponds along the Proposed Project. A summary of little grebe recordings between 2016 and 2024 is included in Table 3.38. Evidence of breeding little grebe were regularly recorded during the survey seasons between 2016 and 2024, often with adult pairs seen on nests or with young. The location of little grebe observations are shown in Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.38: Little Grebe Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	2	2	0	2	-	-	Lough Ourna, Co. Tipperary (Annex C - Figure 5)
2017	10	2	8	-	2	-	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2018	6	0	6	-	-	-	-
2019	17	6	11	4	-	-	Cloona, Co. Kildare (Annex C - Figure 31)
2021	2	2	0	-	-	1	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
				-	-	1	Island, Co. Offaly (Annex C - Figure 21)
2022	8	8	0	-	2	-	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
				-	-	3	Clonarrow, Co. Offaly (Annex C - Figure 21)
				1	2	-	Cloona, Co. Kildare (Annex C - Figure 31)
						2	Parteen Basin, Co. Tipperary/Clare (Annex C - Figure 1&2)
2024	19	19	0	4			Lough Ourna, Co. Tipperary (Annex C - Figure 5)
				4			Ballinvalley, Co. Offaly (Annex C - Figure 17)
						6	Gorteenkeel, Co. Offaly (Annex C - Figure 21)
						1	Rathlumber, Co. Offaly (Annex C - Figure 24)
					2		Cloona, Co. Kildare (Annex C - Figure 31)

3.2.1.2.5 Sparrowhawk (Green Listed BoCCI)

91. Sparrowhawk was observed frequently during the breeding bird surveys between 2016 and 2024. The majority of records related to hunting, commuting or roosting individuals, however some evidence of breeding activity was recorded in 2018 and 2019 when a fledgling was observed, and an adult was recorded food carrying near a potential nest sites. A summary of sparrowhawk recordings between 2016 and 2024 is included in Table 3.39. The locations of sparrowhawk observations are shown in Figures within Annex B, along with their breeding bird status in Annex C and are listed in the results dataset in Annex D.

Table 3.39: Sparrowhawk Records Observed During Breeding Bird Surveys Between 2016 and 2024

Year	No. of Records	No. of Breeding Records	No. of Unknown/Non-breeding Records	Breeding Status within 1km of Proposed Project			Breeding Locations
				Confirmed	Probable	Possible	
2016	6	0	6	-	-	-	-
2017	8	0	8	-	-	-	-
2018	8	1	7	1	-	-	Dalgan, Co. Offaly (Annex C - Figure 19)
2019	4	1	3	1	-	-	Derrinboy, Co. Offaly (Annex C - Figure 14)
2021	2	1	1	-	-	-	Cloona, Co. Kildare (Annex C - Figure 31)
2022	13	1	12	-	-	1	Drehid/Loughnacrusa, Co. Kildare (Annex C - Figure 30)
2024	2	1	1	-	-	1	Gorteenkeel, Co. Offaly (Annex C - Figure 21)

3.2.2 38 kV Uprate Works

92. The main findings of the breeding bird surveys carried out between 2019 and 2024 on the Lower River Shannon at the Kildorus VP, located southwest of O'Briensbridge County Clare, are summarised herein for each species.

93. The focus of the surveys was to establish the distribution and abundance of those species which are at potential risk from impacts associated with the Proposed Project (i.e. target species). Species sensitivity to the Proposed Project was determined using information gathered from the desktop study, consultation with relevant stakeholders, and the results from field surveys in previous years. Sensitivity factors include one or more of the following: risk of disturbance, displacement, collision with powerlines and species distribution within the study area. The level of conservation significance was drawn from two lists: The Birds of

Conservation Concern in Ireland and from Annex I of the EU Birds Directive (Gilbert *et al.* 2021; Nelson *et al.* 2019).

3.2.2.1 Key Species of Conservation Significance

3.2.2.1.1 Black-headed Gull (Amber Listed BoCCI)

94. Black-headed gulls were frequently recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The vast majority of VP surveys recorded foraging black-headed gull flying throughout the viewshed. Individuals were also regularly observed commuting along the Lower River Shannon. Black-headed gull were not recorded during the lowland wader surveys. A total of 189 black-headed gulls were recorded throughout the survey seasons between 2019 and 2024.

95. Table 3.40 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.40: Black-Headed Gull Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Black-headed Gull	2019	48	N/A	N/A
	2020	53	45	8
	2021	63	35	28
	2022	19	14	5
	2024	6	4	2

3.2.2.1.2 Common Gull (Amber Listed BoCCI)

96. Common gull was recorded once at Kildoorus during the 2020 breeding season, on the 3 September 2020. It was recorded flying upstream along the river and flew above the existing OHLs.

97. Table 3.41 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.41: Common Gull Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Species	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Common Gull	2020	1	1	0

3.2.2.1.3 Coot (Amber Listed BoCCI)

98. In 2019, coot were infrequently observed during VP surveys at O'Briensbridge, at polesets 66B-67B. No flights were recorded. Birds, consisting of one or two individuals and were observed foraging on the water within the viewshed area. Coot were not recorded during the lowland wader surveys. Table 3.42 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.42: Coot Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Coot	2019	4	N/A	N/A

3.2.2.1.4 Cormorant (Amber Listed BoCCI)

99. Cormorant were frequently recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The majority of these flights were of birds commuting towards Parteen Basin or in the direction of the Shannon Estuary without landing in the study area. Cormorant were not recorded during the lowland wader surveys. A total of

382 cormorant were recorded throughout the survey seasons between 2019 and 2024. Table 3.43 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.43: Cormorant Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Cormorant	2019	150	N/A	N/A
	2020	56	56	0
	2021	99	88	11
	2022	52	48	4
	2024	25	12	13

3.2.2.1.5 Curlew (Red Listed BoCCI)

100. Curlew were rarely recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The few records of curlew were calling birds commuting downstream toward the direction of the Shannon Estuary. Curlew were not recorded during the lowland wader surveys. A total of 50 curlew were recorded throughout the survey seasons between 2019 and 2024. Table 3.44 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.44: Curlew Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Curlew	2019	1	N/A	N/A
	2021	1	1	0
	2024	48	4	44

3.2.2.1.6 Herring Gull (Amber Listed BoCCI)

101. Herring gull were infrequently observed during VP surveys at O'Briensbridge, at polesets 66B-67B. The vast majority of VP surveys recorded commuting herring gull flying throughout the viewshed. The majority of these flights were of birds commuting towards Parteen Basin or in the direction of the Shannon Estuary without landing in the study area. Herring gull were not recorded during the lowland wader surveys. A total of nine herring gulls were recorded throughout the survey seasons between 2019 and 2024. Table 3.45 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.45: Herring Gull Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Herring Gull	2019	8	N/A	N/A
	2021	1	1	0
	2022	1	1	0

3.2.2.1.7 Kingfisher (Amber Listed BoCCI)

102. Kingfisher was rarely observed during VP surveys at O'Briensbridge, at polesets 66B-67B on two separate occasions as it commuted across the River Shannon. This species is typically confined to the margins of waterbodies, where it finds both feeding and roosting opportunities. Kingfisher were not recorded during the lowland wader surveys. Table 3.46 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.46: Kingfisher Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Kingfisher	2019	2	N/A	N/A
	2022	1	0	1

3.2.2.1.8 Kestrel (Red Listed BoCCI)

103. Kestrel were frequently observed during VP surveys at O'Briensbridge, at polesets 66B-67B. The majority of VP surveys recorded commuting or hunting kestrel flying throughout the viewshed. Kestrel were not recorded during the lowland wader surveys. A total of ten kestrel were recorded throughout the survey seasons between 2019 and 2024. Table 3.47 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.47: Kestrel Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Kestrel	2019	4	N/A	N/A
	2020	3	3	0
	2021	3	3	0
	2022	1	1	0

3.2.2.1.9 Lapwing (Red Listed BoCCI)

104. Lapwing were rarely recorded during VP surveys at O'Briensbridge at polesets 66B-67B. Lapwing was only heard calling on one occasion throughout the survey seasons between 2019 and 2024 and none were recorded during the lowland wader surveys. Table 3.48 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.48: Lapwing Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Lapwing	2019	1	N/A	N/A

3.2.2.1.10 Lesser Black-backed Gull (Amber Listed BoCCI)

105. Lesser black-backed gull were frequently observed during VP surveys at O'Briensbridge, at polesets 66B-67B. The majority of these flights were of birds commuting towards Parteen Basin or in the direction of the Shannon Estuary without landing in the study area. There were three records of lesser black-backed gulls during the lowland wader surveys, as they were observed commuting along the Lower River Shannon. A total of 29 lesser black-backed gulls were recorded throughout the survey seasons between 2019 and 2024. Table 3.49 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.49: Lesser Black-backed Gull Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Lesser Black-backed Gull	2019	2	N/A	N/A
	2020	24	24	0
	2021	3	1	2
	2024	22	11	11

3.2.2.1.11 Mute Swan (Amber Listed BoCCI)

106. Mute swan were frequently encountered during VP surveys at O'Briensbridge at poleset 66B-67B. The majority of these flights were of birds commuting towards Parteen Basin or in the direction of the Shannon Estuary with some landing in the study area on the water of the Lower Shannon. There were 60 records of mute swan recorded throughout the survey seasons between 2019 and 2024. Table 3.50 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.50: Mute Swan Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Mute Swan	2019	39	N/A	N/A
	2021	21	21	0
	2022	2	0	2
	2024	5	0	5

3.2.2.1.12 Redshank (Red Listed BoCCI)

107. Redshank were infrequently recorded during VP surveys at O'Briensbridge at polesets 66B-67B. A flock of 18 individuals was recorded twice during an April VP survey, as the species foraged in a field to the southeast of the VP. These individuals were non-breeding. Redshank were not recorded during the lowland wader surveys. Table 3.51 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.51: Redshank Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Redshank	2019	36	N/A	N/A

3.2.2.1.13 Snipe (Amber Listed BoCCI)

108. Snipe were recorded on two separate occasions in May during the 2019 lowland wader surveys. These individuals were both found in wet grassland habitats between polesets 11B and 12B north of poleset 54. Snipe were not recorded during VP surveys.

3.2.2.1.14 Other Birds of High Conservation Concern

109. Meadow pipit was commonly encountered in wet grassland habitats. Breeding was confirmed at two separate locations in 2019. Both occurrences were noted in the surrounding fields between polesets 53B and 55B, in the fields between the headrace canal and the Lower River Shannon.

110. A pair of grey wagtail was recorded at O'Briensbridge during VP surveys in 2019. It is considered that this pair was likely to have bred locally. An individual was also recorded during hinterland surveys at the Blackwater River.

3.2.2.2 Other Species of Low Conservation Significance/Green Listed

3.2.2.2.1 Buzzard (Green Listed BoCCI)

111. Buzzard were rarely recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The only record during VP surveys was recorded soaring near the VP above the existing OHL. Buzzard were recorded on eight occasions during lowland wader surveys and on one occasion during the hinterland surveys. Observed behaviours included; commuting, soaring and hunting. Table 3.52 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.52: Buzzard Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Buzzard	2021	1	1	0
	2022	1	1	0

3.2.2.2.2 Grey Heron (Green Listed BoCCI)

112. Grey heron were frequently recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The majority of these flights were of birds commuting towards Parteen Basin or in the direction of the Shannon Estuary with only a few records landing in the study area to feed. A total of 46 grey heron were recorded throughout the survey seasons between 2019 and 2024. Table 3.53 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.53: Grey Heron Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Grey Heron	2019	33	N/A	N/A
	2020	2	2	0
	2021	11	1	10
	2022	3	2	1
	2024	6	3	3

3.2.2.2.3 Little Grebe (Green Listed BoCCI)

113. Little grebe were rarely observed during VP surveys at O'Briensbridge. This species was not recorded flying and was mostly observed foraging on the water within the viewshed area. They were recorded in the Lower River Shannon at polesets 66B-67B and were not recorded during the lowland wader surveys. Table 3.54 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.54: Little Grebe Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Little Grebe	2019	2	N/A	N/A

3.2.2.2.4 Mallard (Green Listed BoCCI)

114. Mallard were frequently recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The majority of these flights were of birds commuting towards Parteen Basin or in the direction of the Shannon Estuary with only a few records landing in the study area to feed and roost. A total of 129 mallard were recorded throughout the survey seasons between 2019 and 2024. Table 3.55 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.55: Mallard Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Mallard	2019	77	N/A	N/A
	2020	2	2	0
	2021	50	3	47
	2022	8	5	3
	2024	6	0	6

3.2.2.2.5 Moorhen (Green Listed BoCCI)

115. Moorhen were frequently recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The majority of records related to birds feeding and commuting in the area. A total of 23 moorhen were recorded throughout the survey seasons between 2019 and 2024. Table 3.56 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.56: Moorhen Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Moorhen	2019	15	N/A	N/A
	2021	8	0	8

3.2.2.2.6 Sparrowhawk (Green Listed BoCCI)

116. Sparrowhawk were infrequently recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The majority of flights related to individuals hunting or commuting within the study area. Sparrowhawk were not recorded during the lowland wader surveys. Table 3.39 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.57: Sparrowhawk Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Sparrowhawk	2019	2	N/A	N/A
	2021	2	0	2

3.2.2.2.7 Whimbrel (Green Listed BoCCI)

117. Whimbrel were rarely recorded during VP surveys at O'Briensbridge at polesets 66B-67B. The few records of whimbrel were flocks of birds seen feeding near the study area or commuting downstream toward the direction of the Shannon Estuary or upstream towards Parteen Basin. Six whimbrel were recorded on the 15 May 2019 as they were foraging in the field to the south of poleset 28B during the lowland wader surveys. A total of 93 whimbrel were recorded throughout the survey seasons between 2019 and 2024 of which 12 were either curlew or whimbrel (exact species could not been determined due to distance of the flock), which were seen flying across the river, bearing west and above the existing OHL. Given the large size of the flock and lack of suitable habitat in the immediate area, these birds were likely commuting through the area. Table 3.58 below provides a summary of the flight activity during the VP surveys for this target species between 2019 and 2024. The recorded flightlines for this species can be seen in Annex E and are listed in the results dataset in Annex D.

Table 3.58: Whimbrel Summary of Flights Recorded During VP Surveys Between 2019 and 2024 at O'Briensbridge

Species	Year	Total Recorded	Flights at existing Overhead Lines	
			Above	Below
Whimbrel	2021	87	87	0

4. Discussion

4.1 Desktop Study

118. The RWI&PS site at Parteen Basin is situated downstream of the Lough Derg SPA and upstream of the River Shannon and River Fergus Estuaries SPA. These designated sites are 3km and 15.5km from the Proposed Project, respectively. The (breeding) special conservation interests of the Lough Derg SPA are cormorant and common tern. Nationally important numbers of both these species breed on the lake. Noteworthy numbers of both tufted duck and great crested grebe also breed on Lough Derg.
119. There are three SPAs which are designated for hen harrier within 15km of the Proposed Project: Slievefelim to Silvermines Mountains SPA, Slieve Bloom Mountains SPA and Slieve Aughty Mountains SPA. The Slievefelim to Silvermines Mountains SPA is the closest to the Proposed Project, situated 1.5km south-east. In the 2022 breeding season the Slieve Aughty Mountains hen harrier population was three to five pairs. This was an approximate decrease in the population of 64% from the previous 2015 national hen harrier survey. The breeding population within the Slievefelim to Silvermines Mountains has remained relatively stable, however in 2022, there were three to four pairs in the SPA marking an approximate 60% decline. The Slieve Bloom Mountains had shown an increasing trend from the 2015 national hen harrier surveys, but in 2022 eight to nine pairs were recorded, marking an approximately 30% decline. Overall, the species is showing a decreasing population trend nationally. The habitat in Ireland most favoured by hen harrier is heather moorland and conifer plantations (particularly second rotation forest and thicket) (Ruddock *et al.* 2024). The Proposed Project and wider surroundings contain potentially suitable habitat for this species. As hen harrier may travel up to 10km from a roost site for foraging (SNH 2016), the Slieve Bloom Mountains and Slievefelim to Silvermines Mountains SPA hen harrier populations are therefore within connectivity distance from potential supporting habitat within the Proposed Project.
120. The cutaway bog habitat in the midlands of Ireland has been shown to provide valuable habitat for breeding birds such as waders. Bord na Móna commissioned a study to survey ten cutaway bogs in the midlands of Ireland for breeding waders (Copland 2011). Five of these cutaway bogs are located in the wider surroundings of the Proposed Project. During the breeding bird survey season of 2010 and 2011 a number of species of high conservation concern were recorded across the peatland sites in the midlands of Ireland. Of the five cutaway bogs closest to the Proposed Project, breeding was confirmed for ringed plover and lapwing and was considered probable for black-headed gull, snipe and redshank.
121. In summary, the desktop study found local SPAs host water bird populations which are present in nationally important numbers in some instances, therefore breeding bird surveys were required to establish a population baseline to facilitate robust quantitative assessments of any potential impacts associated with the Proposed Project. Similarly, the wider surroundings of the Proposed Project may contain supporting habitat for several species of conservation concern, therefore surveys were conducted to investigate this possibility.

4.2 Field Study

4.2.1 Parteen Basin (Raw Water Intake and Pumping Station Site)

122. At Parteen Basin between the 2016 and 2024 breeding season, the species mentioned in the paragraphs below were recorded in suitable breeding habitat. The maximum site count and number of pairs over the survey period were also recorded indicating the usage of the Parteen Basin as a breeding bird area.
123. During the breeding bird surveys between 2016 and 2024 mute swan (Amber Listed BoCCI) was recorded in every year. The maximum number recorded was 57 individuals in June 2017. The number of breeding pairs recorded between 2016 and 2024 ranged from a minimum of two pairs up to a seven. The maximum site count for cormorant (Amber Listed BoCCI) was 33 individuals in June 2020; however, no evidence of breeding was noted throughout the survey period. These inland tree nesters are likely to be breeding elsewhere such as Lough Derg and use Parteen Basin for roosting, feeding or commuting.

124. Other noteworthy species which were present in low numbers and were confirmed or considered 'probable breeders' included: great crested grebe (Amber Listed BoCCI), little grebe (Green Listed BoCCI), mallard (Amber Listed BoCCI), moorhen (Green Listed BoCCI) and tufted duck (Red Listed BoCCI). However, the closest probable or confirmed breeding attempt was over 300m (greylag goose (feral population)) from the RWI&PS and most of the recordings were in other sections of the basin.

125. There were a number of black-headed gull individuals also recorded at Parteen Basin, however, it is considered that observations of this species at Parteen Basin are individuals using the site for foraging, as no evidence of breeding was recorded.

4.2.2 Treated Water Pipeline (including associated infrastructure sites)

126. Along the route of the Treated Water Pipeline, the following target species were recorded in suitable breeding habitat during the breeding bird surveys between 2016 and 2024. Comments on the number or pairs and the location of suitable habitat are included herein.

4.2.2.1 Waders

127. The following target wader species were observed during the breeding bird seasons between 2016 and 2024; curlew, common sandpiper, lapwing, redshank, ringed plover, snipe and woodcock. The locations of these species can be seen in Annex B, while the survey data is presented in Annex D.

4.2.2.1.1 Curlew

128. An estimated 138 breeding pairs of curlew are present in the Republic of Ireland (ROI). This species is now thought to be a very rare breeder of semi-improved and unimproved rough grassland, lowland wet grasslands, moorland, heath and bog in Ireland. The breeding distribution is mostly confined to important clusters or strongholds in Counties Kerry, Galway, Kildare, Roscommon, Mayo, Leitrim, Monaghan and Donegal (O'Donoghue *et al.* 2019). The curlew breeding population has experienced a significant short-term and long-term decline in the past 25 years (Gilbert *et al.* 2021). Curlew was recorded infrequently and in low numbers during the breeding bird season surveys between 2016 and 2024, often as single records which were observed feeding or commuting and not recorded again in follow up visits. Breeding was not confirmed for this species in any of the breeding bird seasons between 2016 and 2024. Return visits to sites of positive curlew recordings did not detect curlew in residence at these locations. Given the lack of curlew sightings within the breeding bird seasons (2016 – 2024), it is considered curlew are not dependent on the habitats within the Proposed Project for foraging or breeding.

4.2.2.1.2 Common Sandpiper

129. An estimated 1,850 breeding pairs of common sandpiper are present in the ROI (NPWS 2019). Common sandpiper is typically associated with lake edge and riparian habitats (Stroud *et al.* 1987) but has been commonly encountered on cutaway, raised and blanket bogs in Ireland (Copland *et al.* 2008, Copland 2011). No evidence of breeding common sandpiper were recorded during the breeding bird seasons between 2016 and 2024, the infrequent records only related to commuting or feeding individuals, although suitable habitat could be found along the Proposed Project route.

4.2.2.1.3 Lapwing

130. An estimated 620 breeding pairs of lapwing are present in the ROI (NPWS 2019). It is unknown if breeding birds within Ireland are resident. This species is thinly distributed across the country as a breeding species. Its breeding population have experienced a significant short term and long-term decline in the past 25 years (Gilbert *et al.* 2021). Lapwing were possible, probable or confirmed to have bred along the Proposed Project during the 2016, 2017, 2018, 2019, 2021, 2022 and 2024 breeding seasons. The highest number of breeding records occurred in 2022, where the majority of breeding lapwing were recorded on recently rewetted Bord na Mona cutover bog habitat, where lapwing had not been recorded in previous years. All behavioural

observations associated with breeding (display flights, alarm calling and/or a pair holding a territory) were noted in peatland habitats. These breeding lapwing records were principally confined to the large bog complexes along the Proposed Project in Counties Offaly and Kildare (refer to Annex B for all locations of lapwing and Annex C for the locations breeding birds).

4.2.2.1.4 *Redshank*

131. An estimated 300 breeding pairs of redshank are present in the ROI (NPWS 2019). Redshank breeds in a wide variety of wetland habitats and often in association with agricultural lands including lowland wet meadows, floodplains, bogs, marshes and coastal saltmarshes. No breeding redshank were recorded during the breeding bird seasons between 2016 and 2024, records were infrequent and only related to individuals which were observed feeding or commuting and were not recorded again in follow up visits. Records were confined to cutover bog areas in County Offaly and Kildare or along lake margins (Parteen Basin, County Tipperary/Clare).

4.2.2.1.5 *Ringed Plover*

132. An estimated 1,045 breeding pairs of ringed plover are present in the ROI (Balmer *et al.* 2013). Breeding common ringed plover are typically associated with coastal shingle beaches and occasionally inland lakes, however, in Ireland they have been associated with areas of cutover raised and blanket bog in the midlands and the west coast (Copland *et al.* 2008, Copland 2011). Ringed plover was rarely recorded during the breeding seasons between 2016 and 2019, but sightings increase from 2021 to 2024. A pair was first recorded on cutover raised bog near Island, County Offaly. The pair was observed in suitable breeding habitat during the breeding season in May 2021, implying breeding was probable. However, in the following visit in June 2021 the pair was not seen again. It is unknown if this pair nested or if they were successful. In 2022, more possible breeding attempts were recorded at the same location as the 2021 records. This area is a now rewetted Bord na Móna cutover habitat, creating more suitable breeding habitat. Breeding was also recorded at two other locations where the species was not recorded previously, including one perceived confirmed breeding record (consisting of a pair performing a distraction display on a hooded crow and leading it away from an area where an assumed nest or chicks were located) in County Offaly and a bird heard alarm calling (not seen) in an area of suitable habitat in County Kildare. The 2024 season yielded the highest number of breeding records to date with 14 records across three locations. Of these, breeding was confirmed at Ballinvalley County Offaly, where an adult was observed incubating on eggs and Ballycon County Offaly, where two adults and three chicks were observed. Again, these records were located on recently rewetted Bord na Móna cutover habitat (refer to Annex B for all locations of ringed plover and Annex C for the locations of breeding birds).

4.2.2.1.6 *Snipe*

133. An estimated 4,275 breeding pairs of snipe are present in ROI (Lauder and Donaghy 2008). This species is thought to be widely distributed throughout the country, but snipe are a difficult species to survey owing to their secretive nature and crepuscular habit (active in twilight). As a result, this species is typically under recorded, the most common observation of this species was of birds flying from cover as a result of local disturbance, usually flushed by surveyors. The majority of the remaining breeding season observations involved chipping or drumming individuals. Birds present in Ireland are resident or migrants from Scandinavia and Britain. Snipe were recorded regularly in wet grassland and peatland habitats along the route of the Treated Water Pipeline. Records of breeding snipe were distributed across eight main areas along the Treated Water Pipeline: Parteen Basin in County Tipperary, Island, Rathlumber, Cushaling, and Ticknevin in County Offaly, and Timahoe East and Derryvarroge in County Kildare (refer to Annex B for all locations of snipe and Annex C for the locations breeding birds). This species is a probable breeder within the Proposed Project, although no nest sites were located for the species. From 2019, a significant decrease in snipe observations within the Proposed Project was noted. It is unknown what the specific reasoning for this was in 2019 and subsequent years but the species has been recorded undergoing significant short- and long-term declines in Ireland (Gilbert *et al.* 2021).

4.2.2.1.7 *Woodcock*

134. Population estimates for breeding woodcock in Ireland are unknown. This species breeds in woodlands of all types. Woodcock has undergone long-term declines of greater than 70% in its breeding range (Gilbert *et al.* 2021). Surveying woodcock breeding numbers is notoriously difficult. Counts of passes by roding woodcock provide the only feasible method of recording breeding woodcock populations, but their interpretation has been hindered by the fact that they represent multiple registrations of an unknown number of males. Within the Proposed Project, woodcock was confined to surveyed sites of Incha Beg County Tipperary, Derriturn, Cloona and Derrycrib, County Kildare (Annex B). This species is considered a probable breeder within the Proposed Project, although no nest sites were located for the species.

4.2.2.1.8 *Other waders*

135. Two other target species of wader were recorded during breeding bird surveys between 2016 and 2024, black-tailed godwit and golden plover. Both species were rarely recorded during the survey periods. In 2021 a single golden plover was recorded on cutover bog habitat near Ballycon County Offaly early in the breeding season (April), in 2022 a large flock (220) was recorded feeding and roosting on tilled arable land around the TPR in early April. It is likely these golden plover were on migration to their breeding grounds as these records were not in suitable breeding habitat and not seen again in following visits. Black-tailed godwit was recorded for the first time in 2022, when a small flock were observed feeding in a field adjacent to the Lough Oura County Tipperary. Again, this species was likely on migration to its breeding grounds, as there was no suitable breeding habitat in the area and the species was not recorded again in follow up visits.

4.2.2.2 *Waterbirds and Waterfowl*

136. The following target waterbirds and waterfowl species were observed during the breeding bird seasons between 2016 and 2024: cormorant, coot, great crested grebe, mute swan, shoveler, teal and tufted duck. Of these species only coot, great crested grebe, mute swan and tufted duck, were observed breeding. The locations of these species can be seen in Annex B, while the survey data is presented in Annex D.

4.2.2.2.1 *Coot*

137. An estimated 3,462 pairs of coot are present in the ROI (NPWS 2019). Coot nest in large shallow water bodies that are rich in nutrients and have abundant bottom vegetation for food and some emergent vegetation for nest anchorage. Coot were limited in their distribution during the breeding bird seasons between 2016 and 2024. They were recorded at Parteen Basin, Drumminascart, and Lough Oura in County Tipperary and scarcely recorded elsewhere. Breeding was confirmed during 2016, 2017, 2018, 2019 2021 and 2024; the majority of these records related to pairs recorded on nests or with chicks. No breeding was observed in 2022.

4.2.2.2.2 *Great Crested Grebe*

138. An estimated 2,500 pairs of great crested grebe are present in the ROI (NPWS 2019). Great crested grebes breed on large, shallow eutrophic loughs, and along canals and slow flowing rivers – wetlands with emergent vegetation bordered by open water are generally selected. Great crested grebe were limited in their distribution during the breeding bird seasons between 2016 and 2024. They were only recorded at Parteen Basin and Lough Oura in County Tipperary and scarcely recorded elsewhere. Breeding was confirmed at Lough Oura during 2016, 2017, 2018, 2019, 2021 and 2022; the majority of these records related to a single pair recorded on a nest. No breeding was observed in 2024.

4.2.2.2.3 *Mute Swan*

139. An estimated 3,500 pairs of breeding mute swan are present in Ireland (NPWS 2019). Mute swan breed on lakes, ponds, rivers and slow-moving water bodies, nesting along banks and islands on mounds of vegetation. Mute swan was limited in their distribution during the breeding bird season between 2016 and

2024. They largely recorded breeding at Parteen Basin County Tipperary and scarcely recorded breeding elsewhere. Other breeding records outside of Parteen Basin were confined to other large and permanent waterbodies such as those found in Drumminascart and Lough Ourna in County Tipperary.

4.2.2.2.4 *Tufted Duck*

140. A tentative estimate of approximately 800 pairs of tufted duck are present in the ROI (NPWS 2019). In Ireland tufted duck show a preference for large open lakes in lowland areas, where nests are built in waterside vegetation. Many nest in close proximity to each other. Tufted duck were rarely recorded outside of Parteen Basin during the breeding bird seasons between 2016 and 2024. No breeding activity was recorded outside of Parteen Basin, with any records relating to commuting, feeding, or roosting individuals or small flocks which were not recorded in follow up visits.

4.2.2.2.5 *Other Species*

141. Two other target species ducks were recorded during breeding bird surveys between 2016 and 2024: shoveler and teal. Both species were rarely recorded during the survey periods and the majority of records were recorded in Parteen Basin. In 2021 shoveler was recorded in Lough Ourna, County Tipperary and Teal was recorded in Timahoe in County Kildare. Neither species displayed evidence of breeding and were recorded feeding or roosting, they were not recorded again in follow up visits.

4.2.2.3 *Gulls and Terns*

142. The following target gull and tern species were observed during the breeding bird seasons between 2016 and 2024; black-headed gull, herring gull, lesser black-backed gull and common tern. The locations of these species can be seen in Annex B, while the survey data is presented in Annex D.

4.2.2.3.1 *Black-headed Gull*

143. An estimated 7,810 breeding pairs of black-headed gull are present in Ireland (Cummins *et al.* 2019). This species mainly breeds in wetlands, but it is adaptable in its habitat requirements in Ireland. Small numbers of the Irish population are thought to migrate to southern Europe in winter, but most appear to remain in Ireland. The lake at Lough Ourna, County Tipperary annually hosts a large colony of breeding black-headed gulls. A maximum site count of 300 individuals was recorded in April 2019 while a minimum of 80 pairs was observed as probable or confirmed breeding in 2021. This flock constitutes a flock of national importance (61 pairs constitute a flock of national importance). In 2022 a new colony was recorded on a recently rewetted Bord na Móna bog at Gortekeel (Island), County Offaly. At least ten nests were recorded on small islands in a recently formed lake/pond and at least four chicks were seen in following visits. There were no previous breeding attempts recorded at this location in prior visits as the cutover bog was not suitable breeding habitat for black-headed gull. The 2024 breeding season yielded the highest number of breeding records to date with two new colonies recorded in county Offaly, again on rewetted bogs.

4.2.2.3.2 *Other Species*

144. Other gull and tern species were recorded during the breeding bird seasons between 2016 and 2024, including herring gull, lesser black-backed gull and common tern, however no breeding activity was observed for these species. Records related to commuting, roosting, or feeding individuals and any records recorded within or near potential suitable breeding habitat were not recorded at these locations in follow up visits.

4.2.2.4 *Raptors*

145. The following target raptor species were observed during the breeding bird seasons between 2016 and 2024; barn owl, hen harrier, kestrel, merlin, peregrine falcon, sparrowhawk and buzzard. The locations of these species can be seen in Annex B, while the survey data is presented in Annex D.

4.2.2.4.1 *Barn Owl*

146. There is an estimated 562 to 702 breeding pairs of barn owl in Ireland (Expert Opinion: BWI, NPWS 2019). This species breeds primarily in the cavities of ruined structures, such as derelict buildings and castles. Although scarce in Ireland, the south and midlands of the country is a stronghold for the species. Its breeding population has undergone both a long term and short-term decline in the last 25 years (Gilbert *et al.* 2021). Barn owl was recorded rarely during the breeding bird surveys between 2016 and 2024, and limited breeding activity was recorded during this period, but this may be due to the nocturnal nature of the species.
147. However, in 2022 two possible breeding records were observed, the first being a live sighting of a barn owl hunting during the breeding season in the area of the WTP. Although there was limited breeding habitat (disused farm buildings or cavities in mature trees) observed within the Proposed Project and the only suitable nearby nest site (a derelict farm building) did not show signs of occupancy, a possible breeding status was given to the record on a precautionary basis. The land around the WTP provides good hunting habitat (rough, species rich and low-intensity or unmanaged grassland habitats suitable for small mammals; Lusby *et al.* (2021)), and barn owls in Ireland can range up to 6km from a nest site. Therefore, it is likely the habitats within the Proposed Project are used by barn owl within the surrounding area. A second possible record was given to a disused farm building in Gallbally, County Offaly, located approximately 100m south of the Proposed Project. There was no live sighting of barn owl in the building but evidence of historic use (old feathers and pelts) were found, indicating barn owl may possibly use the site to breed.
148. In 2024, no live sightings of barn owl were recorded during the breeding bird surveys. However, as in previous years, searches of derelict houses and tree cavities were conducted to identify potential barn owl habitat. Two derelict farmhouses were examined: one located 200m from the Proposed Project at Incha Beg, County Tipperary, and another 15m from the Proposed Project at Ballyanny, County Tipperary. Evidence such as old feathers, pellets, and whitewash was recorded at both locations, indicating they could provide suitable nesting or roosting habitat for barn owl. As a result, a possible breeding status was applied to both sites.
149. In 2025, although no targeted breeding bird surveys were undertaken, an incidental record of barn owl was recorded during a bat survey in County Offaly. The observation comprised a pair of barn owls confirmed nesting in a cavity of a tree, where chicks could be heard calling. This observation was located within the Zol for the Proposed Project and will be susceptible to potential impacts as a result. Evidence of this breeding pair was not recorded in previous ornithological or ecological surveys.

4.2.2.4.2 *Hen Harrier*

150. There were an estimated 85 to 106 breeding pairs of hen harrier recorded during a study in Ireland in 2022. Overall, the species is showing a decreasing population trend nationally. This was a decline of 33% in the total population since the previous 2015 surveys (Ruddock *et al.* 2024). The habitat in Ireland most favoured by hen harrier is heather moorland, scrub and conifer plantations (particularly second rotation forest and thicket) (Ruddock *et al.* 2024). The Proposed Project and wider surroundings contain potentially suitable habitat for this species. As hen harrier may travel up to 10km from a nest site for foraging (SNH 2016), the Slieve Bloom Mountains SPA and Slievefelim to Silvermines Mountains SPA hen harrier populations are therefore within connectivity distance from potential supporting habitat within the Proposed Project.
151. Hen harrier was rarely recorded during the breeding bird surveys between 2016 and 2024. The species was only recorded twice, once in 2018 when an adult was recorded on cutover bog at Timahoe, County Kildare and a second in 2019 which was observed outside the breeding bird season in September 2019, during an aquatic survey near Cloughjordan, County Tipperary. This area was within the foraging range of hen harrier from the Slievefelim to Silvermines Mountains SPA and the Slievebloom Mountains SPA. No evidence of breeding hen harrier was recorded during the breeding bird surveys between 2016 and 2024.

4.2.2.4.3 *Kestrel*

152. The breeding population of kestrel is unknown in Ireland, but an estimated 13,500 individuals are present within the ROI (Lewis *et al.* 2019). This is a widely distributed species in Ireland, foraging and breeding in the majority of open habitats. Kestrels are largely sedentary in Ireland, only migrating to lower latitudes during the winter months. Kestrel was regularly recorded during the breeding bird seasons between 2016 and 2024. The majority of these records related to commuting, hunting or roosting individuals. Breeding was confirmed on two occasions only in 2018, one recorded at Derrycreeb, County Kildare where an adult was observed carrying prey in suitable breeding habitat and one at Ballyanny, County Tipperary when a pair of adults were observed mobbing a buzzard in suitable breeding habitat. No nest sites were located at either of these locations and it is unknown if the recorded birds bred successfully.

4.2.2.4.4 *Merlin*

153. An estimated 200 to 400 pairs of merlin are thought to be present in the ROI (NPWS 2019). The species is typically found near upland areas favouring open moors and peatland habitats, in recent times and due to landscape changes the species has adapted to nesting in and near upland forested areas (Lusby *et al.* 2017). Merlin was only observed once during the breeding bird seasons between 2016 and 2024, in June 2021 on a cutover raised bog near Cushaling, County Offaly, this adult was only recorded briefly commuting through the area and was not seen in following visits. No evidence of breeding activity was recorded.

4.2.2.4.5 *Peregrine Falcon*

154. An estimated 515 breeding pairs of peregrine falcon are thought to be present in the ROI (NPWS 2019). This species is mainly resident in Ireland. Peregrine falcon is widely distributed throughout the country, although they are not considered common. Peregrine falcon was recorded infrequently during the breeding bird surveys between 2016 and 2024. The majority of records relate to commuting or hunting individuals where no breeding activity was recorded. A breeding pair was observed in 2021, 2022 and 2024 at the Edenderry power station near Cushaling, County Offaly, breeding has been recorded at this site in the past. Peregrine falcon is a wide-ranging species with a core foraging distance of 2km and a maximum foraging range from the nest site of 18km (SNH 2016). Given the wide-ranging nature of this species and the infrequency of observations, it is considered unlikely that the species is dependent on the Proposed Project for foraging or breeding.

4.2.2.4.6 *Sparrowhawk*

155. The breeding population of sparrowhawk is unknown in Ireland, but an estimated 11,800 individuals are present within the ROI (Lewis *et al.* 2019). The sparrowhawk is one of the most common and widespread raptor species in the Ireland and adults are typically sedentary. In areas where it is absent, it is due to a lack of suitable woodland or scrub for breeding (Gibbons *et al.* 1993). Sparrowhawk were recorded frequently during the breeding bird seasons between 2016 and 2024. The majority of these records related to hunting, or commuting individuals, however breeding activity was recorded on three occasions, once in 2019 when an adult was observed in suitable breeding habitat carrying prey and visiting a possible nest site near Derrinboy, County Offaly, also in the area was an active plucking post, which is typical of the species. In 2021, 2022 and 2024 possible breeding records were recorded, where adults birds were observed flying in/near suitable breeding habitat in Counties Offaly and Kildare.

4.2.2.4.7 *Buzzard*

156. An estimated 1,940 pairs of buzzard are present in the ROI (NPWS 2019). Buzzard bred in Ireland until the beginning of the 19th century when numbers fell dramatically, due to persecution followed by their subsequent disappearance as a breeding bird by the late 19th century. In 1933, a pair bred in Antrim and by the 1950s four pairs were breeding in Northern Ireland (Hutchinson 1989). The species has since spread southwards and likely present in all counties in Ireland. Buzzard was recorded regularly during the breeding bird seasons between 2016 and 2024. The majority of records related to commuting, hunting or soaring birds.

No confirmed breeding or nest sites were recorded during the targeted breeding bird surveys; however, in 2019, 2021, 2022 and 2024 a number of birds were recorded as possible or probable breeder, given their activity or location within or near suitable breeding habitat. These possible or probable breeding records were confined to counties Tipperary, Offaly and Kildare. In 2025, the species was confirmed breeding. This observation was recorded as an incidental recorded during an ecological multidisciplinary walkover survey in County Kildare. The record comprised of an adult bird sitting on a nest.

4.2.2.5 Passerines and Others

157. The following target passerines and other target species were observed during the breeding bird seasons between 2016 and 2024; grey partridge, grey wagtail, kingfisher, meadow pipit, sand martin and yellowhammer. The locations of these species can be seen in Annex B, while the survey data is presented in Annex D.

4.2.2.5.1 Grey Partridge

158. Grey partridge has experienced a long-term contraction (up to 90%) of its range throughout Ireland. The grey partridge range is now restricted to Lough Boora, County Offaly (north of the Proposed Project). A dedicated project to increase their numbers is being run at this location. The species was only recorded in 2016 and on two occasions, observations related to individuals and there was no evidence of breeding occurring.

4.2.2.5.2 Grey Wagtail

159. The breeding population of grey wagtail is unknown in Ireland, but an estimated 50,770 individuals are present within the ROI (Lewis *et al.* 2019). Grey wagtail is found along fast-flowing, rocky streams and rivers in both upland and lowland habitats in and around waterbodies with a strong selection for riparian shingle (Ormerod and Tyler 1991). Feeding on ground and aerial invertebrates, the population is prone to significant losses when prolonged periods of sub-zero temperatures limit availability of terrestrial and aquatic insects. Grey wagtail was recorded infrequently, often on or near watercourse along the Proposed Project, often records related to commuting or feeding individuals, however breeding was confirmed or assumed probable or possible breeding near Killaloe Bridge, County Clare in 2017, near Killurane, County Tipperary in 2018 the river Cushling in County Offaly in 2019 and 2022 and Parteen Basin in 2024.

4.2.2.5.3 Kingfisher

160. An estimated 1,031 pairs of kingfisher are present in the ROI (Cummins *et al.* 2010, NPWS 2019). This species is typically sedentary but may undergo short migrations to the coast during cold weather. This species is widely distributed along canals and rivers of Ireland. Their distribution is largely dependent on the availability of soft sediment banks for breeding. Kingfisher were recorded to have bred at one location during the 2016 surveys, at two locations during the 2017 surveys, and at four locations during the 2022 surveys. The recorded nest site at Friarstown, County Kildare in 2016 was observed outside the breeding bird season and was found during a multidisciplinary survey; it is unknown if this nest was successful. In 2017 the recorded breeding activity related to a nest site, located in a riverbank in Munny, County Offaly and an adult carrying prey in suitable breeding habitat along the Kilmastulla River that flows adjacent to Parteen Basin. For both these records it is unknown if breeding was successful. In follow up visits in the following survey seasons up to 2022 no breeding activity was recorded at these sites again. Any kingfishers records during this time related only to commuting individuals. In 2022 there was one probable record of kingfisher breeding at Parteen Basin, County Clare/Tipperary, when a pair was observed holding an apparent territory after a number of visits. During a multidisciplinary survey at Derries, County Offaly a number of old nesting burrows were recorded along the Silver River at the proposed crossing location for the Proposed Project. There was no recent evidence of use during the 2022 season, so a possible breeding record was given. Two other possible breeding records were assigned to adult kingfishers seen in/near suitable breeding habitat, during the breeding season, at Cloncant, County Offaly and Ticknevin Bog, County Kildare. No nests were located at these locations during subsequent visits.

4.2.2.5.4 *Meadow Pipit*

161. The breeding population of meadow pipit is unknown in Ireland, but an estimate of >1,350,000 individuals are present within the ROI (Lewis *et al.* 2019), where they are associated with open countryside such as rough grasslands and both lowland and upland bogs and grass moors. Meadow pipit were regularly encountered during the breeding bird seasons between 2016 and 2024. Records were often located in wet grassland habitats and cutover bogs along the Proposed Project. No breeding was confirmed for these ground nesting birds during the survey seasons, but breeding was probable and possible during all survey years.

4.2.2.5.5 *Sand Martin*

162. The breeding population of sand martin is unknown in Ireland, but an estimate of 460,000 individuals are present within the ROI (Lewis *et al.* 2019). Sand martins are a summer visitor to Ireland, often arriving in March. They spend the winter in sub-Saharan Africa. They are a widespread species which are often associated with riparian habitats. This species typically breeds colonially; usually nesting in sandy or mud cliffs, quarries, riverbanks and cutaway peat banks. Sand martin was regularly encountered throughout the Proposed Project. The largest congregations of foraging individuals were associated with large waterbodies: Parteen Basin and Lough Ourna, County Tipperary. Breeding was either confirmed, probable or possible in the years 2016, 2017, 2018, 2019, 2021, 2022 and 2024, with records confined to counties Tipperary and Offaly. The distribution of this species is largely dependent on habitat availability such as soft sediment banks. During the breeding bird surveys, these habitats were present in sand banks in County Tipperary and the peaty banks and active quarries in County Offaly.

4.2.2.5.6 *Yellowhammer*

163. The breeding population of yellowhammer is unknown in Ireland, but an estimate of over 217,000 individuals are present within the ROI (Lewis *et al.* 2019). Yellowhammer has a close association with cereal farming (Kyrkos *et al.* 1998) and winter stubbles (Whittingham *et al.* 2005) where it has a high dependency on the ready supply of cereal and weed seeds for food. As a result, its breeding population is largely confined to the south and east of Ireland, where arable farms are most common. Yellowhammer was recorded frequently during the breeding bird season between 2016 and 2024. No breeding activity was confirmed during the survey period, but the species was often recorded within suitable breeding habitat or males heard calling. During 2016/2017 yellowhammer records were largely confined to the east of the Proposed Project and largely associated with areas where cereal crops were in cultivation. In the following years yellowhammer were recorded more evenly across the Proposed Project and found in a wider variety of agricultural habitats.

4.2.3 **38 kV Uprate Works**

4.2.3.1 *Waders*

164. A number of wader species were recorded during the breeding bird surveys along the Lower River Shannon near the existing OHLs between 2019 and 2024, including; curlew, lapwing, redshank, snipe and whimbrel.

4.2.3.1.1 *Curlew*

165. Curlew were recorded infrequently during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. Observations were related to single or small flocks of birds, all of which flew over the existing OHLs. Observations of curlew were recorded in May and June, however given the lack of suitable breeding habitat, the activity of the birds (commuting along the river) and the lack of records it is not thought that curlew are dependent on this area for breeding. Curlew were not recorded during lowland wader surveys, which were only conducted during the 2019 breeding season.

4.2.3.1.2 *Lapwing*

166. Lapwing were recorded rarely during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. This species was recorded once in April 2019 when a number of birds were heard calling in fields opposite the VP. However, given the lack of suitable breeding habitat, the activity of the birds (commuting along the river) and the lack of records it is not thought that Lapwing are dependent on this area for breeding and were like on migration to breeding grounds. Lapwing were not recorded during lowland wader surveys, which were only conducted during the 2019 breeding season.

4.2.3.1.3 *Redshank*

167. Redshank were recorded rarely during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. This species was recorded twice in April 2019. A flock totalling 18 was recorded feeding in fields to the southeast of the VP. Given the lack of suitable breeding habitat, the activity of the birds (foraging) and the lack of records it is not thought that redshank are dependent on this area for breeding and were like on migration to breeding grounds. Redshank were not recorded during lowland wader surveys, which were only conducted during the 2019 breeding season.

4.2.3.1.4 *Snipe*

168. Snipe was recorded rarely during the breeding bird season between 2019 and 2024. No snipe was recorded during VP surveys at O'Briensbridge, along the Lower River Shannon. Snipe were recorded twice in May 2019 during the lowland wader survey, both observations were recorded in wet grassland habitat, but no evidence of breeding activity was observed. It is unknown if this species bred in this area.

4.2.3.1.5 *Whimbrel*

169. Whimbrel were recorded infrequently during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. These were non-breeding as whimbrel are passage migrants during April and May as they move between Icelandic breeding areas and wintering grounds in west Africa.

4.2.3.2 *Waterbirds and Waterfowl*

170. A number of waterbirds and waterfowl species were recorded during the breeding bird surveys along the Lower River Shannon near the existing OHLs between 2019 and 2024, including; cormorant, coot, mute swan, grey heron, little grebe, mallard and moorhen.

4.2.3.2.1 *Cormorant*

171. Cormorant was one of the most frequently recorded species throughout the breeding bird surveys along the Lower River Shannon near the existing OHLs between 2019 and 2024, with a total of 290 flights recorded. The vast majority of these flights were birds observed flying high over the existing OHLs. It is considered likely that the local population utilise both Parteen Basin and the Shannon Estuary for feeding and roosting.

4.2.3.2.2 *Mute Swan*

172. Mute swans were frequently observed throughout the breeding season, but only observed in flight on eight occasions, usually in pairs. Most observations were of loafing individuals.

4.2.3.2.3 *Other Species*

173. Other water bird species which were regularly observed but no flights recorded included little grebe, coot, greylag goose, moorhen and mallard.

4.2.3.3 Gulls

174. A number of gull species were recorded during the breeding bird surveys along the Lower River Shannon near the existing OHLs between 2019 and 2024, including: black-headed gull, common gull, herring gull and lesser black-backed gull.

4.2.3.3.1 *Black-headed Gulls*

175. Black-headed gulls were recorded frequently during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. A total of 389 flights were recorded over the survey period nearly all of which related to individuals or flocks (up to 22 individuals in a flock) commuting upstream or downstream along the River Shannon. All of these flights were recorded above the existing OHLs.

4.2.3.3.2 *Other Species*

176. The remaining gull species recorded (common gull, herring gull and lesser black-backed gull) were all recorded infrequently, the flightline records show they also used the area to commute between Parteen Basin and the Lower River Shannon/Estuary.

4.2.3.4 Raptors

177. Two raptor species, kestrel and sparrowhawk were recorded during the breeding bird surveys along the Lower River Shannon near the existing OHLs between 2019 and 2024.

4.2.3.4.1 *Kestrel*

178. Kestrel were observed frequently during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. Often in pairs it is thought that breeding is probable, although there was no suitable habitat identified in the area within and surrounding the Proposed 38 kV Uprate Works. It is unknown if the frequently recorded pair of kestrel bred in the area or if they were successful.

4.2.3.4.2 *Sparrowhawk*

179. Sparrowhawks were observed infrequently during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. Records only related to individuals hunting in the vicinity of the VP at O'Briensbridge.

4.2.3.5 Others

180. Other targets species were recorded during the breeding bird surveys along the Lower River Shannon near the existing OHLs between 2019 and 2024, including: kingfisher and sand martin.

4.2.3.5.1 *Kingfisher*

181. Kingfisher was rarely recorded during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. The limited recorded for this species only related to individuals commuting across the River Shannon. This species is typically confined to the margins of waterbodies, where it finds both feeding and roosting opportunities. Kingfisher were not recorded during the lowland wader surveys.

4.2.3.5.2 *Sand Martin*

182. Sand martin were frequently recorded during the breeding bird seasons between 2019 and 2024 during VP surveys at O'Briensbridge, along the Lower River Shannon. Often occurring in flocks, the species was typically recorded feeding or commuting over water.

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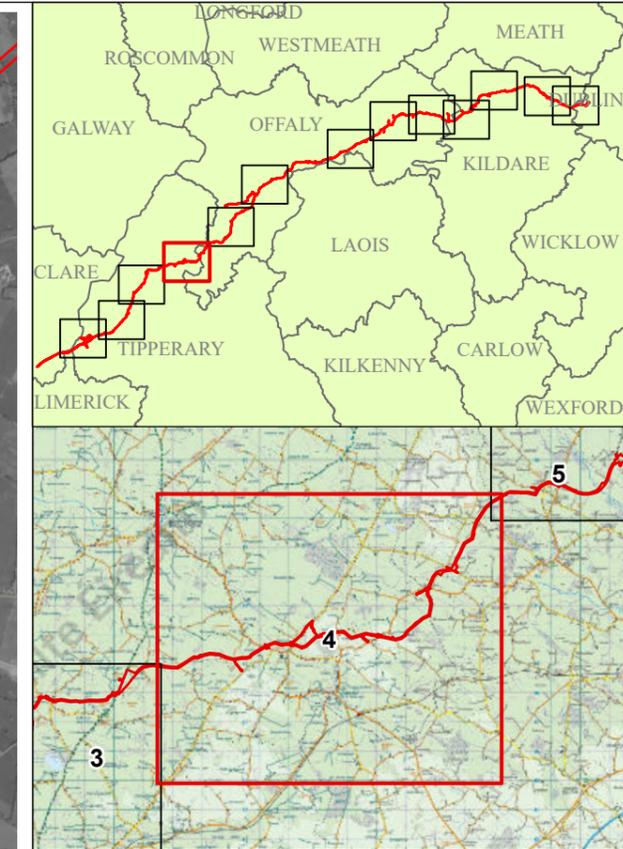
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Annex A. Survey Locations



Legend

- Planning Application Boundary
- WSP Vantage Point Locations

F02	06/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

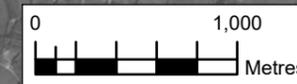
Annex A Figure 4
Breeding Birds Survey Locations
2016 to 2024
Sheet 4 of 13

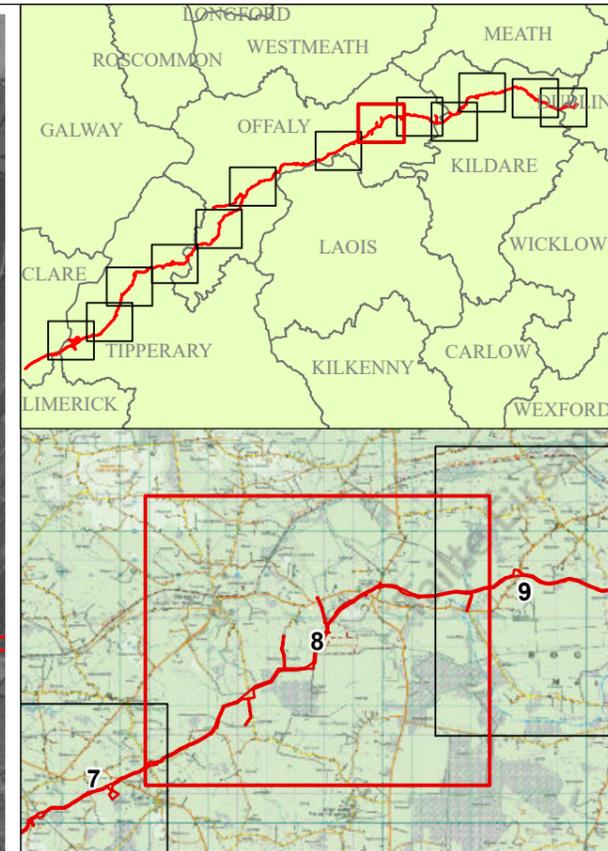
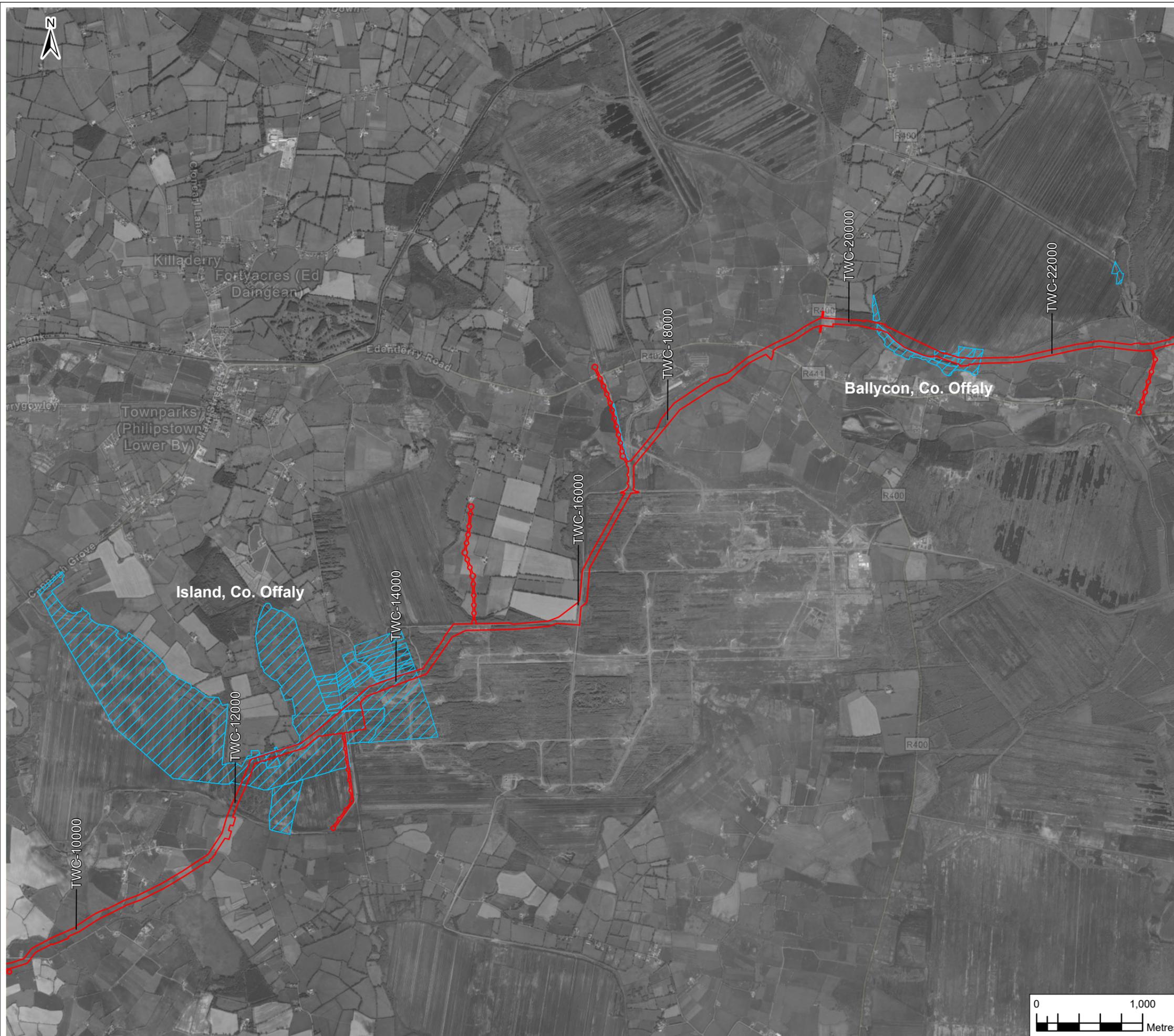
Drawing Status

Final - Planning Application

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Legend

- Planning Application Boundary
- Lowland Water Survey Sites

F02	06/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Client

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex A Figure 8
Breeding Birds Survey Locations
2016 to 2024
Sheet 8 of 13

Drawing Status

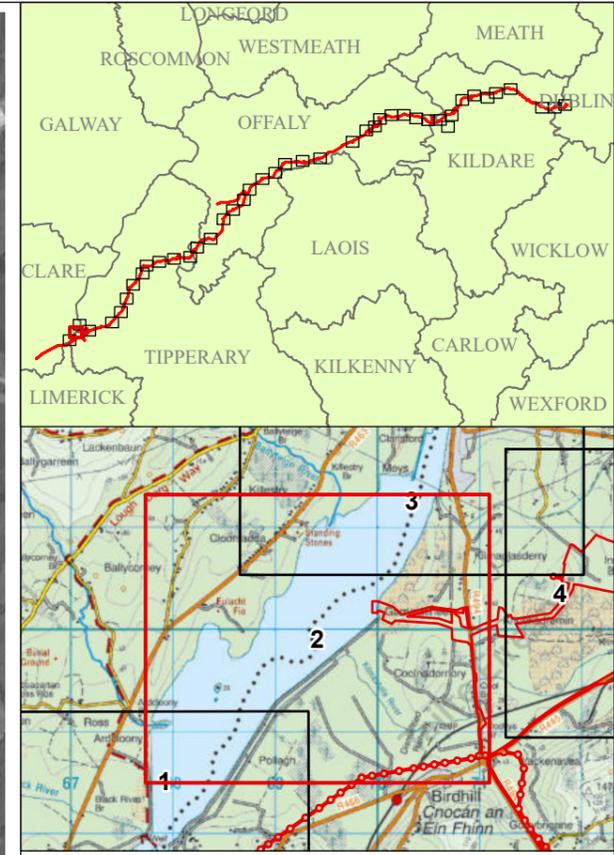
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Annex B. Observations and Flightlines



Legend

- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Project: Water Supply Project Eastern and Midlands Region

Drawing Title: Annex B Figure 2 Breeding Birds Surveys Lowland Wader, Woodcock and Boat Survey Results Sheet 2 of 43

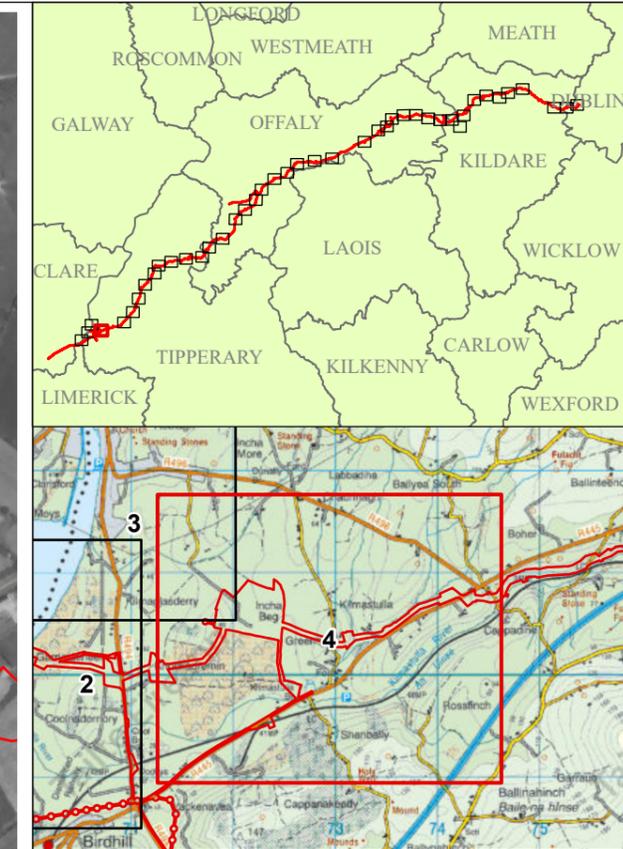
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Legend

- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex B Figure 4
Breeding Birds Surveys
Lowland Wader, Woodcock and
Boat Survey Results
Sheet 4 of 43

Drawing Status

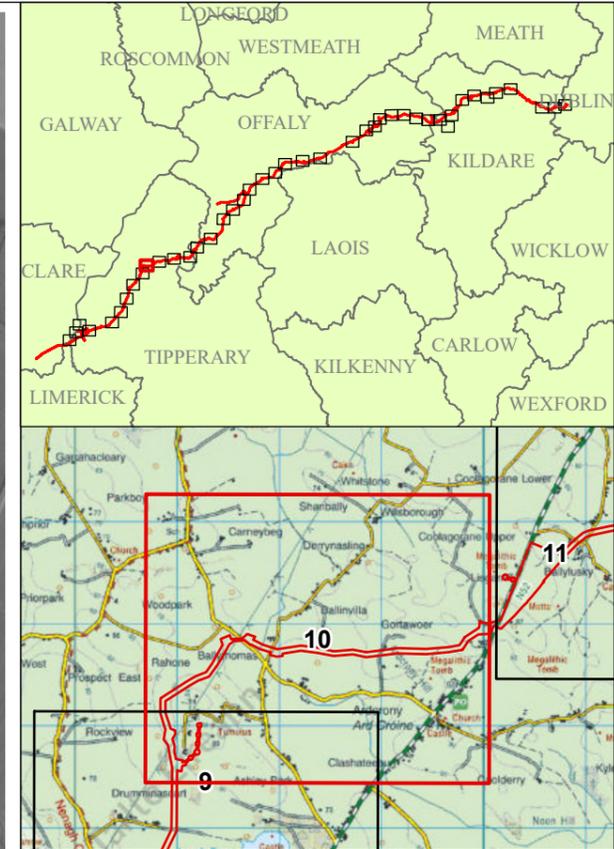
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- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Eastern and Midlands Region

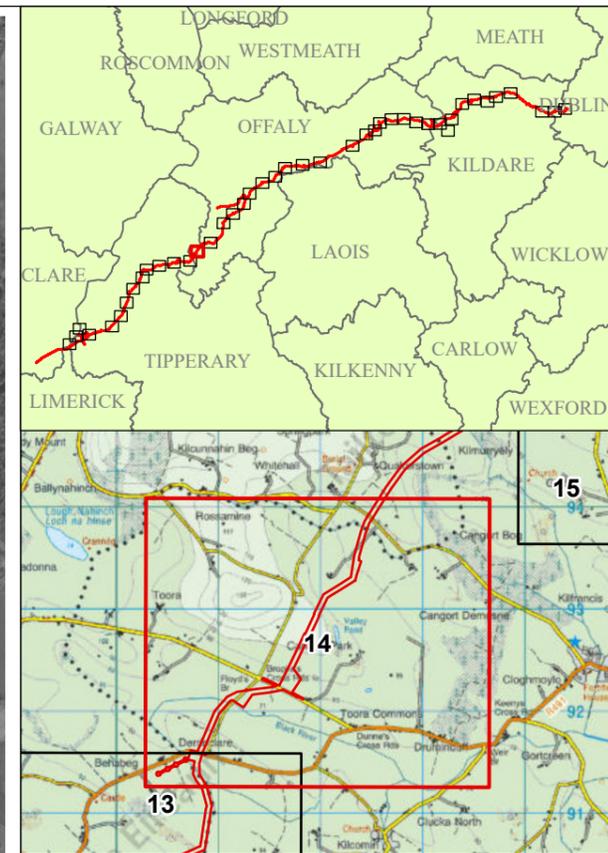
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Breeding Birds Surveys
Lowland Wader, Woodcock and
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Sheet 10 of 43

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- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex B Figure 14
Breeding Birds Surveys
Lowland Wader, Woodcock and
Boat Survey Results
Sheet 14 of 43

Drawing Status

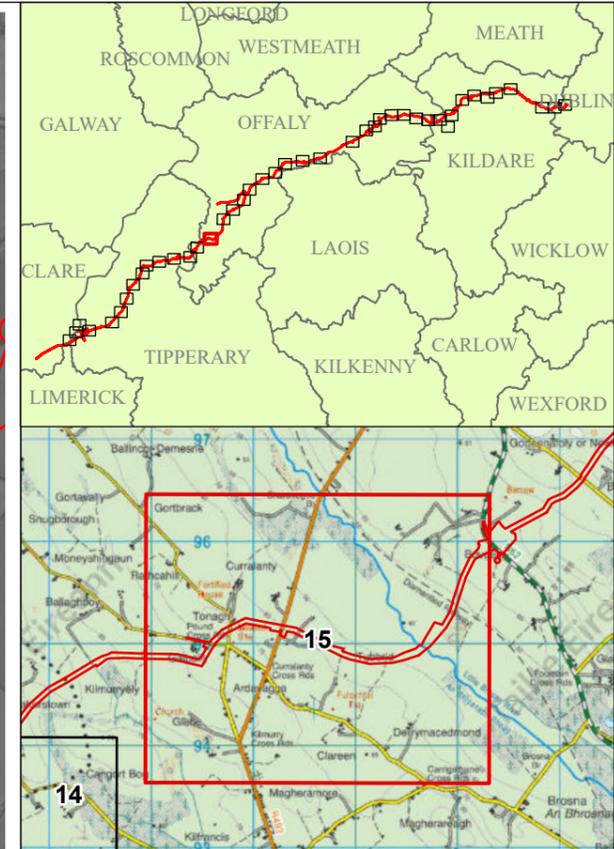
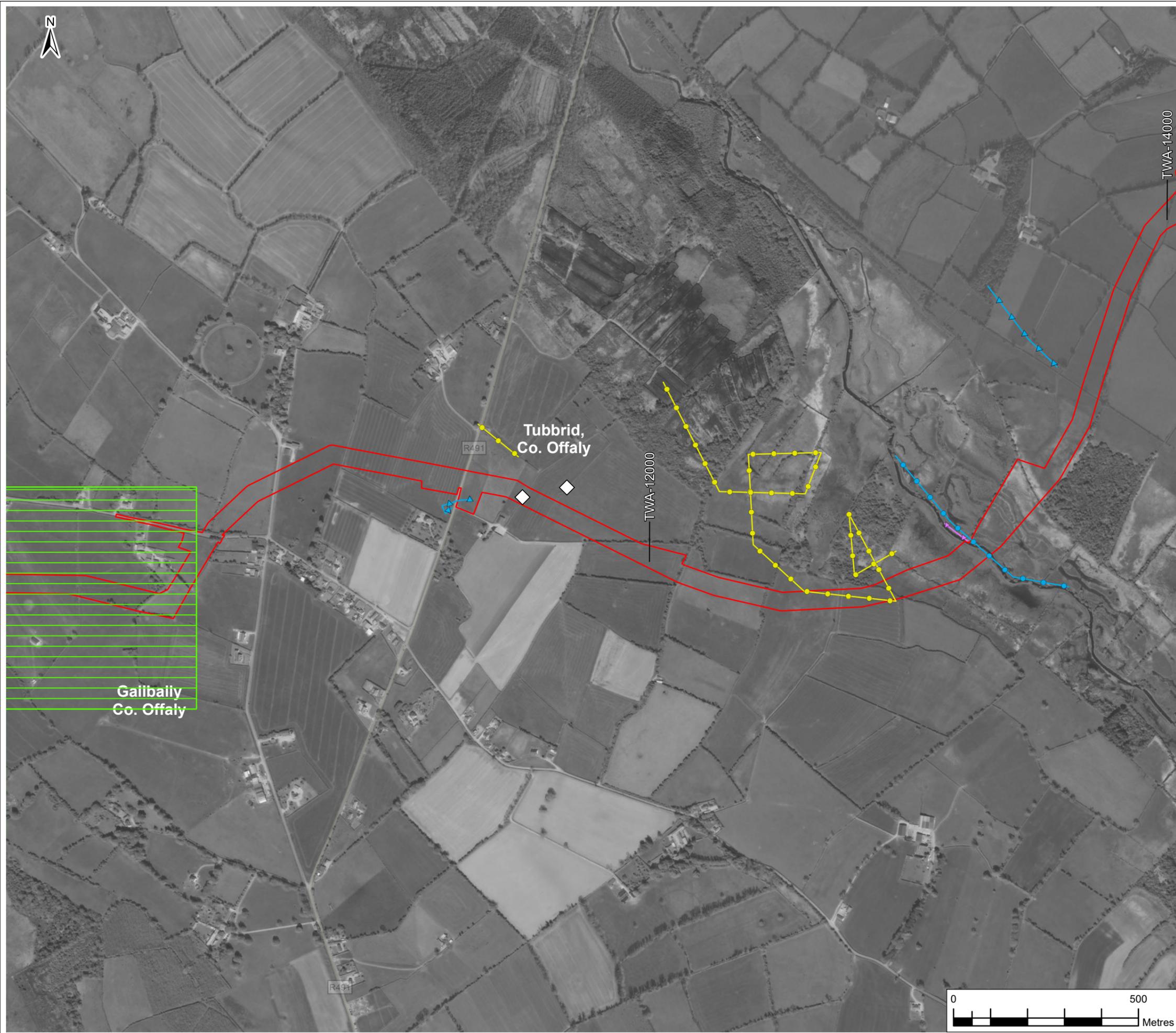
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- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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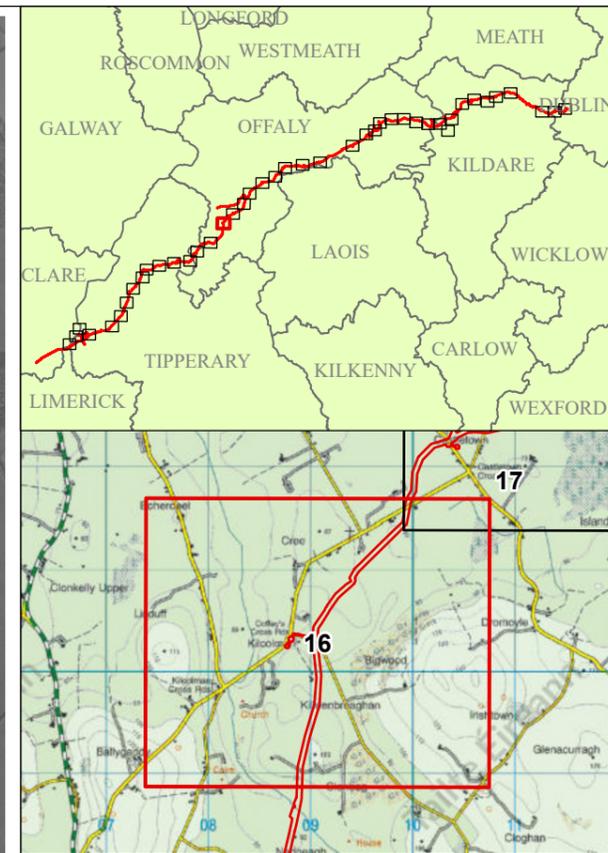
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 Breeding Birds Surveys
 Lowland Wader, Woodcock and
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 Sheet 15 of 43

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- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Project
 Water Supply Project
 Eastern and Midlands Region

Drawing Title
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 Breeding Birds Surveys
 Lowland Wader, Woodcock and
 Boat Survey Results
 Sheet 16 of 43

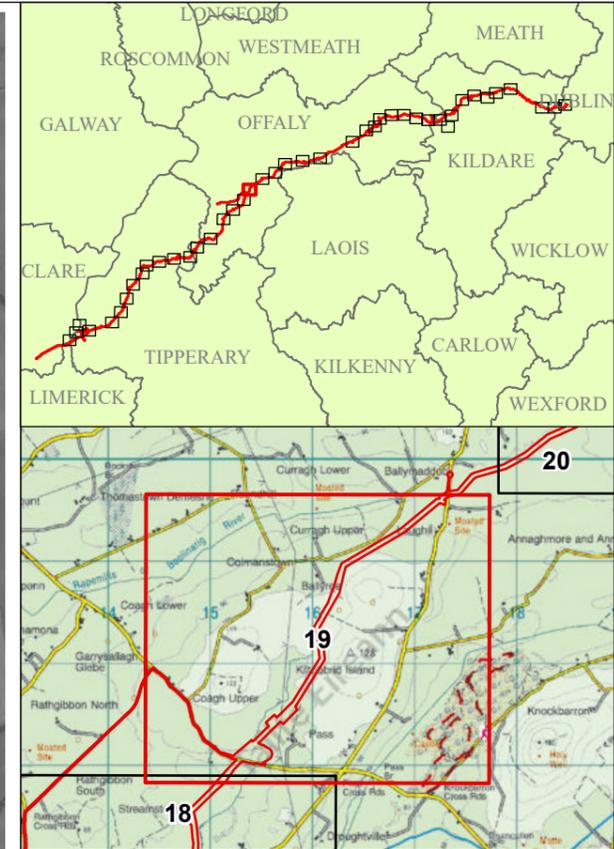
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Kilcolmn,
Co. Offaly



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- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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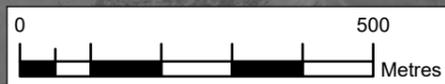
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 Eastern and Midlands Region

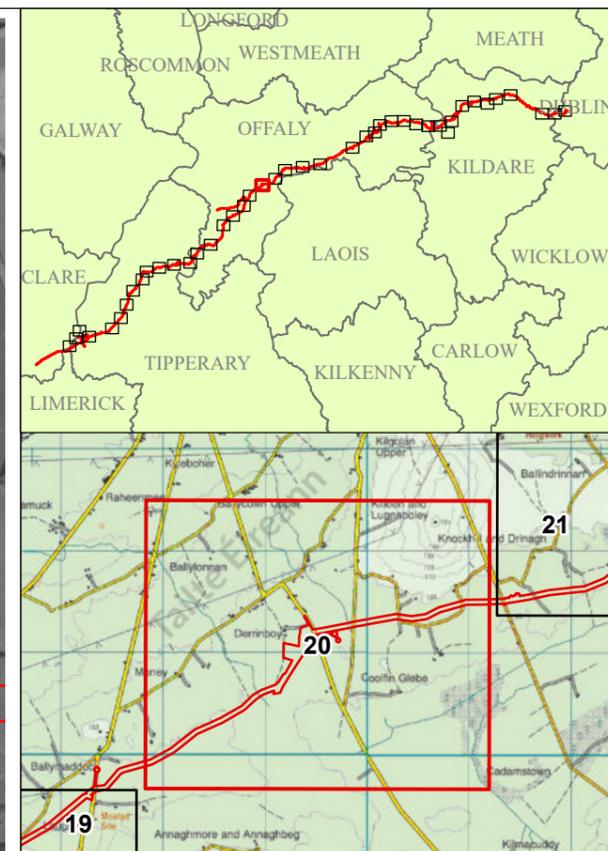
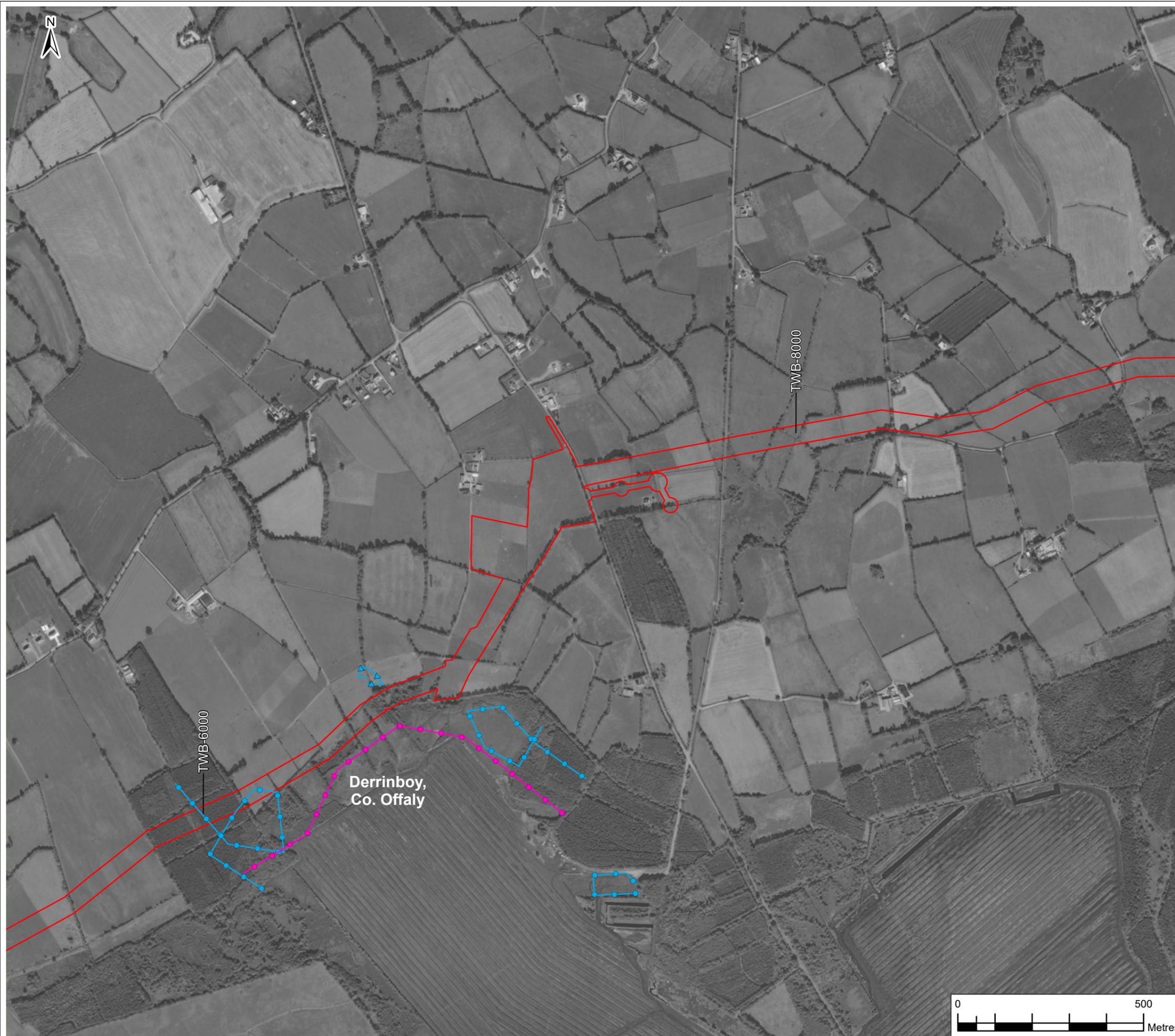
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 Breeding Birds Surveys
 Lowland Wader, Woodcock and
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 Sheet 19 of 43

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Legend

- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Project: Water Supply Project Eastern and Midlands Region

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Drawing Status: Final - Planning Application

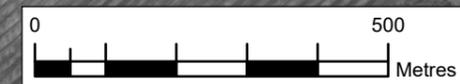
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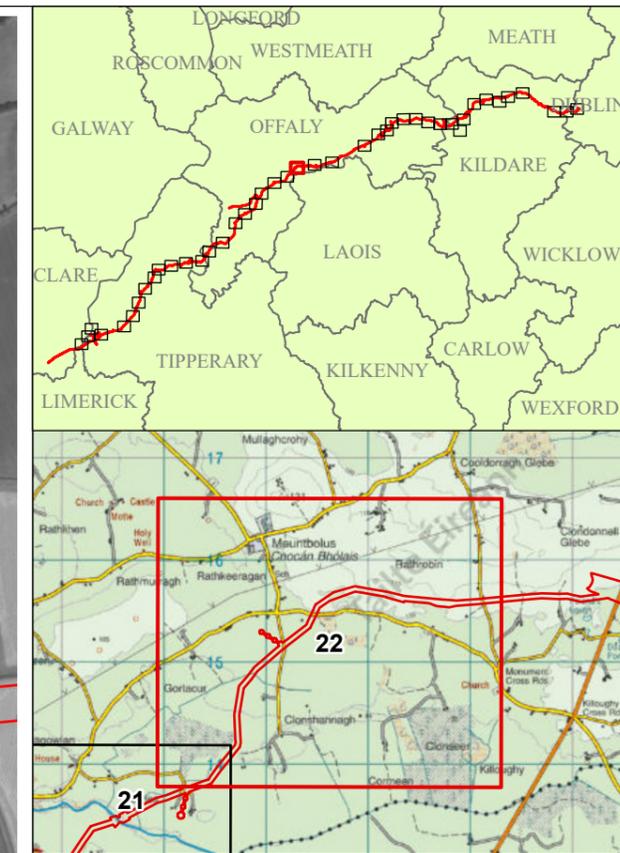
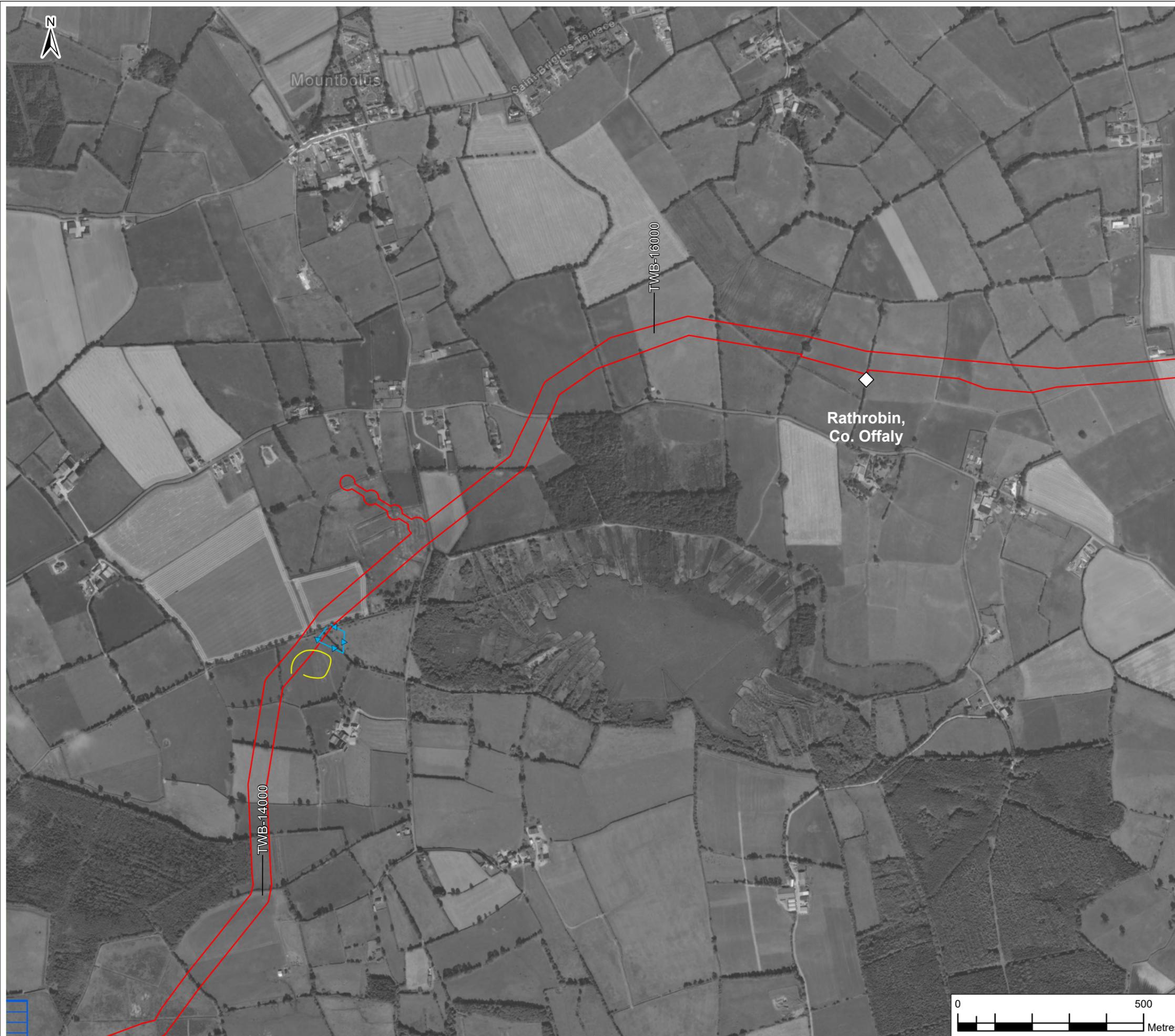
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- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Water Supply Project
Eastern and Midlands Region

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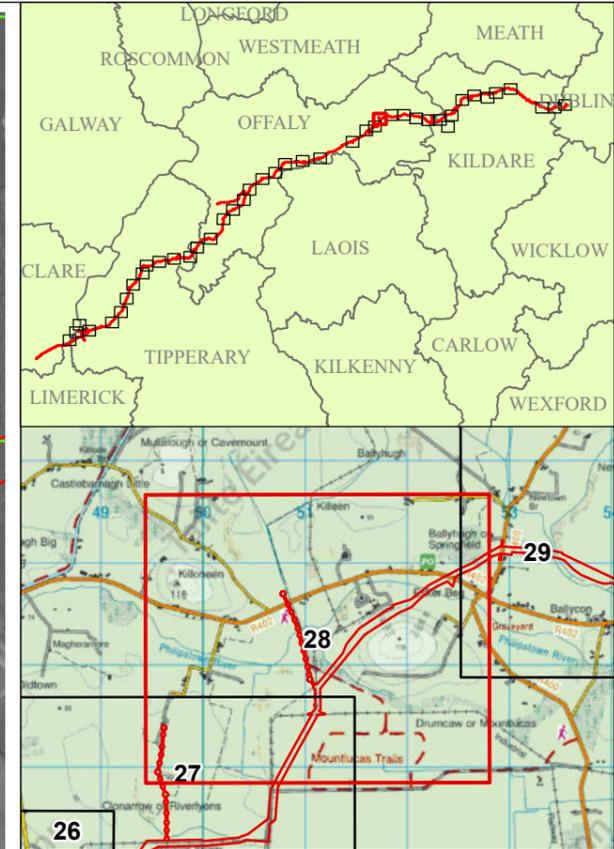
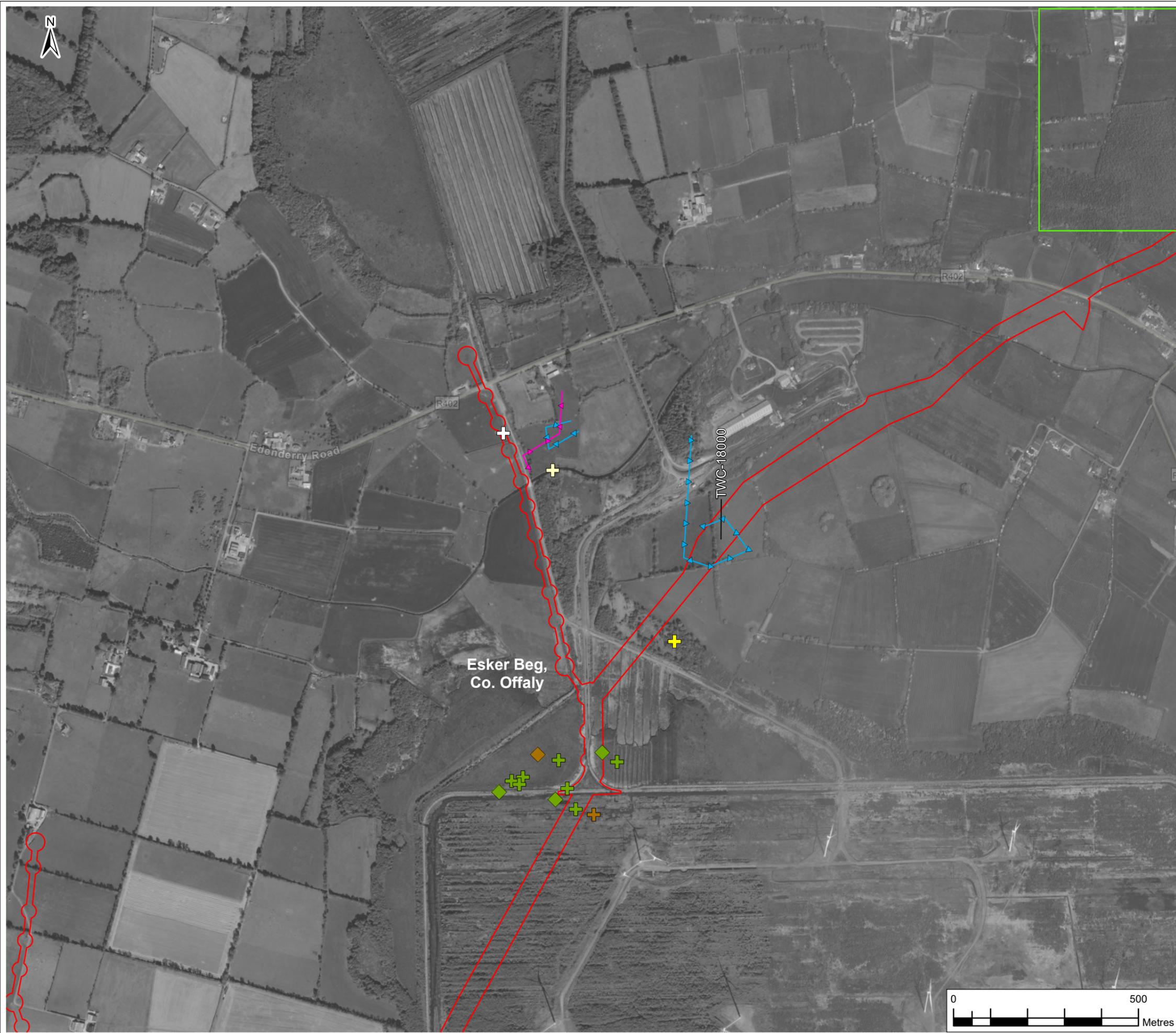
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Breeding Birds Surveys
Lowland Wader, Woodcock and
Boat Survey Results
Sheet 22 of 43

Drawing Status

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- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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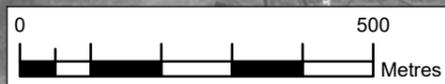
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 Eastern and Midlands Region

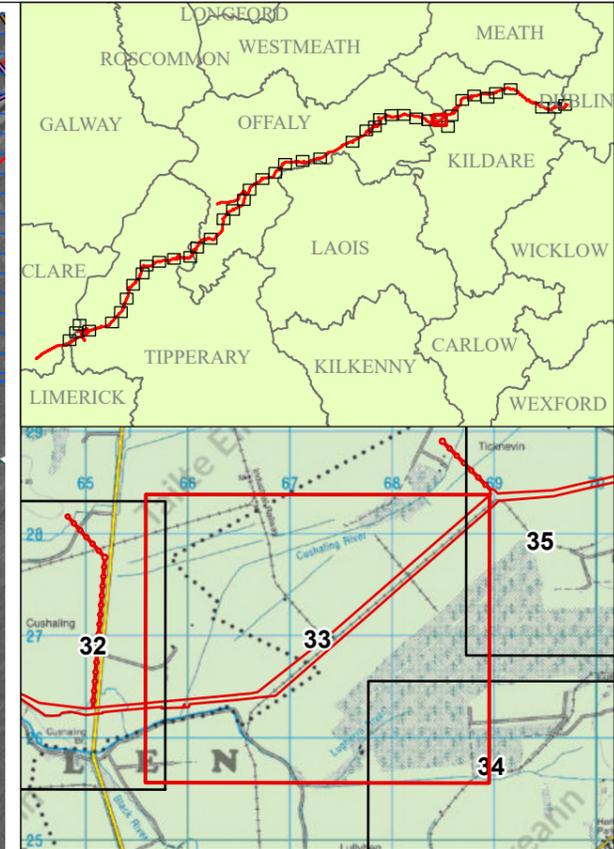
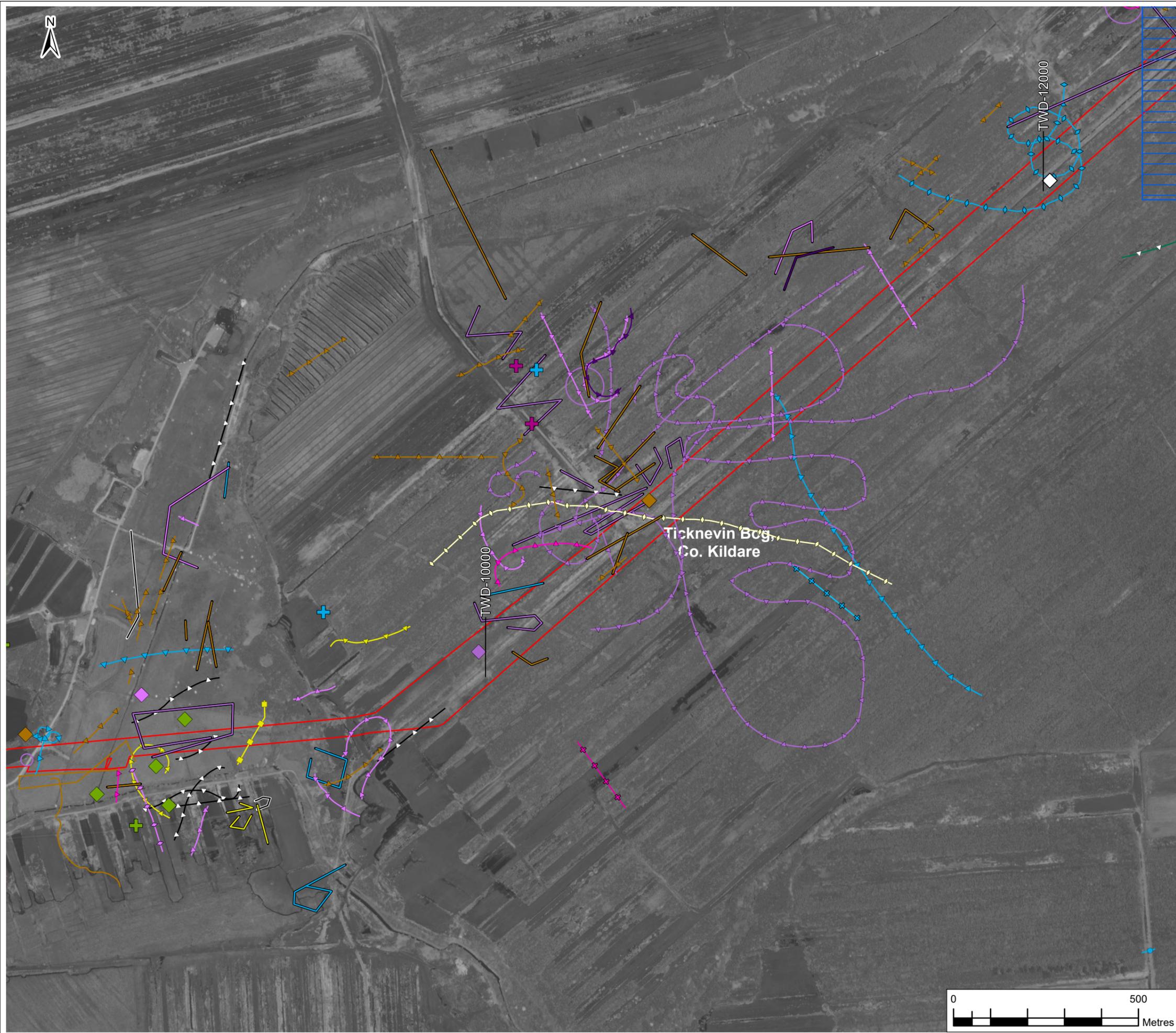
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 Breeding Birds Surveys
 Lowland Wader, Woodcock and
 Boat Survey Results
 Sheet 28 of 43

Drawing Status
 Final - Planning Application

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- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd



Client

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Eastern and Midlands Region

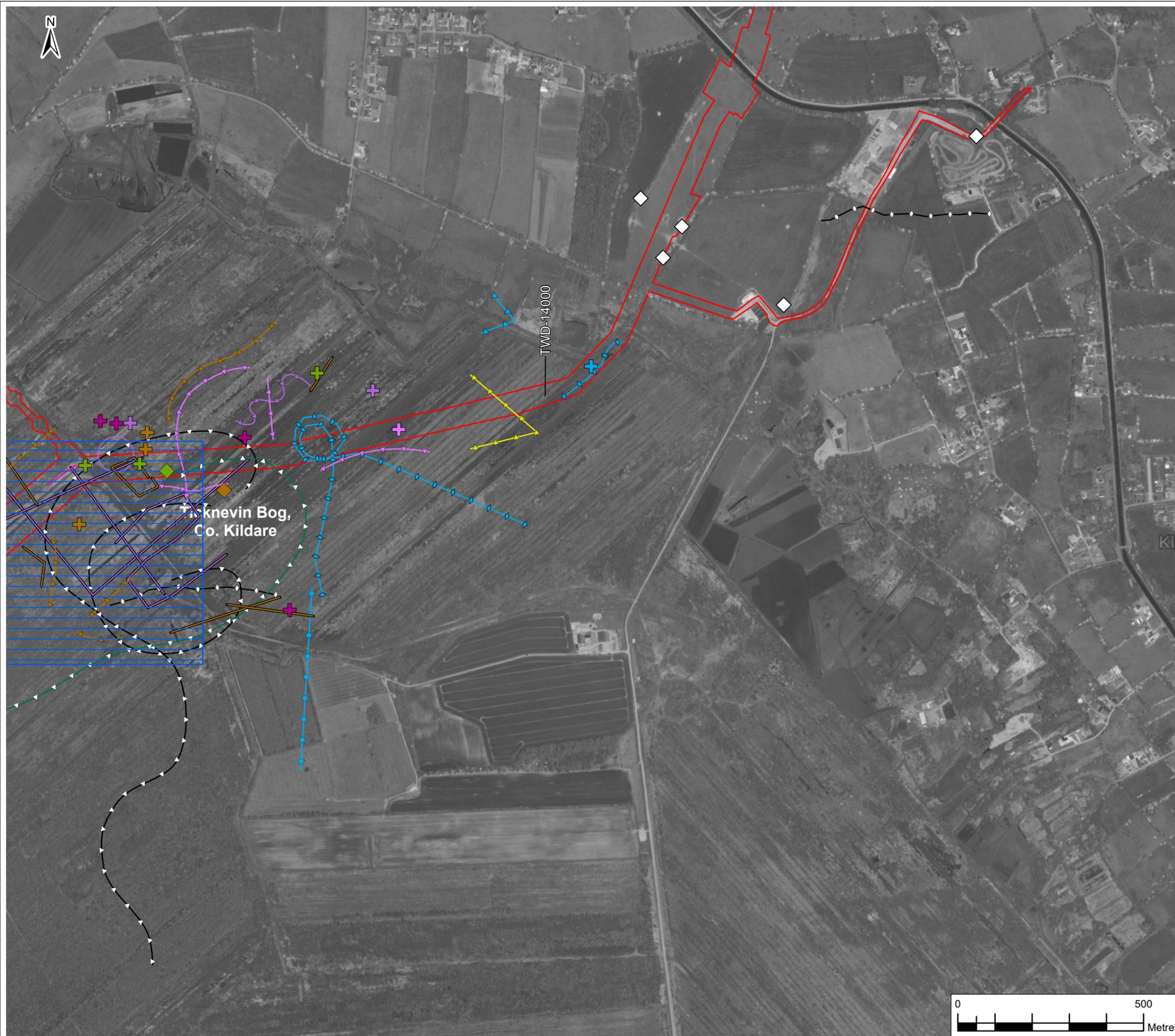
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Breeding Birds Surveys
Lowland Wader, Woodcock and
Boat Survey Results
Sheet 33 of 43

Drawing Status
Final - Planning Application

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- Planning Application Boundary
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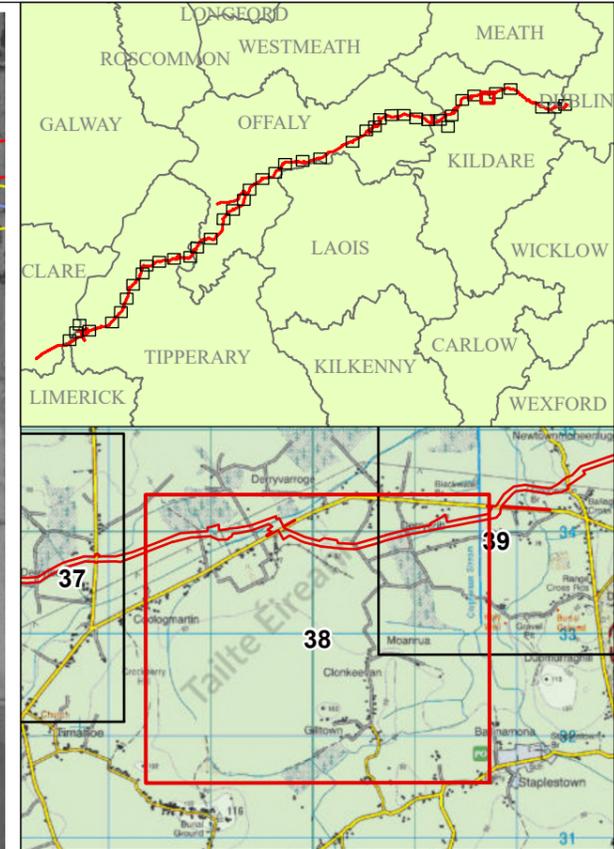
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Breeding Birds Surveys
Lowland Wader, Woodcock and
Boat Survey Results
Sheet 35 of 43

Drawing Status

Final - Planning Application

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Legend

Planning Application Boundary

Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Client

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

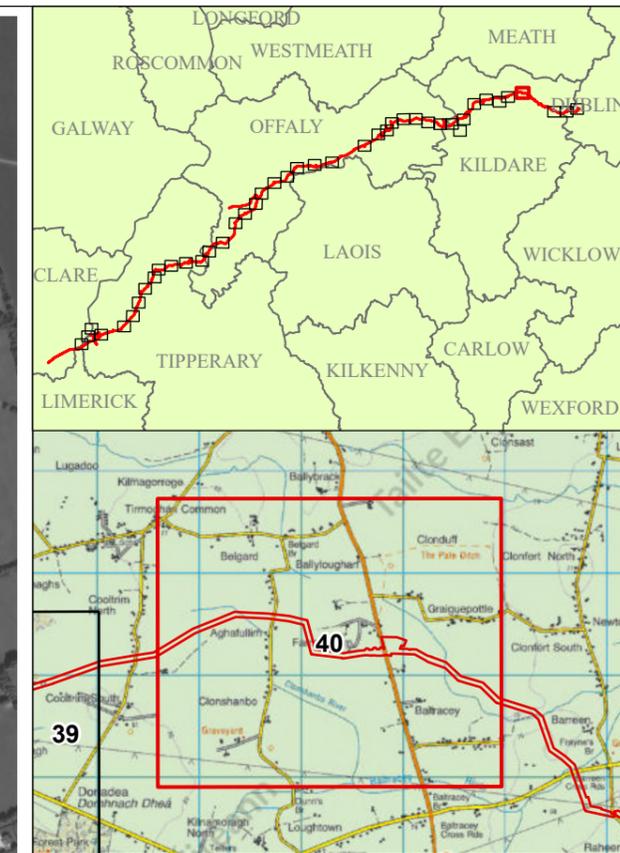
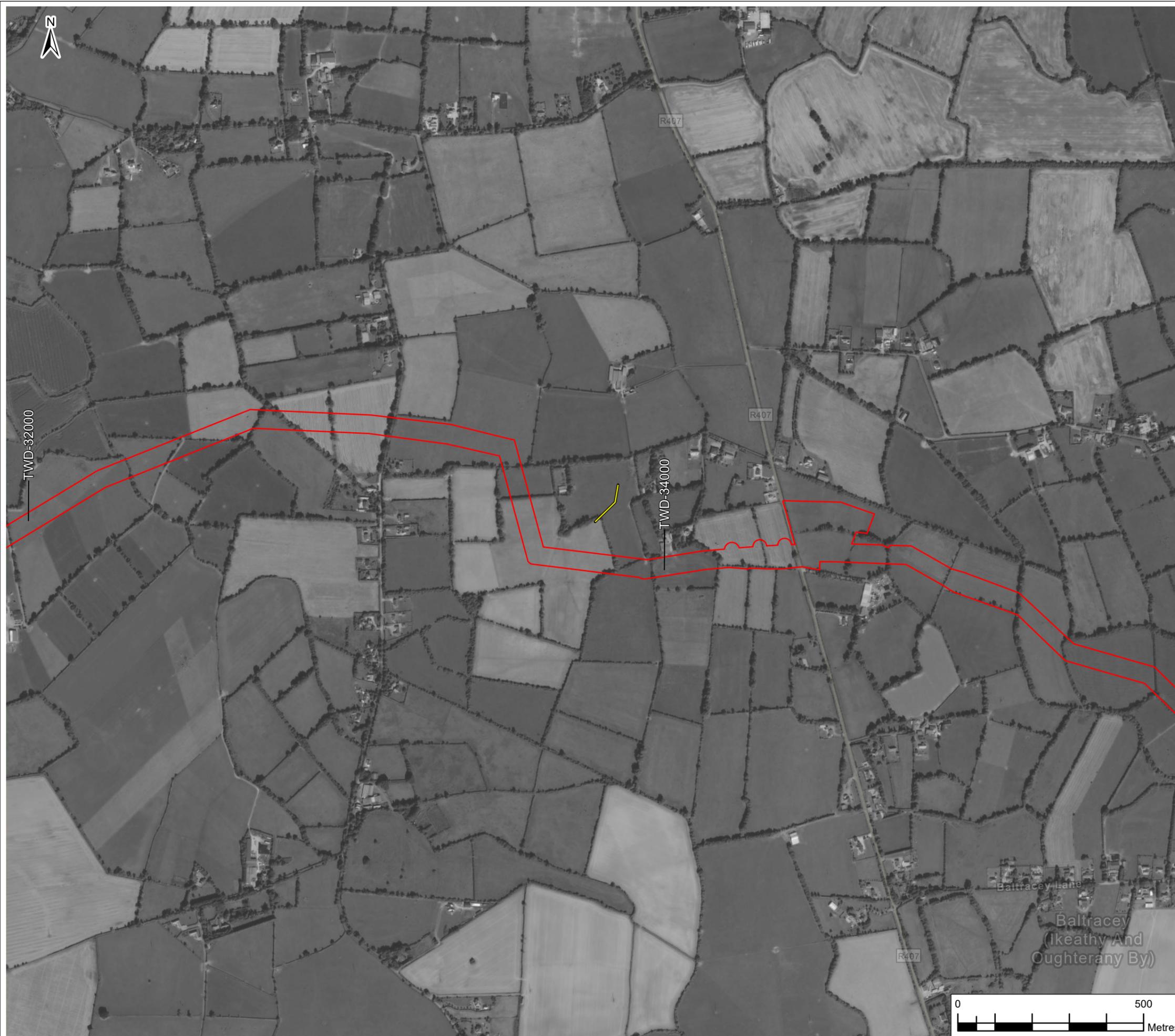
Annex B Figure 38
Breeding Birds Surveys
Lowland Wader, Woodcock and
Boat Survey Results
Sheet 38 of 43

Drawing Status: Final - Planning Application

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Legend

- Planning Application Boundary
- Breeding Birds Non-flight observations and Flightlines* see legend on page 1

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex B Figure 40
Breeding Birds Surveys
Lowland Wader, Woodcock and
Boat Survey Results
Sheet 40 of 43

Drawing Status

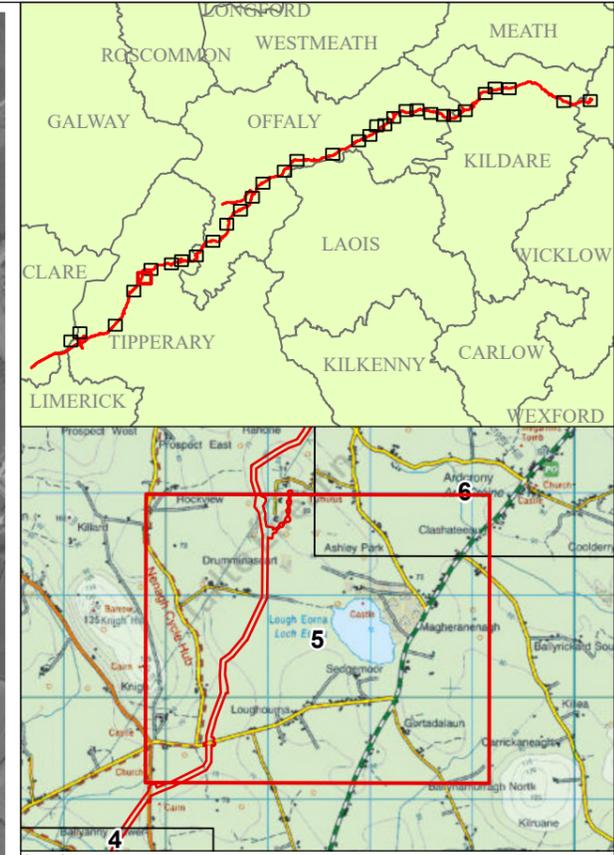
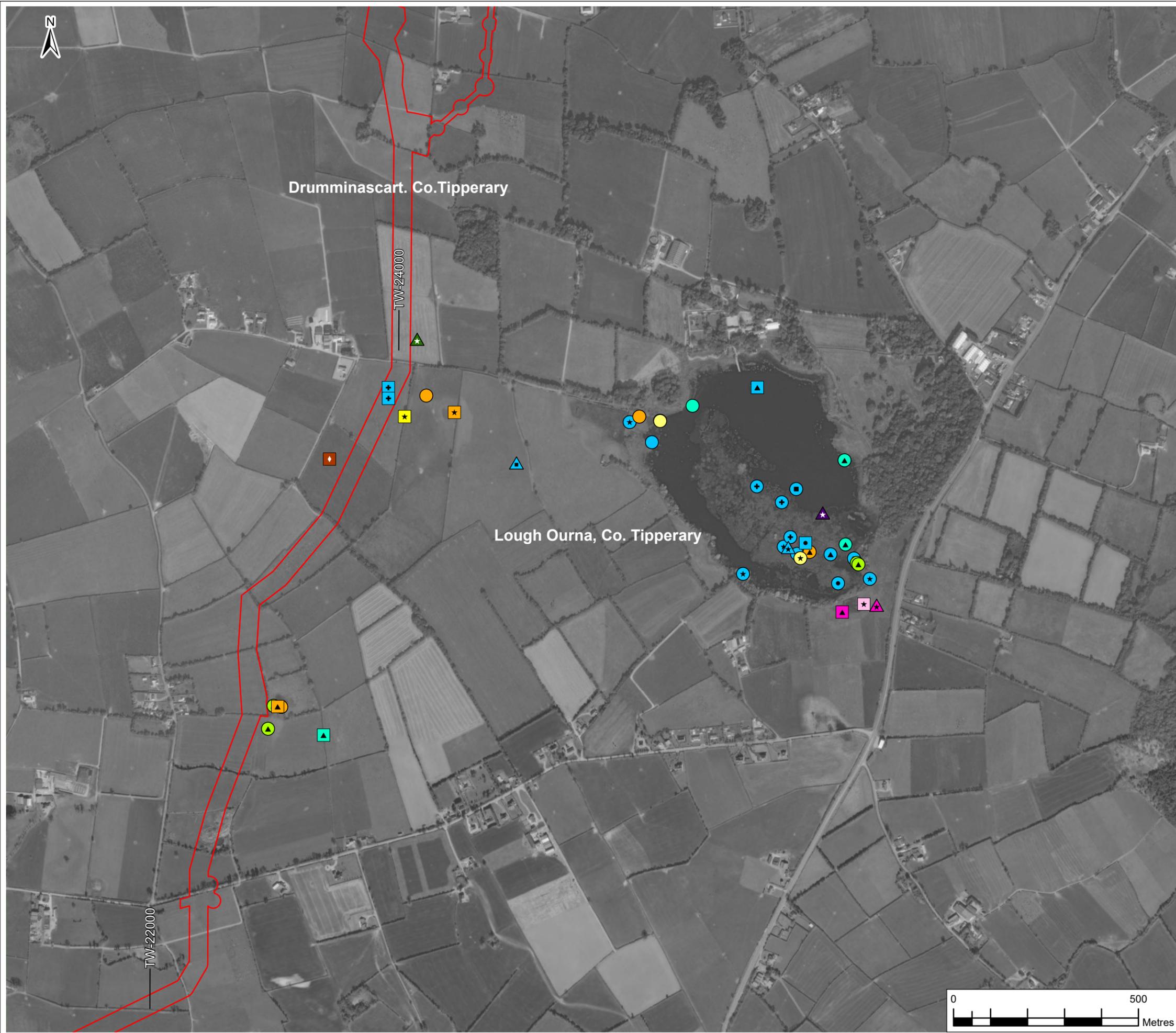
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Annex C. Breeding Status



Legend

Planning Application Boundary	Black-headed Gull, 2022
Confirmed Breeding Status*	Black-headed Gull, 2024
Black-headed Gull, 2016	Buzzard, 2024
Black-headed Gull, 2017	Coot, 2021
Black-headed Gull, 2019	Coot, 2024
Black-headed Gull, 2021	Mallard, 2024
Black-headed Gull, 2022	Snipe, 2018
Black-headed Gull, 2024	Tufted Duck, 2021
Coot, 2016	Yellowhammer, 2021
Coot, 2024	Probable Breeding Status*
Great Crested Grebe, 2016	Black-headed Gull, 2019
Great Crested Grebe, 2021	Black-headed Gull, 2021
Little Grebe, 2016	Mallard, 2021
Little Grebe, 2024	Meadow Pipit, 2021
Mute Swan, 2024	Shoveler, 2021
Possible Breeding Status*	
Black-headed Gull, 2017	

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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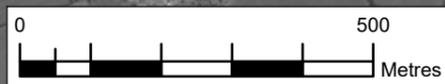
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 Eastern and Midlands Region

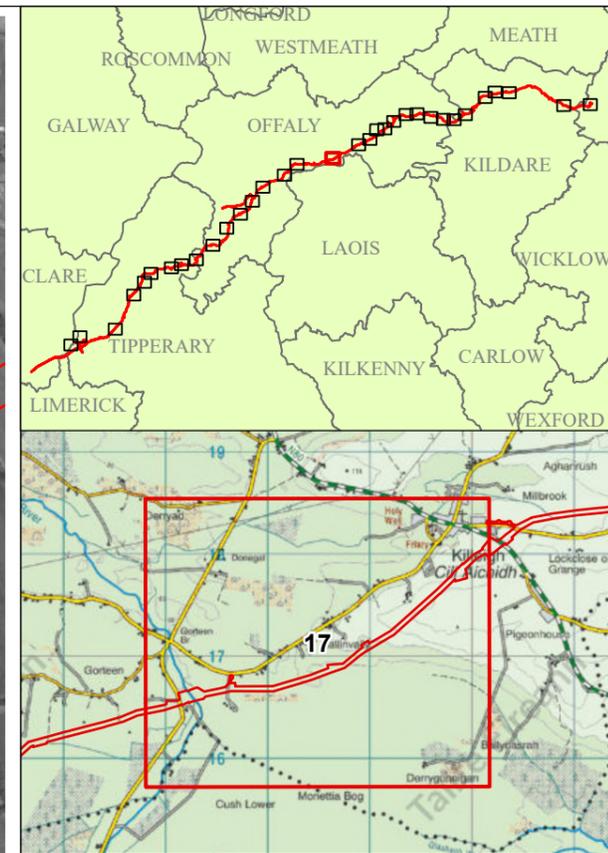
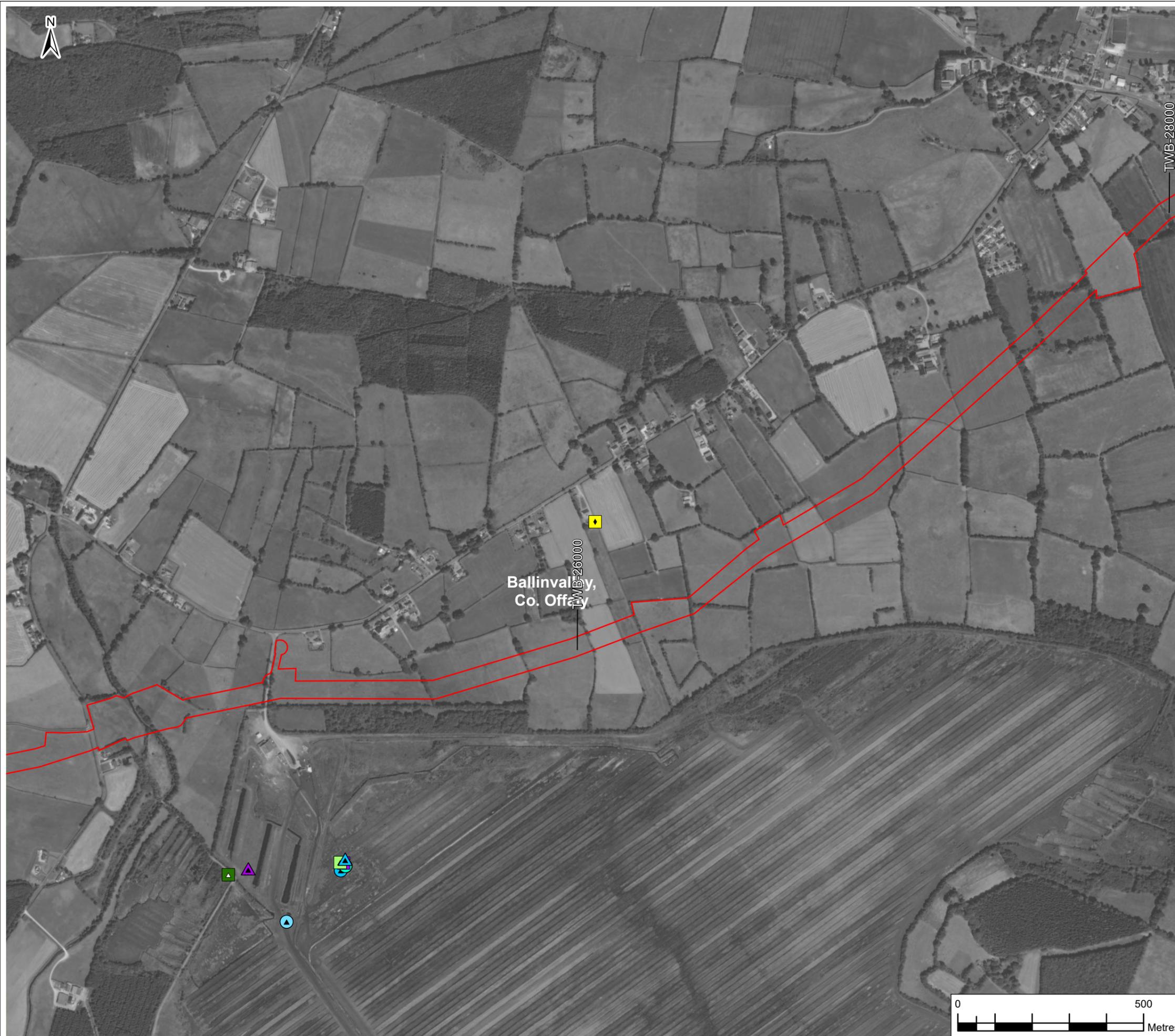
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 Breeding Birds Surveys
 Breeding Birds Status
 Sheet 5 of 33

Drawing Status
 Final - Planning Application

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Legend

Planning Application Boundary	Meadow Pipit, 2024
Confirmed Breeding Status* Black-headed Gull, 2024	Mute Swan, 2024
Little Grebe, 2024	Yellowhammer, 2018
Ringed Plover, 2024	Probable Breeding Status*
Possible Breeding Status*	Black-headed Gull, 2024
Lapwing, 2024	Lapwing, 2024

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Eastern and Midlands Region

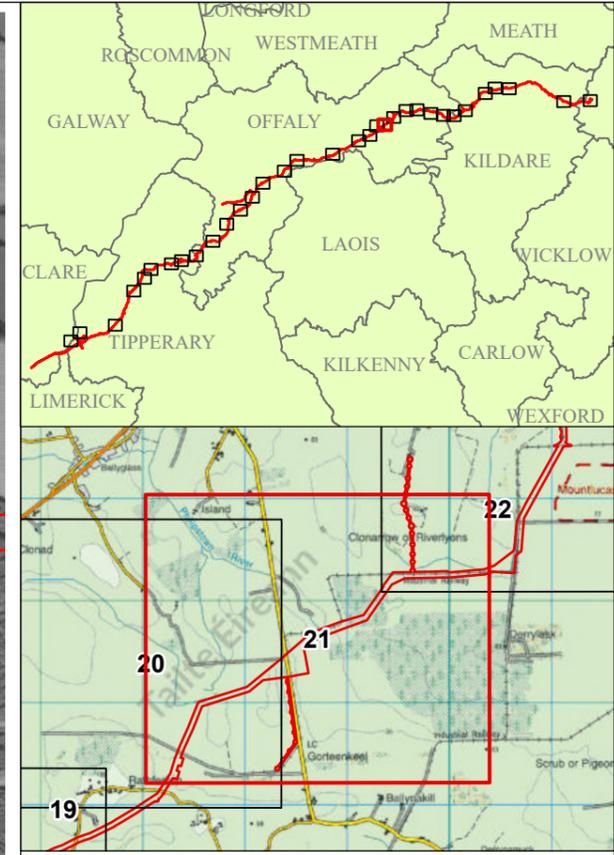
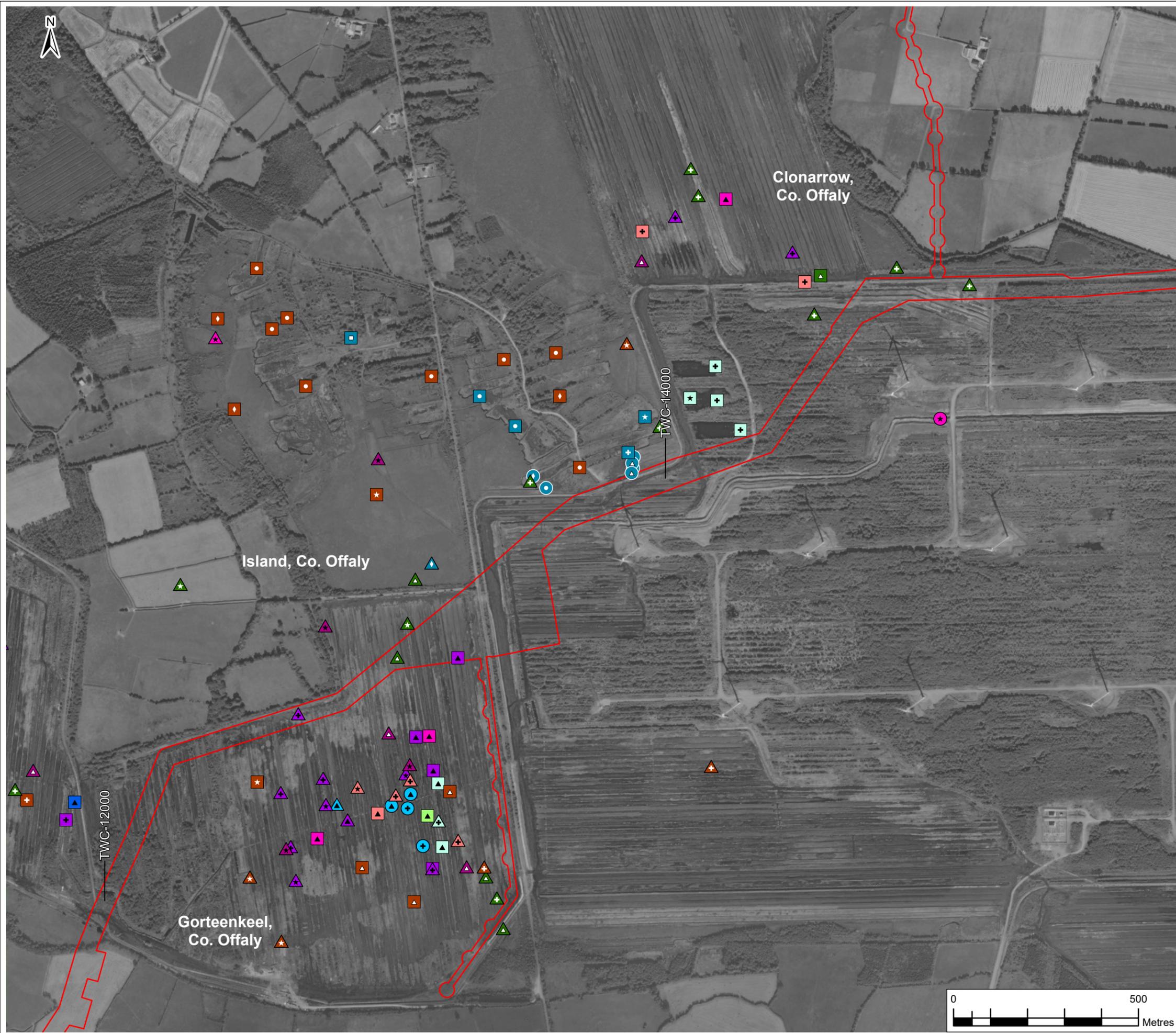
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Breeding Birds Surveys
Breeding Birds Status
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Drawing Status: Final - Planning Application

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Legend

Planning Application Boundary	Meadow Pipit, 2024	Lapwing, 2021
Confirmed Breeding Status*	Mute Swan, 2024	Lapwing, 2022
Black-headed Gull, 2022	Ringed Plover, 2022	Lapwing, 2024
Black-headed Gull, 2024	Ringed Plover, 2024	Little Grebe, 2022
Mallard, 2021	Sand Martin, 2017	Mallard, 2021
Sand Martin, 2017	Sand Martin, 2019	Meadow Pipit, 2021
Sand Martin, 2018	Sand Martin, 2021	Meadow Pipit, 2022
Sand Martin, 2022	Sand Martin, 2022	Meadow Pipit, 2024
Sand Martin, 2024	Snipe, 2017	Ringed Plover, 2021
Possible Breeding Status*	Snipe, 2018	Ringed Plover, 2022
Lapwing, 2022	Snipe, 2021	Sand Martin, 2018
Lapwing, 2024	Snipe, 2022	Skylark, 2021
Little Grebe, 2021	Snipe, 2024	Skylark, 2024
Little Grebe, 2022	Sparrowhawk, 2024	Snipe, 2021
Little Grebe, 2024	Probable Breeding Status*	Snipe, 2022
Mallard, 2024	Black-headed Gull, 2024	

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
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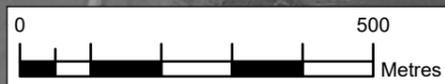
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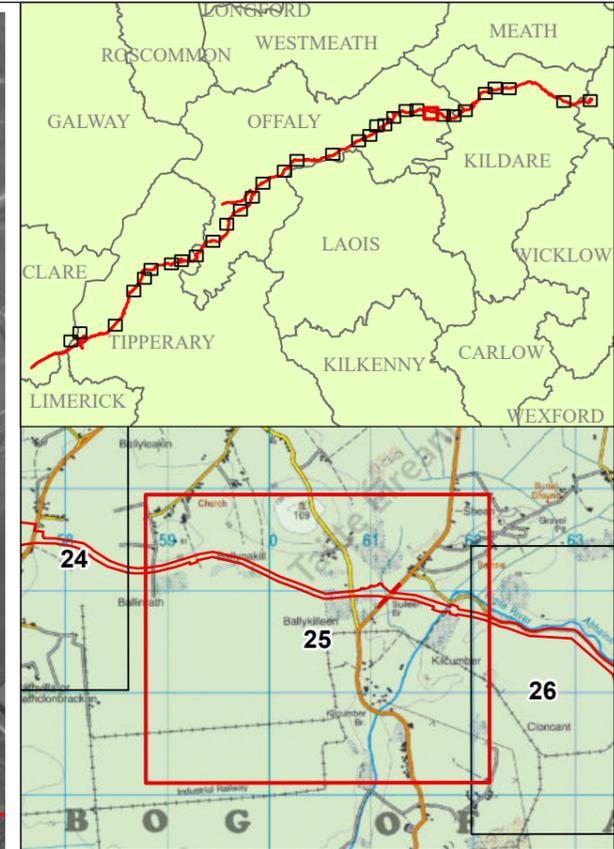
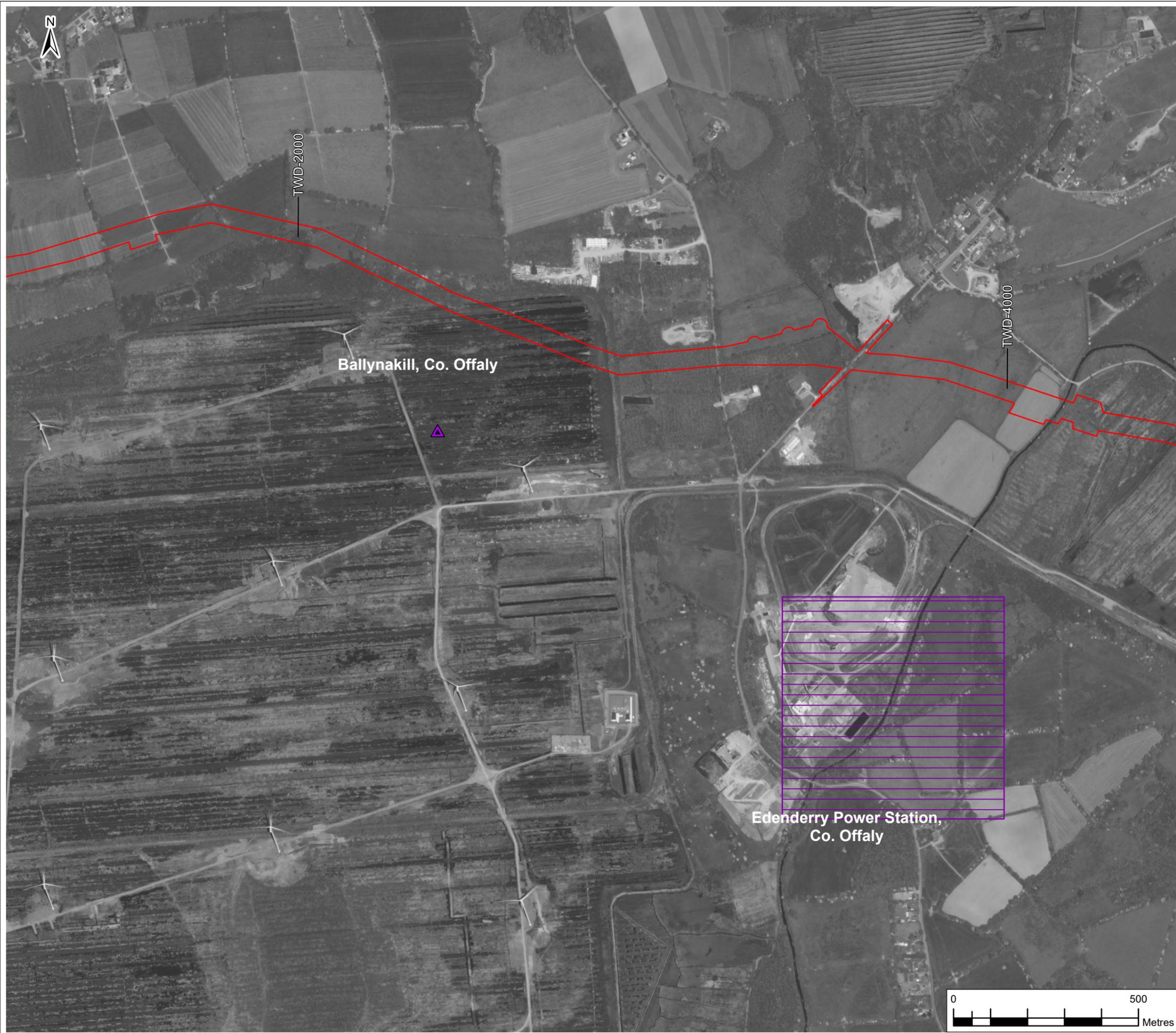
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Breeding Birds Surveys
Breeding Birds Status
Sheet 21 of 33

Drawing Status
Final - Planning Application

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Legend

- Planning Application Boundary
- Probable Breeding Status***
- ▲ Lapwing, 2024
- Peregrine, 2024

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
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Eastern and Midlands Region

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Annex C Figure 25
Breeding Birds Surveys
Breeding Birds Status
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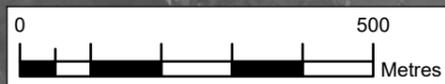
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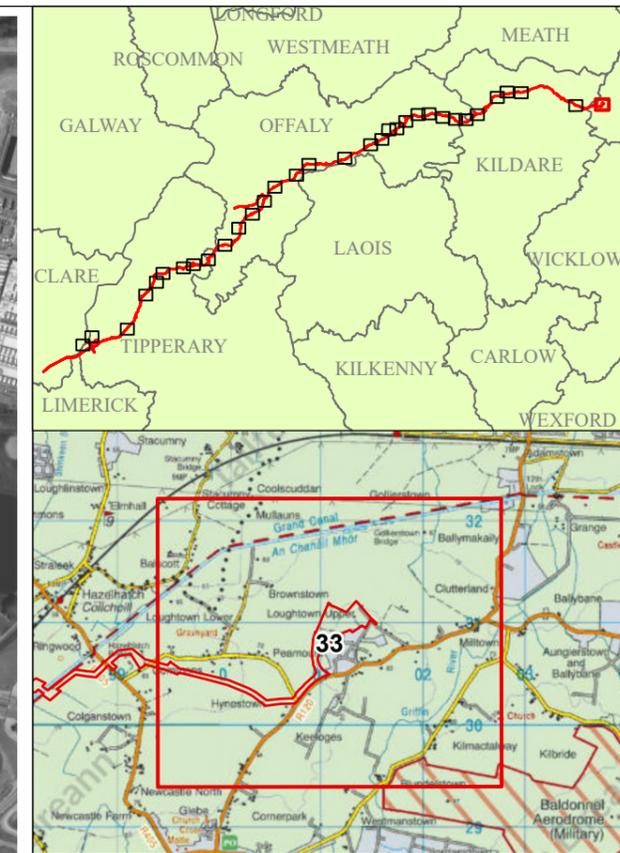
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Legend

Planning Application Boundary

Possible Breeding Status*

- ▲ Meadow Pipit, 2024
- ▲ Skylark, 2024

Probable Breeding Status*

- ▲ Skylark, 2024
- ▲ Yellowhammer, 2024

*Locations of sensitive species have been generalised to protect breeding sites. Symbols do not indicate exact breeding locations

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Eastern and Midlands Region

Drawing Title

Annex C Figure 33
Breeding Birds Surveys
Breeding Birds Status
Sheet 33 of 33

Drawing Status

Final - Planning Application

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Annex D. Survey Data

Breeding Bird Survey Results – 2016 & 2017

Lapwing (L.)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
13/05/2016	L.	1	—	AB	On flooded field
13/05/2016	L.	1	—	AB	On flooded field
13/05/2016	L.	1	—	AB	Flew around flooded field
16/05/2016	L.	3	—	AB	—
16/05/2016	L.	2	—	AB	—
16/05/2016	L.	1	—	AB	—
17/05/2016	L.	8	—	AB	—
01/06/2016	L.	1	—	JH	Not displaying. Silent then flew off
01/06/2016	L.	1	—	JH	Display flight
01/06/2016	L.	3	—	JH	Not displaying
01/06/2016	L.	2	—	JH	Pair defending. Possible nest
15/06/2016	L.	1	N/A	—	Call. Approximately 1.6km south of line in field beside (east of) access track
21/06/2016	L.	2	20m, 5 minutes.	—	Circling flight. Displaying. Breeding Pair
21/06/2016	L.	30	—	—	Flock. Field has been recently spread with slurry encouraging feeding.
26/05/2017	L.	2	—	AB	Pair
26/05/2017	L.	1	20m, 5 minutes.	PC and AB	Flight to NE
26/05/2017	L.	1	30m	PC and AB	Flight at SE
26/05/2017	L.	1	20m	PC and AB	Probable nest in area. Flight from ground to bog to NW
29/05/2017	L.	14	—	AB	Ascends from bog with wandering flight heads north
29/05/2017	L.	1	—	AB	Circled S
29/05/2017	L.	17	—	AB	Foraging
29/05/2017	L.	2	—	AB	Pair mobbing RN
29/05/2017	L.	3	—	AB & PC	3rd L. joins pair. Quite agitated. Chicks may be nearby
29/05/2017	L.	2	—	AB & PC	Pair
29/05/2017	L.	1	—	AB & PC	Dead chick beside railway. Confirmed breeding in area
29/05/2017	L.	2	—	AB & PC	Pair calling and flying back and forth. Probable nest
29/05/2017	L.	1	—	PC and AB	Ascends from bog and flies W to E to W again
29/05/2017	L.	1	20m	PC and AB	Calling and flying back and forth
29/05/2017	L.	1	70m	PC and AB	Commuting flight, SW, then NW

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
29/05/2017	L.	1	70m	PC and AB	Flight in SE direction
29/05/2017	L.	17	—	AB	Foraging in field
29/05/2017	L.	2	—	AB	Pair calling
29/05/2017	L.	2	—	AB	Pair mobbing RN
15/06/2017	L.	2	—	AB	Pair
15/06/2017	L.	2	—	AB	Pair
15/06/2017	L.	1	—	AB	Flew SE
15/06/2017	L.	1	—	AB	Flew SE
15/06/2017	L.	2	—	AB	Pair
15/06/2017	L.	2	—	AB	Pair
16/06/2017	L.	2	—	AB	Pair
16/06/2017	L.	30	—	AB	Feeding
16/06/2017	L.	1	—	AB	Calling
16/06/2017	L.	2	—	AB	Pair
16/06/2017	L.	1	—	AB	Flew SW
16/06/2017	L.	30	—	AB	Feeding
16/06/2017	L.	1	—	AB	Calling
16/06/2017	L.	2	—	AB	Pair
16/06/2017	L.	2	—	AB	Pair
22/06/2017	L.	1	—	PC & AB	Holding territory
22/06/2017	L.	15	120m	PC and AB	Flying over fields
22/06/2017	L.	46	100m	AB & PC	Ascended from bog. Rose to 100m as they flew over Treeline and out of view
22/06/2017	L.	1	30m	PC and AB	Appeared to fly into bog
03/07/2017	L.	25	—	AB and SC	Flight 11:52
03/07/2017	L.	25	—	AB & SC	Same flock of L. Flew west. 11.57.
03/07/2017	L.	3	—	AB & SC	12.01.
03/07/2017	L.	27	—	AB and SC	Flying over field. 07:54
03/07/2017	L.	1	—	AB & SC	Flight 11:31

Curlew (CU)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
16/06/2016	CU	1	10m, 10s	AB and GF	—
15/06/2016	CU	6	20m	—	Raise from riverbed, flew to drainage channel to the southwest along access track. Outside strip map.
09/05/2016	CU	22	—	JQ	—
27/05/2016	CU	1	—	PB	—
11/05/2016	CU	1	—	AB	Flying SW
—	CU	1	40 m, fly over, 20 seconds	—	—
—	CU	1	—	—	CU
29/05/2017	CU	2	—	AB	Foraging
29/05/2017	CU	2	—	AB	Foraging in field

Snipe (SN)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
09/05/2016	SN	1	—	JQ	Flying SE
12/05/2016	SN	1	—	AB	—
25/05/2016	SN	1	—	DML	—
26/05/2016	SN	1	—	DML	Male snipe drumming
26/05/2016	SN	1	—	CW	Calling
26/05/2016	SN	1	—	CW	Calling
26/05/2016	SN	3	—	PB	—
26/05/2016	SN	2	—	LB	—
26/05/2016	SN	1	—	PB	Drumming male
26/05/2016	SN	1	—	LB	Calling
27/05/2016	SN	1	—	PB	—
30/05/2016	SN	1	—	BA	—
01/06/2016	SN	1	—	JH	—
01/06/2016	SN	1	—	JH	—

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
20/06/2016	SN	4	120m, 5 minutes	—	Circling flight. Birds flying in a group with chipping call
20/06/2016	SN	4	—	—	Chipping call
21/06/2016	SN	1	—	—	Male drumming (display flight)
21/06/2016	SN	1	—	—	Male drumming (display flight)
21/06/2016	SN	1	—	—	Male drumming (display flight)
21/06/2016	SN	1	—	—	Drumming SN
24/06/2016	SN	1	—	AB & CW	Drumming
24/06/2016	SN	2	—	AB & CW	Chipping
24/06/2016	SN	1	—	AB	Drumming flight
07/07/2016	SN	1	—	—	On water in turlough centre
23/05/2017	SN	1	2m	PC and AB	SN flushed from GS4, flew N, Possible nest
24/05/2017	SN	2	N/A	JC & FH	Chirping at 22:30 during woodcock survey.
29/05/2017	SN	1	—	AB	Drumming
29/05/2017	SN	1	—	AB	Chipping
29/05/2017	SN	1	—	AB	Drumming
29/05/2017	SN	1	—	PC & AB	Drumming
29/05/2017	SN	1	—	PC & AB	Drumming
29/05/2017	SN	1	—	PC & AB	Drumming
29/05/2017	SN	1	—	PC & AB	Flushed
29/05/2017	SN	1	—	AB	Chick pulled apart. Confirmed breeding
29/05/2017	SN	2	—	AB	Chipping
29/05/2017	SN	1	—	AB	Drumming
29/05/2017	SN	1	—	AB	Chipping
29/05/2017	SN	1	—	AB	Drumming
29/05/2017	SN	1	—	PC and AB	Flew NE and landed in bog
29/05/2017	SN	1	—	PC and AB	Flew S after being flushed
29/05/2017	SN	1	—	PC and AB	Flew
29/05/2017	SN	1	—	PC and AB	Flew
29/05/2017	SN	1	—	PC and AB	Flight after being flushing
29/05/2017	SN	1	—	PC and AB	Flight after being flushing

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
29/05/2017	SN	1	—	PC and AB	Flew to SW
29/05/2017	SN	1	—	AB	Flew SW while chipping
29/05/2017	SN	2	—	AB	Drumming male
29/05/2017	SN	1	—	PC & AB	Chipping call
29/05/2017	SN	1	—	PC & AB	Drumming and chipping call shortly after
29/05/2017	SN	1	—	PC & AB	Drumming.
29/05/2017	SN	1	—	PC and AB	SN drumming flight
29/05/2017	SN	2	—	AB	Drumming
29/05/2017	SN	1	—	AB	Flew E
31/05/2017	SN	2	—	PC & AB	Chipping
31/05/2017	SN	1	—	PC & AB	Drumming
01/06/2017	SN	1	—	JC & AB	SN drumming and chipping at 22.48
06/06/2017	SN	1	—	JC	Drumming at 22:37
15/06/2017	SN	1	—	AB	Flushed NW
15/06/2017	SN	1	—	AB	Flew N
15/06/2017	SN	2	—	AB	Flew SE
15/06/2017	SN	1	—	AB	Chipping call
15/06/2017	SN	1	—	AB	Chipping
16/06/2017	SN	1	—	AB	Drumming
16/06/2017	SN	1	—	AB	Flew southeast
16/06/2017	SN	1	—	AB	Flew N
16/06/2017	SN	1	—	AB	Flew S
16/06/2017	SN	1	—	AB	Flew SW
16/06/2017	SN	1	—	AB	Chipping
16/06/2017	SN	1	—	AB	Chipping call
16/06/2017	SN	1	—	AB	Drumming male
16/06/2017	SN	1	—	AB	Drumming male
16/06/2017	SN	1	—	AB	Chipping
16/06/2017	SN	1	—	AB	Drumming
16/06/2017	SN	1	—	AB	Drumming
04/07/2017	SN	1	70m	AB & SC	Flight and chipping. 11:32
04/07/2017	SN	1	10m	AB & SC	SN alighted from ground. Erratic flight. Drumming heard later.

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
05/07/2017	SN	1	—	AB & SC	Drumming. 09:17.
05/07/2017	SN	1	—	AB & SC	Male drumming
05/07/2017	SN	3	—	AB & SC	2 chipping, another drumming. 3 in total.

Woodcock (WK)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
20/06/2016	WK	2	20m	AB & CW	Calling; 1 in wood, 1 calling in flight
20/06/2016	WK	1	—	—	Calling in flight
23/06/2016	WK	1	—	AB	Drumming flight
23/06/2016	WK	1	12m & 10 s	AB	—
24/06/2016	WK	2	—	AB	Roding
24/06/2016	WK	1	—	AB	1 male
24/06/2016	WK	1	12m & 6s	AB	—
24/06/2016	WK	1	—	AB	Roding
01/06/2017	WK	1	10m	JC & AB	Roding along forest track.
01/06/2017	WK	1	10m	JC & AB	Roding along forest track.
01/06/2017	WK	1	10m	JC & AB	Roding along forest track
01/06/2017	WK	1	10m	JC & AB	Roding along forest track.
01/06/2017	WK	1	10m	JC & AB	Roding.
01/06/2017	WK	1	—	JC & AB	Roding making chipping call along forest track.
01/06/2017	WK	1	—	JC & AB	Roding making chipping call along forest track. Only audible.
01/06/2017	WK	1	—	JC & AB	Roding making chipping call along forest track.
06/06/2017	WK	1	11 m & 15s	JC & FH	—
06/06/2017	WK	1	11m & 20s	JC & FH	—
06/06/2017	WK	1	15 m & 10s	JC & FH	—
06/06/2017	WK	1	5m & 20 s	JC & FH	—

Black-headed Gull (BH)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
16/05/2016	BH	0	—	AB	Breeding Colony
16/05/2016	BH	25	—	AB	—
16/05/2016	BH	1	—	AB	—
16/05/2016	BH	1	—	AB	—
16/05/2016	BH	3	—	AB	—
17/05/2016	BH	1	—	AB	—
17/05/2016	BH	4	—	AB	—
17/05/2016	BH	1	—	AB	Flying NE
16/06/2016	BH	100	—	AB	Circling
16/06/2016	BH	47	—	AB	On flooded field outside corridor.
16/06/2016	BH	1	—	AB and GF	BH due to slurry spreading in next field
30/06/2016	BH	2	—	AB	—
30/06/2016	BH	1	—	AB	—
30/06/2016	BH	3	—	AB	—
30/06/2016	BH	4	—	AB	—
22/05/2017	BH	1	—	JC & AB	—
06/06/2017	BH	1	—	PC & AB	Perched
06/06/2017	BH	1	5m	PC & AB	Flying
07/06/2017	BH	—	—	AB	Lot of activity with many gulls visible within reedbeds. Possible nest sites
07/06/2017	BH	160	Approx. 10m	PC & AB	BH constantly foraging on Lough. Regular flights NE. Apparent BH nests to north of lake. Bank/field partly visible through reeds. Gulls may be incubating.
07/06/2017	BH	1	10m	PC & AB	Flying and landing in field
07/06/2017	BH	—	20-30m	AB & PC	Flight path used regularly
07/06/2017	BH	—	10m	AB	Flight line used by BH entering the lough.
07/06/2017	BH	—	Approx. 10m	PC and AB	Regular BH flights through VP
07/06/2017	BH	—	—	PC and AB	Some BH also return via this same flightline
16/06/2017	BH	0	—	AB	Not a nesting site as no material
19/06/2017	BH	2	—	PC & AB	—
19/06/2017	BH	1	—	PC & AB	—

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
19/06/2017	BH	1	1m	PC and AB	Flying
20/06/2017	BH	4	—	PC & AB	On flooded patch. Flock of approximately 30 to east following tractor in field.
20/06/2017	BH	230	—	PC & AB	A lot of juveniles

Kingfisher (KF)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
31/05/2016	KF	1	—	AB	Flying S. Downstream along River
30/06/2016	KF	2	—	AB	—
20/09/2016	KF	1	1m	AB & AT	Seen in flight and lost sight still in flight following the stream (moving upstream)
03/11/2016	KF	0	—	AB & CW	Burrows, 2m high bank, sandy loamy soil. Potential KF
16/11/2016	KF	1	—		Sighting flying downstream along the River Liffey
23/05/2017	KF	1	0-1m	PC and AB	—
23/05/2017	KF	1	1-2m	PC and AB	—
19/06/2017	KF	1	—	AB & PC	—
19/06/2017	KF	1	—	AB & PC	South near Parteen Weir.
19/06/2017	KF	1	—	PC and AB	KF carrying food. Outside strip map to the south along channel at Parteen
19/06/2017	KF	1	0-2	PC and AB	Flight from perch to 2m height. Outside strip map to the south along channel at Parteen.
19/06/2017	KF	1	—	PC and AB	Flying down canal
08/08/2017	KF	2	1m	LK & PM	Flying over waterbody. Old nest on bank at centreline (see aquatic notes for photo).
10/08/2017	KF	—	—	PC & AB	KF nest found (see aquatic notes for photo).
10/08/2017	KF	1	—	AB & PC	Heard calling. 07:47
17/08/2017	KF	1	—	AB & KD	Sighting 07:15
22/08/2017	KF	1	—	AB & KD	Sighting 08:12
05/09/2017	KF	1	—	PC & AB	Heard calling from river

Sand Martin (SM)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
08/06/2016	SM	20	—	PC	Colony 40 entrances
08/06/2016	SM	0	—	PC	Colony 20 entrances
08/06/2016	SM	0	—	PC	Colony 15 entrances
16/06/2016	SM	16	—	AB	—
16/06/2016	SM	20	—	AB	—
23/05/2017	SM	—	—	AB & PC	Along access track at Parteen to the southwest of the line.
25/05/2017	SM	1	—	PC & AB	Small colony in bank
26/05/2017	SM	1	—	AB	Colony
07/06/2017	SM	—	—	PC & AB	—
12/06/2017	SM	1	—	PC & AB	Burrow in bank
19/06/2017	SM	—	—	PC & AB	—
21/06/2017	SM	—	—	PC & AB	—
21/06/2017	SM	1	—	PC & AB	Colony. More burrows. Chicks audible. Breeding confirmed

Barn Owl (BO)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
15/09/2016	BO	1	—	CW	Barn Owl Hunting
23/05/2017	BO potential	N/A	N/A	AB & PC	Old cottage with intact chimney, potential for BO. No Access to survey. C.320m south of corridor.

Kestrel (K.)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
16/06/2016	K.	1	—	AB and GF	Male flight (same bird) lands in tree alongside river
16/06/2016	K.	1	—	AB and GF	Kestrel male, no sign of a breeding partner or nest site.
09/05/2016	K.	1	—	BA	Nest Site

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
08/06/2016	K.	1	2m	PC	Kestrel observed flying over the river in a westerly direction
17/05/2016	K.	1	—	AB	—
24/05/2016	K.	1	—	BA	Foraging
18/05/2016	K.	1	—	AB	Circled in woodland then flew W. Male
24/05/2016	K.	1	—	CW	—
31/05/2016	K.	1	—	PC	Perched on fencepost
12/05/2016	K.	1	—	JQ	—
09/05/2016	K.	1	—	BA	Circling, hovering
—	K.	1	40 m, 30 s	—	Hunting, hovering
—	K.	1	80	—	Hunting in field before flying over house and perching on sycamore tree.
—	K.	1	20 m, 5 s	—	Hunting, had prey
—	K.	1	12 m, 5 s	—	Perched in tree flew off on site of surveyor
—	K.	1	—	—	—
—	K.	1	—	—	—
—	K.	1	—	—	—
—	K.	1	—	—	—
—	K.	1	—	—	—
19/07/2017	K.	1	20 m, 20 s	KD & SC	Commuting
18/07/2017	K.	1	15m to 5m	AB, KD & SC	Hunting.
03/07/2017	K.	1	—	AB & SC	Hunting hover
21/06/2017	K.	1	—	PC & AB	Hunting
15/06/2017	K.	1	—	AB	Hovering
12/06/2017	K.	1	—	PC and AB	Hunting. Drops down out of view
06/06/2017	K.	1	15m to 5m, 30s	JC & FH	Flew
31/05/2017	K.	1	15-20m, 15s	PC and AB	Flew E before turning back W and dropping into bog.
31/05/2017	K.	1	30m (30s) -20m, 15s	PC and AB	Hunting over bog. Flying N direction, before dropping to bog out of view.
15/06/2017	K.	1	—	AB	Hovering

Peregrine (PE)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
24/05/2017	PE	1	—	PC and AB	PE chasing WP

Sparrowhawk (SH)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
31/05/2016	SH	1	3m	PC	East to West
31/05/2016	SH	1	—	AB	Flying N
21/06/2016	SH	1	40m	—	—
21/06/2016	SH	1	—	—	—
30/06/2016	SH	1	—	AB	—
30/05/2017	SH	1	30-80m	PC & AB	Male SH flew NE while being mobbed by MT. Flew over trees
31/05/2017	SH	1	10m	PC & AB	Female SH flies NE from conifers into scrub. Commuting. Outside strip map to south
01/06/2017	SH	1	<2m for 10 sec	JC & AB	SH being chased by B.
12/06/2017	SH	1	—	PC & AB	Female drinking from pool. C.2.2km to the northwest of line.
20/06/2017	SH	1	70m	PC & AB	Flying S carrying food item. Confirmed breeding. Likely in forestry
21/06/2017	SH	1	—	PC & AB	Hunting
21/06/2017	SH	1	—	PC & AB	SH with prey. Breeding confirmed. Nest in direction of flight
25/08/2017	SH	1	—	AB & KD	—
—	SH	1	4m, 60 secs, w to east	—	—

Grey Partridge (P.)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes
02/06/2016	P.	1	—	PC	Recorded from a field of rapeseed
02/06/2016	P.	1	—	PC	Recorded from a field of rapeseed

Breeding Bird Survey Results – 2018

Lapwing (L.)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
03/07/2018	L. Lapwing	5	-	AB SC	Foraging	Lowland wader survey
21/05/2018	L. Lapwing	4	-	AB	Constantly circling this area	Lowland wader survey
21/05/2018	L. Lapwing	1	Flew SW at 10m	AB	-	Lowland wader survey
21/05/2018	L. Lapwing	2	Flew NE from 0 -10 m	AB	-	Lowland wader survey
21/05/2018	L. Lapwing	1	Zig zag flight from E to W	AB	-	Lowland wader survey
21/05/2018	L. Lapwing	1	Flew N and landed from 10 m	AB	Flight and calling	Lowland wader survey
21/05/2018	L. Lapwing	1	Flew W the E calling at 5m	AB	-	Lowland wader survey
21/05/2018	L. Lapwing	1	Flew NW at 0-10m	AB	-	Lowland wader survey
18/06/2018	L. Lapwing	1	Flew W and circled S, then N	AB KM	-	Lowland wader survey
18/06/2018	L. Lapwing	2	Flew N and swung to E then S	AB KM	-	Lowland wader survey
18/06/2018	L. Lapwing	2	Zig zag flight NE	AB KM	Foraging	Lowland wader survey
21/05/2018	L. Lapwing	1	Flew SW	AB	-	Lowland wader survey
11/07/2018	L. Lapwing	1	N/A		Calling	Lowland wader survey
21/05/2018	L. Lapwing	1	N/A	AB		Lowland wader survey
16/04/2018	L. Lapwing	17	N/A	AB FH		Lowland wader survey
26/06/2018	L. Lapwing	1	N/A	AB SC		Lowland wader survey
26/06/2018	L. Lapwing	1	N/A	AB SC		Lowland wader survey
26/06/2018	L. Lapwing	1	N/A	AB SC		Lowland wader survey
26/06/2018	L. Lapwing	1	N/A	AB KM		Lowland wader survey

Snipe (SN)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
19/06/2018	SN Snipe	3	Commuting W; Chipping	-	Commuting W; Chipping	Lowland wader survey
03/07/2018	SN Snipe	1	E	AB SC	Flushed	Lowland wader survey
15/05/2018	SN Snipe	1	S	AB FH	-	Lowland wader survey
17/04/2018	SN Snipe	3	SW	AB FH	-	Lowland wader survey
17/04/2018	SN Snipe	1	NW	AB FH	-	Lowland wader survey
17/04/2018	SN Snipe	2	NW	AB FH	-	Lowland wader survey

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
17/04/2018	SN Snipe	1	W	AB FH	-	Lowland wader survey
17/04/2018	SN Snipe	2	W	AB FH	-	Lowland wader survey
18/04/2018	SN Snipe	1	NW	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	1	Flew in two separate directions	AB FH	territorial Dispute	Lowland wader survey
18/04/2018	SN Snipe	1	Flew in two separate directions	AB FH	territorial Dispute	Lowland wader survey
18/04/2018	SN Snipe	2	Drumming after	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	2	W	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	1	S	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	1	S	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	1	W	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	1	NW	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	2	S	AB FH	Flushed	Lowland wader survey
19/04/2018	SN Snipe	1	S	AB FH	Flushed	Lowland wader survey
19/04/2018	SN Snipe	1	NW	AB FH	Flushed	Lowland wader survey
19/04/2018	SN Snipe	1	W	AB FH	Flushed	Lowland wader survey
19/04/2018	SN Snipe	1	NW	AB FH	Flushed	Lowland wader survey
19/04/2018	SN Snipe	1	N	AB FH	Flushed	Lowland wader survey
19/04/2018	SN Snipe	1	E	AB FH	Flushed	Lowland wader survey
19/04/2018	SN Snipe	1	SE	AB FH	Flushed	Lowland wader survey
19/04/2018	SN Snipe	1	NE	AB FH	Flushed	Lowland wader survey
20/04/2018	SN Snipe	1	NE	AB FH	Flushed	Lowland wader survey
20/04/2018	SN Snipe	1	SE	AB FH	Flushed	Lowland wader survey
20/04/2018	SN Snipe	1	SW	AB FH	Flushed	Lowland wader survey
20/04/2018	SN Snipe	1	NE	AB FH	Flushed	Lowland wader survey
20/04/2018	SN Snipe	1	NE	AB FH	Flushed	Lowland wader survey
20/04/2018	SN Snipe	1	NW	AB FH	Flushed	Lowland wader survey
23/05/2018	SN Snipe	1	Flew NE	AB	Flushed	Lowland wader survey
22/05/2018	SN Snipe	1	Flew NW from 0-25--15m	AB	Flushed	Lowland wader survey
18/04/2018	SN Snipe	1	Flushed in a S direction	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	1	Chipping flight in a S direction	AB FH	Chipping	Lowland wader survey
18/04/2018	SN Snipe	1	W	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	1	S	AB FH	Flushed	Lowland wader survey

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
18/04/2018	SN Snipe	1	Flushed NNW	AB FH	Flush	Lowland wader survey
18/04/2018	SN Snipe	1	Flushed NE	AB FH	Flushed	Lowland wader survey
18/04/2018	SN Snipe	2	Flushed in a W direction	AB FH	Flushed	Lowland wader survey
23/04/2018	SN Snipe	1	Chipping call as it flew NE	AB PC	Chipping	Lowland wader survey
23/04/2018	SN Snipe	1	Flew NE	AB PC	Flight	Lowland wader survey
23/04/2018	SN Snipe	2	Flushed NE	AB PC	Flush	Lowland wader survey
23/04/2018	SN Snipe	1	Chipping flight SW	AB PC	Chipping	Lowland wader survey
23/04/2018	SN Snipe	1	Chipping flight SW	AB PC	Chipping	Lowland wader survey
23/04/2018	SN Snipe	1	Flushed NW	AB PC	Flushed	Lowland wader survey
23/04/2018	SN Snipe	1	Flushed in a S direction	AB PC	Flushed	Lowland wader survey
23/04/2018	SN Snipe	1	Flushed in a S direction	AB PC	Flushed	Lowland wader survey
23/04/2018	SN Snipe	1	Flushed in a S direction	AB PC	Flushed	Lowland wader survey
23/04/2018	SN Snipe	1	Flushed in a W direction	AB PC	Flushed	Lowland wader survey
23/04/2018	SN Snipe	1	Flushed S, turning NNW	AB PC	Flushed	Lowland wader survey
23/04/2018	SN Snipe	1	Flushed in a S direction	AB PC	Flushed	Lowland wader survey
23/04/2018	SN Snipe	3	Flushed in a SW direction	AB PC	Flushed	Lowland wader survey
24/04/2018	SN Snipe	1	NE	AB KD	Flushed	Lowland wader survey
25/04/2018	SN Snipe	1	Flushed in a S direction from within silt pond	AB KD	Flushed	Lowland wader survey
25/04/2018	SN Snipe	1	Same individual flushed E within silt pond.	AB KD	Flushed	Lowland wader survey
25/04/2018	SN Snipe	1	Flushed in a W direction	AB KD	Flushed	Lowland wader survey
25/04/2018	SN Snipe	3	Flushed from foraging pool in a S direction	AB KD	Flushed	Lowland wader survey
16/05/2018	SN Snipe	1	Flew SSW chipping	AB FH	-	Lowland wader survey
17/05/2018	SN Snipe	1	Flew SSW at 30M	AB FH	-	Lowland wader survey
17/05/2018	SN Snipe	1	Flew E then S at 40m	AB FH	-	Lowland wader survey
21/05/2018	SN Snipe	1	Flew NE	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	Flew W chipping	AB	Flushed	Lowland wader survey
21/05/2018	SN Snipe	1	Flew E	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	Flew E	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	Flushed, Flew NE	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	Flew SW at 1m	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	Flew S calling regularly	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	Flew E, calling regularly	-	-	Lowland wader survey

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
11/06/2018	SN Snipe	1	Flew S	PC K	-	Lowland wader survey
18/06/2018	SN Snipe	1	Flew N	AB KM	-	Lowland wader survey
18/06/2018	SN Snipe	1	Flew SE	AB KM	-	Lowland wader survey
18/06/2018	SN Snipe	1	Flew S	AB KM	-	Lowland wader survey
18/06/2018	SN Snipe	1	Flew NE	AB KM	-	Lowland wader survey
18/06/2018	SN Snipe	1	Flew E	AB KM	-	Lowland wader survey
14/08/2018	SN Snipe	2	N/A	-	Foraging	Lowland wader survey
13/09/2018	SN Snipe	1	N/A	-	Flushed from foraging	Lowland wader survey
15/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
12/06/2018	SN Snipe	1	N/A	PC KM	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
23/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
23/04/2018	SN Snipe	1	N/A	AB PC	-	Lowland wader survey
23/04/2018	SN Snipe	1	N/A	AB PC	-	Lowland wader survey
23/04/2018	SN Snipe	1	N/A	AB PC	-	Lowland wader survey
24/04/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
24/04/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
24/04/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
24/04/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
25/04/2018	SN Snipe	1	N/A	AB KD	-	Lowland wader survey
17/05/2018	SN Snipe	1	N/A	AB FH	-	Lowland wader survey
17/05/2018	SN Snipe	1	N/A	AB FH	-	Lowland wader survey
21/05/2018	SN Snipe	1	N/A	AB	-	Lowland wader survey
23/05/2018	SN Snipe	1	N/A	-	-	Lowland wader survey
15/05/2018	SN Snipe	1	N/A	AB FH	-	Lowland wader survey

Woodcock (WK)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
09/05/2018	WK_Woodcock	1	1 WK flew S at 40 m	JC RH	-	Woodcock Survey
09/05/2018	WK_Woodcock	1	1 WK flew S at 40 m	JC RH	-	Woodcock Survey
09/05/2018	WK_Woodcock	1	1 Wk flew N/NW at 50 m	JC RH	-	Woodcock Survey
09/05/2018	WK_Woodcock	1	1 WK flew S at 50 m	JC RH	-	Woodcock Survey
29/05/2018	WK_Woodcock	1	WK Chirping as it flies S along the perimeter of treeline at 10m	AB KM	-	Woodcock Survey
29/05/2018	WK_Woodcock	1	WK flies W over WD4 towards VP, then turns S, at 10m.	AB KM	-	Woodcock Survey
30/05/2018	WK_Woodcock	1	WK roding. flew N over WD4 and towards bog	AB KM	-	Woodcock Survey
30/05/2018	WK_Woodcock	1	Chipping call. Flies SW over bog and scrub	AB KM	-	Woodcock Survey
30/05/2018	WK_Woodcock	1	WK roding. Flew NE over bog and scrub	AB KM	-	Woodcock Survey
30/05/2018	WK_Woodcock	1	WK roding. Flew SE from WS1 over WD4	AB KM	-	Woodcock Survey
30/05/2018	WK_Woodcock	1	Roding. Flew NE over bog and scrub	AB KM	-	Woodcock Survey
30/05/2018	WK_Woodcock	1	Roding. Flew S then SE	AB KM	-	Woodcock Survey
31/05/2018	WK_Woodcock	1	Chipping. SE at 15m	AB KM	-	Woodcock Survey
31/05/2018	WK_Woodcock	1	Chipping flight. N direction at 10m	AB KM	-	Woodcock Survey
31/05/2018	WK_Woodcock	1	Roding. Flew W at 8m	AB KM	-	Woodcock Survey
31/05/2018	WK_Woodcock	1	Chipping. Flew SE at 15m	AB KM	-	Woodcock Survey
19/06/2018	WK_Woodcock	1	Flying N to S	KD SC	-	Woodcock Survey
19/06/2018	WK_Woodcock	1	Flying S to NE into conifers	KD SC	-	Woodcock Survey
19/06/2018	WK_Woodcock	1	Flying SE to NW	KD SC	-	Woodcock Survey
19/06/2018	WK_Woodcock	1	Flying S to N	KD SC	-	Woodcock Survey
19/06/2018	WK_Woodcock	1	Flying S to N	KD SC	-	Woodcock Survey
19/06/2018	WK_Woodcock	1	Flying E to W	KD SC	-	Woodcock Survey
19/06/2018	WK_Woodcock	1	Flying N to S	KD SC	-	Woodcock Survey
19/06/2018	WK_Woodcock	1	Flying SE to NW	KD SC	-	Woodcock Survey
10/05/2018	WK_Woodcock	1	Flying NE to SW	LK	-	Woodcock Survey
10/05/2018	WK_Woodcock	1	Flying N, circled back and flew directly of VP approximately 25 m high	LK	-	Woodcock Survey

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
10/05/2018	WK_Woodcock	1	Flew NW to SE over VP at 20 m	LK	-	Woodcock Survey
10/05/2018	WK_Woodcock	1	Flew E to W over VP at 30m height	LK	-	Woodcock Survey
10/05/2018	WK_Woodcock	1	Flying E over VP and turning SW approximately 50 m high	LK	Calling in flight	Woodcock Survey
10/05/2018	WK_Woodcock	1	Flew SE to NW over VP at 20 m height	LK	-	Woodcock Survey
10/05/2018	WK_Woodcock	1	Flew directly over VP from S to N, approximately 30 m high	LK	-	Woodcock Survey
31/05/2018	WK_Woodcock	1	Roding, flew SW at 10m	AB KM	-	Woodcock Survey
31/05/2018	WK_Woodcock	1	Chipping, flew E at 8m	AB KM	-	Woodcock Survey
21/06/2018	WK_Woodcock	1	Flying from N to S directly over VP	LK SC	-	Woodcock Survey
21/06/2018	WK_Woodcock	1	Flying from S to N just E of VP	LK SC	-	Woodcock Survey
02/08/2018	WK_Woodcock	1	N/A	-	Chipping	Woodcock Survey
30/05/2018	WK_Woodcock	1	N/A	AB KM	-	Woodcock Survey

Black-headed Gull (BH)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
05/07/2018	BH_BlackHeaded_Gull	1	Commuting N	-	-	Low land wader survey
16/04/2018	BH_BlackHeaded_Gull	14	S	AB FH	-	Boat Surveys
16/04/2018	BH_BlackHeaded_Gull	1	W	AB FH	-	Boat Surveys
16/04/2018	BH_BlackHeaded_Gull	2	Flew S then curved W, then N	AB FH	-	Boat Surveys
16/04/2018	BH_BlackHeaded_Gull	1	S	AB FH	-	Boat Surveys
16/04/2018	BH_BlackHeaded_Gull	2	SW	AB FH	-	Boat Surveys
16/04/2018	BH_BlackHeaded_Gull	1	NE	AB FH	-	Boat Surveys
11/06/2018	BH_BlackHeaded_Gull	1	Circled	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	1	Flew NW then circled to SE	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	2	Flew SE	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	2	Flew SE	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	2	Flew N	PC KM	-	Low land wader survey
18/04/2018	BH_BlackHeaded_Gull	5	Circling over flooded part of field	AB FH	Circling	Low land wader survey
18/04/2018	BH_BlackHeaded_Gull	33	Commuting E	AB FH	Commuting	Low land wader survey

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
15/05/2018	BH_BlackHeaded_Gull	17	S	AB FH	-	Low land wader survey
12/06/2018	BH_BlackHeaded_Gull	1	Flew SE	PC KM	-	Low land wader survey
12/06/2018	BH_BlackHeaded_Gull	1	Flew W then curved S	PC KM	-	Low land wader survey
13/06/2018	BH_BlackHeaded_Gull	1	Flew S	-	-	Low land wader survey
04/07/2018	BH_BlackHeaded_Gull	1	N/A	-	Male foraging	Low land wader survey
04/07/2018	BH_BlackHeaded_Gull	41	N/A	-	Foraging	Low land wader survey
12/06/2018	BH_BlackHeaded_Gull	1	N/A	PC KM	-	Low land wader survey
12/06/2018	BH_BlackHeaded_Gull	1	N/A	PC KM	-	Low land wader survey
12/06/2018	BH_BlackHeaded_Gull	1	N/A	PC KM	-	Low land wader survey
12/06/2018	BH_BlackHeaded_Gull	7	N/A	PC KM	-	Low land wader survey
18/04/2018	BH_BlackHeaded_Gull	230	N/A	AB FH	-	Low land wader survey
13/06/2018	BH_BlackHeaded_Gull	83	N/A	PC KM	-	Low land wader survey
23/05/2018	BH_BlackHeaded_Gull	10	N/A	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	1	N/A	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	7	N/A	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	1	N/A	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	1	N/A	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	1	N/A	PC KM	-	Low land wader survey
11/06/2018	BH_BlackHeaded_Gull	1	N/A	PC KM	-	Low land wader survey

Kingfisher (KF)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
26/07/2018	KF_Kingfisher	2	-	-	Foraging	Lowland wader survey
15/05/2018	KF_Kingfisher	1	N/A	AB	-	Lowland wader survey
11/06/2018	KF_Kingfisher	1	N/A	PC KM	-	Boat survey
11/06/2018	KF_Kingfisher	1	N/A	PC KM	-	Boat survey

Sand Martin (SM)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
19/06/2018	SM Sand Martin	15	N/A	AB KM	Foraging over high bog beside dwelling	Lowland wader survey
05/07/2018	SM Sand Martin	1	N/A	-	-	Lowland wader survey
15/05/2018	SM Sand Martin	40	N/A	AB	-	Lowland wader survey
11/06/2018	SM Sand Martin	40	N/A	PC KM	-	Boat Survey

Kestrel (K.)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
05/07/2018	K. Kestrel	1	-	-	Commuting/foraging	Lowland wader survey
07/08/2018	K. Kestrel	1	Commuting E with food	-	-	Lowland wader survey
24/08/2018	K. Kestrel	1	Flying W. Mobbed by RO	PC AB	-	Lowland wader survey
03/07/2018	K. Kestrel	2	-	-	Mobbing BZ	Lowland wader survey
30/07/2018	K. Kestrel	1	-	JAH SC	Flushed	Lowland wader survey
21/08/2018	K. Kestrel	1	-	PC AB	Foraging	Lowland wader survey
15/05/2018	K. Kestrel	1	N	AB FH	-	Lowland wader survey
12/06/2018	K. Kestrel	1	Circled	PC KM	Hunting	Lowland wader survey
21/05/2018	K. Kestrel	1	Flew N then circled S	AB	Foraging	Lowland wader survey
21/05/2018	K. Kestrel	1	Flew SW at 45 m	AB	Hunting	Lowland wader survey
11/07/2018	K. Kestrel	1	N/A	-	Perched on wire	Lowland wader survey
13/06/2018	K. Kestrel	1	N/A	PC KM	-	Lowland wader survey
15/08/2018	K. Kestrel	1	N/A	-	-	Lowland wader survey
28/08/2018	K. Kestrel	1	N/A	-	-	Lowland wader survey
27/08/2018	K. Kestrel	1	N/A	-	-	Lowland wader survey
14/08/2018	K. Kestrel	1	N/A	-	-	Woodcock survey

Peregrine (PE)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
21/05/2018	PE_Peregrine	1	Flew N, then circled E, then S	AB	Lowland wader survey	Lowland wader survey

Sparrowhawk (SH)

Date	Species	Abundance	Flight Height/Duration	Surveyor	Notes	Survey Type
26/06/2018	SH_Sparrowhawk	1	Circling	-	Mobbed by crows	Lowland wader survey
23/08/2018	SH_Sparrowhawk	1	-	AB PC	Commuting/ Flushed	Lowland wader survey
24/08/2018	SH_Sparrowhawk	1	-	-	Hunting	Lowland wader survey
17/04/2018	SH_Sparrowhawk	1	SW	AB FH	-	Lowland wader survey
23/04/2018	SH_Sparrowhawk	1	Flew in an E direction	AB PC	-	Lowland wader survey
23/04/2018	SH_Sparrowhawk	1	Commuting N	AB PC	-	Lowland wader survey
23/04/2018	SH_Sparrowhawk	1	Flushed in a S direction	AB PC	Flushed	Lowland wader survey
24/07/2018	SH_Sparrowhawk	1	N/A	-	Female feeding fledgling	Lowland wader survey

Breeding Bird Survey Results – 2019

Table 1: Lowland Wader Survey Point Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2019

Location	BH	BZ	CA	CO	GG	GJ	GL	H.	HG	KF	L.	LB	LG	MA	MH	MS	SH	SM	T.	TU	WA	Y.	Grand Total		
linvally, Co. Offaly																							1	1	
Ballybrack, Co. Offaly																								5	5
Ballycollin, Co. Offaly																								1	1
Carrigatogher, Co. Tipperary																	1								1
Clonad, Co. Offaly																		1							1
Cloona, Co. Kildare							1	2			2		7	4	2				4		2				24
Currallanty, Co. Offaly																								10	10
Cushaling, Co. Offaly		1					1							2	1	1	1								7
Dangan, Co. Kildare								2						15	3									6	26
Derrinboy, Co. Offaly																								5	5
Derrvarroge, Co. Kildare														2											2
Gorteenafoly, Co. Offaly																								1	1
Gorteenkeel, Co. Offaly														2											2
Gortmore, Co. Tipperary		1									2			7										1	11
Island, Co. Offaly																		1							1
Kilcolman, Co. Offaly																								2	2
Killalary, Co. Offaly																								3	3
Killure, Co. Offaly		1																							1
Knockhill, Co. Offaly																								1	1
Lough Eorna	510																20							2	532
Lugmore, Co. Offaly																								1	1
Lullymore, Co. Kildare		1						2			2		7	10	6						1			2	31
Mount Lucas, Co. Offaly																	1								1
Newtown, Co. Kildare														7		3								7	17
Newtownmoneenluggagh, Co. Kildare																								3	3

Location	BH	BZ	CA	CO	GG	GJ	GL	H.	HG	KF	L.	LB	LG	MA	MH	MS	SH	SM	T.	TU	WA	Y.	Grand Total
Parteen	4		25	14	17	37		9	3	2			4	143	4	100				6			368
Rathlumber, Co. Offaly											2											3	5
Timahoe West												30											30
Grand Total	514	4	25	14	17	37	2	15	3	2	8	30	18	192	16	125	2	2	4	7	2	54	1093

Table 2: Lowland Wader Survey Flightline Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2019

Location	BH	BO	BZ	CA	GJ	GL	H.	HG	K.	KF	L.	LB	MA	MH	PE	SH	SM	SN	T.	WM	Grand Total	
Ballyanny, Co. Tipperary		1										1										2
Ballycon, Co. Offaly			1						1													2
Carrigatogher, Co. Tipperary			4										1									5
Cloona, Co. Kildare											4	2	11						2	2		21
Currallanty, Co. Offaly			1						2													3
Dangan, Co. Kildare	1		1									1										3
Derrinboy, Co. Offaly			5													1						6
Gorteenkeel, Co. Offaly			2				1															3
Gortmore, Co. Tipperary			3				1						1									5
Island, Co. Offaly													1			1	1					3
Kilcolman, Co. Offaly			1																			1
Killalary, Co. Offaly			2																			2
Lough Eorna	6																					6
Lullymore, Co. Kildare			8				6				2	14	10	1								41
Newtown, Co. Kildare			2	1			1			1		8	1		1							15
Newtownmoneenluggagh, Co. Kildare									1			1										2
Parteen	2			21	4	1		1		2		3	33			1	2				6	76
Peamount, Co. Dublin												2										2

Location	BH	BO	BZ	CA	GJ	GL	H.	HG	K.	KF	L.	LB	MA	MH	PE	SH	SM	SN	T.	WM	Grand Total
Grand Total	9	1	30	22	4	1	9	1	4	3	6	32	58	1	1	3	3	2	2	6	198

Table 3: VP Count Data Recorded during Breeding Birds Surveys at Parteen Basin in 2019

Location and Month	BH	BZ	CA	CN	CO	GG	HG	LG	MA	MS	SM	T.	Grand Total
Ardcloony, Co. Clare	14	1	21		1	1			13	26	1	3	81
Jul	1	1	10			1			8	7	1		29
Aug	9		11						5	10			35
Sep	4				1					9		3	17
Clarisford, Co. Clare	4		8	1		1	2	1	4	12			33
Jul	1		2	1			1		3				8
Aug			3				1		1				5
Sep	3		3			1		1		12			20
Flanagans, Co. Tipperary	28						2		6				36
Jul	8						1		3				12
Aug	9								3				12
Sep	11						1						12
Grand Total	46	1	29	1	1	2	4	1	23	38	1	3	150

Table 4: Total Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2019

Survey	BH	BO	BZ	CA	CN	CO	GG	GJ	GL	H.	HG	K.	KF	L.	LB	LG	MA	MH	MS	PE	SH	SM	SN	T.	TU	WA	WM	Y	Total
LWS Point Data	514	0	4	25	0	14	17	37	2	15	3	0	2	8	30	18	192	16	125	0	2	2	0	4	7	2	0	54	1093
LWS Flightline Data	9	1	30	22	0	0	0	4	1	9	1	4	3	6	32	0	58	1	0	1	3	3	2	2	0	0	6	0	198
VP Counts	46	0	1	29	1	1	2	0	0	0	4	0	0	0	0	1	23	0	38	0	0	1	0	3	0	0	0	0	150
Grand Total	569	1	35	76	1	15	19	41	3	24	8	4	5	14	62	19	273	17	163	1	5	6	2	9	7	2	6	54	1441

Lapwing (L.)

Date	Species	Abundance	Activity	Notes
01/05/2019	L. Lapwing	2	Actively displaying	Male and female
07/05/2019	L. Lapwing	2	Flying and displaying	
08/05/2019	L. Lapwing	1	Displaying	
23/05/2019	L. Lapwing	1	Circled and landed.	Suitable breeding habitat. Suspect capped landfill site. Within foraging distance of pipeline.
24/05/2019	L. Lapwing	2	Resting	
24/05/2019	L. Lapwing	1	Foraging	
24/05/2019	L. Lapwing	2	Flying	
14/06/2019	L. Lapwing	2	Flying and alarm call	Probable nest nearby

Date	Species	Abundance	Activity	Notes
13/06/2019	L. Lapwing	1	Displaying	

Snipe (SN)

Date	Species	Abundance	Activity	Notes
08/05/2019	SN Snipe	1	Flying	Flushed
24/05/2019	SN Snipe	1	Flying	Flushed
26/06/2019	SN Snipe	2	Flying	Flew E over VP, 20m high

Woodcock (WK)

Date	Species	Abundance	Flight Height/Duration	Notes
13/05/2019	WK Woodcock	1	Flying W to Eat 15m height over VP	
13/05/2019	WK Woodcock	2	Flying- circled from SE to SW over VP at 10m high	
13/05/2019	WK Woodcock	2	Flying SW to NW just W of VP at 10m high	
13/05/2019	WK Woodcock	1	Flying N to S, just E of VP at 20m high	
13/05/2019	WK Woodcock	1	Flying S to N, 20m E of VP at 15, high	
13/05/2019	WK Woodcock	1	South of VP, flying from E to W	Heard not seen.
13/05/2019	WK Woodcock	1	Flying E to W. Over access tract to VP at 30m	
13/05/2019	WK Woodcock	2	Flying NE to SE over access track to VP at 20m	
13/05/2019	WK Woodcock	1	Flying E to W at 30m high	
14/05/2019	WK Woodcock	1	Flying- Flew S and circled towards E at 15-20m high, approx. 30m E of VP	
14/05/2019	WK Woodcock	1	Flying S to N at 15m high. Approx. 30m W of VP	
14/05/2019	WK Woodcock	1	Flying N to S at 15m high. Approx 10m W of VP	
14/05/2019	WK Woodcock	1	Flying S to N at 20m high. Approx. 10m W of VP	
14/05/2019	WK Woodcock	1	Flying N to S at 15m high. 15m E of VP	
14/05/2019	WK Woodcock	1	Flying SW to E to N at 15m high. Flew N along tree line /access track and over VP	
14/05/2019	WK Woodcock	1	Flying SW to E to N at 15m high. Flew N along tree line /access track and over VP	
14/05/2019	WK Woodcock	1	Flying N to S at 15m high, directly over VP	
14/05/2019	WK Woodcock	1	Flew S circling to Eat 15m. 100 m E of VP	

Date	Species	Abundance	Flight Height/Duration	Notes
14/05/2019	WK Woodcock	2	Flying E to S at 15m. 30m S of VP	
14/05/2019	WK Woodcock	1	Flying S to N at 15m high. 40m W of VP	
14/05/2019	WK Woodcock	1	Flying E to S at 15m high. 10m E of VP	
14/05/2019	WK Woodcock	2	Flying N to SW at 15m high. 100m W of VP	
14/05/2019	WK Woodcock	1	Flying NE to SW at 15m high over VP	
14/05/2019	WK Woodcock	1	Flying SW to N over VP and landed 20m N of VP	
14/05/2019	WK Woodcock	1	Heard in trees SW, 30m SW of VP	
14/05/2019	WK Woodcock	1	Flying E to W over VP at 15m height	
14/05/2019	WK Woodcock	1	Flying N to S over VP at 15m height	
04/06/2019	WK Woodcock	1	Flying east circling south, 10 m east of VP. Height 15 m	
04/06/2019	WK Woodcock	1	Flying east to SE 10 m east of VP. Height 15 m	
04/06/2019	WK Woodcock	1	Flying west to east 10 m from VP. Height 15 m	
04/06/2019	WK Woodcock	1	Flying N-S, over VP at 15 m	
04/06/2019	WK Woodcock	1	Flying east to west, 20 m east of VP at 15 m	
04/06/2019	WK Woodcock	1	Flying W-E, 10 m east of VP at 15 m	
04/06/2019	WK Woodcock	1	Flying S-N, 15 m east of VP at 15 m	
04/06/2019	WK Woodcock	1	Flying S-N, 15 m west of VP at 20 m	
04/06/2019	WK Woodcock	1	Flying N-S, 15 m west of VP at 20 m	
04/06/2019	WK Woodcock	1	Flying east to west over VP at 10 m	
04/06/2019	WK Woodcock	3	Flying SW-NE over VP at 15 m	
05/06/2019	WK Woodcock	1	Flying S-N at 20 m high, calling	
05/06/2019	WK Woodcock	1	Flying N to S at 50 m east of VP at 20 M height	
05/06/2019	WK Woodcock	1	Flying 50 m S of VP, moving east to west at 20 m height	
05/06/2019	WK Woodcock	1	Flying 200 m NE of VP, at 25 m height. Moving SE to NW	
05/06/2019	WK Woodcock	1	Flying W to E, 80 m N of VP 180 m from VP	
05/06/2019	WK Woodcock	1	Roding to SW of VP. 180 m form VP	
05/06/2019	WK Woodcock	1	Roding to SW of VP. 100 m form VP	
25/06/2019	WK_Woodcock	1	Flew N and turned W before circling back across same flight path. 15m high, between 20 and 30 m from VP	
25/06/2019	WK Woodcock	1	Flying W to E, 20m high, 200m from VP, N	
25/06/2019	WK Woodcock	1	Flying N from E of VP, 20m high	
26/06/2019	WK Woodcock	1	Flew N, 15m, 20m E of VP, chipping	Cuckoo calling throughout VP

Date	Species	Abundance	Flight Height/Duration	Notes
26/06/2019	WK_Woodcock	1	Flew N, spotted surveyors and veered N, then circled back roding	
26/06/2019	WK_Woodcock	1	Flew E, 15m high, 20m from VP, roding and chipping	
26/06/2019	WK_Woodcock	1	Flew S, 15m high to W of VP, chipping	
26/06/2019	WK_Woodcock	1	Flew N, 15m, 20m E of VP, chipping	
26/06/2019	WK_Woodcock	1	Flew W over VP, turned SW, at 15m height	
26/06/2019	WK_Woodcock	1	Flew N, 30m E of VP, at 15m high, over VP	
26/06/2019	WK_Woodcock	1	Flew W over VP, turned SW, at 15m height	
26/06/2019	WK_Woodcock	1	Flew N, 15m high, over VP roding	

Black-headed Gull (BH)

Date	Species	Abundance	Activity	Notes
29/04/2019	BH_BlackHeaded_Gull	1	Foraging	
29/04/2019	BH_BlackHeaded_Gull	2	Flying S	M and F
30/04/2019	BH_BlackHeaded_Gull	3		
30/04/2019	BH_BlackHeaded_Gull	10	Foraging	
30/04/2019	BH_BlackHeaded_Gull	3	Flying	
30/04/2019	BH_BlackHeaded_Gull	200	Foraging	
27/05/2019	BH_BlackHeaded_Gull	1	Flying	Sub. adult
10/06/2019	BH_BlackHeaded_Gull	3		
11/06/2019	BH_BlackHeaded_Gull	300	Nesting and foraging	M and F, probable breeding status
15/07/2019	BH_BlackHeaded_Gull	1	Foraging	Foraging on spit
15/07/2019	BH_BlackHeaded_Gull	1	Commuting	Commuting S at 10m
15/07/2019	BH_BlackHeaded_Gull	8	Foraging	Foraging around bridge
08/08/2019	BH_BlackHeaded_Gull	9	Foraging	Foraging around bridge
08/08/2019	BH_BlackHeaded_Gull	8	Foraging	-
08/08/2019	BH_BlackHeaded_Gull	1	Foraging	Foraging over Parteen @ 5-10m
09/08/2019	BH_BlackHeaded_Gull	11	Foraging	Foraging around bridge
09/08/2019	BH_BlackHeaded_Gull	4	Foraging	-
09/08/2019	BH_BlackHeaded_Gull	3	Foraging	M, F and Juveniles, confirmed breeding status

Herring Gull (HG)

Date	Species	Abundance	Activity	Notes
17/07/2019	HG Herring Gull	1	Foraging	Foraging around bridge
15/07/2019	HG Herring Gull	1	Commuting	Commuting S at 10m
15/07/2019	HG Herring Gull	1	Foraging	Foraging around bridge
15/07/2019	HG Herring Gull	1	Commuting	Commuting S at 10m
08/08/2019	HG Herring Gull	1	Foraging	Foraging around bridge
08/08/2019	HG Herring Gull	1	Foraging	
09/09/2019	HG Herring Gull	1	Foraging	Foraging around bridge
09/09/2019	HG Herring Gull	1		

Tufted Duck (TU)

Date	Species	Abundance	Activity	Notes
29/04/2019	TU Tufted Duck	2	Foraging	M and F. Probably breeding
29/04/2019	TU Tufted Duck	2	Foraging	M and F. Probably breeding
29/04/2019	TU Tufted Duck	2	Foraging	
24/05/2019	TU Tufted Duck	1	Loafing	

Kingfisher (KF)

Date	Species	Abundance	Activity	Notes
22/05/2019	KF Kingfisher	1	Calling from hawthorn branch	
22/05/2019	KF Kingfisher	1		Adult
22/05/2019	KF Kingfisher	1		
31/05/2019	KF Kingfisher	1	Commuting	Adult
09/06/2019	KF Kingfisher	1	Heard in woodland	

Sand Martin (SM)

Date	Species	Abundance	Activity	Notes
29/04/2019	SM_Sand_Martin	1	Flying	
30/04/2019	SM_Sand_Martin	1		
30/04/2019	SM_Sand_Martin	1	Flying	
01/04/2019	SM_Sand_Martin	1		
22/05/2019	SM_Sand_Martin	1		
29/05/2019	SM_Sand_Martin	-	Colony with 100 nest sites in a quarry	Seen from the road
12/06/2019	SM_Sand_Martin	-	Colony with 100 nest sites in a quarry	Seen from the road
15/07/2019	SM_Sand_Martin	1		

Kestrel (K.)

Date	Species	Abundance	Activity	Notes
01/05/2019	K. Kestrel	1	Hunting	
27/05/2019	K. Kestrel	1	Commuting	
29/05/2019	K. Kestrel	1	Hunting hovering	Adult male
11/06/2019	K. Kestrel	1	Commuting	Male

Peregrine (PE)

Date	Species	Abundance	Activity	Notes
31/05/2019	PE_Peregrine	1	Hunting. Descended from altitude and tuned towards woodland and buildings.	Adult male

Sparrowhawk (SH)

Date	Species	Abundance	Activity	Notes
29/04/2019	SH_Sparrowhawk	1	Flying	Male
30/04/2019	SH_Sparrowhawk	1	Flying	
02/05/2019	SH_Sparrowhawk	1	Hunting	
23/05/2019	SH_Sparrowhawk		Juvenile blackbird feathers found on ground and left after plucking	
28/05/2019	SH_Sparrowhawk	1	Carrying prey back to suspected nest site	Adult

Barn Owl (BO)

Date	Species	Abundance	Activity	Notes
19/06/2019	BO Barn Owl	1	Flying E from the collapsed roof of the building. Possibly roosting here.	Two story abandoned building

Breeding Bird Survey Results – 2020

Table 1: Vantage Point Count Data Recorded during Breeding Birds Surveys at Parteen Basin in 2020

Location and Month	BH	CA	CN	CS	CU	ET	GB	GG	GJ	GL	H.	K.	KF	LB	MA	MH	MS	SN	TE	Grand Total
Ardcloony	89	74	3	1	2	0	0	4	14	4	0	1	0	34	39	1	70	2	0	338
Jul	4	20	3	0	2	0	0	1	0	4	0	1	0	13	13	1	8	2	0	72
Aug	56	26	0	1	0	0	0	3	14	0	0	0	0	18	21	0	15	0	0	154
Sep	29	28	0	0	0	0	0	0	0	0	0	0	0	3	5	0	47	0	0	112
Clarisford	68	17	5	0	0	6	5	0	0	0	2	2	2	6	6	0	13	0	1	133
Jul	29	6	0	0	0	6	5	0	0	0	2	1	0	1	5	0	9	0	1	65
Aug	26	7	5	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	0	43
Sep	13	4	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	25
Grand Total	157	91	8	1	2	6	5	4	14	4	2	3	2	40	45	1	83	2	1	471

Table 2: Vantage Point Count Data Recorded during Breeding Birds Surveys at 38kV Kildoorus VP in 2020

Location and Month	BH	CA	CM	H.	K.	LB	MA	Grand Total
Kildoorus	53	56	1	2	3	24	2	141
Jul	13	38	0	2	0	0	2	55
Aug	31	18	0	0	3	17	0	69
Sep	9	0	1	0	0	7	0	17
Grand Total	53	56	1	2	3	24	2	141

Breeding Bird Survey Results – 2021

Table 1: Lowland Wader Survey Point Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2021

Location	BH	BZ	CA	CO	CS	GG	GJ	GP	H.	K.	KF	L.	LG	MA	MH	ML	MP	MS	PE	RP	SH	SM	SN	SV	T.	TU	WK	Y.	Total
Ballycommon, Co. Tipperary														2	2		1						3					4	12
Ballycon, Co. Offaly		2			1			1	1					2			1												8
Cushaling, Co. Offaly		2												4		1			2										13
Derryvarrogue, Co. Kildare		3												1									4						11
Druminascart, Co. Tipperary	1			1													1	4									1	8	
Inchabeg, Co. Tipperary									1								2						3						6
Island, Co. Offaly		4							1	1		6	1	11			5			2		40	6						84
Lough Ourna	32 2					2								2										3		5			334
Lullybeg, Co. Kildare											1																		2
Parteen	1		9			7	6		1		3		1	48	12		2	89								16			209
Rathlumber, Co. Offaly		1										3		1			3												16
Ticknevin, Co. Kildare		3																											5
Timahoe East, Co. Kildare									1			9		9							1		6		4		7		40
Timahoe West, Co. Kildare		1								1				2													5		13
Grand Total	324	16	9	1	1	9	6	1	5	2	4	18	2	82	14	1	15	93	2	2	1	40	22	3	4	21	12	5	762

Table 2: Lowland Wader Survey Flightline Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2021

Location	BH	BZ	CA	GG	GJ	GL	H.	K.	KF	MA	SH	SV	T.	TU	Grand Total
Ballyanny, Co. Tipperary		2													2
Ballycommon, Co. Tipperary											1				1
Ballycon, Co. Offaly		1						1							2
Cushaling, Co. Offaly								1							1
Druminascart, Co. Tipperary		1													1
Island, Co. Offaly		2													2
Parteen	1		31	1	22	1	3		5	22		2	1	5	94
Grand Total	1	6	31	1	22	1	3	2	5	22	1	2	1	5	103

Table 3: VP Count Data Recorded during Breeding Birds Surveys at Parteen Basin in 2021

VP	BH	BZ	CA	CS	CU	GG	GJ	H	KF	L.	LB	MA	MS	PE	RK	TU	Grand Total
Ardcloony	65		43	2	5		32		1	5	7	64	53	2	3	11	293
Jul	12		32		5				1		2	10	5	2	3	9	81
Aug	38		4	2						5	3	54	33				139
Sep	15		7				32				2		15			2	73
Clarisford Park	66	1	12			1	22	1	5		3	15	48				174
Jul	29	1	2			1			1			12	16				62
Aug	20		2						4		1		2				29
Sep	17		8				22	1			2	3	30				83
Grand Total	131	1	55	2	5	1	54	1	6	5	10	79	101	2	3	11	467

Table 4: 38kV VP Count Data Recorded during Breeding Birds Surveys at Lower River Shannon in 2021

Month	BH	BZ	CA	CU	CU or WM	GJ	H.	HG	K.	LB	MA	MH	MS	SH	WM	Grand Total
Apr	6	1	35			4	6		1		6		4		75	138
May			27		12	4	1		1		5			2		52
Jun	4		20				1	1					3			29
Jul	22		14	1						1	9	1	7			55
Aug	19		1				2		1	2	9					34
Sep	12		2			7	1				21	7	7			57
Grand Total	63	1	99	1	12	15	11	1	3	3	50	8	21	2	75	365

Table 5: Total Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2021

Survey Type	BH	BZ	CA	CO	CS	CU	CU or WM	GG	GJ	GL	GP	H.	HG	K.	KF	L.	LB	LG	MA	MH	ML	MP	MS	PE	RP	RK	SH	SM	SN	SV	T.	TU	WM	WK	Y.	Grand Total
LWS Point Data	324	16	9	1	1	0	0	9	6	0	1	5	0	2	4	18	0	2	82	14	1	15	93	2	2	0	1	40	22	3	4	21	0	12	5	762
LWS Flightline Data	1	6	31	0	0	0	0	1	22	1	0	3	0	2	5	0	0	0	22	0	0	0	0	0	0	0	1	0	0	2	1	5	0	0	0	103
VP Counts	131	1	55	0	2	5	0	1	54	0	0	1	0	0	6	5	10	0	79	0	0	0	101	2	0	3	0	0	0	0	0	11	0	0	0	467
38kV VP Counts	63	1	99	0	0	1	12	0	15	0	0	11	1	2	0	0	3	0	50	8	0	0	21	0	0	0	2	0	0	0	0	0	75	0	0	365
Grand Total	519	24	194	1	3	6	12	11	97	1	1	20	1	6	15	23	13	2	233	22	1	15	215	4	2	3	4	40	22	5	5	37	75	12	5	1697

Lowland Wader Survey Point Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2021

Black-headed Gull (BH)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Black-headed Gull	1		Loafing	Unknown	19/04/2021
Black-headed Gull	270	Adults	Approx 270 birds, several of which flying around lake. One pair observed mating	Probable	20/04/2021
Black-headed Gull	10	Adult	At least 10 birds sitting on nests in reeds in this area	Confirmed	11/05/2021
Black-headed Gull	30	Adult	At least 30 birds sitting on nests in reeds in this area	Confirmed	11/05/2021
Black-headed Gull	7	Adult	At least 7 birds sitting on nests in reeds in this area	Confirmed	11/05/2021
Black-headed Gull	5	Adult	At least 5 birds sitting on nests in reeds in this area. Distant view so possibly more in reeds	Confirmed	11/05/2021
Black-headed Gull	1	Adult	Feeding	Unknown	02/06/2021

Cormorant (CA)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Cormorant	1	Juv	Drying wings	Unknown	19/04/2021
Cormorant	1	1	Perched on stake in water	Unknown	13/05/2021
Cormorant	2	Adult	Perched on stake in water	Unknown	13/05/2021
Cormorant	1		On telephone pole	Unknown	02/06/2021
Cormorant	3		Flushed by boat	Unknown	02/06/2021
Cormorant	1			Unknown	02/06/2021

Common Sandpiper (CS)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Common Sandpiper	1	Adult	Flushed from S bank of river and flew NW.	Unknown	22/04/2021

Golden Plover (GP)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Golden Plover	1	Adult	On exposed peat. Possibly feeding. Likely on migration	Unknown	22/04/2021

Great Crested Grebe (GG)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
GG	1		Foraging	Possible	19/04/2021
GG	2	1pair		Probable	19/04/2021
GG	2	Adult	Pair observed on and around nest	Confirmed	20/04/2021
GG	1	1		Possible	13/05/2021
GG	3		Foraging	Unknown	02/06/2021

Greylag Goose (GJ)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
GJ	4		Wading and flushed by boat	Possible	19/04/2021
GJ	1	Female	Flushed by boat	Possible	19/04/2021
GJ	1	Female	Flushed by boat	Possible	19/04/2021

Kestrel (K.)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Kestrel	1	Adult male	Hunting	Unknown	21/04/2021
Kestrel	1	Adult male	Hovering/hunting over bog	Unknown	11/06/2021

Kingfisher (KF)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Kingfisher	1		Flying	Unknown	19/04/2021
Kingfisher	1		Perched on tree	Unknown	02/06/2021
Kingfisher	1	Male	Foraging	Unknown	02/06/2021
Kingfisher	1	Adult	Flew across path towards river Cushaling	Unknown	18/05/2021

Lapwing (L.)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Lapwing	2	Adult	Calling and flying in this area, clearly agitated by surveyors' presence. Possible nest nearby.	Probable	12/05/2021
Lapwing	2	Adult	Second pair to be recorded in area. Agitated call and display flight in suitable breeding habitat.	Probable	12/05/2021
Lapwing	2	Adult	One bird remaining in area. Other bird fly SW over PB4 out of view. No distraction displaying or calling from either bird. Remaining bird appeared to be a juv, lacking head crest and breeding plumage	Probable	03/06/2021
Lapwing	2		Flying/circling over disturbed ground, same location as 2019	Probable	27/04/2021
Lapwing	3	Adult	Display flight	Probable	24/04/2021
Lapwing	3	Adult	Display flight	Probable	24/04/2021
Lapwing	1		Flying	Possible	28/04/2021
Lapwing	1	Adult	On peat lands - 2 birds present in April. If breeding took place likely that nest/young were predated	Possible	09/06/2021
Lapwing	2	Adult	Calling over wetland pools	Probable	16/05/2021

Merlin (ML)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Merlin	1		Seen for 3 seconds	Possible	10/06/2021

Mute Swan (MS)

Bird Species	Number of Birds	Sex/ Age	Activity	Breeding Status	Date
Mute Swan	1	Female	On nest	Confirmed	19/04/2021
Mute Swan	2	2 juveniles		Unknown	19/04/2021
Mute Swan	2			Probable	19/04/2021
Mute Swan	2	1 pair		Probable	19/04/2021
Mute Swan	2	1 adult and one juv from 2020		Unknown	19/04/2021
Mute Swan	2	1 pair		Probable	19/04/2021
Mute Swan	2	1 pair		Probable	19/04/2021
Mute Swan	1	Female	On nest	Confirmed	19/04/2021
Mute Swan	2	Female	On nest	Confirmed	19/04/2021
Mute Swan	2	1 pair		Probable	19/04/2021
Mute Swan	2	Adult and sub-adult	Pair feeding in middle of agricultural grassland	Unknown	20/04/2021
Mute Swan	2	Adult	Feeding	Unknown	11/05/2021
Mute Swan	9		On nest. 2 adults and 7 cygnets	Confirmed	13/05/2021
Mute Swan	2		In water	Unknown	13/05/2021
Mute Swan	2	Male and Female	On water	Unknown	13/05/2021
Mute Swan	1	1 adult and one juv		Unknown	13/05/2021
Mute Swan	6	M and F		Probable	13/05/2021
Mute Swan	2	1 pair	On nest	Confirmed	13/05/2021
Mute Swan	1	1 pair		Probable	13/05/2021
Mute Swan	1	Female	On nest	Confirmed	13/05/2021
Mute Swan	1	Female	On nest	Confirmed	13/05/2021
Mute Swan	1	Female		Unknown	13/05/2021
Mute Swan	1	Female		Unknown	13/05/2021
Mute Swan	2		1 pair foraging	Unknown	13/05/2021
Mute Swan	2	1 adult and 1 subadult	Foraging	Probable	13/05/2021
Mute Swan	1		On nest	Confirmed	13/05/2021
Mute Swan	1		Foraging	Unknown	13/05/2021
Mute Swan	2		Foraging	Unknown	13/05/2021
Mute Swan	1		Foraging	Unknown	13/05/2021
Mute Swan	8		Foraging. 6 adults and 2 sub adults	Unknown	13/05/2021
Mute Swan	6		Sleeping	Unknown	02/06/2021
Mute Swan	2	2		Probable	02/06/2021

Bird Species	Number of Birds	Sex/ Age	Activity	Breeding Status	Date
Mute Swan	2	1 pair	On nest	Confirmed	02/06/2021
Mute Swan	1	1 pair		Probable	02/06/2021
Mute Swan	1	Female	On nest with one visible cygnet	Confirmed	19/04/2021
Mute Swan	3	1 adult with 2 cygnets		Confirmed	02/06/2021
Mute Swan	1		Loafing	Unknown	02/06/2021
Mute Swan	4			Possible	02/06/2021
Mute Swan	7		2 adults 5 cygnets	Confirmed	02/06/2021

Ringed Plover (RP)

Bird Species	Number of Birds	Sex/ Age	Activity	Breeding Status	Date
Ringed Plover	2	Adult	Pair feeding in suitable breeding habitat	Probable	12/05/2021

Shoveler (SV)

Bird Species	Number of Birds	Sex/ Age	Activity	Breeding Status	Date
SV	3	2M + 1F	Feeding and loafing	Probable	20/04/2021

Snipe (SN)

Bird Species	Number of Birds	Sex/ Age	Activity	Breeding Status	Date
Snipe	1	Adult	Flushed. In suitable breeding habitat	Possible	20/04/2021
Snipe	1	Adult	Flushed from suitable habitat	Possible	20/04/2021
Snipe	1	Adult	Feeding then flushed. In suitable habitat	Possible	20/04/2021
Snipe	1	Adult	Flushed	Possible	20/04/2021
Snipe	2	Adult	Flushed	Possible	20/04/2021
Snipe	1	Adult	Flushed and flew E. Possible breeding. In suitable habitat	Possible	21/04/2021
Snipe	1	Adult	Likely feeding along drainage ditch, before being flushed by surveyor.	Unknown	22/04/2021
Snipe	1	Adult male	Chipping and drumming display	Probable	12/05/2021
Snipe	1	Adult male	Chipping flight	Probable	13/05/2021
Snipe	1	Adult male	Chipping and displaying in suitable breeding habitat, on return visit	Probable	03/06/2021

Bird Species	Number of Birds	Sex/ Age	Activity	Breeding Status	Date
Snipe	2		Calling from reed bed	Possible	24/04/2021
Snipe	1		Chipping from undergrowth	Possible	28/04/2021
Snipe	1		Not seen - calling and chipping	Possible	25/04/2021
Snipe	1		Not seen - calling and chipping	Possible	25/04/2021
Snipe	1		Drumming at river crossing	Probable	11/06/2021
Snipe	1	Adult	Not seen, heard chipping	Possible	11/06/2021
Snipe	1	Adult	Not seen, heard chipping	Possible	11/06/2021
Snipe	2	Adult	Pair present in 'island' in cutaway bog, calling over 1 hr	Probable	11/06/2021

Woodcock (WK)

Location Name	Date	BTO Code	Species	Time	Abundance	Comments
Derrycrib	11/05/2021	WK	Woodcock	21:37	1	Heard roding to west of WD4
Timahoe	12/05/2021	WK	Woodcock	20:15	1	Heard roding from WD4 to E of site
Timahoe	12/05/2021	WK	Woodcock	22:12	1	Heard roding to S of VP from scrub area
Timahoe	02/06/2021	WK	Woodcock	21:20	1	Male Roding east
Timahoe	02/06/2021	WK	Woodcock	21:29	1	Male Roding east
Timahoe	02/06/2021	WK	Woodcock	22:07	1	Male Roding
Timahoe	02/06/2021	WK	Woodcock	22:17	2	In flight, calling
Derrycrib	22/06/2021	WK	Woodcock	22:23	1	Heard roding N of VP
Derrycrib	22/06/2021	WK	Woodcock	22:24	1	Heard roding SE of VP
Derrycrib	22/06/2021	WK	Woodcock	22:44	1	Seen flying S over VP, heard roding, 13m above ground
Derrycrib	22/06/2021	WK	Woodcock	22:54	2	2 WK flying N over VP, calling, 12m above ground
Timahoe	23/05/2021	WK	Woodcock	22:11	1	Flew SW, roding over trees, 12m above ground
Timahoe	23/05/2021	WK	Woodcock	22:19	1	Flew NE, roding above tree, 11m above ground
Timahoe	23/05/2021	WK	Woodcock	22:28	1	Heard roding to N of VP, not seen
Timahoe	23/05/2021	WK	Woodcock	22:31	1	Flew S, roding above trees, 12m above ground
Timahoe	23/05/2021	WK	Woodcock	22:37	1	Flew NNE, roding above trees, 12m above ground
Inchabeg	02/06/2021	WK	Woodcock	22:47	1	WK heard roding over conifers
Drehid	19/05/2021	WK	Woodcock	21:25	1	Roding over tree
Drehid	19/05/2021	WK	Woodcock	21:30	1	Roding Short distance 30-50m
Drehid	19/05/2021	WK	Woodcock	21:35	2	Roding Short distance 30-50m

Location Name	Date	BTO Code	Species	Time	Abundance	Comments
Drehid	19/05/2021	WK	Woodcock	21:40	1	Roding Short distance 30-50m

Tufted Duck (TU)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Tufted Duck	3	2 M 1 F		Unknown	19/04/2021
Tufted Duck	13	Few females with the majority males		Unknown	19/04/2021
Tufted Duck	5	4M and 1F	Feeding in suitable habitat	Possible	20/04/2021

Sand Martin (SM)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Sand Martin	40	Adults	Flying and calling near to potential suitable breeding habitat. No nesting colony visible in area	Possible	21/04/2021

Buzzard (BZ)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
BZ	1	Adult	Hunting	Unknown	21/04/2021
BZ	1	Adult	Display flight and calling over agricultural field. Suitable nesting habitat within area	Probable	22/04/2021
BZ	1	Adult	Soaring over bog and woodland	Possible	26/04/2021
BZ	1	Adult	Soaring	Possible	26/04/2021
BZ	1		Flew over woodland and farm buildings	Possible	27/04/2021
BZ	1	Adult	Soaring	Unknown	27/04/2021
BZ	2	Adult	Pair soaring together	Unknown	27/04/2021
BZ	1	Adult	Flew out from small stand of trees, seen for 10 seconds	Possible	24/04/2021
BZ	1	Adult	Soaring above bog woodland	Possible	25/04/2021
BZ	1	Adult	Soaring above bog woodland	Possible	25/04/2021
BZ	2		Pair soaring together	Unknown	17/05/2021

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
BZ	1	Adult	Soaring	Unknown	18/05/2021
BZ	1	Adult	Soaring	Unknown	18/05/2021
BZ	1	Adult	Flew along tree line	Possible	16/05/2021

Peregrine (PE)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Peregrine	2	Male and Female	On nest and Edenderry power station	Probable	27/04/2021

Sparrowhawk (SH)

Bird Species	Number of Birds	Sex/Age	Activity	Breeding Status	Date
Sparrowhawk	1	Male	Hunting	Possible	28/04/2021

VP Count Data Recorded during Breeding Birds Surveys at Parteen Basin in 2021

Parteen VP Survey Results July 2021															
VP	Date	Observer	Observation/ Flight Number	Observation Time	BTO Code	Number	Fly	On Water	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Notes
Clarisford Park	05/07/2021	JS	1	13:50	MS	6	No	Yes	No	-	No	No	No	Within	On arrival, one adult and 5 juv, swimming on water
Clarisford Park	05/07/2021	JS	2	13:50	MA	4	No	Yes	No	-	No	No	No	Within	On arrival, adult female and 4 ducklings
Clarisford Park	05/07/2021	JS	3	13:50	MS	3	No	Yes	No	-	No	No	No	Within	On arrival, close to abstraction point
Clarisford Park	05/07/2021	JS	4	13:52	BH	1	Yes	No	No	S	No	No	Yes	Within	Flew from Killaloe direction, heading S along W bank, occasionally dip feeding in water
Clarisford Park	05/07/2021	JS	5	13:57	BH	2	Yes	No	No	N	Yes	No	No	Within	Flew up along W W shore occasionally dip feeding in water towards Killaloe o.o.v.
Clarisford Park	05/07/2021	JS	6	13:58	BH	1	Yes	No	No	N	Yes	No	No	Within	Flew up along E shore towards Killaloe
Clarisford Park	05/07/2021	JS	7	14:06	BH	2	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4
Clarisford Park	05/07/2021	JS	8	14:10	BH	1	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4

Parteen VP Survey Results July 2021

VP	Date	Observer	Observation/ Flight Number	Observation Time	BTO Code	Number	Fly	On Water	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Notes
Clarisford Park	05/07/2021	JS	9	14:15	BH	3	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4
Clarisford Park	05/07/2021	JS	10	14:22	BH	1	Yes	No	No	N	Yes	No	No	Within	Flight similar to ref 5
Clarisford Park	05/07/2021	JS	11	14:25	BH	1	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4
Clarisford Park	05/07/2021	JS	12	14:37	BH	3	Yes	No	No	N	Yes	No	No	Within	Flight similar to ref 5
Clarisford Park	05/07/2021	JS	13	14:48	MA	1	Yes	No	No	W	No	Yes	No	Within	Flight within basin, flew from E to W. Female
Clarisford Park	05/07/2021	JS	14	15:02	BH	1	Yes	No	No	N	Yes	No	No	Within	Flight similar to ref 5
Clarisford Park	05/07/2021	JS	15	15:11	BZ	1	Yes	No	No	NE	No	No	No	Outside	Buzzard hunting over ESB lands before drifting NE o.o.v. behind forestry
Clarisford Park	05/07/2021	JS	16	15:31	BH	1	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4
Clarisford Park	05/07/2021	JS	17	15:34	CA	1	Yes	No	No	S	No	Yes	No	Within	Flight within basin, left water and flew S to marker bouy where it began to dry
Clarisford Park	05/07/2021	JS	18	15:48	KF	1	Yes	No	No	E	Yes	No	No	Within	Flew from W shore to E o.o.v.
Clarisford Park	05/07/2021	JS	19	15:52	BH	1	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4
Clarisford Park	05/07/2021	JS	20	15:59	BH	3	Yes	No	No	N	Yes	No	No	Within	Flight similar to ref 5
Clarisford Park	05/07/2021	JS	21	16:20	BH	2	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4
Clarisford Park	05/07/2021	JS	22	16:31	BH	2	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4
Clarisford Park	05/07/2021	JS	23	16:47	BH	1	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 4
Clarisford Park	06/07/2021	JS	1	05:30	MS	7	No	Yes	No	-	No	No	No	Within	On arrival family of swans, 2 adults and 5 cygnets swimming and feeding on water
Clarisford Park	06/07/2021	JS	2	05:30	MA	7	No	Yes	No	-	No	No	No	Within	On arrival several ducks, swam for open water into reeds, similar location to ref 1
Clarisford Park	06/07/2021	JS	3	05:30	GG	1	No	Yes	No	-	No	No	No	Within	On arrival feeding in water, same location as ref 1
Clarisford Park	06/07/2021	JS	4	05:54	BH	2	Yes	No	No	S	No	No	Yes	Within	Pair flew close to shore and continued down W bank till o.o.v
Clarisford Park	06/07/2021	JS	5	06:34	CA	1	Yes	No	No	N	Yes	No	No	Within	Flew directly up centre of lake, heading towards Killaloe
Clarisford Park	06/07/2021	JS	6	07:25	BH	1	Yes	No	No	S	No	No	Yes	Within	Fligh similar to ref 4
Ardcloony	07/07/2021	JS	1	05:30	TU	9	No	Yes	No	-	No	No	No	Within	Small raft feeding on water slowly drifting N. seen on arrival
Ardcloony	07/07/2021	JS	2	05:30	MA	10	No	Yes	No	-	No	No	No	Within	Seen on arrival. MA roosting and feeding around spit to N of VP
Ardcloony	07/07/2021	JS	3	05:34	CA	1	Yes	No	No	SW	No	No	Yes	Within	High over water, over weir
Ardcloony	07/07/2021	JS	4	05:30	CA	14	No	Yes	No	-	No	No	No	Within	Seen on arrival, CA roosting in trees! on smallest wooded island
Ardcloony	07/07/2021	JS	5	05:47	MS	4	No	Yes	No	-	No	No	No	Within	Small herd of swans foraging along shore, close to abstraction point
Ardcloony	07/07/2021	JS	6	06:24	CU	2	Yes	No	Yes	SW	No	No	No	Within	Seen flying and calling, high above water, commuting D/S. Flew over weir and down W bank of canal
Ardcloony	07/07/2021	JS	7	06:26	RK	2	Yes	No	Yes	SW	No	No	No	Within	First heard calling, then seen flying high above water, then headed N, turned suddenly and flew SW

Parteen VP Survey Results July 2021

VP	Date	Observer	Observation/ Flight Number	Observation Time	BTO Code	Number	Fly	On Water	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Notes
Ardcloony	07/07/2021	JS	8	06:34	CA	3	Yes	No	No	N	No	Yes	No	Within	Flew from canal, low over water landing in water just N of spit
Ardcloony	07/07/2021	JS	9	07:01	BH	5	Yes	No	No	N	No	No	No	Within	Small flock commuting up along E shore
Ardcloony	07/07/2021	JS	10	07:01	CA	1	Yes	No	No	N	No	No	No	Within	Flight within basin, left water and flew to small, wooded island
Ardcloony	07/07/2021	JS	11	07:12	CU	1	Yes	No	Yes	NE	No	No	No	Within	Seen flying and calling high above water, gave display/long call over water then flew NE o.o.v.
Ardcloony	07/07/2021	JS	12	07:15	LB	1	Yes	No	No	S	No	No	Yes	Within	Commuting D/S over weir and down River Shannon
Ardcloony	07/07/2021	JS	13	07:27	BH	2	Yes	No	No	S	No	No	Yes	Within	Commuting D/S over weir and down canal
Ardcloony	07/07/2021	JS	14	07:37	CA	2	Yes	No	No	N	No	Yes	No	Within	Commuting up along W bank
Ardcloony	07/07/2021	JS	15	07:50	BH	1	Yes	No	No	S	No	No	Yes	Within	Flight similar to ref 13
Ardcloony	07/07/2021	JS	16	08:12	CA	1	Yes	No	No	SW	No	No	Yes	Within	Left wooded island and flew over weir down canal
Ardcloony	07/07/2021	JS	1	09:00	CA	1	No	Yes	No	-	No	No	No	Within	Juv CA perched on long on spit to N of VP seen on arrival
Ardcloony	07/07/2021	JS	2	09:00	MS	1	No	Yes	No	-	No	No	No	Within	Seen on arrival, feeding on spit to N of VP as per ref 1
Ardcloony	07/07/2021	JS	3	09:25	CA	1	Yes	No	No	N	No	Yes	No	Within	Flew from canal, low over water landing behind spit
Ardcloony	07/07/2021	JS	4	09:31	CA	1	Yes	No	No	N	Yes	No	No	Within	Flew from canal high over water, heading towards Killaloe
Ardcloony	07/07/2021	JS	5	09:52	BH	2	Yes	No	No	S	No	No	Yes	Within	Flew along E shore, over weir down Shannon
Ardcloony	07/07/2021	JS	6	10:02	CA	2	Yes	No	No	SW	No	No	Yes	Within	Left water and flew down canal
Ardcloony	07/07/2021	JS	7	10:08	CA	1	Yes	No	No	SW	No	No	Yes	Within	Left water and flew down canal
Ardcloony	07/07/2021	JS	8	10:12	BH	1	Yes	No	No	S	No	No	Yes	Within	Similar to flight ref 5
Ardcloony	07/07/2021	JS	9	10:29	KF	1	Yes	No	Yes	N	No	Yes	No	Within	Flew along W bank calling, flew o.o.v. behind spit
Ardcloony	07/07/2021	JS	10	10:35	CA	2	Yes	No	No	N	No	Yes	No	Within	Flew from canal, low over water, landing close to abstraction point
Ardcloony	07/07/2021	JS	11	10:42	CU	1	Yes	No	Yes	SW	No	No	Yes	Within	Flew from NE high river water calling then over weir down canal
Ardcloony	07/07/2021	JS	12	10:45	RK	1	Yes	No	Yes	W	No	Yes	No	Within	Flew from NE low over water and calling, landed in water then onto W bank
Ardcloony	07/07/2021	JS	13	10:51	PE	1	Yes	No	No	NW	No	No	No	Within	Flew directly up centre of lake, high over water, circled bay once before drifting NW o.o.v.
Ardcloony	07/07/2021	JS	14	10:54	CU	1	Yes	No	Yes	N	No	No	No	Within	Flight within basin, first headed over on E bank before flying to W bank down to weir and back to E bank
Ardcloony	07/07/2021	JS	15	11:09	CA	1	Yes	No	No	SW	No	No	Yes	Within	Similar to flight ref 6
Ardcloony	07/07/2021	JS	16	11:22	CA	1	Yes	No	No	SW	No	No	Yes	Within	Similar to flight ref 6
Ardcloony	07/07/2021	JS	17	11:24	PE	1	Yes	No	No	E	No	No	No	Within	High above water, then dove to attack a BH who flew N. PE flew low to water then turned E, o.o.v. behind embankment
Ardcloony	07/07/2021	JS	18	11:24	BH	1	Yes	No	No	N	Yes	No	No	Within	BH left water after PE flushed it, then flew N
Ardcloony	07/07/2021	JS	19	11:44	LB	1	Yes	No	No	N	No	Yes	No	Within	Flew from Shannon, over weir then landed on spit

Parteen VP Survey Results August 2021

VP	Date	Observer	Observation/ Flight Number	Observation Time	BTO Code	Number	Fly	On Water	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Notes
Clariford Park	05/08/2021	JS	1	09:41	MS	2	No	Yes	No	—	—	—	—	Within	Pair of mute swans feeding along east bank seen on arrival
Clariford Park	05/08/2021	JS	2	09:41	CA	1	No	Yes	No	—	—	—	—	Within	Foraging in water on arrival to VP
Clariford Park	05/08/2021	JS	3	09:45	BH	1	Yes	No	No	S	No	No	Yes	Within	Flew down centre of lake heading south till out of vision
Clariford Park	05/08/2021	JS	4	09:51	BH	2	Yes	No	No	S	No	No	Yes	Within	Flew east vantage point and down west bank dip feeding along way
Clariford Park	05/08/2021	JS	5	10:11	CA	1	Yes	No	No	S	No	No	Yes	Within	Left water heading south, flew over water
Clariford Park	05/08/2021	JS	6	10:29	BH	1	Yes	No	No	N	Yes	No	No	Within	Flew up along west bank heading north
Clariford Park	05/08/2021	JS	7	11:05	KF	1	Yes	No	No	E	No	Yes	No	Within	Flight within basin, flew from reeds to west bank up and went east
Clariford Park	05/08/2021	JS	8	11:10	BH	2	Yes	No	No	S	No	No	Yes	Within	Flight as per reference 4
Clariford Park	05/08/2021	JS	9	11:25	BH	1	Yes	No	No	S	No	No	Yes	Within	Flight as per reference 4
Clariford Park	05/08/2021	JS	10	11:50	BH	1	Yes	No	No	N	Yes	No	No	Within	Flight as per reference 6
Clariford Park	05/08/2021	JS	11	11:53	BH	1	Yes	No	No	N	Yes	No	No	Within	Flew upstream along east bank
Clariford Park	05/08/2021	JS	12	12:15	BH	2	Yes	No	No	S	No	No	Yes	Within	Flight as per reference 4
Ardcloony	04/08/2021	JS	1	18:30	MA	30	No	Yes	No	—	No	No	No	Within	Large flock feeding off spit
Ardcloony	04/08/2021	JS	2	18:30	MS	14	No	Yes	No	—	No	No	No	Within	Flock feeding to the North of small islands
Ardcloony	04/08/2021	JS	3	18:31	BH	12	No	Yes	No	—	No	No	No	Within	Flock perched on small jetty north of weir
Ardcloony	04/08/2021	JS	4	19:31	MA	3	Yes	No	No	N	Yes	No	No	Within	Flew from canal, up along east bank towards Killaloe
Ardcloony	04/08/2021	JS	5	19:33	LB	1	Yes	No	No	N	Yes	No	No	Within	Flew from Shannon, up centre of lake heading north
Ardcloony	04/08/2021	JS	6	19:38	L.	5	Yes	No	Yes	—	No	Yes	No	Within	Flying within basin, left bank calling, circled 5 times and landed in same area
Ardcloony	04/08/2021	JS	7	19:49	BH	1	Yes	No	No	S	No	Yes	No	Within	Flew south along east bank then crossed lake to land on jetty in front of weir
Ardcloony	04/08/2021	JS	8	19:53	MA	1	Yes	No	No	N	Yes	No	No	Within	Flight similar to reference 4
Ardcloony	04/08/2021	JS	9	20:06	CA	1	Yes	No	No	N	No	Yes	No	Within	Left water and flew to south island where Cormorants are roosting
Ardcloony	04/08/2021	JS	10	20:14	BH	1	Yes	No	No	S	No	No	Yes	Within	Flew along east bank then crossed weir down River Shannon
Clariford Park	03/08/2021	JS	1	18:30	BH	1	Yes	No	No	N	Yes	No	No	Within	Flew along west bank and shore heading towards Killaloe
Clariford Park	03/08/2021	JS	2	18:35	BH	1	Yes	No	No	N	Yes	No	No	Within	Flight as per 1
Clariford Park	03/08/2021	JS	3	18:58	BH	1	Yes	No	No	N	Yes	No	No	Within	Flight as per 1
Clariford Park	03/08/2021	JS	4	19:12	LB	1	Yes	No	No	S	No	No	Yes	Within	Flew from Killaloe direction heading south down centre of lake
Clariford Park	03/08/2021	JS	5	19:24	BH	1	Yes	No	No	S	No	No	Yes	Within	Flew from Killaloe heading south along west bank

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VP	Date	Observer	Observation/ Flight Number	Observation Time	BTO Code	Number	Fly	On Water	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Notes
Clarisford Park	03/08/2021	JS	6	19:26	BH	1	Yes	No	No	S	No	No	Yes	Within	Flew from Killaloe heading south along east bank
Clarisford Park	03/08/2021	JS	7	19:35	BH	2	Yes	No	No	S	No	No	Yes	Within	Flight as per 5
Clarisford Park	03/08/2021	JS	8	19:57	KF	2	Yes	No	Yes	E	No	Yes	No	Within	Flight within basin, pair flew east past VP to trees out of view on north shore
Clarisford Park	03/08/2021	JS	9	20:14	KF	1	Yes	No	Yes	W	No	Yes	No	Within	Flight within basin, calling bird flew from east to west landing out of view near boat house
Clarisford Park	03/08/2021	JS	10	20:39	BH	1	Yes	No	No	W	Yes	No	No	Within	Flight as per 1
Clarisford Park	03/08/2021	JS	11	20:51	BH	1	Yes	No	No	W	Yes	No	No	Within	Flight as per 1
Ardcloony	03/08/2021	JS	1	13:05	MA	10	No	Yes	No	—	—	—	—	Within	On arrival, mallard flock roosting and feeding near spit
Ardcloony	03/08/2021	JS	2	13:05	BH	7	No	Yes	No	—	—	—	—	Within	On arrival, black headed gull flock roosting on log on spit
Ardcloony	03/08/2021	JS	3	13:07	BH	5	Yes	No	No	N	Yes	No	No	Within	Flock flew up west bank headed towards Killaloe
Ardcloony	03/08/2021	JS	4	13:08	MS	19	No	Yes	No	—	—	—	—	Within	Large flock of swans to the north of spit
Ardcloony	03/08/2021	JS	5	13:17	BH	8	Yes	No	No	N	No	Yes	No	Within	Flew from canal, along west bank landing with other black headed gulls on spit
Ardcloony	03/08/2021	JS	6	13:19	BH	2	Yes	No	No	S	No	No	Yes	Within	Flew from spit heading down River Shannon
Ardcloony	03/08/2021	JS	7	13:37	LB	1	Yes	No	No	N	Yes	No	No	Within	Flew from Shannon towards spit then continued north
Ardcloony	03/08/2021	JS	8	14:09	CA	2	Yes	No	No	NW	No	Yes	No	Within	Flight within basin, flushed by boat and flew northwest behind spit
Ardcloony	03/08/2021	JS	9	14:17	LB	1	Yes	No	No	N	Yes	No	No	Within	Flew from Shannon along east bank towards Killaloe
Ardcloony	03/08/2021	JS	10	14:19	CS	1	Yes	No	No	N	No	Yes	No	Within	Flew along west bank to spit till out of view
Ardcloony	03/08/2021	JS	11	14:52	BH	1	Yes	No	No	N	No	Yes	No	Within	Flight as per reference 5
Ardcloony	03/08/2021	JS	12	15:02	BH	1	Yes	No	No	S	No	No	Yes	Within	Left spit, flew along west bank down canal
Ardcloony	03/08/2021	JS	13	15:15	CA	1	Yes	No	No	S	No	No	Yes	Within	Left water and flew down Shannon
Ardcloony	03/08/2021	JS	14	15:28	MA	10	Yes	No	No	N	No	Yes	No	Within	Flushed by walker on spit, left water and flew N behind spit
Ardcloony	03/08/2021	JS	15	15:45	CS	1	Yes	No	No	N	No	Yes	No	Within	Flew along west bank landing near spit

Parteen VP Survey Results September 2021

VP	Date	Observer	Observation/ Flight Number	Observation Time	BTO Code	Number	Fly	On Water	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Notes
Ardcloony	02/09/2021	JC	1	06:44	MS	5	No	Yes	No	—	No	No	No	Within	5 adults on water
Ardcloony	02/09/2021	JC	2	06:45	BH	1	Yes	No	No	N	Yes	No	No	Within	Flew N and went o.o.v. behind trees

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VP	Date	Observer	Observation/ Flight Number	Observation Time	BTO Code	Number	Fly	On Water	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Notes
Ardcloony	02/09/2021	JC	3	06:52	BH	1	Yes	No	No	N	No	Yes	No	Within	Short flight
Ardcloony	02/09/2021	JC	4	07:01	CA	2	Yes	No	No	NW	Yes	No	No	Within	Flying low above water
Ardcloony	02/09/2021	JC	5	07:02	TU	2	Yes	No	No	NW	Yes	No	No	Within	Flew E over VP then continued NE
Ardcloony	02/09/2021	JC	6	07:16	GJ	18	Yes	No	No	SW	No	No	Yes	Within	Flew over bridge (eastern bridge)
Ardcloony	02/09/2021	JC	7	07:26	BH	4	No	Yes	No	_	No	No	No	Within	Perched on pier
Ardcloony	02/09/2021	JC	8	07:42	LB	1	Yes	No	No	NE	No	Yes	No	Within	Flew o.o.v. behind trees
Ardcloony	02/09/2021	JC	9	07:58	GJ	4	Yes	No	No	SW	No	No	Yes	Within	Flew over bridge (western bridge)
Ardcloony	02/09/2021	JC	10	08:11	CA	1	Yes	No	No	SW	No	No	Yes	Within	flew W of bridge
Ardcloony	02/09/2021	JC	11	08:30	CA	1	No	Yes	No	_	No	No	No	Within	Hunting
Ardcloony	02/09/2021	JC	12	08:34	MS	2	No	Yes	No	_	No	No	No	Within	2 adults on water
Ardcloony	02/09/2021	JC	13	08:50	GJ	10	Yes	No	No	SW	No	No	Yes	Within	Flew over eastern bridge
Ardcloony	02/09/2021	JC	14	09:22	MS	4	No	Yes	No	_	No	No	No	Within	
Ardcloony	02/09/2021	JC	1	10:20	BH	1	No	Yes	No	_	No	No	No	Within	Perched on buoy
Ardcloony	02/09/2021	JC	2	10:21	BH	1	Yes	No	No	N	No	Yes	No	Within	Short flight, o.o.v. behind trees
Ardcloony	02/09/2021	JC	3	10:36	CA	1	No	Yes	No	_	No	No	No	Within	Hunting
Ardcloony	02/09/2021	JC	4	10:39	MS	2	No	Yes	No	_	No	No	No	Within	2 adults on water
Ardcloony	02/09/2021	JC	5	10:56	BH	2	Yes	No	No	N	No	No	No	Within	o.o.v. behind trees
Ardcloony	02/09/2021	JC	6	11:01	BH	2	No	Yes	No	_	No	No	No	Within	Perched on pier
Ardcloony	02/09/2021	JC	7	11:24	LB	1	Yes	No	No	NW	Yes	No	No	Within	
Ardcloony	02/09/2021	JC	8	11:25	CA	2	Yes	No	No	SW	No	No	Yes	Within	Flew over western bridge
Ardcloony	02/09/2021	JC	9	11:56	BH	1	Yes	No	No	N	No	No	No	Within	o.o.v. behind trees
Ardcloony	02/09/2021	JC	10	12:30	BH	1	Yes	No	No	NE	No	No	No	Within	Flew NE towards Lough Derg
Ardcloony	02/09/2021	JC	11	12:42	MS	2	No	Yes	No	_	No	No	No	Within	2 adults on water
Ardcloony	02/09/2021	JC	12	13:01	BH	1	No	Yes	No	_	No	No	No	Within	Perched on buoy (same location as 1 on map)
Clariford Park	03/09/2021	JC	1	06:47	GJ	22	Yes	No	No	NE	No	No	No	Within	Flock flew directly over VP and continues NE
Clariford Park	03/09/2021	JC	2	06:47	BH	1	Yes	No	No	E	No	Yes	No	Within	
Clariford Park	03/09/2021	JC	3	06:49	BH	1	Yes	No	No	W	No	No	Yes	Within	Flew E, turned and flew W
Clariford Park	03/09/2021	JC	4	06:52	CA	1	Yes	No	No	NE	Yes	No	No	Within	Flying low above water
Clariford Park	03/09/2021	JC	5	07:11	MS	2	No	Yes	No	_	No	No	No	Within	Adult pair on water
Clariford Park	03/09/2021	JC	6	07:16	MS	6	No	Yes	No	_	No	No	No	Within	Adult pair on water with 4 cygnets
Clariford Park	03/09/2021	JC	7	07:20	MA	3	No	Yes	No	SE	No	No	No	Within	Swam SE across lake

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VP	Date	Observer	Observation/ Flight Number	Observation Time	BTO Code	Number	Fly	On Water	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Notes
Clarisford Park	03/09/2021	JC	8	07:29	CA	1	No	Yes	No	_	No	No	No	Within	Hunting/diving
Clarisford Park	03/09/2021	JC	9	07:36	BH	1	Yes	No	No	W	No	Yes	No	Within	Flew W above basin until o.o.v.
Clarisford Park	03/09/2021	JC	10	07:38	CA	2	Yes	No	No	NE	Yes	No	No	Within	Flew NE towards Lough Derg
Clarisford Park	03/09/2021	JC	11	07:52	BH	1	Yes	No	No	NE	Yes	No	No	Within	Swooped down to drink and flew towards Lough Derg
Clarisford Park	03/09/2021	JC	12	08:09	MS	14	No	Yes	No	W	No	No	No	Within	Flock swimming together, 10 adults, 4 juveniles
Clarisford Park	03/09/2021	JC	13	08:24	H	1	Yes	No	No	NE	Yes	No	No	Within	Flew NE above water
Clarisford Park	03/09/2021	JC	14	08:54	BH	3	Yes	No	No	NE	Yes	No	No	Within	Flew approx. 15m apart
Clarisford Park	03/09/2021	JC	15	09:20	BH	1	Yes	No	No	SW	No	Yes	No	Within	Flew NE then turned and flew SW
Clarisford Park	03/09/2021	JC	1	10:15	CA	1	No	Yes	No	_	No	No	No	Within	Hunting/fishing
Clarisford Park	03/09/2021	JC	2	10:16	BH	1	Yes	No	No	NE	Yes	No	No	Within	Dipped to drink then continued flying
Clarisford Park	03/09/2021	JC	3	10:18	CA	2	Yes	No	No	SW	No	Yes	No	Within	Pair flew low over water
Clarisford Park	03/09/2021	JC	4	10:41	BH	1	Yes	No	No	NE	Yes	No	No	Within	
Clarisford Park	03/09/2021	JC	5	10:56	BH	2	Yes	No	No	SW	No	Yes	No	Within	
Clarisford Park	03/09/2021	JC	6	11:03	MS	1	No	Yes	No	_	No	No	No	Within	Adult on water
Clarisford Park	03/09/2021	JC	7	11:04	MS	4	No	Yes	No	_	No	No	No	Within	Cygnets on water
Clarisford Park	03/09/2021	JC	8	11:22	LB	1	Yes	No	No	SW	No	Yes	No	Within	
Clarisford Park	03/09/2021	JC	9	11:49	BH	1	Yes	No	No	E	Yes	No	No	Within	
Clarisford Park	03/09/2021	JC	10	11:50	MS	1	No	Yes	Yes	E	No	No	No	Within	Cygnets swam in front of VP, calling
Clarisford Park	03/09/2021	JC	11	12:09	BH	1	Yes	No	No	N	No	No	No	Within	Flew over VP
Clarisford Park	03/09/2021	JC	12	12:20	MS	2	No	Yes	No	_	No	No	No	Within	2 adults on water
Clarisford Park	03/09/2021	JC	13	12:26	LB	1	Yes	No	No	NE	No	No	No	Within	
Clarisford Park	03/09/2021	JC	14	12:29	CA	1	No	Yes	No	_	No	No	No	Within	Hunting
Clarisford Park	03/09/2021	JC	15	12:42	BH	1	Yes	No	No	NE	No	No	No	Within	
Clarisford Park	03/09/2021	JC	16	13:01	BH	2	Yes	No	No	SW	No	No	No	Within	Flew NE, turned and flew SW

38kV VP Count Data Recorded during Breeding Birds Surveys at Lower River Shannon in 2021

38kV VP Survey Results April 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location - Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	29/04/2021	RA	1	08:58	CA	1	Yes	No	No	NE	Yes	No	No	Outside	Above	20	
Kildoorus - 38kV	29/04/2021	RA	2	09:02	MS	1	Yes	No	No	S	No	No	No	Outside	Below	1	Flew from O'Briensbridge and landed in front of VP
Kildoorus - 38kV	29/04/2021	RA	2	09:03	MS	1	Yes	No	No	S	No	No	No	Outside	Below	1	Flew from O'Briensbridge and landed in front of VP
Kildoorus - 38kV	29/04/2021	RA	3	09:04	MS	2	Yes	No	No	NE	Yes	No	No	Outside	Below	10	Flew from water up to 10m to O'Briensbridge
Kildoorus - 38kV	29/04/2021	RA	4	09:16	BH	1	Yes	No	No	S	No	No	Yes	Outside	Above	50	
Kildoorus - 38kV	29/04/2021	RA	5	09:17	BZ	1	Yes	No	No	-	No	Yes	No	Outside	Above	100	Circling
Kildoorus - 38kV	29/04/2021	RA	6	09:19	CA	1	Yes	No	No	W	No	Yes	No	Outside	Above	80	
Kildoorus - 38kV	29/04/2021	RA	7	09:36	CA	1	Yes	No	No	NE	Yes	No	No	Outside	Above	30	
Kildoorus - 38kV	29/04/2021	RA	8	09:36	K.	1	Yes	No	No	E	Yes	No	No	Outside	Above	50	Commuting east
Kildoorus - 38kV	29/04/2021	RA	9	09:47	CA	2	Yes	No	No	W	No	Yes	No	Outside	Above	30	1 pair flew over S lines
Kildoorus - 38kV	29/04/2021	RA	10	09:50	CA	1	Yes	No	No	N	Yes	No	No	Outside	Above	80	
Kildoorus - 38kV	29/04/2021	RA	11	09:51	CA	1	Yes	No	No	W	No	Yes	No	Outside	Above	40	Flew over river to canal
Kildoorus - 38kV	29/04/2021	RA	12	10:02	MA	1	Yes	No	No	NE	Yes	No	No	Outside	Below	2	
Kildoorus - 38kV	29/04/2021	RA	13	10:04	CA	2	Yes	No	No	W	No	Yes	No	Outside	Below	5	
Kildoorus - 38kV	29/04/2021	RA	14	10:08	GJ	2	Yes	No	No	E	Yes	No	No	Outside	Above		Flew at collision height then above lines, then back to collision height
Kildoorus - 38kV	29/04/2021	RA	15	10:25	H.	1	Yes	No	No	E	No	No	No	Outside	Below	0	Flew from west side of river and landed on east
Kildoorus - 38kV	29/04/2021	RA	16	10:25	H.	1	Yes	No	No	W	No	No	No	Outside	Below	3	Flew from east towards side of river
Kildoorus - 38kV	29/04/2021	RA	17	10:39	GJ	2	Yes	No	No	S	No	No	Yes	Outside	Above	35	
Kildoorus - 38kV	29/04/2021	RA	18	10:58	CA	1	Yes	No	No	E	No	No	No	Within	Above	35	
Kildoorus - 38kV	29/04/2021	RA	19	11:06	CA	1	Yes	No	No	W	No	Yes	No	Outside	Above	35	
Kildoorus - 38kV	29/04/2021	RA	1	05:40	MA	1	Yes	No	No	E	Yes	No	No	Outside	Above	70	
Kildoorus - 38kV	29/04/2021	RA	2	05:43	CA	2	Yes	No	No	NW	No	Yes	No	Outside	Above	10	

38kV VP Survey Results April 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location - Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	29/04/2021	RA	3	05:47	BH	1	Yes	No	No	E	Yes	No	No	Outside	Above	80	
Kildoorus - 38kV	29/04/2021	RA	4	05:49	CA	2	Yes	No	No	E	Yes	No	No	Outside	Above	60	
Kildoorus - 38kV	29/04/2021	RA	1	05:54	BH	1	Yes	No	No	NE	Yes	No	No	Outside	Above	60	
Kildoorus - 38kV	29/04/2021	RA	5	06:03	CA	5	Yes	No	No	NE	Yes	No	No	Outside	Above	52	
Kildoorus - 38kV	29/04/2021	RA	6	06:08	CA	1	Yes	No	No	E	Yes	No	No	Outside	Above	45	
Kildoorus - 38kV	29/04/2021	RA	7	06:08	CA	1	Yes	No	No	E	Yes	No	No	Outside	Above	48	
Kildoorus - 38kV	29/04/2021	RA	8	06:11	CA	1	Yes	No	No	NW	No	Yes	No	Outside	Above	90	
Kildoorus - 38kV	29/04/2021	RA	8	06:15	CA	1	Yes	No	No	NW	No	Yes	No	Outside	Above	40	
Kildoorus - 38kV	29/04/2021	RA	4	06:15	BH	3	Yes	No	No	E	Yes	No	No	Outside	Above	50	
Kildoorus - 38kV	29/04/2021	RA	9	06:17	H.	2	Yes	No	No	W	No	No	No	Within	Below	5	Flew over water onto shore/bank
Kildoorus - 38kV	29/04/2021	RA	10	06:25	H.	1	Yes	No	No	E	Yes	No	No	Within	Below	1	Flew along water to OB bridge
Kildoorus - 38kV	29/04/2021	RA	11	06:29	H.	1	Yes	No	No	W	No	Yes	No	Within	Below	10	
Kildoorus - 38kV	29/04/2021	RA	12	06:33	CA	2	Yes	No	No	W	No	Yes	No	Outside	Above	20	Flew across river, turned back towards land
Kildoorus - 38kV	29/04/2021	RA	4	06:33	CA	1	Yes	No	No	E	Yes	No	No	Outside	Above	25	
Kildoorus - 38kV	29/04/2021	RA	13	06:35	WM	7	Yes	No	No	SW	No	No	Yes	Outside	Above	40	Flew SW along river
Kildoorus - 38kV	29/04/2021	RA	1	06:40	CA	1	Yes	No	No	E	Yes	No	No	Outside	Above	30	
Kildoorus - 38kV	29/04/2021	RA	8	06:42	CA	1	Yes	No	No	W	No	Yes	No	Outside	Above	35	
Kildoorus - 38kV	29/04/2021	RA	14	06:45	MA	2	Yes	No	No	W	No	No	No	Within	Below	-	1 pair landed in river
Kildoorus - 38kV	29/04/2021	RA	2	06:50	CA	1	Yes	No	No	W	No	Yes	No	Outside	Above	40	
Kildoorus - 38kV	29/04/2021	RA	15	06:55	WM	15	Yes	No	No	W	No	No	No	Outside	Above	60	Flying over and back between canal and river
Kildoorus - 38kV	29/04/2021	RA	16	07:02	CA	1	Yes	No	No	SW	No	Yes	No	Outside	Above	-	
Kildoorus - 38kV	29/04/2021	RA	17	07:05	CA	1	Yes	No	No	E	Yes	No	No	Outside	Above	60	
Kildoorus - 38kV	29/04/2021	RA	18	07:16	CA	2	Yes	No	No	NW	No	Yes	No	Outside	Above	-	
Kildoorus - 38kV	29/04/2021	RA	19	07:25	WM	3	Yes	No	No	E	Yes	No	No	Outside	Above	50	
Kildoorus - 38kV	29/04/2021	RA	19	07:35	WM	50	Yes	No	No	E	Yes	No	No	Outside	Above	50	
Kildoorus - 38kV	29/04/2021	RA	20	07:44	MA	2	Yes	No	No	W	No	Yes	No	Within	Below	-	
Kildoorus - 38kV	29/04/2021	RA	21	07:54	CA	1	Yes	No	No	SW	No	Yes	No	Outside	Above	60	

38kV VP Survey Results May 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Above/ Below current line	Flight height m	Notes
Kildoorus - 38kV	10/05/2021	SC		10:05	MA	1			Yes								On arrival- calling from far bank
Kildoorus - 38kV	10/05/2021	SC		10:05	CA	1		Yes									On arrival- perched on far bank
Kildoorus - 38kV	10/05/2021	SC	1	10:12	MA	1	Yes		Yes	SW			Yes	Within	Below	2	Flew downstream calling
Kildoorus - 38kV	10/05/2021	SC	2	10:16	H.	1	Yes			NE				Within	Below	2	Flew upstream, mobbed by HC.
Kildoorus - 38kV	10/05/2021	SC	3	10:42	CA	2	Yes			W		Yes		Within	Below	2	Commuting
Kildoorus - 38kV	10/05/2021	SC	4	10:45	CA	1	Yes			E			Yes	Within	Above	10	Commuting
Kildoorus - 38kV	10/05/2021	SC	5	10:51	CA	1	Yes			W		Yes		Within	Above	10	Commuting, flight line as 3
Kildoorus - 38kV	10/05/2021	SC	6	10:55	CA	1	Yes			E			Yes	Within	Above	10	Commuting, flight line as 4
Kildoorus - 38kV	10/05/2021	SC	7	11:02	CA	1	Yes			W		Yes		Within	Above	10	Commuting, flight line as 3
Kildoorus - 38kV	10/05/2021	SC	8	11:11	CA	1	Yes			E			Yes	Within	Below	1	Commuting, flight line as 2
Kildoorus - 38kV	10/05/2021	SC	9	11:15	SH	1	Yes			N				Within	Below	1	Hunting low across river and turned NE
Kildoorus - 38kV	10/05/2021	SC	10	11:16	GJ	4	Yes			W				Within	Below	0	Swam across river
Kildoorus - 38kV	10/05/2021	SC	11	12:10	K.	1	Yes							Within	Above	10	Hunting over VP and landed in conifers behind VP. Took off 1 min later, crossed river and hunted along bank before disappearing out of view.
Kildoorus - 38kV	10/05/2021	SC	12	12:22	CA	2	Yes			W			Yes	Within	Above	10	Commuting, flight line as 3
Kildoorus - 38kV	10/05/2021	SC	13	12:23	CU or WM	12	Yes			W				Within	Above	14	Flew across river, circled back and out of view. Too far to be certain which species
Kildoorus - 38kV	10/05/2021	SC	14	12:55	CA	1	Yes			SW			Yes	Within	Below	1	Commuting, flight line as 1
Kildoorus - 38kV	10/05/2021	SC		17:25	MA	2								Within	Below	0	On arrival- crossing river swimming, male and female
Kildoorus - 38kV	10/05/2021	SC	1	17:42	MA	1	Yes			S			Yes	Within	Above	10	
Kildoorus - 38kV	10/05/2021	SC	2	17:53	SH	1	Yes			SW				Within	Below	2	Flew across river carrying prey, over hedge and out of view
Kildoorus - 38kV	10/05/2021	SC	3	17:54	CA	1	Yes			SW			Yes	Within	Above	15	Flew over river towards canal

38kV VP Survey Results May 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location-Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	10/05/2021	SC	4	18:02	CA	1	Yes			NE		Yes		Within	Above	10	Commuting
Kildoorus - 38kV	10/05/2021	SC	5	18:15	CA	1	Yes			NE		Yes		Within	Above	15	Commuting, flightline as 4
Kildoorus - 38kV	10/05/2021	SC	6	18:16	CA	1	Yes			SW			Yes	Within	Above	30	Commuting, flightline as 3
Kildoorus - 38kV	10/05/2021	SC	7	18:18	CA	1	Yes			SW		Yes		Within	Above	20	Commuting, flightline as 3
Kildoorus - 38kV	10/05/2021	SC	8	18:29	CA	1	Yes			W			Yes	Within	Above	20	
Kildoorus - 38kV	10/05/2021	SC	9	18:38	CA	1	Yes			SW			Yes	Within	Above	20	Commuting, flightline as 3
Kildoorus - 38kV	10/05/2021	SC	10	18:55	CA	1	Yes			SW			Yes	Within	Above	30	Commuting, flightline as 8
Kildoorus - 38kV	10/05/2021	SC	11	19:16	CA	1	Yes			SW			Yes	Within	Above	30	Commuting, flightline as 3
Kildoorus - 38kV	10/05/2021	SC	12	19:26	CA	3	Yes			SW			Yes	Within	Above	30	Commuting, flightline as 3
Kildoorus - 38kV	10/05/2021	SC	13	19:46	CA	1	Yes			SW			Yes	Within	Above	30	Commuting, flightline as 3
Kildoorus - 38kV	10/05/2021	SC	14	19:48	CA	2	Yes			SW			Yes	Within	Above	40	Commuting, flightline as 3
Kildoorus - 38kV	10/05/2021	SC	15	19:55	CA	1	Yes			SW			Yes	Within	Above	30	Commuting, flightline as 3

38kV VP Survey Results June 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location-Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	01/06/2021	JG	1	05:39	CA	1	Yes			NE	Yes			Within	Above	30	Commuting upstream
Kildoorus - 38kV	01/06/2021	JG	2	05:55	CA	1	Yes	Yes		NE	Yes			Within	Below	1	Left perch by VP, flew downstream
Kildoorus - 38kV	01/06/2021	JG	3	06:07	MS	1	Yes	Yes		NE				Within	Below	5	Flew upstream, landed by VP and loafed
Kildoorus - 38kV	01/06/2021	JG	4	06:24	BH	3	Yes			NE	Yes			Within	Above	30	Flew over eastern bank, circled and flew N
Kildoorus - 38kV	01/06/2021	JG	5	06:49	CA	1	Yes			S			Yes	Within	Above	30	Commuting downstream
Kildoorus - 38kV	01/06/2021	JG	6	07:06	CA	1	Yes			NE	Yes			Within	Above	30	Per Flightline 1
Kildoorus - 38kV	01/06/2021	JG	7	07:08	HG	1	Yes			NE	Yes			Within	Above	30	Per Flightline 1
Kildoorus - 38kV	01/06/2021	JG	8	07:36	CA	2	Yes			NE	Yes			Within	Above	40	Per Flightline 1

38kV VP Survey Results June 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	01/06/2021	JG	9	07:42	CA	1	Yes			S			Yes	Within	Above	25	Per Flightline 5
Kildoorus - 38kV	01/06/2021	JG	10	07:52	MS	1	Yes			S			Yes	Within	Below	5	Flew low downstream
Kildoorus - 38kV	01/06/2021	JG	11	08:09	CA	1	Yes			NE	Yes			Within	Above	18	Per Flightline 1
Kildoorus - 38kV	01/06/2021	JG	12	08:59	CA	1	Yes			W				Within	Above	40	Flew W from E bank
Kildoorus - 38kV	01/06/2021	JG	13	09:01	CA	1	Yes			S			Yes	Within	Above	25	Per Flightline 5
Kildoorus - 38kV	01/06/2021	JG	14	09:23	CA	1	Yes			S			Yes	Within	Above	25	Per Flightline 5
Kildoorus - 38kV	01/06/2021	JG	15	07:43	BH	1	Yes			NE	Yes			Within	Below	8	Per Flightline 1
Kildoorus - 38kV	01/06/2021	JG	16	09:44	H.	1	Yes			S			Yes	Within	Above	25	Per Flightline 5
Kildoorus - 38kV	01/06/2021	JG	17	09:53	CA	1	Yes			NE	Yes			Within	Below	1	Per Flightline 1
Kildoorus - 38kV	01/06/2021	JG	18	10:03	CA	3	Yes			S			Yes	Within	Above	30	Per Flightline 5
Kildoorus - 38kV	01/06/2021	JG	19	10:14	CA	1	Yes			W				Within	Above	30	Per Flightline 12
Kildoorus - 38kV	01/06/2021	JG	20	10:41	CA	3	Yes			W				Within	Above	35	Per Flightline 12
Kildoorus - 38kV	01/06/2021	JG	21	10:52	CA	1	Yes			W				Within	Above	25	Per Flightline 12
Kildoorus - 38kV	01/06/2021	JG	22	11:23	MS	1	Yes			S			Yes	Within	Below	1	Per Flightline 5

38kV VP Survey Results July 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	05/07/2021	JS	1	19:09	BH	15	Yes	No	No	S	No	No	Yes	Outside	Above	60	Flock flew high over water heading D/S
Kildoorus - 38kV	05/07/2021	JS	2	19:22	MH	1	Yes	No	No	E	No	No	No	Outside	Below	1	Short flight crossing river channel ~50m U/S of OHL
Kildoorus - 38kV	05/07/2021	JS	3	09:31	MA	1	Yes	No	No	S	No	No	Yes	Outside	Above	20	Flying D/S over water and E bank over existing OHL
Kildoorus - 38kV	05/07/2021	JS	4	20:10	MA	3	No	Yes	No	S	No	No	Yes	Outside	Below	-	MA Fx3 swam past VP heading D/S till o.o.v.
Kildoorus - 38kV	05/07/2021	JS	5	21:04	CA	1	Yes	No	No	SW	No	No	Yes	Outside	Above	30	Flew over VP heading towards canal
Kildoorus - 38kV	05/07/2021	JS	6	21:08	CA	1	Yes	No	No	SW	No	No	Yes	Outside	Above	30	Flew D/S towards VP crossing OHL on E bank
Kildoorus - 38kV	05/07/2021	JS	7	21:31	CU	1	Yes	No	Yes	SW	No	No	Yes	Outside	Above	80	Heard calling and seen flying high above water, same flight as ref 6
Kildoorus - 38kV	06/07/2021	JS	1	10:45	MS	7	No	Yes	No	-	No	No	No	Outside	Below	-	On arrival 1 adult and 6 cygnets, slowly making way U/S o.o.v.

38kV VP Survey Results July 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	06/07/2021	JS	2	10:45	CA	1	No	Yes	No	-	No	No	No	Outside	Below	-	On arrival feeding on water
Kildoorus - 38kV	06/07/2021	JS	3	10:45	MA	5	No	Yes	No	-	No	No	No	Outside	Below	-	One female and 4 ducklings, slowly making way U/S swimming
Kildoorus - 38kV	06/07/2021	JS	4	10:55	CA	1	Yes	No	No	S	No	No	Yes	Outside	Below	1	Bird flushed by rower, flew D/S o.o.v.
Kildoorus - 38kV	06/07/2021	JS	5	11:51	CA	2	Yes	No	No	SW	No	No	Yes	Outside	Above	50	Flew from E crossing OHL then over river heading SW o.o.v.
Kildoorus - 38kV	06/07/2021	JS	6	12:08	CA	1	Yes	No	No	NE	No	Yes	No	Outside	Above	30	Flew from canal over OHL and continued over W bank, U/S o.o.v.
Kildoorus - 38kV	06/07/2021	JS	7	12:12	LB	1	Yes	No	No	NE	No	Yes	No	Outside	Above	20	Flew U/S
Kildoorus - 38kV	06/07/2021	JS	8	12:15	CA	1	Yes	No	No	SW	No	No	Yes	Outside	Above	20	Flew mostly over land before crossing river and heading to canal
Kildoorus - 38kV	06/07/2021	JS	9	12:28	BH	3	Yes	No	No	S	No	No	Yes	Outside	Below	10	2 juvs and 1 adult flew D/S under OHL
Kildoorus - 38kV	06/07/2021	JS	10	12:57	CA	1	Yes	No	No	SW	No	No	Yes	Outside	Above	50	Similar flight to ref 8
Kildoorus - 38kV	06/07/2021	JS	11	13:00	BH	4	Yes	No	No	S	No	No	Yes	Outside	Above	30	Similar flight to ref 9
Kildoorus - 38kV	06/07/2021	JS	12	13:07	CA	2	Yes	No	No	NW	No	Yes	No	Outside	Above	60	Flew upriver then turned towards canal o.o.v.
Kildoorus - 38kV	06/07/2021	JS	13	13:34	CA	3	Yes	No	No	SW	No	No	Yes	Outside	Above	50	similar flight to ref 9

38kV VP Survey Results August 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	05/08/2021	JS	1	06:00	MA	8	No	Yes	No	-	No	No	No	Outside	Below	-	Seen on arrival, slowly making way upstream past bulge (swimming)
Kildoorus - 38kV	05/08/2021	JS	2	06:12	CA	1	Yes	No	No	N	No	Yes	No	Outside	Above	30	Flew from canal upstream till out of vision
Kildoorus - 38kV	05/08/2021	JS	3	06:19	LB	2	Yes	No	No	N	No	Yes	No	Outside	Below	5	Flew upriver heading upstream
Kildoorus - 38kV	05/08/2021	JS	4	06:41	MA	1	Yes	No	No	S	No	No	Yes	Outside	Below	5	Flew fast and low over water past VP heading downstream
Kildoorus - 38kV	05/08/2021	JS	5	06:42	BH	1	Yes	No	No	N	No	Yes	No	Outside	Above	20	Flew past VP, crossing line, continuing upstream
Kildoorus - 38kV	05/08/2021	JS	6	07:28	BH	1	Yes	No	No	S	No	No	Yes	Outside	Below	2	Flying downstream past VP below line
Kildoorus - 38kV	05/08/2021	JS	7	07:57	BH	2	Yes	No	No	S	No	No	Yes	Outside	Below	5	Flight similar to reference 6

38kV VP Survey Results August 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	05/08/2021	JS	8	08:41	BH	1	Yes	No	No	S	No	No	Yes	Outside	Above	20	Flight similar to reference 6
Kildoorus - 38kV	04/08/2021	JS	1	14:30	BH	12	No	Yes	No	_	No	No	No	Outside	Below	_	Birds seen on arrival loafing on water near bridge (swimming)
Kildoorus - 38kV	04/08/2021	JS	2	14:50	H.	1	Yes	No	No	N	No	Yes	No	Outside	Below	2	Flew slowly along east bank under overhead line
Kildoorus - 38kV	04/08/2021	JS	3	15:11	H.	1	Yes	No	No	S	No	Yes	No	Outside	Below	1	Flew from upstream landing on metal railing on east bank
Kildoorus - 38kV	04/08/2021	JS	4	16:15	K.	1	Yes	No	No	E	No	No	Yes	Outside	Above	20	Hunting over fields across from VP, crossed over line and continued hunting
Kildoorus - 38kV	04/08/2021	JS	5	16:23	BH	1	Yes	No	No	S	No	No	Yes	Outside	Below	5	Flying along west bank dip feeding till out of vision
Kildoorus - 38kV	04/08/2021	JS	6	16:25	BH	1	Yes	No	No	N	No	Yes	No	Outside	Above	10	Flew upstream towards O'Briensbridge

38kV VP Survey Results September 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	01/09/2021	JC	1	14:00	MS	5	No	Yes	No	_	No	No	No	Outside	Below	_	2 adults, 3 juveniles
Kildoorus - 38kV	01/09/2021	JC	2	14:00	MH	4	No	Yes	No	_	No	No	No	Outside	Below	_	Swimming in and out of reeds
Kildoorus - 38kV	01/09/2021	JC	3	14:16	BH	3	Yes	Yes	No	NE, SW	No	No	No	Outside	Below	10m	1 adult landed on boat next to 2 other adults
Kildoorus - 38kV	01/09/2021	JC	4	14:28	MH	2	No	Yes	No	_	No	No	No	Outside	Below	_	Foraging among reeds
Kildoorus - 38kV	01/09/2021	JC	5	14:32	MA	2	No	Yes	No	_	No	No	No	Outside	Below	_	Walked past VP then swam S
Kildoorus - 38kV	01/09/2021	JC	6	14:56	BH	1	Yes	No	No	NE	No	Yes	No	Outside	Above	25m	Flew over bridge and continued o.o.v.
Kildoorus - 38kV	01/09/2021	JC	7	15:04	BH	1	No	Yes	No	_	No	No	No	Outside	Below	_	Perched on buoy
Kildoorus - 38kV	01/09/2021	JC	8	15:32	BH	1	No	Yes	No	_	No	No	No	Outside	Below	_	3 BH on water
Kildoorus - 38kV	01/09/2021	JC	9	15:58	MA	5	No	Yes	No	_	No	No	No	Outside	Below	_	On water in front of car park
Kildoorus - 38kV	01/09/2021	JC	10	16:55	BH	2	Yes	No	No	S	No	No	Yes	Outside	Below	12m	Flew past VP and went o.o.v. behind trees
Kildoorus - 38kV	01/09/2021	JC	1	18:04	CA	2	Yes	No	No	S	No	No	Yes	Outside	Above	30	Flew across river and o.o.v. behind trees
Kildoorus - 38kV	01/09/2021	JC	2	18:06	BH	1	Yes	No	No	N	No	Yes	No	Outside	Above	22	Flew across river and o.o.v. behind trees
Kildoorus - 38kV	01/09/2021	JC	3	18:22	GJ	7	Yes	No	No	NE	Yes	No	No	Outside	Above	50	Flew NE towards Lough Derg
Kildoorus - 38kV	01/09/2021	JC	4	18:46	MA	2	No	Yes	No	_	No	No	No	Outside	Below	_	Swam SE across river

38kV VP Survey Results September 2021

VP	Date	Observer	Observation Flight Number	Observation Time	BTO Code	Number	Fly	Perch	Calling	Bearing	Toward LD	Toward Parteen	Toward Lower River Sh.	Location- Within or Outside Basin	Above/Below current line	Flight height m	Notes
Kildoorus - 38kV	01/09/2021	JC	5	19:00	BH	1	Yes	No	No	SW	No	No	No	Outside	Below	8	Flew and landed on boat
Kildoorus - 38kV	01/09/2021	JC	6	19:08	MH	1	No	Yes	No	W	No	No	No	Outside	Below	-	Swam across river and into reeds
Kildoorus - 38kV	01/09/2021	JC	7	19:44	MS	2	No	Yes	No	-	No	No	No	Outside	Below	-	Adult pair on water
Kildoorus - 38kV	01/09/2021	JC	8	19:48	MA	4	No	Yes	No	E	No	No	No	Outside	Below	-	Swam east across river and into reeds
Kildoorus - 38kV	01/09/2021	JC	9	19:57	BH	2	Yes	No	No	S	No	No	Yes	Outside	Above	24	Flew S above river
Kildoorus - 38kV	01/09/2021	JC	10	20:09	MA	8	No	Yes	No	-	No	No	No	Outside	Below	-	Roosting on boat
Kildoorus - 38kV	01/09/2021	JC	11	20:12	H.	1	Yes	No	No	E	No	No	No	Outside	Below	10	Flew across river and landed in reeds

Breeding Bird Survey Results – 2022

Table 1: VP Count Data Recorded during Breeding Birds Surveys at Parteen Basin in 2022

VP	BH	BZ	CA	CN	CS	GJ	H	K	LB	MA	MS	XG	Grand Total
Parteen VPs (Ardcloony and Clarisford Park)	69	1	57	12	4	1	2	1	2	23	68	44	284
Jul	31	1	13	10	3		1		2	16	23	44	144
Aug	9		4	2						2	25		42
Sep	29		40		1	1	1	1		5	20		98
Grand Total	69	1	57	12	4	1	2	1	2	23	68	44	284

Table 2: 38kV VP Count Data Recorded during Breeding Birds Surveys at Lower River Shannon in 2022

Month	BH	BZ	CA	CU	CU or WM	GJ	H.	HG	K.	LB	MA	MH	MS	SH	WM	Grand Total
Apr	6	1	35			4	6		1		6		4		75	138
May			27		12	4	1		1		5			2		52
Jun	4		20				1	1					3			29
Jul	22		14	1						1	9	1	7			55
Aug	19		1				2		1	2	9					34
Sep	12		2			7	1				21	7	7			57
Grand Total	63	1	99	1	12	15	11	1	3	3	50	8	21	2	75	365

Table 3: Infrastructure VP Count Data Recorded during Breeding Birds Surveys 2022

VP	BH	BZ	GP	HG	JD	K	LB	MA	PE	SH	XG	Y	Y.	Grand Total
BPS VP		5				5	3			2		1		16
Apr		1				1								2
May							3							3

VP	BH	BZ	GP	HG	JD	K	LB	MA	PE	SH	XG	Y	Y.	Grand Total
Jul										1		1		2
Aug		3												3
Sep		1				4				1				6
BTP VP	2	8			250	1	4				1	1	6	273
Apr		1				1								2
May		1									1			2
Jun	2	4										1	3	10
Jul							2							2
Aug		2			250								3	255
Sep							2							2
TPR VP		10	440	2		5		1	2	7		4		471
Apr		1	440	1				1						443
May						1						1		2
Jun		1		1						4		2		8
Jul		2										1		3
Aug		5				2				3				10
Sep		1				2			2					5
WTP VP						1				1				2
Aug						1								1
Sep										1				1
Grand Total	2	23	440	2	250	12	7	1	2	10	1	6	6	762

Breeding Walkover Survey Point Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2022

Barn Owl (BO)

Bird Species	Number_of_	Sex_Age	Notes	Breeding Status	Date
Barn Owl	1	Adult male	Adult seen hunting, dropped to ground, rose 1 min later and flew E oov	Possible	29/06/2022
Barn Owl	0	Unknown	Old barn in corner of farm. Used by BO in past but not recently, old feather and pelts found. Could be used as roost or may have been old nest site	Possible	22/07/2022

Black-headed Gull (BH)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Black-headed Gull	1	Adult	BH flying over lake	Unknown	19/04/2022
Black-headed Gull	250	Adult	At least 250 pairs observed on nest in lake. mating also recorded and large number of unknown breeding status BH flying around lake	Confirmed	20/04/2022
Black-headed Gull	30	Adult	Number of adult birds nesting in recently rewetted PB4. At least 10 birds seen on nest, some of which appear to be on eggs.	Confirmed	19/05/2022
Black-headed Gull	1	Adult	Adult gull flying NW flying over GA1	Unknown	25/05/2022
Black-headed Gull	1	Adult	Adult flying NW over GA1 habitat	Unknown	25/05/2022
Black-headed Gull	10	Adult	Adult black headed gulls continuously flying across fields, likely coming from nearby colony	Possible	25/05/2022
Black-headed Gull	50	Males and Females	Flying above lake and nesting	Confirmed	25/05/2022
Black-headed Gull	1	Adult	-	Unknown	31/05/2022
Black-headed Gull	20	Adult and juvenile	At least 4 juvenile seen, nests recorded in previous month	Confirmed	24/06/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Black-headed Gull	60	Males and Females	Flying above lake and nesting	Confirmed	29/06/2022
Black-headed Gull	12	Adult	Adult black headed gulls continuously flying across fields, likely coming from nearby colony	Possible	29/06/2022

Black-tailed Godwit (BW)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Black-tailed Godwit	18	Adult	Small flock feeding in wet area of field	Unknown	20/04/2022

Buzzard (BZ)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Buzzard	2	Adults	-	Unknown	19/04/2022
Buzzard	1	Adult	-	Unknown	19/04/2022
Buzzard	1	Adult	BZ above Treeline and fields	Unknown	19/04/2022
Buzzard	1	Adult	Adult bird rest on fence post beside river	Unknown	26/04/2022
Buzzard	1	Adult	Adult buzzard mobbed by 2 HC	Unknown	26/04/2022
Buzzard	1	Adult	Buzzard hunting	Unknown	27/04/2022
Buzzard	1	Adult	Buzzard hunting	Unknown	27/04/2022
Buzzard	1	Adult	BZ flying over WN7, circled a few times and flew NW	Unknown	28/04/2022
Buzzard	2	Adults	Pair of BZ soaring on a thermal over cutover bog.	Unknown	29/04/2022
Buzzard	1	Adult	Adult bird seen carrying nesting material, mobbed by Jackdaws	Probable	16/05/2022
Buzzard	1	adult	Buzzard flying over	Unknown	16/05/2022
Buzzard	1	Adult	Buzzard flying over cutover bog	Unknown	17/05/2022
Buzzard	1	Adult	Left tree in WN7 and flew over woods where it was mobbed by HC, drop low to ground behind wood until oov	Unknown	18/05/2022
Buzzard	1	Adult	Adult BZ first seen flying over cutover bog then over WN7, circled over surveyor and drifted E	Unknown	19/05/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Buzzard	2	Adult	Adult pair soaring together over GA1	Unknown	25/05/2022
Buzzard	1	Adult	Buzzard being mobbed by crows	Unknown	31/05/2022
Buzzard	2	Unknown	Soaring high	Unknown	14/06/2022
Buzzard	1	Adult	Buzzard circling above field	Unknown	15/06/2022
Buzzard	1	Adult	One large adult flying low into Treeline	Unknown	15/06/2022
Buzzard	1	Adult	Adults heard and seen soaring	Unknown	16/06/2022
Buzzard	1	Adult	Adult buzzard flying circled several times, soaring on a thermal	Unknown	22/06/2022
Buzzard	2	Adult	2 adult buzzards, one smaller mobbing larger buzzard. Slowly drifted northeast. Potential suitable breeding habitat in mature WN7	Possible	23/06/2022
Buzzard	1	Adult	Buzzard soaring above grazing pasture	Unknown	29/06/2022

Common Tern (CN)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Common Tern	1	Adult	Mobbed kestrel	Unknown	27/06/2022

Cormorant (CA)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Cormorant	4	Adults	Adults resting on wooden poles, holly hen went into water	Unknown	19/04/2022
Cormorant	1	Adult	-	Unknown	19/04/2022
Cormorant	1	Adult	-	Unknown	19/04/2022
Cormorant	4	Adult	Group of adults flew east over lake	Unknown	27/06/2022
Cormorant	1	Adult	Adult flew S	Unknown	27/06/2022
Cormorant	4	Adult	Adults flew E over lake	Unknown	27/06/2022

Curlew (CU)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Curlew	2	Adult	2 adult curlew seen resting & preening in rewetted PB4. Not recorded in previous months. Possibly failed breeders or on migration	Unknown	24/06/2022

Great Crested Grebe (GG)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Great Crested Grebe	2	Adults	Pair swimming together	Possible	19/04/2022
Great Crested Grebe	1	Adult	Seen diving	Unknown	31/05/2022

Grey Heron (H.)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Grey Heron	1	Adult	Adult resting on bank	Unknown	19/04/2022
Grey Heron	1	Adult	Heron flushed from bog drain	Unknown	26/04/2022
Grey Heron	1	Adult	Adult Heron flying	Unknown	27/04/2022
Grey Heron	1	Adult	Male flying over not suitable breeding habitat	Unknown	17/05/2022
Grey Heron	1	Adult	Heron flushed from reeds	Unknown	20/05/2022
Grey Heron	1	Adult	Heron flushed from reeds	Unknown	20/05/2022
Grey Heron	1	Adult	Flushed heron from bank	Unknown	31/05/2022
Grey Heron	1	Adult	Seen in tree, then flushed	Unknown	31/05/2022
Grey Heron	1	Adult	Adult resting on bank	Unknown	31/05/2022
Grey Heron	1	Adult	Adult resting next to lake	Unknown	27/06/2022
Grey Heron	1	Adult	Adult heron flew over lake	Unknown	27/06/2022

Grey Wagtail (GL)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Grey Wagtail	1	Adult	Adult bird flushed from under bridge over Cushing River	Possible	26/04/2022

Greylag Goose (GJ)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Greylag Goose	5	Adults	5 adults in field	Unknown	19/04/2022
Greylag Goose	2	Adult	-	Unknown	19/04/2022
Greylag Goose	2	Adult	-	Unknown	19/04/2022
Greylag Goose	3	Adults	-	Unknown	19/04/2022
Greylag Goose	3	Adult	3 feral GJ flying over rewetted bog	Unknown	29/04/2022
Greylag Goose	13	4 adults and 9 goslings	Adult pair with 9 goslings on land next to lough	Confirmed	24/05/2022
Greylag Goose	2	Adult	Pair resting on wet grassland	Possible	24/05/2022
Greylag Goose	15	4 adults 11 juveniles	-	Confirmed	31/05/2022
Greylag Goose	2	Adult	Pair seen flying north	Unknown	31/05/2022

Kestrel (K.)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Kestrel	1	Adult	Hunting over small area of woodland	Unknown	19/04/2022
Kestrel	1	Adult	Adult kestrel hunting along field margin.	Unknown	20/04/2022
Kestrel	1	Adult	Kestrel flying & hunting	Unknown	28/04/2022
Kestrel	1	Adult	Adult kestrel flying	Unknown	16/05/2022
Kestrel	1	Adult	Adult soaring above Treeline	Unknown	25/05/2022
Kestrel	1	Adult	Kestrel hunting over PB4, not previously recorded. Not suitable habitat for breeding	Unknown	24/06/2022
Kestrel	1	Adult	Mobbed by terns then hunting	Unknown	27/06/2022
Kestrel	1	Adult	Adult kestrel flew east across lake	Unknown	27/06/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Kestrel	1	NA	Flying overhead and calling. Soon chased by buzzard	Unknown	24/08/2022

Kingfisher (KF)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Kingfisher	1	Adult	Adult kingfisher flying across river	Unknown	19/04/2022
Kingfisher	1	Adult	Flew into willow scrub	Unknown	19/04/2022
Kingfisher	1	Adult male	Male fishing along bank	Unknown	19/04/2022
Kingfisher	2	Adult	Adult pair flying together next to lake, no obvious nest holes	Probable	24/05/2022
Kingfisher	1	Adult	KF seen flying	Unknown	31/05/2022
Kingfisher	1	Adult	KF seen on bank	Unknown	31/05/2022
Kingfisher	1	Adult	KF seen on fence	Unknown	31/05/2022
Kingfisher	1	Adult female	KF sitting on branch in FL8, not likely a breeder, no suitable nesting habitat on pond but potential suitable peat banks in wider area that could be suitable	Unknown	21/06/2022
Kingfisher	1	Adult	KF Flushed from edge of drainage ditch, some steep banks/possible breeding habitat in area. Not recorded in this location in previous months	Possible	22/06/2022
Kingfisher	1	Adult	KF seen flying from bank	Possible	22/06/2022
Kingfisher	1	Unknown	Kingfisher spotted flying along stream then perched on branch	Unknown	26/07/2022
Kingfisher	0	Unknown	Potential old nest hole, at least 6 along south bank. One of which had a moss nest in it (possibly wren or GL). Holes 1.5m above river, approx. 50mm wide and angle up away from water. No whitewash present	Possible	28/07/2022
Kingfisher	1	Unknown	Nothing more to add	Unknown	14/09/2022

Lapwing (L.)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Lapwing	3	Adults	3 adults flew over wet grassland and left West	Unknown	19/04/2022
Lapwing	2	Adult	Pair feeding near wet area in field	Unknown	20/04/2022
Lapwing	1	adult	Single bird seen adjacent to flooded pool area in cutover bog	Possible	21/04/2022
Lapwing	2	Adult	One bird began displaying, joined by second who chased the first away	Probable	22/04/2022
Lapwing	3	Adult	3 adults flushed from recently rewetted bog. At least 1 displaying	Probable	25/04/2022
Lapwing	2	Adult pair	Pair seen in suitable habitat	Probable	25/04/2022
Lapwing	2	Adult pair	Pair seen in suitable habitat	Probable	25/04/2022
Lapwing	7	Adult	Number of adult lapwing spread over area. Lapwing recorded in this location month prior therefore territory has likely been established. Three of seven flew up to mob a HC before returning to area	Probable	18/05/2022
Lapwing	3	Adult	First heard then seen high over bog, two of the three flew north while third began calling and displaying (twists and dives in flight). Two then turned to calling bird and all three flew south. Not nesting in area where seen flying, possibly S of here.	Possible	18/05/2022
Lapwing	2	Adult	At least two birds flew up from peat and began mobbing HC	Probable	19/05/2022
Lapwing	2	Adult	At least two birds flew up from peat and began mobbing HC	Probable	19/05/2022
Lapwing	2	Adult	At least two birds flew up from peat and began mobbing HC	Probable	19/05/2022
Lapwing	3	Adult	3 adult lapwing rose from different areas of PB4 to mobbed raven	Probable	20/05/2022
Lapwing	2	Adult pair	Not previously recorded. More than likely not breeding. Rested at waters edge & flew East	Unknown	21/06/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Lapwing	11	Adult	Number of adult lapwing spread over area. Lapwing recorded in this location months prior therefore territory has likely been established. At least 3 obvious pairs. Vegetation appears to have been/shorter than previous months	Probable	21/06/2022
Lapwing	3	Adult	3 birds flying over cutover bog and scrub. No suitable breeding habitat in immediate area. Birds not recorded at this location in previous month. Likely on migration or failed breeders	Unknown	21/06/2022
Lapwing	3	Adult	flushed pair, circled and returned to the area. Not previously recorded. 3rd L. Flushed from pool	Probable	22/06/2022
Lapwing	5	adult	5 lapwing seen resting near flooded pool area in cutover bog. Recorded in previous months	Probable	24/06/2022
Lapwing	1	Adult	Flushed on PB4. Not recorded previous	Possible	24/06/2022

Lesser Black-backed Gull (LB)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Lesser Black-backed Gull	3	Adult	3 adults flying S over lake	Unknown	27/06/2022

Little Egret (ET)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Little Egret	5	Adult	2 adult Little Egrets seen resting and feeding on rewetted PB4. Not recorded in previous months	Unknown	24/06/2022

Little Grebe (LG)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Little Grebe	1	Adult unknown	Little grebe heard calling	Possible	25/04/2022
Little Grebe	1	Adult unknown	Little grebe heard calling	Possible	25/04/2022
Little Grebe	2	Adult	Adult pair observed in nest	Probable	29/04/2022
Little Grebe	1	Adult	Adult observed in nest, nest recorded previously in April	Confirmed	16/05/2022
Little Grebe	2	Adult	Pair of LG seen on newly formed lake on recently rewetted PB4	Probable	19/05/2022
Little Grebe	1	Adult	LG seen on water	Possible	20/05/2022

Mallard (MA)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Mallard	3	Males	-	Unknown	19/04/2022
Mallard	2	Adult males	Non-breeding	Unknown	19/04/2022
Mallard	1	Adult male	-	Unknown	19/04/2022
Mallard	1	Adult female	-	Unknown	19/04/2022
Mallard	2	M+F	Flew over field	Unknown	20/04/2022
Mallard	3	Male adults	3 males flushed from pond	Unknown	25/04/2022
Mallard	2	M+F	Pair flushed from bog drain, flew N	Unknown	25/04/2022
Mallard	2	Adult m + f	M & f flying	Possible	26/04/2022
Mallard	1	Adult male	Adult male mallard flying	Possible	27/04/2022
Mallard	2	Adult	2 adults flying over	Unknown	27/04/2022
Mallard	1	Adult	Mallard flushed from recently rewetted cutover bog	Unknown	29/04/2022
Mallard	9	Adult female and 8 ducklings	Female & 8 ducklings	Confirmed	16/05/2022
Mallard	8	Adult female and 7 ducklings	Female & 7 ducklings	Confirmed	16/05/2022
Mallard	2	Adult pair	Pair seen on water	Possible	31/05/2022
Mallard	2	Female	2 females flushed	Unknown	31/05/2022
Mallard	2	Adult male	2 male mallard flushed	Unknown	31/05/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Mallard	5	Adult males	5 males flushed	Unknown	31/05/2022
Mallard	1	Adult female	Adult female flushed from Reed bed	Possible	21/06/2022
Mallard	2	Adult	-	Unknown	23/06/2022
Mallard	15	Adult	-	Possible	27/06/2022
Mallard	3	Adult	3 adults in suitable nesting habitat	Unknown	27/06/2022
Mallard	3	Male, Adult	3 adults flying S over lake	Unknown	27/06/2022
Mallard	2	Adult	2 adults flying W	Unknown	27/06/2022
Mallard	4	1 adult female and 3 ducklings	Adult with three ducklings'	Confirmed	28/06/2022

Meadow Pipit (MP)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Meadow Pipit	2	Adult	Brief flight, landed in gorse	Probable	19/04/2022
Meadow Pipit	1	Adult male	MP displaying on GA1	Probable	20/04/2022
Meadow Pipit	1	Adult male	MP displaying on GA1	Probable	20/04/2022
Meadow Pipit	1	Adult	Adult seen displaying	Probable	25/04/2022
Meadow Pipit	1	Adult	Adult seen displaying	Probable	25/04/2022
Meadow Pipit	2	Adult	Adult seen displaying	Probable	25/04/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	25/04/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	25/04/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	26/04/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	26/04/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	27/04/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	27/04/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	27/04/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	29/04/2022
Meadow Pipit	0	Adult	Adult displaying	Probable	16/05/2022
Meadow Pipit	1	Adult	Adult displaying	Probable	16/05/2022
Meadow Pipit	1	Adult	Adult seen & heard calling	Possible	16/05/2022
Meadow Pipit	1	Adult male	Pipit seen displaying	Probable	17/05/2022
Meadow Pipit	1	Adult male	Pipit seen displaying	Probable	17/05/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Meadow Pipit	1	Adult male	Male calling and displaying/parachuting in suitable breeding habitat	Probable	19/05/2022
Meadow Pipit	1	Adult	Meadow pipit displaying over rewetted bog	Probable	20/05/2022
Meadow Pipit	1	Adult	MP displaying on PB4	Probable	20/05/2022
Meadow Pipit	1	Adult	MP displaying on PB4	Probable	20/05/2022
Meadow Pipit	1	Adult	MP displaying on PB4	Probable	20/05/2022
Meadow Pipit	1	Adult	MP displaying on PB4	Probable	20/05/2022
Meadow Pipit	0	Adult	Adult displaying	Probable	20/05/2022
Meadow Pipit	0	Adult	Adult displaying	Probable	20/05/2022
Meadow Pipit	1	Adult male	Adult male display flight	Probable	24/05/2022
Meadow Pipit	1	Adult male	Adult male display flight over wet grassland	Probable	24/05/2022
Meadow Pipit	1	Adult	-	Probable	16/06/2022
Meadow Pipit	1	Adult male	MP parachute display over degraded PB1	Probable	23/06/2022

Moorhen (MH)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Moorhen	2	Adults	Pair of adult moorhen	Possible	19/04/2022
Moorhen	1	Adult	Single calling adult	Unknown	20/04/2022
Moorhen	1	Adult	Moorhen seen on water	Unknown	31/05/2022

Mute Swan (MS)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Mute Swan	2	Adult	-	Unknown	19/04/2022
Mute Swan	1	Unknown	-	Unknown	19/04/2022
Mute Swan	2	Unknown	-	Unknown	19/04/2022
Mute Swan	1	Unknown	-	Unknown	19/04/2022
Mute Swan	1	Unknown	-	Unknown	19/04/2022
Mute Swan	1	Last years juvenile	-	Unknown	19/04/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Mute Swan	2	1 adult and 1 juvenile	-	Unknown	19/04/2022
Mute Swan	2	Adults	-	Unknown	19/04/2022
Mute Swan	5	Adults	-	Unknown	19/04/2022
Mute Swan	2	Adults	One on bank, one on water	Possible	19/04/2022
Mute Swan	1	Adult	-	Unknown	19/04/2022
Mute Swan	1	Adult	Female on nest	Confirmed	19/04/2022
Mute Swan	2	Female adult	Female on nest on island, male swimming nearby	Confirmed	19/04/2022
Mute Swan	4	3 juveniles and 1 adult	-	Unknown	19/04/2022
Mute Swan	2	Adult	-	Possible	19/04/2022
Mute Swan	2	Adult female and male	Female on nest, male swimming nearby doing territorial display	Confirmed	19/04/2022
Mute Swan	1	Adult male	Solo male swimming	Unknown	19/04/2022
Mute Swan	1	Adult female	Female on nest	Confirmed	19/04/2022
Mute Swan	1	Adult	One adult swan	Unknown	19/04/2022
Mute Swan	2	Adult	Flying over, no suitable breeding habitat in area	Unknown	17/05/2022
Mute Swan	2	Adult	Pair resting next to lake	Possible	24/05/2022
Mute Swan	2	Adult pair	One on nest, one on water	Confirmed	31/05/2022
Mute Swan	5	Adult & signets	Adult pair and 3 signets seen on water	Confirmed	31/05/2022
Mute Swan	6	Adult & signets	Adult pair and 4 signets seen on water & bank	Confirmed	31/05/2022
Mute Swan	1	Adults	One adult seen on bank	Unknown	31/05/2022
Mute Swan	1	1 adult	Adult seen on water	Unknown	31/05/2022
Mute Swan	1	1 adult	Adult seen on water	Unknown	31/05/2022
Mute Swan	1	1 adult	Adult seen on nest, heron beside	Unknown	31/05/2022
Mute Swan	6	2 adult 4 juveniles	-	Unknown	31/05/2022
Mute Swan	25	Large flock of adults & juveniles	-	Unknown	31/05/2022
Mute Swan	0	Unknown	Nest on lakeshore	Unknown	31/05/2022
Mute Swan	4	Adult X2 cygnet X2	Adults with cygnets on lake	Confirmed	27/06/2022
Mute Swan	2	Adult	Pair on grass next to lake	Probable	27/06/2022
Mute Swan	2	Adult	Pair at nesting site	Confirmed	27/06/2022
Mute Swan	9	2 adults & 7 signets	Adult pair and 7 signets seen on water	Confirmed	27/06/2022
Mute Swan	31	Adult	Large group of swans on lake	Unknown	27/06/2022
Mute Swan	4	2 adults and 2 cygnets	Adults with cygnets	Confirmed	28/06/2022

Peregrine Falcon (PE)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Peregrine	2	Adult	2 adult PE seen near nesting platform on building at Edenderry power station	Probable	18/05/2022
Peregrine	1	Adult	Flying over field, dived for prey, ate prey and flew away	Unknown	14/06/2022

Ringed Plover (RP)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Ringed Plover	2	adult	Pair of birds seen in suitable breeding habitat in nesting season.	Probable	22/04/2022
Ringed Plover	1	Adult	Adult heard in suitable habitat	Possible	16/05/2022
Ringed Plover	2	adult	Pair of birds seen in suitable breeding habitat in nesting season. Likely same pair as April surveys.	Probable	19/05/2022
Ringed Plover	1	adult	Single bird seen on rewetted peat, suitable habitat	Possible	20/05/2022
Ringed Plover	1	adult	Single bird seen on rewetted peat, suitable habitat	Possible	20/05/2022
Ringed Plover	2	Adult	Pair of RP performing distraction display on HC, led it away from pond area and flew back	Confirmed	23/06/2022
Ringed Plover	1	Adult	Resting and feeding on PB4	Probable	24/06/2022

Sand Martin (SM)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Sand Martin	6	Adult	Sand Martins seen flying around turf banks. No nesting holes visible.	Possible	25/04/2022
Sand Martin	13	Adult	13 adults seen flying, 16 holes visible in bank	Confirmed	20/05/2022

Snipe (SN)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Snipe	1	Adult	Flushed by surveyors and flew E	Possible	19/04/2022
Snipe	1	Adult	Flushed by surveyors and flew E	Possible	19/04/2022
Snipe	1	Adult	Flushed by surveyors and flew E	Possible	19/04/2022
Snipe	1	Adult	Flushed from field and flew W	Unknown	20/04/2022
Snipe	1	Adult	Flushed snipe	Possible	25/04/2022
Snipe	1	Adult	Flushed snipe	Possible	25/04/2022
Snipe	1	Adult	Flushed snipe	Possible	25/04/2022
Snipe	1	Adult	Adult snipe flushed	Possible	27/04/2022
Snipe	1	Adult male	Male snipe drumming	Probable	28/04/2022
Snipe	1	Adult male	Male snipe chipping	Probable	28/04/2022
Snipe	1	Adult male	Male snipe drumming	Probable	28/04/2022
Snipe	2	Adult male	2 adult snipe flushed	Possible	28/04/2022
Snipe	1	Adult male	Male snipe drumming	Probable	28/04/2022
Snipe	1	Adult male	Male snipe drumming	Probable	28/04/2022
Snipe	2	Adult	Flushed from lake edge & Drumming	Probable	16/05/2022
Snipe	1	Adult male	Male chipping heard not seen	Possible	17/05/2022
Snipe	1	Adult	Displaying over rewetted cutover bog	Probable	19/05/2022
Snipe	1	Adult	Displaying over rewetted cutover bog	Probable	19/05/2022
Snipe	1	Adult	Chirping & Drumming	Probable	21/06/2022
Snipe	1	Adult	Chirping & Drumming	Probable	21/06/2022
Snipe	1	Adult	Chirping & Drumming	Probable	21/06/2022
Snipe	1	Adult male	Chirping SN	Possible	23/06/2022
Snipe	1	Adult	Snipe chipping on PB4. Not recorded previous	Possible	24/06/2022
Snipe	1	Adult	Adult snipe flying	Possible	27/06/2022
Snipe	1	Unknown	Nothing more to add	Unknown	14/09/2022

Sparrowhawk (SH)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Sparrowhawk	1	Adult male	SH flying	Unknown	28/04/2022
Sparrowhawk	1	Adult male	Male, flying low to ground past surveyors from PB4 area, over road into scrub/bog wood	Possible	21/06/2022
Sparrowhawk	1	Adult	Seen eating something on road and flew off towards pipeline route	Unknown	09/09/2022

Tufted Duck (TU)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Tufted Duck	28	Mix of male and female	Flock on water	Unknown	19/04/2022
Tufted Duck	3	Males	3 males flew across lake	Unknown	19/04/2022
Tufted Duck	17	Mix of male and female	-	Unknown	19/04/2022

Water Rail (WA)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Water Rail	1	Adult	Water rail heard calling	Possible	28/04/2022
Water Rail	1	Adult	Heard calling	Possible	21/06/2022

Whooper Swan (WS)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Whooper Swan	1	adult	Single WS resting and preening on cutover bog adjacent to flooded pool area. Likely on migration or non-breeder	Unknown	21/04/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Whooper Swan	1	Adult	Single WS resting and preening on cutover bog adjacent to flooded pool area. Likely on migration or non-breeder. Likely same bird as April survey	Unknown	19/05/2022
Whooper Swan	1	Adult	Single WS resting and preening on cutover bog adjacent to flooded pool area. Likely on migration or non-breeder. Likely same bird as April & May survey	Unknown	24/06/2022

Woodcock (WK)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Woodcock	1	Adult male	Male heard roding over conifers, not seen.	Probable	16/05/2022
Woodcock	1	Adult male	WK roding over path	Probable	19/05/2022
Woodcock	1	Adult male	WK roding along transect	Probable	19/05/2022
Woodcock	1	Adult male	WK roding	Probable	19/05/2022
Woodcock	1	Adult male	WK heard near end of transect	Probable	19/05/2022
Woodcock	1	Adult male	Heard then seen flying over clearing near woodland	Probable	19/05/2022
Woodcock	1	Adult male	Heard then seen flying over clearing near woodland	Probable	19/05/2022
Woodcock	1	Adult male	Heard then seen flying over woodland, then turned and flew back	Probable	19/05/2022
Woodcock	1	Adult male	Flying over woodland, roding	Probable	19/05/2022
Woodcock	1	Adult male	roding over woodland	Probable	19/05/2022
Woodcock	1	Adult male	flew across trail roding	Probable	19/05/2022
Woodcock	1	Adult male	flew across trail roding	Probable	19/05/2022
Woodcock	1	Adult male	flew towards woodland	Probable	19/05/2022
Woodcock	1	Adult male	WK flying over	Probable	08/06/2022
Woodcock	1	Adult male	WK seen flying from ground and turned South	Probable	08/06/2022
Woodcock	1	Adult male	WK roding across transect	Probable	08/06/2022
Woodcock	1	Adult male	WK roding towards East	Probable	08/06/2022
Woodcock	1	Adult male	WK roding roding across transect and continued East	Probable	08/06/2022
Woodcock	1	Adult male	Wk seen roding	Probable	08/06/2022
Woodcock	1	Adult male	WK foraging East then turned and flew back West	Probable	08/06/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Woodcock	2	Adult male	One WK chasing another into trees	Probable	08/06/2022
Woodcock	1	Adult male	WK roding South	Probable	08/06/2022
Woodcock	1	Adult male	WK flew from NE to SW at 20m height	Probable	08/06/2022
Woodcock	1	Adult male	WK flew from NE to SW at 20m height	Probable	08/06/2022
Woodcock	1	Adult male	WK flew along treeline NE to SW at 15m height	Probable	08/06/2022
Woodcock	1	Adult male	WK fly over bog SW to NE at 15m height	Probable	08/06/2022
Woodcock	1	Adult male	WK fly over bog SW to NE at 15m height	Probable	08/06/2022
Woodcock	1	Adult male	WK fly over bog SW to NE at 15m height	Probable	08/06/2022
Woodcock	1	Adult male	WK flew from E to W at 20m	Probable	08/06/2022
Woodcock	1	Adult male	WK fly over bog SW to NE at 15m height	Probable	08/06/2022
Woodcock	1	Adult male	WK roding East	Probable	09/06/2022
Woodcock	2	Adult male	Two WK flying together and split	Probable	09/06/2022
Woodcock	1	Adult male	WK roding East	Probable	09/06/2022
Woodcock	1	Adult male	WK roding along path (SW - E)	Probable	28/06/2022
Woodcock	1	Adult male	WK flew from trees/bog and across the path (N-S)	Probable	28/06/2022
Woodcock	1	Adult male	WK flying from trees across path (S-N)	Probable	28/06/2022
Woodcock	1	Adult male	WK flew across path twice	Probable	28/06/2022
Woodcock	1	Adult male	Wk flew S across path	Probable	28/06/2022
Woodcock	1	Adult male	WK seen roding over track	Probable	28/06/2022
Woodcock	1	Adult male	Wk heard roding in woodland, not seen	Probable	30/06/2022
Woodcock	1	Adult male	Wk seen and heard flying east	Probable	30/06/2022
Woodcock	1	Adult male	Wk heard roding , seen flying south	Probable	30/06/2022
Woodcock	1	Adult male	WK heard roding and seen flying N. E	Probable	30/06/2022
Woodcock	1	Adult male	WK heard roding and seen flying east	Probable	30/06/2022
Woodcock	1	Adult male	Wk heard roding, not seen	Probable	30/06/2022

Yellowhammer (Y.)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Yellowhammer	2	M+F	Pair seen and heard in hedge of gorse and willow	Probable	21/04/2022
Yellowhammer	1	M	Male seen and heard in hedge of gorse and willow	Possible	21/04/2022

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Yellowhammer	1	Male	Yellowhammer male singing	Probable	25/04/2022
Yellowhammer	1	Male	Yellowhammer male singing	Probable	25/04/2022
Yellowhammer	1	Adult male	Adult male signing on power line, suitable breeding habitat in area	Possible	17/05/2022
Yellowhammer	1	Adult female	Suitable breeding habitat in area	Unknown	17/05/2022
Yellowhammer	1	Adult male	Male Y heard calling from WL1. Not seen.	Possible	18/05/2022
Yellowhammer	1	Adult male	Male Y heard calling from WL1. Not seen.	Possible	19/05/2022
Yellowhammer	1	Adult male	Male Y heard calling from WL1. Not seen.	Possible	19/05/2022
Yellowhammer	1	Adult	Adult resting in tree before flying westward	Unknown	25/05/2022
Yellowhammer	1	Adult male	Male Y heard calling from Post near ditch, suitable habitat in area	Possible	21/06/2022
Yellowhammer	1	Adult male	Adult male singing in suitable breeding habitat in area	Possible	22/06/2022
Yellowhammer	1	Adult male	Adult male singing in suitable breeding habitat in area	Possible	22/06/2022
Yellowhammer	1	Adult male	Adult male singing in suitable breeding habitat in area	Possible	22/06/2022
Yellowhammer	1	Adult	Male calling from edge of WN7. Not suitable habitat, possibly feeding nearby on flowers & seed heads along railway line	Unknown	25/06/2022
Yellowhammer	1	Adult male	Calling and singing male	Possible	20/07/2022
Yellowhammer	1	Adult male	Calling and singing male	Possible	21/07/2022
Yellowhammer	1	Adult male	Calling and singing male	Possible	21/07/2022
Yellowhammer	1	Adult male	Calling and singing male	Possible	22/07/2022
Yellowhammer	1	Adult male	Calling male Y in suitable breeding habitat	Possible	27/07/2022
Yellowhammer	1	Adult male	Calling male Y in suitable breeding habitat. One of several calling in area.	Possible	28/07/2022
Yellowhammer	1	Adult male	Calling male Y in suitable breeding habitat. One of several calling in area.	Possible	28/07/2022
Yellowhammer	1	Adult male	Calling male Y in suitable breeding habitat. One of several calling in area.	Possible	28/07/2022
Yellowhammer	1	Adult male	Calling male Y in suitable breeding habitat. One of several calling in area.	Possible	29/07/2022

VP Count Data Recorded during Breeding Birds Surveys at Parteen Basin in 2022

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Flight Duration	Flight Height	Bearing	Notes
Parteen VP	11/07/2022	JS	11:45	MS	3	No	N/A	N/A	-	Two adults and one cygnet. Likely one of the breeding pairs recorded on PB in previous month
Parteen VP	11/07/2022	JS	11:45	XG	10	No	N/A	N/A	-	Seen on arrival, number of juvenile 1st and second winter birds. Unsure on species
Parteen VP	11/07/2022	JS	11:45	LB	2	No	N/A	N/A	-	One seen on arrival, pair resting in fallen tree on water edge
Parteen VP	11/07/2022	JS	12:23	CA	5	No	N/A	N/A	-	Birds seen preening on fallen tree along lake edge.
Parteen VP	11/07/2022	JS	17:55	MA	13	No	N/A	N/A	-	Seen on arrival, number feeding ducks near spit
Parteen VP	11/07/2022	JS	19:29	CS	3	No	N/A	N/A	-	At least 3 CS seen and heard calling and feeding along bank slowly walk S
Parteen VP	11/07/2022	JS	12:27	MA	1	yes		1	N	Left water, flying low, headed north until o.o.v. Behind spit
Parteen VP	11/07/2022	JS	12:31	BH	3	yes	120	1	W	Flying low to water, landed on spit
Parteen VP	11/07/2022	JS	12:31	BH	3	yes	120	1	W	Left spit and few down West Bank and down canal
Parteen VP	11/07/2022	JS	12:41	H	1	yes	120	15	NE	Flew from W over Parteen to east bank where it dropped low oov
Parteen VP	11/07/2022	JS	13:04	BH	20	yes	180	1	S	Flew down centre of lake, low to water, over weir and down canal
Parteen VP	11/07/2022	JS	13:06	CA	1	yes	180	1	S	Flew down centre of lake, low to water, over weir and down canal
Parteen VP	11/07/2022	JS	13:29	CN	1	yes	40	5	N	Adult hunting over water, flew behind spit oov
Parteen VP	11/07/2022	JS	18:10	CA	1	yes	50	1	N	Flew from canal over weir and along E bank heading N
Parteen VP	11/07/2022	JS	18:27	BH	2	yes	50	3	S	Flew along E bank dip feeding along the way before flying over weir down Shannon
Parteen VP	11/07/2022	JS	18:42	CA	1	yes	30	1	S	Flew over weir from canal, low over water and landed on island to roost
Parteen VP	11/07/2022	JS	18:53	XG	34	yes	60	2	S	Large flock of unknown gull, majority of which juveniles. Flew from Killaloe direction, over weir and down Shannon

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Flight Duration	Flight Height	Bearing	Notes
Parteen VP	11/07/2022	JS	19:47	CN	1	yes	50	5	N	Flew from weir. headed north until o.o.v. Behind spit
Parteen VP	13/07/2022	JC	14:35	MS	7	No	N/A	N/A	-	Group of adult mute swans on water
Parteen VP	13/07/2022	JC	14:35	MS	11	No	N/A	N/A	-	Group of adult mute swans on water
Parteen VP	13/07/2022	JC	14:35	MS	2	No	N/A	N/A	-	Adult mute swan and cygnet on water
Parteen VP	13/07/2022	JC	14:43	CA	1	No	N/A	N/A	-	Adult CA feeding on lake
Parteen VP	13/07/2022	JC	19:47	CA	1	No	N/A	N/A	-	Adult CA on water
Parteen VP	13/07/2022	JC	14:41	CN	1	yes	120	10	W	Feeding in flight
Parteen VP	13/07/2022	JC	14:57	CN	2	yes	120	10	W	Flew across lake
Parteen VP	13/07/2022	JC	15:04	CN	1	yes	110	10	E	Flew across lake
Parteen VP	13/07/2022	JC	15:20	CA	1	yes	200	5	SW	Flew low over water
Parteen VP	13/07/2022	JC	15:38	BH	1	yes	100	15	W	Flew across lake
Parteen VP	13/07/2022	JC	16:23	CN	1	yes	150	7	W	Feeding over lake
Parteen VP	13/07/2022	JC	16:26	BZ	1	yes	200	30	W	Soaring
Parteen VP	13/07/2022	JC	17:05	CA	1	yes	150	4	NE	Flew low over water
Parteen VP	13/07/2022	JC	18:05	CN	1	yes	100	10	NE	Flew over lake
Parteen VP	13/07/2022	JC	18:29	CN	1	yes	140	10	W	Feeding over lake
Parteen VP	13/07/2022	JC	18:45	BH	1	yes	140	15	NE	Flew over lake
Parteen VP	13/07/2022	JC	19:22	BH	1	yes	150	10	NE	Flew over lake and landed on water
Parteen VP	13/07/2022	JC	19:49	CN	1	yes	100	10	NW	Flew over lake
Parteen VP	13/07/2022	JC	20:13	MA	2	yes	100	10	NE	Flew over lake
Parteen VP	13/07/2022	JC	20:37	CA	1	yes	80	6	NE	Flew over lake and landed on water
Parteen VP	10/08/2022	JC	05:05	MS	22	No	N/A	N/A	-	Large flock of swans on water next to island
Parteen VP	10/08/2022	JC	05:24	CA	1	No	N/A	N/A	-	CA hunting on lake
Parteen VP	10/08/2022	JC	06:20	BH	2	yes	50	3	S	Flew over lake before flying over weir
Parteen VP	10/08/2022	JC	05:33	CA	1	yes	120	5	SW	Flew over lake and then over weir

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Flight Duration	Flight Height	Bearing	Notes
Parteen VP	10/08/2022	JC	05:49	BH	1	yes	80	8	N	
Parteen VP	10/08/2022	JC	06:13	BH	1	yes	100	8	NE	
Parteen VP	10/08/2022	JC	07:25	MA	2	yes	100	12	SE	
Parteen VP	11/08/2022	JC	06:01	MS	1	No	N/A	N/A	-	Adult MS on water
Parteen VP	11/08/2022	JC	09:54	MS	2	No	N/A	N/A	-	Adult and juvenile on water
Parteen VP	11/08/2022	JC	05:24	CN	1	yes	60	7	E	
Parteen VP	11/08/2022	JC	07:15	CN	1	yes	80	10	W	Feeding in flight
Parteen VP	11/08/2022	JC	07:50	BH	1	yes	120	10	W	Flew over lake and landed on water
Parteen VP	11/08/2022	JC	08:05	CA	2	yes	150	12	SW	
Parteen VP	11/08/2022	JC	09:22	BH	1	yes	100	8	NE	
Parteen VP	12/08/2022	JC	08:47	BH	2	yes	120	6	NE	
Parteen VP	12/08/2022	JC	09:16	BH	1	yes	80	6	SE	
Parteen VP	06/09/2022	JS	17:10	CA	31	No	N/A	N/A	-	Large roost, seen preening and resting on trees on small island.
Parteen VP	06/09/2022	JC	12:40	MS	6	No	N/A	N/A	-	6 adults
Parteen VP	06/09/2022	JC	12:40	MS	2	No	N/A	N/A	-	1 adult, 1 juvenile
Parteen VP	06/09/2022	JC	15:10	CA	1	No	N/A	N/A	-	
Parteen VP	06/09/2022	JC	15:40	MS	2	No	N/A	N/A	-	Adult and juvenile
Parteen VP	06/09/2022	JS	11:31	MS	6	No	N/A	N/A	-	Adult swans feeding along edge of island
Parteen VP	06/09/2022	JS	11:32	MS	2	No	N/A	N/A	-	Seen on arrival, adult and this year juvenile feeding near spit
Parteen VP	06/09/2022	JS	17:02	CS	1	yes	15	1	S	Seen briefly, flying low along W bank until out of view
Parteen VP	06/09/2022	JS	17:30	CA	1	yes	120	5	SW	Flew from roost island and then over weir
Parteen VP	06/09/2022	JS	18:06	CA	1	yes	190	2	N	flew from behind spit and turned N head to Killaloe
Parteen VP	06/09/2022	JS	18:26	CA	1	yes	50	2	N	Left water and flew over Weir down canal
Parteen VP	06/09/2022	JS	17:15	BH	2	yes	70	3	S	Flew along E bank dip feeding along the way before flying over weir down Shannon

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Flight Duration	Flight Height	Bearing	Notes
Parteen VP	06/09/2022	JS	17:40	BH	6	yes	70	3	S	Spaced out flock flew along E bank before flying over weir down Shannon
Parteen VP	06/09/2022	JS	18:29	GJ	1	yes	120	6	SW	Flew down centre of lake calling and then over weir down canal
Parteen VP	06/09/2022	JC	12:42	BH	1	yes	70	15	W	
Parteen VP	06/09/2022	JC	12:45	BH	1	yes	60	15	E	
Parteen VP	06/09/2022	JC	12:52	BH	1	yes	100	5	E	Drinking from lake
Parteen VP	06/09/2022	JC	13:04	CA	1	yes	100	8	SW	
Parteen VP	06/09/2022	JC	13:04	MS	2	yes	30	2	S	Took flight off water and landed again
Parteen VP	06/09/2022	JC	13:25	BH	1	yes	80	20	N	
Parteen VP	06/09/2022	JC	13:36	MA	2	yes	80	12	W	
Parteen VP	06/09/2022	JC	13:52	BH	1	yes	100	15	NE	
Parteen VP	06/09/2022	JC	14:12	MA	1	yes	140	15	W	
Parteen VP	06/09/2022	JC	14:27	MA	1	yes	100	1	NW	
Parteen VP	06/09/2022	JC	14:43	BH	1	yes	80	12	NE	
Parteen VP	06/09/2022	JC	15:02	BH	1	yes	80	15	E	
Parteen VP	06/09/2022	JC	15:02	CA	2	yes	100	8	NE	
Parteen VP	06/09/2022	JC	15:32	H	1	yes	100	15	W	
Parteen VP	06/09/2022	JC	15:14	BH	1	yes	80	8	NE	
Parteen VP	06/09/2022	JC	16:25	BH	2	yes	100	15	N	
Parteen VP	06/09/2022	JC	16:15	K	1	yes	30	15	E	
Parteen VP	06/09/2022	JC	16:02	CA	1	yes	60	4	NE	
Parteen VP	06/09/2022	JS	12:10	BH	3	yes	50	3	N	Flew along E bank dip feeding along the way before flying towards Killaloe
Parteen VP	06/09/2022	JS	12:53	BH	3	yes	120	1	W	Flew from canal and flew up along E bank towards Killaloe
Parteen VP	06/09/2022	JS	12:48	BH	4	yes	80	2	N	Flock flew up from canal along W bank and continued past spit out of view

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Flight Duration	Flight Height	Bearing	Notes
Parteen VP	06/09/2022	JC	18:25	MA	1	yes	60	4	E	
Parteen VP	06/09/2022	JC	18:55	BH	1	yes	90	20	N	
Parteen VP	06/09/2022	JC	19:02	CA	1	yes	120	4	SW	

38kV VP Count Data Recorded during Breeding Birds Surveys at Lower River Shannon in 2022

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	21/04/2022	JC	05:30	MS	1	No	N/A	N/A	N/A	N/A	Single adult on water
Kildoorus	21/04/2022	JC	05:30	MS	1	No	N/A	N/A	N/A	N/A	Single adult on water
Kildoorus	21/04/2022	JC	10:14	CA	1	No	N/A	N/A	N/A	N/A	Adult eating fish
Kildoorus	21/04/2022	JC	11:23	MS	3	No	N/A	N/A	N/A	N/A	3 adults swimming
Kildoorus	21/04/2022	JC	06:12	MA	2	No	N/A	N/A	N/A	N/A	Male and female swimming near riverbank
Kildoorus	21/04/2022	JC	09:12	CA	1	No	N/A	N/A	N/A	N/A	Adult CA fishing
Kildoorus	21/04/2022	JC	10:16	BH	1	No	N/A	N/A	N/A	N/A	Perched on boat
Kildoorus	21/04/2022	JC	10:17	MA	2	No	N/A	N/A	N/A	N/A	Swimming around reeds at edge of river
Kildoorus	21/04/2022	JC	15:45	CA	2	Yes	NE	Above	18	90	Pair flew above 38kv line
Kildoorus	21/04/2022	JC	14:50	CA	1	Yes	S	Above	20	150	CA X1 flying over river
Kildoorus	21/04/2022	JC	16:10	GJ	3	Yes	SW	Above	24	80	Adults GJ X3 flew over river
Kildoorus	21/04/2022	JC	15:26	CA	2	Yes	SW	Below	2	120	Adults flying low above water
Kildoorus	21/04/2022	JC	17:15	MA	2	Yes	S	Above	20	50	2 adults flying
Kildoorus	23/05/2022	LB	11:50	CA	1	Yes	N	Above	100	10	

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	23/05/2022	LB	12:15	CA	3	Yes	N	Above	200	15	
Kildoorus	23/05/2022	LB	12:40	CA	1	Yes	N	Above	150	10	
Kildoorus	23/05/2022	LB	12:55	CA	1	Yes	S	Above	150	10	
Kildoorus	23/05/2022	LB	12:55	BH	8	Yes	N	Above	120	10	
Kildoorus	23/05/2022	LB	12:55	K	1	Yes	-	Above	120	15	Hunting
Kildoorus	23/05/2022	LB	13:00	CA	1	Yes	N	Above	200	5	
Kildoorus	23/05/2022	LB	13:50	MA	2	Yes	N	Below	4	5	
Kildoorus	23/05/2022	LB	13:55	BZ	1	Yes	-	Above	120	10	Mobbed by crows
Kildoorus	23/05/2022	LB	14:00	MA	2	Yes	N	Above	120	10	
Kildoorus	23/05/2022	LB	06:00	CA	2	Yes	N	Above	200	10	
Kildoorus	23/05/2022	LB	06:55	CA	1	Yes	S	Above	150	10	
Kildoorus	23/05/2022	LB	07:05	MA	2	No	N	Below	-	65	On Water
Kildoorus	23/05/2022	LB	07:20	MS	2	Yes	N	Below	4	15	
Kildoorus	23/05/2022	LB	07:50	CA	1	Yes	S	Above	200	10	
Kildoorus	23/05/2022	LB	08:00	MH	2	No	-	Below	-	5	On Water
Kildoorus	23/05/2022	LB	08:10	CA	2	Yes	S	Above	150	5	
Kildoorus	23/05/2022	LB	08:20	CA	1	Yes	N	Above	50	10	
Kildoorus	23/05/2022	LB	08:40	CA	2	No	N	Above	200	10	
Kildoorus	23/05/2022	LB	08:50	HG	1	Yes	N	Above	200	15	
Kildoorus	27/06/2022	LB	13:35	CA	1	Yes	S	Above	400	10	
Kildoorus	27/06/2022	LB	13:55	XG	1	Yes	N	Above	400	15	
Kildoorus	27/06/2022	LB	14:20	CA	1	Yes	S	Above	300	10	
Kildoorus	27/06/2022	LB	15:00	CA	4	Yes	S	Above	400	10	

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	27/06/2022	LB	15:15	MA	1	Yes	SE	Above	100	5	
Kildoorus	27/06/2022	LB	16:00	CA	4	Yes	S	Above	150	10	
Kildoorus	27/06/2022	LB	16:05	CA	5	Yes	S	Above	200	15	
Kildoorus	27/06/2022	LB	16:30	CA	1	Yes	S	Above	400	10	
Kildoorus	28/06/2022	LB	10:55	CA	2	Yes	N	Above	400	15	
Kildoorus	28/06/2022	LB	11:05	KF	1	Yes	-	Below	1m above water	5	
Kildoorus	28/06/2022	LB	11:10	CA	5	Yes	N	Above	400	15	
Kildoorus	28/06/2022	LB	13:10	CA	2	Yes	N	Above	300	10	
Kildoorus	28/06/2022	LB	13:40	XG	2	Yes	N	Above	400	15	
Kildoorus	14/07/2022	JC	14:41	CA	1	No	N/A	N/A	N/A	N/A	
Kildoorus	14/07/2022	JC	14:41	BH	2	No	N/A	N/A	N/A	N/A	Resting on boat
Kildoorus	14/07/2022	JC	20:37	BH	3	No	N/A	N/A	N/A	N/A	Resting on boat
Kildoorus	14/07/2022	JC	18:12	ET	1	Yes	SW	Below	12		Almost flew into power lines
Kildoorus	14/07/2022	JC	18:34	CA	1	Yes	SW	Below	2		
Kildoorus	14/07/2022	JC	19:40	BH	1	Yes	SW	Above	20	100	
Kildoorus	14/07/2022	JC	13:05	BH	1	Yes	NE	Above	20	80	Flew over bridge
Kildoorus	14/07/2022	JC	13:15	H	1	Yes	SW	Above	5	80	Flew over water and landed on shore
Kildoorus	14/07/2022	JC	13:32	CA	1	Yes	SW	Above	5	120	Flew over lake and landed on water
Kildoorus	14/07/2022	JC	14:04	BH	1	Yes	S	Below	10	120	landed on water
Kildoorus	14/07/2022	JC	14:15	H	1	Yes	E	Below	10	80	
Kildoorus	10/08/2022	LB	10:05	CA	1	Yes	W	Above	300	10	
Kildoorus	10/08/2022	LB	11:00	CA	1	Yes	W	Above	300	10	
Kildoorus	10/08/2022	LB	11:40	CA	2	Yes	W	Above	300	5	
Kildoorus	10/08/2022	LB	12:00	CA	1	Yes	W	Above	300	5	

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	10/08/2022	LB	13:30	GJ	2	Yes	SE	Above	20	15	
Kildoorus	10/08/2022	LB	13:55	BH	3	Yes	Circling	Above	200	180	
Kildoorus	10/08/2022	LB	16:05	BH	1	Yes	SW	Above	50	10	
Kildoorus	10/08/2022	LB	16:20	H	1	Yes	NW	Above	20	20	
Kildoorus	10/08/2022	LB	12:00	K	1	No	-	N/A	N/A	N/A	Heard calling, not seen. Possible juvenile
Kildoorus	10/08/2022	LB	14:50	MA	1	No	Swimming	Below	1	360	Female
Kildoorus	10/08/2022	LB	14:55	KF	2	No	N/A	Below	1	60	Present at possible nest site. Birds on bank under existing OHL on headrace canal
Kildoorus	09/09/2022	JC	14:40	BH	1	Yes	NE	Below	8	120	Flew and dipped low to drink water
Kildoorus	09/09/2022	JC	05:41	BH	1	Yes	NE	Below	12	50	Flew under bridge
Kildoorus	09/09/2022	JC	05:55	CA	1	Yes	SW	Below	2	90	Flew low over water
Kildoorus	09/09/2022	JC	07:44	MA	1	Yes	NE	Below	2	90	Flew out of reeds
Kildoorus	09/09/2022	JC	11:05	BH	1	Yes	N	Below	10	90	Landed on bank
Kildoorus	09/09/2022	JC	11:25	BH	1	Yes	N	Below	8	90	Flew over water and dipped to drink

VP Count Data Recorded during Breeding Birds Surveys at Infrastructure Sites in 2022

VP	Date	Observer	Observation Time	BTO Code	Number	Fly	Flight Duration	Flight Height	Bearing	Notes
TPR VP	14/04/2022	JS	14:37	GP	90	No	N/A	N/A	-	At least a flock of 90 GP feeding with a flock of WP, on recently harrowed/plough field. Not typical breeding habitat, on migration.
TPR VP	14/04/2022	JS	16:21	GP	130	No	N/A	N/A	-	Previously recorded flock to Day survey, spread across field feeding and resting
BPS VP	14/04/2022	JC	17:14	K	1	yes	100	15	SE	Perched on pole for approx. 5 minutes then flew

VP	Date	Observer	Observation Time	BTO Code	Number	Fly	Flight Duration	Flight Height	Bearing	Notes
BPS VP	14/04/2022	JC	18:17	BZ	1	yes	120	40	S	Mobbed by 2 HC
TPR VP	14/04/2022	JS	13:21	BZ	1	yes	34	2	SE	Seen low to ground flying over hedge and field
TPR VP	14/04/2022	JS	13:47	HG	1	yes	55	50	NW	Constant commuting flight
TPR VP	14/04/2022	JS	14:48	GP	90	yes	340	60	SW	Flock left ground and circled site till oov
TPR VP	14/04/2022	JS	15:20	MA	1	yes	25	20	N	Adult male, quick commuting flight
TPR VP	14/04/2022	JS	15:23	GP	130	yes	300	30	N	Flock circled a number of times and landed
BTP VP	22/04/2022	JC	08:21	K	1	yes	100	16	E	Adult K flew over agricultural grassland
BTP VP	22/04/2022	JC	09:25	BZ	1	yes	180	25	S	Adult BZ chased by HC
TPR VP	13/05/2022	JS	05:48	Y	1	No	N/A	N/A	-	Adult male calling from overhead line. Possible breeding status
TPR VP	13/05/2022	JS	08:31	K	1	yes	50	15	S	Male seen hunting over area of grassland, then mobbed by JD and flew S
BPS VP	13/05/2022	JC	04:49	LB	1	yes	40	20	S	LB flew S over GA1
BPS VP	13/05/2022	JC	04:53	LB	1	yes	40	20	S	LB flew S over GA1
BPS VP	13/05/2022	JC	07:21	LB	1	yes	80	20	W	LB flew W over GA1
BTP VP	24/05/2022	LB	11:05	BZ	1	yes	No		-	
BTP VP	24/05/2022	LB	11:50	XG	1	yes	No		-	
TPR VP	20/06/2022	KL	04:27	Y	1	No	N/A	N/A	-	Yellowhammer heard singing in hedgerow
TPR VP	20/06/2022	KL	07:35	Y	1	No	N/A	N/A	-	Yellowhammer perched on power lines
TPR VP	20/06/2022	KL	04:13	HG	1	yes	20	60	SE	Single herring gull commuting flight
TPR VP	20/06/2022	KL	05:20	SH	1	yes	60	30	W	SH seen flying over field, circled then flew W
TPR VP	20/06/2022	KL	06:31	SH	1	yes	20	20	E	Sparrowhawk seen carrying prey in talons heading E
TPR VP	20/06/2022	KL	07:53	BZ	1	yes	120	100	W	Buzzard circled a few times and then flew W
TPR VP	20/06/2022	KL	08:14	SH	1	yes	30	30	N	Sparrowhawk flew across field and then headed north
TPR VP	20/06/2022	KL	08:59	SH	1	yes	10	3	W	Sparrowhawk seen chasing small passerine around hedgerow

VP	Date	Observer	Observation Time	BTO Code	Number	Fly	Flight Duration	Flight Height	Bearing	Notes
BTP VP	27/06/2022	LB	10:30	BZ	1	yes	35	200	-	Hunting
BTP VP	27/06/2022	LB	10:50	BZ	1	yes	20	200	-	Circling
BTP VP	27/06/2022	LB	9:30- 11:30	Y.	1	No	No	-	-	Singing
BTP VP	28/06/2022	LB	14:55	BZ	1	yes	10 min	100	-	Juvenile Bird Hunting
BTP VP	28/06/2022	LB	15:30	Y	1	yes	Intermittent	Intermittent	-	Singing/ Calling
BTP VP	28/06/2022	LB	15:40	BH	1	yes	30 sec	300	SW	Fly over
BTP VP	28/06/2022	LB	16:50	Y.	2	No	30 min	Intermittent	-	Singing/ Calling
BTP VP	28/06/2022	LB	17:15	BH	1	yes	10	200	NE	Flying Over
BTP VP	28/06/2022	LB	17:30	BZ	1	yes	5 min	10 to 30	-	Adult, Hunting
BTP VP	11/07/2022	JC	19:22	LB	2	yes	60	30	NW	
BPS VP	12/07/2022	JS	05:45	Y	1	No	N/A	N/A	-	Sing male heard from WL1, not seen. Breeding in area possible
BPS VP	12/07/2022	JS	05:56	SH	1	yes	25	10	N	Flew over VP, heading N, dropping oov behind hedge. Mobbed by several GO and SL.
TPR VP	13/07/2022	JS	15:35	Y	1	No	N/A	N/A	-	Yellowhammer seen and heard singing in on power line. Mostly probably breeding in area as recorded in previous months
TPR VP	13/07/2022	JS	15:33	BZ	1	yes	120	50	NW	Heard calling first then seen circling several times of fields before dropping fast to NW until oov
TPR VP	13/07/2022	JS	15:39	BZ	1	yes	70	50	S	Flew near VP, circled and headed S. obvious injury or deformity with leg, when flying it hangs down
TPR VP	08/08/2022	JS	04:55	BZ	1	yes	20	8	E	Seen on arrival, flushed from telegraph pole, flew south and then turn E behind VP
TPR VP	08/08/2022	JS	04:56	BZ	1	yes	10	8	S	Second BZ seen on arrival, flew from N and landed on telegraph pole to W of VP, remained here calling
TPR VP	08/08/2022	JS	05:47	SH	1	yes	10	3	S	Flew low over field and over hedge o.o.v., flushing a large flock of LN from recently harvested rape seed field
TPR VP	08/08/2022	JS	06:25	K	2	yes	15	10	S	Pair of K, M+F flew low over field heading south over hedge
TPR VP	08/08/2022	JS	06:51	BZ	1	yes	25	5	E	BZ left pole calling in front of VP, landing in trees.

VP	Date	Observer	Observation Time	BTO Code	Number	Fly	Flight Duration	Flight Height	Bearing	Notes
TPR VP	08/08/2022	KL	07:46	SH	1	yes	120	20	N	SH seen flying over field, chase a LN in front of the VP. Hunt was unsuccessful and it flew N
TPR VP	08/08/2022	JS	09:09	BZ	2	yes	150	70	N	Pair calling and soaring on thermal, circling several times before drifting N
TPR VP	08/08/2022	JS	10:43	SH	1	yes	60	3	N	First seen low to ground, flew to field to W of VP where it began chasing LN. Failed to catch any and flew N until, o.o.v.
BPS VP	08/08/2022	JC	14:05	BZ	1	yes	200	50	SE	Circling continuously above VP, calling
BPS VP	08/08/2022	JC	14:14	BZ	1	yes	240	50	S	Circling continuously, calling
BPS VP	08/08/2022	JC	15:53	BZ	1	yes	300	50	SE	Circling continuously above VP, calling
BTP VP	09/08/2022	LB	11:30	Y.	1	yes	N/A	N/A	-	Bird calling from hedgerow
BTP VP	09/08/2022	LB	14:00	Y.	1	yes	N/A	N/A	-	Bird calling from hedgerow
BTP VP	09/08/2022	LB	14:05	BZ	1	yes	70	50	-	Bird calling and circling
BTP VP	09/08/2022	LB	14:35	Y.	1	yes	N/A	N/A	-	Calling from hedgerow
BTP VP	09/08/2022	LB	16:50	JD	250	yes	180	100-200	-	Large flock, mostly Jackdaw
BTP VP	09/08/2022	LB	17:00	BZ	1	yes	N/A	N/A	-	Bird calling, probable juv
WTP VP	09/08/2022	JC	06:43	K	1	yes	150	20	SE	Hunting/hovering then flew o.o.v. heading SE
BTP VP	05/09/2022	JC	18:35	LB	2	yes	140	20	E	Adult pair
BPS VP	07/09/2022	JS	08:16	K	1	yes	40	8	S	Adult female, flew from N over fields and hedges, landing briefly on telegraph pole before continuing S
BPS VP	07/09/2022	JS	08:21	SH	1	yes	15	5	S	Adult female, low to ground, Mobbed by several GO, RO and SL.
BPS VP	07/09/2022	JS	08:25	BZ	1	yes	30	20	SE	Mobbed by several RO, slowly drifted SE until dropped low and oov
BPS VP	07/09/2022	JS	09:22	K	1	yes	100	4	N	Adult female, flew N over fields and hedges, landing briefly on telegraph pole before continuing N
BPS VP	07/09/2022	JS	09:46	K	1	yes	115	15	NW	Adult female, flew N over fields and hedges, began circling and gain height to approx. 40m and drifted out of view NW
BPS VP	07/09/2022	JS	11:35	K	1	yes	45	8	NW	Adult female, flew N over fields and hedges

VP	Date	Observer	Observation Time	BTO Code	Number	Fly	Flight Duration	Flight Height	Bearing	Notes
WTP VP	07/09/2022	JC	16:40	SH	1	yes	40	5	SE	Flew along hedgerow
TPR VP	08/09/2022	JS	12:30	BZ	1	yes	10	4	S	Flushed from fence on arrival and flew S.
TPR VP	08/09/2022	JS	13:24	K	1	yes	10	6	E	Seen hunting briefly before being mobbed by HC and RO and quickly leaving area until oov
TPR VP	08/09/2022	JS	13:35	PE	1	yes	90	30	NE	Adult, hunting/flying through area. Circled once and slowly drifted NE until oov
TPR VP	08/09/2022	JS	14:55	PE	1	yes	60	3	NE	Adult, hunting/flying through area. Failed to catch WP and LN prey and slowly drifted NE until oov
TPR VP	08/09/2022	JS	16:35	K	1	yes	15	6	NE	Flew and hunted briefly over reservoir, turned and flew NE

Breeding Bird Survey Results – 2024

Table 2: 38kV VP Count Data Recorded during Breeding Birds Surveys at Lower River Shannon in 2024

Month	BH	CA	CU	GJ	H.	LB	MA	MS	KF	Grand Total
Apr		15	62	3	3			4		87
May	3	15			1		9	5		33
Jun		5		1	1			2		9
Jul	1	9		3	2	1	10	6	1	33
Aug		2				21	6	2		31
Sep	2						3	11		16
Grand Total	6	46	62	7	7	22	28	30	1	209

Breeding Bird Walkover Survey Point Data Recorded during Breeding Bird Surveys within the Proposed Project Study Area in 2024

Barn Owl (BO)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Barn Owl	0	Adult male	Small number of old pelts on ground and some whitewash on walls inside derelict farmhouse. Very suitable for nesting BO but no evidence of breeding observed.	Possible	25/06/2024
Barn Owl	0	Unknown	Recorded during aquatic survey. Old pellets and feathers found inside old derelict house in NW corner. Unknown if breeding in this location but highly suitable for breeding and roosting.	Possible	30/08/2024

Black-headed Gull (BH)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Black-headed Gull	1	Unknown	Flying straight down upriver.	Unknown	15/05/2024
Black-headed Gull	3	Unknown	Flying upriver.	Unknown	15/05/2024
Black-headed Gull	7	Unknown	Circling.	Unknown	15/05/2024
Black-headed Gull	4	Male and female	2 Pairs. Nest protection display. Stressed behaviour due to 4 HC in the area.	Probable	18/04/2024
Black-headed Gull	22	Male and female	22 bh observed at the lake. Alarm calls. Breeding probable.	Probable	24/04/2024
Black-headed Gull	12	Male and female	A group of BH loafing, swimming and short flight.	Possible	25/04/2024
Black-headed Gull	16	Male and female	16 bh loafing of turned soil.	Unknown	15/05/2024
Black-headed Gull	4	Unknown	2 nests.	Confirmed	15/05/2024
Black-headed Gull	37	Unknown	At least 16 nests confirmed.	Confirmed	16/05/2024
Black-headed Gull	6	Male and female	Agitated calls, territorial display, 3 nests.	Confirmed	17/05/2024
Black-headed Gull	25	Unknown	At least 7 nests with adult incubating. Colony recorded here in previous months survey.	Confirmed	20/05/2024
Black-headed Gull	2	Male and female	2 bh alarmed flight, territorial behaviour, nest likely but not visible.	Probable	24/06/2024
Black-headed Gull	2	Unknown	Nest visible, no young seen but one adult on the nest.	Confirmed	24/06/2024
Black-headed Gull	22	Unknown	6 nests visible, potentially more out of view.	Confirmed	25/06/2024
Black-headed Gull	4	Unknown	No nest visible at this point but agitated and territorial behaviour.	Probable	25/06/2024
Black-headed Gull	93	Adults and juvenile. Male and female	93 birds recorded flying, resting or on nests, composed of adults and juveniles. At least 4 nests visible but like to be more in large section of reeds. Colony recorded here in previous surveys.	Confirmed	26/06/2024
Black-headed Gull	96	Adults and juvenile. Male and female	96 birds recorded flying, resting or on nests, composed of adults and juveniles. At least 6 nests visible but number of sub-adult/recently fledged chicks on water or edge of pond. Colony recorded here in previous surveys.	Confirmed	27/06/2024

Buzzard (BZ)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Buzzard	2	Male and female	Pair of buzzards soaring	Unknown	18/04/2024

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Buzzard	1	Male	Single male buzzard hunting, then mobbed by a pair of rooks and flew southwest and out of sight	Unknown	19/04/2024
Buzzard	1	Possible male	Single buzzard flyover south and out of view. Modest size - possible male. Heard calling a few minutes earlier	Unknown	22/04/2024
Buzzard	2	Unknown	Circled and eventually flew North and oov	Unknown	23/04/2024
Buzzard	1	Unknown	Circled and eventually flew southwest and oov	Unknown	23/04/2024
Buzzard	1	Unknown	Circled and eventually flew southwest and oov	Unknown	23/04/2024
Buzzard	1	Unknown	Mobbed by rooks and then flew oov	Possible	14/05/2024
Buzzard	1	Unknown	Soaring, second BZ perched on post, separate point entry	Possible	16/05/2024
Buzzard	1	Unknown	Single BZ hunting	Possible	16/05/2024
Buzzard	1	Unknown	Buzzard hunting	Possible	24/06/2024
Buzzard	1	Unknown	Buzzard hunting	Possible	24/06/2024
Buzzard	2	Male and female	Pair of buzzards soaring	Unknown	18/04/2024
Buzzard	1	Unknown	Soaring and circling	Possible	27/06/2024
Buzzard	1	Unknown	Flying and perching on posts	Unknown	28/06/2024
Buzzard	1	Unknown	Single buzzard perched at the edge of woodland	Possible	23/04/2024
Buzzard	2	Male and female	Pair of buzzards observed multiple times over the same area. Very vocal, on occasion call heard from the woodland	Possible	23/04/2024
Buzzard	1	Unknown	Buzzard perched, loud call	Possible	25/04/2024
Buzzard	1	Unknown	Buzzard seen foraging on grassland among cows. Flushed and mobbed by rooks.	Unknown	25/04/2024
Buzzard	1	Male and female	2 buzzards, second soaring possibly a pair but no nest confirmed, separate flight line	Possible	16/05/2024
Buzzard	3	Male	Birds high over wooded area soaring. Two males calling and displaying flight	Probable	20/05/2024
Buzzard	2	Male and female	Pair of buzzards observed multiple times over the same area. Very vocal and number of mid air interactions/coming together	Possible	23/05/2024
Buzzard	1	Unknown	Soaring over area	Unknown	28/05/2024
Buzzard	2	Unknown	Left tree and began calling and circling over surveyor, possible nest in area	Unknown	26/06/2024
Buzzard	1	Female	Large female buzzard perched on top of pine tree.	Possible	26/06/2024
Buzzard	2	Male and female	2 buzzards courtship flight	Probable	26/06/2024
Buzzard	1	Unknown	Display, diving, calling	Probable	26/06/2024
Buzzard	1	Unknown	Display flight	Probable	27/06/2024

Cormorant (CA)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Cormorant	1	Adult	Flying upriver	Unknown	15/05/2024
Cormorant	2	Adult	Flying upriver	Unknown	15/05/2024
Cormorant	1	Adult	Flying upriver	Unknown	15/05/2024
Cormorant	1	Adult	Flying upriver	Unknown	10/06/2024
Cormorant	1	Adult	Flying upriver	Unknown	10/06/2024
Cormorant	1	Adult	Flying upriver	Unknown	10/06/2024
Cormorant	1	Unknown		Unknown	29/04/2024
Cormorant	1	Unknown	Flew over lake and landed	Unknown	29/04/2024
Cormorant	9	Unknown	Flock flushed from tree on edge of the lake	Unknown	29/04/2024
Cormorant	1	Unknown	Flushed	Unknown	29/04/2024
Cormorant	1	Unknown		Unknown	29/04/2024
Cormorant	2	Adult	Flying and landing in water	Unknown	15/05/2024
Cormorant	3	Adult	Perched on fence post	Unknown	15/05/2024
Cormorant	2	Adult	Perched on fence post	Unknown	15/05/2024
Cormorant	6	Adult	Perched on tree	Unknown	15/05/2024
Cormorant	4	Adult	Perched	Unknown	15/05/2024
Cormorant	8	Adult	Perched	Unknown	15/05/2024
Cormorant	1	Adult	Flushed	Unknown	15/05/2024
Cormorant	8	Adult	Perched	Unknown	10/06/2024

Great Crested Grebe (GG)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Great Crested Grebe	1	Adult	Diving	Unknown	29/04/2024
Great Crested Grebe	1	Unknown	Diving	Unknown	29/04/2024
Great Crested Grebe	1	Unknown	Flushed but landed near	Unknown	29/04/2024

Grey Heron (H.)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Grey Heron	1	Unknown	Flying	Unknown	29/04/2024
Grey Heron	2	Unknown	2 herons flying over bog in south direction	Unknown	18/04/2024
Grey Heron	1	Unknown	Perched at edge of lake	Unknown	29/04/2024
Grey Heron	2	Unknown	Perched and flushed	Unknown	15/05/2024
Grey Heron	2	Unknown	Perched and flushed	Unknown	15/05/2024
Grey Heron	1	Unknown	Perched	Unknown	15/05/2024
Grey Heron	1	Unknown	Perched	Unknown	15/05/2024
Grey Heron	1	Adult	Flushed from foraging	Unknown	17/04/2024
Grey Heron	1	Adult	Foraging	Unknown	18/04/2024
Grey Heron	1	Adult	Single heron foraging in drainage channel	Unknown	19/04/2024
Grey Heron	1	Adult	Foraging on water	Unknown	28/05/2024
Grey Heron	1	Immature	Immature heron seen loafing on cutover bog near a pond.	Unknown	24/06/2024
Grey Heron	1	Juvenile	Juvenile heron flushed.	Unknown	25/06/2024
Grey Heron	1	Adult	Single heron flushed	Unknown	25/06/2024
Grey Heron	1	Adult	Single h foraging on pond	Unknown	27/06/2024

Grey Wagtail (GL)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Grey Wagtail	1	Unknown	Foraging	Possible	15/05/2024

Greylag Goose (GJ)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Greylag Goose	3	Adult		Unknown	10/06/2024
Greylag Goose	3	Unknown	Flew over and landed on lake	Unknown	29/04/2024
Greylag Goose	3	Unknown	On water	Unknown	29/04/2024

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Greylag Goose	2	Unknown	Flew over and landed on lake	Unknown	29/04/2024
Greylag Goose	5	Adult	Swimming	Possible	15/05/2024

Kestrel (K.)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Kestrel	1	Adult	Foraging adult	Unknown	17/04/2024
Kestrel	1	Female	Female perched on and ash tree	Unknown	24/04/2024
Kestrel	1	Adult	Hunting over area	Unknown	28/05/2024
Kestrel	1	Adult	Hunting over area	Unknown	27/06/2024

Kingfisher (KF)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Kingfisher	1	Unknown	Flying along bank near old boat	Unknown	29/04/2024

Lapwing (L.)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Lapwing	3	Adult	3 lapwing flyover possible breeding in area	Unknown	17/04/2024
Lapwing	5	Adults	Displaying and territorial behaviour	Probable	17/04/2024
Lapwing	3	Adults	3 lapwings, one foraging and two displaying	Probable	18/04/2024
Lapwing	1	Adult	Single lapwing flushed from suitable habitat	Possible	18/04/2024
Lapwing	4	Adults	Alarm calls and displays. Short flights.	Probable	18/04/2024
Lapwing	1	Adult	Alarm call, heard but not seen.	Possible	22/04/2024
Lapwing	2	Adult	Pair of lapwings. Alarm calls.	Probable	24/04/2024
Lapwing	1	Adult	Single l. Standing at the edge of pond	Possible	16/05/2024
Lapwing	2	Adult	Two lapwings in display flight	Probable	17/05/2024

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Lapwing	2	Adults	2 lapwing distressed flight and alarm calls	Possible	17/05/2024
Lapwing	1	Adults	Single lapwing agitated	Possible	17/05/2024
Lapwing	2	Adult	Pair left ground calling and began to mob HC	Probable	20/05/2024
Lapwing	4	Adult	Two birds seen Displaying/calling	Probable	20/05/2024
Lapwing	4	Adult	2 pairs began mobbing H which landed near water	Confirmed	20/05/2024
Lapwing	1	Adult		Possible	20/05/2024
Lapwing	1	Adults	Area recently used for peat milling/extraction. Unsure if breeding if likely at the location	Possible	21/05/2024
Lapwing	1	Adult	Single lapwing foraging	Possible	24/06/2024
Lapwing	2	Adult	Pair mobbing HC. Likey a non-breeding/failed breeding pair, as not recorded in area previously	Unknown	26/06/2024
Lapwing	2	Adult	Pair mobbing H. Likey a non-breeding/failed breeding pair, as not recorded in area previously	Unknown	26/06/2024
Lapwing	4	Adult	4 lapwing seen alarm calling and short flights. Mobbing hooded crow. Agitated	Probable	25/06/2024
Lapwing	2	Adult	lapwing seen alarm calling and short flights. Mobbing hooded crow. Agitated	Probable	25/06/2024
Lapwing	1	Adult	lapwing seen alarm calling and short flight	Probable	25/06/2024
Lapwing	1	Adult	Single lapwing foraging	Possible	25/06/2024
Lapwing	2	Adult	2 lapwing distressing	Confirmed	26/06/2024

Lesser Black-backed Gull (LB)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Lesser Black-backed Gull	2	Unknown	Flying upriver	Unknown	15/05/2024
Lesser Black-backed Gull	2	Unknown	Standing on edge of lake	Unknown	29/04/2024
Lesser Black-backed Gull	1	Adult	Adult flyer	Unknown	17/04/2024

Little Grebe (LG)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Little Grebe	2	Adult	Swimming	Possible	15/05/2024
Little Grebe	4	Adult	4 LG foraging on rewetted PB4	Possible	17/04/2024
Little Grebe	1	Adult	Single adult swimming and foraging	Possible	18/04/2024
Little Grebe	2	Adults	Nest with eggs visible, 2 adults	Confirmed	25/04/2024
Little Grebe	4	Adults and young	2 adults and 2 chicks visible	Confirmed	16/05/2024
Little Grebe	2	Adult	Foraging on water	Probable	28/05/2024
Little Grebe	2	Adult	foraging on rewetted PB4	Possible	17/04/2024
Little Grebe	2	Adult and young	Adult feeding chick	Confirmed	26/06/2024

Mallard (MA)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Mallard	2	Males	2 mallard males circling	Unknown	30/04/2024
Mallard	1	Unknown	Flushed	Unknown	29/04/2024
Mallard	7	Male	Flushed. All male	Unknown	29/04/2024
Mallard	1	Unknown	Swimming- flushed	Unknown	29/04/2024
Mallard	2	Unknown	Swimming and foraging	Possible	15/05/2024
Mallard	1	Unknown	Swimming	Possible	15/05/2024
Mallard	1	Unknown	Swimming	Possible	15/05/2024
Mallard	2	Unknown	Swimming	Possible	15/05/2024
Mallard	4	Unknown	Swimming and flushed	Possible	15/05/2024
Mallard	1	Adult with young	With 5 ducklings	Confirmed	15/05/2024
Mallard	4	Unknown	Swimming	Possible	15/05/2024
Mallard	5	Adult and sub-adults	2 adults and 3 sub-adults from this year	Confirmed	10/06/2024
Mallard	1	Unknown	Flushed	Unknown	10/06/2024
Mallard	2	Adult pair	Pair flushed from drainage ditch	Unknown	17/04/2024
Mallard	3	Adult	Circled but eventually landed on wetland	Possible	17/04/2024
Mallard	3	Adult male	Flushed from wetland	Possible	17/04/2024
Mallard	1	Adult males	Single male flushed from pond	Unknown	18/04/2024

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Mallard	2	Adult male and female	Pair flushed from small pond	Possible	18/04/2024
Mallard	10	Male, female and young	4 adult mallard (2 male, 2 female) and 6 ducklings	Confirmed	23/04/2024
Mallard	6	Female and young	Female and five ducklings	Confirmed	23/04/2024
Mallard	2	Adult male and female	Pair flushed from wetland	Probable	23/04/2024
Mallard	1	Male	Swimming on pond	Possible	17/05/2024
Mallard	3	Adult	Adults resting on waters edge	Possible	20/05/2024
Mallard	1	Adult	Unknown if breeding at this location. Flushed from small shallow, vegetated pools on PB4	Unknown	22/05/2024
Mallard	4	Adult females	Unknown breeding status. 4 females flushed from water	Unknown	26/06/2024
Mallard	7	Adult	Number of adults resting and preening. potential for some to have breed locally	Possible	26/06/2024
Mallard	4	Male	4 ma males flushed	Possible	25/06/2024
Mallard	5	Male	5 ma males flushed	Possible	25/06/2024

Meadow Pipit (MP)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Meadow Pipit	1	Unknown	Display flight	Probable	17/04/2024
Meadow Pipit	1	Unknown	Display flight	Probable	17/04/2024
Meadow Pipit	4	Adult, male	Male display calls, four adults observed altogether in a small area	Possible	18/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	19/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	19/04/2024
Meadow Pipit	2	Adult, male	Single singing male, display flight	Possible	19/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	19/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	22/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	23/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	23/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	24/04/2024
Meadow Pipit	2	Adult	2 adults observed on the ground and flying	Possible	24/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	24/04/2024
Meadow Pipit	1	Unknown		Possible	29/04/2024

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Meadow Pipit	1	Unknown		Possible	29/04/2024
Meadow Pipit	1	Adult, male	Male display	Probable	13/05/2024
Meadow Pipit	2	Unknown	2 mp in suitable habitat	Probable	13/05/2024
Meadow Pipit	3	Male	3 MP at least 1 male singing	Possible	14/05/2024
Meadow Pipit	1	Adult, male	Single displaying male	Possible	29/04/2024
Meadow Pipit	2	Adult, male	2 moss males displays and songs	Possible	16/05/2024
Meadow Pipit	1	Adult, male	Single male singing and displaying	Probable	17/05/2024
Meadow Pipit	1	Adult, male	Single male singing and displaying	Probable	17/05/2024
Meadow Pipit	1	Unknown	Display flight	Probable	20/05/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Probable	21/05/2024
Meadow Pipit	1	Unknown	Flushed and singing	Possible	17/05/2024
Meadow Pipit	1	Unknown	Display flight	Probable	17/05/2024
Meadow Pipit	1	Unknown	Display flight	Probable	17/04/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Probable	23/05/2024
Meadow Pipit	2	Adult, male	Single male singing and displaying	Probable	24/06/2024
Meadow Pipit	1	Adult, male	Single male singing and displaying	Probable	24/06/2024
Meadow Pipit	1	Unknown	Display flight	Probable	24/06/2024
Meadow Pipit	1	Unknown	Display flight	Probable	24/06/2024
Meadow Pipit	1	Unknown	Display flight	Probable	24/06/2024
Meadow Pipit	1	Unknown	Display flight	Probable	25/06/2024
Meadow Pipit	1	Juvenile	Juvenile MP flushed from long grass	Confirmed	25/06/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	25/06/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	25/06/2024
Meadow Pipit	1	Adult, male	Single singing male, display flight	Possible	26/06/2024

Moorhen (MH)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Moorhen	1	Adult	Single MH swimming	Possible	10/06/2024
Moorhen	1	Adult	Single MH swimming	Possible	10/06/2024

Mute Swan (MS)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Mute Swan	1	Unknown	On the edge of the lake	Unknown	29/04/2024
Mute Swan	1	Male	Male	Unknown	29/04/2024
Mute Swan	2	Male and female	Pair MS	Unknown	29/04/2024
Mute Swan	18	Juveniles	Swimming in large group	Unknown	29/04/2024
Mute Swan	1	Unknown	Probable nest in reeds difficult to see	Probable	29/04/2024
Mute Swan	2	Unknown	On nest	Confirmed	29/04/2024
Mute Swan	2	Unknown	On nest	Confirmed	29/04/2024
Mute Swan	2	Unknown	On nest	Confirmed	29/04/2024
Mute Swan	1	Unknown	Swimming	Unknown	29/04/2024
Mute Swan	2	Juvenile	One juvenile	Unknown	29/04/2024
Mute Swan	2	Unknown	One juvenile	Unknown	29/04/2024
Mute Swan	1	Unknown	Swimming	Unknown	29/04/2024
Mute Swan	1	Unknown	Standing at lake edge	Unknown	29/04/2024
Mute Swan	9	Adults	Swimming	Possible	15/05/2024
Mute Swan	10	Adults	Some roosting some swimming	Possible	15/05/2024
Mute Swan	2	Adult	Swimming	Possible	15/05/2024
Mute Swan	2	Adult	Swimming	Possible	15/05/2024
Mute Swan	2	Adult	Swimming	Possible	15/05/2024
Mute Swan	2	Male and female pair	Female on nest and male swimming	Confirmed	15/05/2024
Mute Swan	2	Male and female	Swimming	Confirmed	15/05/2024
Mute Swan	1	Adult	On nest	Confirmed	15/05/2024
Mute Swan	2	Male and female	Swimming	Confirmed	15/05/2024
Mute Swan	2	Adults	Swimming	Possible	15/05/2024
Mute Swan	2	Male and female	1 swimming one on nest	Confirmed	15/05/2024
Mute Swan	1	Adult	On nest	Confirmed	15/05/2024
Mute Swan	1	Adult	Loafing	Possible	15/05/2024
Mute Swan	6	Adults	Swimming	Possible	15/05/2024
Mute Swan	12	Adults	Swimming	Possible	15/05/2024
Mute Swan	6	Adults and cygnets	2 adults and 4 cygnets	Confirmed	10/06/2024
Mute Swan	2	Adult and cygnet	Adult with 1 cygnet	Confirmed	10/06/2024

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Mute Swan	3	Adults and cygnet	Adult with 1 cygnet	Confirmed	10/06/2024
Mute Swan	8	Adults and cygnets	2 adults and 6 cygnets	Confirmed	10/06/2024
Mute Swan	1	Adults	Swimming	Possible	10/06/2024
Mute Swan	1	Adults	Swimming	Possible	10/06/2024
Mute Swan	2	Adults	2 mute swans on pond. Same pair as seen in April.	Probable	28/05/2024
Mute Swan	2	Male and female	MS seen incubating, nest at an edge of pond	Confirmed	25/04/2024
Mute Swan	2	Male and female	MS seen incubating, nest at an edge of pond	Confirmed	25/04/2024
Mute Swan	1	Adult		Possible	15/05/2024
Mute Swan	2	Male and female	MS seen incubating, nest at an edge of pond	Confirmed	15/05/2024
Mute Swan	2	Male and female	MS seen incubating, nest at an edge of pond	Confirmed	25/04/2024
Mute Swan	2	Adults	Pair of ms on pond, no visible nest	Possible	16/05/2024
Mute Swan	1	Adult	Single ms loafing and swimming on channel	Possible	17/05/2024
Mute Swan	5	Adult	A group of ms swimming on artificial bog lake	Possible	24/06/2024
Mute Swan	1	Adults	Single ms swimming	Possible	28/05/2024

Peregrine Falcon (PE)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Peregrine	1	Female	Female SE on nest box. Perched. Updated April sighting	Probable	20/05/2024

Redshank (RK)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Redshank	1	Adult	Resting. Likely a non-breeding/failed breeding bird, as not recorded in area previously	Unknown	26/06/2024

Ringed Plover (RP)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Ringed Plover	3	Adult	3 RP short flight, landing mobbed by BH	Possible	17/05/2024
Ringed Plover	4	Adult and young	Pair of chicks seen. Adults agitated, one bird doing injured distraction display	Confirmed	20/05/2024
Ringed Plover	5	Adult	Ringed plover alarm calls, 4 visible others audible close by	Probable	25/06/2024
Ringed Plover	2	Adult, male and female	Pair agitated and one bird seen on nest	Confirmed	27/06/2024

Sand Martin (SM)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Sand Martin	8	Adults	A group of SM flying and circling. Drinking water from ponds. Possibility exploring nest opportunities	Unknown	18/04/2024
Sand Martin	10	Adults	A group of SM flying and circling. Possibility exploring nest opportunities	Unknown	18/04/2024
Sand Martin	25	Adults	19 nest holes observed. Active nests. Adults feeding	Probable	19/04/2024
Sand Martin	16	Adult	A group of SM flying and circling near turf bank and visiting/excavating at least 6 nest holes.	Probable	21/05/2024
Sand Martin	30	Adults	33 nest holes, at least 7 used	Confirmed	24/06/2024

Shelduck (SU)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Shelduck	2	Adults	Landed on the lake and took off shortly after. Scarce record for midlands, mostly coastal breeder. Possibly on migration.	Unknown	18/04/2024

Snipe (SN)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Snipe	1	Adult male	Male Snipe chipping in rewetted pb4	Possible	17/04/2024
Snipe	1	Adult	Flushed	Possible	22/04/2024
Snipe	1	Adult	Flushed	Possible	22/04/2024
Snipe	1	Adult	Flushed	Possible	22/04/2024
Snipe	1	Adult	Flushed	Possible	23/04/2024
Snipe	1	Adult	Flushed	Possible	23/04/2024
Snipe	1	Adult male	Single snipe heard drumming for a few minutes	Possible	30/04/2024
Snipe	1	Adult male	Male snipe first heard drumming and calling, then seen flying and perched on a low post	Possible	30/04/2024
Snipe	1	Adult male	Single snipe heard drumming and calling	Possible	30/04/2024
Snipe	1	Adult male	Single snipe heard calling	Possible	13/05/2024
Snipe	1	Adult	Heard calling	Possible	17/05/2024
Snipe	1	Adult male	Display flight	Probable	20/05/2024
Snipe	1	Adult male	Display flight	Probable	20/05/2024
Snipe	1	Adult	Drumming and chipping	Probable	21/05/2024
Snipe	1	Snipe	Single snipe flushed	Possible	17/05/2024
Snipe	1	Adult male	Flushed from vegetation	Possible	17/04/2024
Snipe	1	Adult male	Snipe calling	Probable	25/06/2024

Sparrowhawk (SH)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Sparrowhawk	1	Female	Female SH flushed and flew south	Possible	26/06/2024
Sparrowhawk	1	Male	Hunting male	Possible	17/04/2024

Woodcock (WK)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Woodcock	1	Unknown	WK flying SW from woodland to bog, calling heard but inhibited by passing of quad and 2 motorbikes	Probable	20/05/2024
Woodcock	1	Male	WK fling N-SW to bog. Flew out of sight	Probable	20/05/2024
Woodcock	1	Male	WK flying N-S towards bog. Out of sight and landed	Probable	20/05/2024
Woodcock	1	Male	Flying from bog to woodland	Probable	20/05/2024
Woodcock	1	Male	Roding and traveling N-S to bog	Probable	20/05/2024
Woodcock	1	Male	Calling and flying over woodland to bog, E-W	Probable	20/05/2024
Woodcock	1	Male	Roding and flying from woodland towards bog	Probable	20/05/2024
Woodcock	1	Male	Flying and calling heading E-SW towards bog woodland	Probable	20/05/2024
Woodcock	1	Male	Flying from woodland towards bog S-N-E	Probable	21/05/2024
Woodcock	2	Male	Flying from bog towards woodland, crossed over path, E-W-N, when went oov then x2 WK seen flying together, same direction	Probable	21/05/2024
Woodcock	1	Male	Flying from woods to bog S-N	Probable	21/05/2024
Woodcock	1	Male	Roding, flying over woodland E-W	Probable	21/05/2024
Woodcock	1	Male	Roding, likely same male, flying W-E	Probable	21/05/2024
Woodcock	1	Male	Roding likely same male, flying E-W	Probable	21/05/2024
Woodcock	1	Male	Roding, flying over bog/wood, likely same male W-E	Probable	21/05/2024
Woodcock	1	Male	Flying from bog over path, S-N, roding	Probable	21/05/2024
Woodcock	1	Male	Flying/roding N-S	Probable	21/05/2024
Woodcock	1	Male	Flying over woods, ODS W-E	Probable	21/05/2024
Woodcock	1	Male	Roding, N-S	Probable	21/05/2024
Woodcock	1	Male	Flying over grassland towards bog, SE-NW	Probable	21/05/2024
Woodcock	1	Male	Roding, flying east along transect, heard calling	Probable	20/05/2024
Woodcock	1	Male	Heard calling and flying along transect route	Probable	20/05/2024
Woodcock	1	Male	Flew along edge of woodland-didn't call	Probable	21/05/2024
Woodcock	1	Male	Roding male	Probable	06/06/2024
Woodcock	1	Male	Roding male	Probable	06/06/2024
Woodcock	1	Male	Roding male, Flights as per ref 2	Probable	06/06/2024
Woodcock	1	Male	Roding male, one of two	Probable	06/06/2024
Woodcock	1	Male	Roding male, one of two	Probable	06/06/2024
Woodcock	1	Male	Roding male	Probable	06/06/2024

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Woodcock	1	Male	Roding male, one of two seen at same time	Probable	06/06/2024
Woodcock	1	Male	Roding male, one of two seen at same time	Probable	06/06/2024
Woodcock	1	Male	Roding male, heard not seen	Probable	06/06/2024
Woodcock	1	Male	Flying and calling along woodland	Probable	06/06/2024
Woodcock	1	Male	Heard calling but not seen	Probable	06/06/2024
Woodcock	1	Male	Roding, flying E-W over wn7/pb4	Probable	04/06/2024
Woodcock	1	Male	Roding, flying SE-NW over WN7/PB4	Probable	04/06/2024
Woodcock	1	Male	Roding, flying w-s over WN7/PB4	Probable	04/06/2024
Woodcock	1	Male	Roding flying n-s, over WN7/PB4	Probable	04/06/2024
Woodcock	1	Male	Roding flying over WN7 oos ne-sw	Probable	04/06/2024
Woodcock	1	Male	Roding, flying s-nw	Probable	04/06/2024
Woodcock	1	Male	Wk pair likely disturbed by group of crows, one flew east	Probable	04/06/2024
Woodcock	1	Male	Wk pair, other individual circled and flew back to WN7	Probable	04/06/2024
Woodcock	1	Male	Roding, flying w-e along WN7	Probable	04/06/2024
Woodcock	2	Male	Pair, flew from WN7, n-s, flew low down (PB4) and back up again over WN7	Probable	04/06/2024
Woodcock	1	Male	Flying W to e just over treeline	Probable	27/06/2024
Woodcock	1	Male	Flew from N to S across transect	Probable	26/06/2024
Woodcock	1	Male	Flew slightly east and looped south	Probable	26/06/2024
Woodcock	1	Male	Flew east along adjacent to transect	Probable	26/06/2024
Woodcock	1	Male	Individual flying Sto NE	Probable	24/06/2024
Woodcock	1	Male	Individual flying Sto N	Probable	24/06/2024
Woodcock	1	Male	Individual flying N to SE	Probable	24/06/2024
Woodcock	1	Male	Individual flying N to E and zig zagged	Probable	24/06/2024
Woodcock	1	Male	looped from NE back in the same direction	Probable	24/06/2024
Woodcock	1	Male	Flew from NE and went north	Probable	24/06/2024
Woodcock	1	Male	Flew from east to west	Probable	24/06/2024
Woodcock	1	Male	Flew from NE to S	Probable	24/06/2024

Yellowhammer (Y.)

Bird Species	Number	Sex/Age	Notes	Breeding Status	Date
Yellowhammer	1	Male	Single Singing male	Possible	17/04/2024
Yellowhammer	2	Male and female	Signing male observed first, then with female together for a few minutes	Probable	24/04/2024
Yellowhammer	1	Male	Single male singing. Not seen	Possible	25/04/2024
Yellowhammer	2	Male	Singling males, one seen one heard	Possible	25/04/2024
Yellowhammer	1	Male	Single singing male	Possible	25/04/2024
Yellowhammer	1	Male	Calling male	Possible	20/05/2024
Yellowhammer	1	Male	Calling male	Possible	20/05/2024
Yellowhammer	1	Male	Single singing male	Possible	24/06/2024
Yellowhammer	1	Male	Single Y seen foraging	Possible	25/06/2024

38kV VP Count Data Recorded during Breeding Birds Surveys at Lower River Shannon in 2024

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	26/04/24	JM	09:37	GJ	1	No	n/a	n/a	n/a	n/a	Single greylag loafing.
Kildoorus	26/04/24	JM	10:12	MS	2	No	n/a	n/a	n/a	n/a	2 juveniles - second year plumage
Kildoorus	26/04/24	JM		CA	1	No	n/a	n/a	n/a	n/a	Single cormorant first seen swimming, then perched
Kildoorus	26/04/24	JM	10:40	CA	1	No	n/a	n/a	n/a	n/a	Cormorant diving,
Kildoorus	13/05/24	JM	14:00	MA	1	No	n/a	n/a	n/a	n/a	Single male mallard swimming
Kildoorus	13/05/24	JM	14:15	CA	3	No	n/a	n/a	n/a	n/a	3 ca perched on the bank of the river
Kildoorus	13/05/24	JM	14:21	MS	1	No	n/a	n/a	n/a	n/a	Single MS swimming and foraging
Kildoorus	13/05/24	JM	14:35	MA	3	No	n/a	n/a	n/a	n/a	2x male, 1x female
Kildoorus	13/05/24	JM	16:35	MS	2	No	n/a	n/a	n/a	n/a	Pair of MS swimming and foraging

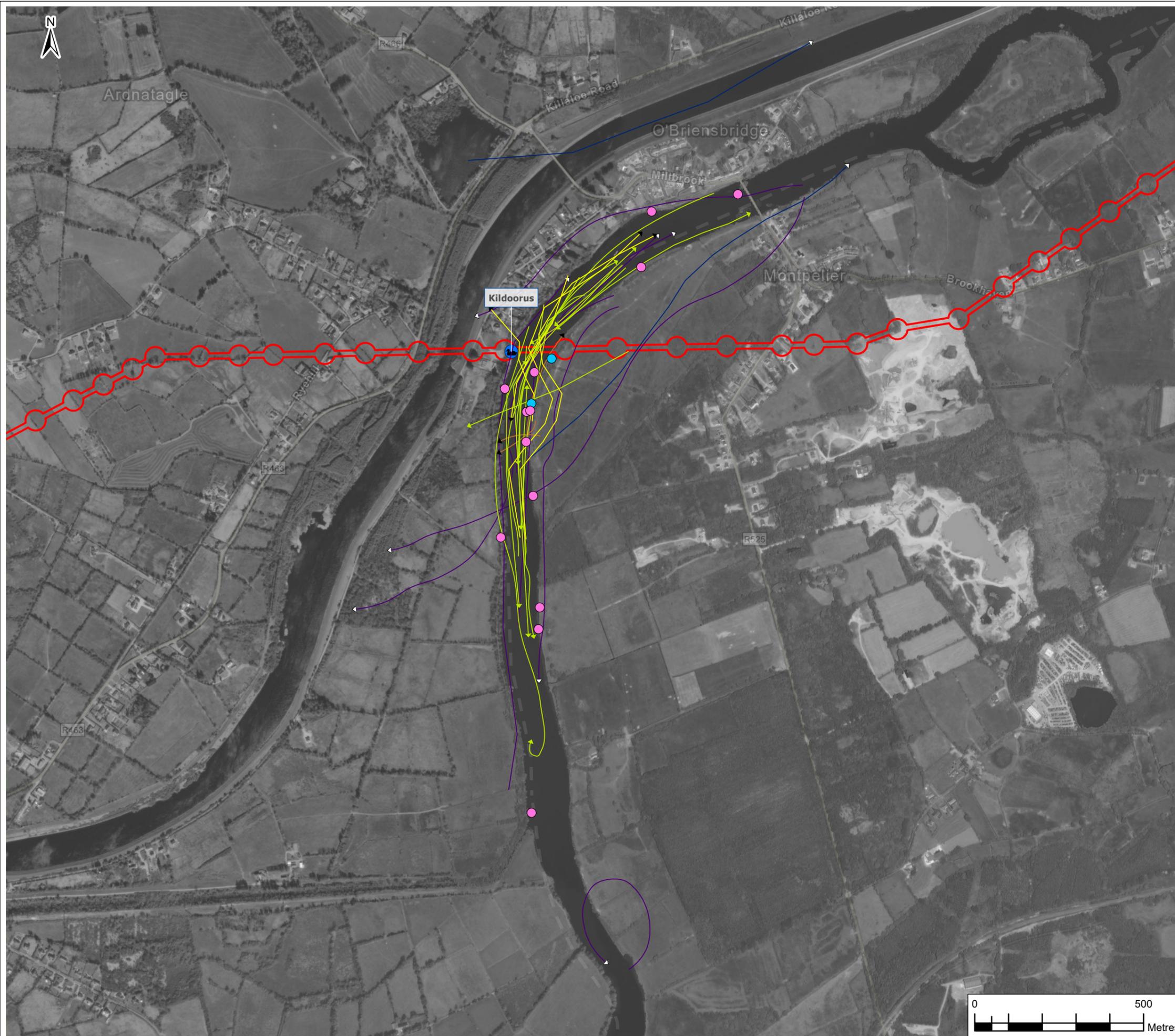
VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	14/05/24	JM/MB	17:59	MA	1	No	n/a	n/a	n/a	n/a	Male mallard swimming
Kildoorus	14/05/24	JM/MB	18:06	MS	2	No	n/a	n/a	n/a	n/a	Two swans swimming near reeds
Kildoorus	14/05/24	JM/MB	18:37	MA	1	No	n/a	n/a	n/a	n/a	1 male on water
Kildoorus	11/06/24	JM	06:36	MS	1	No	n/a	n/a	n/a	n/a	Swimming
Kildoorus	11/06/24	JM	8:15	MS	1	No	n/a	n/a	n/a	n/a	Swimming
Kildoorus	11/06/24	JM	9:47	GJ	1	No	n/a	n/a	n/a	n/a	Single GJ
Kildoorus	12/07/24	JM	7:25	MA	10	No	n/a	n/a	n/a	n/a	2 adult females and 8 almost adult size ducklings
Kildoorus	12/07/24	JM	07:49	MS	6	No	n/a	n/a	n/a	n/a	2 adults and 4 cygnets
Kildoorus	12/07/24	JM	08:43	H	1	No	n/a	n/a	n/a	n/a	Single heron
Kildoorus	12/07/24	JM	11:09	KF	1	No	n/a	n/a	n/a	n/a	Single KF perched on a willow tree.
Kildoorus	12/07/24	JM	13:08	GJ	3	No	n/a	n/a	n/a	n/a	3 greylags swimming
Kildoorus	12/07/24	JM	13:22	CA	1	No	n/a	n/a	n/a	n/a	Swimming and hunting
Kildoorus	19/08/24	JM	07:50	MS	2	No	n/a	n/a	n/a	n/a	2 MS swimming, no cygnets
Kildoorus	19/08/24	JM	09:10	MA	6	No	n/a	n/a	n/a	n/a	2 females, six juveniles
Kildoorus	16/09/24	JM	12:38	MS	6	No	n/a	n/a	n/a	n/a	2 adults, 4 cygnets
Kildoorus	19/08/24	JM	12:30	CA	1	No	n/a	n/a	n/a	n/a	Swimming and diving
Kildoorus	16/09/24	JM	11:13	MS	2	No	n/a	n/a	n/a	n/a	Pair of MS swimming and foraging
Kildoorus	16/09/24	JM	11:52	MA	3	No	n/a	n/a	n/a	n/a	Swimming
Kildoorus	26/04/24	JM	6:12	CA	6	Yes	S	N/A	8	36	Key of cormorants flying south
Kildoorus	26/04/24	JM	06:35	CU	11	Yes	N	N/A	8-15	42	A group of curlews flew north
Kildoorus	26/04/24	JM	07:00	CA	1	Yes	N	N/A	8	25	Single cormorant flew north

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	26/04/24	JM	07:15	CA	1	Yes	N	Other	8	48	Single cormorant flew north
Kildoorus	26/04/24	JM	07:22	GJ	2	Yes	N	Below	1	10	Pair of greylags landed on water then climbed on bank
Kildoorus	26/04/24	JM	07:25	H	1	Yes	SE	Below	3	12	Single heron left river right and flew out of view
Kildoorus	26/04/24	JM	07:30	CU	3	Yes	S	N/A	15	118	3 curlew flew south initially but started to circle then dropped out of sight
Kildoorus	26/04/24	JM		MS	2	Yes	SW	N/A	10	18	2 MS flew sward out of view
Kildoorus	26/04/24	JM	08:01	CU	4	Yes		Below	15	65	4 curlews landed on bank, joining a small group of curlews
Kildoorus	26/04/24	JM	08:17	H	1	Yes	N	Above	1	51	Single heron flew along the bank, then flew across the river to land out of view
Kildoorus	26/04/24	JM	08:25	CU	32	Yes		Below	1	45	Flock of curlew flying low above water, then flew onto same part of the bank where previous curlews landed
Kildoorus	26/04/24	JM	10:00	CU	2	Yes	N	Above	10	25	2 curlews flew north
Kildoorus	26/04/24	JM	10:57	CA	4	Yes	N	Above	10	75	Cormorants flying north
Kildoorus	26/04/24	JM	10:00	CU	2	Yes	NW	Above	37		2 curlew flyover and out of sight
Kildoorus	26/04/24	JM	11:12	CA	1	Yes	N	Other	10	N	Cormorant
Kildoorus	26/04/24	JM	11:50	CU	8	Yes	S	Below	3	12	Group of Curlew flushed by kayaker
Kildoorus	26/04/24	JM	11:58	H	1	Yes	E	Above	1	10	Heron changed river side
Kildoorus	13/05/24	JM	16:08	MA	3	Yes	S	Other	10	43	3 mallards flying over river and turning se
Kildoorus	13/05/24	JM	14:31	CA	1	Yes	S	Other	40	67	CA flying north to south
Kildoorus	13/05/24	JM	15:15	CA	1	Yes	S	Below	5	14	Single ca flew from east and landed on water
Kildoorus	14/05/24	JM/MB	17:59	CA	1	Yes	W	Below	20		Single cormorant flying
Kildoorus	14/05/24	JM/MB	18:26	CA	1	Yes	W	Above	25	15	Flying above line west
Kildoorus	14/05/24	JM/MB	18:30	CA	1	Yes	NE	Above	25	23	Single cormorant flyover
Kildoorus	14/05/24	JM/MB	18:45	H	1	Yes	E	Above	1	10	Single heron flew from one side of river to other
Kildoorus	14/05/24	JM/MB	18:46	CA	1	Yes	NE	N/A	10	40	Single CA circled above river
Kildoorus	14/05/24	JM/MB	19:16	BH	3	Yes	W	Above	25	39	3 BH flying overhead
Kildoorus	14/05/24	JM/MB	19:26	CA	3	Yes	SW	Above	30	26	3 CA flying across river

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	14/05/24	JM/MB	19:29	CA	1	Yes	SW	Above	25	19	1 CA flying across river
Kildoorus	14/05/24	JM/MB	19:53	CA	1	Yes	N	Above	25	62	1 CA Flying up the river
Kildoorus	14/05/24	JM/MB	19:58	CA	1	Yes	W	N/A	10	13	1 CA flying overhead
Kildoorus	11/06/24	JM	06:00	H	1	Yes	S	Below	4	13	Short flight - flushed
Kildoorus	11/06/24	JM	06:32	CA	1	Yes	S	Below	5	22	CA flyover
Kildoorus	11/06/24	JM	07:16	CA	1	Yes	NE	Below	10	47	CA flyover
Kildoorus	11/06/24	JM	7:36	CA	1	Yes	NE	Above	10	27	CA flyover
Kildoorus	11/06/24	JM	10:16	CA	1	Yes	NW	Below	8	27	CA flyover
Kildoorus	11/06/24	JM	11:24	CA	1	Yes	N	Below	8	40	CA flyover
Kildoorus	12/07/24	JM	07:29	CA	2	Yes	SW	Below	10	30	2 CA flyover
Kildoorus	12/07/24	JM	08:04	CA	2	Yes	NW	Below	0-10	57	2 CA flying low over water then raising above the treeline
Kildoorus	12/07/24	JM	09:09	BH	1	Yes	N	Other	2	180	Low flight over water
Kildoorus	12/07/24	JM	09:26	LB	1	Yes	W	Below	8	21	Single LB flew over the river
Kildoorus	12/07/24	JM	09:54	CA	1	Yes	SE	Below	20	63	Single CA flying high towards southeast
Kildoorus	12/07/24	JM	11:44	CA	1	Yes	SE	Below	10	34	Single CA flyover
Kildoorus	12/07/24	JM	11:53	CA	2	Yes	NE	Other	10	27	1 CA flyover
Kildoorus	12/07/24	JM	13:35	H	1	Yes	W	Below	10	28	Single heron landed at the bank of the river
Kildoorus	19/08/24	JM	07:53	CA	1	Yes	S	Below	10	48	CA flyover
Kildoorus	19/08/24	JM	09:38	LB	1	Yes	S	Below	12	60	Single LB flyover
Kildoorus	19/08/24	JM	11:38	LB	11	Yes		Above	4-20	80	A group of LB circling above town in strong wind
Kildoorus	19/08/24	JM	12:51	LB	4	Yes	S	Below	6-15	180	Small group of LBs flying south, often gliding in strong wind, eventually oov
Kildoorus	19/08/24	JM	13:05	LB	5	Yes	S	Below	6-15	155	Small group of LBs flying south, often gliding in strong wind, eventually oov
Kildoorus	16/09/24	JM	12:39	MS	3	Yes	S	Other	1	38	3 MS flying low above water

VP	Date	Observer	Observation Time	BTO Code	Number	Flying	Bearing	Above/Below current line	Flight height	Flight Duration	Notes
Kildoorus	16/09/24	JM	13:39	BH	1	Yes		Above	12	180	Circling
Kildoorus	16/09/24	JM	15:18	BH	1	Yes	S	N/A	10	108	BH flyover south
Kildoorus	16/09/24	JM	16:16	MA	3	Yes	N	N/A	2	45	3 mallards flew over water

Annex E. Vantage Point Flightlines



Legend

	Planning Application Boundary		Flightlines
	Vantage Point Locations		Gull Speices
	Kingfisher		Herring Gull
	Mute Swan		Kingfisher
			Mute Swan
			Whimbrel

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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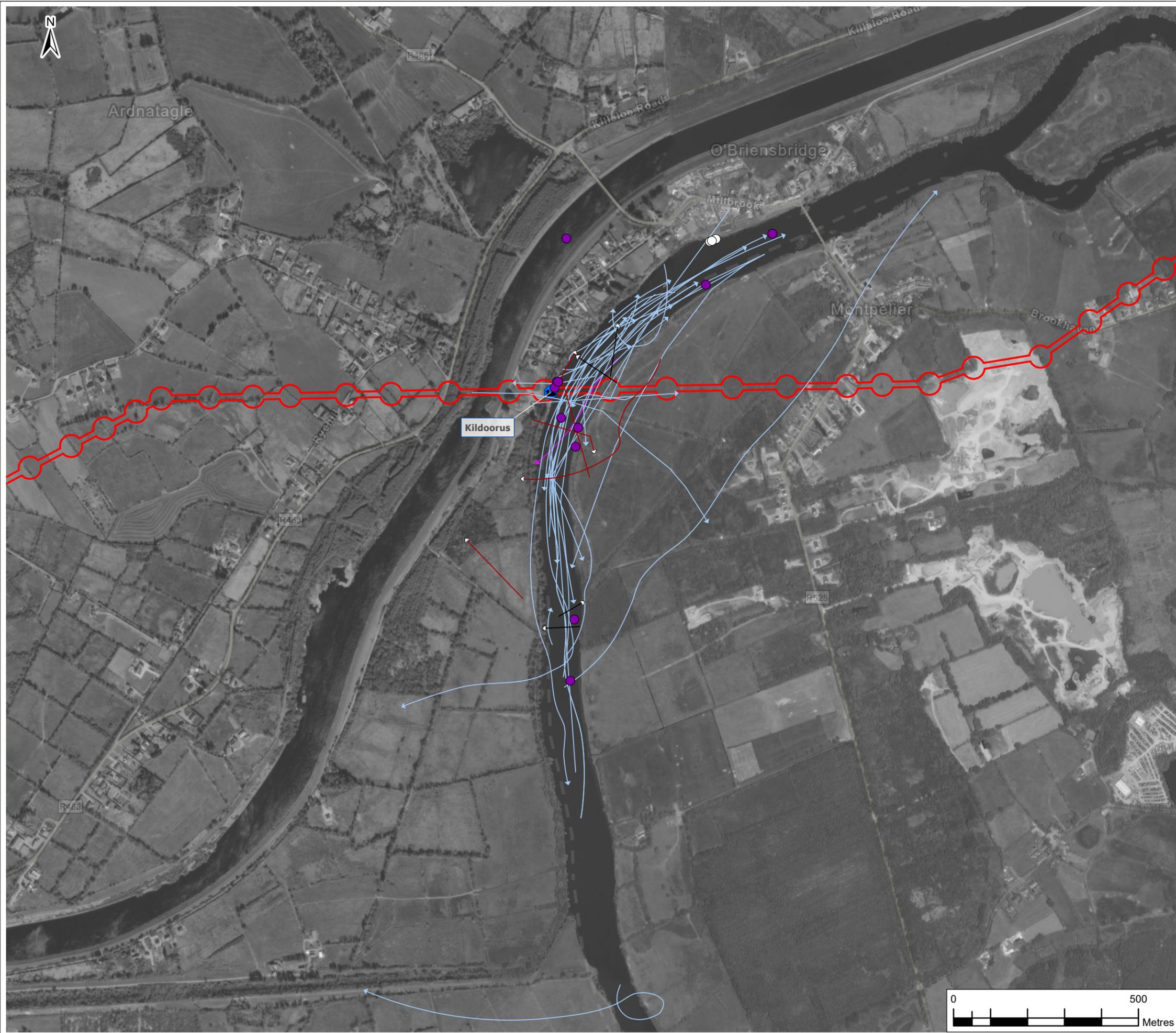
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 Water Supply Project
 Eastern and Midlands Region

Drawing Title
 Annex E Figure 4
 38kV VP Breeding Birds Surveys 2019 to 2024 Flightlines

Drawing Status
 Final - Planning Application

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Legend

- Planning Application Boundary
- Vantage Point Locations

Non-flight Observations

- Black-headed Gull
- Mallard

Flightlines

- Little Egret
- Mallard
- Moorhen
- Sparrowhawk

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Client

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex E Figure 6
38kV VP Breeding Birds Surveys 2019 to 2024 Flightlines

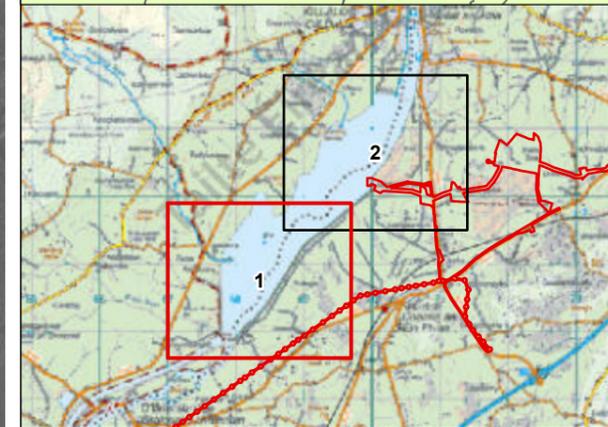
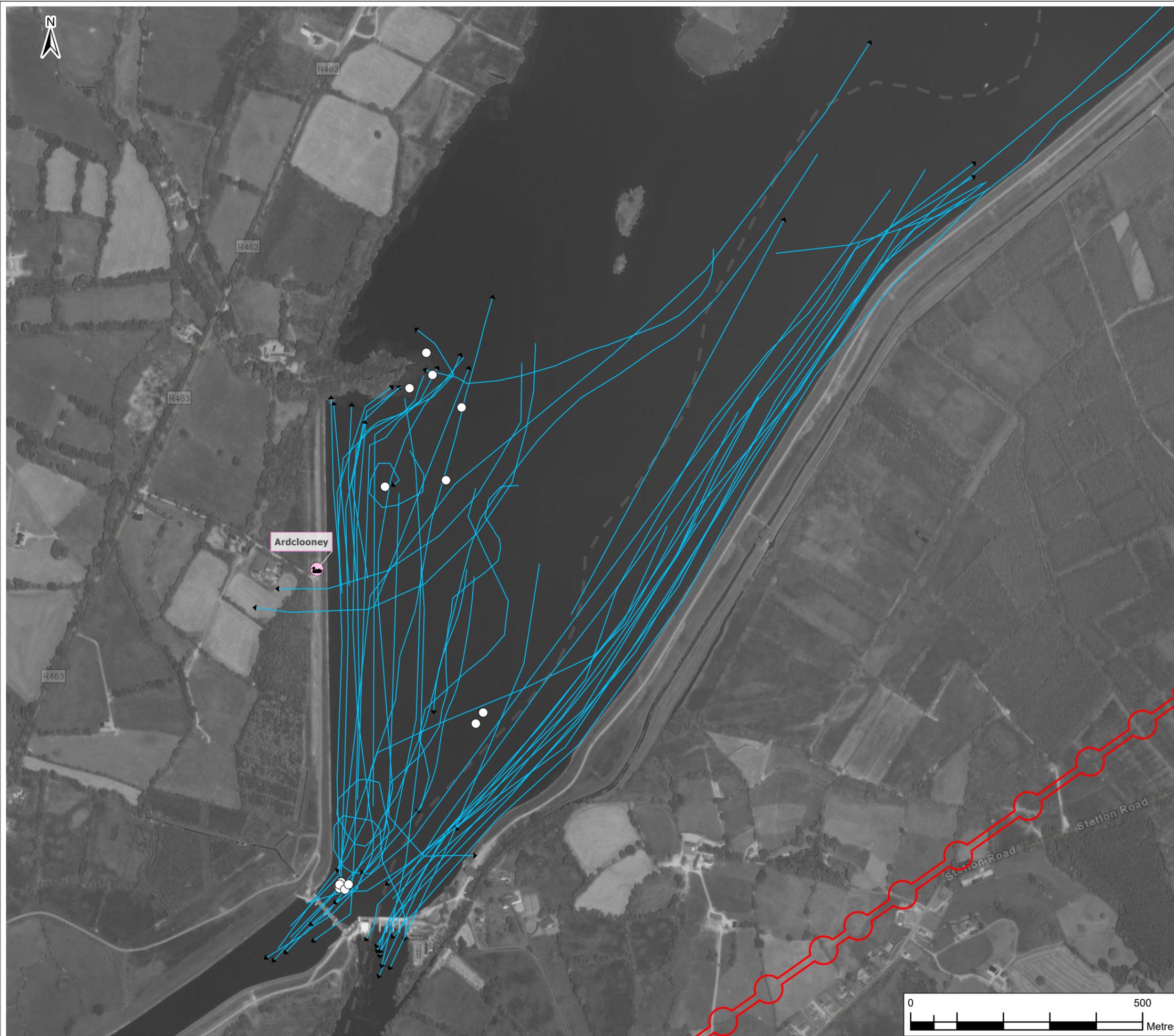
Drawing Status

Final - Planning Application

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Legend

- Planning Application Boundary
- Vantage Point Locations
- Non-flight Observations**
- Black-headed Gull
- Flightlines**
- Black-headed Gull

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
Annex E Figure 7
Parteen Basin VP Breeding Birds Surveys 2019 to 2024
Sheet 1 of 2

Drawing Status
Final - Planning Application

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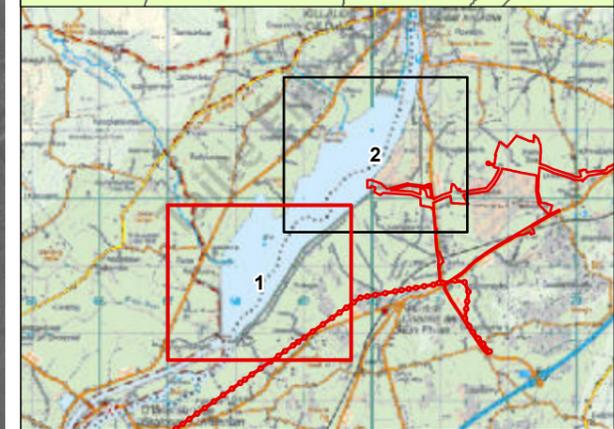
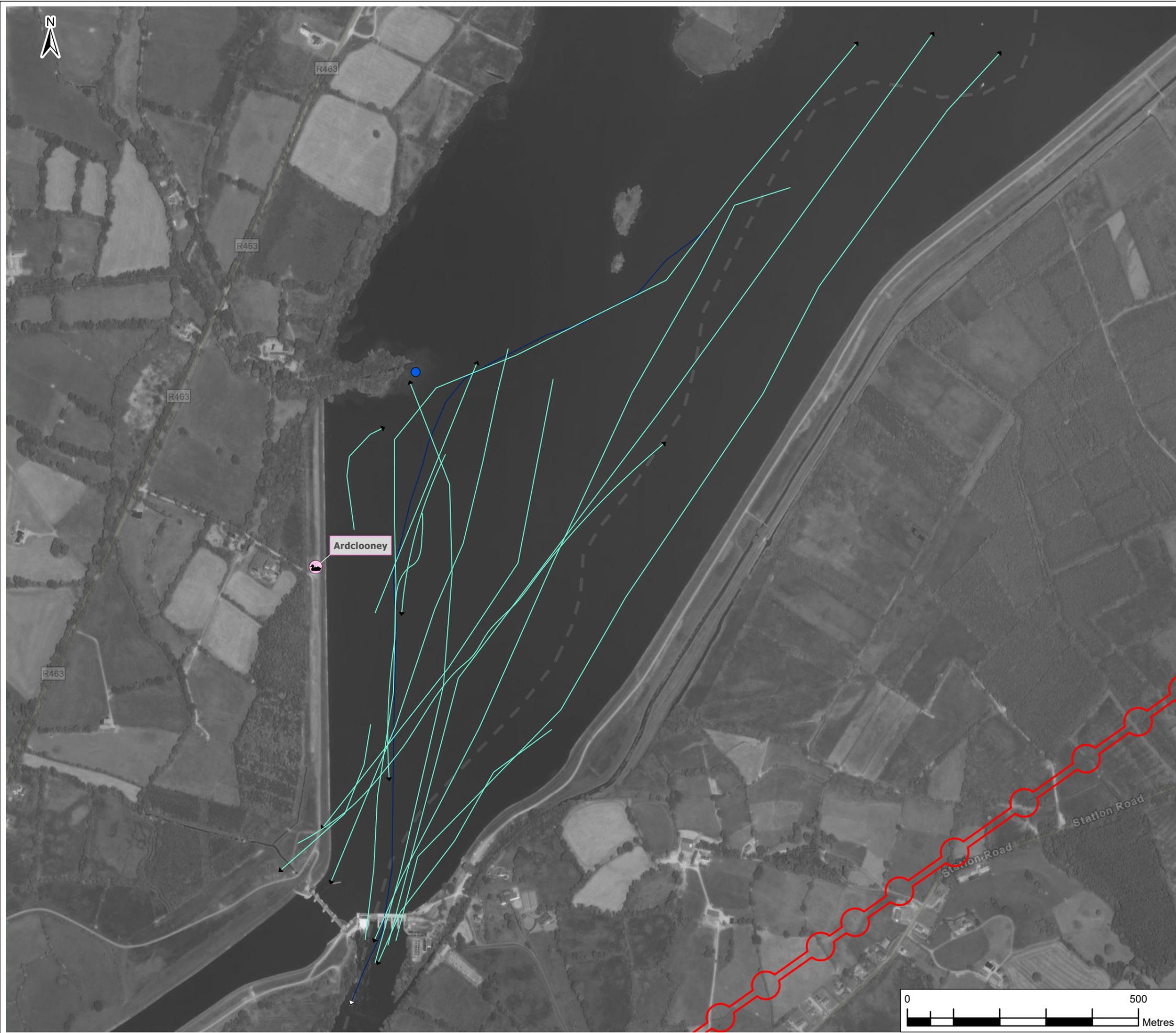
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Client No.
9318

Drawing No.
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Legend

- Planning Application Boundary
- Vantage Point Locations
- Lesser Black-backed Gull

Non-flight Observations

- Lesser Black-backed Gull

Flightlines

- Gull Species
- Lesser Black-backed Gull

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Client

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex E Figure 11
Parteen Basin VP Breeding Birds Surveys 2019 to 2024
Sheet 1 of 2

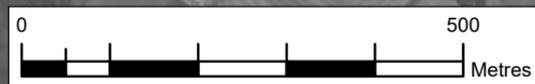
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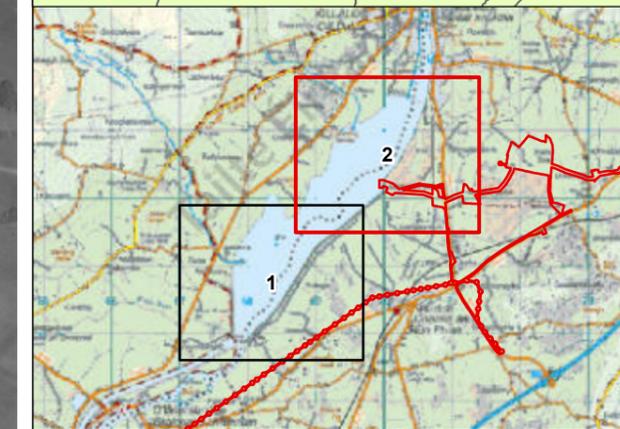
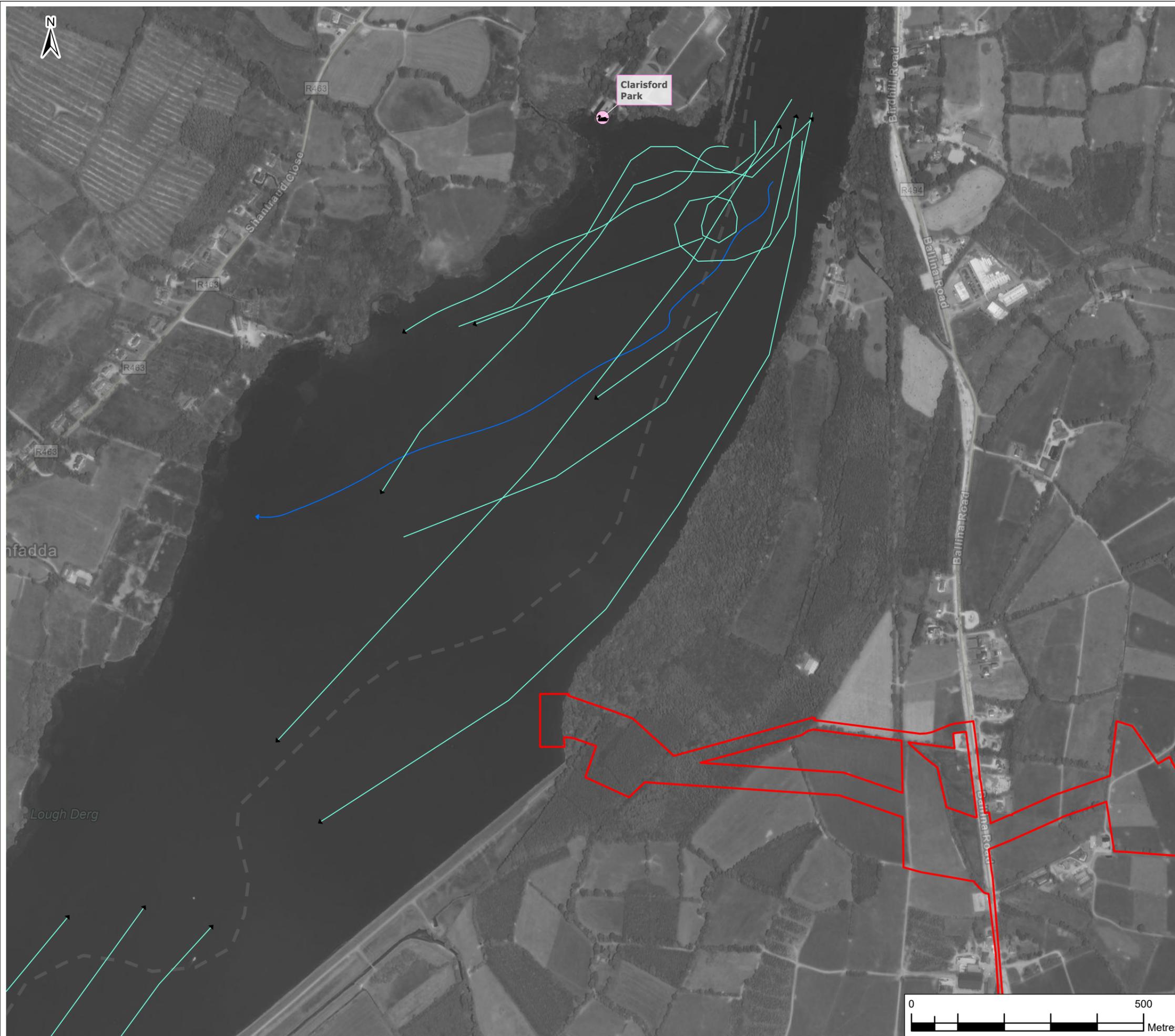
Final - Planning Application

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Legend

- Planning Application Boundary
- Vantage Point Locations

Flightlines

- Lesser Black-backed Gull
- <all other values>

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Project

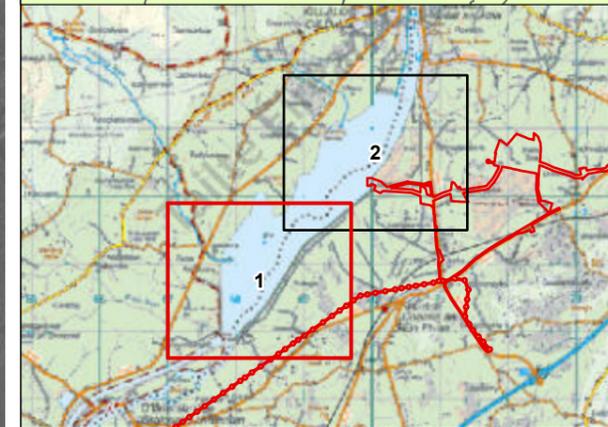
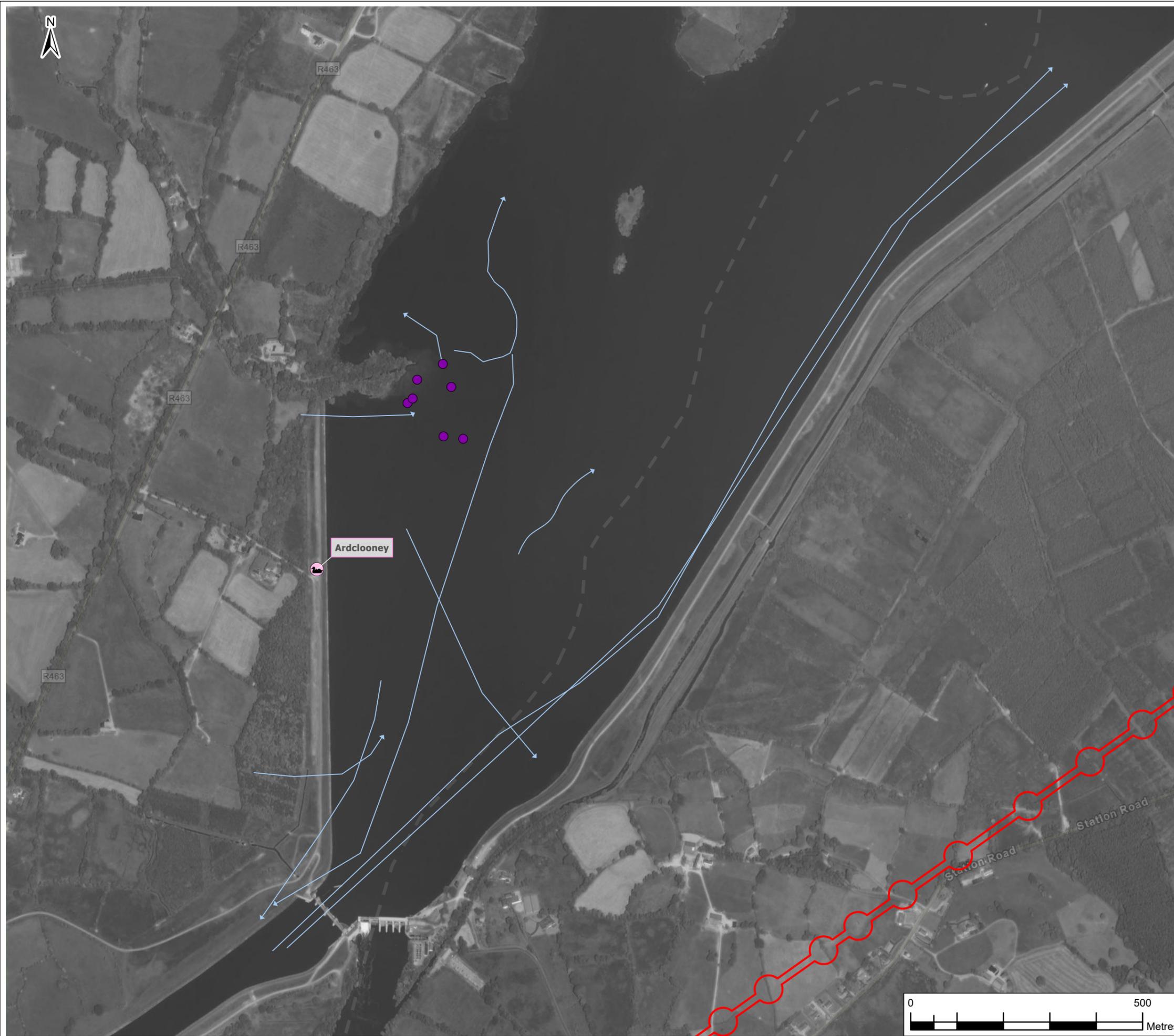
Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex E Figure 12
Parteen Basin VP Breeding Birds Surveys 2019 to 2024
Sheet 2 of 2

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Legend

- Planning Application Boundary
- Vantage Point Locations
- Non-flight Observations**
- Mallard
- Flightlines**
- Mallard

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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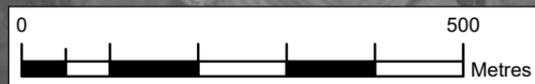
Project
Water Supply Project
Eastern and Midlands Region

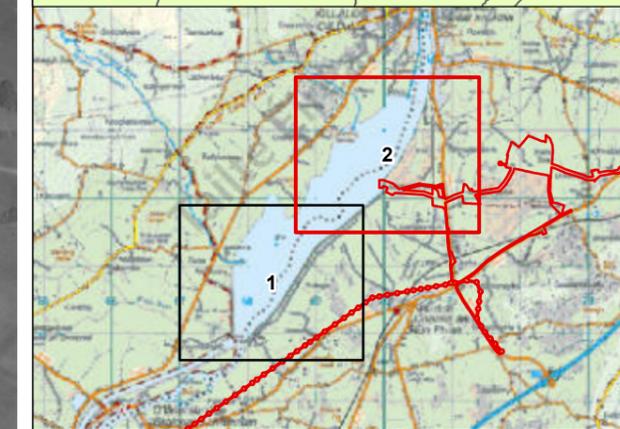
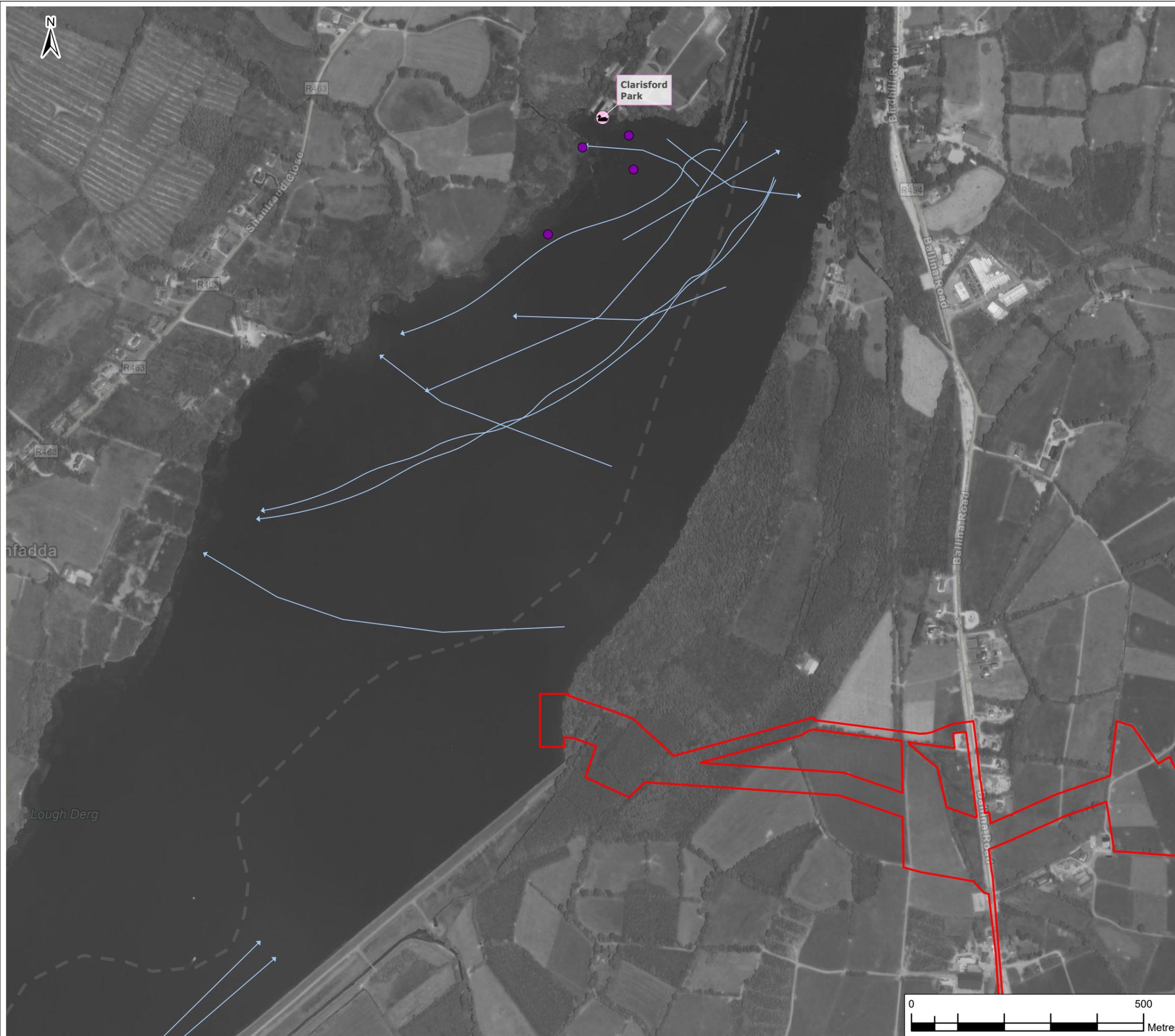
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Annex E Figure 13
Parteen Basin VP Breeding Birds Surveys 2019 to 2024
Sheet 1 of 2

Drawing Status
Final - Planning Application

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Legend

- Planning Application Boundary
- Vantage Point Locations
- Non-flight Observations**
- Mallard
- Flightlines**
- Mallard

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex E Figure 14
Parteen Basin VP Breeding Birds Surveys 2019 to 2024
Sheet 2 of 2

Drawing Status

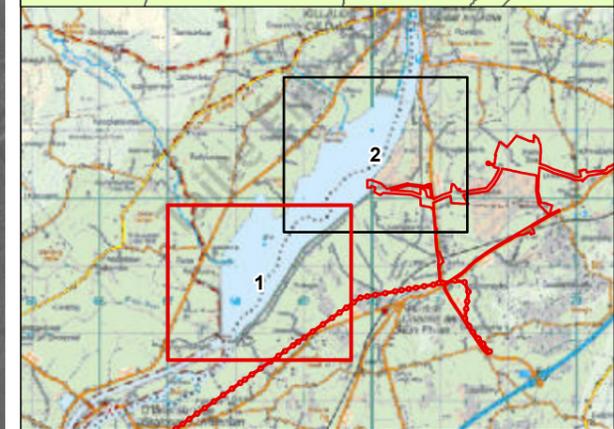
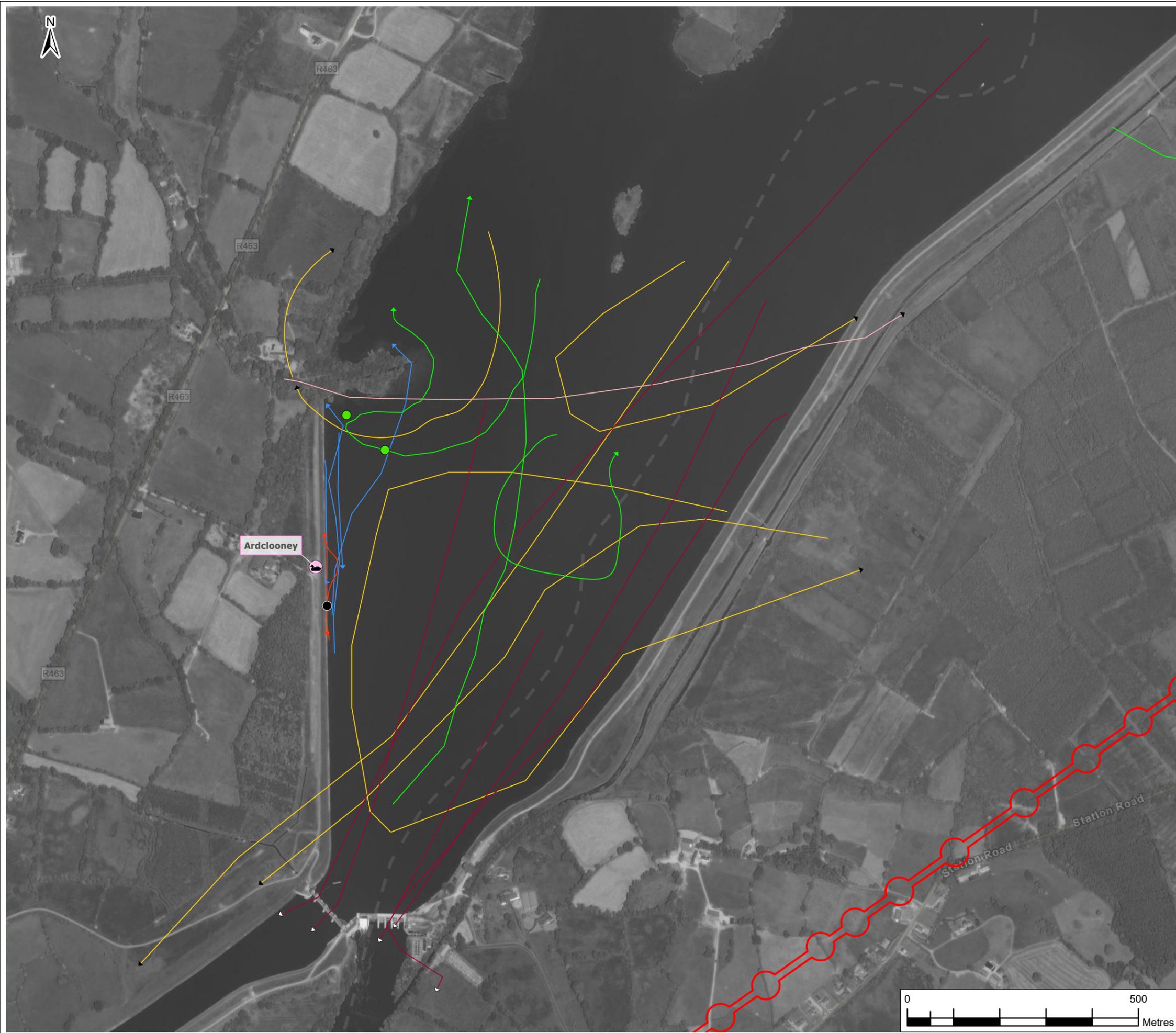
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Legend

Planning Application Boundary	Curlew
Vantage Point Locations	Grey Heron
Non-flight Observations	
Common Sandpiper	Greylag Goose
Great Crested Grebe	Common Sandpiper
	Common Tern
Flightlines	
Buzzard; Common Buzzard	Grey Wagtail

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

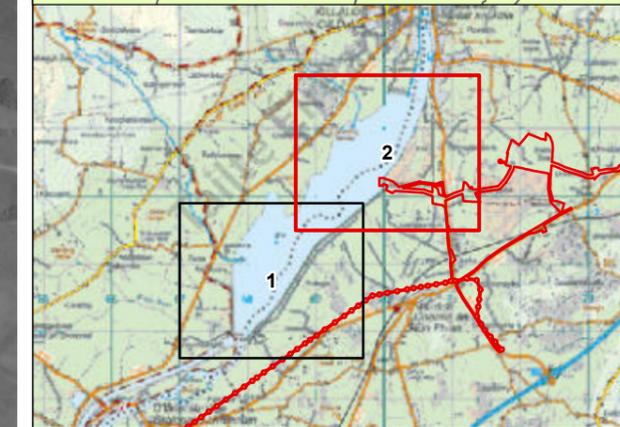
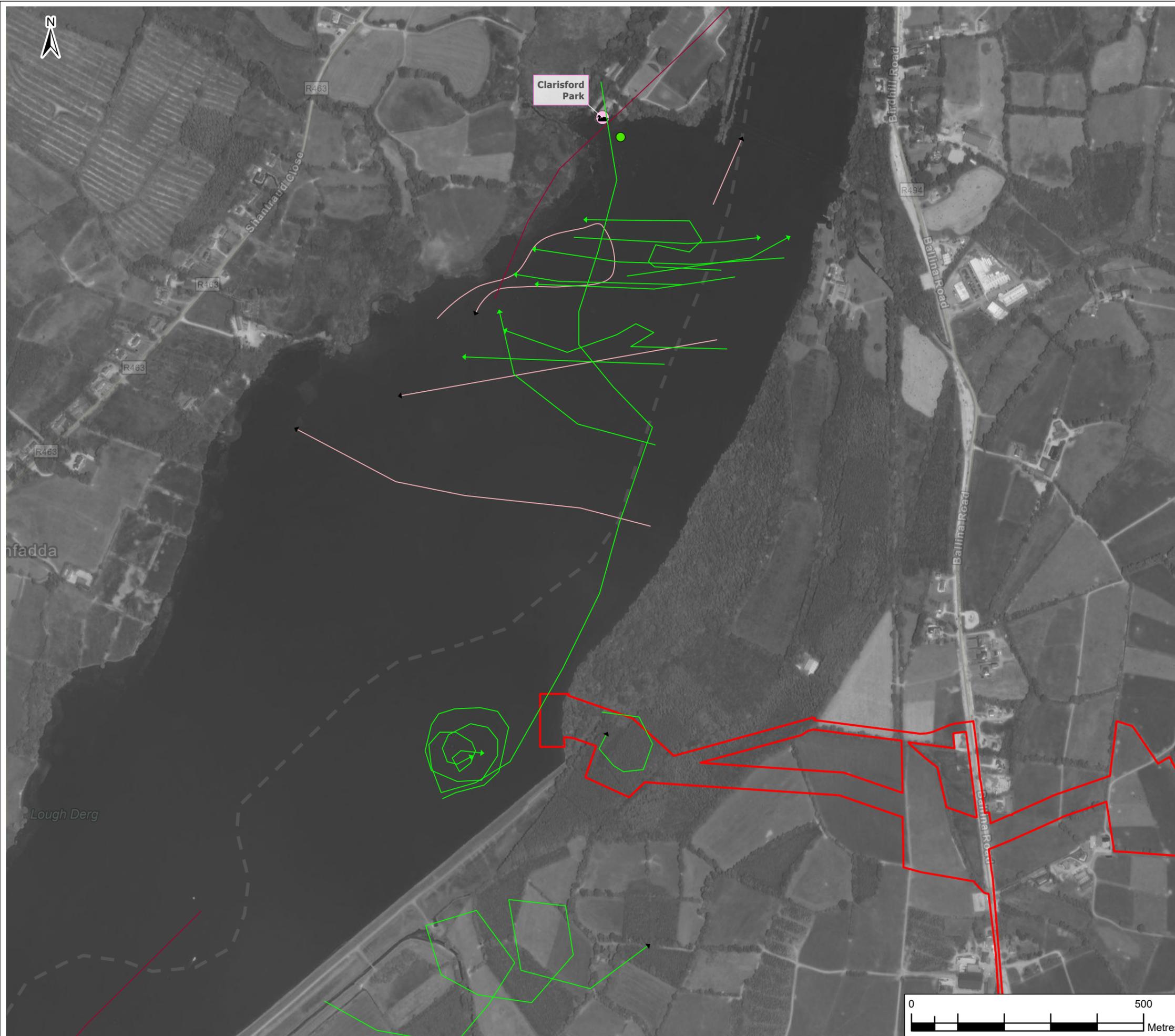


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Uisce Éireann Irish Water
Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
Annex E Figure 15
Parteen Basin VP Breeding Birds Surveys 2019 to 2024
Sheet 1 of 2

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Legend

- Planning Application Boundary
- Vantage Point Locations
- Non-flight Observations**
- Great Crested Grebe
- Flightlines**
- Buzzard; Common Buzzard
- Grey Heron
- ▷ Greylag Goose
- Common Tern

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

Annex E Figure 16
Parteen Basin VP Breeding Birds Surveys 2019 to 2024
Sheet 2 of 2

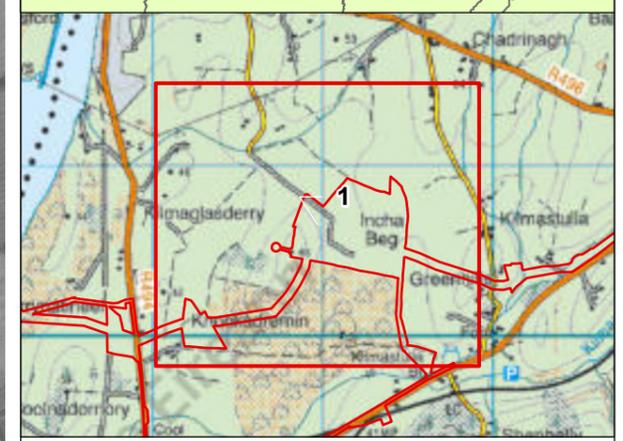
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Legend

- Planning Application Boundary
- Vantage Point Locations

Flightlines

- Kestrel
- Sparrowhawk

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

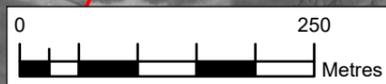
Annex E Figure 19
Infrastructure Sites Breeding Birds Surveys 2019 to 2024
Sheet 1 of 4

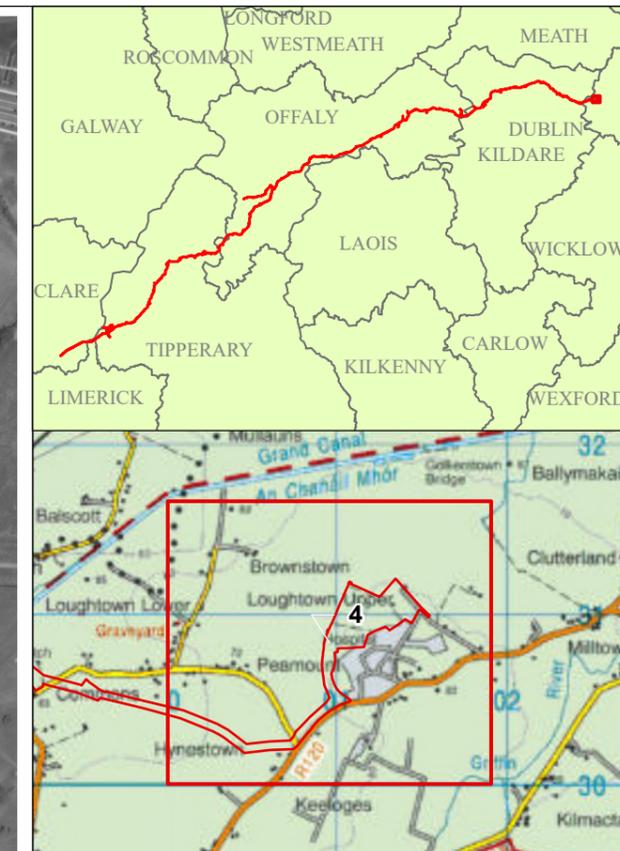
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Legend

Planning Application Boundary	Herring Gull
Vantage Point Locations	Kestrel
Non-flight Observations	Mallard
Golden Plover	Sparrowhawk
Yellowhammer	<all other values>
Flightlines	Buzzard; Common Buzzard

F02	08/10/25	Final - Planning Application	SP	JS	LK	SW
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Drawing Title
 Annex E Figure 22
 Infrastructure Sites Breeding Birds Surveys 2019 to 2024
 Sheet 4 of 4

Drawing Status	Final - Planning Application	
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