Appendix 12-3. Baseline Report - Bat Technical Appendix

Dublin Airport (Passenger Capacity) Act 2026

EIAR Appendix 12-3

Baseline Report - Bat Technical Appendix

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Delivering a better world

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1. Introduction

1.1 Background

AECOM was commissioned by daa to prepare an Environmental Impact Assessment Report (EIAR) which presents the Principal Assessment of the likely significant effects of the Proposed Order on biodiversity. The assessment compares the 2029 Permitted Operation and 2029 Proposed Operation scenarios in accordance with the project-wide assessment framework described in Chapter 5: Methodology (EIAR Volume 2).

This Technical Appendix to Chapter 12: Biodiversity of the EIAR documents the desk study and field survey carried out for bats within the Dublin Airport Site Boundary and surrounding lands. A suite of bat surveys was carried out between 2019 and 2025, comprising Preliminary Roost Assessments (PRA) / Ground Level Tree Assessments (GLTA), subsequent dusk emergence surveys of buildings and trees, and bat activity surveys.

This Technical Appendix is structured as followed:

- **Section 1: Introduction**
- **Section 2: Legislative and Planning Policy Context** provides an overview of relevant international and national nature conservation legislation and national and local planning policies related to biodiversity and nature conservation
- **Section 3: Methods** describes the desk study and field survey methods used to assess the presence or likely absence of bat species
- **Section 4: Results** set out the results of the desk study and field survey
- **Section 5: Summary** details the key findings of the desk study and field survey
- **Section 6: Figures**

1.2 Quality Assurance and Statement of Authority

This Technical Appendix, and the desk study and field survey described within it, has been completed in accordance with the AECOM Integrated Management System (IMS). The AECOM IMS places emphasis on professionalism, technical excellence, quality, as well as covering health, safety, environment, and sustainability management. All staff members are committed to establishing and maintaining our accreditation to the relevant international standards, including ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018.

AECOM is one of eight founding members of the Institute of Environmental Management and Assessment (IEMA) EIA Quality Mark scheme, helping IEMA to pilot the scheme prior to its launch in 2011 and maintaining membership ever since. The EIA Quality Mark is a voluntary scheme through which AECOM's EIA activity is reviewed regularly by IEMA. The Quality Mark demonstrates that AECOM EIARs are of high quality, technically sound, independently audited and regularly monitored to maintain high standards. It also underlines AECOM's commitment to continuous improvement of EIA practice across Ireland and the UK.

Details of the qualifications and experience of the AECOM ecologists involved in preparing this Technical Appendix, including in completing the desk study and field survey, are given in Table 1-1. Field surveys in 2025 were conducted by suitably experienced APEM ecologists.

Table 1-1: Quality Assurance

Staff Member	Qualifications	Role in Preparing this Technical Appendix	Experience
Tony Marshall (Technical Director)	• BSc (Hons) in Biological Sciences (Ecology) (1st Class) • Chartered Ecologist CEcol • Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM)	Tony was responsible for ensuring that field survey followed good practice guidelines. He also provided technical verification of V1 version of this Technical Appendix.	Tony has 16 years' experience as a professional ecologist on projects for private and public sector clients. He has extensive experience in Ecological Impact Assessment (EcIA) at all stages of the process, including screening / scoping, baseline data collection, assessment, and reporting. He has conducted many surveys for bats and used the results obtained to identify the impacts of infrastructure developments

Staff Member	Qualifications	Role in Preparing this Technical Appendix	Experience
			and to devise suitable mitigation / enhancement strategies.
Emma Boston (Associate Director)	• BSc (Hons) degree in Zoology (2nd Class) • PhD in Conservation Biology from Queen's University, Belfast, plus ten years' post-doctoral research experience in conservation biology. • CEcol MCIEEM • Member of Royal Society of Biology (MRSB)	Emma was responsible for ensuring that field survey followed good practice guidelines. Emma also carried out the analysis of bat calls from the field surveys for this Technical Appendix. She carried out the Lead Verification of the V2 version of this document.	Emma has over 19 years' professional experience in the survey of bats for research, conservation, and consultancy. Emma has expertise in the survey methods for bats using of a range of survey methods, techniques, and equipment, including acoustic call analysis. She has carried out bat surveys for small and large developments, and infrastructure schemes. She been involved in many projects where she has designed and prescribed specific mitigation for bats. Emma has held licences in Northern Ireland and the Republic of Ireland to disturb or catch bats for development, education, and research purposes, and currently holds a NatureScot and Natural England Level 4 licence.
Jenny Hunter (Principal Ecologist)	• BSc (Hons) in Environmental Biology (1st class) • MSc in Ecological Management and Conservation Biology • MCIEEM MRSB	Jenny carried out field surveys following good practice guidelines. Jenny also provided technical review of this Technical Appendix.	Jenny has over 12 years' professional experience of ecological consultancy. Jenny has extensive experience in the survey of bats using of a range of survey methods, techniques, and equipment, including acoustic call analysis. She has carried out bat surveys (preliminary roost assessments, emergence / re-entry, and activity surveys) for a range of small to large developments and infrastructure schemes. Jenny has assisted in licensed roost closures and has been involved in designing and prescribing specific mitigation for bats. She has provided inhouse training to junior colleagues on bat surveys and is well versed in relevant legislation and survey guidance. Jenny is AECOM Ecology's digital data capture lead in the use of mobile mapping technology for high quality data collection in the field.
Laura Cappelli (Senior Ecologist)	• BSc (Hons) in Conservation Biology (1st Class) • MSc (Hons) in Biodiversity and Conservation (1st Class) • MCIEEM	Laura carried out field surveys following good practice guidelines. Laura also provided technical review of this Technical Appendix.	Laura has over six years' experience as a professional ecologist on projects for private and public sector clients. She has experience in EcIA and has carried out several surveys for bats including preliminary roost assessments, bat activity and bat emergence surveys including the deployment of infrared (IR) and thermal cameras.
Alison Donnelly (Senior Ecologist)	• BSc (Hons) in Marine Science (2.1) • MRes (Hons) in Marine Biology (2.1)	Alison carried out field surveys following good practice guidelines.	Alison has over six years' experience as a professional ecologist on projects for private and public sector clients. She has experience in EcIA and has carried out several surveys for bats including preliminary roost assessments, bat activity and bat emergence surveys including the deployment of IR and thermal cameras.
Seanin Maxwell (Senior Ecologist)	• BSc (Hons) in Biology (1st class) • MSc in Ecological Management and Conservation Biology (Distinction) • Associate member of CIEEM	Seanin co-authored this Technical Appendix and carried out field surveys.	Seanin has over six years' professional experience of ecological consultancy. Seanin has extensive experience in the survey of bats using a range of survey methods for a variety of small- and large-scale projects. Seanin has assisted on bat box surveys in both Northern Ireland and England, as well as participating in voluntary bat roost counts. Seanin is also proficient in bat call analysis and in the deployment of IR and thermal cameras.

Staff Member	Qualifications	Role in Preparing this Technical Appendix	Experience
Aoife Whyte (Graduate Ecologist)	• BSc (Hons) in Biomedical and Biological Sciences with a specialisation in Zoology (1st class) • Qualifying Member of CIEEM	Aoife co-authored this Technical Appendix.	Aoife has over two years' of experience as a professional ecologist on projects for private and public sector clients. She has experience in EcIA and has carried out several surveys for bats including preliminary roost assessments, bat activity and bat emergence surveys including the deployment of IR cameras and thermal camera. Aoife also has experience in bat call analysis and data management.
Paul Donaghey (Senior Ecologist)	• BSc (Hons) in Biological Sciences (2.1) • MSc in Ecological Management and Conservation Biology • ACIEEM	Paul carried out field surveys following good practice guidelines	Paul has over five years' professional experience of ecological consultancy. Paul has carried out numerous bat surveys, including activity transects and emergence / re-entry surveys for a range of large- and small-scale projects. Paul also has extensive experience in bat call analysis, and regularly assists colleagues in Great Britain with bat analysis. Paul is also proficient in the use of GIS.
Aoife Keenan (Graduate Ecologist)	• BSc (Hons) in Environmental Management with Professional Studies (1st class) • MSc in Ecological Management and Conservation Biology	Aoife carried out field surveys following good practice guidelines	Aoife has over two years' professional experience in environmental consultancy including previous experience as a seasonal ecologist. She is proficient in using GIS software and has experience in bat activity and emergence surveys.
Chris Hill (Technical Director)	• BSc (Hons) in Zoology • MRes (Hons) in Ecology and Environmental Sustainability • Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM)	Chris co-authored this Technical Appendix.	Chris has over 17 years' experience as a professional ecologist on projects for private and public sector clients. He has extensive experience in Ecological Impact Assessment (EcIA) at all stages of the process, including screening / scoping, baseline data collection, assessment and reporting. He has conducted many surveys for bats and used the results obtained to identify the impacts of infrastructure developments and to devise suitable mitigation / enhancement strategies.
Brian Cuthbert (Associate Director)	• BSc (Hons) Zoology (2.1) • PhD Zoology • Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) • Practitioner of the Institute of Sustainability and Environmental Professionals (PISEP) (formerly IEMA)	Brian verified version V3 of this Technical Appendix.	Brian has over 30 years of environmental consultancy experience in ecological survey, environmental impact assessment and technical review for terrestrial and marine projects in Ireland and the UK, as well as in Africa, the Middle East and Central Asia.

2. Legislative and Planning Policy Context

2.1 Relevant Legislation

All bats in the Republic of Ireland are listed on Annex IV of the Habitats Directive[1]. Listing under Annex IV requires Member States of the European Union (EU) to strictly protect these species wherever they occur. In addition, the lesser horseshoe bat *Rhinolophus hipposideros* is also listed under Annex II of the Habitats Directive, which effectively means that Member States are required to designate areas of importance to this species as Special Areas of Conservation (SAC).

The Habitats Directive is transposed into Irish law by the Habitats Regulations[2], which provide national legislation for the protection of bats. Under the Habitats Regulations it is an offence to:

- Deliberately capture, injure, or kill any bat
- Deliberately disturb a bat, particularly during the period of breeding, rearing, hibernation, and migration
- Damage or destroy a bat breeding site or resting place

2.2 Relevant Planning Policy and Guidance

The following planning policy is also relevant to bats:

- Project Ireland 2040: National Planning Framework (NPF)[3]
- National Biodiversity Action Plan 2023-2030[4]
- Regional Spatial and Economic Strategy for the Eastern and Midland Region[5]
- Fingal Development Plan 2023-2029[6]
- Dublin Airport Local Area Plan[7]
- Fingal Biodiversity Action Plan 2022-2030[8]

In addition, the following guidelines were considered when designing and undertaking desk study and field survey for bats:

- *Guidelines on the information to be contained in Environmental Impact Assessment Reports* (herein referred to as 'the EPA Guidelines')[9]
- *Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report* (Directive 2011/92/EU as amended by 2014/52/EU)[10]
- *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*[11]
- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*[12]
- *Bat Surveys for Professional Ecologists: Good Practice Guidelines* 3rd edition (Collins, 2016)[13]
- *Bat Surveys for Professional Ecologists: Good Practice Guidelines* 4th edition (Collins, 2023)[14]

[1] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.
[2] European Communities (Birds and Natural Habitats) Regulations 2011.
[3] https://npf.ie/wp-content/uploads/Project-Ireland-2040-NPF.pdf
[4] https://www.npws.ie/legislation/national-biodiversity-plan
[5] https://emra.ie/rses/#:~:text=The%20RSES%20will%20identify%20the,up%20to%202030%20and%20beyond
[6] https://www.fingal.ie/development-plan
[7] https://www.fingal.ie/sites/default/files/2020-01/dublin-airport-lap-2020.pdf
[8] https://www.fingal.ie/sites/default/files/2023-12/Fingal%20Biodiversity%20Action%20Plan%202023-2030.pdf
[9] https://www.epa.ie/news-releases/news-releases-2022/epa-publishes-guidelines-on-the-information-to-be-contained-in-environmental-impact-assessment-reports.php
[10] https://ec.europa.eu/environment/eia/pdf/EIA_guidance_EIA_report_final.pdf
[11] https://www.gov.ie/en/publication/53aee9-guidelines-for-planning-authorities-and-an-bord-pleanala-on-carrying/
[12] CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.3. CIEEM, Winchester. Available: https://cieem.net/wp-content/uploads/2018/08/EcIA-Guidelines-v1.3-Sept-2024.pdf
[13] Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition. Bat Conservation Trust, London.
[14] Collins, J. (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th Edition. Bat Conservation Trust, London.

3. Methods

3.1 Desk Study

A desk study was carried out to identify nature conservation designations for which bats are a qualifying feature and to search for records of these species in proximity to Dublin Airport.

A stratified approach was taken when defining the desk study area, which sought to identify:

- International nature conservation designations within 15km
- National statutory and non-statutory designated sites within 2km
- Records of bats within 2km

In addition, as part of the desk study, the results of previous daa commissioned surveys for bats in the vicinity of the Proposed Order were also reviewed.

The desk study was carried out using the data sources detailed in Table 3-1.

Table 3-1: Desk Study Data Sources

Data Source	Date Accessed	Data Obtained
Environmental Protection Agency (EPA) Maps online tool (https://gis.epa.ie/EPAMaps/)	01 July 2026	• Locations of internationally designated sites within 15km of Dublin Airport. • National statutory designated sites within 2km of Dublin Airport.
National Parks and Wildlife Service (NPWS) website (www.npws.ie)	01 July 2026	• Details on relevant international and national statutory and non-statutory designations.
National Biodiversity Data Centre (NBDC) (maps.biodiversityireland.ie)	17 July 2024	• Records of bat species within 2km of Dublin Airport.
The Status of EU Protected Habitats and Species in Ireland (Article 17 Report) (https://www.npws.ie/publications/article-17-reports/article-17-reports-2019)	01 July 2026	• Information on the status of EU protected habitats and species in Ireland.
Red List for Terrestrial Mammals (Marnell *et al*, 2019)[15]	01 July 2026	• Information on conservation status of Irish bat species.
Bat Activity Survey and Proposed Mitigation Strategy for Dublin Airport North Runway (RPS, 2016)[16]	01 July 2026	• Results of previous bat surveys carried out at Dublin Airport.
Dublin Airport Environmental Impact Statement for Northern Parallel Runway (Parkman, 2004)[17]	01 July 2026	• Results of previous bat surveys carried out at Dublin Airport.
Dublin Airport Local Area Plan and Appendix 2: Fingal Development Plan 2020-2026 Objectives relating to Dublin Airport (https://www.fingal.ie/dublin-airport-local-area-plan-2020)	01 July 2026	• Local planning policies relevant to the Proposed Order.
Google Maps (https://www.google.com/maps/) Tailte Éireann 1:25,000 maps and aerial photography (https://www.arcgis.com/apps/webappviewer/index.html?id=3ae19cc156bf4706a929304bf8fcc4f6)	01 July 2026	• Information on habitats and habitat connections (based on aerial images) relevant to planning policy and assessment of potential effects on bats.

[15] Marnell, F., Looney, D., and Lawton, C. (2019). Ireland Red List No. 12: Ireland Red List No. 12 Terrestrial Mammals. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.
[16] RPS (2016). Bat Activity Survey and Proposed Mitigation Strategy daa Northern Parallel Runway.
[17] Parkman, M. (2004). Dublin Airport Environmental Impact Statement Northern Parallel Runway.

3.2 Field Survey

All field surveys up until 2024 were carried out by experienced AECOM ecologists (see Section 1.2) and surveys in 2025 were conducted by experienced APEM ecologists. All surveys had regard for relevant guidance including, but not limited to, the National Road Authority's (NRA) (now known as Transport Infrastructure Ireland (TII)) *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*[18] and the best practice guidelines published by the Bat Conservation Trust (BCT) [13,14]. The scope of field survey was determined based on an understanding of the habitats encompassed by the Proposed Order informed by previous walkover surveys, and BCT guidelines.

To aid survey design, reporting and assessment across a large area, the Dublin Airport Site Boundary was demarcated into numbered Survey Locations (SL) where survey efforts were focussed. Three of these survey locations, referred to as SP04, SP07, and SP09 were retained as survey areas from historic surveys for consistency; all locations are presented on Figure 1. It is also noted that the Dublin Airport Site Boundary is also split into different sectors for the purposes of describing the baseline.

Daytime Bat Walkover (DBW) surveys in 2023 and 2024 were carried out within all accessible and visible lands potentially suitable for bats within 50m of the Proposed Order and an extended survey area around SL9; displayed as the Survey Area in Figure 1. Daytime Bat Walkover (DBW) surveys in 2023 and 2024 were carried out within all accessible and visible lands potentially suitable for bats within 50m of the Dublin Airport Site Boundary and an extended survey area around SL9 as displayed in Figure 1. In 2023, bat activity surveys were carried out at SL2, SL4, SL9, SL10, and SL4. Bat emergence surveys of a tree adjacent SL4 were also carried out in 2023. In 2024, bat activity surveys were carried out at SL2, SL4, and SL10, SL9, SL4, and SL12. Bat emergence surveys of the structures in the eastern section of SL4 along the R108 roads were also carried out in 2024.

The main areas where surveys were carried out between 2019 to 2022 are displayed in Figure 2; this includes three survey locations (SP04, SP07, and SP09) that are no longer within the Proposed Order. In 2025 bat surveys were undertaken within the Dublin Airport Site Boundary and a 50m buffer, comprising GLTA and PRA, bat roost surveys, bat activity transect surveys and static detector deployments. As mentioned above, survey areas in 2023, 2024 and 2025 are displayed in Figure 1.

A description of the field survey methods adopted is provided in the following sections for each type of survey conducted.

3.2.1 Preliminary Roost Assessments and Ground Level Tree Assessments

An assessment of the suitability of trees and other structures was carried out on 20 February 2019, 10 April 2019, 01 August 2019, 11 March 2020, 23 and 24 June 2020, and 09 May 2023 during daylight hours using the previous BCT guidance[13]. Following the updated BCT guidance[14], the suitability of structures and trees in all accessible lands within 50m of the Proposed Order was carried out during daylight hours on 23 and 24 May, 10, 14, and 18 June and 06, 16 and 17 September 2024. Following the updated BCT guidance[14], the suitability of structures and trees in all accessible lands within 50m of the Proposed Order was carried out during daylight hours on 23 and 24 May, 10, 14, and 18 June and 06, 16 and 17 September 2024 and 31 July, 7 August and 14 August 2025.

During daylight hours in 2024 and 2025, accessible buildings and trees within the survey areas were subject to a visual ground-based PRA / GLTA. The PRA and GLTA were carried out to assess the suitability of buildings / structures and trees to support roosting bats and to identify the presence of potential roost features (PRFs) and access points.

External signs that bats are using a building, structure, or tree as a roost can include:

- Presence of entry points such as suitably sized gaps and crevices
- Bat droppings: black droppings, 5-10mm long that crumble to a fine dust when crushed and may be located on the ground or stuck to tree trunks or branches
- Staining: secretions from bat fur, which can cause oily brown stains in the vicinity of roost entrances. urine stains which may be present below the entrance to the roost
- Audible squeaking from within the roost site

[18] NRA (2008). Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes. National Roads Authority, Ireland.

- Odour, which may be indicative of a large roost
- Flies around the entrance of a roost, attracted by the smell of bat droppings

Structures which were found to have suitable access points or roosting features were categorised as having 'Low', 'Moderate' or 'High' bat roost suitability, in accordance with the definitions provided in BCT guidance[13,14], presented in Table 3-2.

Table 3-2: Bat Roost Suitability Categories – Structures

Guidance	Suitability	Description of Roosting Habitats in Structures
Collins, 2016 and 2023	Negligible	No obvious habitat features on site; however, a small element of uncertainty remains.
	Low	A structure with one or more potential roost features that could be used by individual bats opportunistically at any time of the year. Unsuitable for large numbers of bats.
	Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).
	High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to the size, shelter, protection, conditions, and surrounding habitat. These structures have the potential to support high conservation status roosts such as maternity or hibernation roosts.

Source: Collins (2016[13], 2023[14]).

Trees which were found to have PRFs during previous surveys carried out before 2024 were categorised as having 'Low', 'Moderate' or 'High' bat roost suitability, in accordance with the definitions provided in the previous BCT guidance[13] (Table 3-3). Trees were reclassified following the updated BCT guidance during GLTA surveys carried out in 2024. The updated classification terminology for trees is 'None' (i.e. no potential roost features), 'Further Assessment Required' (FAR) (if further survey required to determine presence of PRFs), or 'PRF' (PRFs present). PRFs can be further categorised as either 'PRF-I' or 'PRF-M' as defined in BCT 2023 guidance[14] (Table 3-3.). As the categories for trees from the previous and updated BCT guidance are not directly transferable, the terminology from the previous guidance[13] is used when presenting the results of previous surveys before 2024 and terminology from the updated guidance[14] is used for presenting the results of updated surveys in 2024. See Annex A for summary of reclassified trees following the updated GLTA.

Table 3-3: Bat Roost Suitability Categories – Trees

Guidance	Suitability	Description of Roosting Habitats in Trees
Collins, 2023[14]	None	Either no PRFs in the tree or highly unlikely to be any.
	FAR	Further assessment required to establish if PRFs are present in the tree.
	PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
	PRF-M	PRF is suitable for multiple bats and therefore may be used by a maternity colony.
Collins, 2016[13]	Negligible	Negligible habitat features on site likely to be used by roosting bats.
	Low	Tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
	Moderate	Tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).
	High	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat.

Source: Collins (2016[13], 2023[14]).

3.2.2 Further Inspections of Potential Roost Features (2019)

As outlined in previous BCT guidance[13], trees identified as having Moderate or High bat roost suitability[19] were subject to further inspection. No trees were identified as having High bat roost suitability within the Proposed Order but there were five trees previously identified as having Moderate suitability for roosting bats. Further inspections of PRFs of these trees occurred during the tree climbing survey in which trees (T01, T3, T33) were inspected in more detail using a ladder or rope access with an endoscope. This work was carried out on 23 May

[19]The classification of trees follows the previous 3rd edition of Collins (2016) when referring to surveys carried out before 2024.

2019 under licence (DER/BAT 2019-13). Trees with Moderate bat roost suitability (T67, T68) in the SL9 area were excluded from these further inspections in May 2019 due to its design not being finalised at time of survey. However, these trees were reassessed in May 2023 following previous BCT guidance[13].

A detailed description of all PRFs was made and based on these results, the overall bat roost suitability of trees was re-categorised, as necessary. No further PRF inspections were undertaken.

3.2.3 Dusk Emergence Survey

Survey methods for dusk emergence surveys carried out between 2019 and 2023 followed standard methodology in accordance with good practice guidelines[13]. In 2024 and 2025, the survey method followed updated BCT guidance in Collins (2023)[14] which supersedes Collins (2016)[13]. It details the new requirement for night vision aids (NVA) i.e. thermal and IR cameras, during roost surveys and removes the use of dawn re-entry surveys as a standard method.

Structures and trees[20] with Moderate bat roost suitability within the Proposed Order were subject to two dusk emergence surveys and structures with Low bat roost suitability were subject to one dusk survey. Dusk emergence surveys commenced at least 15 minutes prior to sunset and ended 1.5 to 2 hours after sunset. Trees and structures with bat roost suitability based on the reclassification in 2024 according to Collins (2023)[14] are shown in Figure 3.

3.2.3.1 2019 and 2020 Emergence Surveys

A single dusk emergence survey of Shamrock House Annex with Low suitability was carried out in May 2019 and a single emergence survey on the Animal Welfare Facility with Low suitability was carried out in July 2020. Based on the results of the bat emergence surveys, bat activity surveys, and given the built-up, well-lit area at the airport no further surveys of these structures were required.

Additionally, a dusk emergence survey was carried out at a derelict building (Derelict Building 1) located to the west of SL9 on the eastern side of the R132 in July 2020. A dusk emergence survey was also planned for another nearby derelict structure (Derelict Building 2) located to the north of SL9. Due to anti-social behaviour the survey of Derelict Building 1 was aborted approximately one hour after sunset and the survey of Derelict Building 2 was cancelled (see Section 3.4). However, this is not considered to pose a limitation as these structures will not be demolished or otherwise impacted as part of the Proposed Order.

A single dusk emergence survey of two trees (previously referred to as T67 and T68) was carried out in 2020, which were originally recorded as Moderate suitability, but downgraded to Negligible following an updated PRA in May 2023 as there were no suitable PRFs present. See Annex A for further details.

3.2.3.2 2023 and 2024 Emergence Surveys

In May and June 2024, dusk emergence surveys were carried out on structures with bat roost suitability within the vicinity of SL4. Several of these structures along the R108. Two dusk emergence surveys were carried out on Moderate suitability structures (S04, S06 and S09) and one dusk emergence survey was carried out on Low suitability structures (S01, S03, S05, and S08). The locations of these structures are shown on Figure 3.

In June and August 2023, two dusk emergence surveys of the PRF-I tree T01 (previously referred to as T35 and classified as ‘Moderate’) located adjacent to SL4 were carried out. As mentioned above, the updated guidance states that no emergence surveys are required for trees classified as PRF-I, and this tree T01 was surveyed twice in accordance with the previous Collins (2016)[13] guidance prior to the publication of the updated guidance. Trees reclassified from ‘Moderate’ suitability are outlined in Annex A.

3.2.3.3 2025 Emergence Surveys

In July and August 2025, dusk emergence surveys were carried out on structures with bat roost suitability within the vicinity of SL4. A single dusk emergence survey was undertaken on Moderate suitability structures (S04, S06 and S09) and one dusk emergence survey was carried out on Low suitability structures (S01, Derelict Building 2, S08, S05 and animal welfare facility and Shamrock House Annex. The locations of these structures are shown on Figure 3.

3.2.3.4 Detailed Methods

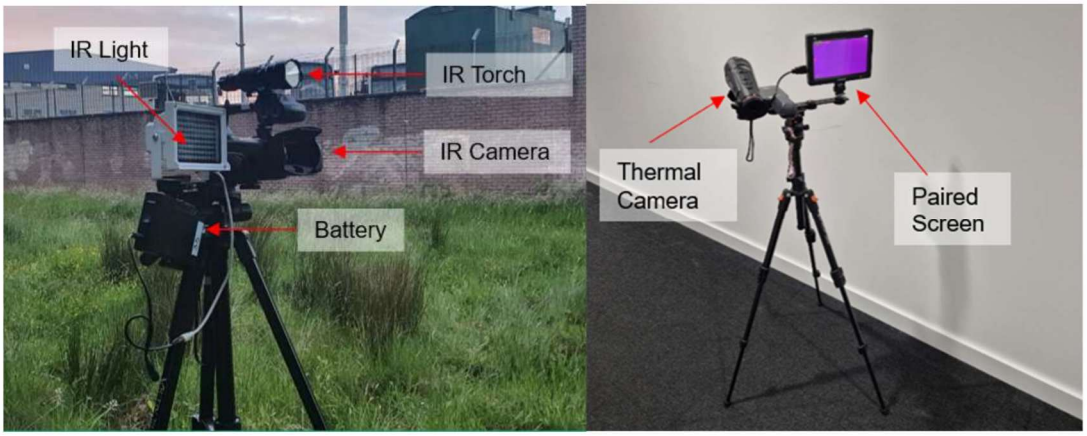
Surveyors positioned themselves with clear views of potential access features / PRF(s) to observe any bat emergence. Any incidental bat activity was noted in the wider area during the surveys. Each structure / tree was watched and if any bats emerged or re-entered, the surveyors attempted to pinpoint the roost location and identify and count the number of bats emerging / re-entering, where light conditions permitted. Batlogger M and Batlogger M2 (Elekon) detectors (‘Batlogger’) / bat detectors were employed as a means of recording bat echolocation calls

[20] One tree (T1) was surveyed twice in 2023 in accordance with the previous Collins (2016)[13] guidance.

and identifying species present. Surveyors listened for bats using detectors and on hearing a bat, they attempted to identify species, flight direction, height, and bat behaviour. General bat activity was also noted during the survey to provide further information on use of the area by bats.

In addition, to supplement the 2024 and 2025 bat emergence surveys, IR and thermal cameras were deployed. The cameras were set up to face potential access features / PRF(s) and IR cameras were equipped with a torch-style IR light (for pin-pointing features), an IR flood light (for wider field of view) and a SM4 static detector or Batlogger held by a surveyor. An example of the IR and thermal camera setup is presented in Plate 3-1.

Plate 3-1: Indictive bat emergence survey set up (not from the Proposed Order)



All dusk emergence surveys were carried out under suitable weather conditions. Detailed survey timings and weather conditions are presented in Table 3-4.

Table 3-4: Dusk Emergence Survey Details

Survey Date	Structure/ Tree Reference	Start Time	End Time	Time of Sunset	Temp. (ºC)	Cloud Cover (%)	Wind (Beaufort Scale)	Precipitation
2019								
30 May 2019	Shamrock House Annex	21:20	23:10	21:40	18	50 - 80	Light air	None
2020								
24 June 2020	T67, T68	21:43	23:13	21:58	17 - 20	10 - 30	Still	Dry
09 July 2020	Derelict Building 1*	21:56	22:45	21:51	16	100	Light air	Dry
15 July 2020	Animal Welfare Facility	21:30	23:15	21:45	17 - 19	80 - 100	Light air	Dry
2023								
28 June 2023	T1*	21:46	23:31	22:01	16 - 13	60 - 90	Light air	Dry
24 August 2023	T1*	20:38	22:04	20:53	16 - 14	100	Light breeze	Dry
2024								
28 May 2024	S04*	21:24	23:09	21:39	14 - 15	60 - 90	Light breeze	Dry
29 May 2024	S06*, S08, S09*	21:25	23:10	21:40	13	60 - 90	Light breeze	Recent rain
11 June 2024	S05	21:38	23:23	21:53	11 - 10	100	Light air	Dry
12 June 2024	S01, S03	21:39	23:24	21:54	12 - 10	60 - 90	Moderate breeze	Dry
24 June 2024	S06*, S09*	21:42	21:57	23:27	20 - 18	0 - 10	Light air	Dry
25 June 2024	S04*	21:42	21:57	23:27	15 - 14	60 - 90	Light air	Dry

Survey Date	Structure/ Tree Reference	Start Time	End Time	Time of Sunset	Temp. (ºC)	Cloud Cover (%)	Wind (Beaufort Scale)	Precipitation
2025								
30 July 2025	S01, S04	21:12	22:57	21:27	18°C	75	Gentle breeze	Dry
31 July 2025	Derelict Building 2	21:00	22:45	21:25	18°C	60	Light breeze	Dry
6 August 2025	S06, S08	20:55	22:40	21:10	15°C	75	Fresh breeze	Dry
7 August 2025	S05, S09	20:54	22:40	21:09	16°C	60	Moderate breeze	Dry
14 August 2025	Animal Welfare Facility	20:39	22:24	20:54	20°C	60	Low	Dry
21 August 2025	Shamrock House Annexe	20:24	22:09	20:39	20°C	60	Low	Dry

* Moderate suitability
Note : T01 reclassified to PRF-I following Colins (2023). T67 and T68 were reclassified as having no suitability following further assessment.

3.2.4 Night-time Bat Walkover

Night-time Bat Walkovers (NBW), comprising walked transects were conducted at dusk in areas of potentially suitable habitat for bats. Bat activity surveys were carried out during bat survey season (May to September), during which time bats are active, engaged in foraging and breeding activity. Bat surveys carried out from 2019 to 2023 followed BCT survey methods outlined in Collins (2016)[13] while bat surveys carried out in 2024 and 2025 followed updated BCT guidance in Collins (2023)[14]. With the exception of adopting some new terminology, and a stationary position for the first 30 minutes of the survey under new guidance, there is little change with respect to activity survey methods and this has allowed the surveys to be comparable.

Dusk activity surveys commenced at sunset and ended a minimum of two hours after sunset. The survey was extended to a third hour after sunset if further time was required to walk the transect or if bat activity was determined by professional judgement to be sufficiently elevated to warrant it. The exception to this was the 2025 walked transects which commenced following the completion of the emergence surveys.

During each activity survey, a pre-determined transect was walked while surveyors listened for bats using full-spectrum Batloggers with headphones. Upon hearing a bat, surveyors attempted to identify the direction and height of bat flight, and any notable bat behaviour (e.g., foraging or commuting). Weather conditions likely to influence bat activity including temperature (automatically recorded by Batloggers), wind, and rain (if any) were also recorded during each survey and are presented in Table 3-5.

Walked activity transect surveys were carried out within areas identified as having potentially suitable habitats for bats. The transect routes varied slightly between years due to the different Survey Locations and boundaries considered as part of the Proposed Order each year. The wider area around SL9 was surveyed as the boundary for this Proposed Order was not finalised at time of survey. Due to cattle presence in survey parcel SL4 variations of this transect were also required. The walked transect routes are shown on Figures 1 and 2.

Spot counts (i.e. listening points) were determined along the transect route at suitable locations, at which surveyors listened at a stationary position for five minutes. Following updated BCT guidance in Collins (2023)[14], the first 30 minutes of the 2024 surveys were spent at a stationary position nearby treelines and hedgerows. The location of spot counts and 30-minute stationary position counts in 2024 are shown on Figure 1.

Details of bat activity surveys are presented in Table 3-5.

Table 3-5: Bat Activity Survey Details

Survey Date	Project Survey Location(s)	Start Time	End Time	Time of Sunset	Temp. (ºC)	Cloud Cover (%)	Wind (Beaufort Scale21)	Precipitation
2019								
16 May 2019	SL4; SL9	21:20	00:21	21:20	9 - 15	25	0 – 1	Dry
03 July 2019	SL10; SP04	21:55	00:20	21:55	12-15	0-25	0 – 1	Dry
19 August 2019	SL10; SP04	20:55	23:09	20:45	13-11	100	3 – 4	Dry
05 September 2019	SL4 (east); SL9	20:11	23:48	20:06	14	100	0 – 2	Dry
2020								
18 May 2020	SL10; SP04	21:24	23:53	21:24	16 – 19	100	2 – 5	Dry
20 May 2020	SL12; SP07; SP09	21:33	00:38	21:27	13 – 15	80 – 100	0 – 2	Dry
27 May 2020	SL2; SL4	21:36	00:03	21:37	13	0 – 30	0 – 1	Dry
15 June 2020	SL4; SL9	21:51	01:18	21:54	17 – 20	100	1	Dry
22 June 2020	SL12; SP09	21:58	00:20	21:57	16	50	4	Dry
30 June 2020	SL2; SL4	21:57	00:20	21:57	16	100	0 – 2	Dry
24 August 2020	SL12; SP09	20:32	22:45	20:32	14	100	3	Dry
10 September 2020	SL4	19:53	21:51	19:52	12 – 13	100	2	Dry
2021								
19 July 2021	SP07	21:40	23:40	21:40	17 – 18	0 – 30	2	Dry
02 September 2021	SP07	20:12	22:12	20:12	12 – 13	100	1 – 2	Dry
2022								
30 May 2022	SL4; SL9	21:41	00:07	21:41	6 – 10	40 – 90	1	Dry
31 May 2022	SL10; SP04; SP07	21:42	23:53	21:42	10 – 11	100	1 – 2	Dry
28 July 2022	SL09; SL9; SP07	21:27	23:27	21:27	13 – 15	40 – 50	1	Dry
03 August 2022	SL10; SL4; SP04	21:17	23:17	21:17	14 – 15	60 – 100	1	Dry
05 September 2022	SL9; SL10; SP07	20:05	22:05	20:05	15 – 16	100	1	Dry
26 September 2022	SL10; SL4	19:14	21:04	19:14	11 – 12	100	2	Dry
2023								
29 May 2023	SL4; SL10; SL9	21:39	00:10	21:39	13 - 11	10 - 30	0	Dry
24 July 2023	SL2	21:33	23:39	21:39	17 - 15	60 - 90	1	Dry
09 August 2023	SL4; SL10; SL9	21:06	23:24	21:06	20 - 19	100	0	Dry
06 September 2023	SL4; SL10; SL9	20:03	22:03	20:03	23 - 20	60 - 90	0	Dry
2024								
20 May 2024	SL9; SL10	21:27	00:05	21:27	14 - 12	40 - 50	1	Dry
23 May 2024	SL2	21:32	23:32	21:32	12 - 11	60 - 90	1	Dry
27 May 2024	SL4 (East); SL12	21:37	00:09	21:37	13 - 14	60 - 90	0	Dry
05 June 2024	SL9; SL10	21:47	00:05	21:47	11 - 10	100	1	Dry
06 June 2024	SL2	21:48	23:48	21:48	11 - 10	40 - 50	1	Dry

[21] 0 – calm; 1- light air; 2 – light breeze; 3 – gentle breeze; 4 – moderate breeze; 5 – fresh breeze

Survey Date	Project Survey Location(s)	Start Time	End Time	Time of Sunset	Temp. (ºC)	Cloud Cover (%)	Wind (Beaufort Scale21)	Precipitation
13 June 2024	SL4; SL12	21:55	00:26	21:55	14 - 12	40 - 50	3	Dry
19 June 2024	SL9; SL10	21:56	00:00	21:56	15 - 11	40 - 50	2	Dry
20 June 2024	SL4; SL12	21:57	00:34	21:57	18 - 14	40 - 50	0	Dry
27 June 2024	SL2	21:57	00:57	21:57	13 - 11	60 - 90	5	Dry
05 September 2024	SL2	20:04	22:04	20:04	16	100	3	Dry
16 September 2024	SL9; SL10	19:36	21:36	19:36	16 - 13	10 - 30	1	Dry
17 September 2024	SL4; SL12	19:34	22:05	19:34	15 - 13	0	0	Dry
2025								
30 July 2025	SL4; SL12	23:21	00:10	21:27	18°C	75	1	Dry
31 July 2025	SL9	21:39	23:30	21:25	18°C	60	1	Dry
06 August 2025	SL4	23:11	23:57	21:10	15°C	75	3	Dry

3.2.5 Static Detector Survey

To supplement the NBWs, full spectrum static bat detectors (Song Meter 2+ ('SM2') and Song Meter 4 ('SM4')) were deployed in habitats which were considered to be potentially important to local bats populations for foraging and commuting. Detectors were timed to start recording 30 minutes before sunset and finish recording 30 minutes after sunrise for each day they were deployed, triggering to record upon detecting bats.

Detectors were deployed in several locations around the Dublin Airport Site Boundary described below for between five and 29 consecutive nights between 2019 and 2025.

In 2019, static detectors were deployed in six locations. Statics were deployed for between 13 and 29 consecutive nights between April and September 2019. Static detector locations in 2019 are detailed below:

- SL4 – located in a hedgerow within the eastern section of SL4, attached to tree (ITM 715135, 743862)
- Treeline south of Long-term Car Park (Red) (SL9) – located on treeline to the south of Long-term Car Park (Red) (SL9) (ITM 717438, 742220)
- SL10 – located on an ash *Fraxinus excelsior* tree adjacent to the survey area (ITM 717586, 743905)
- SP04 – located within the Halpenny Golf Course, on fence beside birch *Betula* sp. tree (ITM 717817, 743523)
- Car park at airport near Gate Post 9 – located on a light post within a car park (ITM 715566, 743481)
- SL2 – located airside beside a treeline along the Cuckoo Stream (ITM 717068, 742695)

In 2020, static detectors were deployed in four locations. Statics were deployed for between eight and 28 consecutive nights between June and September 2020. Static detector locations in 2020 are detailed below:

- SL11 – north-west of Airport Roundabout (ITM 717595, 743532)
- SP09 – south of Old Airport Road (ITM 716917, 742255)
- Woodland north of Long-term Car Park (Red) (SL9) – beside trees to the north of Long-term Car Park (Red) (SL9) (ITM 717683, 742527)
- Derelict Building 2 north of Long-term Car Park (Red) (SL9) – beside structure north of Long-term Car Park (Red) (SL9) (ITM 717627, 742542)

In 2023, static detectors were deployed in a single location at SL12, with one early deployment and one late deployment in the bat season. Statics were deployed for between five and seven consecutive nights in June 2023 and August 2023. The static detector was located on a tree, in scrub vegetation at SL12 (ITM 714244, 742978).

In 2024, static detectors were deployed in three locations. Statics were deployed for between seven and eight consecutive nights in June 2024. Static detector locations in 2024 are detailed below:

- Long-term Car Park (Red) SL9– located within hedgerow in the Long-term Car Park (Red) (ITM 717889, 742268)
- SL4 – attached to tree in SL4 (ITM 715305, 743840)
- SL11 – attached to tree within woodland to the north-west of Airport Roundabout (ITM 717583, 743512)

In 2025, static detectors were deployed in four locations. Statics were deployed for a minimum of five consecutive nights in between 31 August and 14 July 2025. Static detector locations in 2025 are detailed below:

- SL12 - static detector was located on a tree, in scrub vegetation at (ITM 714244, 742978).
- SL4 – attached to tree in SL4 (ITM 715305, 743840)
- SL11 – attached to tree within woodland to the north-west of Airport Roundabout (ITM 717583, 743512)
- Long-term Car Park (Red) SL9 – located within hedgerow in the Long-term Car Park (Red) (ITM 717889, 742268)

Static detectors were not deployed in 2021 or 2022. Detailed information on static detector deployment dates and locations are presented in Table 3-6. Locations of static detectors are presented in Figures 1 and 2

Table 3-6: Static Detector Survey Details

Location	Dates Deployed	No. of Nights Deployed	No. Nights Detectors were Operating*
2019			
SL4	17/04/2019 – 16/05/2019	29	12
Treeline south of Long-term Car Park (Red) (SL9)	23/05/2019 – 05/06/2019	13	13
SL10	10/07/2019 – 01/08/2019	22	4
SP04	10/07/2019 – 01/08/2019	22	4
Car park at airport near Gate Post 9	14/08/2019 – 12/09/2019	29	29
SL2	14/08/2019 – 12/09/2019	29	29
2020			
SL11	24/06/2020 – 03/07/2020	9	9
SP09	24/06/2020 – 02/07/2020	8	2
Woodland north of Long-term Car Park (Red) (SL9)	10/09/2020 – 07/10/2020	28	28
Derelict Building 2 north of Long-term Car Park (Red) (SL9)	10/09/2020 – 07/10/2020	28	28
2023			
SL12	29/05/2023 – 02/06/2023	5	5
SL12	09/08/2023 – 15/08/2023	7	7
2024			
SL9	06/06/2024 – 14/06/2024	8	8
SL4	18/06/2024 – 24/06/2024	7	7
SL 11	25/06/2024 – 02/07/2024	7	7
2025			
SL12	31 August 2025 – 14 July 2025	15	15
SL4	31 August 2025 – 14 July 2025	15	15
SL11	31 August 2025 – 14 July 2025	15	15
SL9	31 August 2025 – 14 July 2025	15	15

* The number of nights that the static detectors were deployed were not always the same as the number of nights that they were operating due to various technical issues such as battery life and static detector and SD card malfunctions.

3.3 Data Analysis

Bat call data collected during surveys were stored and subsequently analysed using Kaleidoscope Pro software, to identify any bats not detected in the field by the surveyors and to confirm species identifications made in the field.

Survey data collected in 2019 and 2020 were initially recorded onto field sheets. The field data were then digitised to produce figures. Survey data collected from 2021 onwards were recorded onto a mobile mapper in the field.

3.4 Limitations

Desk study information is dependent on records having been submitted for the area of interest. As such, lack of records for particular species does not necessarily mean they are absent from the area of interest. Similarly, the presence of records for particular species does not automatically mean they still occur within the area of interest or are relevant.

Static detectors were only deployed in each location on one or two occasions each year to provide supplemental data to the bat transects, i.e., data were not collected across the season at each location. In addition, static detectors were deployed for varying number of nights, but standardised to allow comparison. Coupled with the data recorded during walked transect surveys over several years, it is considered that sufficient data was obtained to inform the assessment. The data allow an understanding of the bat species present and general activity levels to be determined.

In addition, there was an issue with the static detector deployed at survey area SP09 in 2020, which resulted in only two nights of data being recorded. This meant that there was not full coverage of this area between the dates it was deployed. However, this area is no longer within the Proposed Order. Therefore, this does not pose a limitation to the assessment.

Field survey was partly limited by some areas of inaccessibility due to ongoing construction or other factors such as presence of aggressive cattle and safety issues. However, the central fields in SL4 were accessible during 2023 surveys and September 2024 survey and the southern fields were accessible in May 2024. Field surveys were carried out by amended transects within the field and / or around the perimeter of the fields. Therefore, this is not considered to pose a constraint to the assessment.

One tree of Moderate bat roost suitability (T01, previously called T35) adjacent to the Proposed Order Boundary was previously not surveyed due to the presence of cattle. However, this is not considered to pose a limitation as this tree was surveyed in May and August 2023 due to the movement of cattle. No bats were seen to emerge in the 2023 emergence surveys.

Only a single emergence survey of the initially assessed Moderate trees T67 and T68 was carried out. Further survey was aborted due a safety risk. However, these two Moderate trees were reassessed as having no suitability for roosting bats during a more detailed survey as the features were closed and did not enter the cavity into the tree. Therefore, this does not pose a limitation.

One building of Moderate suitability (Derelict Building 1) and Low suitability (Derelict Building 2) nearby SL9 were not fully surveyed due to safety concerns in this area. However, a static detector survey was carried out in this location instead. These structures will not be demolished or otherwise affected as part of the Proposed Order. Therefore, this does not pose a limitation.

The 2025 walked transects commenced following the completion of the emergence surveys and as such were shorter in time than previous years surveys, these surveys wer

A number of isolated incidences occurred over the survey seasons, relating to equipment failures and health and safety concerns over access. These are detailed in Table 3-7. No other limitations were identified.

Table 3-7: Specific Limitations Encountered During Surveys

Survey Affected	Date(s)	Limitation	Outcome
SL4 – transect	15 June 2020	Access to transect route.	The transect route could not be walked as planned due to the presence of cattle. Cattle were present near the treeline at the centre of SL4 and this was subsequently not surveyed. To account for this, two additional listening points were added during this survey. The change in route was slight and was still located within the same general area. This is not considered to pose a constraint to the assessment.

Survey Affected	Date(s)	Limitation	Outcome
SL4 – transect	22 June 2020	Access to transect route.	This area was not surveyed due to the presence of cattle. However, two additional surveys of this transect were carried out in 2022 to ensure a full suite of transect surveys in this area. This is not considered to pose a constraint to the assessment.
Derelict Building 1 and Derelict Building 2 at SP01 – emergence survey	09 July 2020	Detector failure and antisocial behaviour.	Survey commenced late due to a fault with the Batlogger. The Batlogger was fixed, and the survey continued as normal, until approximately 22:40 when the surveyors were approached by a person living inside the structure. The survey was immediately aborted, and no further emergence survey was carried out of this building, or of Derelict Building 2 located nearby. This building is not within any project boundary associated with the Proposed Order. Therefore, it is not considered to pose a constraint to the assessment.
SL4 – transect	30 May 2022	Cattle present.	This transect could not be walked as planned due to the presence of cattle. The transect route occurred in the southern fields and continued around the perimeter of the project boundary along the field edges and public roads. This is not considered to pose a constraint to the assessment.
SP07 – transect	05 September 2022	Cattle present.	Survey aborted due to aggressive cattle. However, two surveys had previously been carried out at this location during 2022 and it is considered that sufficient data was obtained to inform the assessment. This is not considered to pose a constraint to the assessment. This transect is not located within the Proposed Order.
SP04 – transect	26 September 2022	Access to transect route.	No transect of survey parcel SP04 was carried out due to health and safety – area was in active use as a golf driving range and there were concerns about being hit by golf balls. However, two surveys of this area were carried out in 2022, with three additional surveys between 2019 – 2020. Furthermore, this area is no longer within the Proposed Order. Therefore, it is considered that sufficient data was obtained and this is not considered to pose a constraint to the assessment.
SL2- transect	2023 bat activity survey season	Access to transect route.	Only one survey in 2023 was carried out airside within SL2 due to access limitations. This is not considered to pose a constraint as the survey parcel is deemed to have very limited suitability for bats as the survey parcel is now largely a construction site. Three bat activity surveys were also carried out in this location in 2024, thus sufficient data was obtained to inform the assessment.
SL4 - transect	2024 bat activity survey season	Cattle present.	This transect could not be walked as planned in May and June due to the presence of cattle. Alternate routes were walked depending on the location of the cattle per survey. A 30-minute stationary position listening point was carried out adjacent to the fields at the beginning of each survey and the transect route was amended to continue around the perimeter of the project boundary along the field edges and public roads. Three surveys were also previously carried out at this location during 2023 and one survey was carried out in September 2024, thus sufficient data was obtained to inform the assessment.
SL11	2024 bat activity survey season	Antisocial behaviour, busy road	No transect of SL11 was carried out due to health and safety – the area is located beside busy R132 road and antisocial behaviour was noted within the woodland in the survey parcel. This area is considered to have very limited suitability for bats given the well-lit and built-up location. However, on a precautionary basis, a static detector was deployed within this woodland for seven nights to record potential bat activity, which confirmed extremely low levels of bat activity. It is therefore considered that sufficient data was obtained to inform the assessment.
SL4 - transect	27 May 2024	Access restriction	This transect could not be walked as planned due to access restrictions. The transect route was amended to continue around the perimeter of the project boundary along the field edges and public roads. Three surveys were later carried out at this location, and it considered that sufficient data was obtained to inform the assessment.
Structure S01 near SL4 – emergence survey	12 June 2024	Access and thermal camera failure	There was no access to S01 due to security fencing. However, this structure was viewed with binoculars from the fence. Furthermore, during the bat emergence survey of S01, the thermal camera malfunctioned and the final 30 minutes of the survey was not recorded. This is not considered to pose a constraint to the assessment as a surveyor was present at this structure and continued to watch the access feature.

Survey Affected	Date(s)	Limitation	Outcome
SL11 Transect	7 August 2025	Rain cancelled survey	Data collection from bat transect in vicinity SL11 was not carried out due to the onset of persistent rain which resulted in this survey having to be cancelled.
SL9 - Static	14 August 2025	Equipment failure	The Batlogger M2 from bat transect in vicinity of SL9 failed to record during the survey
Derelict building 1 – emergence survey	2025 surveys	Change of site conditions	Derelict building 1 did not exist in 2025, therefore no emergence survey was carried out at this location.

Given the amount of data collected over the 2019-2025 survey period, and the relatively low levels of bat activity generally recorded, the limitations identified above are not considered to significantly affect the reliability of the assessment of baseline conditions relative to bats, and thus the overall assessment of ecological impacts.

4. Results

4.1 Desk Study

4.1.1 Designated Sites

There are no designated sites for which bats are Qualifying Interests species within the desk study area described in Section 3.1.

4.1.2 Species Records

Bat activity was recorded in the Environmental Impact Statement Report for Dublin Airport North Runway[17], comprising four species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus* and Leisler's bat *Nyctalus leisleri*. No bat roosts were confirmed within the site of the Dublin Airport North Runway (10L/28R) development.

Bat activity was also recorded in the Bat Activity Survey and Proposed Mitigation Strategy Report for Dublin Airport North Runway[16]. In addition, a brown long-eared bat roost was confirmed at the derelict two storey building present within the footprint of the North Runway (10L/28R) development area. No bat roosts in trees were identified by these surveys.

Records of the following bat species were returned by NBDC within 2km of the Proposed Order: brown long-eared bat, common pipistrelle, soprano pipistrelle, Leisler's bat, Daubenton's bat *Myotis daubentonii,* and Natterer's bat *Myotis nattereri.*

4.2 Field Survey

4.2.1 Preliminary Roost Assessment and Ground Level Tree Assessment

PRA / GLTA were carried out on trees and buildings within the vicinity of the Dublin Airport between 2019 and 2024 as per Section 3.2.1. The results of the PRA / GLTA are presented in the following sections.

4.2.1.1 Built Structures

Three structures within the vicinity of the Proposed Order (S04, S06, and S09) were initially assessed to have Moderate suitability for bats and six structures (S01, S03, S05, S08, Animal Welfare Facility, and Shamrock House Annex) were assessed to have Low suitability for bats. Two derelict structures that are located outside the Proposed Order nearby SL9 were also identified as having potential bat roost suitability.

The structures in the eastern section of SL4 along R108 were surveyed between May and June 2024 and July and August 2025 (structures S01, S03, S04, S05, S06, S08, and S09). The majority of structures in this area are well-sealed with concrete; however, these structures have tiled roofs with missing / lifted tiles and / or openings in the walls which provide potential access points for roosting bats. These structures are located near to hedgerows and treelines that could provide connectivity to bat feeding habitats, albeit they are illuminated by streetlights. Two structures in this area (S02 and S07) were assessed as having Negligible suitability for bats and no further survey was carried out.

Animal Welfare Facility and Shamrock House Annex were categorised to have Low suitability for roosting bats. However, these structures have a single potential access feature and the absence of any tiled roofing, or brickwork significantly reduces their suitability as roosts. Furthermore, they are located in built-up, well-lit areas of Dublin Airport that lack semi-natural vegetation with no habitat features providing connectivity.

Derelict Building 1 had Moderate bat roosting suitability with more than one potential access feature identified, including lifted roof tiles and holes in wooden soffits and Derelict Building 2 had Low bat roost suitability, with gaps noted within the stonework. No structures will be altered or demolished as part of the Proposed Order.

Vacant building S01 was initially assessed to have Low bat roost suitability.

Details of these structures are provided in Table 4-1, with photographs provided in Plate 4-1. Structure locations are presented in Figure 3.

Table 4-1: Buildings with Potential Access Feature(s)

Building	Description	Suitability	Potential Access Feature(s)	Airside?	Location (ITM)
S01 (See Plate 4-1a)	Two storey intact residential structure with concrete wall and tiled roof. Windows boarded with stone.	Low	Small opening at base of centre chimney on southern side.	No	715332, 743964
S03 (See Plate 4-1b)	Single storey old shed with pebbled walls, metal roof, and open door. Structure is covered in dense vegetation and is very open and wet.	Low	Open section of door on southern side with access to wooden beams in roof apex.	No	715330, 743940
S04 (See Plate 4-1c-e)	Two storey intact building with stone, pebble and concrete walls and a tiled roof.	Moderate	Small opening in stonework on southern wall. Missing tiles in roof on eastern side, as well as lifted tiles and some openings on western side of the roof.	No	715332, 743911
S05 (See Plate 4-1f)	Two storey intact structure with pebbled concrete walls and tiled roof. Windows boarded with stone.	Low	Gap at ridge tile on eastern and western side of the roof between the northern and central chimneys.	No	715302, 743863
S06 (See Plate 4-1g)	Single storey concrete and pebbled wall structure with tiled roof. Windows boarded up with stone and lots of ivy present.	Moderate	Lifted tiles on roof below chimney on southern side of structure, facing west.	No	715333, 743892
S08 (See Plate 4-1h)	Single storey concrete residential structure with tiled roof.	Low	Crack at southwest corner edge possibly going into cavity wall, and small openings at ridge tile of roof to the south facing west.	No	715334, 743877
S09 (See Plate 4-1i)	Single storey brick structure with tiled roof and currently in use.	Moderate	Lifted tiles on western side and gap between timber barge on southwest corner edge with potential entry into space between ceiling and roof.	No	715334, 743865
Animal Welfare Facility (See Plate 4-1j)	Building with pitched corrugated roof and timber barge boarding cavities on the inner walls and fascia. Located in well-lit built-up part of Dublin Airport.	Low	Gap between timber barge boards / fascia.	Yes	717015, 742748
Shamrock House Annex (See Plate 4-1k)	Single storey structure with flat roof and timber barge boarding cavities on the inner walls and fascia. Located in well-lit built-up part of Dublin Airport.	Low	Gap between timber barge boards / fascia.	No	717220, 743038
Derelict Building 1 (See Plate 4-1l)	Single-storey building with a hipped roof and clay tiles, with pebbledash walls. Outside of the Dublin Airport Site Boundary and not proposed to be demolished.	Moderate	Lifted roof tiles and c. 6cm hole on south facing side of structure, underneath wooden soffit that leads up into the soffit and possibly leading into the structure.	No	717426, 742556
Derelict Building 2 (See Plate 4-1m)	Building with pitched corrugated roof and cavities present within inner walls. Outside of the and not proposed to be demolished.	Low	Cavities within inner walls.	No	717627, 742542

Plate 4-1: Buildings and Structures with Potential Roost Feature(s)

a) S01 – small opening at base of centre chimney



b) S03 – open section on door with access to wooden beams in roof apex



c) S04 Southern side – small opening in stonework



d) S04 Western side – lifted tiles and openings in roof



e) S04 Eastern side – missing tiles in roof



f) S05 – gap at ridge tile on eastern and western side of roof between northern and central chimneys



g) S06 – lifted tiles on roof below chimney on southern side



h) S08 – crack at southwest corner edge, and small openings at ridge tile of roof to the south facing west



i) S09 – lifted tiles on western side of roof and gap between timber barge on southwest corner edge




j) Animal Welfare Facility Structure – gap between timber barge boards / fascia) (located in well-lit, built-up part of Dublin Airport




k) Shamrock House Annex Structure - gap between timber barge boards / fascia (located in well-lit, built-up part of Dublin Airport)




l) Derelict Building 1 – lifted roof tiles and c. 6 cm hole on south facing side of structure, underneath wooden soffit) (no longer considered as part of the Proposed Order and not proposed to be demolished



m) Derelict Building 2 – cavities within inner walls (no longer considered as part of the Proposed Order and not proposed to be demolished)



4.2.1.2 Trees

Based on PRA carried out in 2019 following the previous BCT guidance (2016)[13] several trees with Moderate bat roost suitability were initially identified (as set out in Annex A). Subsequently, the PRF assessment (climbing survey) identified the hazard beam crack on the oak tree (T01) as a suitable PRF, as one side of the hazard beam is quite open and tapers quickly into a crack and on the other side, where the crack extends up into a dry crevice. No bats were noted during the tree climbing survey. The tear out feature and mature ivy were reassessed to not be PRFs. The further inspection of the other two trees (T3 and T33) initially categorised as having Moderate suitability for roosting bats (located at survey parcel SL4) were also subsequently re-assessed during the tree climbing survey and were re-assigned as having Negligible and Low bat roost suitability.

An updated PRA and reclassification of all trees within 50m of the Proposed Order based on previous BCT guidance (Collins, 2016)[13] was carried out in May 2023. Only one tree (T01) was assessed to have Moderate suitability for roosting bats. Further detailed inspections from the ground level of the two trees T67 and T68 were also carried out. These two trees were originally considered to have Moderate suitability and were subsequently downgraded to having Negligible suitability as the potential knotholes on the trunk are closed and do not enter into the cavity of the tree.

In 2024, following the updated guidance (Collins, 2023)[14] a detailed GLTA was carried out. T01 was reclassified as having a suitability of 'PRF-I' due to the presence of features potentially suitable for individual bats, as described

above. The original and updated descriptions of the PRFs on trees originally assessed to be of Moderate bat roosting suitability in 2019 are presented in Annex A.

The majority of the trees within the Proposed Order are relatively thin and not of age or condition to support suitable PRFs. Based on initial surveys carried out in 2019 and following previous BCT guidance (Colins, 2016)[13] approximately 19 trees and a treeline of around 15-20 trees in the vicinity of SL9, approximately 43 trees in SL4, and one tree nearby SL4 were initially identified as having Low suitability on a precautionary basis mainly due to the presence of ivy, which individual bats can potentially use for roosting. However, following the updated guidance (Colins, 2023)[14] and a more detailed GLTA, these trees were reassessed as having Negligible suitability for roosting bats as the ivy-growth was very dense with mainly thin stems that obstructs access and were not considered suitable for roosting bats.

The location of T01 is shown on Figure 3 and images are displayed in Plate 4-2.

Plate 4-2: T01 located adjacent to SL4 (PRF-I)



4.2.2 Dusk Emergence Survey

4.2.2.1 Structures (2019/2020 Survey Results)

All structures identified in 2019 to be of Low suitability to support roosting bats were subject to a single dusk emergence survey, with the exception of Derelict Building 2. This building was not surveyed due to safety concerns that caused the first emergence survey of Derelict Building 1 (Moderate suitability) in July 2020 to be aborted after about an hour. A static bat detector was deployed near Derelict Building 1 instead. Shamrock House Annex was surveyed in May 2019 and the Animal Welfare Facility was surveyed in July 2020. No roosting bats were identified during any survey.

No bat activity was incidentally noted during the survey of Shamrock House Annex or Derelict Building 1. A low level of incidental bat activity limited to one single pass during was noted during the survey of the Animal Welfare Building in July 2020. No further survey of these structures was required given the level of bat activity in these well-lit and built-up areas at Dublin Airport and given that the derelict structures are not due to be demolished as part of the Proposed Order.

4.2.2.2 Structures (2024 Survey Results)

Structures identified to be of Low suitability to support roosting bats (S01, S03, S05, and S08) were subject to a single dusk emergence survey in June 2024 while structures identified to be of Moderate suitability (S04, S06 and S09) were subject to two dusk emergence surveys, one in May and one in June 2024 as per Collins (2023)[14]. No roosting bats were identified during any survey.

A low level of incidental bat activity was noted during the surveys, varying from four total registrations to 65 registrations in a single night. The number of registrations represents the number of times that a bat call was

recorded by the bat detector. Therefore, this does not equate to the number of individuals during any given survey. During these surveys, individual bats were often noted passing by multiple times. Species recorded were Leisler's bat, common pipistrelle and soprano pipistrelle. No other species were noted.

Common pipistrelle was the most commonly recorded species across all surveys (maximum of 52 registrations in a single night), with Leisler's bat (maximum of seven registrations) and soprano pipistrelle (maximum of two registrations) recorded less frequently. Small numbers of bats, typically one or two individuals, were occasionally observed foraging around and over the structures, but no bats were seen to emerge / re-enter during any of the surveys. Analysis of IR / thermal camera video footage confirmed that no bats emerged from any of the structures surveyed. Stills from the camera footage are presented in Annex B and show potential roost access features. Stills were taken at the darkest time of the survey.

Pipistrelle social calls were heard multiple times throughout the surveys of S04 on the southern and western side. No social calls were detected on the eastern side closer to Dublin Airport. A single social call was recorded during the survey at S05 and once at S06.

4.2.2.3 Structures (2025 Survey Results)

In July and August 2025, dusk emergence surveys were carried out on structures with bat roost suitability within the vicinity of SL4. A single dusk emergence survey was carried out on Moderate suitability structures (S04, S06 and S09) and one dusk emergence survey was carried out on Low suitability structures (S01, Derelict Building 2, S08, S05 and animal welfare facility and Shamrock House Annex). Vacant building S01 was confirmed as a Leisler's bat roost, with one individual observed and heard emerging from the chimney during the survey.

4.2.2.4 Tree (2023 Survey Results)

A single oak tree (T01) classified as PRF-I (previously Moderate suitability) was subject to two dusk emergence surveys, one in June 2023 and one in September 2023 following BCT guidance (Collins, 2016)[13]. No roosting bats were identified emerging from T01 during any survey. Based on the updated BCT guidance (Colins, 2023)[14] that was released in September 2023, no further surveys are required for trees with PRF-I suitability.

There was a small amount of incidental bat activity recorded within the agricultural field in SL4 with species comprising Leisler's bat (maximum of 60 registrations), common pipistrelle (maximum of ten registrations) and soprano pipistrelle (maximum of eight registrations).

4.2.3 Bat Activity Survey

4.2.3.1 2019 Survey Results

Walked transects were carried out in 2019 in the lands within and around SL9[22], SL10, and SP04. Three species of bat were detected during the walked transect surveys across these survey parcels: common pipistrelle, soprano pipistrelle and Leisler's bat. The most commonly encountered bat species was common pipistrelle, closely followed by Leisler's bat, with only a few passes of soprano pipistrelle detected. Overall bat activity was low during each survey. Bat registrations recorded on the Batlogger are displayed in Figure 4a.

At SL4, bats were noted foraging along the western-most boundary, and along the field margins in the centre of the site, where Leisler's bat was also observed foraging during both walked transects. At the survey area around SL9 only common and soprano pipistrelle were detected, with a common pipistrelle observed foraging around a treeline to the north, and to the east of the site entrance. Within SL10 and SP04 only common pipistrelle and Leisler's bat were detected. A few individual Leisler's bats were observed foraging over the SL10, and common pipistrelle foraging up and down the treeline to the south of the survey parcel SP04. SL10 has been converted into a construction site since the time of this survey.

4.2.3.2 2020 Survey Results

Walked transects the following survey areas were carried out in 2020: SL2, SL4, SL9, SL10, SL9, SL4, SL12, SP04, SP07, and SP09. Four bat species were identified: common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle *Pipistrellus nathusii,* and Leisler's bat. Common pipistrelle was the most commonly encountered species across all surveys, with 92 registrations in total, accounting for 46.7% of all bat registrations. Leisler's bat was the next most frequently encountered species, with 68 registrations in total. Nathusius' pipistrelle and soprano pipistrelle were encountered less frequently, with 24 and thirteen registrations in total, respectively. Nathusius' pipistrelle was recorded in June only, in just three locations at SL4, SL9, and SL12. As previously set out, the number of bat registrations do not indicate individual bats, but rather the number of times a bat call was registered on the Batlogger and identified to species. Therefore, bat registrations are inflated compared to the actual number

[22] Varying walked transects were carried out within the surrounding lands of SL9 as the boundaries for these survey locations were not finalised at the time survey.

of bats on site, as constant activity by one bat will result in multiple registrations for one bat pass. Bat registrations recorded on the Batlogger are displayed in Figure 4b.

Activity was generally low across all transects in 2020. Elevated levels of activity were generally associated with linear corridors, with bouts of continual foraging by small numbers of individual bats accounting for the majority of activity.

Low activity of common pipistrelle, soprano pipistrelle, Leisler's bat, and Nathusius' pipistrelle was observed along the hedgerow network within fields in SL4. In particular, the treeline located to the south of the existing SL4 which runs west to east was regularly used throughout the survey season and was the only area in which soprano pipistrelle was recorded during the 2020 walked surveys.

A single survey of the fields surrounding SL9 was carried out in June 2020. Common pipistrelle and Leisler's bat were recorded infrequently making use of boundary and internal hedgerows, with a single pass of Nathusius' pipistrelle also noted along a hedgerow in a northern field.

Similarly, within a field to the north of Dublin Airport's South Runway (10R/28L) and the R108 Road at SL12, bats were observed to make regular use of boundary hedgerows for commuting and foraging. Across the survey season, low numbers of three species were recorded foraging and commuting at the north-western field corner, comprising Leisler's bat, common pipistrelle, and Nathusius' pipistrelle.

During a survey carried out in May 2020, Leisler's bat was seen foraging along hedgerows and commuting north over a field, south-west of Dublin Airport's South Runway (10R/28L) at SP07. During another survey in May, common pipistrelle was noted continually foraging along boundary vegetation to the east of the R132 Dublin Road, within the grounds of Halpenny Golf Driving Range at SP04. No other bat species were recorded in these areas.

Bat activity elsewhere was generally limited to a small number of passes of individual bats.

4.2.3.3 2021 Survey Results

Two transects at SP07 were carried out during 2021, which is an area that is no longer being considered as part of the Proposed Order. Three bat species were identified: common pipistrelle, soprano pipistrelle, and Leisler's bat. Leisler's bat was the most commonly encountered species across both surveys, with 144 registrations in total, accounting for over 90% of all bat registrations. Common pipistrelle and soprano pipistrelle were encountered in similarly low numbers, with a total of nine and five registrations, respectively. Overall bat activity was low during each survey. Bat registrations recorded on the Batlogger are displayed in Figure 4c.

September had the highest level of bat activity. However, species composition did not vary significantly by month, with Leisler's bat dominant across both months. Bat activity was generally concentrated along the hedgerow which runs west to east, separating two fields. During both surveys, Leisler's bat was observed continuously foraging and commuting along this hedgerow, with soprano pipistrelle and common pipistrelle also recorded using this feature. Soprano pipistrelle and Leisler's bat were also heard along the hedgerow which bounds and runs parallel to the R108 road, whilst Leisler's bat was also noted flying directly over fields, across the road and into the airport grounds.

4.2.3.4 2022 Survey Results

Walked transects at the following survey areas were carried out in 2022: SL4, SL9, SL10, SP04 and SP07. Three bat species were identified: common pipistrelle, soprano pipistrelle, and Leisler's bat. Leisler's bat was the most commonly encountered species across all surveys, with 51 registrations in total, accounting for 53.6% of all bat registrations. The next most commonly encountered species was common pipistrelle, accounting for 34.5% of all bat registrations. Soprano pipistrelle was recorded less frequently, with only three registrations of this species. Bat registrations recorded on the Batlogger are displayed in Figure 4d.

Activity was generally low across all transects in 2022 with a maximum of only 35 total bat registrations on a single night. The majority of these bat registrations were located in SP07 near Dublin Airport's Holiday Blue Car Park. Elevated levels of activity were generally associated with linear corridors, particularly hedgerows.

With respect to SL4, habitats within this transect comprise a number of fields with boundary hedgerows, located to the south of Dublin Airport's North Runway (10L/28R) and to the west of the R108 road. During the single survey of this transect carried out in May 2022, bat activity was limited to brief passes of common pipistrelle along the eastern-most hedgerow, which bounds the R108 road.

Regarding the lands in and around SL9, habitats along this transect consist of a number of fields with boundary hedgerows, located to the east of the R132 Swords Road and to the west of the M1. Activity was generally low in this area. Activity was highest, albeit overall activity levels remained low, during July, with Leisler's bat, soprano pipistrelle and common pipistrelle recorded. Foraging by these species was recorded along a hedgerow to the

south of SL9, which forms the northern boundary of the Dardistown Cemetery. This hedgerow was the only location where soprano pipistrelle was recorded across all 2022 transect surveys. During the May survey, bat activity was limited to a single pass of common pipistrelle along an internal hedgerow.

With respect to SL4, this area comprises a field to the south of Dublin Airport's North Runway (10L/28R) which was in active construction at the time of survey. Bat activity was considerably lower compared to previous surveys. Leisler's bat was the only species recorded in this area. Leisler's bat activity comprised brief passes along the western-most hedgerow during the May survey and foraging above the field during the August survey. There was no bat activity in SL4 by any bat species during the September survey.

The survey parcels SL10 and SP04 are located to the north of the Airport Roundabout, on either side of the R132 Swords Road. SP04 comprises an existing car park and associated boundary vegetation within Halpenny Golf Driving Range. There was no bat activity recorded within SL10. Bat activity within SP04 was limited to common pipistrelle, which was recorded foraging and commuting along the boundary vegetation. Common pipistrelle activity was limited to one and two registrations in August and September, respectively. Common pipistrelle activity was relatively highest in May, albeit activity levels were still low.

The SP07 transect comprises a field bounded by hedgerows, bisected by a hedgerow, located to the south of Dublin Airport's South Runway (10R/28L), and west of Dublin Airport's Holiday Blue Car Park. Bat activity in this area during the May survey was relatively high compared with other areas around Dublin Airport, with foraging by both Leisler's bat and common pipistrelle along western boundary vegetation. Foraging by Leisler's bat was also noted along the northern boundary hedgerow which runs parallel to the R108 road. Bat activity in July was low and limited to a single pass by a commuting Leisler's bat along the northern boundary hedgerow.

4.2.3.5 2023 Survey Results

Walked transects in the following survey areas were carried out in 2023: SL2, SL4, SL9, and SL10. Four bat species were identified: Leisler's bat, common pipistrelle, soprano pipistrelle, and Nathusius' pipistrelle. Leisler's bat was the most commonly encountered species across all surveys, with 27 registrations in total, accounting for 61% of all bat registrations. Common pipistrelle and soprano pipistrelle were encountered less frequently, with nine and seven registrations in total, respectively. Nathusius' pipistrelle was recorded just once in 2024, within a field in SL4 and was not recorded again in any of the walked transects.

Activity was considerably low across all transects in 2023 with a total of 44 registrations across the entire survey season and a maximum of 25 registrations on a single night in September 2023. Relatively elevated levels of activity were generally associated with linear corridors including hedgerows and treelines. As previously described, the number of bat registrations do not indicate individual bats, but rather the number of times a bat call was registered on the Batlogger. The majority of activity originated from small numbers of individual bats with bouts of continual foraging. Field notes were analysed in conjunction with the bat registrations from the Batlogger to provide a more accurate representation of the data as described below and displayed in Figure 4e.

The fields within SL4 were accessible in May and August 2023 as the cattle were not present within the transect during these surveys. In May, the only activity recorded in SL4 was a single Leisler's bat foraging along a hedgerow in the central eastern field. Activity levels in SL4 were slightly elevated in August with three brief passes of Leisler's bat recorded within the western-most field and along the R108 road. Two Leisler's bats were also observed commuting together above the R108 road heading south-westward in August. No other species were recorded during the May or August surveys. Four bat species were recorded in the September survey with Leisler's bat, common pipistrelle, soprano pipistrelle and Nathusius' pipistrelle all noted. Nathusius' pipistrelle was recorded as a brief pass nearby the R108 road. Records of other species were typically recorded as brief passes, with the exception of two Leisler's bats that were recorded foraging on separate occasions within the central eastern field and nearby streetlights along the R108 road. Social calls were also heard along the eastern side of the R108 road.

There were low levels of bat activity in the survey area of SL9, albeit slightly elevated relative to the other survey parcels. Soprano pipistrelle and common pipistrelle were the only bat species recorded in May. Records were associated with hedgerows in a field to the north of Dardistown Cemetery with two brief passes of common pipistrelle and foraging of a single soprano pipistrelle. Leisler's bat, soprano pipistrelle and common pipistrelle were all recorded in the August survey. Species were typically recorded as brief passes along hedgerows with the exception of a single common pipistrelle recorded foraging in the field to the north of Dardistown Cemetery. Two brief passes of soprano pipistrelle were recorded along a hedgerow to the north of Dardistown Cemetery and a single soprano pipistrelle and common pipistrelle were also recorded as brief passes nearby the Cuckoo Stream. The only bat activity noted during the September survey was a single brief pass of Leisler's bat along a hedgerow in the field to the north of Dardistown Cemetery.

Survey parcel SL10 is dominated by hardstanding and is largely an active construction site with a small linear woodland along the R132 road to the east. No species were recorded in this survey parcel during the May or August 2023 surveys. However, three species were recorded in September including a brief pass of a Leisler's bat and a foraging common pipistrelle and soprano pipistrelle on separate occasions near the woodland.

A single survey was carried out airside in SL2 in July 2023 during which no bat species were recorded.

The results of the walked transect bat activity surveys in 2023 are summarised in Figure 4e.

4.2.3.6 2024 Survey Results

Walked transects in the following survey areas were carried out in 2024: SL2, SL4, SL9, SL10, and SL12. A total of three bat species were identified across the surveys comprising Leisler's bat, common pipistrelle, and soprano pipistrelle. Leisler's bat was the most commonly encountered species across all surveys, with 122 registrations in total, accounting for 49% of all bat registrations, followed by common pipistrelle with 88 registrations in total, accounting for 36% of all bat registrations. Soprano pipistrelle bats were encountered less frequently, with 38 registrations in total.

Similarly to previous surveys between 2019 and 2023, activity was low across all transects in 2024 with occasional periods of prolonged foraging by small numbers of individual bats accounting for the majority of bat registrations recorded during the surveys. Areas of relatively elevated levels of activity were associated with linear corridors, particularly boundary and internal hedgerows and treelines. Bat activity was relatively higher in the survey area for SL4, SL9 in comparison to the survey areas for SL2, SL10 and SL12. Field notes during the walked transects and bat registrations from the Batlogger were used in conjunction to display the results in Figure 4f, which are described further below.

The fields in the south-western part of SL4 were accessible during the survey in May as the cattle were not in this location at the time of survey. Bat activity was low within these western fields, with just one Leisler's bat recorded foraging along the western-most boundary hedgerow and one common pipistrelle briefly passing along the central hedgerow. Further surveys were carried out along the perimeter of SL4 along the R108 road due to cattle as described in Section 3.4. In May, common pipistrelle was recorded foraging along the roads beside the eastern-most field, along the northern part of R108, and beside the car park for the CHC Dublin Search and Rescue Base.

To the south-east of SL4, a single soprano pipistrelle was recorded commuting along a hedgerow which bounds the R108 road, and a single soprano pipistrelle was recorded foraging above an agricultural field. The second activity survey visit carried out in June recorded no bats. Five bats were recorded during the third survey visit carried out in late June comprising Leisler's bat, common pipistrelle and soprano pipistrelle. A Leisler's bat was recorded commuting along the northern-most boundary hedgerow, and two Leisler's bats were recorded foraging above the central eastern field, with one individual observed to be foraging approximately 15m high. Common pipistrelle and soprano pipistrelle were also noted foraging along the R108 road.

In September, surveyors were able to access all fields in SL4 and a total of 12 bats were recorded commuting and foraging comprising Leisler's bat, soprano pipistrelle and common pipistrelle. A single common pipistrelle, Leisler's bat and soprano pipistrelle were recorded foraging along the central hedgerows. In the southern field, five Leisler's bat were recorded foraging, approximately 3m high, in the centre of the field and along the boundary hedgerows. Three soprano pipistrelle bats were also recorded foraging in this area. A single Leisler's bat was recorded commuting over these hedgerows.

Regarding the survey area for SL9, bat activity was highest in the central section of these fields along internal boundary hedgerows, albeit overall activity levels remained low. SL9 was an active construction site at the time of survey. A total of five bats were recorded in May and four bats were recorded in June, with species comprising common pipistrelle, soprano pipistrelle, and Leisler's bat. Two common pipistrelle bats were recorded foraging and commuting along internal field boundaries of the central fields in May, with one common pipistrelle recorded foraging in this location in June. One soprano pipistrelle was recorded briefly passing, likely commuting along the Cuckoo Stream in May and June. One common pipistrelle was also recorded briefly passing in the vicinity of SL4 and SL9 in May and in June along a hedgerow in the south-eastern field. A brief pass of one Leisler's bat was recorded in a southern field in May and also in late June. In September, only three individual bats were recorded, comprising one foraging common pipistrelle, one commuting common pipistrelle, and a brief pass of a Leisler's bat in SL9 in September.

The east of the SL4 was an active construction site at the time survey. Given these access restrictions, transect extended along the perimeter of SL4 during the May survey. No bats were recorded in this location in May, however, two surveys were carried out in June with Leisler's bat, common pipistrelle and soprano pipistrelle recorded foraging and commuting along the boundary hedgerows and above the overgrown field as shown in Figure 4f.

Social calls were recorded in June along a hedgerow at the southern boundary of SL4. In September, activity levels were low, being limited to a single commuting common pipistrelle, another brief pass of common pipistrelle, and two brief passes of Leisler's bat.

Bat activity within SL2, SL10 and SL12 was extremely limited across the 2024 survey season. A large section of the airside SL2 was an active construction site at the time of survey. A single common pipistrelle was recorded in SL2 in May and another in June. No other bat species were recorded across any of the surveys in this area. In May, a single brief pass of Leisler's bat was recorded, along with a single common recorded foraging approximately 5m above the small grassland area in SL10. No other bat species were recorded in this area across all surveys. The only bat activity recorded in SL12 was a single common pipistrelle commuting along a hedgerow in June, with no other bats recorded here across all surveys.

4.2.3.7 2025 Survey Results

There were four walked transects conducted in 2025, two surveys were carried out at SL4 (one in July and one in August), one survey was carried out at SL9 and one at SL12. A total of three bat species were identified across the surveys comprising common pipistrelle, soprano pipistrelle and unidentified myotis (see Table 4-2). The transects and species registrations are shown on Figure 4g.

Table 4-2: Total Passes Recorded per Species During Walked Transects in 2025

Transect Survey Location	Date	Common pipistrelle	Soprano pipistrelle	Myotis species
SL4	30/07/2025	4	2	0
SL12	30/07/2025	18	1	0
SL9	31/07/2025	1	1	0
SL4	06/08/2025	6	0	2

Bat activity was low across all transects in 2025 with a total of 35 recordings. Common pipistrelle accounted for 82.8% of all recordings, with soprano pipistrelle at 11.4% and unidentified myotis at 5.7%. SL12 recorded the highest levels of activity with 19 passes.

4.2.4 Static Detector Survey

4.2.4.1 Overview of Static Detectors

Static bat detectors were placed in thirteen locations between 2019 and 2025, with some locations resurveyed as set out in Section 3.2.5. In 2019, static detectors were placed in six locations. In 2020, static detectors were placed in four locations. A static detector was placed in one location on two occasions during the 2023 bat activity survey season. In 2024, static detectors were placed in three locations. Placement of these detectors was based on potentially suitable foraging habitat and connectivity to the wider landscape. Locations of static detectors are presented in Figures 1 and 2.

4.2.4.2 2019

In SL4, four bat species were detected, comprising common pipistrelle, soprano pipistrelle, Leisler's bat and Nathusius' pipistrelle. Common pipistrelle was the most commonly detected, particularly in the early and mid-part of the night, followed by Leisler's bat which was mostly recorded close to dusk suggesting these bats were passing through this site on the way to foraging habitats elsewhere. Soprano pipistrelle were detected only a small number of times, and only a single pass by Nathusius' pipistrelle was recorded, early in the evening.

For the static detector placed in a treeline to the south of SL9, Leisler's bat was the most commonly detected species, followed by common pipistrelle and just five passes of soprano pipistrelle. Leisler's bat passes were detected during the middle part of the night suggesting they were foraging at this location and not likely to be roosting nearby.

In the woodland adjacent to SL10, the most commonly detected bat species was again Leisler's bat, while at survey parcel SP04 located in the Halpenny Golf Course common pipistrelle was most commonly recorded, with a single pass of soprano pipistrelle.

The static detector deployed at the car park at the airport in August recorded no bats, while the static at SL2 recorded low levels of soprano pipistrelle and Leisler's bat.

4.2.4.3 2020

The static detector deployed at the woodland to the north of Long-term Car Park (Red) (SL9) recorded a total of 3,233 passes (approximately 115 passes per night on average) from four species, comprising Leisler's bat, common pipistrelle, soprano pipistrelle, and brown long-eared bat. Unidentified myotis *Myotis* sp. were also recorded, which could not be identified to species. The most frequently recorded species was Leisler's bat, which accounted for approximately 67.8% of all registrations. The next most commonly species were common pipistrelle and soprano pipistrelle, which accounted for 21.7% and 8.7% of all registrations, respectively. Brown long-eared bat and unidentified myotis were recorded less frequently, with only 54 and eight registrations, respectively. It is worth noting that brown long-eared bat was recorded only on this detector and was not recorded during any other manual or static detector survey between 2019 and 2024.

The static detector deployed at Derelict Building 2 to the north of Long-term Car Park (Red) (SL9) recorded a very low amount of bat activity, with 71 passes from three species, comprising common pipistrelle, soprano pipistrelle, and Leisler's bat. The most frequently recorded species was common pipistrelle, which accounted for approximately 54.9% of all registrations. The second most common species was Leisler's bat, which accounted for approximately 39.4% of all registrations. Soprano pipistrelle was recorded less frequently, with only four registrations of this species.

The static detector deployed in SP09, south of Old Airport Road, recorded two registrations of Leisler's bat, recorded on the same night.

The static detector deployed at the Airport Roundabout recorded no bats.

4.2.4.4 2023

Static detectors were deployed on two occasions in SL12 during the 2023 survey season. The static detector deployed early in the bat season in June recorded low levels of bat activity, with a total of 308 passes (approximately 62 passes per night) from three species, comprising common pipistrelle, Leisler's bat, and soprano pipistrelle. The most frequently recorded species was common pipistrelle, which accounted for approximately 65.5% of all registrations. The next most commonly recorded species were common pipistrelle and soprano pipistrelle, which accounted for 18.5% and 16% of all registrations, respectively.

The static detector deployed in August in the same location recorded slightly lower levels of bat activity with a total of 229 passes (approximately 33 passes per night) comprising Leisler's bat, common pipistrelle, soprano pipistrelle and unidentified myotis species which could not be identified to species. The most frequently recorded species was Leisler's bat, which accounted for approximately 45% of all registrations. The next most commonly recorded species were common pipistrelle and soprano pipistrelle, which accounted for 40% and 14% of all registrations, respectively.

Table 4-3: Total Passes Recorded per Species in 2023 (SL12)

	May and June			August		
Species	**Average Passes per Night**	**Total Passes**	**% of All Registrations**	**Average Passes per Night**	**Total Passes**	**% of All Registrations**
Common pipistrelle	40	202	65.5	13	92	40
Soprano pipistrelle	10	49	16	5	32	14
Leisler's bat	11	57	18.5	15	102	45
Myotis species	0	0	0	<1	3	1

4.2.4.5 2024

The static detectors deployed recorded low levels of bat activity within the Dublin Airport Site Boundary and surrounding lands. The static detector deployed at SL4 recorded the relatively highest level of activity while the static detector deployed at SL11 recorded the lowest levels of activity. Common pipistrelle and Leisler's bat were the most common species recorded across all surveys.

The static detector deployed within the hedgerow in the SL9 area recorded low levels of bat activity, with a total of 72 passes (approximately 9 passes per night) from three species, comprising soprano pipistrelle, Leisler's bat, and common pipistrelle. The most frequently recorded species was common pipistrelle, which accounted for approximately 71% of all registrations. The next most commonly recorded species were Leisler's bat and soprano pipistrelle, which accounted for 24% and 5% of all registrations, respectively.

The static detector deployed nearby the structures in SL4 recorded a relatively small amount of bat activity, although recorded relatively higher activity compared with the other static locations, with a total of 663 passes (approximately 95 passes per night) from four species, comprising Leisler's bat soprano pipistrelle, common pipistrelle, and Nathusius' pipistrelle. The most frequently recorded species was Leisler's bat, which accounted for approximately 59% of all registrations, followed by common pipistrelle and soprano pipistrelle, which accounted for 30% and 12% of all registrations, respectively. Nathusius' pipistrelle bats were recorded as a brief pass on three separate occasions, indicating they likely only commute through this area.

The static detector deployed in the linear woodland to the north-west of SL11 recorded just one call from a Leisler's bat, likely commuting over the area. No other bat species were recorded in this location.

Table 4-4 below summarises the total number of passes per species recorded during the 2024 surveys.

Table 4-4: Total Passes Recorded Per Species in 2024 (SL9, SL4, and SL11)

	SL9			SL4			SL11		
Species	Average Passes per Night	Total Passes	% of All Registrations	Average Passes Per Night	Total Passes	% of All Registrations	Average Passes Per Night	Total Passes	% of All Registrations
Common pipistrelle	7	53	71	28	198	30	0	0	0
Soprano pipistrelle	<1	4	5	11	77	12	0	0	0
Nathusius' pipistrelle	0	0	0	<1	3	0.01	0	0	0
Leisler's bat	2	18	24	55	385	59	<1	1	100

4.2.4.6 2025

The static detectors deployed recorded generally low levels of bat activity within the Dublin Airport Site Boundary and surrounding lands. The static detector deployed at SL4 recorded the relatively highest level of activity while the static detector deployed at SL11 recorded the lowest levels of activity. Common pipistrelle and soprano pipistrelle were the most common species recorded across all surveys.

The static detector deployed within SL9 area recorded relatively low levels of bat activity, with a total of 872 passes (approximately 58 passes per night) from three species, comprising soprano pipistrelle, Leisler's bat, and common pipistrelle. The most frequently recorded species was soprano pipistrelle, which accounted for approximately 61% of all registrations. The next most commonly recorded species were common pipistrelle and Leisler's bat which accounted for 24% and 15% of all registrations, respectively.

The static detector deployed in SL4 recorded the highest levels of bat activity, with a total of 3,364 passes (approximately 224 passes per night) from six species, comprising Leisler's bat soprano pipistrelle, common pipistrelle, brown long-eared bat, unidentified myotis and Nathusius' pipistrelle. The most frequently recorded species was common pipistrelle, which accounted for approximately 57% of all registrations, followed by Leisler's bat and soprano pipistrelle, which accounted for 22% and 20% of all registrations, respectively. Nathusius' pipistrelle bats, myotis and brown long-eared bats were recorded as three to four passes, indicating they likely only infrequently commute through this area.

The static detector deployed within SL12 area recorded low levels of bat activity, with a total of 152 passes (approximately 10 passes per night) from four species, comprising soprano pipistrelle, Leisler's bat, Nathusius' pipistrelle and common pipistrelle. The most frequently recorded species was common pipistrelle, which accounted for approximately 65% of all registrations. The next most commonly recorded species were Leisler's bat and soprano pipistrelle which accounted for 23% and 11% of all registrations, respectively. Nathusius' pipistrelle bats, were recorded as one pass, indicating they likely only commute through this area.

The static detector deployed within SL11 area recorded low levels of bat activity, with a total of 112 passes (approximately 7 passes per night) from four species, comprising soprano pipistrelle, Leisler's bat, Nathusius' pipistrelle and common pipistrelle. The most frequently recorded species was Leisler's bat, which accounted for approximately 66% of all registrations. The next most commonly recorded species were common pipistrelle and soprano pipistrelle which accounted for 24% and 9% of all registrations, respectively. Nathusius' pipistrelle bats, were recorded as one pass, indicating they likely only commute through this area.

Table 4-5 summarises the total number of passes per species recorded during the 2025 surveys.

Table 4-5: Total Passes Recorded Per Species in 2025 (SL4, SL9, SL11 and SL12)

Species	SL4			SL12			SL11			SL9		
	Average Passes per Night	Total Passes	% of All Registrations	Average Passes Per Night	Total Passes	% of All Registrations	Average Passes Per Night	Total Passes	% of All Registrations	Average Passes Per Night	Total Passes	% of All Registrations
Common pipistrelle	128	1924	42.8%	7	99	2.2%	2	27	0.6%	14	208	4.6%
Soprano pipistrelle	46	683	15.2%	1	17	0.4%	1	10	0.2%	36	534	11.9%
Nathusius' pipistrelle	<1	3	0.1%	<1	1	0.0%	<1	1	0.1%	0	0	0.0%
Leisler's bat	50	747	16.6%	2	35	0.8%	5	74	1.6%	9	130	2.9%
Myotis species	0	4	0.1%	0	0	0.0	0	0	0.0	0	0	0.0
Brown long-eared	0	3	0.1%	0	0	0.0	0	0	0.0	0	0	0.0

5. Summary

The results of the suite of bat surveys carried out at Dublin Airport and the surrounding lands indicate some, albeit limited, suitable habitat for roosting bats. The emergence surveys carried out on the trees and structures identified as suitable, including the tree T01 with a suitability of PRF-I, the seven structures with Low suitability (Animal Welfare Facility, Shamrock House Annex, Derelict Building 2, S03, S05, S08) and the four structures with Moderate suitability (Derelict Building 1, S04, S06, and S09), found no roosting bats. In 2025 vacant building S01 was however confirmed as a Leisler's bat roost during emergence surveys.

Overall bat activity (i.e., foraging and commuting) was found to be low during the surveys. Relatively elevated levels of activity were generally associated with linear corridors with foraging by small numbers of individual bats accounting for the majority of activity.

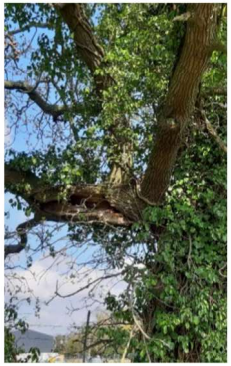
A total of six bat species were identified during transect and static surveys: common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, Leisler's bat, brown long-eared bat, and unidentified myotis species. The most frequently recorded species were common pipistrelle and Leisler's bat. Brown long-eared bat had very low levels of activity. Bats were generally recorded foraging and/or commuting along treelines and hedgerows. However, whilst suitable

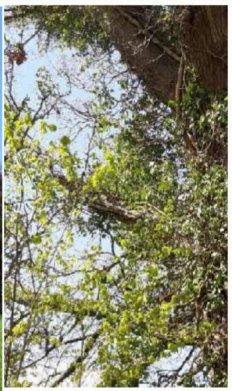
foraging and commuting habitat is present, this is generally limited by the isolated nature of habitat parcels, surrounded by existing roads and hardstanding within and surrounding Dublin Airport.

6. Figures

Annex A Trees Initially Assessed with Moderate Suitability for Roosting Bats

Table A.6-1: Trees Initially Assessed with Moderate Suitability for Roosting Bats In 2019 PRA

Tree Ref.	Location (ITM)	Initial Bat Roost Suitability in 2019 (Collins, 2016)	Tree Species	Initial PRFs	Nearest / Survey Location	Updated PRF Assessment (Including 2019 Climbing Assessment)	Revised Bat Roost Suitability (2019 Climbing Assessment and 2023 PRA) (Colins, 2016)	Updated Classification in 2024 (Collins, 2023)[14]	Tree Photograph	Photograph(s) of PRFs
T1 (previously T35)	714770 743771	Moderate	Oak	• Mature ivy • Broken limbs and tear outs on southern aspect	SL4	• Tree was climbed and inspected • Only suitable feature is hazard beam crack. Tear out feature not suitable, mature ivy not suitable feature in and of itself • One side of hazard beam not suitable as it is quite open and tapers quickly into crack • Second side extends up into a crevice, dry, suitable for individual bats, but no bats present at time of inspection	Moderate (one feature)	PRF-I		
T3	715019 743657	Moderate	Ash	• Mature ivy • 1 wound • 1 shallow tear-out • 1 crack / split	SL4	• Tree was climbed and inspected • Potential features included a wound that was found to not be deep, a knot hole that was found to have no crevice and a tear-out that was just on the surface. The crack identified as potential features was also assessed to not be suitable • Overall, no suitable features present and considered to be Negligible	Negligible	Negligible		

Tree Ref.	Location (ITM)	Initial Bat Roost Suitability in 2019 (Collins, 2016)	Tree Species	Initial PRFs	Nearest / Survey Location	Updated PRF Assessment (Including 2019 Climbing Assessment)	Revised Bat Roost Suitability (2019 Climbing Assessment and 2023 PRA) (Colins, 2016)	Updated Classification in 2024 (Collins, 2023)[14]	Tree Photograph	Photograph(s) of PRFs
T33	714812 743800	Moderate	Oak *Quercus* sp.	• Mature ivy • Broken branch on southern and western aspect • Fissures present	SL4	• Tree was climbed and inspected • Cracked branches are open and not suitable • Mature ivy but not a feature that can be examined • Cracked branch on south side has finger length crack but obscured by ivy	Low	Negligible (due to ivy cover)		
T67	717679 742511	Moderate	Ash	• Ten knotholes	SL9	• GLTA • These potential knotholes on the trunk are closed and do not enter into the cavity of the tree. Not suitable for roosting bats	None	None		

Tree Ref.	Location (ITM)	Initial Bat Roost Suitability in 2019 (Collins, 2016)	Tree Species	Initial PRFs	Nearest / Survey Location	Updated PRF Assessment (Including 2019 Climbing Assessment)	Revised Bat Roost Suitability (2019 Climbing Assessment and 2023 PRA) (Colins, 2016)	Updated Classification in 2024 (Collins, 2023)[14]	Tree Photograph	Photograph(s) of PRFs
T68	717686 747517	Moderate	Ash	• Five knotholes	SL9	• GLTA • These potential knotholes on the trunk are closed and do not enter into the cavity of the tree. Not suitable for roosting bats	None	None		

Annex B IR and Thermal Cameras Stills from 2024 Emergence Surveys

Plate B 1: Stills from IR and thermal cameras showing potential access points at darkest time of emergence survey

S04 (West side)



S04 (East side)



S04 (South side)



S03



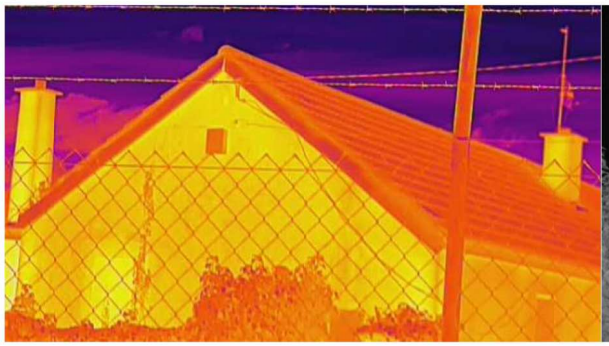
S05 (east side)



S05 (west side)



S01



S06



S08



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