



Ecological Impact Statement

Pitch Floodlights
at Doughiska, Galway



DOCUMENT DETAILS

Client: Galway City Council

Project Title: Installation of 24 floodlights on 9 columns for the Doughiska Football pitches.

Address: Doughiska, Galway

Document Title: Ecological Impact Assessment Report

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Date: 07th of May 2025

Table of Contents

1	Introduction	1
1.1	Proposed Project	1
2	LEGISLATION & PLANNING POLICY	3
2.1.1	EU Habitats Directive	3
2.1.2	EU Birds Directive	3
2.1.3	Wildlife Act 1976 – 2012	3
2.1.4	The Planning and Development Act 2000 (as amended):	3
3	METHODOLOGY	4
3.1	Statement of Authority	4
3.2	Desk Study	4
3.3	Field Surveys	4
3.4	Ecological Impact Assessment	5
3.5	Appropriate Assessment	7
4	BASELINE ECOLOGICAL CONDITIONS	8
4.1	DESIGNATED CONSERVATION AREAS	8
4.2	HABITAT DESCRIPTIONS	13
4.2.1	Outside the site	14
4.3	FAUNA	15
4.3.1	Mammals	15
4.3.2	Birds	18
4.4	HABITAT and FAUNAL EVALUATION	18
5	ECOLOGICAL IMPACT ASSESSMENT	19
5.1.1	Designated Sites	19
5.1.2	5.2 Habitats	19
5.1.3	Species	19
5.2	Cumulative Impacts & Effects	21
6	MITIGATION MEASURES	22
6.1	Species	22
6.1.1	Bats	22
7	RESIDUAL IMPACTS	23
8	CONCLUSIONS	23

1 Introduction

Eire Ecology was commissioned by Galway City Council to carry out an Ecological Impact Assessment with regard to the proposed development of pitches in Doughiska Galway.

This report concentrates on ecological features within the development area of particular significance, primarily designated habitats and species, including habitats/species listed in Annex I, II and IV of the EU Habitats Directive, rare flora listed in the Flora Protection Order along with other semi-natural habitats of conservational value.

The report has been compiled in compliance with the European Communities Legal requirements and follows guidance outlined in the following documents:

- Guidelines on the information to be contained in Environmental Impact Assessment Reports May 2022.
- Guidelines for ecological impact assessment in the UK and Ireland CIEEM 2024

The European Habitats Directive 92/43/EEC (Article 6) indicates the need for plans and projects to be subject to Habitats Directive Assessment (also known as Appropriate Assessment) if the plan or project is not directly connected with or necessary to the management of a Natura 2000 site (which includes SACs and SPAs) but which has the potential to have implications on a site's conservation objectives. These implications can be significant effects either individually or in combination with other plans or projects.

1.1 Proposed Project

Galway City Council seeks planning permission for the instillation of 24 floodlights on 9 columns for the Doughiska Football pitches.

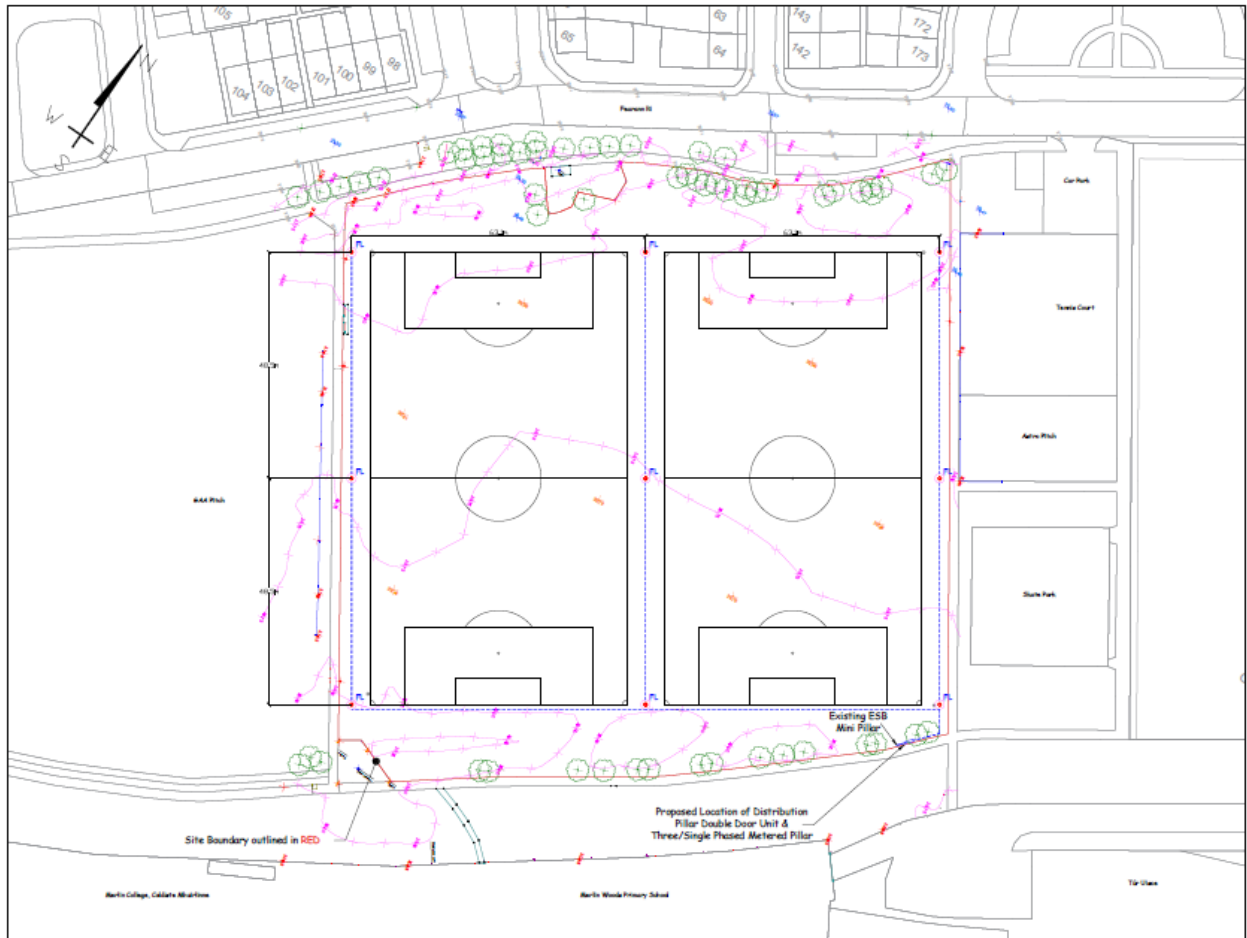


Figure 1-1: Site outline

2 LEGISLATION & PLANNING POLICY

2.1.1 EU Habitats Directive

The “Habitats Directive” (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) is the main legislative instrument for the protection and conservation of biodiversity within the European Union and lists certain habitats and species that must be protected within wildlife conservation areas, considered to be important at a European as well as at a national level. A “Special Conservation Area” or SAC is a designation under the Habitats Directive.

The Habitats Directive sets out the protocol for the protection and management of SACs. The Directive sets out key elements of the system of protection including the requirement for “Appropriate Assessment” of plans and projects. The requirements for an Appropriate Assessment are set out in the EU Habitats Directive. Articles 6(3) and 6(4) of the Directive.

2.1.2 EU Birds Directive

The “Birds Directive” (Council Directive 79/409/EEC as codified by 2009/147/EC) provides for a network of sites in all member states to protect birds at their breeding, feeding, roosting and wintering areas. This directive identifies species that are rare, in danger of extinction or vulnerable to changes in habitat and which need protection (Annex I species). Appendix I indicates Annex I bird species as listed on the Birds Directive. A “Special Protection Area” or SPA, is a designation under The Birds Directive. SACs and SPAs form a pan-European network of protected sites known as Natura 2000 sites and any plan or project that has the potential to impact upon a Natura 2000 site requires Appropriate Assessment (AA).

2.1.3 Wildlife Act 1976 – 2012

The primary pieces of national legislation for the protection of wildlife in Ireland are the Wildlife Act (1976) and the Wildlife [Amendment] Act (2000). The aims of the wildlife act according to the National Parks and Wildlife Service are “... to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims.” All bird species are protected under the act. The Wildlife (Amendment) Act of 2000 amended the original Act to improve the effectiveness of the Act to achieve its aims.

2.1.4 The Planning and Development Act 2000 (as amended):

This Act integrates biodiversity considerations into the planning process and requires ecological assessments, including for bats, as part of Environmental Impact Assessments (EIAs).

3 METHODOLOGY

3.1 Statement of Authority

The present report was compiled by John Curtin of Eire Ecology providing information on flora and fauna. John Curtin B.Sc. is the principal ecologist with Eire Ecology and has over 15 years of experience in ecological impact assessment. Surveys were conducted by John Curtin and Karolina Illien M.Sc. Karolina is an Ecologist working with Eire Ecology since 2021.

3.2 Desk Study

The assessment was carried out in three stages, firstly through desktop assessment to determine existing records in relation to habitats and species present in the study area. This included research on the NPWS metadata website, the National Biodiversity Data Centre (NBDC) database and a literature review of published information on flora and fauna occurring in the development areas.

3.3 Field Surveys

The second phase of the assessment involved site visits to establish the existing environment in the footprint of the proposed development. Areas which were highlighted during desktop assessment were investigated in closer detail according to the Heritage Council Best Practice Guidance for Habitat Survey and Mapping (Smith et al., 2011). Habitats in the proposed development areas were classified according to the Heritage Council publication "A Guide to Habitats in Ireland" (Fossitt, 2000). This publication sets out a standard scheme for identifying, describing and classifying wildlife habitats in Ireland. This form of classification uses codes to classify different habitats based on the plant species present. Species recorded in this report are given in both their Latin and English names. Latin names for plant species follow the nomenclature of "An Irish Flora" (Parnell & Curtis, 2012).

Wintering bird surveys were conducted on three occasions in February and March 2025.

Habitats were surveyed on the 05th of May 2025 by conducting a site walkover covering the area under the footprint of the proposed development. The survey date is considered within the botanical survey period.

Signs of mammals were searched while surveying the study area noting any sights, signs or any activity in the vicinity especially along adjacent boundaries. Evidence of bird nesting or potential for nesting was recorded. A photographic record was made of the main features of interest. Finally a static bat survey was conducted between the 29th of April and the 05th of May 2025.

3.4 Ecological Impact Assessment

The final part of the assessment involves an evaluation of the proposed development area and determination of the potential impacts on the flora and fauna of the area. The EclA has been undertaken in accordance with guidelines produce by the CIEEM (CIEEM, 2018); experience of 'best practice' in ecological assessment; and criteria set out below in Table 3-1 and Table 3-2.

Table 3-1: Geographic context for determining ecological resource value

Geographic context
INTERNATIONAL IMPORTANCE:
'European site' including special area of conservation (SAC), site of community importance (SCI), special protection area (SPA) or proposed special area of conservation.
Proposed Special Protection Area (pSPA).
Site that fulfills the criteria for designation as a 'European site' (see annex III of the habitats directive, as amended).
Features essential to maintaining the coherence of the Natura 2000 network.
Site containing 'best examples' of the habitat types listed in Annex I of the habitats directive.
Resident or regularly occurring populations (assessed to be important at the national level)5 of the following
▪ <i>Species of bird, listed in Annex I and/or referred to in article 4(2) of the birds directive; and/or</i> ▪ <i>Species of animal and plants listed in Annex II and/or IV of the habitats directive</i>
Ramsar site (convention on wetlands of international importance especially waterfowl habitat 1971).
World heritage site (convention for the protection of world cultural & natural heritage, 1972).
Biosphere reserve (UNESCO man & the biosphere programme).
Site hosting significant species populations under the Bonn convention (convention on the conservation of migratory species of wild animals, 1979).
Site hosting significant populations under the berne convention (convention on the conservation of European wildlife and natural habitats, 1979).
Biogenetic reserve under the council of Europe. European diploma site under the council of Europe.
Salmonid water designated pursuant to the European communities (quality of salmonid waters) regulations, 1988, (S.I. no 293 of 1988)
National importance
Site designated or proposed as a natural heritage area (NHA).
Statutory nature reserve.
Refuge for fauna and flora protected under the wildlife acts. National park.
Undesignated site fulfilling the criteria for designation as a natural heritage area (NHA); statutory nature reserve; refuge for fauna and flora protected under the wildlife act; and/or a national park.
Resident or regularly occurring populations (assessed to be important at the national level of the following:
▪ <i>Species protected under the wildlife acts; and/or</i> ▪ <i>Species listed on the red data list</i>
Site containing 'viable areas' of the habitat types listed in Annex I of the habitats directive
County importance:
Area of special amenity.
Area subject to a tree preservation order.
Area of high amenity, or equivalent, designated under the county development plan.
Resident or regularly occurring populations (assessed to be important at the county level) of the following:

Geographic context	
- Species of bird, listed in Annex I and/or referred to in article 4(2) of the birds directive; - Species of animal and plants listed in Annex II and/or IV of the habitats directive; - species protected under the wildlife acts; and/or - Species listed on the relevant red data list	Site containing area or areas of the habitat types listed in annex i of the habitats directive that do not fulfil the criteria for valuation as of international or national importance.
	County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified in the National or Local BAP, if this has been prepared.
	Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county.
	Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level
Local importance (high value)	
- Species of bird, listed in Annex I and/or referred to in article 4(2) of the birds directive; - Species of animal and plants listed in Annex II and/or IV of the habitats directive; - Species protected under the wildlife acts; and/or - Species listed on the relevant red data list	Locally important populations of priority species or habitats or natural heritage features identified in the local bap, if this has been prepared;
	Resident or regularly occurring populations (assessed to be important at the local level) of the following
	- Species of bird, listed in Annex I and/or referred to in article 4(2) of the birds directive; - Species of animal and plants listed in Annex II and/or IV of the habitats directive; - Species protected under the wildlife acts; and/or - Species listed on the relevant red data list
	Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality;
Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value	
Local importance (lower value)	
Sites containing small areas of semi-natural habitat that are of some local importance for wildlife;	
Sites or features containing non-native species that are of some importance in maintaining habitat links	

Table 3-2: Criteria for assessing impacts based on CIEEM (2024) and (EPA, 2018)

Parameter	Description
Quality	Positive effect: A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
	Neutral effect: No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative effect: A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
Extent	The area over which an impact occurs
Duration	- Momentary – effects lasting from seconds to minutes - Brief – effects lasting less than a day - Temporary – effects lasting less than a year - Short-term – effects lasting 1 to 7 years - Medium term – effects lasting 7 to 15 years - Long term – effects lasting 15 to 60 years - Permanent – effects lasting over 60 years

Parameter	Description	
	Reversible	
Reversibility	Irreversible impacts: permanent changes from which recovery is not possible within a reasonable time scale or for which there is no reasonable chance of action being taken to reverse it. Reversible impact: temporary changes in which spontaneous recovery is possible or for which effective mitigation (avoidance/cancellation/reduction of effect) or compensation (offset/recompense/offer benefit) is possible.	
Frequency and Timing	Frequency –How often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually) Timing –the timing of an activity or change may result in an impact if it coincides with critical life-stages or seasons e.g. bird nesting season.	
Describing the significance of effects (EPA, 2022)	Imperceptible	An effect capable of measurement but without significant consequences.
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
	Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
	Profound	An effect which obliterates sensitive characteristics

3.5 Appropriate Assessment

An Appropriate Assessment Screening document has been prepared by Eire Ecology on behalf of Galway City Council to assist the competent authority in fulfilling its duties in accordance with Regulation 6 (3) of the Habitats Directive 92/43/EEC.

The Appropriate Assessment Screening document submitted in support of the project concluded that no significant adverse effects upon European sites would arise as a result of the proposed project.

The Proposed Development is c. 1.67 hectares and is situated off the Doughiska Road (L5141). The site has been used as a playing pitch since 2008 by the group known as Merlin Woods FC. .

4 BASELINE ECOLOGICAL CONDITIONS

4.1 DESIGNATED CONSERVATION AREAS

The site of the proposed project is not located within the boundary of statutory or non-statutory designated sites of international, national or local nature conservation importance. There are however a number of designated sites within the Zone of Influence (Zol) of the proposed project. Table 4-1 below provides descriptive details of designated sites and features of natural heritage importance located within immediate proximity to the site of the proposed project; or outside the site of the proposed project but connected it through an identifiable impact pathway. The boundary of each of these designated sites in relation the proposed project is illustrated in Figure 4-1.

The NBDC was examined for records of rare and designated species within the 2km square the site resides; M32N. Results can be found in Table 4-2.

Table 4-1: Designated sites and features of natural heritage importance located within the vicinity of the site.

Site	Site Code	Distance	Details	Has the designated site connectivity to the subject site?
(Proposed) National Heritage Areas (pNHA's & NHA's)				
Kiltullagh turlough pNHA	000287	3.7km	Turlough in the catchment of the Clare River	No. EPA AA mapviewer shows the turlough is located within a different sub-catchment hydrologically upstream from the site.
Moycullen Bogs NHA	002364	7.4km	Blanket bog and other associated habitats & species.	No. Lacks connectivity. Located far side of Corrib river within different groundwater body
Killarainy Lodge, Moycullen pNHA	002083	14.2km	Nursery roost of the Natterer's Bat (<i>Myotis nattereri</i>).	No. (BCT, 2016) states Natterers bats have a CSZ of 4km. The subject site lies well outside this zone.
Special Protected Areas (SPA's) / Special Areas of Conservation (SAC's)				
Galway Bay Complex SAC	000268	1.31km	Large coastal SAC with 17 conservation objectives (CO's). Juniperus scrub, Semi-natural dry grasslands and Limestone pavements are the most terrestrial of the CO's.	Proximity, hydrologically connected via groundwater however scale of works and lack of good hydrological connectivity means impacts are highly unlikely.
Inner Galway Bay SPA	004031	1.49km	Large coastal SPA supports an excellent diversity of wintering wetland birds, with divers, grebes, cormorants, dabbling duck, sea duck and waders all well represented	Species associated with the SPA including gulls can utilise playing pitches for feeding and resting purposes.
Lough Corrib SAC	00297	4.2km	Situated to the north of Galway city, the SAC contains a variety of freshwater and terrestrial protected habitats as well as 9 species.	No. EPA AA mapviewer shows the SAC is located within a different sub-catchment hydrologically upstream from the site.
Cregganna Marsh SPA	004142	4.77km	Situated about 3 km south of Oranmore, to the west of the Galway - Ennis road. The SPA is designated for Greenland White-fronted Goose.	No. The SPA is designated for Greenland White-fronted Goose. These geese can travel between the SPA and Rahaseen turlough however are not associated with urban habitats such as Doughiska.
Lough Corrib SPA	004042	6.25km	Of special conservation interest for the following species: Greenland White-fronted Goose, Gadwall, Shoveler, Pochard, Tufted Duck, Common Scoter, Hen Harrier, Coot, Golden Plover, Black-Headed Gull, Common Gull, Common Tern and Arctic Tern. The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds	No. Distance. SPA is hydrologically upstream of the site (in the case of wetlands).

Site	Site Code	Distance	Details	Has the designated site connectivity to the subject site?
Lough Fingall Complex SAC	000606	11.68km	Situated immediately south-east of Ballindeereen in Co. Galway, and within 2-3 km of Galway Bay. Site contains wetland and terrestrial protected habitats and Lesser horseshoe bats.	No. EPA AA mapviewer shows the turlough is located within a different sub-catchment from the site.
Rahasane Turlough SPA	004089	13.85km	Rahasane Turlough lies in gently undulating land, approximately 2 km west of Craughwell, Co. Galway. It consists of two basins which are connected at times of flood but separated as the waters recede. Designated an SPA for Whooper Swan, Greenland Whitefronted Goose, Wigeon, Golden Plover and Black-tailed Godwit. Also designated an SAC for turlough habitat.	No. EPA AA mapviewer shows the turlough is located within a different sub-catchment from the site.
Rahasane Turlough SAC	000322	13.92km		
Kiltiernan Turlough SAC	001285	14.38km		
Castletaylor Complex SAC	000242	14.56km		

Doughiska 15km Buffer

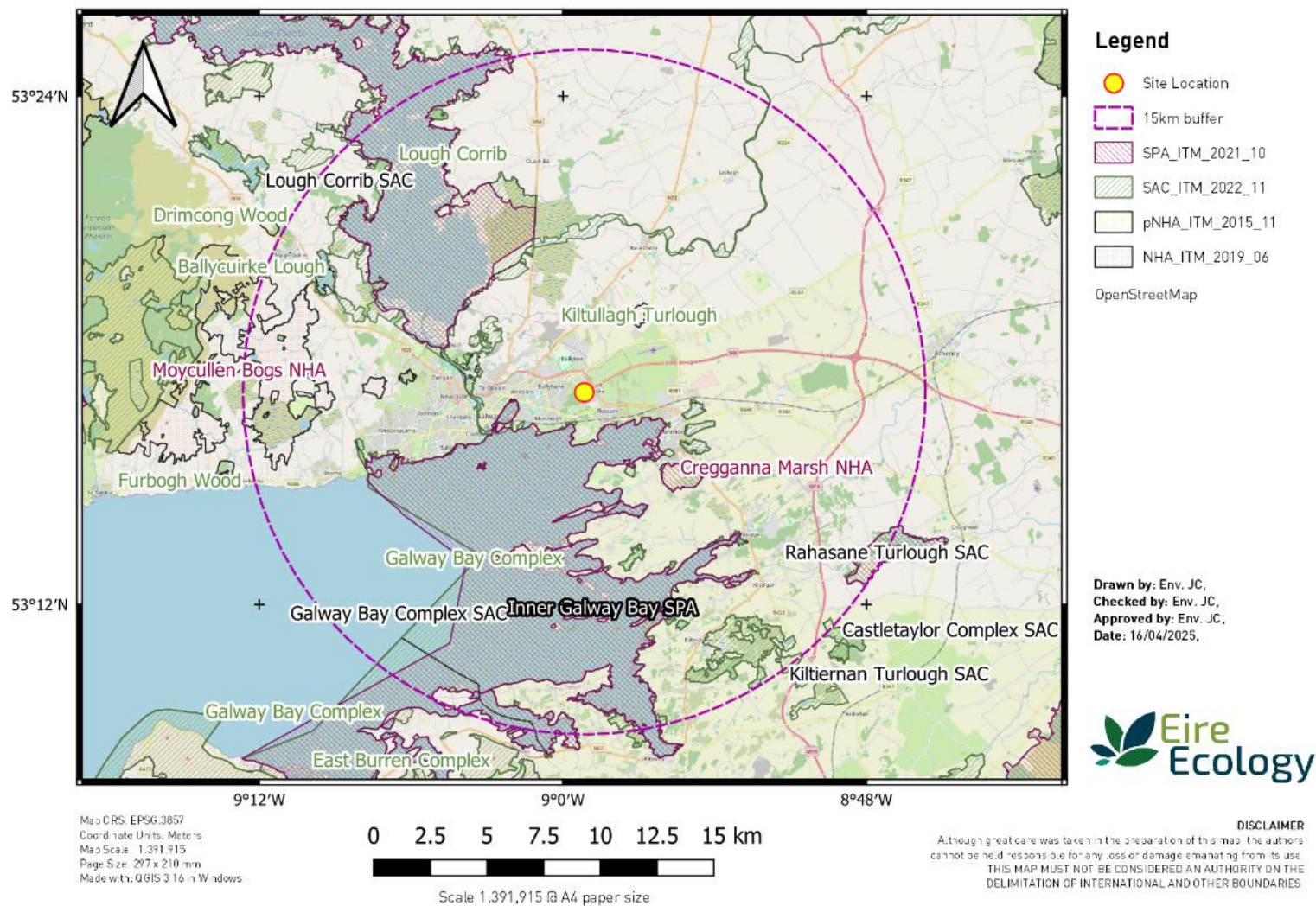


Figure 4-1: Designated sites surrounding proposed development

Table 4-2 Designated species recorded within 2km square: M32N

Species name	Date of last record	Designation	Potential to breed within subject site
Amphibian			
Common Frog (<i>Rana temporaria</i>)	15/05/2003	EU Habitats Directive - Annex V Wildlife Acts	Low, requires water
Birds			
Barn Swallow (<i>Hirundo rustica</i>)	16/04/2023	Wildlife Acts Birds of Conservation Concern - Amber List	None, no nesting habitat
Common Kestrel (<i>Falco tinnunculus</i>)	01/03/2024	Wildlife Acts Birds of Conservation Concern - Amber List	Low, no nesting habitat, high anthropogenic activity
Common Pheasant (<i>Phasianus colchicus</i>)	04/03/2023	Wildlife Acts EU Birds Directive - Annex II & III	Low, high anthropogenic activity
Common Starling (<i>Sturnus vulgaris</i>)	17/07/2022	Wildlife Acts Birds of Conservation Concern - Amber List	None, no nesting habitat
Common Swift (<i>Apus apus</i>)	08/07/2017	Wildlife Acts Birds of Conservation Concern - Amber List	None, no nesting habitat
Common Wood Pigeon (<i>Columba palumbus</i>)	31/12/2011	Wildlife Acts EU Birds Directive - Annex II & III	Low, high anthropogenic activity
Eurasian Oystercatcher (<i>Haematopus ostralegus</i>)	05/03/2019	Wildlife Acts Birds of Conservation Concern - Amber List	Is known to use pitches for feeding. Not suitable for breeding.
Herring Gull (<i>Larus argentatus</i>)	31/12/2011	Wildlife Acts Birds of Conservation Concern - Red List	Is known to use pitches for feeding. Not suitable for breeding.
House Martin (<i>Delichon urbicum</i>)	07/05/2014	Wildlife Acts Birds of Conservation Concern - Amber List	None, no nesting habitat
House Sparrow (<i>Passer domesticus</i>)	22/05/2016	Wildlife Acts Birds of Conservation Concern - Amber	None, no nesting habitat
Mew Gull (<i>Larus canus</i>)	31/12/2011	Wildlife Acts Birds of Conservation Concern - Amber List	Is known to use pitches for feeding. Not suitable for breeding.
Northern Lapwing (<i>Vanellus vanellus</i>)	31/12/2011	Wildlife Acts EU Birds Directive - Annex II Birds of Conservation Concern - Red List	Is known to use pitches for feeding. Not suitable for breeding.
Sky Lark (<i>Alauda arvensis</i>)	31/12/2011	Wildlife Acts Birds of Conservation Concern - Amber	Low, high anthropogenic activity
Plants			
Spring Gentian (<i>Gentiana verna</i>)	27/04/2016	Near threatened	None, habitats are too improved.
Insects			
Marsh Fritillary (<i>Euphydryas aurinia</i>)	05/06/2018	EU Habitats Directive - Annex II Vulnerable	None, habitats are too improved.
Mammals			
Eurasian Red Squirrel (<i>Sciurus vulgaris</i>)	16/09/2017	Wildlife Acts	Low, no nesting habitat, high anthropogenic activity
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	14/08/2009	EU Habitats Directive - Annex IV Wildlife Acts	Low, no roosting habitat. Likely hunts throughout area.
West European Hedgehog (<i>Erinaceus europaeus</i>)	03/07/2023	Wildlife Acts	Low, lacks scrubby layer.

4.2 HABITAT DESCRIPTIONS

The main habitat recorded on site consists of amenity grassland (GA2). By the periphery of the site treelines (WL2) can be found while buildings and artificial surfaces (BL3) consisting of roads and all weather pitches are found adjacent to the site (see figure 4-2 below).

Doughiska Habitat Map



Figure 4-2: Habitat map of subject site

Table 4-3: Habitat types present according to Fossitt (2000).

Habitat	Habitat Category	Habitat Type
(G) Grassland	(GA) Improved Grassland	(GA2) Amenity grassland
(B) Cultivated and built land	(BL) Built land	(BL3) Buildings and artificial surfaces
(W) Woodland	(WL) Linear woodland	(WL2) Treeline



Plate 4-1: Doughiska pitch facing NE.



Plate 4-2: From northern corner looking SW

Treelines surrounding the site consist of planted semi mature trees with a variety of native and horticultural variants. Along the north west of the site, tree varieties include silver birch (*Betula pendula*) and non-native holm oak (*Quercus ilex*) and sycamore (*Acer pseudoplatanus*). Along the south western boundary the treeline contains a mix of rowan (*Sorbus aucuparia*), sycamore and alder (*Alnus glutinosa*).

Grassland within the site is of a low ecological value dominated by grass; rye grass (*Lolium perenne*) alongside occasional dandelion (*Taraxacum officinale* agg), daisy (*Bellis perennis*), and rarely, clover (*Trifolium spp*) and Germander Speedwell (*Veronica chamaedrys*).

4.2.1 Outside the site

Doughiska pitches continue outside the site boundary to the southwest after which resides the Doughiska playground. The playground has a heaped landscaped grass habitat partially obstructing the view of merlin woods located beyond. Merlin woods resides 250m to the south-west of the site. The woodland closest to the site consists of a treeline of birch and alder with conifer plantation beyond.

4.3 FAUNA

4.3.1 Mammals

Bats

Bats are protected by law (Wildlife Act (1976), Wildlife (Amendment) Act 2000 and the Habitats

Directive (Council Directive No. 97/62/EC of 27 October 1997 (amending Council Directive No.92/43/EEC of 21 May 1992)). In order to comply with legislation that bats are not killed or injured, it is essential to ensure that measures to reduce risk to bats are undertaken or that the presence of bats can be ruled out.

Given the proximity of Merlin Woods (a known wildlife habitat), a static bat detector survey was conducted in April / May 2025. Two Static Bat Detectors (full spectrum Song Meter Minis) were deployed onsite between the 29th of April and the 05th May 2025. One detector was placed within amenity grassland on a pole on the southern boundary (representative of the majority of the site) while the second was placed outside the site to the south in the best available bat habitat between the site and Merlin woods. The aim was to compare activity within the site to the nearest section of woodland.

Each bat pass does not correlate to an individual bat but is representative of bat activity levels. Some species such as the pipistrelles will continuously fly around a habitat and therefore it is likely that a series of bat passes within a similar time frame is one individual bat. On the other hand, Leisler's bats tend to travel through an area quickly and therefore an individual sequence or bat pass is more likely to be indicative of individual bats.

Detectors were programmed to commence half an hour before sunset and finish half an hour after sunrise to ensure that bat species that emerge early in the evening and return to roosts late are recorded.

The data was analyzed with Wildlife Acoustic's Kaleidoscope Pro; version 5.6.6). This software identifies many of the calls made by Irish bats. All calls were manually verified.

Table 4-3 provides a summary of data with full data tables provided in Appendix A. Results show the number of registrations and Bat passes per hour (Bp/Hr) and divides results per species and detector. An overall average of 8 Bp/Hr was recorded. The detector placed by Merlin Woods, outside the site, showed 17 times more activity than those within the site.

Figure 4-3 shows the location of static detectors with size of location point based on number of registrations recorded. Detector 2, positioned outside the site by the woods, recorded Brown Long-eared bat and unidentified Myotis bats; species associated with woodlands.

Activity within the site was low with D1 recording an average bat pass rate of 0.9 per hour. The most common species recorded here was Leisler's bat. This species is most adapt in flying in open areas and has a call that is recorded at greater distances than other Irish species.

Bat activity by the pitch is very low with levels appropriate to low bat suitability habitats. Activity levels were independently verified via ECOBAT. This states that detector 1 had low activity from all species while at detector two, highest activity was recorded from Soprano Pipistrelle with two nights of moderate activity, three nights moderate low and all others having low activity (see accompanying ECOBAT document for full details).

It should be noted that a single bat continuously circling a small stand of trees will produce numerous recordings, thus the number of registrations cannot quantify abundance, rather activity.

Table 4-4: Summary of combined static surveys

Detector	1 – Pitch	2 – Merlin Woods edge	Total	Bat passes per hour
Leisler's Bat	29	29	58	3.1
Common Pipistrelle	14	55	69	3.7
Soprano Pipistrelle	17	959	976	52.9
Brown Long-eared	0	1	1	0.1
Unidentified Myotis	0	4	4	0.2
Total registrations	60	1048	1108	
Minutes recorded	4153	4153	8306	
Bat passes per hour	0.9	15.1	8	

Doughiska Static Results



Figure 4-3: Combined Bat Activity. Size of circle represents activity level (Bp/Hr)

4.3.2 Birds

All species of birds are protected under the Wild life Act 1976/Wild life Amendment Act 2000. As previously mentioned, the Inner Galway Bay SPA is designated for the presence of 21 bird species. In order to identify links between the subject site and the SPA in question, three wintering bird surveys were conducted at Doughiska. Due to the late appointment of Eire Ecology, surveys were confined to February and March. Given the site lies c1.49km away from the SPA with a variety of habitats such as woodland, urban and pasture lying in-between we feel the surveys are sufficient for the minor works proposed. Surveys consisted of vantage point (VP) watches using binoculars and spotting scope. Table 4-4 provides details of species of note within the site. Of the eight observation recorded, only two interacted with the site when seven and three oystercatchers landed on the pitch. No species designated within the Inner Galway Bay SPA were found within the site.

Table 4-5: Species of note observed in site.

Survey Number	Date	Obs No.	Species Name	No. of Birds	Time of flight	Details
1	13/02/2025	1	Herring Gull	10	12:45	Circling over pitch
1	13/02/2025	2	Oystercatcher	7	13:29	Landed on pitch then took off right after
2	04/03/2025	1	Mew Gull	1	12:02	Flying over not interacting with site
2	04/03/2025	2	Mew Gull	1	12:26	Flying over not interacting with site
2	04/03/2025	3	Oystercatcher	3	12:49	Landed on pitch
3	12/03/2025	1	Herring Gull	2	12:05	Flying over not interacting with site
3	12/03/2025	2	Herring Gull	6	12:24	Flying over not interacting with site
3	12/03/2025	3	Lesser Black-backed Gull	1	13:09	Overflying site

In addition, the following species were recorded at Doughiska; Wood Pigeon, Blackbird, Robin, Pied Wagtail, Hooded Crow, Starling and Winter Wren. All these species are common to the locality.

4.4 HABITAT and FAUNAL EVALUATION

The ecological value of the site was assessed following the guidelines set out in the Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (2006) and according to the Natura Scheme for evaluating ecological sites (after Nairn & Fossitt, 2004). Judgements on the evaluation were made using geographic frames of reference, e.g. European, National, Regional or Local.

The general footprint habitats in the site are of low local ecological value consisting primarily of amenity grassland. The site has a low local value for bat species and high local value for birds (based on the occasional usage by Oystercatchers).

5 ECOLOGICAL IMPACT ASSESSMENT

5.1.1 Designated Sites

The proposed development at the construction stage will involve no works within any site designated on account of its natural heritage interest. It is not anticipated that the proposed development would have potential to give rise to any loss of habitat or other direct effects upon any designated sites of natural heritage importance.

The site walkover did not reveal any hydrological connectivity (baring groundwater). The proposed works are minor in extent. **No significant ecological impacts are predicted in respect of designated sites.**

5.1.2 5.2 Habitats

The site was not recorded to support any habitats considered to be of significant ecological value, with the entirety of the site being comprised of amenity grassland. Periphery treelines will not be impacted. **No significant ecological impacts are predicted in respect of habitats.**

5.1.3 Species

5.1.3.1 Bat

Loss of Roosting Habitat - The development will not have an impact on roosting bats.

Loss of foraging and commuting habitat - the proposed works are confined to amenity grassland and hardstand. These are not habitats typically associated with foraging and commuting bats. The upgrades to these elements will not impact foraging or commuting features for bats.

Disturbance – the construction phase activities are minor and will be limited to daylight hours thus will have no disturbance impacts on bats. A potential operational phase impact has been identified as lighting. While the site itself has a low value for bats, habitats in the periphery are of higher value.

Lighting effects on feeding and commuting bats with emphasis on Lesser Horseshoe bats.

Guidance on lighting has been based on Bats and artificial lighting in the UK, Guidance Note 08/18 (BCT, 2018), EUROBATs; *Guidelines for consideration of bats in lighting projects*. (Voigt, 2018) and BCI; Bats & Lighting document; (BCI, 2010). Lighting can alter the behaviour of bats and the insects they prey on. Night flying insects can be attracted to lights particularly sources that emit an ultraviolet component or have a high blue spectral content. Whilst some species of bat such as Leisler's and Pipistrelle species can take advantage of this occurrence, other species such as Daubenton's bat and brown long-eared avoid such areas. Lighting can create barriers for bat species both entering roosts and using commuting routes such as rivers, treelined roads and woodland edges.

BCI's Bats & Lighting document (BCI, 2010) states 'Brown Long-eared bats (*Plecotus auritus*) and Myotis species, commute and forage along dark wildlife corridors such as treelines and consequently shies away from highly illuminated sections. Therefore, illumination can impede their flight to suitable feeding areas. Consideration should be given to ensure that dark wildlife corridors remain in the landscape to allow bats and other wildlife to travel safely to and from feeding habitats.' The report also states 'each species of bat has an optimum level of light for emergence. For example, Daubenton's bats prefer a light level of less than 1 lux.' While the BCT guidelines do not give a recommended level of acceptable lux levels on commuting habitats it notes 'significant effects (on bat activity) have been recorded from as low as 3.6 lux'. Eurobats guidelines state *Myotis daubentonii* and *M. mystacinus*/*M. brandtii* consistently avoided their preferred habitats, i.e. lakes and forest gaps, in response to the brightness of the Nordic midsummer nights.

A mitigation guideline produced by (Bat Conservation Trust, 2018) recommends that for effective mitigation to be implemented, there needs to be a collaborative effort by an ecologist in conjunction with engineers, planners and when deemed necessary by the ecologist, there should also be input from a lighting specialist and landscape designer. The guideline was designed for the UK where more bat species are concerned however there are aspects of the guideline that apply to Irish bat species. The guidelines recommend a baseline bat survey is conducted and the following areas should have no ALAN

- Roosting and swarming sites for all species
- Foraging or commuting habitat for highly light-averse species (lesser horseshoe, brown long-eared and some Myotis)
- Foraging or commuting habitat used by large numbers of bats
- Foraging or commuting habitat for rare species (Lesser horseshoe) (Bat Conservation Trust, 2018)

Results show bat activity during the surveys was highest adjacent to the Merlin Woods which acts as an ecological hotspot for bats in the town. The detector placed by the woods had 95% of combined activity.

Without appropriate design, there is a likelihood of long term slight impact on commuting and foraging bats by illumination. It should be noted the treelines on either side of the pitch is illuminated already by development and street lights.

5.1.3.2 Birds

The only designated species found interacting with the site was Oystercatcher. Gulls (Herring and Lesser Black-backed) were noted overflying but not interacting. It is estimated, Ireland's wintering population of Oystercatcher is 60,540 (Lewis, 2019). The max observed on the pitch was 7. *Oystercatcher are not designated as a Conservation Objective of the Inner Galway Bay SPA or the Lough Corrib SPA however are red listed under Birds of Conservation Concern in Ireland 4: 2020–2026.* The subject site is not suitable for breeding Oystercatcher, with the construction phase proposed for the summer months, no impacts are expected on the species due to disturbance. The operational phase impacts will be negligible given the small footprint of the lights. Given the low numbers observed, lack of associated designated sites and minor footprint, **no significant negative ecological impacts are predicted in respect of birds.**

5.2 Cumulative Impacts & Effects

The assessment of cumulative impacts estimates the impact of existing, permitted and proposed developments that could act in combination with the project to result in cumulative effects on the ecological environment. Active planning applications within the development site have been considered during the assessment of cumulative impacts.

The implementation of the mitigation measures as set out below will ensure that the project does not contribute to any significant cumulative impacts.

6 MITIGATION MEASURES

6.1 Species

6.1.1 Bats

The main and most important measures proposed involves timing of usage. Lights will be limited to 16:00 to 22:30 from September to April inclusive **thus outside the main bat active periods**.

It is proposed to install 6 x 15m columns, each with two floodlights. Given concerns regarding the attractiveness of invertebrates to blue component in lights, the proposed bulbs have been changed from a 5700K to a warmer 4000K. Lighting specialists, Signify, have produced a lighting report and lux diagram demonstrating minimal light spill outside the site boundary with minimal light spill to the west (the direction of Merlin Woods).

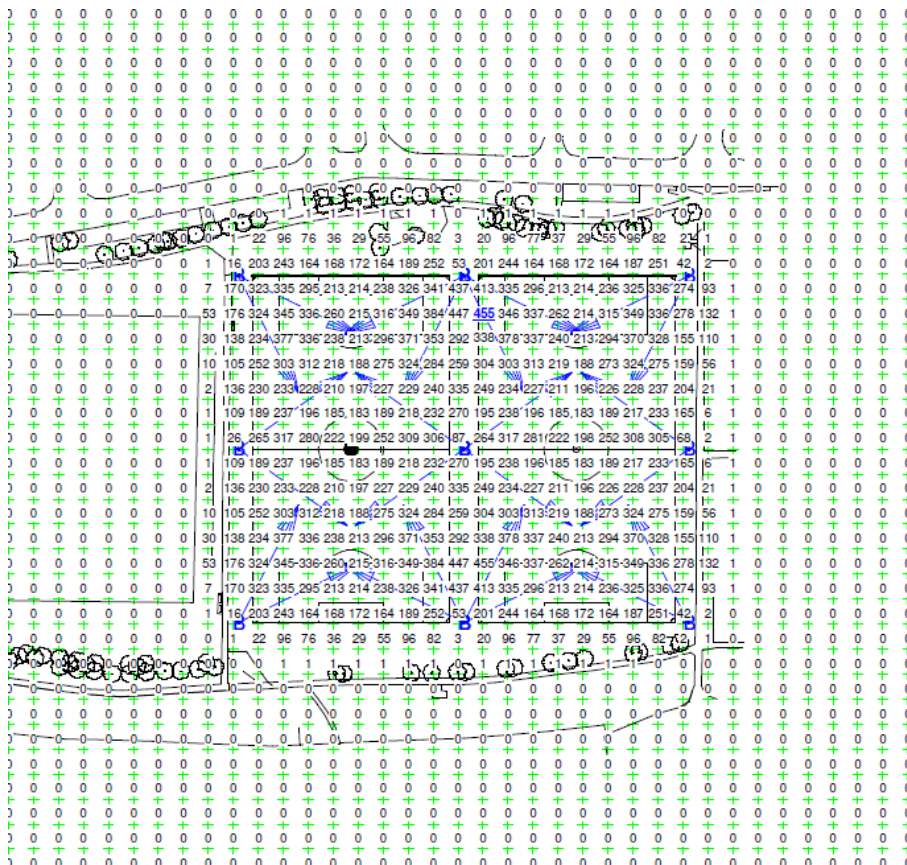


Figure 6-1: Extract from lighting report – lux diagram

This limited and controlled lighting strategy is designed to reduce ecological impacts associated with artificial light and supports the findings of the accompanying bat assessment.

7 RESIDUAL IMPACTS

Residual impacts are those that occur after the mitigation measures have taken effect. If the mitigation measures listed above are employed during construction, then there will be no residual impact on local biodiversity.

8 CONCLUSIONS

The proposed development site consists of an existing pitch. It is proposed to install 9x 15m columns to provide lighting from September to April inclusive. Habitats within the site are of extremely limited ecological value comprised of amenity grassland. Bordering immature and semi-mature treelines will remain unaffected by the development.

A number of designated sites of natural heritage importance are present within relative proximity to the site, including the Inner Galway Bay SPA. While the closeby Merlin Woods (mature broad-leaf trees, mixed broad-leaf / conifer woodlands) is not designated under National or European legislation it is referred to in the Galway City Council Development Plan which states; the woods is included in its green network (recreation and amenity zoned lands sports facilities, playgrounds, open spaces and playing pitches - Large scale open spaces for passive and active recreation, wildlife conservation and education). This report provides measures that ensures impacts on the park (particularly lighting) will be negligible.

Subject to the implementation of mitigation measures set out in section 6, it is considered that no significant residual impacts to local biodiversity will remain.

9 References

BCI. (2010). Bats & Lighting. Guidance Notes for planners, engineers, architects and developers. Noticenature.

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CIEEM. (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine Version 1.1. Winchester: Chartered Institute of Ecology and Environmental Management.

Lewis, L. J. (2019). Irish Wetland Bird Survey: Waterbird Status and Distribution 2009/10-2015/16. Irish Wildlife Manuals, No. 106. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

Voigt, C. C. (2018). Guidelines for consideration of bats in lighting projects. EUROBATS Publication Series No. 8. Bonn, Germany, 62 pp.: UNEP/EUROBATS Secretariat.

1 Appendix

Doughiska Static 1 - pitch

Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Total
5th April	1	8	6	15
6th April	7	2	5	14
7th April	3	1	1	5
8th April	5	0	1	6
9th April	4	1	0	5
10th April	1	2	2	5
11th April	8	0	2	10

Doughiska Static 2 – Merlin Woods

Date	Leisler's Bat	Common Pipistrelle	Soprano Pipistrelle	Brown Long-eared	Unidentified Myotis	Total
29th April	5	12	408	0	1	426
30th April	10	7	200	1	1	219
1st May	2	5	22	0	0	29
2nd May	3	5	109	0	0	117
3rd May	2	8	26	0	0	36
4th May	2	8	49	0	1	60
5th May	5	10	145	0	1	161