



Ecological Impact Assessment  
Proposed Residential Housing Ballinasloe

August 22, 2022

Reference Number EcIA 26082022

Client : Limehill Esker  
principal author Marie Louise Heffernan



Aster Environmental Consultants

Rusheenduff, Renvyle Co. Galway,

095 43090 / 086 8278031

[www.aster.ie](http://www.aster.ie)

## CONTENTS

1.0 INTRODUCTION.....	3
2.0 DESCRIPTION OF DEVELOPMENT.....	10
3.0 METHODOLOGY .....	11
4.0 ESTABLISHING THE BASELINE .....	15
5.0 IMPORTANT ECOLOGICAL FEATURES.....	29
6.0 ASSESSMENT OF IMPACTS.....	31
7.0 CONCLUSION .....	37

## 1.0 INTRODUCTION

### 1.1 BACKGROUND

Aster Environmental Consultants Ltd have been appointed by Limehill Esker Limited relation to the planning permission for a proposed Strategic Housing Development at Dunlo Ballinasloe County Galway. Aster has been commissioned to carry out an Ecological Impact Assessment. The assessment will be conducted in accordance with CIEEM guidelines for Ecological Impact Assessment (2018).

The proposed development consists of the provision of 167 residential units comprising a mix of houses and apartments together with all associated landscaping and site works and connection to existing services.

This report was prepared on behalf of Aster Environmental Consultants by Marie Louise Heffernan CEnv, MCIEEM, MSc who has 28 years' experience in Ecology with 20 years in Ecological consultancy. Marie Louise holds an MSc in Environmental Science from TCD (1995), and is a chartered environmentalist with the Society of the Environment (UK) as well as a full member of the Chartered Institute of Ecology and Environmental Management.

### 1.2 PURPOSE OF ASSESSMENT

The aim of this Ecological Impact Assessment is to endeavour to ensure that the elements of the proposed project that may potentially affect protected habitats or species are adequately assessed in this assessment. This is separate to, but complements, the Natura Impact Statement.

EclA is a process of identifying, quantifying and evaluating the potential effects of development-related or other proposed actions on habitats, species and ecosystems.

### 1.3 PRINCIPALS AND APPROACH OF ECIA

The following principles underpin EclA:

#### Avoidance

Seek options that avoid harm to ecological features (for example, by locating on an alternative site).

#### Mitigation

Negative effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.

#### Compensation

Where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.

#### Enhancement

Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

### Overall Aims

EclA is a process of identifying, quantifying and evaluating the potential effects of development-related or other proposed actions on habitats, species and ecosystems. In this case the key elements are the

### Baseline Information

- Identification of habitats on site
- Species associated with that habitat
- Links if any to designated areas Natura 2000 sites NHAS etc

### Project Description

- Description of the project
- Identification of potential significant impacts

### Mitigation

- Identification of steps to protect the environment from impacts as identified

## 1.4 LEGISLATIVE CONTEXT

The requirements for Ecological Impact assessment are enshrined in legislation and underpinned with specific references in County Development and local area plans.

In this case of relevance are

1. Wildlife Act
2. Flora Protection Order
3. National Biodiversity Plan
4. Galway County Development plan
5. Ballinasloe Local Area Plan

### Wildlife Act, 1976

The Wildlife Act, 1976, is the principal national legislation providing for the protection of wildlife and the control of some activities that may adversely affect wildlife. The Wildlife Act, 1976, came into operation on 1 June 1977. The aims of the Wildlife Act, 1976, 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.

Under the Act, the Minister responsible for nature conservation may afford protection to all wild species of fauna and flora. However, the 1976 Act did not provide for the conservation of fish species nor of aquatic invertebrates in general, except insofar as species may be added in agreement with the Minister for Communications, Marine and Natural Resources. Currently all bird species, 22 other animal species or groups of species and 86 species of flora are afforded protected status.

The Act also enables the possession, trade and movement of wildlife to be regulated and controlled. Hunting and also falconry is controlled under the Act. Specific areas of importance for wildlife may be

protected under the Act either as Nature Reserves, Refuges for Fauna, or by way of management agreements.

### **Flora (Protection) Order, 2022**

The current list of plant species protected by Section 21 of the Wildlife Act, 1976 is set out in the Flora (Protection) Order, 2022, which supercedes orders made in 1980, 1987, 1999 and 2015.

It is illegal to cut, uproot or damage the listed species in any way, or to offer them for sale. This prohibition extends to the taking or sale of seed. In addition, it is illegal to alter, damage or interfere in any way with their habitats. This protection applies wherever the plants are found and is not confined to sites designated for nature conservation.

### **The National Biodiversity Plan 2017 -2021**

The Plan sets out actions through which a range of government, civil and private sectors will undertake to achieve Ireland's 'Vision for Biodiversity', and follows on from the work of the first and second National Biodiversity Action Plans.

There are 119 targeted actions contained in the Plan, underpinned by seven strategic objectives. The objectives lay out a clear framework for Ireland's national approach to biodiversity, ensuring that efforts and achievements of the past are built upon, while looking ahead to what can be achieved over the next five years and beyond.

They include:

1. mainstreaming biodiversity across the decision making process in the State;
2. strengthening the knowledge base underpinning work on biodiversity issues;
3. increasing public awareness and participation;
4. ensuring conservation of biodiversity in the wider countryside;
5. ensuring conservation of biodiversity in the marine environment;
6. expanding and improving on the management of protected areas and protected species;
7. enhancing the contribution to international biodiversity issues.

### **European legislation**

Natura 2000 sites are those designated under the terms of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, known as the 'Habitats Directive' and Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (codified version of Directive 79/409/EEC as amended) commonly known as the 'Birds Directive'. There are two types of Natura 2000 site designation, the Special Area of Conservation (SAC) and the Special Protection Area (SPA). SACs are designated for the conservation of flora, fauna and habitats of European importance under the Habitats Directive and SPAs for the conservation of bird species and habitats of European importance under the Birds Directive. These sites form part of 'Natura 2000' a network of protected areas throughout the European Union. Annex I of the Habitats Directive lists certain habitats that must be given protection. Certain habitats are deemed 'priority' and have greater protection. Irish

habitats listed on Annex I include raised bogs, active blanket bogs, lagoons, turloughs, heaths, lakes and rivers. Annex II of the same directive lists species whose habitats must be protected and includes Lesser Horseshoe Bat, Otter, Salmon and White-clawed Crayfish. Annex I of the Birds Directive lists endangered and migratory species for which SPAs are required to be designated.

Projects potentially impacting on these sites must be assessed under a process called Appropriate Assessment. The Department of the Environment Heritage and Local Government guidelines (DOELHG, 2009) indicates the European Commission's methodological guidance (EC, 2002) promoting a four-stage process to complete the AA. The purpose of Appropriate Assessment is to protect sites of European importance. In this respect an Appropriate Assessment screening has been prepared for this project and is presented as a separate report.

### **Galway County Development Plan 2022-2028**

Galway County development plan 2020 to 2028 and objectives of the Galway County Council development plan 2022 to 2028 was reviewed as part of this proposal the following items are of particular note

According to the new County Development plan

The Key Towns are to grow their population by at least 30%, relative to Census 2016 (i.e. Ballinasloe and Tuam). In relation to Ballinasloe, one of the Key Future Priorities for the town includes: "realising the town's potential as a 'County Town', ensuring a balance of development in the town centre of Ballinasloe, and providing for compact growth and brownfield development, revitalising Dunlo Street, Market Square, Society Street and Main Street, and to reduce vacancies and support the vitality and vibrancy of these core shopping streets/side streets and the town centre.

In addition they specifically state that "Town Centre Infill and Brownfield Sites. A number of settlements in the county offer brownfield development opportunities that could deliver the aspirations of Placemaking and Compact Growth. They are very often serviceable and located along existing public transport corridors and their development would improve the quality public realm in a place. In accordance with the NPF and RSES it is anticipated that a substantial portion of development will be delivered on brownfield and infill sites"

Other relevant policies and objectives are as follows

Policy Objectives Natural Heritage and Biodiversity

NHB 1 Natural Heritage and Biodiversity of Designated Sites, Habitats and Species

Protect and where possible enhance the natural heritage sites designated under EU Legislation and National Legislation (Habitats Directive, Birds Directive, European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts) and extend to any additions or alterations to sites that may occur during the lifetime of this plan. Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under European legislation (Habitats and Birds Directive) and protected under national Legislation (European Communities (Birds and Natural Habitats)

Regulations 2011 (SI 477 of 2011), Wildlife Acts 1976-2010 and the Flora Protection Order (SI 94 of 1999). Support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas, Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries (and other designated sites including any future designations) and the promotion of the development of a green/ ecological network.

#### NHB 2 European Sites and Appropriate Assessment

To implement Article 6 of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or project(s). All assessments must be in compliance with the European Communities (Birds and Natural Habitats) Regulations 2011. All such projects and plans will also be required to comply with statutory Environmental Impact Assessment requirements where relevant.

#### NHB 3 Protection of European Sites

No plans, programmes, or projects etc. giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects.\*

#### NHB 4 Ecological Appraisal of Biodiversity

Ensure, where appropriate, the protection and conservation of areas, sites, species and ecological/networks of biodiversity value outside designated sites. Where appropriate require an ecological appraisal, for development not directly connected with or necessary to the management of European Sites, or a proposed European Site and which are likely to have significant effects on that site either individually or cumulatively.

#### NHB 5 Ecological Connectivity and Corridors

Support the protection and enhancement of biodiversity and ecological connectivity in nondesignated sites, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife areas where these form part of the ecological network and/or may be considered as ecological corridors in the context of Article 10 of the Habitats Directive.

NHB 6 Implementation of Plans and Strategies Support the implementation of any relevant recommendations contained in the National Heritage Plan 2030, the National Biodiversity Plan, the All Ireland Pollinator Plan and the National Peatlands Strategy and any such plans and strategies during the lifetime of this plan.

NHB 7 Mitigation Measures Require mitigating measures in certain cases where it is evident that biodiversity is likely to be affected. These measures may, in association with other specified requirements, include establishment of wildlife areas/corridors/parks, hedgerow, tree planting,

wildflower meadows/marshes and other areas. With regard to residential development, in certain cases, these measures may be carried out in conjunction with the provision of open space and/or play areas.

#### Policy Objective Water Resources

##### WR 1 Water Resources

Protect the water resources in the plan area, including rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependant species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the River Basin District Management Plan 2018 – 2021 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same) and also have regard to the Freshwater Pearl Mussel Sub-Basin Management Plans.

##### WR 2 River Basin Management Plans

It is a policy objective of the Planning Authority to implement the programme of measures developed by the River Basin District Projects under the Water Framework Directive in relation to: Surface and groundwater interaction, Dangerous substances, Hydromorphology, Forestry, On site wastewater treatment systems, Municipal and industrial discharges, Urban pressures, Abstractions.

### **Ballinasloe Local Area Plan 2022-2028**

#### BKT 3 Environmental Assessments

To require the preparation and assessment of all planning applications in the plan area to have regard to the information, data and requirements of the Appropriate Assessment Natura Impact Report, SEA Environmental Report and Strategic Flood Risk Assessment Report that accompany this LAP. There shall be a requirement of Ecological Impact Assessment as appropriate in plan area.

KT 41 European Sites Protect European sites that form part of the Natura 2000 Network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Environmental Liability Directive, the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance).

In summary all national and international legislation as well as the regional and local plans have been considered in the production of this Ecological Impact assessment.



## 1.5 SCOPING, GUIDANCE AND CONSULTATION

This assessment follows the CIEEM guidelines on Ecological Impact Assessment (CIEEM, 2018)

### Other Guidance Methodology Used

Reports and Guidance notes used

- Guidance on implementing the Habitats Directive is provided by the European Commission in Managing Natura 2000 sites the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC22
- Advice notes on Current practice in preparation of EIA statements (EPA, 2003)
- Draft Revised guidelines on the on the information to be contained in environmental Impact Statements (EPA, 2017)
- Environmental Impact of National Road schemes – a practical guide NRA 2009
- Guidelines for assessment of Ecological Impacts of national Road schemes

### OTHER REPORTS

We also reviewed the following documents pertaining to the adjacent sites that were relevant

MCKOS, 2019. Ecological Impact Assessment Proposed Residential Housing Development Ballinasloe Co. Galway. Ref 170335 – EcIA 2019

RPS, 2007. Environmental Impact Statement. Dunlo Town Centre Development. Doc Ref MGT0024RP00010

### Consultation

Given that this is a Strategic Housing Development consultation and opinion were sought from An Bord Pleanála. The relevant comments from An Bord Pleanála considers that the following issues need to be addressed. Note only relevant sections are presented

#### 1. Development Strategy.

(d) Further justification / investigation of the public open space strategy and quantum and quality of communal open space. Further consideration of eligible and connected green (biodiversity) network, ideally providing a continuous biodiversity corridor through the site.

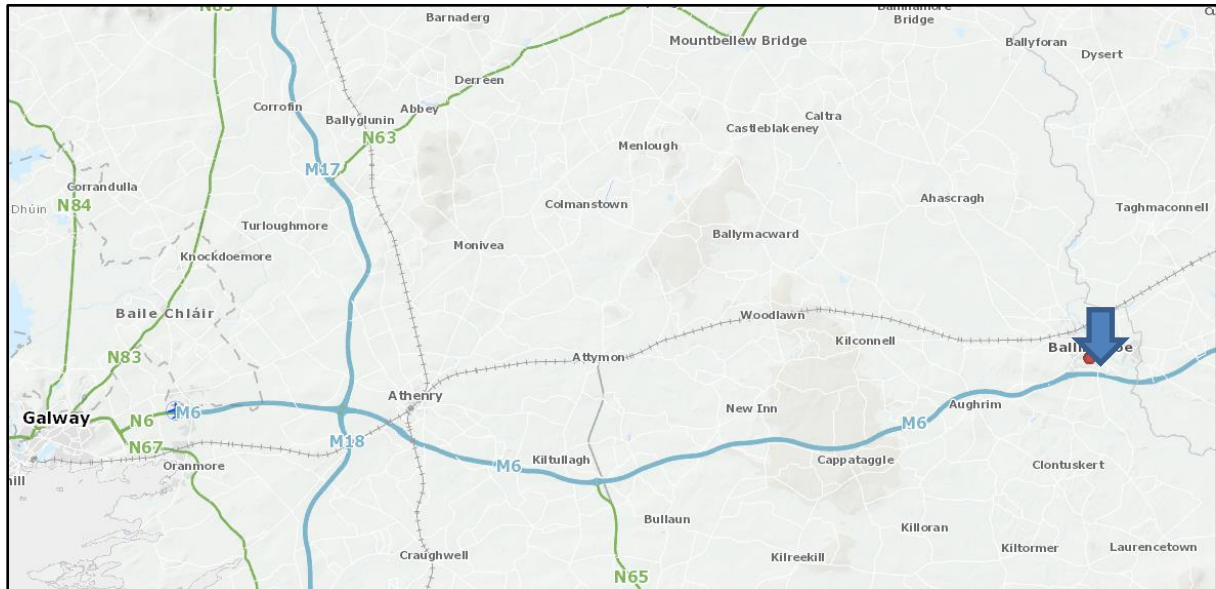
#### 2. An up-to-date Ecological Impact Assessment, inclusive of a Bird and Bat Survey.

In addition we sought consultation from Development applications unit of NPWS in the Department of Housing, Local Government and Heritage. A letter was sent on the 1st June seeking their advice and input in respect of the development. We received a request for additional information and a reference number on the 16<sup>th</sup> August with a statement that 6 weeks timeframe is expected. At the time of submission no response had been received.

## 2.0 DESCRIPTION OF DEVELOPMENT

### 2.1 LOCATION

The proposed development is located in Ballinasloe Co. Galway and close to the eastern boundary of the County.



Map 1: Location of the proposed development (Reproduced under OSI Licence number EN 0070910)

### 2.2 DESCRIPTION

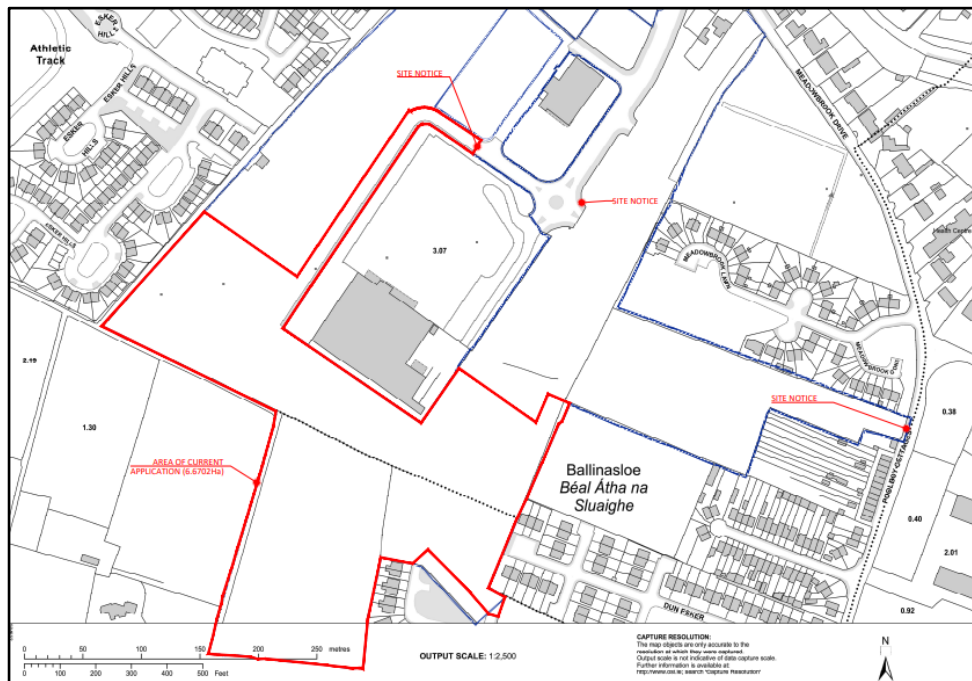
Limehill Esker Ltd intend to apply to An Bord Pleanála for Permission for a Strategic Housing Development (‘Dunlo SHD’) at this site (c.6.7ha) in the townlands of Dunlo and Pollboy, Ballinasloe Co Galway.

The site is generally bounded by: the Dun Esker and Beechlawn Heights Estates to the east, the Esker Fields Estate to the west, greenfield residential zoned lands to the south, and a commercial park and a residential site under construction immediately to the north.

The proposed development consists of residential development (c. 15,992 m<sup>2</sup> gross floor area), consisting of 167 No residential units and all associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works, including:

- Block A1 and A2, each consisting of 6 No Two-Bed Ground Floor apartments, 1 No One-Bed ground Floor apartment, 6 No Three-Bed First Floor Duplex Units, and 1 No Three-Bed Second Floor apartment.
- Blocks B1 to B13 inclusive, each consisting of 2 No Two-Bed Ground Floor Duplex Units, 2 No Three-Bed Ground Floor Duplex Units, 1 No Two-Bed Second Floor apartment, and 1 No One-Bed Second Floor apartment.

- House Type C : 32 No Two-Bed units in semi-detached pairs
- House Type E : 27 No Three-Bed units in triplet arrangements
- provision of 281 No. on-site car parking spaces incorporating 163 No. spaces for residents of the apartment/duplexes, and 118 No in-curtilage car parking spaces for the housing units
- Provision of all water, surface water, foul drainage, utility ducting and public lighting and all associated siteworks and ancillary services.
- All ancillary site development works including access roadways, footpaths, cycle ways, pedestrian links, Bicycle Sheds, waste storage areas, communal and open space, site landscaping, and boundary treatments,



Map 2. Site Boundary map (Reproduced under OSI Licence number EN 0070910)

### 3.0 METHODOLOGY

Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to a development (CIEEM, 2018). The following sections outline the methodologies utilized to establish the baseline ecological condition of the proposed development site.

#### 3.1 DEFINING THE ZONE OF INFLUENCE

According to CIEEM 2018 The 'zone of influence' for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. Activities associated with the construction, operation (best and worst-case operating conditions should be separately identified. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change. It may therefore be

appropriate to identify different zones of influence for different features. The features affected could include habitats, species, and ecosystems and the processes on which they depend.

The main aspects considered in defining the zone of influence

- Habitats and species present on site and in the vicinity
- Range of noise or light pollution from the site
- Hydrological connectivity with wetlands and watercourses

In this case the zone of influence is set in response to the Key Environmental receptors. In designated sites with hydrological connectivity it can be up to 15km. In this case taking into account the habitats on site, the connectivity, hydrology and noted and likely species on site the zone of influence is set at 850m from a precautionary perspective.

### 3.2 STUDY

The initial stage of the Ecological Impact Assessment address study of available published data on the on the area and any additional information available on habitats and species in vicinity of the proposed development review of OSI mapping habitat and species mapping and other photography was also undertaken obtained from the destiny is the first aid in defining a Zone of influence of the proposed development

The following material was consulted

- Geohive Aerial photography and 1:50000 mapping
- National Parks and Wildlife Service (NPWS)
- National Biodiversity Data Centre (NBDC)
- BirdWatch Ireland
- Geological Survey Ireland (GSI) area maps
- Environmental Protection Agency (EPA) water quality data
- Other information sources and reports footnoted in the course of the report

### 3.3 FIELD SURVEYS

Multiple field surveys were carried out of the proposed development site by Marie Louise Heffernan CEnv, MCIEEM, MSc. The Ecological surveys were carried out on the following dates 19<sup>th</sup> November 2021, 28<sup>th</sup> November 2021, 14<sup>th</sup> January 2022, Wed 30<sup>th</sup> March, 29<sup>th</sup> April, 18<sup>th</sup> June 2022.

The surveys were carried over a period of 9 months to ensure a comprehensive assessment of the site throughout the seasons. This approach enabled wintering and breeding surveys as well as bat surveys all within the appropriate survey window.

Surveys were as follows

#### **A. Habitat Survey**

The habitat survey was carried out by Marie Louise Heffernan. The habitats were surveyed by walking a series of transects through the site, identification of plants present and classifying the habitats present according to level three Fossitt (2002). This classification scheme covers natural, semi-natural and artificial habitats of terrestrial, freshwater and marine environments, and of rural and urban areas. Habitat categories are arranged within a series of ordered groupings to produce a hierarchical framework that operates on three levels. The scheme identifies 11 broad habitat groups at level 1, 30 habitat subgroups at level 2, and 117 separate habitats at level 3. Categories are given identifying codes at each level and, where possible, these reflect the names of habitat groups or subgroups.

#### **B. Invasive Species**

A search for non native invasive species was undertaken on site. All potential invaders were noted but particular focus was on species on schedule 49 and 50 of European Communities (Birds and Natural Habitats) Regulations, 2011 as amended SI477 of 2015.

#### **C. Bird Surveys**

Carried out by Marie Louise Heffernan a surveyor with 25 years of bird counting experience

There were two bird survey types carried out Wintering (Special Conservation Interest Species of River Suck Callows SPA Only) and Breeding Bird survey.

##### **Wintering Bird Survey**

The distribution of most species of waterbirds (principally swans, geese, ducks and waders) during the non-breeding period is restricted largely to wetland habitats. Many wetland sites represent relatively discrete areas and, with most species readily visible within these areas. The simple 'look-see' method, whereby all birds present within a pre-defined area are counted, is thus employed for I-WeBS (Irish Wetland Bird Survey) core counts.

The essence of the count is as follows

- a total count of individuals of all waterbird species present on a predefined area of wetland habitat;
- the date and time of the count;
- a measure of the accuracy of the count;
- disturbance that may have affected the accuracy of the count

These winter surveys were carried out for the sole purpose of identifying if Special Conservation Interest birds associated with the SPA utilized the site in winter

In addition, the site was searched for droppings. Swan and geese droppings in particular are very easily identified given the size, shape and colour. This would indicate use outside survey dates/times. These surveys were carried out 28<sup>th</sup> November 2021, 14<sup>th</sup> January 2022 and 30<sup>th</sup> March.

### **Breeding Bird Surveys**

BTO British Trust for Ornithology breeding bird survey method was used. The survey involves two early-morning spring visits to a local 1-km square, to count all the birds you see or hear while walking two 1-km lines across the square. This survey was adapted to walk a 1km route through the site crossing various habitats. The main purpose was to discover variety of birds using the site and habitats they associated with.

These surveys took place on 30<sup>th</sup> March, 29<sup>th</sup> April, 18<sup>th</sup> June 2022.

Recommended survey dates are as follows

March – Optional reconnaissance visit to check access, routes and to record habitat data

Early April – mid May Early season BBS visit

Mid May – late June – Late season BBS visit, at least four weeks after Early visit

### **D. Mammal Survey**

Irish mammals are generally nocturnal and therefore surveys focus on tracks, dens and signs to determine use of a site.

This survey was carried out in January and March 2022. The site was surveyed by Marie Louise Heffernan CEnv, MCIEEM, MSc. The survey involved a thorough search (as far as vegetation would allow) of areas of scrub, road verges, ditch embankments and around field boundaries. Particular case was taken to follow any mammal tracks and to look for latrines, hair on brambles and sett/den entrances.

### **E. Bat Survey**

A specialist Bat survey was carried out by Veon Limited in June and July 2022. Bat Activity Surveys and roost assessments were made. A preliminary roost assessment (PRA) of trees on site was carried out to identify any potential roost features (PRFs) and the presence or likely absence of roosting bat species at Dunlo, Ballinasloe, and its surrounding lands. A Bat Activity Assessment was also undertaken, which involved surveyors following set Transect walks across the site using handheld Anabat Walkabout omnidirectional Heterodyne bat detectors and the use of passive static bat detectors (BATLOGGER M (Elekon) bat detector) in any areas determined as potential high activity for bats (hotspots), such as feeding, foraging, and/or roosting zones. (see Bat Survey Appendix II for further details)

## 4.0 ESTABLISHING THE BASELINE

Baseline ecological conditions were assessed and described according to standard methodology. Baseline is considered in several different sections

1. Habitats
2. Species
3. Designated areas (European and National)

The background information from various sources as compiled and an assessment made of the general area

1. NPWS Designated Sites information
2. Biodiversity Ireland database
3. Bird Atlas 2007-2011

The site was systematically and thoroughly walked in a ground-truthing exercise, where the habitats on the site were assessed and mapped. This habitat mapping exercise was carried out on the June 2022 and was informed by the data from the other site visits.

Seasonal factors were not relevant as the site was visited both in the winter, spring and the summer seasons. Specific bird and bat surveys were undertaken at the appropriate times. The mammal survey was carried out at the same time as the Flora and habitat survey.

The ecological baseline data will be presented in two sections

- 5.1 Published Information and Desk Study Findings
- 5.2 Ecological survey results

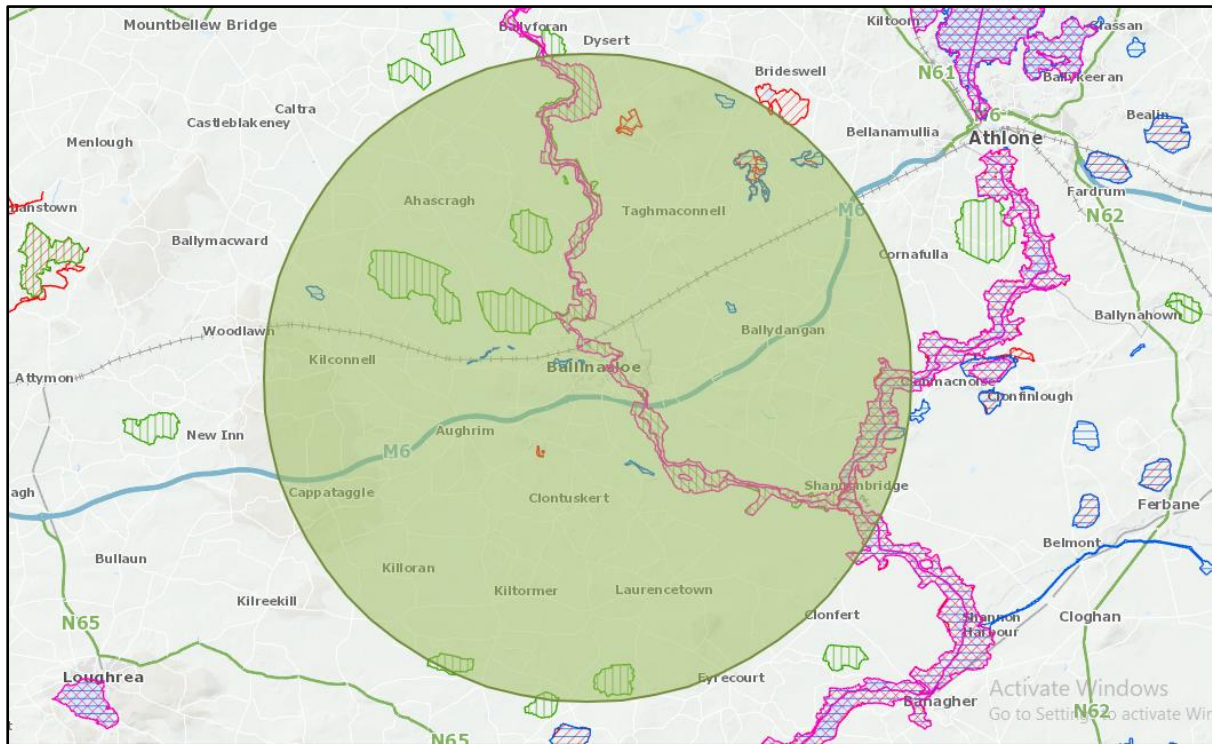
### 4.1 PUBLISHED INFORMATION AND DESK STUDY FINDINGS

Collation of existing information regarding the wider area specifically the 10km<sup>2</sup> or hectad within which the site lies. This information is then be used to build up a picture of the conservation value of the general area. The following is the presentation of the data relevant to the site as collated from various sources such as

1. National Parks and Wildlife Service (NPWS.ie)
2. Biodiversity Maps
3. EPA maps

## Designated Sites

Using the NPWS site a radius of 15km was drawn from the site of interest and all designated national and international sites identified in this area.



Map 3 Natura 2000 sites within 15 km radius from project centre (Reproduced under OSI Licence number EN 0070910)

## Natural Heritage Areas & Proposed Natural Heritage Areas

Natural Heritage Areas (NHAs) are sites that were designated for the protection of flora, fauna, habitats and geological sites of national importance. These are the base designation for Nature Conservation in Ireland. It was from these NHAs that the most important sites were selected for international designation as SACs and SPAs. Proposed NHAs are those in line for designation but not designated to date.



Natural Heritage Areas	Code	Distance
River Suck Callows NHA	002222	700m
Killure Bog NHA	001283	3.4km
Annaghbeg Bog NHA	002344	6.2 km
Crit Island West NHA	000254	6.8 km
Moorfield Bog NHA	001303	13.1 km
Eskerboy Bog NHA	001264	14 km
CloonishBog NHA	000249	14.5 km

Table 1: NHAs sites within 15km

Proposed Natural Heritage Areas	Distance
Ballinsloe Esker pNHA	600m
Cloonascragh Fen and Black Wood pNHA	3.7 km
Cranberry Lough pNHA	6.6 km
Castlesampson esker pNHA	10.5 km
River Shannon Callows pNHA	11.8 km
Clorhane Wood pNHA	13.1 km
Callow Lough pNHA	13.1 km
Feacle Turlough pNHA	13.8 km
Clonfert Cathedral pNHA	14 km

Table 2: pNHA sites within 15km

The nearest of the above sites is the pNHA Ballinaloe esker. No connectivity is suspected with this or any other pNHA or NHA listed above with the exception of River Suck Callows NHA which is also designated as an SAC (see below).

#### SPECIAL AREAS OF CONSERVATION AND SPECIAL PROTECTION AREAS

There are two types of EU site designation, the Special Area of Conservation (SAC) and the Special Protection Area (SPA). SACs are designated for the conservation of flora, fauna and habitats of European importance and SPAs for the conservation of bird species and habitats of European importance. These sites form part of '*Natura 2000*' a network of protected areas throughout the European Union.

Annex I of the Habitats Directive lists certain habitats that must be given protection. Certain habitats are deemed 'priority' and have greater protection. Irish habitats include raised bogs, active blanket bogs, turloughs, heaths, lakes and rivers. Annex II of the directive lists species whose habitats must be protected and includes Lesser Horseshoe Bat, Otter, Salmon and White-clawed Crayfish.

Natura 2000 sites within the catchment and within 15 kilometres of each scheme were initially considered as per DoELG guidance (2009) (see Map 2). The N2000 sites were identified within the 15km radius (Table 1).

Natura 2000 Site	Code	Distance
River Suck Callows SPA	004097	700m from the SAC or 840m to the river Suck
Glenloughan Esker SAC	002213	3.8km
Castlesampson Esker SAC	001625	11.0km
Killeglan Grassland SAC	002214	11.4km
Ballynamona Bog and Corkip Lough SAC	002239	14.9km

Table 3: Natura 2000 sites within 15km

The only designated area with a potential connected pathway is the River Suck Callows SPA. This has been addressed in the Appropriate Assessment screening. All other designated areas are outside the zone of influence.

## Flora

The study area is located entirely within hectad M83. Biodiversity Ireland database incorporates the data *New Atlas of the British & Irish Flora* (Preston *et al.*, 2002) and the 1987 – 1999 atlas survey carried out by the Botanical Society of the British Isles (BSBI). Square M83 includes 100 whole or part one kilometre squares. The search included the list of vascular plants that are listed in Annex II of the EU Habitats Directive and in the Flora (Protection) Order of 1999. No plant species that was listed in Annex II of the Habitats Directive are shown in the atlas for square M83. No Flora Protection Order (2022) flowering plants are known from hectad M 83.

Of the 69 species of bryophytes (20 liverworts and 49 mosses) that have been recorded in hectad M83 by the British Bryological Society (BBS) this list does not include any of the 18 species of bryophytes listed in the Flora (Protection) Order or in Annex II of the EU Habitats Directive. Of the Mosses 12 were not at risk and all the rest were classified as Threatened Species: Least concern Status. The liverworts were classified as Threatened Species: Least concern Status.

### Other Fauna

Records held by the Conchological Society of Great Britain and Ireland (CSGBI), the NPWS and from the EPA River Biologists' in the Biodiversity Ireland database show that 103 species of non marine mollusks have been recorded in this Hectad.

A number of these snails are listed as Threatened Species: Vulnerable/endangered. Threatened Species: Vulnerable 18 records post 1970. Other records are Near threatened 2 records, Endangered 1 records and data deficient 1 records. All the records are from 1970 or earlier and no records have been submitted since. Two snails which require calcareous grassland habitat type, which is found on site, are the Common Whorl Snail and the Moss Chrysalis Snail. No records of either were found from this hectad since 1940 (Byrne et al.2009).

Records held by Biodiversity Ireland (Butterflies - Irish Butterfly Monitoring Scheme) showed that 22 species of butterfly of the 36 species of butterfly regularly found in Ireland have been recorded in hectad M83. . The following rare or protected species are recorded from this hectad.

Latin	English	Status
Coenonympha pamphilus	Small Heath	Threatened Species: Near threatened
Erynnis tages	Dingy Skipper	Threatened Species: Near threatened
Coenonympha tullia	Large Heath	Threatened Species: Vulnerable

Table 4: Butterflies of conservation interest recorded in Hectad M83

The suitability of the habitats on site for these species may be judged by the presence or absence of their food plants. The Small Heath is not confined to heathland and can be found in a wide variety of habitats and maybe found on site. Dingy skipper feeds on Common Bird's-foot-trefoil (*Lotus corniculatus*) this plant is found on site. Both these butterflies have wide habitat preferences with common food plants. Large Heath is found on bogs and its food plant is cotton grass which is not found on site (Regan *et al.*, 2010).

Fourteen of the 24 species of odonates (dragonflies and damselflies) regularly found in Ireland have been recorded in hectad M83.

### Amphibians

The current habitat on the proposed site is generally unsuitable for common frog (*Rana temporaria*) which is found in hectad M83. .

### Avifauna

The main published sources of information regarding the distribution of breeding birds in Ireland were consulted these are 'The New Atlas of Breeding Birds in Britain and Ireland: 1988-1991' (Gibbons *et al.*, 1993) and the most recent *Bird atlas 2007 to 2011* (Balmer *et al.*, 2013). The results below were taken from the Biodiversity Maps Database and all are recent records and relate to the *Bird atlas 2007 to 2011*. The results below are only the birds of Annex I of the habitats directive or on the red and amber lists of avifauna for Ireland.

Breeding Atlas	Annex I	Red List	Amber
2007 -2011			
Barn Owl ( <i>Tyto alba</i> )		Y	
Barn Swallow ( <i>Hirundo rustica</i> )			Y
Black-headed Gull ( <i>Larus ridibundus</i> )		Y	
Common Grasshopper Warbler ( <i>Locustella naevia</i> )			Y
Common Kestrel ( <i>Falco tinnunculus</i> )			Y
Common Kingfisher ( <i>Alcedo atthis</i> )	Y		Y
Common Linnet ( <i>Carduelis cannabina</i> )			Y
Common Pheasant ( <i>Phasianus colchicus</i> )			
Common Raven ( <i>Corvus corax</i> )			
Common Snipe ( <i>Gallinago gallinago</i> )			Y
Common Starling ( <i>Sturnus vulgaris</i> )			Y
Common Swift ( <i>Apus apus</i> )			Y
Common Wood Pigeon ( <i>Columba palumbus</i> )			
Eurasian Teal ( <i>Anas crecca</i> )			Y
Eurasian Wigeon ( <i>Anas penelope</i> )			Y
European Golden Plover ( <i>Pluvialis apricaria</i> )	Y	Y	
Great Cormorant ( <i>Phalacrocorax carbo</i> )			Y
House Martin ( <i>Delichon urbicum</i> )			Y
House Sparrow ( <i>Passer domesticus</i> )			Y
Little Egret ( <i>Egretta garzetta</i> )	Y		
Little Grebe ( <i>Tachybaptus ruficollis</i> )			Y
Mallard ( <i>Anas platyrhynchos</i> )			
Mute Swan ( <i>Cygnus olor</i> )			Y
Northern Lapwing ( <i>Vanellus vanellus</i> )		Y	
Rock Pigeon ( <i>Columba livia</i> )			
Sand Martin ( <i>Riparia riparia</i> )			Y
Sky Lark ( <i>Alauda arvensis</i> )			Y
Whooper Swan ( <i>Cygnus cygnus</i> )	Y		Y
Yellowhammer ( <i>Emberiza citrinella</i> )			Y

Table 5: Biodiversity Ireland records of rare and important birds in Hectad M83

Of interest are the Annex I birds listed Kingfisher, little Egret ,Golden Plover and Whooper Swan . These records are unsurprising in this 10km hectad as the Suck Callows SPA is listed for Whooper Swan and Golden Plover. Kingfisher is a bird associated with rivers and Egret associated with wetlands. The red list species are Barn owl, Black headed gull, Lapwing. The development site is not particularly suitable for any of these bird species. Owl and gull may use the site as part of a much larger foraging range.

### Mammals

The habitat of the proposed development area is grassland scrub with wooded edges and is suitable for a host of animals recorded in hectad M83. These animals are listed below

Species	English name	Habitats Directive species Annex II	Procted under Wildlife act 1976	Invasive species
<i>Martes martes</i>	Pine Marten	N	Y	N
<i>Meles meles</i>	Eurasian Badger	N	Y	N
<i>Sorex minutus</i>	Eurasian Pygmy Shrew	N	Y	N
<i>Vulpes vulpes</i>	Red Fox	N	N	N
( <i>Mustela vison</i> )	American Mink	N	N	Y
<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	N	Y	N
<i>Lutra lutra</i>	European Otter	Y	Y	N
<i>Oryctolagus cuniculus</i>	European Rabbit	N	N	Y
<i>Dama dama</i>	Fallow Deer	N	Y	Y
<i>Lepus timidus</i>	Irish Hare	N	N	N
<i>Erinaceus europaeus</i>	European Hedgehog	N	Y	N
<i>Apodemus sylvaticus</i>	Wood Mouse	N	N	N
<i>Nyctalus leisleri</i>	Lesser Noctule	N	Y	N
<i>Pipistrellus pipistrellus</i>	Pipistrelle	N	Y	N
<i>Pipistrellus sensulato</i>				
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	N	Y	N

Table 6: Biodiversity Ireland records of mammals in Hectad M83

The habitat on site is suitable only for badger, pygmy shrew, fox, Irish hare, hedgehog and wood mouse. Most will be associated with the hedgerow scrub treeline element of the site. Bats are likely to be associated with the treelines and scrub found on site.

### Summary

The desktop study information presented above is invaluable in putting the site in context and providing information on the species listed for Hectad M83. It is also important in setting out expectations for field survey. In summary the mammal species recorded in hectad M83 have a widespread range in Ireland and are commonly found throughout Ireland. The development site has the potential to support some of these species in the disturbed ground / calcareous grassland on site and the treelines and scrub. The common bats and birds as listed are likely to use the treelines / scrub for foraging. However the rarer more important species found in this hectad require wetland or farmed habitats which are not present on site. Rarer mosses and molluscs are listed in this hectad but given the decline in these species in optimal habitats they are not likely to be found here on disturbed ground.

Ecological field surveys (section 5.2) were carried out to specifically characterize the site in terms of birds, bats and mammals.

## 5.2 ECOLOGICAL FIELD SURVEY RESULTS

These are the results of surveys on site as described in methodology in chapter 4

### Habitats

Much information can be gathered from aerial photographs in respect of habitat and changes in habitat both on this site and adjacent sites. The proposed development site was originally farmland and this appears to have been disturbed in 2009. Judging from the surveys of surrounding sites (RPS, 2007, MKOS, 2019) this changed the nature of the site from Calcareous neutral grassland (GS1) to Exposed calcareous rock ER2 and in more recent years as plants have invaded it could have been classified as Recolonising bare ground ED3 see Photo 1 below.

The ground for the entire site has still the characteristics of a site that is disturbed and modified. The ground is very hard and gravelled with approximately 10% Bare ground overall. In the intervening years the site has become grassed and in places this is grading to scrubland where soil was heaped up. This land is in succession and would be expected to become completely covered in scrub WS1 over time.

The habitats found on site are classified based on six walkover surveys between November 2021 and July 2022. The habitats recorded are classified in accordance with 'A Guide to Habitats in Ireland' (Fossitt, 2000), which classifies habitats based on the vegetation present and management history. The habitat map below shows the extent of the habitats on site.



## Map 3: Habitat Map (classification after Fossitt 2000)

## ED3/GS1

The main habitat on site is recolonising bare ground (ED3) in mosaic with dry calcareous and neutral grassland (GS1). This mosaic has arisen due to site clearance in 2009. In some areas the site is 50% bare ground or more whereas in other places recolonisation to 100% has occurred. The soil on site was cleared and piled into heaps and these are dominated by dock (*Rumex* spp) false oat grass (*Arrhenatherum elatius*), nettles (*Urtica dioica*) with red clover (*Trifolium pratense*), meadowsweet (*Filipendula ulmaria*) and eyebright (*Euphrasia* spp). Scrub is invading the site dominated by trees up to around 2m high of buddleia, grey willow (*Salix cinerea*). and birch (*Betula pubescens*). Some areas, scattered throughout, are grassy in nature corresponding more closely to GS1 with grasses; cock's-foot (*Dactylis glomerata*) and perennial rye-grass (*Lolium perenne*) sweet vernal grass (*Anthoxanthum odoratum*) present. Common broadleaved herbs include clovers (*Trifolium* spp.), yarrow (*Achillea millefolium*), Common Knapweed (*Centaurea nigra*), Selfheal (*Prunella vulgaris*), common bird's-foot trefoil (*Lotus corniculatus*), yellow-wort (*Blackstonia perfoliata*), wild carrot (*Daucus carota*), common centaury (*Centaurea erythraea*) and Ox eye daisy (*Leucanthemum vulgare*).

This site is also important for Orchids Bee orchid.: (*Ophrys apifera*), Heath spotted orchid (*Dactylorhiza maculata*) and Pyramidal Orchid (*Anacamptis pyramidalis*) found in pockets throughout the site in June and July surveys.

The habitat on site is transitional in nature and has links to the Annex 1 habitat Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometea*) (\*important orchid sites) (6210)

According to EC(2019) *The vegetation type is considered a priority type if it is an important orchid site, which hosts: a rich suite of orchid species, an important population of at least one orchid species considered rare or (highly) endangered on the national territory, or one or several orchid species considered to be rare or exceptional on the national territory. Scrub and woody vegetation, which develops with the relaxation of management, are also considered part of the 6210 Habitat.* The EU Habitat Interpretation Manual recommends a rather wide interpretation of 6210 habitat (EC 2019).

Indicators of good quality for 6210 habitat • High species richness • Absence of nutrient-demanding and ruderal species • Long-term habitat stability • Generally closed sward with low vegetation structure • Traditional grazing/mowing regime • Low cover of encroaching tall grasses, shrubs and trees. Therefore the habitat is classified as of poor quality (EC, 2019).

## GA1Improved Grassland

This field is improved grassland that has recently been disturbed and is dominated by ruderals Restharrow (*Ononis repens*), dock (*Rumex*), redshank (*Persicaria maculosa*), silverweed (*Potentilla anserina*), red clover (*Trifolium pratense*), yarrow (*Achillea millefolium*), wound wort (*Stachys sylvatica*), rye grass (*Lolium perenne*), pineapple weed (*Matricaria discoidea*) with small pockets of rosebay willowherb (*Chamaenerion angustifolium*). and yellow flag (*Iris pseudacorus*).



### WS1 Scrub

This scrub consists of birch (*Betula pubescens*), willow (*Salix* spp) some ash trees (*Fraxinus excelsior*), and buddleia with bramble (*Rubus*), ragwort (*Senecio jacobaea*), vetch (*Vicia cracca*) and bind weed (*Calystegia* spp.) There is a bare path transecting this section.

### WL2 The treeline

Species recorded within the hedgerow treeline habitat include ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), sycamore (*Acer pseudoplatanus*), dog-rose (*Rosa canina*) and bramble (*Rubus fruticosus*). The trees are generally covered in ivy (*Hedera helix*).



Photo 1: Digiglobe 2011-2013 showing clearance dating from around 2009

### Avifauna Birds

Both wintering and breeding bird surveys were undertaken

### Winter Survey

The winter survey was coupled with mammal and habitat surveys. Only the birds associated with Suck Callows SPA were looked for on site. No species of special conservation interest were observed on site



nor was any evidence of use such as droppings found on survey. No evidence of use by ducks, geese or waders was discovered. This was as expected as the sites habitat is not suitable for these birds.

### Breeding Birds

The data presented is the amalgamation of the two surveys April (6.00 to 7.15 am) and June (5.30 to 6.45 am). Both mornings were cloudy, dry with good visibility. The focus is on qualitative and no of species present rather than quantitative. The finding was that the treelines are the most important habitat on site.

Bird Survey Ballinasloe		Treelines	Open grassland	Scrub	Flying over
Bullfinch pair	Pyrrhula pyrrhula			X	
Goldcrest	Regulus regulus	X			
Collared dove	Streptopelia decaocto.	X			
Wren	Troglodytes troglodytes	X			
Starlings	Sturnus vulgaris		X		
Dunnock	Prunella modularis	X			
Magnpie	Pica pica				X
Chaffinch	Fringilla coelebs	X			
Robin	Erithacus rubecula	X		X	
Songthrush	Turdus philomelos.	X	X		
Woodpigeon FO	Columba palumbus.	X			X
Crow	Corvus cornix	X			X
Blackbird	Turdus merula	X		X	
Blue tit	Parus caeruleus.	X			
jackdaws	Corvus monedula.				X
Rooks	Corvus Frugilegus		X		
Great tit	Parus major.	X			
Treecreeper	Certhia familiaris	X			

Table 7: Breeding bird survey results 2022 with links to habitat

Note none of the birds listed above are red or amber listed they are all common birds that are green listed.



Map 4: Route of Bird Survey

### Mammal Survey

Irish mammals are generally nocturnal and therefore surveys focus on tracks, dens and signs to determine use of a site. In this case potential likely Badger setts were discovered close to the site with tracks through the development site. A fox and fox droppings were also recorded on site.

Badger activity was recorded from the site and setts entrances were noted outside the site boundaries. The setts tunnels are within dry sod banks outside the site. The site itself is a gravel bank and thus unsuitable for setts. The nature of the site means that there is little if any opportunity for setts or tunnelling within the development area. The site is generally unsuitable for badgers foraging. The vast majority of badgers diet is earthworms often up to 90% . This site is unsuitable for earthworms due to the lack of rich humic soil and thus for these foraging animals. The direct impact of the development means commuting routes through the site will impacted on.

The mammal survey was carried out as described in Chapter 4.



Photo1: Probable Sett Entrance, various runs, treelined corridor with badger activity.



Map 5: Badger/Fox Activity Map



## Bats

A total of four bat species were recorded foraging and commuting within the proposed development site at Dunlo, Ballinasloe, Co. Galway. There is an absence of bat roosts within the proposed development site.

NOTE See Bat Survey for details

Bat Species	Importance	Roosting	Foraging	Commuting
Leisler's ( <i>Nyctalus leisleri</i> )	Local	N	Y	Y
Soprano Pipistrelle ( <i>Pipistrellus pygmaeus</i> )	Local	N	Y	Y
Common Pipistrelle ( <i>Pipistrellus pipistrellus</i> )	Local	N	Y	Y
Nathusius' Pipistrelle ( <i>Pipistrellus nathusii</i> )	County	N	Y	Y

Table 8: Bat survey results 2022 (See VEON Bat report)



Map 6 : Bat Activity Map (See VEON BAT report 2022)

## 5.0 IMPORTANT ECOLOGICAL FEATURES

According to CIEEM 2018 “One of the key challenges in EclA is to decide which ecological features (habitats, species, ecosystem and their functions/processes) are important and should be subject to detailed assessment. Such ecological features will be those that are considered to be important and potentially affected by the project. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable. ... Ecological features can be important for a variety of reasons and the rationale used should be explained to demonstrate a robust selection process. Importance may relate, for example, to the quality or extent of designated sites or habitats, to habitat/species rarity, to the extent to which they are threatened throughout their range, or to their rate of decline”

Ecological Evaluation and Impact Assessment follows the Methodology the Guidelines for assessment of ecological impacts of National Road schemes and the CIEEM guidelines for ecological Impact Assessment in the UK and Ireland (2018). These provide a basis for determination for any particular site in relation to its importance on the following scales

International Europe
National
Regional
County
Local importance higher value
Local importance lower value

Locally Important receptors contain habitats and species that are widespread and of low ecological importance and of importance only in the local area internationally important sites by contrast are designated for conservation as part of the Natura 2000 network

### Significance of Natura 2000 network

There is a hydrological connection to the Suck River Callows SPA which is designated to protect wintering waterbirds and the wetland upon which they depend. This is a wetland of international importance.

### Significance of Habitats

The main habitat on site has been disturbed but has links with the Annex I habitat Orchid Rich Grassland. It is not within a designated site either NHA or SAC . This habitat is considered transition as it has arisen due to site clearance and is considered temporary in nature as it will disappear into scrub without grazing or mowing management. It is considered of regional importance.

### Significance of Fauna

The site has records of mammals on site though survey badger and fox. Likely to be found on site also are wood mouse, hedgehog, hare and pygmy shrew. All of these species are common species with widespread distribution. The site is of local importance lower in this regard

### Significance of Bats

The Bat species recorded during the site visits are 3 of four species of local importance and one (Nathusius' Pipistrelle) of county significance. They generally are common bat expected to be widespread in the area. Thus the bat species have been assessed as of local importance (higher).

### Significance of Avifauna

None of the bird species recorded during the site visits are red listed or Annex I species of the EU birds directive. The birds recorded within the site are common birds expected to be widespread in the area. Thus the bird species have been assessed as of local importance (lower value)

KER	Key Ecological Receptor (KER) Reason for selection	Phase of Development
Suck River Callows SPA	The hydrological report prepared by Hydro S revealed a Hydrological connection to the Designated Wetland and Natura 2000 site some 700m away. Site clearance, building and operational phases have potential to impact on this receptor.	Construction Operation
Habitat ED3/GS1	This habitat recolonizing bare ground/calcareous grassland has links with Annex I priority habitat orchid rich grassland and will be lost through the development of the site. Note this habitat is transitioning to scrub	Construction
Treelines	Treelines surrounding the site provide biodiversity corridors and habitat for badgers, birds, bats and other species	Construction
Badgers	Badgers are known from the site boundaries and hedgerows/treeline/scrub areas. Loss of these habitats are likely to have a negative impact on these species. Increased noise and light from the development is also likely to be negative	Construction Operation
Bats	Four bats species have been recorded using this area in particular the treelines/scrub area at the centre of the site for foraging and commuting. Loss of this habitat may adversely affect the local bat population. Lighting associated with the development also has the potential to impact on bat species.	Construction Operation
Birds	Birds species have been recorded using this area in particular the treelines/scrub area and to a lesser extent the grassland habitats. Loss of these habitat may adversely affect the local bird population. Lighting/noise associated with the development also has the potential to impact on birds	Construction Operation

Table 9: KER Selection Rationale and likely impacts during construction and operation

Having identified the KERS and the likely impacts during construction and operation the next phase is an assessment of the impacts and characterization of such impacts.

## 6.0 ASSESSMENT OF IMPACTS

EPA 2017 document guidelines on the information to be contained in environmental Impact Assessment reports table outlines methodology used to assess the effects of the product on the receiving environment references made following parameters where progress when characterising effects

Impact Characteristic	Term	Description
Quality	Positive	A change which improves the quality of the environment
	Neutral	A change which does not affect the quality of the environment
	Negative	A change which reduces the quality of the environment
Significance	Imperceptible	An impact capable consequences of measurement but without noticeable impact
	Slight	An impact which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate	An impact that alters the character of the environment in a manner consistent with existing and emerging trends
	Significant	An impact, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Profound	An impact which obliterates sensitive characteristics
Duration	Short-term	Impact lasting one to seven years
	Medium-	Impact lasting seven to fifteen years
	Long-term	Impact lasting fifteen to sixty years
	Permanent	Impact lasting over sixty years
	Temporary	Impact lasting for one year or less

Table 7: Terminology for assessments of impacts (EPA 2017)

Type	Cumulative	The addition of many small impacts to create one larger, more significant impact
	'Do Nothing'	The environment as it would be in the future should no development of any kind be carried out
	Indeterminable	When the full consequences of a change in the environment cannot be described
	Irreversible	When the character, distinctiveness, diversity, or reproductive capacity of an environment is not permanently lost
	Residual	Degree of environmental change that will occur after the proposed mitigation measures have taken effect
	Synergistic	Where the resultant impact is of greater significance than the sum of its constituents
	'Worst Case'	The impacts arising from a development in the case where the mitigation measures may substantially fail

Table 8: Terminology for assessments of impact types (EPA 2017)

### Potential Impacts on KERS

The section of the report considers the potential impact on Key ecological receptors identified through desk top, field study and specific surveys. the impacts on each of these is considered at all stages of the development



KER	Impacts	Assessment before mitigation	Mitigation	Do Nothing
Suck River Callows SPA	<p>Construction and Operation</p> <p>Potential to impact due to the entry of silt, sediment, hydrocarbons and cement into the watercourses some 840m away. There is no direct path for pollution but there are many indirect routes</p>	<p>Negative</p> <p>Significant /moderate</p> <p>Short term</p>	<p>See Hydrological report for full details (HydroS, 2022</p> <p>Weather constraints</p> <p>Silt Traps</p> <p>Petrol interceptors</p> <p>Silt Fencing</p> <p>Drainage design</p> <p>Construction of interceptor drains and settlement ponds and settlement tanks</p> <p>Temporary structures on hard stands</p> <p>Temporary Port a loos and suitable disposal</p> <p>Bunded areas for hydrocarbons and refueling offsite</p>	<p>No impacts on this wetland</p>
Habitat ED3/GS1	<p>Construction</p> <p>This habitat will be lost during construction of the houses and roads.</p>	<p>Negative</p> <p>Significant /moderate</p> <p>permanent</p>	<p>Within the designated green spaces this habitat to be retained where possible see landscape Masterplan</p> <p>No new soil to be added. No fertilizer used. Area to managed as a wildlife area with signage by mowing annually in September post flowering.</p> <p>This habitat is classified as poor quality from a conservation perspective. It requires mowing management otherwise it will be lost over time.</p>	<p>The site without intervention would over possibly a period as short as 20 years become scrub dominated scrub with a loss of orchid rich grassland.</p>

Treelines	<p>Construction</p> <p>The proposed housing development will involve the permanent removal of Treeline habitat within the development site as shown in fig XXX</p> <p>Lane this feature has been assessed of being a local importance higher value.</p>	<p>Negative</p> <p>Slight</p> <p>Permanent</p>	<p>Removal will be done in line with the provisions of the wildlife act. Any removal of vegetation must be carried out between March 1st and August 31st.</p> <p>The incorporation of additional planting in line with National pollinator Plan to reinforce the current Treeline as part of the landscaping plan and to retain and enhance, where possible, biodiversity corridors.</p>	<p>In a “do nothing” scenario the woodland would remain and set seed on the adjacent land which would transition to scrub and eventually to woodland</p>
Badgers	<p>Construction</p> <p>Loss of some connectivity in terms of foraging range</p> <p>Disturbance Noise</p> <p>Operation</p> <p>Loss of foraging on site</p> <p>Disturbance Noise and Light</p>	<p>Negative</p> <p>Moderate</p> <p>Short Term</p>	<p>Pre construction survey to identify active setts (as this survey was carried out Jan/Feb 2022). No setts are expected to be found within the site boundaries. If setts are found then exclusion of Badgers from active Setts as per NRA guidelines will be followed.</p> <p>Site Clearance to be supervised by an Ecologist and if setts discovered NRA guidelines followed.</p> <p>Construction to take place only in Daytime hours. No artificial lighting to be used.</p> <p>Design to enable badgers to access the green areas in the site post development</p>	<p>In a “do nothing” scenario the woodland would remain and set seed on the adjacent land which would transition to scrub and eventually to woodland</p> <p>Badgers would not be able to tunnel into the current site as it is deep gravel so the extent of the setts would be expected to remain the same.</p> <p>The majority of their prey is earthworms which require open grassland habitat with substantial soil. This site will become woodland on gravel/thin soil and would not be suitable for badgers</p>

Bats	<p>Construction</p> <p>Loss woodland habitat for foraging</p> <p>Loss of connectivity in terms of foraging range</p> <p>Fragmentation may reduce prey species</p> <p>Loss of potential roosts (no roosts found)</p> <p>Disturbance Noise</p> <p>Operation</p> <p>Loss of foraging on site</p> <p>Disturbance Noise and Light also has the potential to impact on bat species.</p>	<p>Negative</p> <p>Slight</p> <p>Permenent</p>	<p>Removal will be done in line with the provisions of the wildlife act. Any removal of vegetation must be carried out between March 1st and August 31st.</p> <p>The incorporation of additional planting in line with National pollinator Plan to reinforce the current Treeline as part of the landscaping plan and to retain and enhance, where possible, biodiversity corridors.</p> <p>(see Veon, 2022 for full bat mitigation)</p>	<p>In a “do nothing” scenario the woodland would remain and set seed on the adjacent land which would transition to scrub and eventually to woodland</p> <p>This would be positive for bats</p>
<p>Birds</p> <p>Common breeding</p>	<p>Birds species have been recorded using this area in particular the treelines/scrub area and to a lesser extent the grassland habitats. Loss of these habitat may adversely affect the local bird population. Lighting/noise associated with the development also has the potential to impact on bird species.</p>	<p>Negative</p> <p>Slight</p> <p>Short Term</p>	<p>Removal will be done in line with the provisions of the wildlife act. Any removal of vegetation must be carried out between March 1st and August 31st.</p> <p>The incorporation of additional planting in line with National pollinator Plan to reinforce the current Treeline as part of the landscaping plan and to retain and enhance, where possible, biodiversity corridors.</p>	<p>In a “do nothing” scenario the woodland would remain and set seed on the adjacent land which would transition to scrub and eventually to woodland</p> <p>This would be positive for birds</p>

### Cumulative impacts on KERs

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can also make habitats and species more vulnerable or sensitive to change.

Cumulative impacts, may be defined as changes to the environment caused by the combined impact of past, present and future human activities and natural processes. Cumulative effects are particularly important in EclA as ecological features may be already exposed to background levels of threat or pressure and may be close to critical thresholds where further impact could cause damage.

In this case these include

1. Ballinasloe Area Plan 2022-28
2. Galway County Development Plan 2022-28
3. Water basin Management Plans
4. Developments granted in the past 5 years
5. Agricultural pressures from the wider area

KER	Cumulative Impacts
Suck River Callows SPA	<p>This aquatic wetland system is potentially at risk from developments granted permission in Ballinasloe. However all developments granted in the past 5 years have been subject to Appropriate Assessment according to the Ballinasloe area plan and the Galway County Development Plan and thus it is expected that there will be no significant impacts on the wetland or the species it supports from these developments.</p> <p>Agriculture in the wider area has the potential to impact cumulatively on this SPA. However, this is subject to Dept of agriculture regulations and guidelines and to the Water Framework Directive.</p> <p>This plan with mitigation is not expected to have any significant impacts</p>
Habitat ED3/GS1	The habitat on the proposed development site is transitional and no cumulative impacts are foreseen from this project subject to mitigation
Treelines	<p>Treelines have been removed to facilitate development but also treelines have been and are to be planted as part of landscaping plans associated with development.</p> <p>No cumulative impact is foreseen subject to mitigation.</p>
Badgers	It is possible that badgers may have been displaced due to past development granted and changes in agriculture. However, much of the surrounding countryside is suitable for these animals. Thus, with mitigation, no significant cumulative impact is predicted resulting from this development

Bats	<p>Treelines and bat foraging have been removed to facilitate past development in the area but also treelines have been planted as part of landscaping plans associated with developments.</p> <p>Noise and light pollution are likely to have increased in this area but no significant impacts are identified or suspected.</p> <p>No cumulative impact from this project is foreseen from this project subject to mitigation.</p>
Birds  Common breeding	<p>Treelines and bird foraging areas have been removed to facilitate developments in this area but also treelines have been planted as part of landscaping plans associated with the same developments.</p> <p>Noise and light pollution are likely to have increased in this area but no significant impacts are identified on these common species.</p> <p>No cumulative impact from this project is foreseen from this project subject to mitigation.</p>

Table 10 : Cumulative Impact assessments or Other plans and Projects on KERS

## SUMMARY OF POTENTIAL IMPACTS ON KERS

Table 10 provides a summary of the potential impacts on the identified KERS both pre and post implementation of mitigation for the construction and operational phases of the proposal. The proposal is considered to be permanent. No cumulative impacts of significance were identified. The “Do nothing” scenario was explored and although positive for common mammals, bats and birds the scrub habitat that would emerge would completely displace the calcareous grassland with links to Orchid rich grassland. Scrub habitat is relatively common. This project if granted will result in irreversible permanent change in line with the aims of the Galway County Development plan to focus development in key towns, with Ballinasloe particularly mentioned.

No significant impacts were identified on any of the species listed in this report. Mitigation is proposed to reduce what impacts were identified and to ensure minimal residual impacts would remain post development.

## 7.0 CONCLUSION

The proposed housing development will be managed carefully during construction and operational phases to ensure no impacts on the Internationally important site River Suck Callows SPA (see NIS for further details). The development is confined to habitats which are considered to be of regional value but transitional in nature. They evolved through site clearance in 2009 and are currently reverting to scrub which is of local importance. Some of this habitat will be retained where possible in current condition where possible; in a “do nothing” scenario this will completely disappear. This is a positive impact on biodiversity.

The established hedgerows /tree lines will be retained and enhanced through planting as part of the site masterplan. Some of this habitat will be lost, but additional planting will mean that overall habitat quantity on site will not change. The most important habitat for common breeding birds and

local/regionally important bats on site are the treelines. These corridors are of local biodiversity value and care has been taken to ensure biodiversity corridors through the site have been retained and enhanced where possible in line with the National Pollinator Plan and An Bord Pleanala requirements.

No significant habitat for important bird species including wintering or breeding habitat for Annex 1 or red listed species occurs within the proposed development site. Badgers protected under the wildlife act utilize the site for foraging but no setts were found within the site boundaries. No significant impacts on these mammals are predicted or expected.

Taking the above information into consideration in respect of the precautionary principle it is considered that the proposed housing development will not result in a significant impact on the ecology of the area

Provided that the development is built with mitigation in effect and in accordance with good practice as described in this report as well as the Natura Impact Statement and Construction management Plans significant impacts are not predicted .

## REFERENCES

- Balmer, D., Gillings, S., Caffrey, Swann, B., Downie, I. and Fuller, R. 2013 Bird Atlas 2007-11 The breeding and wintering birds of Britain and Ireland. BTO Publication
- Birdwatch Ireland Undated IWEBS Counter Manual
- Byrne, A., Moorkens, E.A., Anderson, R., Killeen, I. J. & Regan, E.C. 2009 Ireland Red List No. 2 – Non-Marine Molluscs. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.
- CIEEM, 2018. Guidelines for Ecological Impact Assessment UK and Ireland.
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Directive 2009/147/EC (codified version of Directive 79/409/EEC as amended) (Birds Directive) – transposed into Irish law as European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011).
- Crowe, O. 2005 Ireland's Wetlands and their Waterbirds: Status and Distribution. BirdWatch Ireland, Rockingham, Co. Wicklow.
- EC, 1992. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Directive 2009/147/EC (codified version of Directive 79/409/EEC as amended) (Birds Directive)
- EPA 2003. Advice Notes on current practice in the preparation of Environmental Impact Statements. Environmental Protection Agency
- EPA, 2017. Draft Revised guidelines on the information to be contained in environmental Impact Statements
- EU, 2019 Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC
- EU, 2021 Assessment of plans and projects in relation to Natura 2000 sites Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC
- European Commission 2000 managing Natura 2000 sites the provisions of Article 6 of the habitats directive 92 / 43 / EEC stop office for official publications for the European Communities Luxembourg
- European Commission 2002 assessment of plans and projects significantly affecting Natura 2000 sites methodological guidance on the provisions of Article 6(3) and (4) of the habitats directive 92 / 43 / EEC office for official publications for the European Communities Luxembourg
- European Commission 2006 nature and biodiversity cases ruling of the European Court of Justice office for the official publications for the European Communities Luxembourg

- European Commission 2007 guidance document on article 64 of the habitats directive 93/42 EEC clarification of the concepts of alternative solutions imperative reasons of overriding public interest compensatory measures overall coherence and the opinion of commission
- European Commission 2019 EU HABITAT ACTION PLAN Action plan to maintain and restore to favourable conservation status the habitat type 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (\*important orchid sites)
- European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011).
- Fossitt, J. A. 2000. A Guide to Habitats in Ireland. Dublin: The Heritage Council.
- Hyde D, 2021. Judicial Review of Planning Permissions for Housing Developments Irish Planning and Environmental Law Journal 2021, (1), 3-13
- Hydro S 2022. Hydrological Assessment Dunlo SHD
- MCKOS, 2019. Ecological Impact Assessment Proposed Residential Housing Development Ballinasloe Co. Galway. Ref 170335 – EclA 2019
- NPWS, 2021 (DOWNLOADED 03/03/2022). Conservation Objectives River Suck Callows SPA (site code 4097)
- NPWS, 2021 (DOWNLOADED 03/03/2022). Natura 2000 Form River Suck Callows SPA (site code 4097)
- NPWS, 2022 (DOWNLOADED 03/03/2022) Site Synopsis River Suck Callows SPA (site code 4097)
- NRA (undated) Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes <https://www.tii.ie/technical-services/environment/planning/Ecological-Surveying-Techniques-for-Protected-Flora-and-Fauna-during-the-Planning-of-National-Road-Schemes.pdf>
- NRA (undated). GUIDELINES FOR THE TREATMENT OF BADGERS PRIOR TO THE CONSTRUCTION OF NATIONAL ROAD SCHEMES. <https://www.tii.ie/tii-library/environment/construction-guidelines/Guidelines-for-the-Treatment-of-Badgers-prior-to-the-Construction-of-a-National-Road-Scheme.pdf>
- NRA 2009 Environmental Impact of National road schemes – a practical guide
- NRA 2009 Guidelines for assessment of Ecological Impacts of national Road schemes
- Regan *et al.*, 2010 *Ireland Red List No.4: Butterflies'*
- Regan, E.C., Nelson, B., Aldwell, B., Bertrand, C., Bond, K., Harding, J., Nash, D., Nixon, D., & Wilson, C.J. (2010) Ireland Red List No. 4 – Butterflies . National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Ireland
- RPS, 2007. Environmental Impact Statement. Dunlo Town Centre Development. Doc Ref MGT0024RP00010



S.I. No. 397/2012 - European Communities (Conservation of Wild Birds (River Suck Callows Special Protection Area 004097)) Regulations 2012.

Veon Ltd. 2022. Bat Survey SHD Dunlo Ballinasloe

Websites Consulted     [www.NPWS.ie](http://www.NPWS.ie)

[www.biodiversityireland.ie](http://www.biodiversityireland.ie)

[www.EPA.ie](http://www.EPA.ie)

[www.Galway.ie](http://www.Galway.ie) (Planning and the Galway County Development Plan 2022-28