ENVIRONMENTAL CONSULTANTS

BAT DEROGATION LICENCE SUPPORTING DOCUMENT

Traditional Farmhouse Restoration

Macetown, Navan, Co. Meath

September 2026

Document Details

Client:	John Rowe
Project Title:	Bat Derogation Licence Supporting Document Traditional Farmhouse Restoration Macetown, Navan, Co. Meath
Document:	Bat Survey Report
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Rev	Status	Date
01	Draft	04/09/2026
02	Final	21/09/2026

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1 Introduction

The proposed works involve refurbishing an existing two-storey house and associated outbuildings; constructing a single-storey link extension; and changing the use of an existing outbuilding to habitable accommodation, including installing a new septic tank and percolation area and modifying the existing entrance. The proposed works have the potential to affect a confirmed common pipistrelle (Pipistrellus pipistrellus) roost within Building A.

This derogation licence application is therefore sought in respect of the confirmed common pipistrelle roost within Building A.

As no additional bat roosts were confirmed during the surveys, no further derogation is considered necessary in respect of these species. Nevertheless, the mitigation measures outlined in the Bat Survey Report and Ecological Impact Assessment (IDEC, 2026) address potential impacts on all bat species using the site for foraging and commuting, including measures to minimise disturbance and maintain the site's ecological functionality for bats during and after the proposed works.

a. Objective of the proposed works (for example, as part of the construction of a national road, repair of roofing, undertaking surveys, etc.)

1.1 Statement of Authority

Tommy Szlaga B.Sc. (Hons) QCIEEM, a graduate of Munster Technological University, where he completed a BSc (Hons) in Wildlife Biology (Level 8). Through his studies, he developed strong practical skills in habitat and species surveying, with a particular focus on bat ecology and acoustic survey methods through his undergraduate thesis. He has received specialist training in bat identification and survey methods, as well as Bat Trapping and Handling, through Bat Conservation Ireland. Tommy completed a six-month internship with ID Environmental Consultants in 2024 and has since worked as a Project Ecologist, gaining professional experience in ecological fieldwork, bat surveys, GIS analysis, data interpretation, statutory ecological assessment and environmental reporting, including work on large-scale energy projects.

Ian Douglas (MSc, BSc, H Cert.Ag) of ID Environmental Consultants. Ian is an Ecologist and Environmental consultant with over 12 years' experience in appropriate Assessment, ecological impact assessment, habitats assessment, soil science, GIS mapping and regenerative agriculture. Ian has worked on projects including large road developments, power infrastructure projects, planning applications, planning and design of nature trails, constructed wetland creation and on farm habitat development. Ian previously worked in Ecology and Agriculture in England and Australia before taking a position with Flynn, Furney Environmental Consultants in 2018. With whom he retains a position as Associate Director. Ian formed ID Environmental Consultants in 2021.

Ellen Irwin (BAgrSc, Level 8). Ellen is an Ecologist and Environmental Consultant with over two years' professional experience in Appropriate Assessment, Ecological Impact Assessment and habitat surveying. She is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Ellen has contributed to a wide range of projects with both IDEC and Flynn Furney Environmental Consultants, including large road developments, power infrastructure projects, various residential and commercial planning applications and habitat enhancement projects. Ellen has ample experience in field surveying, including habitat and botanical assessments, mammal surveys, bat roost assessments, and watercourse surveys.

b. Name, qualifications and relevant experience of scientific staff, including trainees (e.g. ecologists) involved in the preparation of the application and those responsible for carrying out the proposed activity.

c. If this application is for the carrying out of surveys that may cause disturbance, qualifications of all involved must be provided, and trainees must be identified.

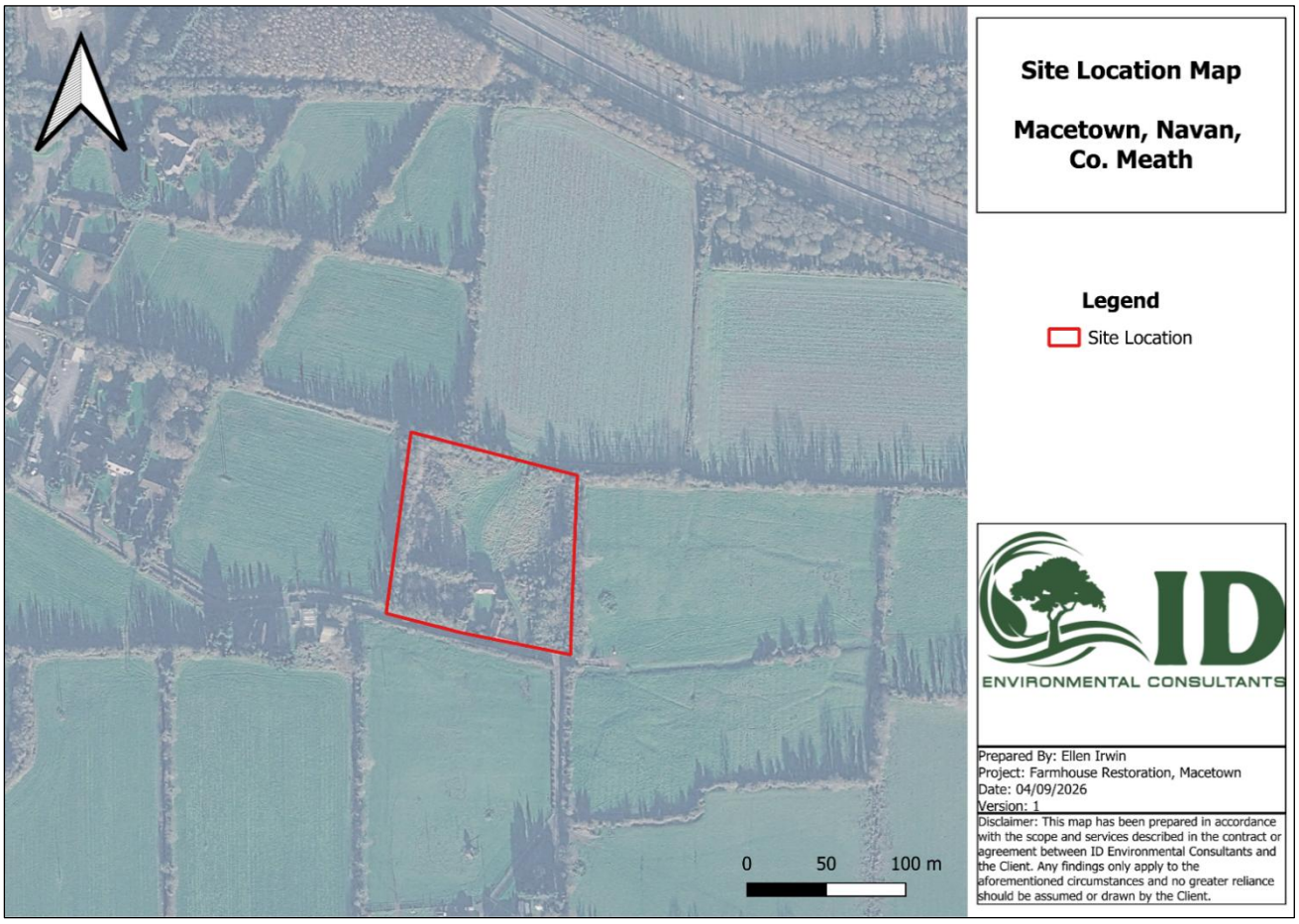
1.2 Site Background

The proposed development site is located within the townland of Macetown, approximately 4km south of Navan, Co. Meath. The site lies within a rural area of Macetown characterised by fields of improved agricultural grassland and scattered private residential dwellings and farmyards. The M3 motorway runs approximately 240m north of the development site. The site is accessed via a local cul-de-sac off the Clonmalevin road.

The site includes six buildings: 3 two-storey derelict traditional farmhouses and 3 associated single-storey farm outbuildings. The dominant habitat on-site was classified as Improved Agricultural Grassland (GA1)/Dry Meadows and Grassy Verges (GS2). A hedgerow (WL1) with a small dry ditch was recorded south of the site along the roadway.

No watercourses or semi-natural habitats of ecological significance occur within the immediate site boundary. A site location map is provided in Figure 1 below.

Figure 1. Site Location Map

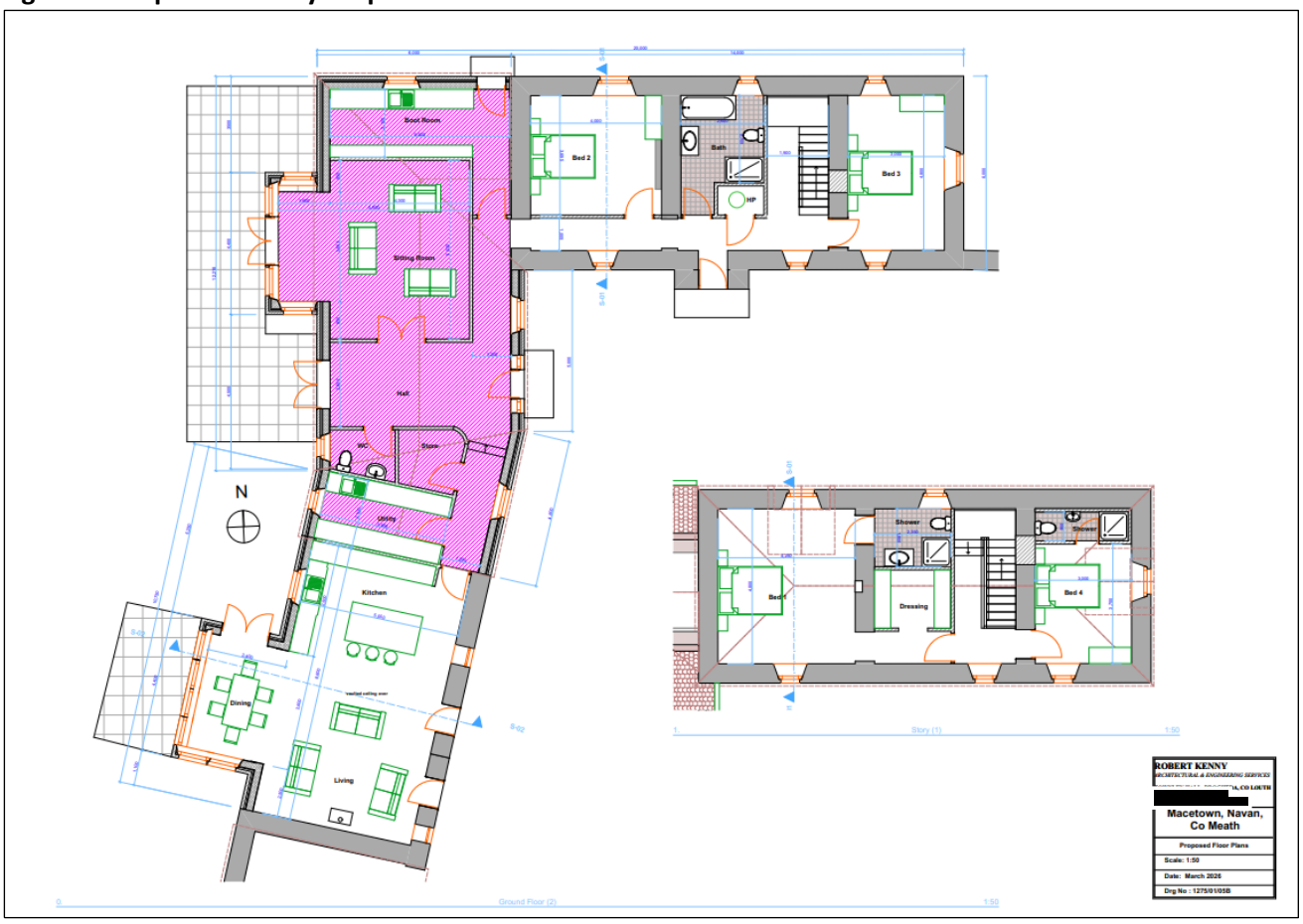


2) *Background to proposed activity, including location, ownership, type of and need for the proposed activity, planning history, policy context, zoning in relevant Development plan (or equivalent), etc.*

1.3 Development Description

The proposed development consists of alterations to and refurbishment of an existing two-storey house and associated outbuildings; construction of a single-storey link extension; and a change of use of an existing outbuilding to habitable accommodation, including installation of a new septic tank and percolation area and modification of the existing entrance.

Figure 2: Proposed site layout plan



3) *Full details of proposed activity to be covered by the derogation (including a site plan). The site may be inspected by an NPWS representative, so the details given should clearly reflect the extent of the project. This information will be used to compare site conditions with the Method Statement.*

1.4 Ecological Survey and Site Assessment

2.4.1. Pre-existing information on species at location and environs

A desktop assessment of existing data was conducted as part of a Bat survey report (IDEC, 2026) (Appendix 1)

2.4.2. Status of the species in the local/regional area

The Common pipistrelle (Pipistrellus pipistrellus) is widespread and abundant across Ireland and is considered to be of Least Concern at both national and European levels.

2.4.3. Objective(s) of survey

The survey aimed to assess the presence or absence of roosting bats within the target buildings before the proposed works.

2.4.4. Description of survey area

The proposed site of works includes several derelict farmhouses constructed of limestone masonry and mortar, and associated outbuildings also constructed of limestone masonry and mortar, as well as metal-clad sheds. These buildings and structures conform to the habitat classification Buildings and Artificial Surfaces (BL3).

The subject buildings have been designated as buildings A-F for the purpose of this report and are shown in Figure 5 below.

- **Building A** – A derelict two-storey traditional farmhouse constructed of limestone masonry and mortar, with partially damaged external lime render, missing and damaged second-floor windows, and a partially damaged natural slate hipped roof.
- **Building B** – A derelict two-storey traditional farmhouse constructed of limestone masonry and mortar, with partially collapsed external walls and no surviving roof structure. A lean-to shed adjoins the southern elevation, comprising stone walls with a metal-clad roof.
- **Building C** – A single-storey limestone masonry and mortar farm outbuilding with an open A-frame roof structure and a partially damaged natural slate roof.
- **Building D** – An L-shaped farm outbuilding comprising a metal-clad shed, with areas of lime external render and an internal mud-wall finish.
- **Building E** – A derelict two-storey traditional farmhouse constructed of limestone masonry and mortar, with a partially collapsed natural slate roof.
- **Building F** – A single-storey farm outbuilding constructed of stone masonry with a metal-clad roof.

The proposed site of works and surrounding area is dominated by fields of Improved Agricultural Grassland (GA1) and Dry Meadows and Grassy Verges (GS2). Vegetation across the site was dominated by common grassland species including Perennial Ryegrass (Lolium perenne), dock (Rumex obtusifolius), dandelion (Taraxacum officinale), meadow buttercup (Ranunculus acris), white clover (Trifolium repens) and self heal (Prunella vulgaris).

A hedgerow (WL1), with a small dry ditch (FW4), was recorded south of the site along the roadway. Vegetation within the hedgerow was dominated by Ash (Fraxinus excelsior), Willow (Salix spp.), Wych elm (Ulmus glabra), Hazel (Corylus avellana) and Ivy (Hedera helix).

Figure 3: Onsite Buildings Map



2.4.5. Survey methodology

Surveys were carried out in accordance with Bat Conservation Trust (BCT) Good Practice Guidelines (2023), A preliminary bat roost assessment was conducted of each individual building.

Dusk emergence surveys of the buildings were undertaken by Tommy Szlaga and Ian Dougas on 27th August 2026 to watch and listen for bats exiting bat roosts and determine the presence or absence of bats at the time of survey. The dusk emergence surveys commenced from sunset and ended approx. 90 minutes after sunset. Survey details are summarised in Table 3 below.

Echolocation recordings were conducted using a handheld Echo Touch Meter Pro 2. Recordings were stored for later analysis. Bat sonograms were manually analysed and identified to species level using specialist software, Wildlife Acoustics Kaleidoscope Viewer Pro. Activity analysis of recorded bat echolocation was defined as registrations/contacts per species within a 15 second (maximum) file. Multiple passes/calls/pulses of the same species within a (maximum) 15 s file count as a single registration. Two thermal imaging cameras were used to aid observation of the target buildings: the Hikmicro Lynx LH25 3.0 and the Hikmicro Lynx LH35 3.0.

Table 1: Details relating to bat surveys conducted on site in August 2026

Date	Survey Type	Survey Times	Weather	Temperature (°C)
27th August 2026 (Sunset 21:20)	Dusk Emergence	20:00 – 21:30	Partially overcast, no precipitation	14°C

2.4.6. Survey results

Four common pipistrelles (Pipistrellus pipistrellus) were observed emerging from Building A during the dusk emergence survey undertaken on 26th August 2026.

The survey therefore confirmed the presence of a common pipistrelle roost comprising four individuals within the easternmost hip of the roof void of Building A. Common pipistrelle foraging activity was recorded within the central farmyard and along the access track to the south of the site.Additionally, Two audio detections of soprano pipistrelle were made; these were identified as a commuting individual.

The bats were observed accessing the roof void through a small gap between the easternmost hip of the roof and the external wall of Building A. The gap appears to have formed gradually through weathering and erosion, allowing bats to fly up the external wall behind the gutter and into the roof void. Bats were only observed emerging from Building A; no bats were observed emerging from any other building on site.

Common pipistrelle is one of the most widespread and frequently recorded bat species in Ireland. The species is listed under Annex IV of the EU Habitats Directive and is afforded strict protection under Irish wildlife legislation.

Table 2: Details relating to bat surveys conducted on site in August 2026

Date	Activity Summary
26th August	• 20:00 – Survey commenced. • 20:51 – First bat recorded, identified as a commuting common pipistrelle. • 20:59 – Two common pipistrelles observed emerging from the previously described roost access point within Building A. • 21:11 – A common pipistrelle observed emerging from the side of Building A (video recorded). • 21:13 – Common pipistrelle pass recorded. • 21:14 – Common pipistrelle pass recorded. • 21:20 – Potential re-entry observed at the easternmost hip of Building A. • 21:30 – Survey concluded.

2.4.7. Population size class assessment

The confirmed roost within Building A is considered to constitute a common pipistrelle summer roost, supporting four individuals. Based on the available survey evidence, the roost is considered to be of local significance. No evidence of maternity use or other specialised roosting behaviour was recorded during the surveys.

4) Ecological Survey and site assessment (Not required for applications to carry out surveys)

a. Pre-existing information on species at location and environs.

b. *Status of the species in the local/regional area (relevant to the consideration of the impact on the population at the appropriate geographic scale (Test 3))*
c. *Objective(s) of survey*
d. *Description of Survey Area*
e. *Survey methodology (including evidence as to how the methodology represents best practice and is appropriate to the Objective). Methodology should include survey maps, details of timing, climate, equipment used and identify any uncertainties or difficulties encountered.*
f. *Survey results including raw data, any processed or aggregated data, and negative results as appropriate. Photographs and maps must be provided where site-specific features are referred to.*
g. *Population size class assessment.*

2 Evidence to support the Derogation Tests

Bat surveys undertaken in July 2026 confirmed the presence of a common pipistrelle (*Pipistrellus pipistrellus*) roost within the second storey of Building A. Four individuals were observed emerging from the building during the 27th August 2026 dusk emergence survey. The proposed works to Building A therefore has the potential to damage or destroy a breeding or resting place of a protected species and to cause disturbance to roosting bats. A derogation licence will therefore be required where the proposed works cannot avoid impacts to the confirmed roost. The following sections consider the relevant derogation tests.

2.1 Test 1: Reason for the Derogation

The reason for seeking this derogation falls under Regulation 54(2)(c), in the interests of public health and safety and for imperative reasons of overriding public interest.

The proposed development involves refurbishing and restoring an existing derelict two-storey house and associated outbuildings to provide habitable accommodation, together with associated wastewater treatment infrastructure and ancillary site works. The project will secure the long-term preservation and beneficial reuse of an existing derelict structure that would otherwise continue to deteriorate, contributing to the sustainable use of the rural built heritage and supporting rural housing objectives. The development will provide social and economic benefits through the provision of residential accommodation, investment in the local area, and the retention of a traditional building that forms part of the local rural landscape. The works will also improve the building's safety, structural integrity, and long-term viability.

Bat surveys confirmed the presence of a small common pipistrelle (Pipistrellus pipistrellus) day/transitional roost within the structure. The roost is not a maternity, hibernation, or other roost of high conservation significance. While the proposed works may result in the loss of existing roosting features, a comprehensive package of mitigation and compensation measures will be implemented under ecological supervision including timing restrictions on works, protection procedures should bats be encountered, retention of suitable commuting habitat, and the installation of integrated bat roosting features within the completed development.

Common pipistrelle is widespread and abundant in Ireland and is considered to be of Least Concern at national and European levels. The proposed mitigation measures will minimise potential impacts on the local population and ensure the species remains at favourable conservation status within its natural range. Accordingly, it is considered that the social and economic benefits arising from the redevelopment and longterm conservation of the existing building constitute imperative reasons of overriding public interest, and

that these benefits outweigh the limited impact on the protected species, while maintaining the species at a favourable conservation status within its natural range.

2.2 Test 2: Absence of Alternative Solutions

1. Do nothing

The do-nothing alternative would involve retaining the existing derelict house and associated outbuildings in their current condition. This would not achieve the objectives of the proposed development, which seek to restore the existing derelict property and bring it back into beneficial use as residential accommodation. Continued lack of maintenance would result in further deterioration of the buildings and would not address the existing condition or safety issues associated with the property. The do-nothing alternative was therefore not considered viable.

2. Retain Building A in its existing condition whilst restoring the remainder of the site

The option of retaining Building A in its existing condition while restoring the remainder of the site and associated outbuildings was considered. While this approach would avoid direct refurbishment works to the building containing the confirmed bat roost, it would not necessarily avoid disturbance to the roost from adjacent construction activities associated with restoring the wider site. Furthermore, retaining Building A in its current condition would not provide the residential accommodation function intended by the proposed development and would therefore not achieve the overall objectives of the project. This alternative was therefore not considered practicable.

3. Development on an alternative greenfield site

Development on an alternative greenfield site was also considered. While this option could avoid temporary disturbance to the existing bat roost, it would require the development of previously undeveloped land, resulting in additional land take and the potential loss or disturbance of semi-natural habitats. Development on an alternative site would also forgo the opportunity to restore and beneficially reuse an existing derelict building and would not represent the sustainable reuse of an existing rural structure. This alternative was therefore not considered necessary or preferable where the existing building can be retained and restored while implementing appropriate measures to minimise disturbance to the roost.

Conclusion

Having considered the above alternatives, the proposed restoration of the existing derelict house represents an approach that allows the objectives of the development to be achieved while retaining the building containing the confirmed common pipistrelle roost. The anticipated impact on the roost is temporary disturbance associated with the refurbishment works rather than permanent loss of the building or roosting structure. Subject to the implementation of appropriate mitigation measures, the proposed development will allow the existing property to be restored and brought into beneficial use while minimising impacts on the protected species.

2.3 Test 3: Impact of a Derogation on Conservation Status

No evidence of a maternity colony, hibernation roost, significant aggregation or roost of high conservation significance was identified. Four common pipistrelle (Pipistrellus pipistrellus) bats were recorded using the building, and the roost is considered to represent a small summer/day roost. Bats generally use day roosts to rest during the active season, and they may be occupied by individual bats or small groups, with bats often moving between roosting locations. The recorded roost size of four individuals is small in comparison with typical summer roosts of pipistrelle bats. Overall, the survey results indicate that the building is used at a low level, and there was no evidence of maternity use or other specialised roosting behaviour. Overall bat activity associated with the site was low, and no significant foraging activity was recorded.

These impacts will be addressed through the following mitigation and compensation measures;

Bat Roosting Features

- Contractors must be made aware of the potential presence of bats and act with vigilance when disturbing fascia/soffits and roof slates/sheets.
- Demolition of the buildings noted as containing roosting habitat should take place between 1st September – 1st May (Marnell et al., 2022).
- Bat boxes will need to be provided as part of the site development to offset the loss of a minor day roost. This will be specified in the derogation licence application. A total of 5 bat boxes will be required to offset the loss of this minor roost. Specifications for the types and settings of bat boxes are provided below:
- 3x schwegler bat boxes (model 1FF) and 2x 1FS Schwegler Large Colony Bat Boxes should be installed around the site.
- Alternatively, 3 built-in bat roosts, such as the Schwegler Bat Tube 1FR and 2FR, could be built into the stonework of some of the buildings on the site.
- Bat boxes should be placed in areas with no artificial lighting and away from high walls or other features that could attract cats.
- Bat boxes should be at least 3m off the ground;
- Sheltered from strong winds and exposed to the sun for part of the day (usually south, southeast or southwest).

Lighting and Disturbance

To minimise potential disturbance to commuting or foraging bats:

- Any necessary external lighting should be directional, low intensity, and designed to avoid light spill onto adjacent vegetation, rooflines, and boundary features.
- Minimise lighting to what is strictly required for health and safety purposes, and review existing lighting to ensure any additional lighting does not result in cumulative lighting impacts, increased sky glow, or over-lighting.
- Avoid lighting on key habitat features. Features important for bats, such as hedgerows, treelines, watercourses, and riparian areas, are key ecological corridors and should be kept dark or near-dark. Buildings and sheds, particularly older buildings, may contain bat roosts, and these should not be lit up.
- All luminaires should lack UV elements when manufactured. Do not use metal halide or fluorescent sources.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce the blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- Column heights should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used.
- Luminaires should always be mounted horizontally, i.e. no upward tilt.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.
- Dimming or part night lighting should be considered. A control management system can dim (typically to 25% or less) or turn off groups of lights when not in use.

Timber Treatment (Applicable to Entire Roof Space)
To avoid potential harm to bats from chemical exposure:

- Only bat-safe timber treatment products shall be used in the roof space.
- Where replacement timbers are required, pre-treated (pressure-treated/tanalised) timber should be used, as this ensures adequate drying prior to installation.
- If on-site timber treatment is necessary, only products listed as bat-safe (see Appendices) shall be used, and sufficient drying time must be allowed prior to installation.
- The use of solvent-based or non-approved timber treatment chemicals is strictly prohibited.
- Pre-treated timber is the preferred approach, as it reduces risks associated with chemical vapours and insufficient curing time. Predicted Residual Impacts of the Proposed Development

Consequently, subject to the implementation of the proposed mitigation and compensation measures and compliance with the conditions of the derogation licence, the granting of the derogation licence will not be detrimental to the maintenance of the population of common pipistrelle at a favourable conservation status within its natural range.

Test 1 - Reason for Derogation:

i. *There should be a clear explanation as to why a specific reason(s) has been selected in the application form.*
ii. *Applicants are advised to read the guidance published by the NPWS '*Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants' *with specific reference to Section 3.1.*

h. *Test 2 - Absence of Alternative Solutions*
   i. *Applicants must list the alternatives to the proposed activity that have been considered, including the do-nothing alternatives clearly and objectively. A basic requirement is that these alternatives should be compared in terms of their impact on the species subject to strict protection. It should be clear to NPWS officials as to why the chosen approach has been selected.*
   ii. *Applicants are advised to read the guidance published by 'Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants" with specific reference to Section 3.2.*

i. *Test 3 - Impact of a derogation on Conservation Status*
   i. *Applicants should include details of the population at the appropriate geographic scale and an evaluation of how the proposed activity will affect the conservation status both before and after mitigation measures have been applied.*
   ii. *Full and detailed descriptions of proposed mitigation measures that are relevant to the potential impact on the target species. Evidence that such mitigation has been successful elsewhere should be provided, where available.*
   iii. *Applicants are advised to read the guidance published '*Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants' *with specific reference to Section 3.3.*

2.4 Monitoring the impacts of the derogations

Monitoring and supervision requirements will be implemented in accordance with the conditions of the derogation licence and the approved mitigation and method statement. Should any bats, evidence of roosting or previously unidentified roosting features be encountered during the works, works in the affected area will

cease immediately and a suitably qualified ecologist will be consulted. The ecologist will determine the appropriate course of action in accordance with the derogation licence.

j. *Applicants must include details of how they propose to verify whether the derogations have been implemented correctly and whether they achieved their objective, using scientifically based evidence, and, if necessary, how the applicant will take corrective measures where required.*
k. *Applicants should provide details of proposed reports to be submitted to the NPWS including the results of monitoring.*
l. *Applicants are advised to read the guidance published by the European Commission "Guidance document on the strict protection of animal species of Community interest under the Habitats Directive" with specific reference to Section 3.4.*
m.

Appendix 1: Macetown Developmnet, Ecological Impact Assemsment Report

ENVIRONMENTAL CONSULTANTS

ECOLOGICAL IMPACT ASSESSMENT REPORT

Traditional Farmhouse Restoration,

Macetown, Navan, Co. Meath

September 2026

Document Details

Client:	John Rowe
Project Title:	Ecological Impact Assessment Report Traditional Farmhouse Restoration, Macetown, Navan, Co. Meath
Project Code:	ID98
Document Title:	Ecological Impact Assessment Report
Prepared By:	Ellen Irwin
Reviewed By:	Ian Douglas

Rev	Status	Date
01	Draft	04/09/2026
02	Final	08/09/2026

Abbreviations

Abbreviation	Term
AA	Appropriate Assessment
BOCCI	Birds of Conservation Concern in Ireland
CJEU	Court of Justice of the European Union
EC	European Commission
IROPI	Imperative Reasons of Overriding Public Interest
LSE	Likely Significant Effects
NHA	Natural Heritage Areas
NIS	Natura Impact Statement
pNHA	proposed Natural Heritage Areas
OPR	Office of the Planning Regulator
SCI	Special Conservation Interest
TFEU	Treaty on the Functioning of the European Union
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Definitions

Definition	Term
Appropriate Assessment (AA)	An assessment of the potential adverse effects of a plan or project (in combination with other plans or projects) on Special Areas of Conservation and Special Protection Areas
Department of Environment, Heritage, and Local Government	The previous name for Department of Housing, Local Government and Heritage. The Irish government department responsible for housing, local government (including planning) and heritage.
Effect	Outcome to an ecological feature from an impact, e.g., the effects on an animal population from the loss of a hedgerow.

European Commission (EC)	The executive body of the European Union responsible for proposing legislation, enforcing European law, setting objectives and priorities for action, negotiating trade agreements, and managing and implementing European Union policies and the budget.
Habitats Directive (92/43/EEC)	European Directive relevant to on the conservation of natural habitats and of wild fauna and flora
Impact	Actions resulting in changes to an ecological feature, e.g., the construction activities of a development removing a hedgerow.
Natura 2000 / European Site	A network of sites selected to ensure the long-term survival of Europe's most valuable and threatened species and habitats. European site" replaced the term "Natura 2000 site" under the EU (Environmental Impact Assessment and Habitats) Regulations 2011 S.I. No. 473 of 2011
Receptor	Environmental components that may be affected, adversely or beneficially, by the project.
Special Protection Areas (SPAs).	Sites classified in accordance with Article 4 of the EC Birds Directive (79/409/EEC) which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex 1 of the Directive), and for regularly occurring migratory Species.
Special Areas of Conservation (SACs)	Areas of protected habitats and species as defined in the Habitats Directive (92/43/EEC).
Qualifying Interest (QI)	Relates to the habitats and/or (non-bird) species for which an SAC or SPA is selected
Zone of Influence (ZoI)	Spatial extent of potential impacts resulting from the project.

1 Introduction

ID Environmental Consultants Ltd were appointed by Robert Kenny Architectural & Engineering Services on behalf of John Rowe to produce an Ecological Impact Assessment Report for the proposed farmhouse restoration project, located at Macetown, Navan, Co. Meath.

Ecologists from ID Environmental Consultants visited the site in August 2026. The survey was carried out to investigate whether any Annex I habitats (EU Habitats Directive), Annex II species (EU Habitats Directive), Annex I Bird Species (EU Birds Directive), 'stepping stones/Ecological Corridors' (as covered under Annex 10 of the EU Habitats Directive) or locally important habitats or species are likely to be impacted upon by the proposed development.

This assessment aimed to;

- Establish baseline ecological data for the proposed development site;
- Determine the ecological value of the identified ecological features;
- Assess the impact of the proposed development on ecological features of value (biodiversity); • Apply mitigation measures to avoid, reduce, remedy or compensate impacts; and
- Identify any residual impacts after mitigation and compensation.

1.1 Statement of Authority

This report was completed by Ellen Irwin (BAgrSc, Level 8). Ellen is an Ecologist and Environmental Consultant with over two years' professional experience in Appropriate Assessment, Ecological Impact Assessment and habitat surveying. She is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Ellen has contributed to a wide range of projects with both IDEC and Flynn Furney Environmental Consultants, including large road developments, power infrastructure projects, various residential and commercial planning applications and habitat enhancement projects. Ellen has ample experience in field surveying, including habitat and botanical assessments, mammal surveys, bat roost assessments, and watercourse surveys.

The completion of this report was also supported by Ian Douglas (MSc, BSc, H Cert.Ag) of ID Environmental Consultants. Ian is an Ecologist and Environmental consultant with over 12 years' experience in appropriate assessment, ecological impact assessment, habitat assessment, soil science, GIS mapping and regenerative agriculture. Ian has worked on projects including large road developments, power infrastructure projects, planning applications, planning and design of nature trails, constructed wetland creation, and on-farm habitat development. Ian previously worked in Ecology and Agriculture in England and Australia before taking a position with Flynn, Furney Environmental Consultants in 2018. With whom he retains a position as Associate Director. Ian formed ID Environmental Consultants in 2021.

Tommy Szlaga also helped complete this project. Tommy is a graduate of Munster Technological University, where he completed a BSc (Hons) in Wildlife Biology (Level 8). Throughout his degree, Tommy developed strong practical skills in habitat and species surveying, with a particular focus on bat ecology, having completed his undergraduate thesis on bat species and their conservation. He also gained experience using GIS software and completed modules in Species Identification, Habitat Studies, and Ecology, giving him the context needed to assess habitats and interpret ecological survey results. Tommy also completed a 6-month internship with ID Environmental Consultants, where he gained ample experience in both ecological surveying and compiling environmental reports.

2 Legislation and Policy Context

2.1 European Council Directives

2.1.1 Council Directive on the Conservation of Natural Habitats of Wild Fauna and Flora - *92/43/EEC- The Habitats Directive*

The Directive aims to promote biodiversity by conserving the natural habitats and wild species listed in its Annexes. Member States must take measures to maintain or restore biodiversity at favourable conservation status, while taking into account economic, social, and cultural requirements and regional and local characteristics.

It gives effect to site and species protection measures by establishing the Natura 2000 network and designating European Sites, including Special Areas of Conservation (SAC) and Special Protection Areas (SPA). It also establishes a list of species (other than birds) whose habitats must be protected to secure their survival. These priority species and habitats are subject to a higher level of protection.

The Directive also requires an appropriate assessment of any plan or project not directly connected with, or necessary to, the management of a European Site but likely to have significant effects on a European Site, either individually or in combination with other plans or projects.

2.1.2 Council Directive on the Conservation of Wild Birds - *2009/147/EC- The Birds Directive*

The Directive provides a framework for the conservation and management of wild birds in Europe, and for human interactions with them. It provides for maintaining wild bird populations across their natural range; conserves habitats for rare or vulnerable species listed in Annex I and for migratory species through the classification of SPAs; and protects all wild birds.

2.2 Irish Legislation

The following National legislation is relevant to the proposed development:

Wildlife Act, 1976 and Wildlife (Amendment) Act, 2000 (as amended). Hereafter collectively referred to as the "Wildlife Acts". The Wildlife Acts are the principal pieces of legislation at the national level for the protection of wildlife and for the control of activities that may harm wildlife. All bird species, 22 other animal species or groups of species and 86 species of flora are protected under these pieces of legislation.

Flora (Protection) Order, 2022. This lists species of plant protected under Section 21 of the Wildlife Act, 1976.

Planning and Development (Amendment) Act 2010 (as amended)[1]. This piece of legislation is the basis for Irish land use planning. Under the legislation, development plans (usually implemented at the local authority level) must include mandatory objectives for the conservation of natural heritage for the conservation of European Sites.

European Communities (EC) (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011 (as amended); hereafter the "Birds and Habitats Regulations". This legislation transposes the Habitats and Birds Directives into Irish law. It also contains regulations (49 and 50) that deal with invasive species (those included within the Third Schedule).

3 Project Description

3.1 Site of Works

The proposed development site is located within the townland of Macetown, approximately 4km south of Navan, Co. Meath. The site lies within a rural area of Macetown characterised by fields of improved agricultural grassland and scattered private residential dwellings and farmyards. The M3 motorway runs approximately 240m north of the development site. The site is accessed via a local cul-de-sac off the Clonmalevin road.

The site includes six buildings: 3 two-storey derelict traditional farmhouses and 3 associated single-storey farm outbuildings. The dominant habitat on-site was classified as Improved Agricultural Grassland (GA1)/Dry Meadows and Grassy Verges (GS2). A hedgerow (WL1) with a small dry ditch was recorded south of the site along the roadway.

No watercourses or semi-natural habitats of ecological significance occur within the immediate site boundary. A site location map is provided in Figure 1 below.

[1] Includes continued updates as per the Planning and Development Act 2024.

Figure 1: Site Location Map



3.2 DevelopmentDescription

The proposed development consists of alterations to and refurbishment of an existing two-storey house and associated outbuildings; construction of a single-storey link extension; and a change of use of an existing outbuilding to habitable accommodation, including installation of a new septic tank and percolation area and modification of the existing entrance.

Figure 2: Proposed Development Layout



4 Survey Methodologies

4.1 Desktop Study

Before the main fieldwork for this assessment, we conducted a desktop survey of available information sources. These included:

- The NPWS Protected Species Database and Online Mapping
- Data on waterbodies, available for download and interrogation from the Environmental Protection Agency (EPA)[2]
- Information on the location, nature and design of the proposed development supplied by the applicant's design team;

[2] https://gis.epa.ie/EPAMaps/

- Review of previous and current planning applications for the subject site and local area via Meath County Council's Planning portal[3], Myplan[4] and the An Coimisiún Pleanála[5]
- Desk research included a review of records available through the National Biodiversity Data Centre mapping system. These included rare and protected species. Records were requested for all species appearing within the study area or immediately surrounding the study area (2km)[6].
- Data on semi-natural Irish grasslands from the Irish Semi-Natural Grassland Surveys (ISGS) 2007 – 2012 • Data contained in the National Survey of Native Woodland (NSNW) and Ancient Woodlands inventory (2011 – 2012).
- Data held on the NPWS Article 17 datasets for protected species[7]

4.2 Field Surveys

Field surveys were carried out in August 2026. Habitats were identified, mapped, and classified, and dominant plant species were noted in accordance with the guidelines of the Heritage Council (2010). Habitats were classified as per Fossitt (2000). Plant nomenclature follows the BSBI's List of Accepted Plant Names (BSBI, 2007). Fauna surveys were carried out in accordance with NRA (2009) guidance.

5 Ecological Impact Assessment

5.1 Key Ecological Receptors

In accordance with National Roads Authority guidelines (2009), impact assessment is only undertaken for 'key ecological receptors' (KERS). KERS are within the project's zone of influence and are "both of sufficient value to be material in decision making and likely to be affected significantly". To qualify as KERS, features must be of local ecological importance (higher value) or higher.

Features falling below this threshold are not assessed. Impacts are described as being either significant or not significant. Broadly, significant effects encompass impacts on the structure and function of defined sites, habitats, or ecosystems, and on the conservation status of habitats and species (including extent, abundance, and distribution) (CIEEM, 2018).

5.2 Zones of Influence and Potential Impacts or Effects

Determining whether a KER has the potential to be affected by the Proposed Development relates to the concept of the Zone of Influence (ZoI). The ZoI relates to the nature of the development, its likely impacts and the presence of connections or pathways between ecological receptors and the development. Thus, ecological receptors that

[3] https://www.eplanning.ie/MeathCC/searchtypes
[4] https://www.myplan.ie/
[5] https://www.pleanala.ie/en-ie/map-search
[6] https://maps.biodiversityireland.ie/Map
[7] https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17

lack a connection to the development are considered outside the ZoI, even if directly within the development site. Conversely, considerably removed receptors from the development can still be considered within the ZoI if a pathway for impacts exists.

Table 1 identifies all connections (ecological, hydrological, and hydrogeological) that provide pathways for impacts between the Proposed Development and ecological receptor sites and species in the surrounding area.

Table 1: Potential impacts, effects, and their zone of influence

Potential Impact and Effect	Description	Zone of Influence
Land-take resulting in habitat loss, fragmentation or degradation.	Permanent loss of habitat within the development footprint and access route.	Lands within the proposed footprint of the proposed development, access routes and adjacent lands that may become isolated or fragmented due to works.
Changes in water quality and quantity/distribution resulting in habitat loss or degradation.	Reduction in the quality of retained habitat or loss of habitat from surrounding areas as a result of surface water pollution.	Changes in surface water quality as a result of works, associated with the proposed development within surrounding waterbodies and associated habitats.
Noise and vibration resulting in disturbance.	Direct impact on feature species reducing their ability to forage or breed.	Generally assessed within 500m of the proposed works (e.g., for wintering birds), but can be significantly lower (e.g. 150 m for otter underground sites. And within 50m or less of the direct vicinity of the site for other mammals and breeding birds.
Cumulative effects with other plans and projects	Cumulative effects on KERs when combined with other plans and projects, due to their occurrence over time or concentration in a specific location.	Assessed within 500m of the site of works and other down and upstream within 5 km of the proposed development.

5.3 Ecological Evaluation and Impact Assessment

The basis of the assessment of the ecological value and significance of the proposed development site for habitats and species follows the Guidelines for Assessment of Ecological Impacts of National Road Schemes (National Roads Authority, 2009) and is consistent with the Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal and Marine (CIEEM, 2018). These guidelines set out the context for determining value on a geographic basis with a hierarchy assigned in relation to the importance of any particular receptor. The guidelines provide a basis for the determination of whether any particular receptor is of importance on the following scale:

- International
- National
- County
- Local Importance (Higher Value)
- Local Importance (Lower Value)

5.3.1 Assessing Ecological Value

The 'ecological value' of an area or feature is therefore defined with reference to geographical context. That is, whether it is valuable locally, regionally, nationally, or internationally. Ecologists assess this by reviewing survey outcomes. Key criteria include the presence of designated sites and whether the site or feature contains protected species or areas of high biodiversity. The criteria for ecological value are given in Table 2.

Table 2: Ecological Value Criteria

Ecological Value	Criteria
International	• European Sites, including Special Areas of Conservation (SAC) & Special Protection Areas (SPA). • Sites that satisfy 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. Sites 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) of the following: • Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or • Species of animals and plants listed in Annex II and/or IV of the Habitats Directive. Ramsar Sites • World Heritage Sites (Convention for the Protection of World Cultural & Natural Heritage, 1972). • Sites hosting significant species populations under the Bonn Convention • Sites hosting significant populations under the Berne Convention
National	• Natural Heritage Area (NHA) • proposed National Heritage Areas (pNHA) • Marine Nature Reserves (MNR). • Resident or regularly occurring populations (important at the national level) of the following: • Species listed on the relevant Red Data list.

Ecological Value	Criteria
	• Sites containing 'viable areas' of the habitat types listed in Annex I of the Habitats Directive.
Regional	• Resident or regularly occurring populations (assessed to be important at the Regional 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 listed on the relevant Red Data list. • Sites containing areas of the habitat types listed in Annex I of the Habitats Directive that do not satisfy the criteria for valuation as of International or National importance. • Regionally important populations of species or viable areas of semi-natural • habitats or natural heritage features identified in the National or Local Biodiversity Action Plan (BAP), if this has been prepared. • Sites containing semi-natural habitat types with high biodiversity in a regional context and a high degree of naturalness, or populations of species that are uncommon within the region. • Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.
Local	• Locally important populations of priority species or habitats or features of natural heritage importance 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 listed on the relevant Red Data list 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; • 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.

Ecological Impact Assessment must also consider the significance of effects expected to arise from a proposed development. CIEEM guidelines (2018) define a significant effect as:

"an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features'... or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site), broad (e.g. national/local nature conservation policy), or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local".

It also states that:
"an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project. A significant effect is a positive or negative ecological effect that should be given weight in judging whether to authorise a project: it can influence whether permission is given or refused and, if given, whether the effect is important enough to warrant conditions, restrictions or further requirements such as monitoring".

5.4 Predicted Impacts and Significance

These possible impacts have been assessed under the CIEEM (2018) and the National Roads Authority guidelines (NRA, 2009). Criteria for assessing the duration of impacts are used in line with EPA guidelines (EPA, 2002). These provide guidance on assessing the impact significance upon features of sites proposed for works. Impact significance must be given in the context of the ecological value of the site and features under study.

The 'ecological value' of an area or feature, therefore, is defined with reference to geographical context. That is, whether it is valuable locally, regionally, nationally, or internationally. Ecologists assess this by reviewing survey outcomes. Key criteria include the presence of designated sites and whether the site or feature contains protected species or areas of high biodiversity. The criteria for ecological value are given in Table 3 below.

Table 3: Ecological Value Criteria

Ecological Value		Description
Significant Negative Effect	**Major Adverse**	• Loss of, permanent damage to or adverse impact on any part of a site of international or national importance; • Loss of a substantial part or key feature of a site of regional importance; • Loss of favourable conservation status (FCS) of a legally protected species; • Loss of or moderate damage to a population of nationally rare species.
	Moderate Adverse	• Temporary disturbance to a site of international or national importance, but no permanent damage; • Loss of or permanent damage to any part of a site of regional importance; • Loss of a key feature of local importance; • A substantial reduction in the numbers of legally protected species such that there is no loss of FCS, but the population is significantly more vulnerable; • Reduction in the amount of habitat available for a nationally rare species, or
Ecological Value		**Description**

		species that are notable at a regional or county level.
No Significant Effect	**Minor Adverse**	• Temporary disturbance to a site of regional value, but no permanent damage; • Loss of, or permanent damage to, a feature with some ecological value in a local context but that has no nature conservation designation; • A minor impact on legally protected species but no significant habitat loss or reduction in FCS; • A minor impact on populations of nationally rare species or species that are notable at a regional or county level.
	Negligible	• No impacts on sites of international, national or county importance; • Temporary disturbance or damage to a small part of a feature of local importance; • Loss of or damage to land of negligible nature conservation value; • No reduction in the population of legally protected, nationally rare, nationally scarce or notable (regional level) species on the site or its immediate vicinity. • Beneficial and adverse impacts balance such that resulting impact has no overall effect upon the feature.
	Minor Beneficial	• A small but clear and measurable gain in general wildlife interest, e.g., smallscale new habitats of wildlife value created where none existed before or where the new habitats exceed in area that habitats lost.
Significant Positive Effect	**Moderate Beneficial**	• Larger new scale habitats (e.g., net gains over 1 ha in area) created leading to significant measurable gains in relation to the objectives of biodiversity action plans.
	Major Beneficial	• Major gains in new habitats (net gains of at least 10 ha) of high significance for biodiversity being those habitats, or habitats supporting viable species populations, of national or international importance cited in Annexes I and II of the Habitats Directive or Annex I of the Birds Directive.

5.4.1 Impact Duration and Likelihood

The duration of impact must also be considered when assessing overall ecological impacts. Criteria for assessment of duration of impacts used (EPA 2002): the following terms when quantifying duration:

Table 4: Impact Duration and Timescales

Impact Duration	Timescale
Temporary	Up to 1 year

Short-term	1-7 years
Medium-term	7-15 years
Long-term	15-60 years
Permanent	Over 60 years

The likelihood of impacts should also be defined. Assessment of the likelihood of impact followed CIEEM guidelines. The assessed likelihood is as follows:

Table 5: Likelihood and Probability of Impacts

Likelihood	Probability
Almost Certain	Probability estimated at greater than 95%
Probable or Likely	Probability estimated between 50% and 95%
Unlikely	Probability estimated between 5% and 50%
Extremely Unlikely	Probability estimated at less than 5%
Almost Certain	Probability estimated at greater than 95%

6 Ecological Assessment

6.1 Watercourses and Surface Water Bodies

No watercourses occur within the immediate site boundary. The nearest watercourse to the development site is the Mullaghmore stream, a tributary of the River Boyne, located 490m south of the development site. The Mullaghmore stream flows eastwards for approximately 4.5km before depositing into the River Boyne, providing connectivity with the River Boyne and River Blackwater SAC/SPA.

No impacts to water quality or deterioration in the quality of the River Boyne is anticipated as a result of the Proposed Development, given the significant buffered distance to the nearest watercourse and the lack of a hydrological connection.

6.2 Designated Sites

Sites designated for the conservation of nature in Ireland include:

- Special Areas of Conservation (SACs) and:
- Special Protection Areas (SPAs)
- Natural Heritage Areas (NHAs)
- proposed Natural Heritage Areas (pNHAs)

SPAs and SACs form the *Natura 2000* network of sites. SPAs and SACs are prime wildlife conservation areas in the country, considered important at both the European and Irish levels. SPAs and SACs are designated under EU Habitats Directive, transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), as amended.

Natural Heritage Area (NHA) is the basic designation for wildlife in Ireland. These areas are considered important for their habitats or plant and animal species. They first entered European Law under the 1976 Wildlife Act, were then transposed into Irish law through the 1997 Natural Habitats Regulations (S.I. No. 94 of 1997), and finally gained full statutory recognition in Ireland with the passing of the Wildlife (Amendment) Act 2000.

pNHA sites were published on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. These sites are designated as being of significance for species and habitats. While not afforded the same protection as sites protected under the Habitats Directive, they are subject to protection through the following mechanisms:

- Agri-environmental farm planning schemes such as ACRES (Formally the GLAS)
- Forest Service requirement for NPWS approval before they will pay afforestation grants on pNHA lands
- Recognition of the ecological value of pNHAs by Planning and Licensing Authorities.

All designated sites within close proximity of the proposed development were considered during the desktop study stage of this screening assessment to assess the potential for significant effects upon their Qualifying Interests/Special Conservation Interests and Conservation Objectives where available.

Table 6 details designated sites identified for the conservation of nature surrounding the proposed works. Maps of designated sites can be seen in Figure 3.

Table 6: Designated areas within 15km of the proposed development site

Site Code	Site Name Designation Site Code	Distance to the designated site (km)	Designation	Connectivity to the project site
2299	River Boyne and River Blackwater SAC	2.4	SAC	None
4232	River Boyne and River Blackwater SPA	2.5	SPA	None
1357	Trim	7	pNHA	None
1324	Jamestown Bog NHA	7.1	NHA	None
1592	Boyne Woods	8.2	pNHA	None
1579	Balrath Woods	12.4	pNHA	None
1591	Slane Riverbank	14.3	pNHA	None

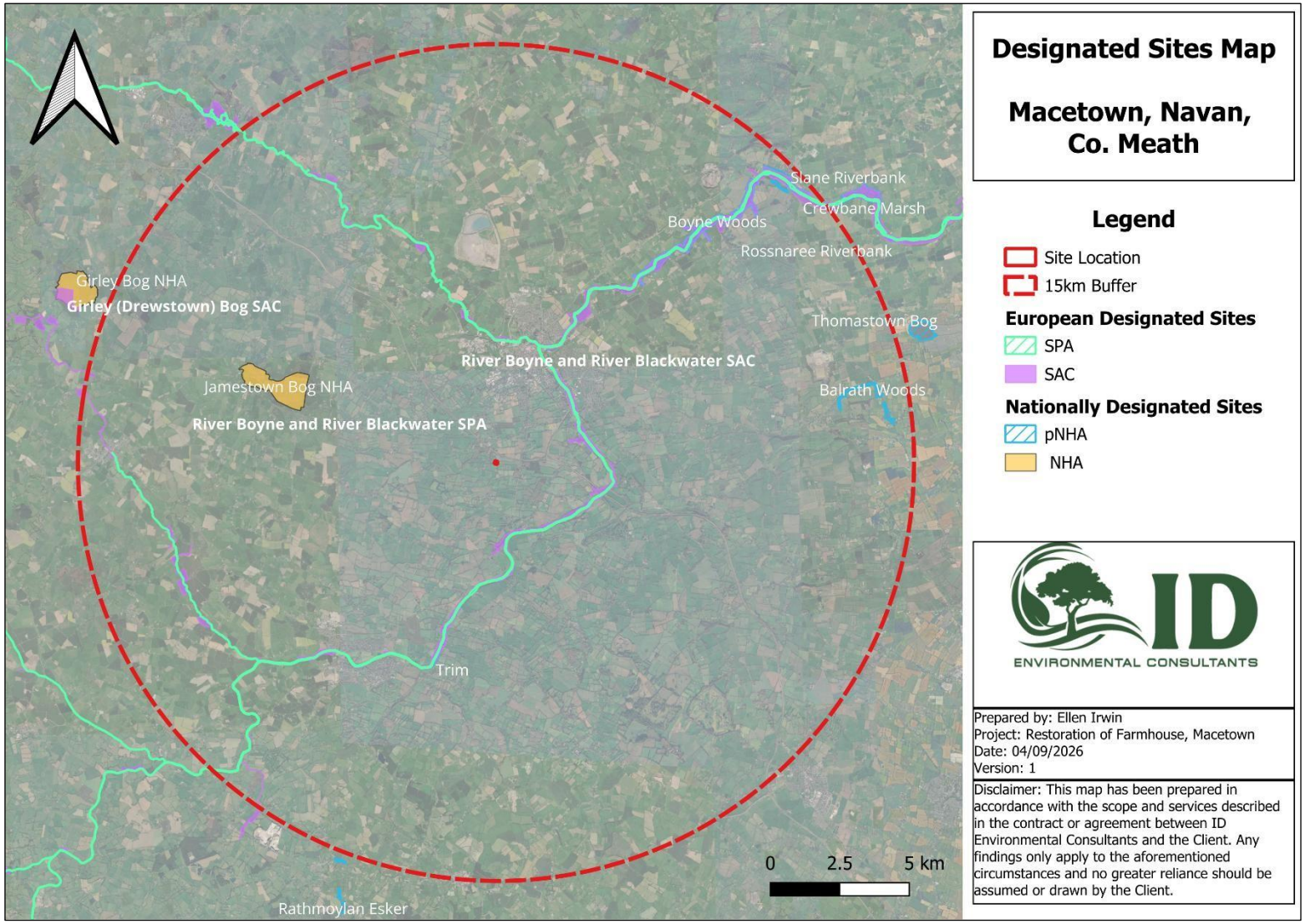
No possible connectivity exists between the proposed development and any European or Nationally designated site within or beyond 15km of the development site.

No risks to the conservation objectives or integrity of any nationally or internationally designated site are predicted as a result of the proposed works for one or a combination of the following:

- Significant buffer distance between the works area to the European site
- Lack of connectivity between the works areas and the designated area

- Size, scale and location of the proposed development
- The nature of the site's conservation objectives
- No impact or change to the management of any designated area; or
- No change to the chemical or physiological condition of any designated site as a result of the proposed works.

Figure 3: Designated Sites Map



6.3 Habitats and Flora

Habitats were identified, mapped, and classified and dominant plant species were noted in accordance with the guidelines given by Fossitt (2010). Habitats were classified as per Fossitt (2000). Plant nomenclature follows the BSBI's List of Accepted Plant Names (BSBI, 2007). The survey timings fall within the recognised optimum period for vegetation surveys/habitat mapping i.e. April to September (Smith et al., 2011). The habitat assessment surveys described in this report have been undertaken with reference to the following guidelines and interpretation documents:

- Fossitt, J.A. (2000) A Guide to Habitats in Ireland. The Heritage Council, Kilkenny.
- Smith, G.F., O'Donoghue, P., O'Hora, K. and Delaney, E., 2011. Best practice guidance for habitat survey and mapping. The Heritage Council: Ireland.
- JNCC. (2010). Handbook for Phase 1 habitat survey - A technique for environmental audit.
- Commission of the European Communities (2007) Interpretation manual of European Union habitats. Eur
    - 27. European Commission DG Environment.
- NPWS (2013) The Status of EU Protected Habitats and Species in Ireland. Habitat Assessments Volume 2. Version 1.1. Unpublished Report, National Parks and Wildlife Service. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- NPWS (2019).The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill

Habitats considered to be of ecological significance, particularly those having the potential to correspond to those listed in Annex I of the EU Habitats Directive 92/43/EEC, were identified and classified as Key Ecological Receptors (KERs). Field surveys focusing on flora and habitat were carried out in August 2026. A desktop review of available records from the National Biodiversity Data Centre (NBDC) indicates that there are no records of protected or rare flora within a 2 km radius of the subject site. Field surveys conducted on site also found no evidence of protected plant species within or adjacent to the proposed development area.

6.4 Habitat Description

The proposed site of works and surrounding area is dominated by fields of Improved Agricultural Grassland (GA1) and Dry Meadows and Grassy Verges (GS2). Vegetation across the site was dominated by common grassland species including Perennial Ryegrass *(Lolium perenne)*, dock *(Rumex obtusifolius)*, dandelion *(Taraxacum officinale)*, meadow buttercup *(Ranunculus acris)*, white clover *(Trifolium repens)* and self heal *(Prunella vulgaris)*.

The proposed site of works includes several derelict farmhouses constructed of limestone masonry and mortar, and associated outbuildings also constructed of limestone masonry and mortar, as well as metal-clad sheds. These buildings and structures conforms to the habitat classification Buildings and Artificial Surfaces (BL3).

A hedgerow (WL1), with a small dry ditch (FW4), was recorded south of the site along the roadway. Vegetation within the hedgerow was dominated by Ash *(Fraxinus excelsior)*, Willow *(Salix spp.)*, Wych elm *(Ulmus glabra)*, Hazel *(Corylus avellana)* and Ivy *(Hedera helix)*.

6.4.1 Invasive Species

The Wildlife Acts, 1976 and 2000, contain several provisions relating to Invasive Non-Native Species (INNS), covering several sections and subsections of the Acts. It is prohibited, without a licence, to plant or otherwise cause to grow in a wild state, in any place in the State, any species of flora, or the flowers, roots, seeds or spores of invasive flora listed on the Third Schedule.

Articles 49 and 50 of the aforementioned Acts set out the legal implications associated with alien invasive species and Schedule 3 (the Third Schedule) of the regulations lists non-native species subject to the restrictions of Articles 49 and 50, which make it an offence to plant, disperse, allow dispersal or cause the spread of invasive species.

No Third Schedule invasive species were recorded within or immediately adjacent to the proposed development site.

6.5 Otters

Otters, along with their breeding and resting places, are protected under the provisions of the Wildlife Act, 1976, as amended by the Wildlife (Amendment) Act, 2000. Otters have additional protection under the Habitats Directive, which is transposed into Irish law by the European Communities (Natural Habitats) Regulations (S.I. 94 of 1997), as amended. No otter records were identified within 2km of the proposed site of works. No suitable habitat for otters was found within or directly surrounding the proposed development site.

6.6 Other Fauna

Badgers (*Meles meles*) and their refugia are protected under the Wildlife (Amendment) Act 2000, the Wildlife Act 1976, and European legislation. No badger records were identified within 2km of the proposed site of works. No signs of badger were recorded within the survey area during field surveys in August 2026.

Both the Red Squirrel (*Sciurus vulgaris*) and the Pine Marten (*Martes martes*) are protected under the Irish Wildlife Act (1976), the Wildlife (Amendment) Act (2000), and the Bern Convention Appendix III. The European Union's Habitats and Species Directive further obliges Ireland to maintain the favourable conservation status of both species throughout their home ranges. No records of Pine Marten or Red Squirrel are found on the NBDC database for the area. No signs of either species were found within or surrounding the study area.

6.7 Bats

All bat species are protected by law in Ireland at a national and European level. Nationally, the Wildlife Act 1976 (amended 2000) makes it an offence to wilfully interfere with or destroy the resting or breeding place for bats. All species of Irish bats are listed under Schedule 5 of the Wildlife Act (1976), making it an offence to:

- Intentionally kill, injure, or take a bat
- Possess or control any live or dead specimen or anything derived from a bat
- Wilfully interfere with any structure or place used for breeding or resting by a bat
- Wilfully interfere with a bat while it occupies a structure or place that it uses for that purpose.

The EU 'Habitats' Directive (92/43/EC; transposed into Irish law by EC Birds and Natural Habitats Regulations (S.I 477 of 2011) provides legal protection for bats and their roosts at a European Union level. In addition, the Irish government are signatories of the 1979 Bonn 'Convention on the Conservation of Migratory Species of Wild Animals' and the 1982 Convention on the 'Conservation of European Wildlife and Natural Habitats'. Ireland must also fulfil commitments under the 1991 'Eurobats Agreement' to conserve bats in Europe. Under the EU Habitats Directive, lesser horseshoe bats are listed as an Annex II species (afforded special protection). All other Irish bat species are listed in Annex IV (general protection) of this directive.

Regulation 51(2) of the 2011 Regulations provides – ("(2) Notwithstanding any consent, statutory or otherwise, given to a person by a public authority or held by a person, except in accordance with a licence granted by the Minister under Regulation 54, a person who in respect of the species referred to in Part 1 of the First Schedule— (a) deliberately captures or kills any specimen of these species in the wild, (b) deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration, (c) deliberately takes or destroys eggs of those species from the wild, (d) damages or destroys a breeding site or resting place of such an animal, or (e) keeps, transports, sells, exchanges, offers for sale or offers for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive, shall be guilty of an offence."

6.7.1 Desktop Study

Prior to fieldwork, a desktop review of available information sources was undertaken to identify bat species likely to occur within the Proposed Development site and the surrounding area.

Sources consulted included:

- Bat Conservation Ireland National Bat Database
- National Biodiversity Data Centre online records
- National Parks and Wildlife Service Protected Species Database and online mapping • Article 17 conservation status reports (NPWS, 2025)

Bat records within a 10km (N86) radius of the Proposed Development were reviewed to identify species potentially present in the local area. Species distribution and habitat associations were also considered to identify any high-risk or edge-of-range species potentially using the wider landscape.

Table 7: Species records within 10km radius of the development site

Species	Count	Date	Database
Leisler's Bat (Nyctalus leisleri)	73	31/08/2022	National Bat Database of Ireland
Nathusius's Pipistrelle (Pipistrellus nathusii)	1	03/08/2015	National Bat Database of Ireland
Pipistrelle (Pipistrellus pipistrellus sensu lato)	12	01/07/2022	National Bat Database of Ireland

Species	Count	Date	Database
Soprano Pipistrelle (Pipistrellus pygmaeus)	87	31/08/2022	National Bat Database of Ireland
Brown Long-eared Bat (Plecotus auritus)	30	01/07/2022	National Bat Database of Ireland
Common Pipistrelle (Pipistrellus pipistrellus sensu stricto)	64	16/08/2022	National Bat Database of Ireland
Daubenton's Bat (Myotis daubentonii)	357	20/09/2021	National Bat Database of Ireland
Whiskered Bat (Myotis mystacinus)	1	31/08/2008	National Bat Database of Ireland
Natterer's Bat (Myotis nattereri)	8	31/08/2022	National Bat Database of Ireland

6.8 NBDC Bat Landscape Mapping

In addition, Bat Conservation Ireland's habitat suitability index[8], available on the NBDC online mapping portal, classifies the landscape within which the site is located as highly suitable for bats, with a score of 27.33; see Table 8 below.

Table 8: Bat Conservation Ireland's habitat suitability index

All Bats	**27.33**	Nyctalus leisleri	41
Pipistrellus pygmaeus	39	Myotis mystacinus	14
Plecotus auritus	33	Myotis daubentonii	35
Pipistrellus pipistrellus	44	Pipistrellus nathusii	8
Rhinolophus hipposideros	0	Myotis nattereri	32

6.8.1 Preliminary Bat Roost Assessment

A preliminary bat roost assessment of the existing buildings was undertaken in accordance with the Bat Conservation Trust (BCT) Good Practice Guidelines (2023). The assessment included an inspection of all buildings for signs of bat use and an assessment of potential roost features (PRFs).

The subject buildings have been designated as buildings A-F for the purpose of this report and are shown in Figure 5 below.

[8] Lundy, M.G., Aughney, T., Montgomery, W.I., & Roche, N. (2011) *Landscape conservation for Irish bats and specific roosting characteristics*. Bat Conservation Ireland. Accessed 15th May 2024.

- **Building A** – A derelict two-storey traditional farmhouse constructed of limestone masonry and mortar, with partially damaged external lime render, missing and damaged second-floor windows, and a partially damaged natural slate hipped roof.
- **Building B** – A derelict two-storey traditional farmhouse constructed of limestone masonry and mortar, with partially collapsed external walls and no surviving roof structure. A lean-to shed adjoins the southern elevation, comprising stone walls with a metal-clad roof.
- **Building C** – A single-storey limestone masonry and mortar farm outbuilding with an open A-frame roof structure and a partially damaged natural slate roof.
- **Building D** – An L-shaped farm outbuilding comprising a metal-clad shed, with areas of lime external render and an internal mud-wall finish.
- **Building E** – A derelict two-storey traditional farmhouse constructed of limestone masonry and mortar, with a partially collapsed natural slate roof.
- **Building F** – A single-storey farm outbuilding constructed of stone masonry with a metal-clad roof.

Figure 4: Onsite Buildings Map



No evidence of bat roosting activity, including droppings, urine staining, fur-oil marks or dead specimens, was identified during the initial ground-level inspection. The existing buildings were in relatively poor structural condition, with several visible defects that could provide access for bats. No obvious Potential Roost Features (PRFs) were identified externally. An internal inspection similarly identified no evidence of bat use.

Low Roosting Potential:

Based on the preliminary assessment, the Building was considered to have low potential for roosting bats. However, given the inherent uncertainty in assessing bat use of buildings and the potential for individual bats to use small or concealed features, a dusk emergence survey was undertaken to determine whether roosting bats were using the buildings.

Moderate Foraging Potential:

The surrounding landscape was assessed as providing limited foraging and commuting habitat for bats. The site lies within a rural area dominated by fields of improved agricultural grassland bounded by treelines and hedgerows. While these habitats provide some potential for opportunistic bat activity, the site contains no significant linear habitat features or other habitats considered to provide important foraging or commuting resources. The site's proximity to the M3 will also limit overall foraging potential within the wider landscape.

6.9 Dusk emergence surveys

A dusk emergence survey was undertaken on 27th August 2026 to establish whether bats were emerging from the existing buildings and to determine the nature and extent of any roosting activity. The survey began before sunset and continued for approximately 90 minutes after sunset. Table 9 provides survey details.

We obtained echolocation recordings using an Echo Meter Touch Pro 2 handheld detector. Recordings were retained for subsequent analysis. Bat echolocation calls were analysed using Wildlife Acoustics Kaleidoscope Viewer Pro, with recordings manually reviewed where required to confirm species identification. Bat activity was recorded as registrations/contacts per species, with each file representing a maximum recording period of 15 seconds; multiple calls or passes of the same species within an individual file were counted as a single registration.

Two thermal imaging cameras, a HIKMICRO Lynx LH25 3.0 and HIKMICRO Lynx LH35 3.0, were used to assist visual observation of the Building during the emergence survey.

Table 9: Details relating to bat surveys conducted on site in August 2026

Date	Survey Type	Survey Times	Weather	Temperature (°C)
27th August 2026 (Sunset 21:20)	Dusk Emergence	20:00 – 21:30	Partially overcast, no precipitation	14°C

6.10 Bat Activity Surveys

A dusk emergence survey was undertaken on 27th August 2026. A single common pipistrelle (Pipistrellus pipistrellus) was observed emerging from the easternmost hip of the roof void of Building A. The individual emerged at approximately 20:51, shortly after sunset.

A second observation of two common pipistrelles emerging from the same location was recorded at approximately 20:59. At 21:11, a common pipistrelle emerged from the side of the building. No additional emergence events were recorded from the Building during the survey.
The survey therefore confirmed the presence of a common pipistrelle roost comprising three individuals within the easternmost hip of the roof void of Building A. Common pipistrelle foraging activity was recorded within the central farmyard and along the access track to the south of the site. Two audio detections of soprano pipistrelle were made; these were identified as a commuting individual.

The bats were observed accessing the roof void through a small gap between the easternmost hip of the roof and the external wall of Building A. The gap appears to have formed gradually through weathering and erosion, allowing bats to fly up the external wall behind the gutter and into the roof void. Bats were only observed emerging from Building A; no bats were observed emerging from any other building on site.

Common pipistrelle is one of the most widespread and frequently recorded bat species in Ireland. The species is listed under Annex IV of the EU Habitats Directive and is afforded strict protection under Irish wildlife legislation.

Table 10: Summary of bat activity from emergence surveys

Date	Activity Summary
26th August	• Start 20:00 • 20:51 – first bat – commuting pip • 20:59 two common pips emerge from previously described location • 21:11 – common pip emerges from side of building (video) • 21:13 – common pass • 21:14 common PIP pass • 21:20 potentially re-entry • Survey concluded at 21:30

6.11 Indication of the significance of structures for bats

Four common pipistrelles (Pipistrellus pipistrellus) were observed emerging from Building A during the dusk emergence survey undertaken on 26th August 2026. No additional bats were observed emerging from any other building on site during the survey period, and only two further observations of common pipistrelles commuting across the site were recorded. Overall, bat activity associated with the site was therefore considered to be low.

The observation of just four emerging individuals is indicative of a low-level roosting use of Building A. No evidence of a maternity colony, hibernation roost, significant aggregation, or use of any building by multiple bats was recorded. The number of bats recorded emerging is considered low in the context of the potential roosting capacity of the species and the wider availability of buildings and other structures within the surrounding lands. No significant foraging activity was recorded during the emergence survey.

Overall, the survey results indicate that the existing site and associated buildings support a single, low-level common pipistrelle day roost rather than a roost of significant conservation importance. The loss of this individual roost is therefore considered to have a limited local impact. Nevertheless, as a confirmed roost, it is afforded legal protection, and the proposed demolition will be undertaken in accordance with the conditions of the relevant derogation licence, including providing suitable replacement roosting opportunities.

6.12 Derogation Licence Application

Due to the confirmed use of the subject Building by common pipistrelle (Pipistrellus pipistrellus) bats, an application for derogation under Regulation 54 & 54A of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, has been prepared and submitted to NPWS. The proposed demolition/alteration works therefore have the potential to disturb, damage, or destroy a breeding or resting place of a European Protected Species (Regulation 51). Accordingly, a derogation licence is required before works commence.

6.13 Birds

All birds seen and heard during the site survey were recorded. All birds recorded were typical species seen and heard in rural, agricultural areas. No SCI species were recorded within or surrounding the proposed development site. Several nest sites for swallows and other passerine species were found in the buildings and in scrub growing over the buildings.

6.14 Mammals

A mammal survey was undertaken across the Proposed Development site to assess its potential to support protected mammal species and to identify any evidence of their presence. The survey included searches for field signs associated with protected mammals, including pine marten (Martes martes), otter (Lutra lutra) and red squirrel (Sciurus vulgaris). No evidence of these species, or any other protected mammal species, was recorded during the survey. On this basis, no significant effects on protected mammals are anticipated as a result of the

6.15 Cumulative and In combination Effects

Several other projects have been considered as part of the screening process. A search of the planning records of Meath County Council and An Bord Pleanála was carried out on 04/09/2026 as part of the desktop study. We reviewed a number of planning applications. The greater majority of the schemes were for the construction or alteration of private dwellings. Such small scale projects in the area, such as residential developments, have negligible effects. Given the proposed development's small-scale, short-term construction phase and general operational phase consistent with the existing land use surrounding the site, it is not foreseeable that the proposed project will have any significant cumulative effects. As no impacts are predicted from the proposed development, no cumulative or in-combination impacts are therefore also predicted.

The Meath County Council Development Plan (2021-2027) was reviewed as part of the desktop study. The Development Plan was reviewed with particular regard to policies and objectives relevant to the potential ecological effects of the proposed development, including the protection of habitats and species, retention of existing ecological features, protection of water resources and the maintenance of ecological connectivity within the wider landscape.

In accordance with the requirements of the Habitats Directive, the Development Plan requires that all Projects and Plans that could affect the Natura 2000 sites in the same zone of impact of the Project site would be initially screened for Appropriate Assessment and, if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way, any in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located would be avoided.

6.16 Summary of Key Ecological Receptors (KERs)

Table 11: Ecological evaluation of ecological resources within and surrounding the subject lands

Habitat/Species/Site	Highest Ecological Valuation Level	Key Ecological Receptor inside the ZOI	Rationale
Designated Sites			
European sites	International	No	No possible connectivity exists between the proposed development and any European Designated Site within or beyond 15km of the development site.
pNHAs and Nationally Designated Sites	National	No	No possible connectivity exists between the proposed development and any Nationally Designated Site within or beyond 15km of the development site. For the pNHA's, given the lack of physical pathway, and the fact that they are designated primarily for habitats, flora and fauna occurring within their boundaries, and will not be subject to habitat loss, disturbance and/or displacement during the construction phase or any phase of the development, no impact is envisaged.
Habitats & Flora			

Dry meadows and grassy verges (GS2)	Low Local Importance	Yes	Grassy verge habitat of low ecological value.

Habitat/Species/Site	Highest Ecological Valuation Level	Key Ecological Receptor inside the ZOI	Rationale
Improved Agricultural Grassland (GA1)	Low Local Importance	Yes	Habitat of negligible ecological significance.
Hedgerow (WL1)	High Local Importance	Yes	Hedgerow recorded along southern boundary. Partial clearance may be required to facilitate the proposed development. No protected flora or fauna was recorded. Any required clearance works will take place outside of the bird breeding season (March-August inclusive) to avoid impacts to breeding birds.
Buildings and Artificial Surfaces (BL3)	Low Local Importance	No	Habitat of negligible ecological significance.
Fauna			
Bats	National importance	Yes	The proposed development site was recorded as having low bat roosting and foraging potential due to a lack of connectivity and a lack of suitable roost features. Four common pipistrelle (Pipistrellus pipistrellus) were observed emerging from Building A on site during dusk emergence surveys. This is assumed to be an opportunistic day roost and is not associated with any maternity roosts. Activity in the area was extremely low overall. NPWS has granted a derogation licence, and the mitigation measures discussed below have been integrated into the overall project.
Otters	National and International importance	No	No habitat suitable for otter was recorded within the ZOI of the proposed project. Therefore, the impact on otters can be classified as negligible.

Terrestrial mammals	High Local Importance	No	No other protected mammal species were recorded within the project ZOI.
Breeding Birds	High Local Importance	No	All works are confined to the existing site boundary within the rural area of Macetown. All birds recorded during field surveys were typical species seen and heard in rural, agricultural areas. No SCI
Habitat/Species/Site	**Highest Ecological Valuation Level**	**Key Ecological Receptor inside the ZOI**	**Rationale**
			species were recorded within or surrounding the proposed development site. The Proposed Development will not result in the significant loss of habitat suitable for breeding birds. Therefore, no impacts on breeding birds are predicted.
Cumulative and In Combination Impacts	-	No	Several other projects have been considered as part of the screening process. As part of the desktop study, a search of the planning records of Meath County Council and An Bord Pleanála was carried out, and a number of relevant planning applications were reviewed. Given the small scale, short-term construction phase, and the fact that the proposed development is consistent with existing land use in the area, the project is not expected to result in any significant in-combination effects with other plans or projects.

7 Ecological Impact Assessment

7.1 Birds – Construction Phase

All works are confined to the existing site boundary within the rural area of Macetown. All birds recorded during field surveys were typical species seen and heard in rural, agricultural areas. No SCI species were recorded within or surrounding the proposed development site. Some vegetation clearance will be required to facilitate the proposed development; however, given the limited extent of clearance and the low ecological value of the habitats affected, no significant impacts on birds are anticipated. Where practicable, vegetation clearance will be undertaken outside the bird breeding season (March to August inclusive) to avoid potential impacts on nesting

birds. Where vegetation clearance cannot be undertaken outside this period, the areas to be cleared will be inspected by a suitably qualified ecologist prior to works commencing to confirm the absence of active nests.

7.2 Birds – Operational Phase

No further impacts to birds are envisaged. However, the site has been recorded as supporting several Barn Swallow nesting sites. Barn Swallow nest boxes are proposed as compensation measures for the proposed development.

7.3 Bats – Construction Phase

The proposed works may directly affect bat fauna because a confirmed common pipistrelle (Pipistrellus pipistrellus) day roost is present within the existing dwelling. A dusk emergence survey undertaken in August 2026 confirmed an emergence event involving four common pipistrelles. No additional emergence events were recorded, and the survey recorded only two further observations of single common pipistrelle individuals commuting across the site. Overall, bat activity at the site was therefore considered low.

The proposed restoration of the existing building could result in the loss of a resting place used by a European Protected Species. Potential impacts associated with the proposed works include:

- Direct loss of the confirmed common pipistrelle day roost, through restoration of the existing building and removal of the roosting feature used by the bats;
- Potential disturbance to the roosting bats during restoration works, particularly if the roost is occupied when works commence;
- Temporary displacement of the bat species, requiring it to locate an alternative suitable roosting location within the surrounding area;
- Potential injury or mortality if restoration works were to commence while a bat was physically present within the affected roost feature; and
- Limited disturbance to commuting and foraging activity during construction. However, this is considered to be minor given the low level of activity recorded during the survey and the limited availability of suitable foraging habitat within the site.

No evidence of a maternity colony, hibernation roost, significant aggregation, or other roost of high conservation significance was identified. The potential impacts are therefore primarily associated with the loss of a single lowlevel day roost and the potential disturbance of four individual bats during restoration, rather than impacts on a significant bat roost or important local foraging or commuting resource. Impacts are limited to localised, minor, temporary effects of local significance.

7.4 Bats – Operational Phase

The principal potential operational-phase effect would arise from the permanent loss or alteration of the existing common pipistrelle day roost as a consequence of restoring the dwelling.

However, the completed development will incorporate replacement roosting provision in accordance with the mitigation and compensation measures specified in this assessment and the associated NPWS derogation licence. This will ensure that suitable roosting opportunities remain available to common pipistrelle within the site following completion of the works.

The proposed development comprises a one-off residential development, and its operation is not expected to result in a substantial increase in disturbance relative to typical residential activity. Provided replacement roosting features are appropriately located and maintained, routine occupation of the dwelling is not expected to affect their continued suitability for bats adversely.
External lighting, where required, will also be designed and positioned to avoid unnecessary illumination of replacement bat roosting features and their associated access and emergence points.

With the implementation and long-term retention of the mitigation and compensatory measures prescribed within the associated derogation licence, no significant adverse operational-phase effects on bats are predicted.

8 Avoidance Measures

Mitigation is prescribed in accordance with the EPA draft guidance on EIAR (EPA, 2017), which requires avoidance as the first approach. Where this is not feasible, adopt measures to prevent impacts that could give rise to adverse effects (e.g., the design of bunded chemical storage). Where impacts cannot be avoided (e.g., noise generation), mitigation is required to reduce effects and limit the receptor's exposure to an acceptable level (often achieved by interrupting the pathway between the source and receptor). The applicant and the construction team (site manager, project environmental manager, and site operatives) are primarily responsible for implementing these measures.

8.1 Birds

- The development site will not be lit at night.
- Any trimming of vegetation should be carried out outside of the bird breeding season (March 1st – August 31st). If vegetation clearance must occur during the breeding season, an Ecological Clerk of Works (ECoW) must be appointed. The ECoW will examine the construction/clearance area(s) no more than 48 hours before works. These surveys will determine the presence/absence of nesting birds, and if active nests are present, no cutting will take place. They will have the authority to include a buffer zone if needed, until any species have moved. The specifications of the artificial nesting sites are provided below:
- Purpose-built artificial barn swallow nest cup suitable for Hirundo rustica[9].

[9] https://www.quickcrop.ie/products/barn-swallow-nest-10b.html?gad_source=1&gad_campaignid=21189034992&gbraid=0AAAAAD0S45dgLKN6kmDfyZcUrr1mZqyjI&gclid=Cj0KCQjw5P7UBhDaARIsAOSlS1P0h5RUs0uHv6258XI0y_qtERUTJmMgvfNWWwWSI78Y6Swz4li8N08aAi8pEALw_wcB

- Approximate dimensions: 100–150 mm deep × 200–250 mm wide, or equivalent commercially available swallow nest cup. Install a minimum of five artificial nest cups together, where space permits, as barn swallows can nest semi-colonially.
- Located within a suitably sheltered building, outbuilding, or open-fronted shed that is covered or overhanging and provides protection from direct rainfall and prevailing weather.
- Nests should generally be installed at least 2 m above ground level, preferably approximately 2.5–4 m where the structure allows.
- A minimum clearance of approximately 150 mm should be retained above the upper edge of the nest cup, allowing birds sufficient space to access and occupy the nest. A clear and unobstructed flight path shall be maintained to the nesting location. Where nests are located within a building or structure.

- Where installed in an open-sided structure, nests should preferably be positioned away from the prevailing south-westerly weather and protected from direct rainfall.

- The nests should be installed before the first breeding season following completion of the development, preferably by March, in advance of the main return of barn swallows to Ireland.

8.2 Avoidance Measures - Bats

Due to the discovery of the minor day roost of common pipistrelle, a bat derogation licence from the National Parks and Wildlife Service has been submitted permitting the disturbance of a bat roost before restoration of the Building in which they were noted. This should be obtained after planning permission has been granted but before any construction works commence on site.

8.2.1 Bat Roosting Features

- Contractors must be made aware of the potential presence of bats and act with vigilance when disturbing fascia/soffits and roof slates/sheets.
- Demolition of the buildings noted as containing roosting habitat should take place between 1st September – 1st May (Marnell et al., 2022).
- Bat boxes will need to be provided as part of the site development to offset the loss of a minor day roost. This will be specified in the derogation licence application. A total of 5 bat boxes will be required to offset the loss of this minor roost. Specifications for the types and settings of bat boxes are provided below:
- 3x schwegler bat boxes (model 1FF) and 2x 1FS Schwegler Large Colony Bat Boxes should be installed around the site.
- Alternatively, 3 built-in bat roosts, such as the Schwegler Bat Tube 1FR and 2FR, could be built into the stonework of some of the buildings on the site.
- Bat boxes should be placed in areas where no artificial lighting has been installed and away from high walls or any other feature that would lead to predation from cats.
- Bat boxes should be at least 3m off the ground;

- Sheltered from strong winds and exposed to the sun for part of the day (usually south, southeast or southwest).

8.2.2 Lighting and Disturbance

To minimise potential disturbance to commuting or foraging bats:

- Any necessary external lighting should be directional, low intensity, and designed to avoid light spill onto adjacent vegetation, rooflines, and boundary features.
- Minimise lighting to what is strictly required for health and safety purposes, and review existing lighting to ensure any additional lighting does not result in cumulative lighting impacts, increased sky glow, or over-lighting.
- Avoid lighting on key habitat features. Features important for bats, such as hedgerows, treelines, watercourses, and riparian areas, are key ecological corridors and should be kept dark or near-dark. Buildings and sheds, particularly older buildings, may contain bat roosts, and these should not be lit up.
- All luminaires should lack UV elements when manufactured. Do not use metal halide or fluorescent sources.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce the blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- Column heights should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used.
- Luminaires should always be mounted horizontally, i.e. no upward tilt.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.
- Dimming or part night lighting should be considered. A control management system can dim (typically to 25% or less) or turn off groups of lights when not in use.

8.2.3 Timber Treatment (Applicable to Entire Roof Space)

To avoid potential harm to bats from chemical exposure:

- Only bat-safe timber treatment products shall be used in the roof space.
- Where replacement timbers are required, pre-treated (pressure-treated/tanalised) timber should be used, as this ensures adequate drying prior to installation.
- If on-site timber treatment is necessary, only products listed as bat-safe (see Appendices) shall be used, and sufficient drying time must be allowed prior to installation.
- The use of solvent-based or non-approved timber treatment chemicals is strictly prohibited.
- Pre-treated timber is the preferred approach, as it reduces risks associated with chemical vapours and insufficient curing time. Predicted Residual Impacts of the Proposed Development

Following full implementation of the mitigation and recommended measures, residual impacts on biodiversity vary from imperceptible to not significant for the proposed project.

9 Conclusion

The Ecological Impact Assessment has considered the potential effects of the Proposed Development on habitats, flora and fauna during both the construction and operational phases. The site is located within the rural, agricultural area of Macetown and is of generally low ecological value. No Annex I habitats or habitats of high or higher local ecological value were identified within the Proposed Development site. No rare, threatened or protected plant species, including species listed under the Flora Protection Order 2022, were recorded.

Potential impacts on birds are considered negligible given the limited extent of vegetation clearance, the low ecological significance of the habitats affected and the lack of SCI species recorded during site surveys. Measures have nevertheless been prescribed to protect breeding birds, including undertaking vegetation clearance outside the main breeding season where practicable and requiring pre-clearance checks by an Ecological Clerk of Works where clearance during this period cannot be avoided.

The principal ecological constraint identified relates to the confirmed presence of a common pipistrelle (Pipistrellus pipistrellus) day roost within the existing Building A. The roost is considered of low conservation significance, comprising four common pipistrelle individuals, with no evidence of a maternity colony, hibernation roost, or other significant aggregation. Restoration of the building will result in the loss of this resting place and therefore requires appropriate measures to avoid injury or mortality and to compensate for the loss of the roosting feature. A derogation licence from the National Parks and Wildlife Service has been sought for restoring the building containing the roost. Mitigation includes appropriate timing and supervision of demolition works, provision of replacement bat habitat, and implementation of sensitive lighting and other measures to minimise disturbance to bats during construction and operation.

The ecological mitigation and avoidance measures identified within this EcIA will be implemented during the construction phase. Following full implementation of these measures, residual effects on biodiversity are predicted to range from imperceptible to not significant.

Accordingly, subject to implementation of the avoidance, mitigation and compensatory measures prescribed within this EcIA, including compliance with the requirements of the agreed NPWS bat derogation licence, the Proposed Development is not expected to result in any significant adverse effects on biodiversity during either the construction or operational phases.

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Appendix 1: Site Photos

Propsoed Site of Works and Derelict Farm Buildings	Site Access Route
	
Dry Meadow and Grassy Verges (GS2) habitat across the Development Site	**Derelict Farmhouse Building**
	