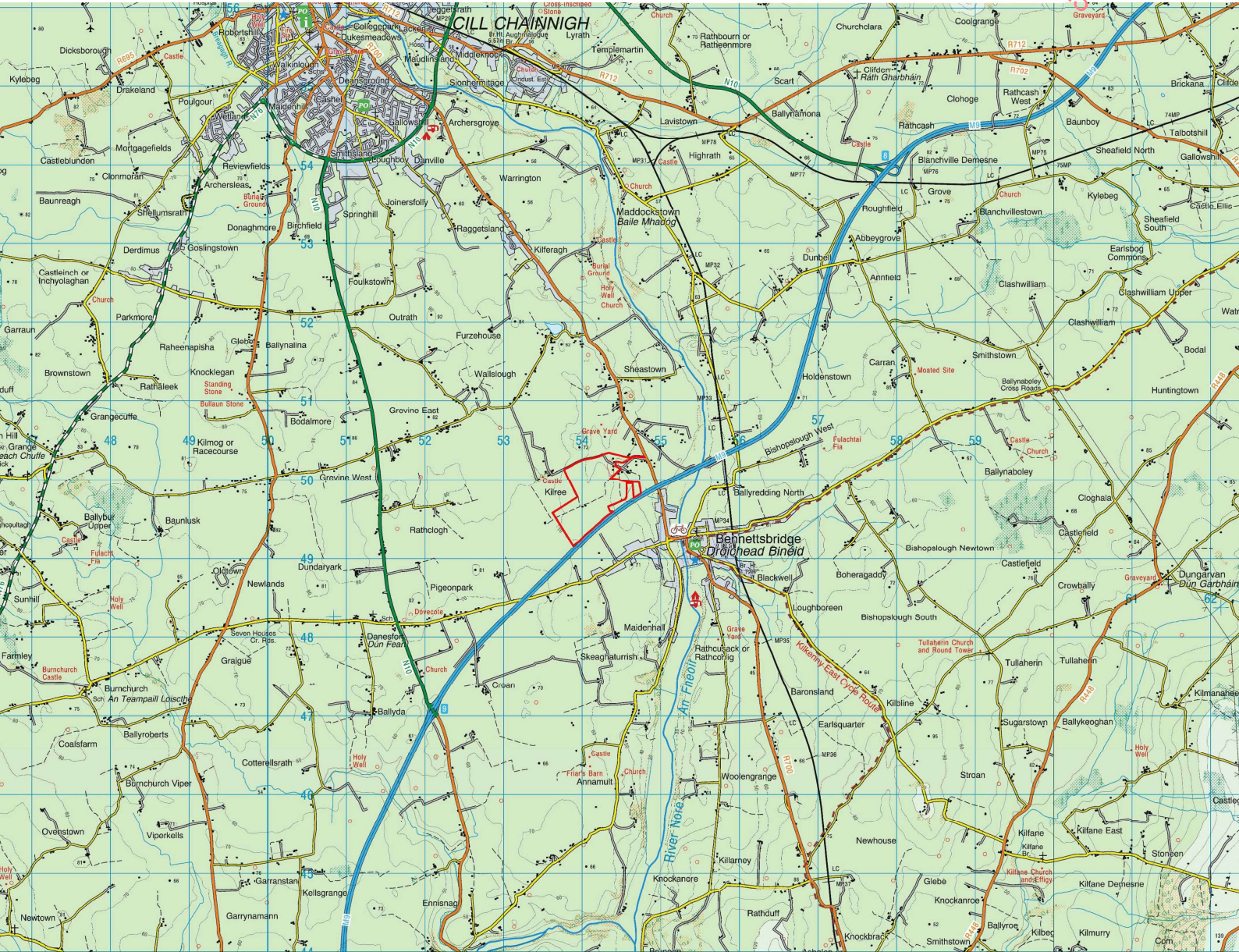


CHAPTER 6

BIODIVERSITY

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JULY 2025

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CHAPTER 6: BIODIVERSITY

Introduction

Background

6.1 This Biodiversity chapter provides an Ecological Impact Assessment (EcIA) undertaken by Green and Blue Ecology acting on behalf of Quarry Consulting to inform the wider Environmental Impact Assessment (EIA) process and preparation of the Environmental Impact Assessment Report (EIAR) on the likely significant impacts on biodiversity from the proposed continuation of use and lateral extension to an existing limestone quarry at Kilree, Bennettsbridge, Co. Kilkenny (refer to EIAR Figure 1.1).

Purpose of the Ecological Impact Assessment

- 6.2 The EcIA can be considered as having three main purposes:
- to provide an objective and transparent assessment of the ecological effects of the proposed development and the implications on biodiversity;
 - to permit objective and transparent determination of the consequences of the proposed development in terms of national, regional and local policies relevant to nature conservation and biodiversity; and
 - to demonstrate that the proposed development will meet the legal requirements relating to habitats and species.
- 6.3 This EcIA has been undertaken in accordance with the guidelines published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹ 'the CIEEM EcIA Guidelines' and with respect to the Environmental Protection Agency's (EPA) guidelines for carrying out Environmental Impact Assessment Reports².
- 6.4 The assessment follows a standard approach based upon: the description of the existing baseline conditions within the application site; the determination of important ecological features; and the identification of all potentially significant ecological effects from the proposed continuation of use and lateral extension to an existing quarry at Kilree. The assessment also considers the likelihood of any cumulative effects, i.e. those resulting from the proposed development and other plans or projects on relevant ecological features.
- 6.5 Where a negative impact has been identified, suitable mitigation measures to prevent, reduce or offset the level of impact are provided, or where mitigation is not possible, enhancement and compensation measures are detailed to ensure compliance with nature conservation legislation and to address any potentially significant effects on biodiversity.
- 6.6 Where appropriate this Chapter also identifies how mitigation, enhancement and compensation measures will / could be delivered along with the requirements for post-construction monitoring, maintenance or management.

¹ CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal and Marine*. Version 1.3 dated September 2024. Chartered Institute of Ecology and Environmental Management, Winchester.

² Environmental Protection Agency (2022). *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*. Environmental Protection Agency. Johnstown Castle Estate, Co. Wexford.

- 6.7 Any residual effects arising, following implementation of mitigation and enhancement measures, are then identified and assessed, with any significant effects clearly described.

Legislative and Policy Context

Legislation

- 6.8 Relevant legislation underpinning the conservation of designated sites, habitats and species is summarised in Table 6.1.

Table 6-1: Relevant Legislation

Legislation	Description
The Wildlife Act 1976 (as amended)	The Wildlife Act is the primary legislation in Ireland which protects animals, birds, plants and their habitats. It also allows the designation of Natural Heritage Areas (NHA) and statutory Nature Reserves and the regulation of hunting and controls in wildlife trading.
The Flora (Protection) Order 2022	The Flora (Protection) Order 2022 provides statutory protection to a number of rare plant species in Ireland from being wilfully cut, picked uprooted or damaged or part of the plants removed.
European Communities (Birds and Natural Habitats) Regulations 2011 (as amended)	The European Communities (Birds and Natural Habitats) Regulations 2011 transpose into national law European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) and Directive 2009/147/EC on the Conservation of Wild Birds (The Birds Directive) that provides for the designation and protection of 'European sites' including Special Areas of Conservation (SAC) and Special Protection Area (SPA), the protection of 'European Protected Species', and the adaptation of planning and other controls for the protection of European Sites. The regulations introduce a review procedure for plans and projects likely to significantly affect a European site, and licensing requirements for developments that may affect a European protected species

Planning Policy

National

- 6.9 The 2025 National Development Plan review 2021-2030 sets out the infrastructure and investment priorities that underpin the implementation of the National Planning Framework and sets out annual sectoral capital allocations from 2026 to 2030, and overall capital expenditure ceilings to 2035. The National Development Plan details the main investment projects, programmes and priorities in Ireland during the lifetime of the Plan.
- 6.10 The National Planning Framework contains a set of national objectives and key principles as a framework to guide development and investment by empowering each region to lead in the sustainable planning and development of their communities.

Regional

- 6.11 The Regional Spatial and Economic Strategy 2020-2032 for the Southern Region sets out the long-term spatial planning strategy, covering the counties of Cork, Kerry, Limerick, Tipperary, Waterford, Carlow, Kilkenny and Wexford. It aims to balance regional growth through the implementation of the National Planning Framework.

Local

- 6.12 Planning policy at the local level is provided by the Kilkenny County Development Plan 2021-2027 adopted on 3rd September 2021. The Kilkenny County Development Plan contains a number of policies relevant to biodiversity that are summarised at Appendix 6A.

Biodiversity Planning

- 6.13 Ireland's National Biodiversity Plan 2023-2030³ identifies actions towards understanding and protecting biodiversity in Ireland with the vision "*that biodiversity and ecosystems in Ireland are conserved and restored, delivering benefits essential for all sectors of society and that Ireland contributes to efforts to halt the loss of biodiversity and the degradation of ecosystems in the EU and globally*".
- 6.14 Local Biodiversity Action Plans have been produced by some County Councils, among them Kilkenny's Biodiversity Plan 2025-2030, which identifies objectives and actions in order to protect, record, conserve and restore biodiversity at a local level during the lifetime of the plan.

Assessment Methodology and Significance Criteria

Area of Study

- 6.15 The area of study was defined on a spatial scale at which ecological features could be affected by the proposed continuation of use and lateral extension to the existing limestone quarry at Kilree. This included all the land lying within the application site as well as ecologically sensitive features within the wider surrounding area with the potential to be directly or indirectly affected by the proposed development.
- 6.16 Based on size and nature of the proposed development and the local landscape it is considered that the maximum extent of any potential zone of influence over which ecological features may be affected by biophysical changes as a result of the proposed development and associated activities would not extend beyond 2km from the boundary of the application site.

Establishing Baseline Ecological Conditions

- 6.17 Baseline ecological data was collated through a combination of desk-based studies and field survey consistent with current standard methodologies and published guidelines. The scope of the ecological field surveys was defined on the basis of known and potential ecological interest within the area of study, and best practice⁴.

³ National Parks and Wildlife Service (2023). Ireland's 4th National Biodiversity Plan 2023-2030. Government of Ireland.

⁴ Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. Chapman and Hall (E & F N Spon), London.

- 6.18 Table 6.2 provides a summary of the ecological scope of works and the methods used to establish the ecological baseline conditions within the study area.
- 6.19 Over and above the scope of works in Table 6.2, it was deemed that no other specialist surveys were necessary in respect to the habitats present at the application site and their potential to support protected species.

Table 6.2: Ecological Scope of Works and Methodologies

Study / Survey	Scope of Works	Study Area	Methodology
Desk-based study	Statutory and non-statutory designated sites	All sites within a 2km radius of the application site	Web-search including the National Parks and Wildlife Service (NPWS) interactive mapping facility (https://www.npws.ie).
	Protected, rare and notable species	2km grid squares encompassing the application site (grid square S54J, S54P, S55F and S55K).	Web-search including information held by the NPWS and the National Biodiversity Data Centre (NBDC) (https://www.biodiversityireland.ie) on 20 th July 2024 and 7 th April 2025.
Habitat Survey	To record and classify the habitat types and appraise on the likely presence / absence of protected species	Application site	Site visit and walkover survey by Steve Judge MCIEEM of Green & Blue Ecology on 24th July 2024. Standard approach to the classification and mapping of habitats in accordance with Fossitt (2000)⁵ to Level 3 and target notes where applicable to describe any feature of particular ecological interest. Extension of Habitat Survey method to include an assessment of habitats for evidence of, or their potential to support protected, rare or notable species (including mammals, birds, reptiles, amphibians and invertebrates) and any other important ecological feature that may require mitigation or an ecologically sensitive design in respect of the proposed development.

⁵ Fossitt, J.A. (2000). *A Guide to Habitats in Ireland*. Reprint 2007. The Heritage Council, Kilkenny, Ireland.

Hedgerow Appraisal	To assess the conservation value of hedgerows / treelines	Application site (proposed lateral extension area)	A detailed assessment of the hedgerows within and along the boundaries of the application site was undertaken by Green & Blue Ecology during the Habitat Survey. Each hedgerow was assessed against the criteria for determining the 'significance' of hedgerows under the Hedgerow Appraisal System (HAS) ⁶ based on ranking the hedgerows on a scale of 0 (low significance) to 4 (highly significant) in five categories of significance including: historical; species diversity; structure, construction and associated features; habitat connectivity and landscape.
Tree Survey	To record information on trees growing on trees growing on or immediately adjacent the proposed extension area of the quarry.	Application site (proposed lateral extension area)	An inspection of trees and/or groups of trees was carried out by Timberland Forestry on 8 th May 2025. The inspection was to assess and record information about the trees and their condition.
Bat Survey	To provide baseline information on the species of bat present and how these species may be using any particular area for roosting, foraging and/or commuting	Application site (proposed lateral extension area)	A preliminary ecological appraisal (PEA) of the proposed lateral extension area was carried out as part of the Habitat Survey carried out at this site on 24 th July 2024 to assess and record any habitats suitable for bats to roost, commute and forage.

⁶ Foulkes, N., Fuller, J., Little, D., McCourt, S. and Murphy, P. (2013). *Hedgerow Appraisal System - Best Practice Guidance on Hedgerow Survey, Data Collation and Appraisal*. Woodlands of Ireland, Dublin.

Environmental Impact Assessment Report

Client: Bennettsbridge Limestone Quarries

Ref. No.: 63.01

Project: Proposed Continuation of Use & Lateral Extension to an Existing Limestone Quarry at Killee, Co. Kilkenny

			A manual bat activity survey of the study area was undertaken by Steve Judge MCIEEM of Green & Blue Ecology at dusk on 8th May 2025 comprising of a Night-time Bat Walkover (NBW) based on a transect encompassing as far as practically possible the proposed lateral extension area, but especially areas of likely higher value for commuting and foraging bats. The dusk NBW commenced 30 minutes before local sunset time and continued for approximately 2 hours after sunset using an Echo Meter Touch 2 Pro detector to detect and record any bats.
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Uncertainty of Data and Limitations

- 6.20 The lack of evidence of any one particular protected species does not necessarily preclude its presence at the site either at this current time or in the future. It is considered however, that the timing of the site visit was suitable for protected species and their habitat-based assessment, as most species would have been active during this time and provided evidence of their presence.
- 6.21 An area in the southern part of the block of woodland, within the site of the proposed lateral extension, were inaccessible due to very dense vegetation. It was therefore not possible to survey the entire woodland and whilst there is the possibility that this area may support important features, it is considered a low risk of presence based on the extent of the woodland surveyed, inspection of aerial photographs and planting scheme. However, a precautionary approach has been taken to inform the assessment where it is considered there is the potential for protected species to be present at this location.

Assessment Methodology

Determining Ecological Importance

- 6.22 In accordance with the CIEEM guidelines only ecological features (habitats, species, ecosystems and their functions/processes), which are considered to be important and potentially affected by the project should be subject to detailed assessment. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable.
- 6.23 CIEEM suggest that to ensure a consistency of approach, ecological features (designated sites, habitats and species) are valued in accordance with their geographical frame of reference. For the purpose of this assessment the geographical frame of reference defined by Transport Infrastructure Ireland⁷ has been used, as detailed below:
- International;
 - National;
 - County;
 - Local (higher); and
 - Local (lower).
- 6.24 Some features can already be recognised as having ecological value, for example they may be designated as statutory or non-statutory nature conservation sites. Other ecological features may require an evaluation based upon their previously un-assessed biodiversity value and professional judgement. A summary of the criteria used in the evaluation of designated sites, habitats and species is provided in Table 6.3.

⁷ NRA (2009). *Guidelines for Assessment of Ecological Impacts of National Road Schemes*. Revision 2. National Roads Authority, Dublin.

Table 6.3: Criteria for the Evaluation of Ecological Features

Value	Criteria
International	An internationally designated site or proposed site including SAC, Site of Community Importance (SCI), SPA, or Ramsar site, or an area which has been determined meets the published selection criteria for such designations, irrespective of whether or not it has yet been notified. World Heritage Sites, where the ecological feature assessed is an intrinsic part of the natural heritage value that led to the designation. An intrinsic part of the core area of a designated Biosphere Reserve. Undesignated sites containing 'best examples' of Annex I habitats under the EU Habitats Directive. Major designated salmonid waters. A resident or regularly occurring population of an internationally important bird species listed in Annex I and/or referred to in Article 4(2) of the EU Birds Directive and/or a species of animal or plant listed in Annex II and/or IV of the EU Habitats Directive and which is threatened or rare in and which is threatened or rare in Ireland or of uncertain conservation status or of global conservation in the National Biodiversity Plan. A resident or regularly occurring nationally significant population or of any internationally important species representing greater than 1% of its international population.
National	A nationally designated site or proposed as a National Heritage Area (NHA) or statutory Nature Reserve or Refuge for Flora and Fauna, or an area fulfilling the criteria for designations, irrespective of whether or not it has yet been notified. Undesignated sites containing good examples and viable areas of Annex I habitats under the EU Habitats Directive. A resident or regularly occurring population (>1% of the national population) of a nationally important species which is protected under the Wildlife Acts as amended or listed on a relevant Red Data list.
County	Areas identified as Areas of Special Amenity, subject to a Tree Preservation Order or Area of High Amenity where designated on the basis of their ecological value. Site containing area or areas of habitat types listed in Annex I of the EU Habitats Directive that do not fulfil the criteria for valuation of International or National importance. A resident or regularly occurring locally significant population (>1% of the county population) assessed of importance of a county important species and/or a species protected under the Wildlife Acts or listed in Annex I of the EU Birds Directive, Annex II and/or IV of the EU Habitats Directive or on a relevant Red Data list assessed to be important at County level. County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified within the NBP and/or Local Biodiversity Action Plan. Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county.

Value	Criteria
	Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.
Local (higher)	Locally important populations of priority species or habitats or natural heritage features identified in any Local Biodiversity Action Plan. A resident or regularly occurring locally significant population (>1% of the local population) and/or a species protected under the Wildlife Acts or listed in Annex I of the EU Birds Directive, Annex II and/or IV of the EU Habitats Directive or on a relevant Red Data list assessed to be important at the Local level. Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality. Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.
Local (lower)	Sites containing small areas of semi-natural habitat or features that are of some local importance for wildlife.

Assessment of Potential Impacts

- 6.25 The assessment of potential ecological impacts has been carried out in accordance with the guidelines published by CIEEM and EPA and be summarised as:
- the identification of the range of potential impacts that may arise from the proposed development;
 - the consideration of the systems and processes in place to avoid, reduce and mitigate the possible effects of these impacts;
 - the identification of opportunities for ecological enhancement within the development;
 - an assessment of the residual impacts, following consideration for the implementation of avoidance, mitigation and enhancement measures; and
 - where necessary the identification of compensation required to offset any residual effects.
- 6.26 Table 6.4 provides a summary of the criteria used to evaluate the residual impacts and assess the significance of any such impact.

Table 6.4: Key Considerations when Characterising Impacts

Value	Criteria
Direction of impact	Positive (a change that improves the quality of the environment) or Negative (a change which reduces the quality of the environment)
Probability of occurring	Broadly defined on 4 levels: Certain (95% chance or higher), Probable (above 50% but below 95%), Unlikely (above 5% but less than 50%) and extremely unlikely (less than 5%)
Magnitude	Size, amount, intensity and volume of any impact on any particular feature including any severity of effect, based on EPA's guidance, as imperceptible, slight, moderate, significant and profound.
Duration	Effects may be described, based on EPA's measures, as short (1 to 7 year), medium (7 to 15 years) or long-term (15 to 60 years) and permanent or temporary in ecological terms (e.g. within the lifetime of the species affected).
Frequency of timing	The number of times an activity will occur and timing of an activity
Reversibility	Whether or not the effect can be reversed from spontaneous recovery or which may be counteracted by mitigation within a reasonable timescale

- 6.27 Impacts are defined as being negative or positive. The term '*significant*' is independent of the value of the receptor. A significant impact is defined as an impact on the integrity of a defined ecosystem, and/or an action that undermines the conservation objectives (either specific or broad) of an important ecological feature.
- 6.28 Where a potential negative impact has been identified, mitigation, enhancement and/or compensatory measures have been formulated using best practice techniques and guidance to prevent, reduce or offset a significant effect. The degree of confidence in the likely success of mitigation or compensation, based upon published studies and the experience of the assessor, is also made and any uncertainties are clearly expressed.
- 6.29 The final part of the assessment is to determine the significance of the residual ecological impacts of the proposed development and also describe the implications of these operations from a legal perspective.

Avoidance, Mitigation, Compensation and Enhancement

- 6.30 A sequential process has been adopted to avoid, mitigate and compensate for ecological impacts. This is often referred to as the '*mitigation hierarchy*'.
- 6.31 It is important for the EIAR to clearly differentiate between avoidance, mitigation, compensation and enhancement and these terms are defined here as follows:
- Avoidance is used where an impact has been avoided e.g. through changes in scheme design;
 - Mitigation is used to refer to measures to reduce or remedy a specific negative impact in situ;

- Compensation describes measures taken to offset residual effects, i.e. where mitigation in situ is not possible; and
- Enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

Assessment of Cumulative Impacts

- 6.32 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a particular location. This EclA assesses the potential cumulative impacts from the proposed development with other projects which could include:
- proposals for which consent has been applied but which are awaiting determination;
 - projects which have been granted consent but which have not yet been started or which have been started but are not yet completed (i.e. under construction);
 - proposals which have been refused permission but which are subject to appeal and the appeal is undetermined;
 - constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline; or
 - developments specifically referenced in a National Policy Statement, a National Plan or a Local Plan.

Baseline Conditions

- 6.33 This section provides an overview of the existing ecological baseline conditions at the application site for the proposed continuation of use and lateral extension to the existing limestone quarry at Kilree and within the wider surrounding environment.

General Site Description

- 6.34 The existing limestone quarry is located in the townland of Kilree, approximately 1km north west of the village of Bennettsbridge and 6.5km south east of Kilkenny city centre, Co. Kilkenny.
- 6.35 The application site covers approximately 62 hectares (ha). The existing operational quarry covers an area of approximately 36.5ha with a consented extraction area of 13.4ha and down to 12 metres Ordnance Datum (mOD). The proposed lateral extension area covers approximately 24.5ha of agricultural land lying to the west of the existing quarry.
- 6.36 The existing quarrying operations comprise of the extraction of limestone using blasting techniques which is then processed (crushing and screening) to produce a range of aggregate materials and lime (agricultural and calcium carbonate).
- 6.37 Existing manufacturing plants at the quarry include a precast manufacturing facility and associated ancillary works for the manufacturing of concrete products, batching of lime products, general storage of products and plant.
- 6.38 Ancillary facilities at the existing quarry include an office, weighbridge, wheelwash, car park area, staff facilities and bunded fuel storage tanks as well as a water management system that includes two settlement ponds.

- 6.39 The surrounding landscape is dominated by agricultural land comprising of fields under permanent pasture and arable typically bounded by hedgerows / treelines interspersed by small patches of woodland and a number of other quarry sites. The River Nore flowing in a southerly direction approximately 660m east of the quarry forms a dominant landscape feature along with the M9 motorway that runs in a north east to south west direction and immediately adjacent the southern boundary of the quarry.
- 6.40 The largest local urban population is the village of Bennettsbridge to the south east of the quarry with other smaller rural settlements and ribbon development along the roads and lanes that cross this area.

Designated Sites

- 6.41 The application site is not subject to any statutory or non-statutory nature conservation designations (SAC, SPA, NHA, Nature Reserve or pNHA).
- 6.42 Within a 2km radius of the application site there are two designated sites. Figure 6.1 shows the location of designated sites in relation to the application site and summary details of these designated sites is presented in Table 6.5.

Table 6.5: Designated Sites

Designated Site	Reason for Importance / Designation	Location Relative to Application Site at Closest Point	Level of Value
Statutory Designated Sites			
River Barrow and River Nore SAC [site code 002162]	The River Barrow and River Nore SAC consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains, and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The River Barrow and River Nore qualifies as a SAC for the following habitats as listed under Annex I of the EU Habitats Directive: • Estuaries; • Mudflats and sandflats not covered by seawater at low tide; • Reefs; • <i>Salicornia</i> and other annuals colonising mud and sand; • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>); • Mediterranean salt meadows (<i>Juncetalia maritimi</i>);	600m east southeast	International

	• Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation; • European dry heaths; • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; • Petrifying springs with tufa formation (<i>Cratoneurion</i>); • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles; and • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>). It also qualifies for the presence of the following species listed on Annex II of the EU Habitats Directive: • Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>); • Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>); • White-clawed Crayfish (<i>Austropotamobius pallipes</i>); • Sea Lamprey (<i>Petromyzon marinus</i>); • Brook Lamprey (<i>Lampetra planeri</i>); • River Lamprey (<i>Lampetra fluviatilis</i>); • Twait Shad (<i>Alosa fallax fallax</i>); • Atlantic Salmon (<i>Salmo salar</i>); • Otter (<i>Lutra lutra</i>); and • Killarney Fern (<i>Vandenboschia speciosa</i>).	
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River Nore SPA [004233]	The River Nore SPA is a long linear site that includes: the River Nore from the bridge at Townparks, north-west of Borris in Ossory, to Coolnamuck in Co. Kilkenny; the Delour River from its junction with the River Nore to Derrynaseera bridge, west of Castletown, in Co Laois; the Erkina River from its junction with the River Nore at Durrow Mills to Boston Bridge in Co. Laois; a 1.5 km stretch of the River Goul upstream of its junction with the Erkina River; the Kings River from its junction with the River Nore to a bridge at Mill Island Co. Kilkenny. The site includes the river channel and marginal vegetation. River Nore qualifies under Article 4 of the EC Directive on the Conservation of Wild Birds (2009/147/EC) (Birds Directive) as a SPA because it regularly supports populations of European importance including: Kingfisher (<i>Alcedo atthis</i>)	660m east southeast	International
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Habitats

6.43 The habitat types recorded within the application site based on the classification as defined by Fossitt (2000) are presented in Table 6.6.

Table 6.6: Habitat Types Recorded in the Application Site

Level 1 Habitat Hierarchy	Level 2 Habitat Hierarchy	Level 3 Habitat Hierarchy	Area / Length
E – Exposed rock and disturbed ground	ED – Disturbed ground	ED4 – Active quarries and mines	36.5ha
G-- Grassland and marsh	GA – Improved grassland	GA1 - Improved agricultural grassland	16.5ha
W – Woodland and scrub	WD – Highly modified / non-native woodland	WD1 – (Mixed) broadleaved woodland	c.7.0ha
	WL – Linear woodland / scrub	WL1 - Hedgerows	892m
		WL2 - Treelines	881m
B – Cultivated and built land	BL – Built land	BL3 – Buildings and artificial surfaces	1.0ha

- 6.44 Figure 6.2 shows the location and extent of the habitats recorded at the application site and important habitats and other features identified immediately adjacent the application site. A summary description and ecological evaluation of each habitat, key sub-habitat and other key features is provided in Table 6.7.

Table 6.7: Description and Evaluation of Habitats and Other Features

Habitat Feature	Description	Location	Level of Value	Rationale
Exposed Rock and Disturbed Ground				
ED4 – Active quarries and mines	The existing active quarry supports <i>ED4 – Active quarries and mines habitat</i> but which comprises a number of sub-habitat types created and subject to varying degrees of disturbance as a result of the quarrying operations including: <i>ER2 – Exposed calcareous rock</i>; <i>ED2 – Spoil and bare ground</i>; <i>FL8 – Artificial lakes and ponds</i>; <i>GS2 – Dry meadows and grassy verges</i>; <i>WS1 – Scrub</i>; and <i>BL3 – Buildings and artificial surfaces</i>. The active part of the quarry is largely devoid of vegetation due to high levels of disturbance but where present includes: Cock's-foot (<i>Dactylis glomerata</i>), Wild Carrot (<i>Daucus carota</i> spp <i>carota</i>), Yorkshire-fog (<i>Holcus lanatus</i>), Mouse-ear Hawkweed (<i>Pilosella officinarum</i>), Ribwort Plantain (<i>Plantago lanceolata</i>), Creeping Buttercup (<i>Ranunculus repens</i>), Weld (<i>Reseda luteola</i>), Red Clover (<i>Trifolium pratense</i>) and Colt's-foot (<i>Tussilago farfara</i>). <i>GS2 - Dry meadows and grassy verges</i> habitat is present on the screening berm running along the southern boundary of the quarry and around the settlement ponds in the east of the site. The grassland areas typically have swards comprising of Sweet Vernal-grass (<i>Anthoxanthum odoratum</i>), Cock's-foot (<i>Dactylis glomerata</i>), Red Fescue	Application site (existing quarry site)	Local (lower)	An anthropogenic habitat created through quarrying with little botanical interest and offering some limited but limited habitat for wildlife.

Environmental Impact Assessment Report

Client: Bennettsbridge Limestone Quarries

Ref. No.: 63.01

Project: Proposed Continuation of Use & Lateral Extension to an Existing Limestone Quarry at Kilree, Co. Kilkenny

Habitat Feature	Description	Location	Level of Value	Rationale
	(<i>Festuca rubra</i>) and Yorkshire-fog (<i>Holcus lanatus</i>) with some Ribwort Plantain, Dandelion (<i>Taraxacum officinale</i> agg.) and Red Clover also present along with Bramble (<i>Rubus fruticosus</i> agg.). FL8 – Artificial lakes and ponds comprise of two settlement ponds that supports stands of Common Reed (<i>Phragmites australis</i>) and Reedmace (<i>Typha latifolia</i>).			
Grassland and Marsh				
GA1 - Improved agricultural grassland	GA1 – Improved agricultural grassland is present in the fields to west of the existing quarry with cattle grazed swards dominated by Perennial Rye-grass (<i>Lolium perenne</i>) but some Meadow Foxtail (<i>Alopecurus pratensis</i>), Yorkshire-fog and Annual Meadow-grass (<i>Poa annua</i>). The herbaceous component is species-poor and includes: Creeping Buttercup (<i>Ranunculus repens</i>) Broad-leaved Dock (<i>Rumex obtusifolius</i>); dandelion; and White Clover (<i>Trifolium repens</i>).	Application site (lateral extension area) and immediate surrounding area	Local (lower)	A common and widespread habitat with little botanical interest and of low ecological and nature conservation value.
Woodland and Scrub				
WD1 – (Mixed) broadleaved woodland	WD1 – (Mixed) broadleaved woodland forms an inverted L-shape block of forestry woodland with an estimated age of around 20 years. The woodland has been planted in diagonal strips predominately consisting of Ash (<i>Fraxinus excelsior</i>) but also includes relatively narrow strips dominated by Sycamore (<i>Acer pseudoplatanus</i>),	Application site (lateral extension area)	Local (higher)	Woodland is identified as a valued habitat in the Kilkenny Biodiversity Action Plan. Woodland does not fulfil the criteria of any Annex I habitat. A relatively large but isolated block of woodland that is of low value, predominantly due to its age and to the

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Habitat Feature	Description	Location	Level of Value	Rationale
	Beech (<i>Fagus sylvatica</i>) and Pedunculate Oak (<i>Quercus robur</i>). Other woody species present include Common Hawthorn (<i>Crataegus monogyna</i>), Copper Beech (<i>Fagus sylvatica purpurea</i>), Wild Privet (<i>Ligustrum vulgare</i>), Grey Poplar (<i>P. x canescens</i>), Cherry (<i>Prunus</i> sp.), Grey Willow (<i>Salix cinerea</i>), Elder (<i>Sambucus nigra</i>) and Wych Elm (<i>Ulmus glabra</i>). All the Ash exhibit signs of infection from <i>Hymenoscyphus fraxineus</i> and are in poor condition. Further information relating to the trees within this woodland area is contained within the Tree Survey Report prepared by Timberland Forestry that is presented at Appendix 6B. The ground and field layers, forming very dense vegetation, include: Hairy Brome (<i>Bromus ramosus</i>), Rosebay Willowherb (<i>Chamerion angustifolium</i>), Cock's-foot, Atlantic Ivy (<i>Hedera Hibernica</i>), Herb-robert (<i>Geranium robertianum</i>), Hogweed (<i>Heracleum sphondylium</i>), Yorkshire-fog, Rough Meadow-grass (<i>Poa trivialis</i>), Bracken (<i>Pteridium aquilinum</i>), Wood Dock (<i>Rumex sanguineus</i>), Bramble, Common Nettle (<i>Urtica dioica</i>) and Bush Vetch (<i>Vicia sepium</i>).			presence of ash dieback caused by the <i>Hymenoscyphus fraxineus</i> fungus affecting the dominant canopy tree species. Nonetheless provides opportunities for a range of resident species, i.e. small mammals, birds and invertebrates and which may be used as a stepping stone between the River Nore valley and other features of higher value in the surrounding landscape.
WL1 – Hedgerows / WL2 - Treelines	The WL1 – Hedgerows habitat, some with associated stone walls, is typically dominated by Common Hawthorn with Ash, Blackthorn (<i>Prunus</i>	Application site (lateral extension)	Local (higher)	A habitat-type mentioned in the Kilkenny Biodiversity Action Plan.

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Habitat Feature	Description	Location	Level of Value	Rationale
	<i>spinosa</i>), Dog-rose (<i>Rosa canina</i> agg.) and Elderflower (<i>Sambucus nigra</i>) also present. Other woody species present in individual hedgerows can include Dogwood (<i>Cornus sanguinea</i>), Beech, Larch (<i>Larix decidua</i>) Wild Privet, Honeysuckle (<i>Lonicera periclymenum</i>) and Oak. The WL2 – Treelines are largely dominated by non-native coniferous species that can include Lawson Cypress (<i>Chamaecyparis lawoniana</i>), Monterey Cypress (<i>Cypressus macrocarpa</i>) and Sitka Spruce (<i>Picea stitchensis</i>). Other species present can include Alder (<i>Alnus glutinosa</i>), Hazel (<i>Corylus avellana</i>) Ash, Scot's Pine (<i>Pinus sylvestris</i>), Grey Poplar, Oak, Elder and Wych Elm (<i>Ulmus glabra</i>). The ground floras are typically an extension of the adjacent agricultural grasslands. A summary of the hedgerow appraisal is presented at Appendix 6C with further information relating to the trees within hedgerows / treelines is contained within the Tree Survey Report prepared by Timberland Forestry presented at Appendix 6B	area) and immediate surrounding area		A typically common and widespread habitat assessed as being generally of low significance, with the exception of hedgerow H1. Habitat which provides opportunities for a range of species including bats, birds and invertebrates.
Cultivated and Built Land				
BL3 – Buildings and artificial surfaces	A farm yard area comprising of a dutch-type barn on a concrete pad and constructed from a steel-frame, with concrete side walls and corrugated tin roof and end walls, and a steel framed, corrugated tin roofed cattle handling facility with slatted concrete floor for the collection of slurry.	Application site (lateral extension area)	Local (lower)	An anthropogenic habitat providing negligible habitat for wildlife.

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Habitat Feature	Description	Location	Level of Value	Rationale
	Other artificial surfaces form farm tracks that run through and adjacent the proposed extension area.			

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Species

- 6.45 Details of protected, rare and notable species records within a 2km radius of the application site (encompassing grid squares S54J, S54P, S55F and S55K) were obtained during the desk-based study and during the Habitat Survey, where general observations and searches were made for the presence, or potential presence of protected, rare and/or notable species for flora and fauna.
- 6.46 Table 6.8 provides a summary of species of importance and an evaluation of the site for these species.

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Table 6.8: Identification and Evaluation of Species

Species	Desk-based Study	Description of Use or Likely Use of the Application Site	Level of Value	Rational
Flora				
Protected, rare and notable species	No records of protected species of flora were returned by NBDC for the search area. NBDC returned records for Corn Margiold (<i>Glebionis segetum</i>) from grid square S54J and for Greater Knapweed (<i>Centaurea scabiosa</i>) from grid square S54J and S55K both red listed ⁸ as Near Threatened None of these records relate to the application site.	During the Habitat Survey no protected, rare or notable species of flora were recorded at, or immediately adjacent the application site.	Not applicable	All reasonable likelihood of absence.
Non-native invasive species	NBDC returned records for New Zealand Pigmyweed (<i>Crassula helmsii</i>), Himalayan Balsam (<i>Impatiens glandulifera</i>), Giant Hogweed (<i>Heracleum mantegazzianum</i>) and Spanish Bluebell (<i>Hyacinthoides hispanica</i>) within the search all of which are non-native invasive species, as listed	During the Habitat Survey no statutory non-native invasive species were recorded as present in the application site.	Not applicable	All reasonable likelihood of absence.

⁸ Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016). *Ireland Red List No. 10: Vascular Plants*. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland.

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Species	Desk-based Study	Description of Use or Likely Use of the Application Site	Level of Value	Rational
	under the Wildlife Act 1976 (as amended) and/or the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).			
Mammals				
Badger	NBDC returned 46 records for Badger (<i>Meles meles</i>) within the search area.	During the Habitat Survey no evidence of badger setts or other signs of badger were found to indicate the presence of badger (i.e. tracks, latrines, snuffle holes or hairs) within the application site, or its immediate surrounding area. However, during the bat survey in May 2025, a mother badger and two cubs were observed moving out of the woodland into the grassland field close to this area before retreating back into the woodland. However, due to dense vegetation it was not possible to confirm any sett location.	Local (Higher)	The badger is protected under the Wildlife Act 1976 (as amended). No sett confirmed within the application site but is highly likely to form part of the territory of a badger clan present in the wider surrounding area. Site unlikely to be important for the maintenance of the local population given the availability of alternative foraging habitat within the wider surrounding area.
Bat assemblage	NBDC returned records for six species of bat including Daubenton's Bat (<i>Myotis daubentonii</i>), Natterer's Bat (<i>Myotis nattereri</i>), Leisler's Bat (<i>Nyctalus leisleri</i>), Common Pipistrelle (<i>Pipistrellis pipistrellis</i>), Soprano	The application site does not support any buildings, structures, trees or features (i.e. fissure or crevices in the quarry walls) that are considered to offer potential and/or suitable bat roosting opportunities.	Local (higher)	All bat species are fully protected under the Wildlife Act 1976 (as amended) and the EC (Birds and Natural Habitats) Regulations 2011 (as amended). Site provides negligible roosting opportunities for bats.

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Species	Desk-based Study	Description of Use or Likely Use of the Application Site	Level of Value	Rational
	pipistrelle (<i>Pipistrellus pygmaeus</i>), and Brown Long-eared Bat (<i>Plecotus auritus</i>). The application site and its immediate surrounding area lie in an identified with a moderate index suitability for all bat species with a score of 30.33.	All the buildings, structures and quarry walls within the application site provide negligible roosting opportunities for bats. However, three mature ash trees located on the western boundary of the woodland in hedgerow reference H2 assessed as being of low potential suitability for roosting bats. The application site is assessed as providing low habitat suitability for commuting and foraging bats and which has some connectivity to the west and north via hedgerows / treelines but with limited connectivity to the east due to the existing quarry and south by the M9 motorway. The bat activity survey recorded relatively low levels of bat activity of five species of bat including: Natterer's Bat, Leisler's Bat, Nathusius's Pipistrelle (<i>Pipistrellus nathusii</i>), Common Pipistrelle, and Soprano Pipistrelle Leisler's Bat, Soprano Pipistrelle and Common Pipistrelle were the most frequently bat species.		The application provides some foraging habitat for a range of bat species, but is generally of low quality. The application site is unlikely to be important or critical to any particular species of bat, or for the maintenance of the local population status of any bat species given the high quality habitat within the wider surrounding environment.

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Species	Desk-based Study	Description of Use or Likely Use of the Application Site	Level of Value	Rational
		The full Bat Survey and Evaluation Report is provided at Appendix 6D.		
Otter	NBDC returned five records for Otter (<i>Lutra lutra</i>) within the search area. None of these records relate to the quarry site itself but some are related to the River Nore at the confluence of the Dunbell Little stream that receives the quarry effluent discharge.	During the Habitat Survey no evidence of Otter was recorded within the application site. However, it is not unreasonable to assume that the stream receiving the effluent discharge from the quarry is highly likely to form part of the territorial range of otters although it is highly unlikely that this is frequented on a regular basis due to the size and nature of this waterbody, adjacent housing development and the length of culvert under the M9 motorway.	Local (higher)	The otter is fully protected under the Wildlife Act 1976 (as amended) and the EC (Birds and Natural Habitats) Regulations 2011 (as amended). Application site provides negligible opportunities for otter. Although otters may use the stream connecting the quarry to the River North this is unlikely to be important or critical to the maintenance of the local otter population.
Other mammal species	NBDC returned two records for Hedgehog (<i>Erinaceus europaeus</i>) and Irish Hare (<i>Lepus timidus</i> ssp. <i>hibernicus</i>) and a solitary record for Fox (<i>Vulpes vulpes</i>) within the search area. In addition, records were returned for Brown Rat (<i>Rattus norvegicus</i>) and Grey Squirrel (<i>Sciurus carolinensis</i>) that are listed as invasive species under the European Communities (Birds and Natural Habitats) Regulations 2011 and for	During the Habitat Survey an Irish Hare was observed in the field to the west of the woodland and another in the same location during the Bat Survey. No other mammals were observed within the application site. Whilst the site has the potential to support a number of other small mammals, no evidence was found to indicate the presence of any protected species of mammal.	Local (lower)	Site provides some localised value to small mammals but is not likely to be critical in maintaining the local population status of any particular species

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Species	Desk-based Study	Description of Use or Likely Use of the Application Site	Level of Value	Rational
	the Greater White-toothed Shrew (<i>Crocidura russula</i>) another non-native species. None of these records relate to the application site or its immediate surrounding area.			
Birds				
Bird assemblage	NBDC returned records for 65 species of birds for the search area that includes Kingfisher (<i>Alcedo atthis</i>), Hen Harrier (<i>Circus cyaneus</i>), and Little Egret (<i>Egretta garzetta</i>) that are listed under Annex I of the EU Birds Directive.	During the Habitat Survey a total of 19 species of birds were recorded visually and/or aurally at and in the vicinity of the application site. Of the species recorded none are listed under Annex I of the EU Birds Directive. One of the bird species recorded is red listed⁹ and one is amber listed¹⁰ Birds of Conservation Concern in Ireland (BoCCI)¹¹. No other evidence, i.e. owl pellets A full list of the birds recorded during the Habitat Survey and their	Local (higher)	Protected under the Wildlife Act 1976 as amended by the Wildlife (Amendment) Act 2000. The application site provides breeding and foraging opportunities for a range of typically common and widespread species associated with quarries and farmland but is not likely to be important or critical for any particular individual species or local populations of birds given the availability of alternative habitat in the wider surrounding area and its potential carrying capacity for any displaced birds.

⁹ Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recovery

¹⁰ Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose populations has declined historically but made a substantial recovery; rare breeders; and those with international important or localised populations.

¹¹ Gilbert G, Stanbury A and Lewis L. (2021). *Birds of Conservation Concern in Ireland 2020 –2026*. Irish Birds 43: 1–22

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Species	Desk-based Study	Description of Use or Likely Use of the Application Site	Level of Value	Rational
		conservation status is provided at Appendix 6E. The application site has fragments of habitat providing some limited opportunities for breeding birds but which are subject to high levels of disturbance.		
Reptiles				
Common lizard	NBDC returned no records for Common lizard (<i>Zootoca vivipara</i>) within the search area.	Although common lizard is a species that can be found in wide range of habitats, the application site provides sub-optimum habitat for this species. No common lizards were observed during the Habitat Survey and it is considered that this species is not likely to be present at this site.	Not applicable	All reasonable likelihood of absence.
Amphibians				
Common Frog	NBDC returned three records for Common Frog (<i>Rana temporaria</i>) within the search area. None of these records relate to the quarry site and its immediate surrounding area.	During the Habitat Survey no evidence of Common Frog was recorded the application site.	Not applicable	All reasonable likelihood of absence.
Smooth Newt	NBDC returned no records for Smooth Newt (<i>Lissotriton vulgaris</i>) within the search area.	During the Habitat Survey no Smooth Newts or evidence of breeding, i.e. eggs or efts, were observed within the application site.	Not applicable	All reasonable likelihood of absence.

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Species	Desk-based Study	Description of Use or Likely Use of the Application Site	Level of Value	Rational
Invertebrates				
Invertebrates	NBDC returned records for one protected invertebrate species within the search area, namely Marsh Fritillary Butterfly (<i>Euphydryas aurinia</i>) listed under Annex II of the Habitats Directive. Other notable species recorded in the search area including: the red listed butterfly ¹² of the Near Threatened Small Heath (<i>Coenonympha pamphilus</i>), the red listed bees ¹³ of the Regionally Extinct Tawny Mining Bee (<i>Andrena fulva</i>), Endangered Gooden's Nomad Bee (<i>Nomada goodeniana</i>) and Near Threatened Gypsy Cuckoo Bee (<i>Bombus bohemicus</i>), Large Red-tailed Bumble Bee (<i>Bombus lapidaries</i>) and Moss Carder-bee (<i>Bombus muscorum</i>); the red listed	During the Habitat Survey no rare or notable species of invertebrate were observed within the application. Whilst no site is without invertebrate interest, it is considered not likely, given the habitat types, that the application site would support any protected invertebrate species.	Local (lower)	The site provides potential habitat for a wide range of invertebrates but is unlikely to be important or critical to any particular species or taxonomic group given the availability of alternative habitat in the wider surrounding area.

¹² Regan, E.C., Nelson, B., Aldwell, B., Bertrand, C., Bond, K., Harding, J., Nash, D., Nixon, D., & Wilson, C.J. (2010). *Ireland Red List No. 4 – Butterflies*. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Ireland.

¹³ Ú. Fitzpatrick, T.E. Murray, A. Byrne, R.J. Paxton & M.J.F. Brown (2006). *Regional Red List of Irish Bees*. Report to National Parks and Wildlife Service (Ireland) and Environment and Heritage Service (N. Ireland).

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Species	Desk-based Study	Description of Use or Likely Use of the Application Site	Level of Value	Rational
	mayflies ¹⁴ of the Near Threatened Brown May Dun (<i>Kangeronia fuscogrisea</i>) and the Endangered Dark Olive (<i>Labiobaetis atrebatinus</i>); and red listed of molluscs ¹⁵ of the Near Threatened Common Whorl Snail (<i>Vertigo pygmaea</i>) and Vulnerable Heath Snail (<i>Helicella itala</i>).			
Other Important Species				
Other species not identified above	NBDC did not return any records for any other rare or notable species within the search area	During the Habitat Survey, no other protected, rare or notable species were recorded. Though the application site may support low numbers of common and widespread species it is considered highly unlikely that any other specially protected species would be present based on the habitats present.	Not applicable	All reasonable likelihood of absence

¹⁴ Kelly-Quinn, M. & Regan, E.C. (2012). *Ireland Red List No. 7: Mayflies (Ephemeroptera)*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

¹⁵ Byrne, A., Moorkens, E.A., Anderson, R., Killeen, I.J. & Regan, E.C. (2009). *Ireland Red List No. 2 – Non-Marine Molluscs*. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.

Summary of Important Ecological Features

- 6.47 In accordance with the CIEEM guidelines only ecological features considered to be important should be carried forward to any detailed assessment. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable. Therefore where receptors have been evaluated at a value of 'Local (lower)' no further assessment is deemed necessary as the impact on these receptors is not likely to be of significance. However, where protected species are present and there is a potential for a breach in wildlife legislation then these species are considered as important ecological features regardless at what level they have been evaluated.
- 6.48 Based on the above, the identified important ecological features with the potential to be affected by proposed continuation of use and lateral extension to an existing limestone quarry at Kilree and carried forward for further ecological impact assessment are detailed in Table 6.9.

Table 6.9: Identified Important Ecological Features

Key Feature	Important Ecological Feature	Evaluation
Designated Sites	River Barrow and River Nore SAC	International
	River Nore SPA	International
Habitats	(Mixed) broadleaved woodland	Local (higher)
	Hedgerows / Treelines	Local (higher)
Species	Badger	Local (higher)
	Bats	Local (higher)
	Otter	Local (higher)
	Bird assemblage	Local (higher)

- 6.49 The otter is a qualifying feature for the River Barrow and River Nore SAC with any individual using the stream receiving the discharge from the quarry being resident on the River Nore. Therefore for this assessment no separation has been made between the River Barrow and River Nore SAC and otters.

Potential Effects

- 6.50 This section assesses the ecological impacts from the proposed continuation of use and lateral extension to the existing limestone quarry at Kilree on important ecological features identified from the preliminary desk-based study, baseline surveys and evaluation of the ecological features. Both qualitative and quantitative information has been used to identify likely significant ecological impacts, including the positive, negative, direct, indirect and the cumulative environmental effects.
- 6.51 To assess the effects of the proposed scheme it is essential that the impacts that could arise are identified and characterised. The impacts that require consideration in the EcIA are based upon knowledge of the proposed development and of the important ecological features. This can only be undertaken with a thorough understanding of ecological processes and how flora and fauna react to the range of impacts that could occur.

Proposed Development

- 6.52 A detailed description of the development is presented in Chapter 3 of the EIAR, but in summary the project relates to a planning application for the continuation and extension of an existing operational limestone quarry in the townland of Kilree within an overall application area of c. 62ha.
- 6.53 The existing operational limestone quarry covers an area of 36.5ha with the extraction of rock currently permitted and conditioned under Plan File Reference No. 18858 to a floor level of 12mOD within an area of 13.5ha.
- 6.54 The proposed development is within an overall application area of c.61ha with planning permission specifically sought for the following:
- lateral extension of the existing permitted quarry area over 24.5ha to a final floor level of 25 - 30mOD;
 - all related ancillary development and associated site works including: processing (crushing, screening and washing), stockpiling of materials, provision of landscaped screening berms and all other related activities;
 - removal and demolition of an existing farmyard and slatted shed to facilitate the expansion of the quarry; and
 - the restoration of the application site to natural habitat after uses following completion of limestone extraction.
- 6.55 The limestone extraction system will continue to use blasting, typically one day per month but which may increase to twice per month during periods of high demand, to fragment the limestone prior to its processing using static and mobile crushing and screening plant within the quarry void to produce a range of aggregate materials. Processed rock will be stored in the existing permitted quarry area pending use in the ancillary manufacturing plants (asphalt plant, concrete batching plant, lime plant) site or sale off site.
- 6.56 The quarry will extract of an estimated 17 million tonnes of mineral reserves over an operational period of 25 years and a further 2 years to complete the final restoration of the site, dependent upon the market demand for extracted material.
- 6.57 Upon cessation of extraction operations the site will be restored to natural habitats.

Identification and Characterisation of Potential Impacts

- 6.58 The potential ecological impacts from the proposed continuation of use and lateral extension to the existing limestone quarry at Kilree fall into two main categories:
- impacts arising from the continuation and extension of quarrying operations (operational phase); and
 - impacts arising from the restoration of the site (post-operational phase).
- 6.59 No distinction has been made between any preparation of the site (construction phase) and the operational phase the removal of the farm yard and its associated building as well as any stripping of vegetation and top-soils / overburden will be carried out on a phased approach and on a 'as required' basis as part the phasing of the overall development and as such is considered to form part of any on-going extraction of limestone at this site.

Potential Impacts and Interaction with Important Ecological Features (Operational Phase)

- 6.60 The sources of potential impacts arising from the proposed continuation and lateral extension of the existing quarry at Kilree and the relevant important ecological features which are likely or have the potential to be directly or indirectly affected from any particular impact source based on the potential zone of influence of the development, in the absence of mitigation are outlined in Table 6.10.

Table 6.10: Sources of Potential Impacts and Important Ecological Potentially Affected

Impact Source	Nature of Impact	Important Ecological Feature Potentially Affected
Habitat loss, damage and fragmentation	Habitat loss involves the direct destruction or physical take-up of vegetation, or the removal of other structures with conservation interest. Habitat loss may also occur indirectly as a result of a change in land-use or water management, for instance the drying-up of ponds or through induced successional events leading to a change in habitat type. Habitat fragmentation is concerned with spatial processes, such as negative edge effects (e.g. colonisation by 'aggressive' species or successional changes) and dispersal problems that can become increasingly severe as habitat is lost and remaining habitat is divided into smaller units. Fragmented habitats are likely to be more vulnerable to external factors that may have a negative effect upon them; e.g. disturbance, and may be less resilient to change (including climate and management change) than connected habitats because colonising species may be unable to reach the habitat to re-colonise in the event of species loss. Habitat loss can have a direct impact on individual populations and assemblages of species result in the direct loss of individuals or populations of animal species, or indirectly by increasing levels of stress placed upon populations of some species through negative edge effects (e.g. predation pressure) and dispersal problems that can become increasingly severe as habitat is lost and remaining habitat is divided into smaller units. The zone of influence of the proposed development is assessed to be restricted to the application site and immediate adjacent areas only.	(Mixed) broadleaved woodland Hedgerows / Treelines Badger Bats Bird assemblage

Disturbance from human activity, noise and vibration	Increases in disturbance, as a result of human activity can have a range of impacts depending upon the sensitivity of the ecological receptor, the nature and duration of the disturbance and its timing. The response of individual species to increased levels of human disturbance will depend upon a number of factors including the sensitivity, reproductive status, previous exposure to human disturbance, behaviour during the event, species tolerance to disturbance, location in relation to the source, availability of alternative nearby habitat, and environmental factors (i.e. topography, vegetation and atmospheric conditions which can influence noise levels). The level of disturbance will also be dependent upon the existing ambient noise levels and maximum noise levels. <u>Noise</u> It is generally accepted that for noise, certain species or groups of species can be impacted upon up to a distance of up to 300m from its source for high level and discontinuous disturbance with these distances reducing for low level and/or continuous disturbance levels. Evidence suggests that in general wildlife, with the exception of the most sensitive species, will adjust and tolerate long-term increases in low-medium-level and continuous noises. Guidance published under AQTAG09¹⁶ indicates that where noise levels are below 80dB LA_{max} and 55dB LA_{eq,1hr} as measured at a nest site for birds or other feature used by wildlife it is considered unlikely that it will have an adverse impact on any such species. <u>Visual Disturbance</u> Visual disturbance from human activity can include the movement of people, machinery and plant and which can result in the disturbance of species by causing increased anxiety and flight due to perceived danger. The response to visual disturbance is highly variable between species, threat type and habituation to human contact and can typically range from 50 to 500m although for many species this is generally below 300m in open situations.	Badger Bats Otter Bird assemblage
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¹⁶ Ormerod, L., Goodlad, N. and Horton, K. (2005). *AQTAG09 – Guidance on the Effects of Industrial Noise on Wildlife*. Air Quality Technical Advisory Group

	<u>Vibration</u> Any blasting operations have the potential to generate vibration. Studies into the effects of blasting on nesting falcons indicate that quarry blasting initiated flight up to 500m from the point source of any blast. The maximum distances at which vibration from other operational sources may be just perceptible to humans is between 30 to 50m from its source and this is likely to be similar for most groups of species. Whilst it is generally recognised vibration can disrupt wildlife, the effect of vibration is usually masked by other disturbance and noise. It is likely that any species sensitive to increase noise will also be sensitive to vibration whilst less sensitive species to noise are likely to tolerate levels of vibration.	
Lighting	Permanent fixed on-site lighting could provoke long-term behaviour changes in sensitive species, especially but not limited nocturnal animals that may have remained on and continue to use the site, or parts of the site and its immediate surrounding area. The zone of influence will be dependent upon the siting of any lamps, direction of illumination and potential overspill in areas of outside the proposed development.	Bats
Dust deposition	Traffic movements, the extraction, handling and stockpiling of aggregates and other associated works have the potential to generate dust. Literature suggests that the most sensitive species area to be affected by dust deposition at levels above 1000 mg/m²/day¹⁷ which is five times greater than the level at which most dust deposition may start to cause a perceptible nuisance to humans. Fugitive dust from mineral extraction sites is typically deposited within 100-200m of the source; the greatest proportion of which, comprising larger particles (greater than 30 microns) is deposited within 100m¹⁸. Where large amounts of dust are deposited on vegetation over a long time-scale (a full growing season for example) there may be some adverse effects upon plants restricting	Bats Bird assemblage

¹⁷ Farmer, A.M. (1993). *The Effects of Dust on Vegetation - A Review*. Environmental Pollution Vol.79, Issue 1, Pages 63-75.

¹⁸ Department of the Environment (1995). *The Environmental Effects of Dust from Surface Mineral Workings*. Volume 1: Summary Report & Best Practice Guides. HMSO.

	photosynthesis, respiration and transpiration. Furthermore it can lead to phytotoxic gaseous pollutants penetrating the plants. The overall effect would be a decline in plant productivity, which may then have indirect effects on the quality of the surrounding habitats and associated fauna. The amounts of dust deposited and its effects are also dependent upon weather conditions as in wet weather less dust will be generated and that which has been deposited upon foliage is likely to be washed off. In accordance with guidance produced by the UK Institute of Air Quality Management (IAQM)¹⁹ an assessment of the effects of dust will normally only be required where an ecological receptor occurs within 250m of sand and gravel extraction operations, or 400m for hard rock quarries.	
Alterations to hydrogeological and hydrological conditions	Mineral extraction operations have the potential to cause alterations to hydrological regimes of surface water bodies through the extraction of minerals and direct loss of surface waters or through the discharge of wastewater to surface waters especially where dewatering is required to ensure the continued operability of working areas. Abstraction of groundwater or de-watering operations can result in the drawdown of groundwaters. The extent of the effects of drawdown can be influenced upon the local geology, soils, topography and climate. Changes in localised groundwater levels or in aquifers as a result of extraction of minerals can have direct and indirect ecological impacts on groundwater dependent terrestrial ecosystem (GWDTE) and associated species as well as on surface waters where groundwaters have hydraulic connectivity with any surface waters. The potential zone of influence of the proposed development will be dependent upon a number of factors related to the existing hydrogeological and hydrological conditions, the nature of mineral extraction operations and the requirements and rates of any dewatering operations and discharge of wastewater.	River Barrow and River Nore SAC River Nore SPA

¹⁹ IAQM (2016). *Guidance on the Assessment of Mineral Dust Impacts for Planning*. Version 1.1 dated May 2016. Institute of Air Quality Management, London.

Changes in water quality (ground and surface waters)	Contamination of groundwater can occur through the direct recharge of groundwaters close to the ground surface, or of deeper aquifers through percolation and other hydrological pathways that may affect surface waters (where there is a potential ground and surface water hydraulic connectivity). Quarrying operations near water have an associated risk of pollution as a result of fuel spillages, oil leakages and other accidents that could lead to a serious impact on water quality and consequently the habitats and species present in any such affected watercourse. Surface water discharges and diffuse pollution from surface water run-off can contribute to a reduction in water quality through a net contribution of nutrients or contamination from a wide range of organic and inorganic compounds.	River Barrow and River Nore SAC River Nore SPA
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Potential Impacts and Interaction with Important Ecological Features (Post-Operational Phase)

- 6.61 No sources of potential significant adverse impacts are considered likely on important ecological features over and above those arising during the operational phase of the proposed development.
- 6.62 The restoration of the site to natural habitats is likely to have a positive and beneficial effect on wildlife. The level and significance of any effects cannot be quantified at this current time for any individual or groups of species but are likely to be beneficial and positive at a Local (higher) value. As the effects from the restoration are considered likely to be generally positive, no further assessment is deemed necessary in respect of the post-operational phase.

Assessment of Effects and Mitigation Measures

- 6.63 Table 6.11 details the assessment of predicted effects on the identified and relevant important ecological features from the proposed continuation of use and lateral extension to the existing limestone quarry at Kilree and mitigation measures to prevent, reduce or offset any potential effects.

Table 6.11: Assessment of Effects on Identified and Relevant Important Ecological Features (Operational Phase)

Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
River Barrow and River Nore SAC / River Nore SPA		
Alterations to hydrogeological and hydrological conditions	<u>Assessment of Effects</u> The quarry at Kilree is underlain by the Kilkenny Groundwater Body (GWB) defined as a regionally important karst aquifer. Groundwater flows are towards the River Nore and likely concentrated within 20m of the top of the limestone²⁰. The quarrying operations at the existing quarry have not resulted in any significant groundwater strikes and has not resulted in any significant drawdown of groundwaters through the dewatering of the quarry via the sump in quarry floor. The continuation and extension of the quarry to a floor level of 25 to 30mOD is not predicted to result in any significant increase of inflows of groundwater based on the formation of the limestone at this location, historic and 2024 drilling of investigation boreholes within the extension area and observation from the working of the western wall of the working quarry. The main ingress of water to the quarry is and will continue to be from rainfall and its flow in the subsoil/bedrock transition zone from the immediate surrounding area following rainfall events. The continuation and extension of the quarry will not require any changes to the existing discharge licence (Reference No. ENV/W/78 issued 15th September 2017) for the volume of water discharged from the quarry. The continuation and extension of the quarry will not result in any cone of depression affecting the River Nore and will not significantly affect the hydrogeological connectivity of the groundwater body to the hydrological regime of the River Nore. No measurable effects are predicted on the River Barrow and River Nore SAC and any of its qualifying Annex 1 habitat and/or Annex II species and on the River Nore SPA and its qualifying bird species.	Not significant

²⁰ <https://gsi.geodata.gov.ie/downloads/Groundwater/Reports/GWB/KilkennyGWB.pdf>

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Ref. No.: 63.01

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Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
	Mitigation No specific ecological mitigation is required as impact is assessed as not significant.	
Changes in water quality	Assessment of Effects The application site is underlain by the Kilkenny GWB that is assessed under the Water Framework Directive (WFD) as being of Good status (2016-2021). The River Nore, including the Dunbell Little tributary receiving the discharge from the quarry, is assessed under the WFD as being of Moderate quality station upstream of Bennettsbridge but with the river improving to Good quality status at and downstream of Bennettsbridge (2016-2021). There has been no change between Cycles 1 and 2 as a direct result of the discharge from the quarry. The EPAs latest assessment of water quality for the River Nore shows it has a Q-rating of Q3-4 (Moderate) at river stations up and downstream of Bennettsbridge at a point NE of Warrington, downstream of Kilkenny and at Ballylinch Bridge respectively (2022). Treated water is currently and will continue to be discharged, via two settlement ponds / lagoons and through an oil interceptor, to the Dunbell Little stream which then flows approximately 600m passing under the M9 and R700 roads before joining the River Nore. Monthly monitoring of water discharged from the quarry indicates that it has complied with the emission limit values (ELV) for the parameters listed under Discharge Licence ENV/W/78 over the last 5-years (2020-24) with the exception of: one exceedance for Total Ammonia in 2021, 2022 and 2023; one exceedance for COD in 2021 and 2023; and suspended solids in 2022. The exceedance for Ammonia is not linked to ammonia nitrates used in the explosives use in the quarrying operations. The continuation and extension of quarrying operations at Kilree will not require any changes or modifications water management system or to the existing discharge licence. Based on current baseline environmental conditions of the surface waters of the River Nore the existing quarry operations have not resulted in any significant deterioration in water quality or in the WFD status of the River Nore through any interaction between ground and surface waters.	No significant

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Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
	The continuation of use and extension of the quarry at Kilree is not predicted to affect water quality in groundwaters flowing to the River Nore or a deterioration in the quality of water discharged to the River Nore via the Dunbell Little. The proposed continuation of use and extension of the quarry at Kilree will have no measurable effects on water quality in the River Nore and no effects on the River Barrow and River Nore SAC or its qualifying Annex I habitats and/or any Annex II species and on the River Nore SPA and its qualifying bird species. Mitigation No specific ecological mitigation is required as impact is assessed as not significant.	
(Mixed) Broadleaved Woodland		
Habitat loss, damage and fragmentation	Assessment of Effects: The lateral extension of the quarry will result in the direct loss of 7ha of mixed broadleaved woodland planted for forestry, albeit that much of the Ash would either have to be removed due to ash dieback or would remain as standing deadwood if it was not cleared.	Significant at Local (higher) value
	Mitigation: It will not be possible to mitigate against the loss of the (Mixed) Broadleaved woodland due to the location of limestone reserves. Therefore compensatory measures would be required to reduce the residual impact on this woodland habitat. Under the Forestry Act 2014 the removal of this woodland will require a felling licence for the Forest Service of the Department of Agriculture, Food and the Marine (DAFM). There will also be a requirement for the replanting of trees of an equivalent area and density.	Significant at Local (higher) value
Hedgerows / Treelines		
Habitat loss, damage and fragmentation	Assessment of Effects:	Significant at Local (higher) value

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	The lateral extension of the quarry will result in the direct loss of approximately 496m of hedgerow and 881m of treeline habitats. None of the hedgerow / treelines sections that will be removed are of high conservation significance.	
	Mitigation: It will not be possible to mitigate against the loss of hedgerow / treeline habitats due to the location of limestone reserves. Therefore compensatory measures would be required to reduce the residual impact on these linear woodland habitats.	Significant at Local (higher) value
Badgers		
Habitat loss, damage and fragmentation	Assessment of Effects: The lateral extension of the quarry will not result in the loss of any known badger sett(s). The quarry extension will result in the loss of 24.5ha of potential foraging habitat within a clan territory. Badger territory sizes vary greatly in Ireland ranging from 15 to 300ha in size. Based on the landscape at Kilree and the presence of the M9, it is considered that the territory of any badger clan is likely to be quite large at this location and that the loss of potential foraging habitat is unlikely to significantly affect the local badger population with other alternative habitat remaining and not fragmented within the context of the wider surrounding area landscape. Mitigation: No specific ecological mitigation is required as impact is assessed as not significant. However, badgers are highly capricious animals that move between setts and can create new setts in response to changes in environmental factors therefore prior to the woodland being cleared an inspection will be carried out by an ecologist and if any badger setts are found an appropriate derogation licence from the National Parks and Wildlife Service will be sought to allow these works to be carried out in accordance with appropriate wildlife legislation.	Not significant
Disturbance from human activity, noise and vibration	Assessment of Effects: No badger setts have been identified within 30m of the lateral extension of the quarry and not significant impacts are predicted from any noise arising from quarrying operations.	Not significant

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Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
	At predicted levels below 12mm/second for PPV and 125dB for Air Over Pressure for any blasting event, it is assessed that any blasting associated with quarrying operations is not likely to have any significant effects on badgers that may be within 100m radius of any blast event. Mitigation: No specific ecological mitigation is required as impact is assessed as not significant.	REV: 13/08/2025
Bats		
Habitat loss, damage and fragmentation	Assessment of Effects: The proposed extension of the limestone quarry will not result in the loss of any known feature used by roosting bats. The lateral extension of the quarry will result in the direct loss of 16.5ha of agricultural grassland, c.7ha of broadleaved woodland and 1377m of hedgerow / treeline habitat. Based on the core sustenance zones (CSZ) radius around a communal roost²¹ for the species recorded during the bat survey this will represent a loss of approximately 2% for Common Pipistrelle (2km CSZ), <1% loss for Leisler's Bat, Soprano Pipistrelle and Nathusius's Pipistrelle (3km CSZ), and <0.5% for Natterer's Bat (4km CSZ). Given the habitats within the wider surrounding landscape these % losses of potential foraging habitat is not likely to be significant on the local population status of any bat species. The removal of hedgerow / treeline habitat is not predicted to result in any loss of significantly important commuting route for any bat species over and above their value as foraging habitat. The loss of potential foraging and commuting habitat in the application site is not likely to have a significant effect on the CSZ for any bat species or on any important commuting route where the resilience and conservation status of any bat roost in the wider surrounding area would be impacted. Mitigation: No specific ecological mitigation is required as impact is assessed as not significant. However, although the three mature Ash trees within the application site were not confirmed as being used	Not significant

²¹ CSZs as defined In Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th Edition). Bat Conservation Trust, London.

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Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
	by roosting bats, there is the potential for this to be used occasionally as a day, night and/or feeding roosting purposes and consideration should be given to the soft felling of these trees with any felled material left on the ground for at least 24 hours before being removed.	
Disturbance from human activity, noise and vibration	Assessment of Effects: There is very little literature about the effects of disturbance on bats. However, it is believed that bats are able to tolerate very loud sounds, at least within the ultrasonic range, based on the loud sounds produced when echolocating. A study examining the impacts of a range of stimuli, such as noise, light, temperature change and tactile disturbance on six different bat species during hibernation concluding that only tactile stimuli were significant²². The continuation and extension of the quarry is not predicted to result in noise levels above 55dB in the immediate surrounding area and within the 300m zone of influence of quarrying operations in the application site. At these levels, no significant impact is predicted on any bat species and roosting site that may be that present within the zone influence of the quarry. The extraction system will continue to use blasting, typically one day per month but which may increase to twice per month during periods of high demand, to fragment the limestone prior to its processing using mobile crushing and screening plant within the quarry void to produce a range of aggregate materials. At predicted levels below 12mm/second for PPV and 125dB for Air Over Pressure for any blasting event, it is assessed that there would be no discernible surface vibration or noise from Air Over Pressure which would result in disturbance to any potential bats that may be roosting in the immediate surrounding area and within the 500m zone of influence of quarrying operations in the application site. The continuation and extension of the existing quarry is not predicted to result in increase in disturbance where there will be any effects on individual bats or on their conservation status of any bat species.	Not significant

²² Speakman, J. R., Webb, P. I & Racey, P. A. (1991). *Effects of Disturbance on the Energy Expenditure of Hibernating Bats*. J. Appl. Ecol. 28: 1087-1104.

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Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
	Mitigation: No specific ecological mitigation is required as impact is assessed as not significant.	
Lighting	Assessment of Effects: The continuation and extension of the existing quarry will not result in any additional lighting or would result in any overspill of illumination of adjacent potential bat foraging and commuting habitat immediately adjacent the application site. Mitigation: No specific ecological mitigation is required as impact is assessed as not significant.	Not significant
Dust deposition	Assessment of Effects: Dust deposition associated with the continuation and extension of the existing quarry is not predicted to be at levels where any potential foraging habitat or its associated invertebrate assemblage, that represent potential prey for bats species, within the immediate surrounding area of the application site will be directly impacted and no indirect effects on bats is predicted. Dust deposition monitoring undertaken on a quarterly based, conditioned by planning consent, would indicate dust levels generated from the quarry site and association infrastructure of the quarry are typically below the 350mg/m²/day guidelines published by the Department of the Environment, Heritage and Local Government (DoEHLG) for dust deposition at extraction sites²³ and well below the 1000mg/m²/day levels when sensitive species are likely affected by dust deposition. The dust generated at the quarry is considered to be inert and will not result in any chemical reactions or toxicological effects to affect any vegetation in the wider surrounding area and its invertebrate assemblages providing prey for bats. Mitigation: No specific ecological mitigation is required as impact is assessed as not significant.	Not significant

²³ DoEHLG (2004). *Quarries and Ancillary Activities - Guidelines for Planning Authorities*. Department of the Environment, Heritage and Local Government.

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Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
Otter		
Disturbance from human activity, noise and vibration	Assessment of Effects: It is recognised that assessing the impacts of disturbance to otter, which is often elusive, is difficult and that there are no environmental standards that can be applied for this species, unlike human beings. However, evidence would suggest that otters are not significantly affected by high levels of human disturbance ²⁴ , provided there is sufficient bank-side habitat providing opportunities for the animals to hide and rest without the fear of being disturbed. Based on noise levels from the continuation and extension of the quarry predicted baseline disturbance levels are not predicted to change with only the direction of disturbance moving towards the west away from the Dunbell Little stream and the River Nore. No effects are predicted on otters that may be include the Dunbell Little within any territory.	Not significant
	Mitigation: No specific ecological mitigation is required as impact is assessed as not significant.	
Bird Assemblage		
Habitat loss, damage and fragmentation	Assessment of Effects The proposed extension of the limestone quarry will result in the loss of 24.5ha of farmland habitat with the potential to be used by birds for breeding and foraging purposes. However, it is considered that the surrounding area has sufficient carrying capacity to accommodate any displaced birds. It is therefore assessed that the loss of habitats is not likely to adversely affect the local population status of any birds species as a direct or indirect result of the extension of the limestone quarry.	Not significant
	Mitigation: No specific ecological mitigation is required as impact is assessed as not significant. However, mitigation measures are required to ensure compliance with Wildlife Act 1976 (as amended)	

²⁴ Chanin P (2003). *Ecology of the European Otter*. Conserving Natura 2000 Rivers Ecology Series No. 10. English Nature, Peterborough.

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Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
	prohibiting the killing, injuring or taking; the damage, destruction or taking of nests in use or being built; and the taking or destruction of eggs, where any nest sites are found to be present in areas proposed to be stripped of vegetation. To avoid destruction of any such nests all of the farm buildings, trees, shrubs and ground vegetation with the potential to support nesting birds will be removed outside the bird breeding season wherever practically possible in light of good forestry practice. However, if any vegetation clearance take place during the bird breeding season (March to the end of August) the area will be inspected for any evidence of nesting activity by an experienced ecologist / ornithologist. Any identified nest will be marked and an appropriately sized exclusion zone for the relevant species delineated around all such nest site(s). No vegetation clearance will be permitted within any exclusion zone until such time as the young have fledged and left the nest. Given the likely nesting species at this site the exclusion zone is unlikely to exceed beyond a 20m radius of any nesting site.	
Disturbance from human activity, noise and vibration	<u>Assessment of Effects:</u> During the stripping of topsoil and overburden in the proposed extension area there may be a temporary elevation in ambient noise levels over 55dB returning to below 55dB during quarrying operations. Although baseline noise levels are not predicted to significantly change, the direction of any noise, visual disturbance and vibration will change. No noise sensitive species of bird or which may be especially sensitive to other types of human disturbance were recorded as present in the proposed quarry extension area. Given that the species recorded as present in the application area are already likely to be habituated to noise, other human disturbance and vibration from the existing quarry, no likely significant effects on the overall population status is on any bird species at and within the local surrounding area from the continuation and extension of quarrying operations. <u>Mitigation:</u> No specific ecological mitigation is required as impact is assessed as not significant.	Not significant
Dust deposition	<u>Assessment of Effects:</u>	Not significant

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Impact	Assessment of Effects	Significance of Impact Before and After Mitigation (Residual Impact)
	Dust deposition levels from the continuation and extension of the existing quarry is not predicted to be at levels where any potential nesting habitat or food sources within the immediate surrounding area of the application site would be directed affected and no indirect effects on the overall population of any bird species is predicted.	
	Mitigation: No specific ecological mitigation is required as impact is assessed as not significant.	

Ecosystem Services

- 6.64 The habitats in the application site provide some provisioning, regulating and supporting services. These include amongst other things:
- Provisioning: grassland providing forage for livestock;
 - Regulating: grassland providing water regulation and recharging of aquifers,
 - Regulating: hedgerows providing carbon sequestration; and
 - Supporting: grassland assisting in soil formation.
- 6.65 However, the scale and nature of the habitats in the application site is limited and therefore the ecosystem services provided is not likely to be significant or important in the locality of the existing quarry site or immediate wider surrounding area.

Cumulative Effects

- 6.66 A search of the ePlanning portals for County Kilkenny has identified the two other planning applications which have potential for cumulative effects on biodiversity. These applications are:
- **Planning Reference 21508:** Permission for the development consisting of a total area of 15.7ha comprising: the continuation of use of the existing pit consisting of 6.8ha previously granted planning permission; extension of the pit into an adjoining greenfield area consisting of 8.9ha which will be subject to extraction and occasional processing of material; continuation of use of the existing processing infrastructure (crushing, screening and washing plant), concrete batching plants, garage, workshop, fuel storage shed, wheelwash, office/laboratory and all other ancillary facilities; landscaping and restoration of the site including construction of berms and all associated ancillary facilities/works over a 25 year permission at Sheastown, Bennettsbridge, Co. Kilkenny. Permission granted on 07/12/2021; and
 - **Planning Reference 2560187:** Planning application for the construction of 2 No. agricultural sheds consisting of cubicles, feeding area and underground slatted slurry storage tanks and construction of 2 No. silage pits and all associated site works.
- 6.67 Table 6.12 provides an assessment of potential cumulative impacts of the continuation of use and lateral extension of the existing quarry at Kilree and the other relevant project identified above.

Table 6.12: Assessment of Effects on Identified and Relevant Important Ecological Features (Operational Phase)

Impact	Receptor	Assessment of Effects	Significance of Cumulative Impact
Planning Reference 21508: Continuation of Use and Extension of a Sand and Gravel Pit at Sheastown			
Habitat loss, damage and disturbance and the effects of habitat loss, damage and fragmentation on associated species.	Hedgerows	The proposed continuation of use and extension of the sand and gravel pit at Sheastown will result in the direct loss the internal field hedgerow boundaries overtime within the extension area. The loss of this habitat has the potential to a have a cumulative impact, in the absence of compensation, with the loss of hedgerow / treeline habitat from the continuation of use and lateral extension of the quarry at Kilree.	Significant at Local (higher) value
	Badger	No evidence of badger was recorded within the application site for the proposed continuation of use and extension of the sand and gravel pit. Therefore no cumulative impacts on badger are likely.	Not significant
	Bats	No bat surveys were carried out as part of the EIAR for the proposed continuation of use and extension of the sand and gravel pit in Sheastown, but identifies that the site may be used by small numbers of bats. The sand and gravel pit extension area lies approximately 1km north east of the proposed quarry extension at Kilree. At this distance and with no significant bat commuting features linking these sites it is assessed that there will be no significant cumulative impact on any CSZ around a communal bat roost.	Not significant
	Birds	The loss of three arable fields and associated hedgerow boundaries as part of the sand and gravel pit extension is not predicted to have any cumulative impacts on birds with the immediate surrounding area around the sand and gravel pit	Not significant

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Impact	Receptor	Assessment of Effects	Significance of Cumulative Impact
		having sufficient carrying capacity to accommodate any displaced birds	
Disturbance from human activity, noise and vibration	Badger Bats Birds	At a distance of 1km between the sand and gravel pit extension and the quarry extension areas no cumulative impacts from disturbance are predicted on any of the identified receptors.	Not significant
Dust deposition	Bats Birds	At a distance of 1km between the sand and gravel pit extension and the quarry extension areas no cumulative impacts from disturbance are predicted on any of the identified receptors.	Not significant
Alterations to hydrogeological and hydrological conditions	River Barrow and River Nore SAC River Nore SPA	The sand and gravel pit at Sheastown lies above the Stoneyford Gravels GWB and is not linked hydrogeological to the Kilkenny GWB that the quarry at Kilree sits. Therefore there is no connectivity between the sand and gravel pit at Sheastown and the quarry at Kilree and therefore no potential cumulative impacts on the hydrogeological and hydrological regime of the River Nore.	Not significant
Changes in water quality (ground and surface waters)	River Barrow and River Nore SAC River Nore SPA	The continuance of use and extension of the sand and gravel pit at Sheastown will not result in any changes to its existing Discharge Licence Reference ENV/W/94 and no cumulative impacts are predicted on water quality in the River Nore.	Not significant
Planning Reference 2560187: Construction of Agricultural Sheds, Slurry Tanks and Silage Pits at Kilree			
Habitat loss, damage and disturbance and the effects of habitat loss, damage and fragmentation on associated species.	Hedgerows	The proposed construction of agricultural sheds, slurry tanks and silage pits at Kilree has the potential to result in loss of hedgerow habitat. However, as part of the development hedgerow will be planted to offset any loss and no cumulative impacts are predicted.	Not significant
	Bats	A bat survey of in July 2025 found no evidence of roosting bats at the development site, but with low numbers of Leisler's Bat,	No significant

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Impact	Receptor	Assessment of Effects	Significance of Cumulative Impact
		Common Pipistrelle, Soprano Pipistrelle and <i>Myotis</i> sp. Foraging at this location. Although the site will be subject to disturbance during the construction of the agricultural buildings, the proposed replacement hedgerow planting will offset the hedgerow to be lost and in the long-term there should be no net loss of bat foraging habitat. Therefore no cumulative impacts are predicted.	
Changes in water quality (ground and surface waters)	River Barrow and River Nore SAC River Nore SPA	There is no potential for cumulative impact from the agricultural development as the potential source of impact on water quality from the storage of slurry and silage is different from the continuation of use and lateral extension of the quarry at Kilree. Therefore no cumulative impacts are predicted on water quality in the River Nore.	Not significant

Ecological Enhancement and Compensation

Broadleaved Woodland

- 6.68 The proposed screening berms that will run along the northern, western and southern boundaries of the extension area will be planted with a mix of broadleaved woodland species creating approximately 5.5ha compensatory (Mixed) broadleaved woodland habitat. Under the Forestry Felling Licence a further 7 ha of replacement planting must be delivered and this could be anywhere in Ireland. Locally this means a net loss of 1.5 ha (7 ha felled vs. 5.5 ha replanted on-site), but when combined with the off-site obligation there is a potential overall net gain of 5.5 ha of broadleaved woodland.
- 6.69 On the outer edge of the berm the woodland planting will be scalloped to create some more structural diversity and open areas improving habitat for invertebrates and foraging opportunities for bats and birds.

Hedgerow

- 6.70 In addition to the woodland planting, c.860m of compensatory hedgerow habitat will be planted along parts of the western boundary of the quarry site providing a defined linear boundary of the quarry whilst providing connectivity with the proposed compensatory woodland planting and other existing hedgerows / treelines that will be retained along the boundary of the quarry.
- 6.71 A c.300m section of retained hedgerow running along the northern boundary of the extension area and farm track will be enhanced through the planting of trees to gap up this hedgerow.

Other Ecological Enhancement and Compensation

- 6.72 No further recommendations for ecological enhancement and/or compensation are deemed necessary as part of the proposed continuation of use and lateral extension of the existing quarry at Kilree.

Monitoring

- 6.73 No specific ecological monitoring is deemed necessary for the proposed continuation of use and lateral extension to the existing limestone quarry at Kilree. However, prior to any removal of the broadleaved woodland a check will be undertaken to ensure no badger setts are present.

Legal and Policy Implications

Legal Implications

- 6.74 The proposed continuation of use and lateral extension to the existing limestone quarry at Kilree has no implications for any statutory designated nature conservation sites.
- 6.75 The only statutory protected species with relevance to the proposed continuance of use and extension of the limestone quarry are potentially badgers (if setts are established in the woodland area), bats (removal of three mature Ash trees) and breeding birds (removal of nesting habitat during the breeding season). However, provided that appropriate mitigation strategies are put in place it will be possible for the proposed continuation of use and lateral

extension of the existing quarry at Kilree to be carried out without the risk of breaching current wildlife legislation in respect to protected species.

Policy Implications

- 6.76 The Kilkenny County Development Plan has a Development Management Requirement to protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character of the county.
- 6.77 The broadleaved woodland within the proposed extension area is considered to have limited amenity value due to it being on private land and its relatively inaccessible location. It also is considered to have limited biodiversity value at this current time due to its age and to the fact that most of the Ash have ash dieback affecting the long-term viability of the woodland without management actions. The woodland would not appear to be important for any individual or groups and is considered not important in providing ecological connectivity in context of wider landscape. It is considered that the proposed planting of compensatory broadleaved woodland would comply with the requirement of the Development Management Requirement relating to woodlands.
- 6.78 The hedgerows / treelines within the application area form part the wider ecological network of linear features but have limited historical significance. It is considered that the proposed hedgerow planting will compensate for the loss of hedgerow / treelines and would comply with the requirements of the Development Management Requirement relating to hedgerows.

Residual Effects

- 6.79 A summary matrix of predicted residual impacts from the proposed continuation of use and lateral extension to the existing limestone quarry at Kilree is provided in Table 6-13.

Table 6.13: Summary Matrix of Predicted Residual Impacts from the Proposed Quarry Development at Kilree

Value	Potential Impact	Direction	Probability	Magnitude	Duration	Frequency	Reversibility	Mitigation / Compensation	Means of Delivering Mitigation / Compensation	Residual Impact
(Mixed) Broadleaved Woodland										
Local (higher)	Direct loss of 7ha of habitat	Negative	Certain	Significant	Permanent	Once	Not reversible	Planting of c5.5ha compensatory mixed broadleaved woodland along the proposed screening berms; Replacement of the full 7 ha under felling-licence requirements	Planning condition	Not significant
Hedgerows / Treelines										
Local (higher)	Direct loss of c.1377m of habitat	Negative	Certain	Significant	Permanent	Once	Not reversible	Planting of c.860m of compensatory hedgerow along parts of the western boundary of the extension area and enhancement of c.300m of retained hedgerow on	Planning condition	Not significant

Environmental Impact Assessment Report

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								northern boundary of extension area. Replanting of compensatory mixed woodland plantation will increase woodland area by 0.5ha which will offset the loss of the remaining 417m hedgerow / treeline habitat		
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FIGURES

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NOTES

LEGEND

- APPLICATION SITE
- 2KM RADIUS
- RIVER BARROW AND RIVER NORE SAC
- RIVER NORE SPA

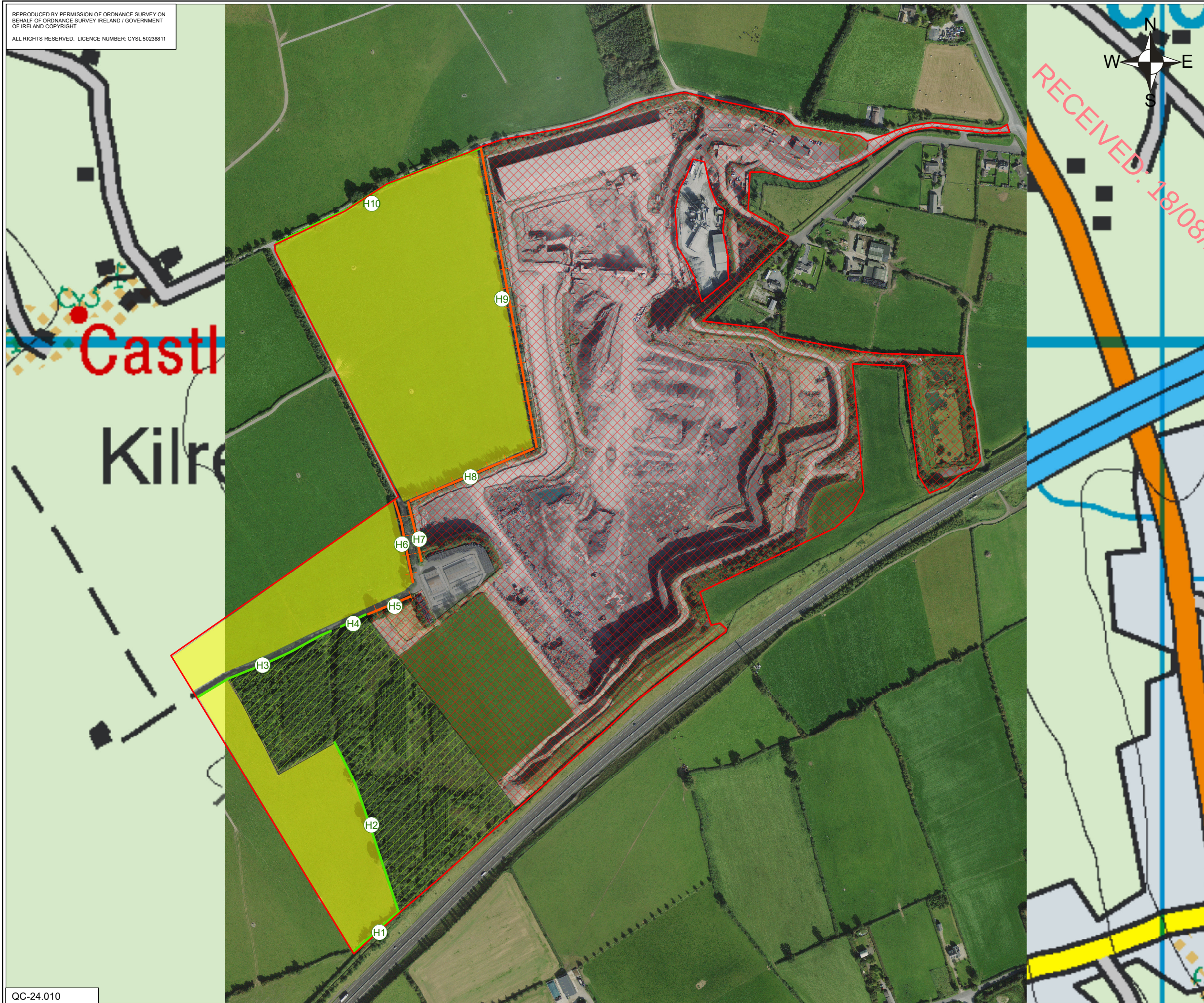


CONTINUATION OF USE AND EXTENSION
OF AN EXISTING QUARRY AT KILREE
BENNETTSBRIDGE, CO. KILKENNY

DESIGNATED SITES

FIGURE 6.1

Scale 1:20,000 @ A3 Date JUNE 2025



NOTES

LEGEND

- APPLICATION SITE
- HABITATS
 - ED4 - ACTIVE QUARRIES AND MINES
 - GA1 - IMPROVED AGRICULTURAL GRASSLAND
 - BL3 - BUILDINGS AND ARTIFICIAL SURFACES
 - WD1 - (MIXED) BROADLEAVED WOODLAND
 - WL1 - HEDGEROWS
 - WL2 - TREELINES
- HEDGEROW APPRAISAL REFERENCE



CONTINUATION OF USE AND EXTENSION
OF AN EXISTING QUARRY AT KILREE,
BENNETTSBRIDGE, CO. KILKENNY

HABITAT PLAN

FIGURE 6.2

APPENDICES

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APPENDIX 6A: LOCAL POLICIES RELEVANT TO BIODIVERSITY

Policy / Objective	Description
Protected Habitats and Species Designated for Nature Conservation	
Development Management Requirements	- To ensure that development proposals, where relevant, improve the ecological coherence of the Natura 2000 network and encourage the retention and management of landscape features that are of major importance for wild fauna and flora as per Article 10 of the Habitats Directive. - To protect and where possible enhance wildlife habitats and landscape features which act as ecological corridors/networks and stepping stones, such as river corridors, hedgerows and road verges, and to minimise the loss of habitats and features of the wider countryside (such as ponds, wetlands, trees) which are not within designated sites. - To ensure that appropriate mitigation and/or compensation measures to conserve biodiversity, landscape character and green infrastructure networks are required in developments where habitats are at risk or lost as part of a development.
Green Infrastructure	
Development Management Requirements	Require all developments in the early pre-planning stage of the planning process to identify, protect and enhance ecological features and habitats, and making provision for local biodiversity (e.g. through protection of existing breeding sites, and provision of appropriate new infrastructure such as swift, bat and barn owl boxes, bat roost sites, green roofs, etc.) and provide links to the wider Green Infrastructure network as an essential part of the design process.
Woodland, Trees and Hedgerows	
Development Management Requirements	- To protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character of the county, and to ensure that proper provision is made for their protection and management, when undertaking, approving or authorising development. - To ensure that when undertaking, approving or authorising development that sufficient information is provided to enable an assessment of impacts on woodlands, trees, and hedgerows. - To have regard to, and seek the conservation of identified trees and woodlands from a) the National Survey of Ancient and Long-Established Woodlands, b) the Tree Register of Ireland (c) sites of significance identified in the Kilkenny Woodlands Survey 1997, (d) the National Survey of Native Woodlands, and (e) Survey of Mature Trees in Kilkenny City and Environs, in the assessment of planning applications.

Policy / Objective	Description
	- To retain hedgerows, and other distinctive boundary treatment such as stone walls, when undertaking, authorising or approving development; where the loss of the existing boundary is unavoidable as part of development, to ensure that a new hedgerow is planted using native species, and species of local provenance to replace the existing hedgerow and/or that the wall is re-built using local stone and local vernacular design. - To discourage the felling of mature trees to facilitate development and, where appropriate make use of Tree Preservation Orders to protect important trees and groups of trees which may be at risk or have an amenity, biodiversity or historic value. - To require the planting of native broadleaved species, and species of local provenance, in new developments as appropriate. See Appendix G for a list of native trees and shrubs.
Inland Water – Rivers, Streams and Groundwater, and Wetlands	
Objective	The Council will protect, manage and enhance the wetlands of the County having regard to the 'County Kilkenny Preliminary Wetland Survey, 2020' and subsequent surveys published during the lifetime of this plan. The Council will also ensure that there is an appropriate level of assessment in relation to proposals which involve draining, reclaiming or infilling of wetland habitats.
Peatlands	
Objective	The Council will protect peatlands from inappropriate development having regard to their amenity and biodiversity value and their visual sensitivity.
Invasive Species	
Development Management Requirements	- To require relevant development proposals to address the presence or absence of invasive alien species on proposed development sites and (if necessary) require applicants to prepare and submit an Invasive Species Management Plan where such a species exists to comply with the provisions of the European Communities (Birds and Natural Habitats) Regulations 2011-2015. - For proposals connected to surface water systems, risks associated with the spread of crayfish plague shall be considered and applicants should submit a crayfish plague management strategy where appropriate.
Native Plant Species	
Development Management Requirements	The Council will promote the use of native plants and seeds from indigenous seed sources in all landscape projects.
Noise, Air Quality and Light Pollution	

Policy / Objective	Description
Development Management Requirements	• To ensure that developments which are subject to the requirements of the Air Pollution Act 1987 and Air Pollution (Licensing of Industrial Plant) Regulations 1988 or any subsequent regulations meet appropriate emission standards and other relevant national and international standards. • To seek to minimise noise and dust through the planning process by ensuring that the design of developments incorporate measures to prevent or mitigate the transmission of dust, noise and vibration, where appropriate. • To ensure that that appropriate mitigation measures to counter noise impact are implemented at all new developments to limit exposure to high noise areas. • Ensure that traffic noise levels are considered as part of all new developments along National routes, major roads (as identified in the Noise Action Plan) and rail lines. This includes, but is not limited to, consulting with the current Noise Action Plan and strategic noise maps as identification of areas that are within the subject criteria of the Regulations for noise exposure. Future developments are required to take account of designated quiet areas as in accordance with the Noise Action Plan 2019-2023. Any development near a designated quiet area will be subject to additional scrutiny so as to ensure that the quiet area is not impacted, and may be prohibited in certain cases. • To ensure that lighting is carefully and sensitively designed. • To require that the design of external lighting minimises the incidence of light spillage or pollution into the surrounding environment.

APPENDIX 6B: TREE SURVEY AND REPORT

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TIMBERLAND FORESTRY

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RECEIVED: 18/08/2025

TREE SURVEY AND REPORT

FOR

Bennettsbridge

Limestone

LANDS AT

Sheastown,

Bennettsbridge,

Co Kilkenny

Ground Survey: 8th May 2025

Report: 22nd May 2025

Prepared By: Dermot Houlihan B.Agr.Sc.(Forestry) MSIF

RECEIVED: 18/08/2025

Terms of reference and Methodology

This report was commissioned by Bennettsbridge Limestone to record information on trees growing on or immediately adjacent to the proposed extension of the quarry, the area of interest is outlined in red on the attached map.

The locations of the groups of trees on site are marked and numbered on the attached Tree Survey map and are described in this report.

Location

The site is located at Kikree, close to Bennettsbridge and is bounded by the M9 Motorway to the South. To the East is the existing Quarry, there is farmland to the North and West with no public access.

Description of the trees on site

The trees on site all originated as either hedgerow trees or as trees planted as landscaping for previous quarry screening.

Group 1 (area 7.02 Ha.)

(See Tree Survey map and attached photos) The largest number of trees on site were planted as a forestry block c. 20 years ago. Ash species accounted for approximately 50% of the area, the Ash trees are suffering from Ash Dieback Disease and are in extremely poor condition, with no viable future. The remaining trees in this area are mixed species comprising of Beech, Oak and Sycamore. This area was afforested with grant aid from the Forest Service as part of CN42836, a Felling Licence will be required and the conditions of this Licence will include the afforestation of an equivalent area of land, this is standard practice.

Group 2

A group 40 metres long x 8 m wide of mixed species of trees, Beech, Oak, Sycamore and Salix c. 20 years old, height 8-9 metres. Located on boundary of concrete farmyard.

Group 3

Four Semi Mature Ash trees, showing signs of Ash Dieback Disease, height 12-14 metres, on boundary of concrete farmyard.

Group 4

A line (length 120 metres) of large mature mostly Monterey Cypress trees, Including a Sitka spruce. Located along Western side of internal farm road.

Group 5

A line of mature trees, length c. 80 metres, trees mainly in poor condition, Oak (4), Ash (2), Larch (4), Scots pine (2). Located along Eastern side of internal farm road. The Ash are suffering from Ash Dieback Disease, while the Larch and Scots Pine are stressed, with some dead, because of the dry conditions on site.

Group 6

This comprises of three rows of mixed species of trees planted as screening. This particular group (length c. 410 metres) is outside of the planning permission area. This is a very mixture of very suitable trees for this area: Oak, Beech, Birch, Alder, Scots pine, Spanish Chestnut and Hornbeam. The original mixture included Ash which are generally in poor condition because of Ash Dieback Disease, however the overall effect of the screening isn't diminished.

Group 7

Thus is a line of mature trees, length c. 200 metres, evidently planted for screening. The main species is Sitka spruce, with smaller numbers of Lawson cypress, there are also a number of Elm trees which most likely arose from natural regeneration. The trees are mature, but the Sitka spruce is unsuited to the site conditions and these are in poor condition, many with dying tops. The Lawson Cypress are not great in number but doing well and this species could be considered for future planting.

Group 8

This is a hedgerow length c. 415 metres, mainly of Hawthorn 5- 6 metres high, growing along the boundary of the existing Quarry. These are doing well and are a useful addition to the landscape. Interspersed are Sycamore, Ash, Elder and Salix, with a group of Monterey Cypress nearest to the Northern end.

At the Northern end of this group, adjacent the farm road is a large mature Ash tree, this removal of tree isn't necessary for the proposed development, but this tree should be removed as it is in a hazardous condition because of its age and Ash Dieback Disease.

Group 9

A line of mature trees, to be retained, the only removals required are some of the Ash and Larch, which are dead or in poor condition.

Group 10

A line of trees between the concrete farmyard and the existing quarry. Length c. 130 metres, main species Ash, which are all in poor condition, there are also a number of young Sycamore, Oak and Salix.

Group 11

Remaining narrow strip (length c. 65 metres) of trees, previously part of a larger planted area. Most of these trees are c. 20 years old, species Ash, Oak, Sycamore and Salix, the Ash are diseased and in poor condition. There is a single mature tree, this is an Ash in reasonable condition, but will need to be removed for safety as it is right beside the farm road.

Tree felling and the planting of replacement trees.

It is proposed that all of the trees listed above are to be cleared, with the exceptions of Groups 6 and 9. The only block of trees to be cleared is Group 1 approximately 7.02 ha. The overall development has an area of approximately 7.5 ha which is to be planted with trees (see attached Planning Areas Map), proposed overburden storage areas and Landscape Screening Berms.

A Felling Licence from the Forest Service DAFM will be required for Group 1, the conditions of this Licence will include the afforestation of an equivalent area of

land, some of the area to be planted as part of the overall development may qualify as replacement land. In any event any areas of 0.1 ha or more will require approval from the Forest Service.

The planting of Silver Birch and Mountain Ash as replacement trees will give early height growth. Oak, Beech, Lime, Maple and Red Oak are all suitable as the long term dominant trees. Planting to include Hazel, Holly, Scots Pine and especially Hawthorn, these are all native species, are low growing and are particularly beneficial for Biodiversity.

Mitigation Measures for the protection of Wildlife

It is likely that there are birds nesting on site and any clearance works or tree felling must be conducted outside of bird nesting season. The bird nesting season is from the 1st of March to the 31st August.

In line with the National Roads Authority's 'Guidelines for the Treatment of Bats during the Construction of National Road Schemes' (NRA, 2006); any trees which have to be cut must be left for 24 hours before being sawn up or mulched.



Dermot Houlihan

22nd May 2025

Tree Survey, Bennettsbridge Limestone
Timberland Forestry 22nd May 2025



Tree Survey Bennettsbridge Limestone
Timberland Forestry May 2025



Group No. 1 (Eastern Boundary) Planted forest area c. 20 years old, Mixed Broadleaves, total
Hectares.



Group 1. Planted forest Western Boundary

Tree Survey Bennettsbridge Limestone
Timberland Forestry May 2025



Group 1. Planted forest Western Boundary closer view.



Group 2

Tree Survey Bennettsbridge Limestone
Timberland Forestry May 2025



Group 3 Four trees adjacent to concrete farm yard.



Group 4 on RHS of farm road and Group 5 to the left

Tree Survey Bennettsbridge Limestone
Timberland Forestry May 2025



Group 6 Outside of planning area, but a good example of a suitable species mixture and planting arrangement.



Group 7

Tree Survey Bennettsbridge Limestone
Timberland Forestry May 2025



Group 7 Closer view



Group 8 Freely growing Hawthorn hedge with trees at intervals

Tree Survey Bennettsbridge Limestone
Timberland Forestry May 2025



Group 9 Mature trees to be retained where possible.



Group 9 Closer view of some of the trees

Tree Survey Bennettsbridge Limestone
Timberland Forestry May 2025



Group 10 a line of scraggy condition trees on two sides of concrete farmyard.



G 11 A line of trees, originally part of planted forest, includes a single mature Ash tree with poor prospects for its future anyway.

APPENDIX 6C: HEDGEROW APPRAISAL

Reference	Historical (a)	Species Diversity per 30m Section (b)	Structure, Construction and Associated Features (c)	Habitat Connectivity (d)	Landscape (E)	Overall Assessed Significance
H1	Score = 4 Townland Boundary	Score = 2 Hawthorn (D), Oak, Dogwood, Ash, Elder, Dog-rose, Wild Privet, Bramble Lords and Ladies	Score = 2 Remnant stone wall 0.5m in height	Score = 1 Single links with other hedgerows	Score = 0	High (a)=4 (a)+(b)= 6
H2	Score = 1 Internal Field Boundary	Score = 1 Hawthorn (D), Blackthorn (D), Ash, Dog-rose, Bramble Lords and Ladies	Score = 2 Stone wall >1m in height	Score = 2 Multiple links with other hedgerows	Score = 3 3 very mature ash all with evidence of ash dieback	Low
H3	Score = 1 Internal Field Boundary	Score = 3 Hawthorn (D), Blackthorn, Ash, Dog- rose, Elder, Honeysuckle, Bramble Lords and Ladies Herb-Robert Hedge Woundwort	Score = 1 Remnant stone wall <0.5m in height	Score = 2 Multiple links with other hedgerows	Score = 0	Low
H4	Score = 1 Internal Field Boundary	Score = 0 Hawthorn (D), Ash Dog-rose, Elder, Bramble	Score = 1 Remnant stone wall <0.5m in height	Score = 2 Multiple links with other hedgerows	Score = 2 2 mature ash both with evidence of ash dieback	Low

Environmental Impact Assessment Report

Client: Bennettsbridge Limestone Quarries

Ref. No.: 63.01

Project: Proposed Continuation of Use & Lateral Extension to an Existing Limestone Quarry at Kilree, Co. Kilkenny

Reference	Historical (a)	Species Diversity per 30m Section (b)	Structure, Construction and Associated Features (c)	Habitat Connectivity (d)	Landscape (e)	Overall Assessed Significance
H5	Score = 1 Internal Field Boundary	Score = 1 Grey Poplar	Score = 0	Score = 2 Multiple links with other hedgerows	Score = 0	Low
H6	Score = 3 Boundary appears on first edition OS maps	Score = 0 Monteray Cypress Sitka Spruce	Score = 1 Remnant stone wall <0.5m in height	Score = 2 Multiple links with other hedgerows	Score = 0	Low
H7	Score = 3 Boundary appears on first edition OS maps	Score = 1 Oak (D), Larch (some dead), Ash, Scots Pine	Score = 1 Remnant stone wall <0.5m in height	Score = 2 Multiple links with other hedgerows	Score = 0	Low
H8	Score = 1 Internal Field Boundary	Score = 2 Sitka Spruce (D), Lawson Cypress, Blackthorn, Hazel, Elder, Wych Elm Herb-Robert	Score = 0	Score = 2 Multiple links with other hedgerows	Score = 0	Low
H9	Score = 3 Northern half of boundary appears on first edition OS maps	Score = 3 Hawthorn (D), Monteray Cypress, Ash, Pedunculate Oak, Sycamore, Alder, Blackthorn, Elder, Dog- rose Herb-Robert	Score = 2 Dry ditch	Score = 2 Multiple links with other hedgerows	Score = 0	Low

Environmental Impact Assessment Report

Client: Bennettsbridge Limestone Quarries

Ref. No.: 63.01

Project: Proposed Continuation of Use & Lateral Extension to an Existing Limestone Quarry at Kilree, Co. Kilkenny

Reference	Historical (a)	Species Diversity per 30m Section (b)	Structure, Construction and Associated Features (c)	Habitat Connectivity (d)	Landscape (e)	Overall Assessed Significance
H10	Score = 1 Internal Field Boundary	Score = 1 Pedunculate Oak, Ash, Beech, Larch (dead / dying), Hawthorn, Blackthorn, Dog-rose, Elder, Bramble Herb-Robert Wood Avens Hedge Woundwort	Score = 2 Remnant stone wall 0.5m in height	Score = 2 Multiple links with other hedgerows	Score = 0	Low

APPENDIX 6D: BAT SURVEY AND EVALUATION REPORT

RECEIVED: 18/08/2025

APPENDIX 6E: SUMMARY OF BIRDS RECORDED DURING THE HABITAT SURVEY (JULY 2024)

Scientific Name	Common Name	Annex I EU Birds Directive	Red List	Amber List
<i>Carduelis carduelis</i>	Goldfinch	-	-	-
<i>Chloris chloris</i>	Greenfinch	-	-	-
<i>Columba palumbus</i>	Wood Pigeon	-	-	-
<i>Corvus cornix</i>	Hooded Crow	-	-	-
<i>Corvus frugilegus</i>	Rook	-	-	-
<i>Corvus monedula</i>	Jackdaw	-	-	-
<i>Cyanistes caeruleus</i>	Blue Tit	-	-	-
<i>Erithacus rubecula</i>	Robin	-	-	-
<i>Falco tinnunculus</i>	Kestrel	-	√	-
<i>Fringula coelebs</i>	Chaffinch	-	-	-
<i>Motachilla alba</i>	Pied Wagtail	-	-	-
<i>Parus major</i>	Great Tit	-	-	-
<i>Pica pica</i>	Magpie	-	-	-
<i>Prunella modularis</i>	Dunnock	-	-	-
<i>Pyrrhula pyrrhula</i>	Bullfinch	-	-	-
<i>Regulus regulus</i>	Goldcrest	-	-	-
<i>Sturnus vulgaris</i>	Starling	-	-	√
<i>Troglodytes troglodytes</i>	Wren	-	-	-
<i>Turdus merula</i>	Blackbird	-	-	-