Planning and Environmental Consultants

Supporting Document – Bat Derogation Licence Application

Cleeves Riverside Quarter, Co. Limerick

DOCUMENT DETAILS

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Project Title:	**Cleeves Riverside Quarter, Co. Limerick**
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APPENDICES

1. INTRODUCTION

This report provides information in support of an application for a derogation under Regulation 54 & 4A of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended. This application is specifically for:

1. The destruction of resting (not breeding) places of a population of two lesser horseshoe (*Rhinolophus hipposideros*) and small roost (<5 individuals) of soprano pipistrelle (*Pipistrellus pygmaeus*).
2. Potential disturbance to a small soprano pipistrelle roost counting approx. 6-8 bats that will be retained as part of the development but could be subject to disturbance during construction and operation.

The above derogation is required to facilitate a proposed development that is being undertaken by Limerick Twenty Thirty on behalf of Limerick County Council.

The proposed development includes phase 2 of a Masterplan for the development of the Cleeves Site in Limerick City. The Masterplan, published in 2023 was prepared in response to the requirements for a coordinated and holistic approach to development on the Cleeves Site (5.30 hectares) as detailed in the Limerick Development Plan 2022 – 2028. It provides a broad framework for LTT's vision for the future and creative re-use of this strategic city centre site and its valuable assets, providing a flexible and phased approach to development.

The ambition of Limerick Twenty Thirty (LTT) is to revitalise and transform the Cleeves site and surrounding area to deliver a World Class Waterfront development in Limerick's urban core. The transformative project seeks to achieve a number of primary objectives:

- supporting the growth of a strong local economy;
- encouraging and facilitating new business investment;
- retaining and integrating the historic buildings and site industrial heritage with contemporary buildings;
- accommodating a mix of uses anchored by a public realm that relates and links to the city core and the River Shannon, whilst implementing high-quality urban design, with sustainable and innovative design.

Once fully developed, the site has the potential to accommodate future population growth through residential unit provision and to further promote a strong local economy through the creation of employment and new local attractions, thereby encouraging and facilitating new business investment.

In order to provide the necessary information to consider this application, his report is accompanied by a full description of all bat surveys undertaken on the site; a description of the proposed development including its policy context and planning history; the proposed lighting plan and the proposed landscaping plan.

The derogation licence application has been prepared by Pat Roberts and Sara Fissolo.

Sara Fissolo is an ecologist with MKO with over five years' experience in ecological consultancy. Sara holds a BSc. (Hons) in Ecology and Environmental Biology from University College Cork. Sara first joined MKO in 2019 and has since worked as a member of MKO's dedicated bat unit, where she

scopes and manages bat survey requirements for a variety of projects, including wind-farms planning applications. She has specialised in carrying out bat survey requirements for developments and nature conservation projects, including habitat appraisals and roost assessments, manual/static activity surveys and data analysis, and produces bat report outputs to inform Ecological Impact Assessments, Environmental Impact Assessments and Appropriate Assessments. Sara's role includes keeping up to date with scientific literature and guiding her team and the rest of the ecology team on how to assess impacts on bats. She attended Wildlife Acoustics, Bat Conservation Ireland (BCI), Bat Conservation Trust (BCT) and CIEEM courses on surveying heritage buildings for bats, on performing advanced survey techniques and identification, on bats and lighting, on performing bat care, on assessing the impact of developments on bats and on the use of Kaleidoscope Pro Software. Sara is a member of BCI, for which she carries out volunteer surveys, is a qualifying member of CIEEM.

Pat Roberts is Principal Ecologist at MKO with over 20 years' experience. Pat's key strengths include his depth of knowledge and experience of a wide range of ecological and biodiversity topics. He currently operates as technical lead within the Ecology Team at MKO. He also manages training and development and ensures that the outputs from the ecology team are of a very high standard and meet the requirements of the clients. Pat has extensive experience in providing ecological services for large-scale infrastructure projects including roads, windfarms and railway construction and maintenance.

2. BACKGROUND TO PROPOSED ACTIVITY

2.1 Site Location and Project Description

The Proposed Development site is located in the Docklands of, Co. Limerick (Grid Ref: R 57051 57119) and is accessed via The North Circular Road. The Proposed Development site is located on the former Cleeves factory site on the northern bank of the River Shannon. The site location is provided in Figure 1.1 and a site layout is provided in the Landscaping Plan, which is provided as Appendix 1.

The Project Description chapter of the EIAR that accompanies the application for the Proposed Development, is provided as Appendix 2. A brief summary is provided below.

The proposed development comprises Phase II, of an overall Masterplan with four phases of development proposed. Phase II is subsequent to ongoing stabilisation and repair of the Flaxmill protected structure (Phase I). Phase III is intended to comprise an educational campus, inclusive of the adaptive reuse of the Flaxmill Building as part of that development and will be subject to a future separate application. Phase IV comprising the Shipyard site will be the final phase of development.

Two structures within the site are designated protected structures: the Flaxmill Building (PS Ref no.264 & NIAH No. 21512053) and the octagonal brick chimney (PS Ref no.265 & NIAH No. 21512059), which are to be retained. Other structures on the site will be removed to facilitate the proposed redevelopment.

The proposed development includes:

A. Demolition of a number of structures to facilitate development including (i) Salesians Secondary School and Fernbank House; (ii) 2 no. houses on North Circular Road; (iii) Residual piers from the basin of the reservoir; (iv) Upper Reservoir on Stonetown Terrace comprising 2 no. concrete water tanks, pump house and liquid storage tank; (v) 1960's lean-to building structures adjoining the Cold Store (former Weaving Mill); (vi) c20th rear lean-to of the Flaxmill Building; (vii) c.1960s office building adjoining the Packing Store and Cheese Plant on North Circular Road; (viii) Cluster of buildings including altered part of the Linen Store, the former Linen Store, Storage Building, and Office/Lab building at O'Callaghan Strand / Stonetown Terrace with partial retention of existing stone wall; (ix) warehouse on the Shipyard site; and (x) partial removal of stone boundary wall defining the Cleeves site adjoining O'Callaghan Strand / Stonetown Terrace. Some of the demolition works / partial demolition works overlap with Phase I works associated with the emergency stabilisation and repair of the Flaxmill building.

B. Construction and phased delivery of:

i. Residential Development in 4 development 'zones' within the site ranging in height from 3 – 7 storeys (with screened service plant at roof level) comprising; (a) 234 no. residential units; (b) 270 no. student bedspaces with ancillary resident services at ground floor level; (c) 256sqm of commercial floorspace; and (d) a creche. The specific development details of each proposed development zone comprise the following:

- Salesians Zone – 1 no. building with 2 no. blocks extending to 6 and 7 storeys comprising 146 no. apartments (76 no. 1 bed; and 70 no. 2 bed); a creche; undercroft car and bicycle parking; reception area, plant rooms, and refuse storage, with screened external plant at roof level; 20 no. 3 storey 3 bed triplexe units; and 30 no. car parking spaces for the dedicated use of the adjoining Salesians Primary School.

- Quarry Zone – 1 no. Purpose Built Student Accommodation building with 3 no. blocks extending to 6 and 7 storeys comprising 270 no. bedspaces with study rooms, shared areas, exercise room, reception area, plant rooms, refuse storage and bicycle parking all at ground floor level and screened external plant at roof level. Provision is made for communication antennae on the rooftop of one block. Consent is also sought for use of the PBSA accommodation, outside of student term time, for short-term letting purposes.

- Stonetown Terrace Zone – 1 no. building extending to 5 storeys comprising 38 no. apartments (6 no. studios; 12 no. 1 beds; and 20 no. 2 beds) with plant rooms and refuse storage at ground level, ancillary infrastructure at basement level at northern end of the block, with screened external plant at roof level; 9 no. 3-storey 3-bed townhouses; and a dedicated secure bicycle storage facility.

- O'Callaghan Strand Zone – 1 no. building extending to 4 / 5 storeys comprising 21 no. apartments (9 no. 1 bed and 12 no. 2 bed) with an open roof structure accommodating communal open space and plant; and 256qm of commercial ground floorspace intended to accommodate Class 1, Class 2 and / or Class 3 uses, with provision for car parking in the undercroft.

ii. Dedicated mobility hub with canopy including double stacker bicycle parking; and EV Charging spaces, within the Shipyard Zone. A dedicated pedestrian/cycle link connects North Circular Road with Condell Road. The remaining area of the zone shall accommodate temporary car parking and a temporary external event space to be used on a periodic basis as the need arises, pending future redevelopment proposals as detailed in the Masterplan (Stage IV).

iii. Extensive provision of Public Realm including creation of the Reservoir/Quarry Park, the Flaxmill Square and the Riverside Corridor. Significant areas of civic and green spaces are provided, incorporating formal and informal play space; nature based SuDs, permeability and access; provision of heritage interpretative panels; and a riverside canopy functioning as an outdoor event space.

iv. 3 no. dedicated bat houses; and

v. All ancillary site development works including (a) water services, foul and surface water drainage and associated connections across the site and serving each development zone; (b) attenuation proposals; (c) raising the level of North Circular Road between Fernhill and O'Callaghan Strand; (d) temporary construction access to the Quarry site including provision of a temporary bridge across the reservoir; (e) refuse collection store (f) car and bicycle parking; (g) public lighting; and (h) all landscaping works.

2.2 Policy Context

Regeneration of the Cleeves site is promoted at national, regional and local policy level, providing a solid planning framework for its development. The site is prioritised for investment under the Urban Regeneration and Development Fund (URDF), with enabling infrastructure and governance reforms supporting its transformation. There are a number of more strategic and generic policies and objectives influencing the approach to development on the site. The proposed development has been carefully considered and designed in the context of such strategic policy, mindful of environmental and social, obligations and targets.

Chapter Three of the EIAR for the proposed development (Project Need and Spatial Planning Policy) is provided as Appendix 3.

3. BAT SURVEYS AND SITE ASSESSMENT

3.1 Bat Surveys

Bat surveys were conducted at the site over four years, the primary conclusions of the surveys undertaken are detailed below. A Baseline Bat Report is included as Appendix 4. It provides full details of all bat surveys undertaken at the site. The results of the bat surveys are shown in Figure 3-1.

The following points set out the conclusion of all surveys:

- Six bat species, as well as Myotis sp. were recorded commuting and foraging across the proposed works site during the bat surveys carried out, including Soprano pipistrelle, Common pipistrelle, Leisler's bat, Brown long-eared bat, Nathusius' pipistrelle and Lesser horseshoe bat (LHB).
- Most of the buildings located within the Masterplan site have the potential to support bat roosts. However, no dropping accumulations indicative of large regular roosts were found. The small accumulations of bat droppings and feeding remains recorded suggest that the structures on site are used with likely regularity by a small number of bats. Droppings were found in seven buildings within the proposed development site, either scattered or accumulated under likely LHB perches. One of these LHB perches were confirmed using DNA analysis. Despite multiple revisits, no LHBs were ever noted roosting at these locations during the daytime.
- Four active roosts were identified within the site:
    - One lesser horseshoe bat was observed entering the Coldstore building, west of the Flaxmill, from the ground floor during a dawn re-entry survey, however no confirmation of its day roosting location was possible: the entrance is well connected to the whole interior.
    - A small soprano pipistrelle roost counting approx. 6-8 bats was identified within the western rock face of the Quarry Site
    - Two lesser horseshoe bats were found to be roosting within a derelict classroom building at the back of the Salesians School.
    - Another active roost was found within the Salesians, in the interior yard of the convent. Based on the evidence found in 2025 and the previous surveys undertaken in 2023, the location consistently hosts a small pipistrelle summer roost (*Pipistrellus sp.*).
- Baseline conditions present lighting disturbance around the Flaxmill site near O'Callaghan Strand, where security lighting operates all night, along the NCR and site boundaries, where road illumination spills onto the site, and in the Salesians, where the school currently operated as an accommodation centre. The central Quarry Site, with the Reservoir, present the darkest environments on the site, and the northern boundary, along the quarry walls between the Flaxmill and into the Salesians, was identified as a regular commuting corridor for LHB. This species is particularly sensitive to light pollution and represents the benchmark towards which all impacts on bats will be assessed.
- The commuting corridor for lesser horseshoe bats was confirmed during static and manual surveys to run between at least two identified roosting locations, one at the Salesians and one within the Flaxmill Site. The species utilises the site for foraging purposes and for roosting. No evidence of maternity roost or hibernating behaviour was identified for this species. It is unusual to find lesser horseshoe bats regularly utilising an urban environment. As such, due to the available roosting opportunities, the site is potentially a significant outpost for the species, despite the low numbers of individuals recorded.
- Soprano and common pipistrelles were observed commuting into the site by crossing the North Circular Road (NCR) towards the Reservoir. This location and the westernmost section of the

site, by the Salesians, are considered the most likely entry and exit points into the site. This is as a result of existing, but suboptimal, green infrastructure including treelines and private gardens located outside the MS in these areas.

- With regard to foraging and commuting bats, the reservoir and quarry areas are of Moderate suitability. Built and open areas, such as open yards and open grassland are considered of Low suitability. This assessment was confirmed by the surveys undertaken, which recorded small numbers of bats foraging continuously around the Reservoir and on occasion across the rest of the site. The Quarry Site was confirmed to be the focal point of bat activity around the Masterplan Site, with low activity levels recorded at all other sites. In particular, very little activity was recorded at the Riverfront and in the Salesians front yard.

In summary, the site is utilised by a small number of bats with approximately two lesser horseshoe bats roosting alternately at various locations throughout the derelict buildings on the site. Two small roosts of soprano pipistrelle were also recorded, neither of which were maternity roosts. Some evidence of bats travelling into the site from the south west was identified and the highest levels of foraging activity were around the quarry and reservoir, which are the sections of the site that are currently unlit and vegetated, thus providing the most optimal foraging habitat.

3.2 Significance of Bats on the Site

The ecological significance and importance of the bats and their habitat identified within the study area was also determined with reference to a defined geographical context. This was undertaken following a methodology that is set out in Chapter 3 of the National Road Authority (NRA)'s *Guidelines for Assessment of Ecological Impacts of National Road Schemes Rev 2* (NRA, 2009a). These guidelines set out the context for the determination of value on a geographic basis with a hierarchy assigned in relation to the importance of any particular receptor. The guidelines provide a basis for determination of whether any particular receptor is of importance on the following scales:

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

The habitats within and surrounding the Masterplan Site are utilised by a small population of bats that are assigned **Local Importance (Higher Value)** due to their urban nature, relatively low suitability for bats and corresponding low activity levels. The soprano pipistrelles that are roosting on the site are assigned an importance of **Local Importance (Higher Value)** as the species is common and widespread in the local area and the number of roosting bats is small, with no breeding colony recorded. A population of approximately 2 LHB that was recorded roosting on the site was assigned **National Importance**, due to the high sensibility of the Limerick area in maintaining a valuable genetic link for populations in the Kerry and Clare counties. The Masterplan site is not located in proximity of any sites designated for the protection of bats and therefore the population is not considered in association with protected sites.

4. REQUIREMENT FOR DEROGATION

The NPWS document, Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland - National Parks and Wildlife Service Guidance Series 1 (2021), was reviewed before undertaking this derogation application.

4.1 Actions for which Derogation is Sought

The proposed development has been specifically designed to minimise any effects on bats wherever possible and to mitigate any potential significant effects. The design of the development provides for the retention of the commuting routes into and out of the site; the provision of suitable dark and vegetated foraging areas within the quarry and reservoir areas and the replacement of the roosting habitat that will be lost throughout the site.

However, despite the informed design of the development and proposed mitigation, there is still a requirement for a derogation under Regulation 54 & 4A of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended. This derogation applies specifically and directly to the following actions:

1. The destruction of resting (not breeding) places of a population of two lesser horseshoe (*Rhinolophus hipposideros*) and small roost (<5 individuals) of soprano pipistrelle (*Pipistrellus pygmaeus*). The locations of these roosting sites are shown on Figure 3.1 above and their nature and status is described in Section 3 and Appendix 4.
2. Potential disturbance to a small soprano pipistrelle roost counting approx. 6-8 bats that will be retained as part of the development but could be subject to disturbance during construction and operation. The location of this roosting site is shown on Figure 3.1 above and its nature and status is described in Section 3 and Appendix 4.

4.1.1 Destruction of Resting Places

The design requirements of the development did not allow for the retention of all the bat roosting habitat on the site given the derelict nature of the factory and other buildings and the scope and vision of the Masterplan. It is however, proposed to minimise and mitigate for any significant impacts and ensure that the site continues to be used by bats into the future and suitable roosting and foraging areas are provided within the design along with the retention of commuting routes not and out of the site. In addition to in-situ mitigation and compensation measures, a bat house suitable for lesser horseshoe bats and other bat species is also proposed to be built ex-situ. This is described below.

The following mitigations and enhancements are proposed to ensure that there are no significant effects as a result of the necessary destruction of bat roosts or roosting habitat.

4.1.1.1 Bat Roosting Habitat

4.1.1.1.1 *Compensation for Soprano Pipistrelle Roost Loss*

The landscape design includes for the retention of the roost identified within the quarry walls. The reservoir arches will also be retained and not illuminated. However a small roost will be lost While no evidence of roosting was found in the tunnels on the site, they do provide suitable resting habitat for bats and birds.

The following mitigation measures will be employed to compensate for the loss of the small roost of soprano pipistrelles within an interior yard of the Salesian's convent. All measures are shown on Figure 4.1.

- **Flaxmill staircase roost**. As part of Phase 1 works on the Flaxmill, following remediation of the building, an unused attic space above the buildings' exterior staircase will be retained and isolated from the building. Access via bat slates will be provided into the space.
- **Flaxmill bat slates**. The provision of bat slates on the Flaxmill has also been included in the design to allow space for crevice dwellers to roost on the roof. These will not provide access to the interior.
- **Salesians Site bat pole roost**. A bat pole will be erected along the northern boundary of the Salesians, in the proposed public gardens, to be of use to pipistrelle species currently utilising the convent's yard.
- **Bat Boxes.** A minimum of three woodcrete bat boxes will be installed at various locations within the site, with final locations to be determined by an ecologist following construction. Provisional locations include on or in proximity to the bat houses along the quarry walls. In addition, two bat boxes suitable for bridges will be erected under one of the tunnel arches to increase roosting suitability in this area. Access into the tunnels will be restricted to prevent disturbance and tampering.

4.1.1.1.2 *Lesser Horseshoe Bats Compensations*

LHB were recorded utilising the site for roosting and as such it was an important part of the design to ensure roosting availability remained within Cleeves Riverside Quarter for this species. Three bat houses were included in the design to provide choice availability in various weather, season, and life-cycle conditions. The locations of the bat houses were selected to provide safe and undisturbed roosting habitat along identified and recreated commuting corridors and will be positioned away from potential tampering and light disturbance. The bat house design was inspired by Vincent Wildlife Trust's designs, however a pitched roof was included instead of a sloped roof. The bat houses as soon as possible after site clearance takes place and will replace smaller Cathedine roosts that will be put in place prior to demolitions to provide suitable habitat during the demolition process. All mitigations are shown on Figure 4.1. and example drawings are provided in Plates 4-1 and 4-2.

Three bat houses have been included in the design. The location of the bat houses within the site was considered in connection with the retention of the dark corridor along the quarry walls and to provide access to the Reservoir, while providing options to bats depending on preferred roosting conditions.

- One bat house is proposed to be located against the western quarry wall, under the proposed boardwalk above the reservoir from the Salesians into the Quarry. This location, in proximity to water and partially shaded by the boardwalk, will provide cooler climatic conditions. The entrance into the house, suitable for LHB (30x20cm), will be located on the floor of the suspended house to limit potential bird access.
- One bat house is proposed along the same quarry wall, at the corner with the northern boundary. This house will be also suspended on the quarry to limit potential tampering. The house will not obstruct the existing soprano pipistrelle roost.
- One bat house is proposed along the northern boundary of the Salesians, where a roost was previously identified. This house will be on stilts to prevent tampering.

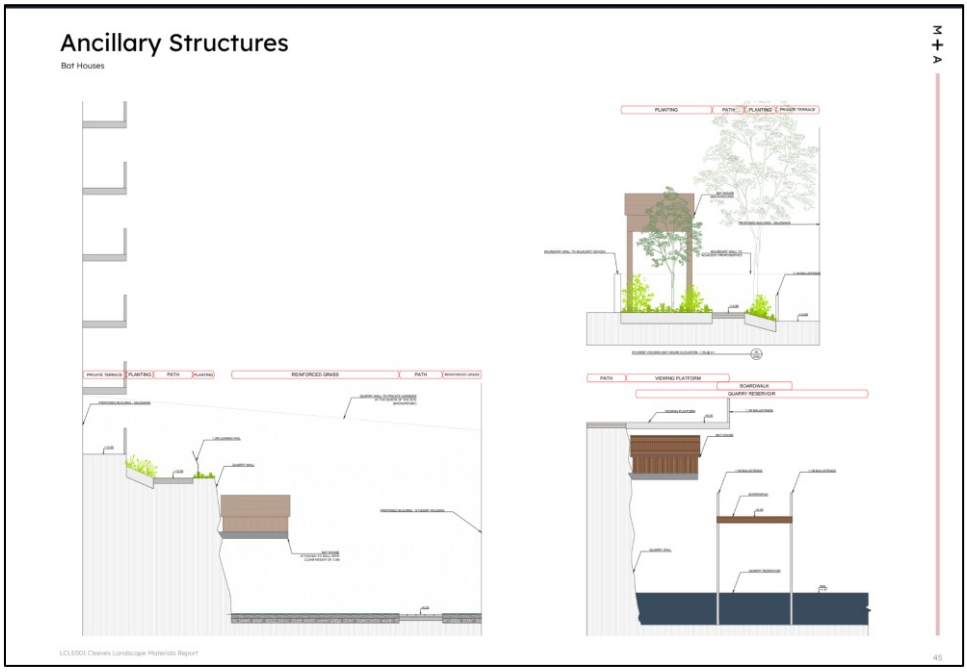

Plate 4-4-1 Extract from LCLE001 Landscape Plan showing proposed bat houses

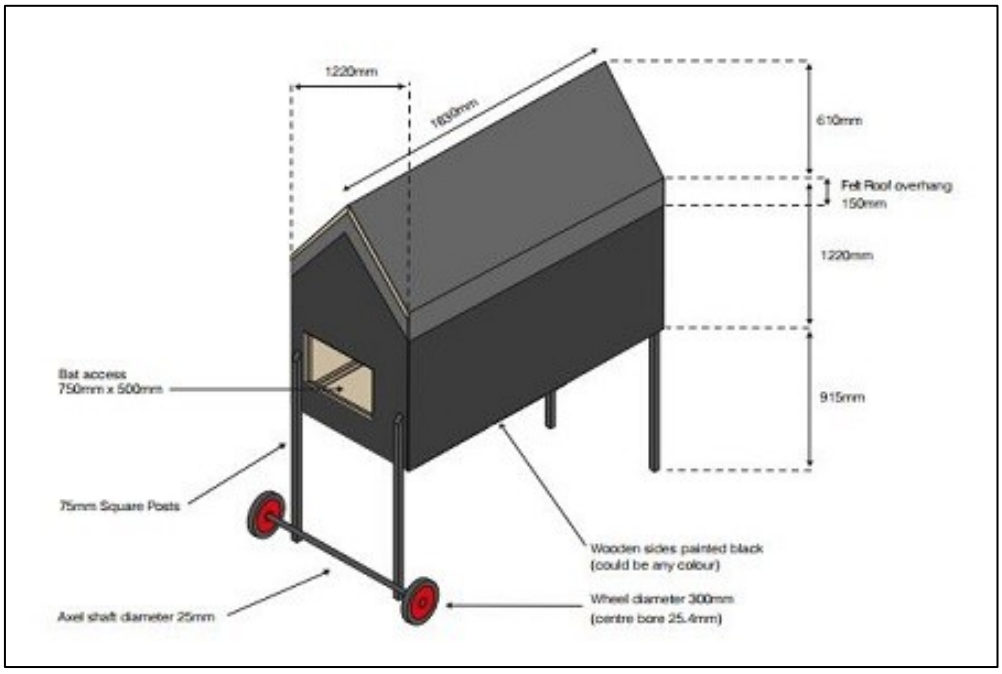

Plate 4-4-2 Cathedine Roost Example

4.1.1.2 Ex-situ Bat House

An agricultural site at Clonmacken in Limerick City, has been identified as a suitable location for the construction of an additional bat house for lesser horseshoe bats. The bat house is intended to enhance roosting opportunity in Limerick City and in proximity to suitable foraging and commuting grounds along the River Shannon. The site is located approximately 1.5km to Cleeves Riverside Quarter (Appendix 6). The ex-situ bat house location (ITM X555243 Y656748) was selected following consultations with NPWS, who suggested Clonmacken as a suitable area, and Limerick City and County Council (LCCC), who own the site and approved the location for a new bat house on LCCC lands for use by Limerick Twenty Thirty.

The Clonmacken area was visited on the 20th January 2026 by Sara Fissolo to assess suitable locations for a bat house to be constructed. Habitats were classified in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000). The preferred location is a small field surrounded by hedgerows tucked between the Condell Rd and the flood embankments running along the River Shannon. The site is predominantly *Juncus*-dominated wet grassland (GS4, Plate 4-3). Willow (*Salix sp.*) hedgerows (WL1) with bramble (*Rubus sp.)* and gorse (*Ulex sp,*) scrub separate and screen the site from the existing greenway, where directional lighting fixtures illuminate the greenway (Plate 4-4). Additional hedgerows line the drains (FW4) located approximately 45m south of the proposed bat house location, screening the site from the public walkways along the flood embankments (Plate 4-5). The site is well connected to suitable foraging and commuting habitats for bats to the south, east and west, including the Westfield Wetlands, via existing hedgerows lining Condell Rd. and its adjacent greenway, and wet woodland/scrub vegetation along the River Shannon, in a position which is possible to isolate and screen from potential future development in the Clonmacken area without losing this connectivity. The site location is shown in Appendix 6.

Plate 4-3 Ex-situ lands

Plate 4-4 Existing lighting along the Condell Rd greenway

Plate 4-5 Proposed Ex-situ location screened from view from public walkways along flood embankments

Bat house drawings are also presented in Appendix 6. The design followed a case study presented in CIEEM guidelines (Reason and Wray, 2023, Case Study 1) which was successfully taken up by breeding and hibernating lesser horseshoe bats. This is a cement block building with a natural slate roof developed on three levels, a ground floor level, an attic space with roof dormer and a sunken chamber created with a pre-cast concrete ring and cover. The building is oriented south-east for sun exposition and to allow for microclimates to develop within the structure throughout the day, allowing for suitable

conditions for maternity roosts, transitional roosts, day/night roosting as well as potential for hibernation within the cooler insulated ground floor and humid sunken floor. It includes two ground-floor entrances suitable for lesser horseshoe bats (Schofield, 2025) as well as other openings suitable for other species via raised roof tiles and barge boards, and an integrated bat box suitable for crevice dwellers at its south-western aspect. The open truss roof design (Plate 4-6) facilitates flight movement within the attic space. An integrated bat box will be added to the blockwork at the house's southern gable to suit crevice dwelling bats such as pipistrelle species.

Plate 4-6 Example of open truss roof design (Reason and Wray, 2023 p. 159)

The ex-situ bat house will be constructed as soon as possible and will be in place prior to large scale demolitions taking place at Cleeves Riverside Quarter. The design and location were selected to minimise ground and site works, involving minor site levelling, accommodations for a 3.5x5m reinforced concrete foundation and for the localised sunken below-ground chamber possible with light machinery, and no vegetation clearance other than grassland vegetation removal within the bat house footprint. Vehicle access to the location, for light machinery and materials delivery, is viable in summer via existing farm access to the west of the site. In addition, materials can be hoisted directly on location from the nearby greenway, without the need to clear vegetation. Ready-mix concrete will be used and pumped onto the site from the Condell Road. Due to the small scale of the works, the use of ready-mixed concrete, and the ~45m distance to the nearest drain, any potential runoff from excavations and concrete pouring will be contained and is not expected to impact water quality. The building will be constructed with standard blockwork, a wooden roof structure, and slate roof waterproofed with bituminous roofing felt which does not contain filaments (i.e. bitumen felt type 1F).

Additional linear features will be created around the ex-situ bat house, and existing hedgerows along the greenway will be bolstered to screen the area from artificial lighting and to create further commuting corridors. A mix of native hedge species, including fast growing species such as willow (*Salix* sp.), will be planted as shown in Appendix 6. In addition, a native treeline will be planted to screen the area from the north. This section may also require screening fencing to separate the bat house location from an existing wayleave and potential future development, whilst the treeline establishes. The existing hedgerows along the Condell Road greenway and the vegetation lining the drains along the existing flood relief embankments located south of the house will not be impacted by the proposed bat house construction.

There will be an allowance for accommodations for additional planting, micrositing, or modifications to the existing greenway lighting in proximity of the site to be implemented as the ex-situ bat house is constructed and monitored.

4.1.1.3 Bat Foraging and Commuting Habitat

It is noted that the derogation is sought for the loss of roosting habitat and direct mitigation is described above. It is further noted that the provision of such habitat is ineffective if the site no longer provides suitable habitat for the species involved. As such, the design of the proposed development was informed by the findings of bat surveys undertaken at the site, which found the quarry area to be the focus of commuting and foraging bat activity, with the reservoir providing suitable prey availability. This is where the majority of bat activity recorded was concentrated. LHBs were found to be moving across the site along its northern boundary, using the quarry walls and neighbouring private gardens to navigate.

In collaboration with the project ecologists, the landscape (Appendix 1) and lighting (Appendix 5) plans underwent a series of iterations to ensure these habitats remained available and were improved and enhanced as much as possible.

The proposed landscape plan includes for the provision of native planting throughout the Application and Masterplan Sites, which will help provide foraging opportunity for local wildlife:

- As the focus of the proposed development's landscape, the reservoir will see biodiverse planting mix replacing the existing the existing low diversity scrub and recolonising bare ground which will maintain connectivity along the identified commuting corridors.
- Phytoremediation islands will also be introduced to help purify surface water and will be planted with native flowering mixes to attract invertebrates and boost biodiversity. The planting mixes around the reservoir will promote prey availability for bats.
- A tree canopy will be re-established along the proposed steps into the quarry, which will replace the existing semi-mature gardens of the Victorian terrace. It was not possible to retain the existing trees as their roots extend below derelict buildings to be demolished.
- The quarry walls will be revegetated with climbing mixes if removal of any existing vegetation during construction was necessary, to maintain prey availability and commuting features in this area.
- In front of the Flaxmill, trees will be introduced within movable wooden planters to increase greenery in this zone while allowing for future phases of the masterplan to be implemented.
- Communal gardens and amenity spaces will be created in the Salesians and Stonetown terrace.
- Tree canopy will be added to existing treelines adjacent to the Shipyard to strengthen potential commuting and foraging route, and increase prey availability in this area.

The proposed lighting plan was specifically limited to the provision of lighting that was justified and navigated Limerick City and County Council Public Lighting and Product Specification 2022 Guidance, amongst others:

- The LCCC guidance on outdoor lighting colour temperature request the use of 4000K luminaires in public areas. Following studies carried out on ecological impact on the site, and the identification of foraging bats in the area, the IDT have agreed to the reduced temperature of 2700K luminaires to accommodate the local wildlife requirements. This colour temperature allows for better visual comfort for wildlife.
- The use low-level bollards has also been incorporated into many areas to suit the design team vision for the site. There is a mixture of symmetrical and asymmetrical bollard being used in the proposed scheme.

- Bollards have been used in the trafficked area to the rear of the Quarry building to suit the IDT requirements.
- Handrail lights are used in areas with steps. This lighting type will maximise the lighting on the steps for safety and minimise up light spill and impact on the ecology. Lighting in handrails will be fit with dimming control to achieve appropriate lux levels.
- Surface mounted downlight luminaires are proposed in some areas, primarily the canopy areas on the main site, and in the shipyard. These luminaires were selected to reduce upwards light spill on the site while providing sufficient light fittings for pedestrians within the scheme constraints
- All luminaires will have an LED light source.
- No lighting is directed at the reservoir area or along linear features created or retained.
- Lighting control regimes were implemented across the site:
    - Walkways and amenity areas will be programmed with dusk to midnight switching, and roadways with dusk to dawn switching, as per LCCC specification.
    - The Quarry Roadway being the primary route for the foraging wildlife will incorporate presence detection, the lighting will be off unless there is movement detected that will activate the lights in this area via movement sensors. The purpose of this is to always ensure minimum light in the area to allow maintenance of the foraging route.

4.1.1.4 Construction Mitigations

The following mitigations will be put in place to ensure that no bats are significantly affected during demolition activities.

Masterplan Phase 1

A derogation licence (DER-BAT-2025-169) is in place for Phase I works relating to the remediation works on the Flaxmill building, where LHB roosts were identified. The following mitigations apply to this phase and will be relevant to the continued monitoring of the site during construction of the Application Site (Phase II):

- A pre-commencement survey will be carried out to assess the buildings where roosting was identified prior to any works. The function of this survey will be to assess any changes in baseline environment since the time of last undertaking surveys in 2024, and to prevent direct harm on bats.
- Prior to commencement, a toolbox talk will be carried out by the project ecologist to inform working crews of the potential effects of the works on resident bats, and known roosting locations will be clearly pointed out. Roosting locations will be avoided where possible.
- While it is recommended to avoid works during the bat activity season (April – September), it is understood that this cannot be avoided due to the structural integrity of the building being at risk. The work programme currently is anticipated to commence in Q2 2025 and run for a period of 12 months.
- Based on the work programme, regular site visits will be undertaken by a licenced bat ecologist at different stages of the works to assess progress and use of known roosts by bats, as well as checking access to known locations is maintained. Inspections will make use of scaffolding equipment where possible to expand bat searches to previously unreachable areas.
- Bat access to the first floor will be maintained throughout the works by ensuring access points are kept free from obstruction. The roost locations on the first floor will not be used to store materials and will be kept free from human traffic.
- Interior lighting will be restricted to the areas where works are being undertaken and any exterior lighting will be turned off when not in use.

In addition to these, it has been proposed to also limit lighting during works in adjacent buildings so as to provide alternative dark environments in buildings adjacent to the Flaxmill during Phase I.

Masterplan Phase II (current development)

The following mitigations in relation to the construction works for Phase II will apply:

- A derogation licence from the NPWS will be in place for the project. The derogation licence is issued by NPWS on a yearly basis, and therefore it is expected that multiple licences will be necessary. Each licence will be informed by monitoring undertaken at the site and will be specific to the works to be undertaken during the calendar year. NPWS will be informed of any progress made during construction with regular updates.
- Prior to commencement, inspections and bat activity surveys will be carried out to ensure no bats are present within the buildings. These will be catered to each specific building. If these cannot rule out the presence of bats, precautions will be taken during the demolitions (manual removals, delayed use of machinery to allow escape) and these will be undertaken under the supervision of an ecologist.
- Demolition works will not be carried out during the bat activity season (April-September) within buildings where active day roosts are found during pre-commencement surveys. Where pre-commencement surveys identify any alternative roosts, similar timing mitigations will be applied.
- A toolbox talk will be carried out by the project ecologist to inform working crews of the potential effects of the works on resident bats, and known roosting locations will be clearly pointed out.
- Prior to demolitions being carried out, alternative roosting resources will be set up to retain roosting availability on site. These will be in the form of three cathedine bat houses, suitable for LHB. Their proposed locations are shown in Figure 4-1. Whilst two of the Cathedine roosts will be located in areas relatively buffered from continuous construction activities, in the Victorian terrace garden and along an existing terrace looking over the reservoir, the third roost will be in the north-western corner of the Quarry Site. A 5m buffer will be created around it to avoid stockpiling and machinery in its immediate vicinity. This is primarily to avoid damage to the roost.
- Other available roosting spaces will be retained along the quarry wall, under the reservoir tunnels and in buildings not proposed for demolition. The permanent bat houses included in the design will also be set up prior to demolition or as soon as possible following site clearance.
- The use of the site by LHB will be monitored during construction using passive static detectors left on site and tuned to the specific frequency calls of the species, to reduce battery and storage usage. A minimum of three detectors at the proposed bat house locations, or nearby, are proposed.

4.1.2 Bat Disturbance

There is the potential for the proposed development to result in disturbance to the identified roost of 6-8 soprano pipistrelle that is to be retained within the quarry wall. As described above, the development has been designed to ensure that the impacts on the main foraging areas within the site are minimised. These areas include the quarry wall where the roost is located and no significant disturbance of the roost is anticipated during operation. However, without mitigation, there is potential to disturb the roost during construction and the mitigation listed below is in place to prevent any significant effect in this regard. Notwithstanding the likelihood that significant effects can be avoided, a derogation is sought on a precautionary basis, given that there will be significant construction and demolition activity being undertaken around the site and the potential for some level of disturbance still exists.

- A toolbox talk will be carried out by the project ecologist to inform working crews of the potential effects of the works on resident bats, and the known roosting location will be clearly identified.
- Vegetation clearance of non-native species and ivy in proximity of the soprano pipistrelle roost identified within the quarry walls will be avoided if possible. If vegetation clearance is required in this area, it will be carried out outside the bat activity season (April-October) and all clearance works supervised by an appropriately qualified ecologist to ensure that the removal does not damage the existing roost crevice and that suitable cover for the roost entrance is retained or replaced.
- If lighting is required during construction (likely only in early evening and morning during winter months), directional lighting will be used to prevent overspill on to sensitive areas, namely the reservoir and quarry areas. There will be no requirement for lighting of the quarry wall where the bat roost is located.
- Exterior lighting during construction, shall be designed to minimize light spillage, thus reducing the effect on areas outside the Proposed Project, and consequently on bats i.e. Lighting will be directed away from sensitive areas around the periphery of the site boundary to minimize disturbance to bats. Directional accessories can be used to direct light away from these features, e.g. through the use of light shields (Stone, 2013). The luminaries will be of the type that prevent upward spillage of light and minimize horizontal spillage away from the intended lands.

In addition, the applicant commits to the use of lights during construction (such that they are necessary) in line with the following guidance that is provided in the Dark Sky Ireland Lighting Recommendations:

- Every light needs to be justifiable,
- Limit the use of light to when it is needed,
- Direct the light to where it is needed,
- Reduce the light intensity to the minimum needed,
- Use light spectra adapted to the environment,
- When using white light, use sources with a “warm” colour temperature (less than 3000K, ideally 2700K).

4.2 Derogation Tests

Article 16 of the Habitats Directive sets out three pre-conditions, all of which must be met before a derogation from the requirements of Article 12 or Article 13 of the Directive can be granted. These preconditions are also set out in Regulation 54 of the Regulations.

The preconditions are:

1. A reason(s) listed in Regulation 54 (a)-(e) applies
2. No satisfactory alternatives exist
3. Derogation would not be detrimental to the maintenance of a population(s) at a favourable conservation status.

The following sections consider each of these tests in relation to the derogation, which is currently sought.

4.2.1 Test 1 – Reason For Derogation

Regulation 54(2) (a)–(e) states that a derogation licence may be granted for any of the reasons listed (a) to (e). In this case, reason (c) as listed below, applies:

(c) In the interest of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.

The redevelopment of the site requires the demolition of all buildings on the site with the exception of two protected structures. As described above, the ambition of Limerick Twenty Thirty (LTT) is to revitalise and transform the Cleeves site and surrounding area to deliver a World Class Waterfront development in Limerick's urban core. The transformative project seeks to achieve a number of primary objectives:

- supporting the growth of a strong local economy;
- encouraging and facilitating new business investment;
- retaining and integrating the historic buildings and site industrial heritage with contemporary buildings;
- accommodating a mix of uses anchored by a public realm that relates and links to the city core and the River Shannon, whilst implementing high-quality urban design, with sustainable and innovative design.

Once fully developed, the site has the potential to accommodate future population growth through residential unit provision and to further promote a strong local economy through the creation of employment and new local attractions, thereby encouraging and facilitating new business investment.

The derelict and dated buildings that currently occupy the site are primarily industrial and/or educational and their retention would preclude the development of the site in line with the overall vision and stated primary objectives. The roosting habitat is spread throughout the site and represents the utilisation of many of the buildings by a small number of bats.

The loss of known roosts and roosting habitat throughout the site along with the potential for disturbance to the roost that is to be retained, has been mitigated so that no significant effects remain. The construction of an ex-situ bat house will enhance roosting habitat in the wider environment, creating important roosting opportunities in Limerick City for bat movement along and across the River Shannon.

This is an important development that could be considered to be in the over-riding public interest for reasons of a social and economic nature.

4.2.2 Test 2 – Absence of Alternative Solutions

The development was designed in line with planning development standards to maximise use of its prime location for residential and public realm uses. The development goals have influenced the overall approach to the development proposal from masterplan concept to detailed design, resulting in a development with an acute focus on compact growth and mixed-use brownfield regeneration, adaptive re-use, reversal of vacancy and dereliction and sustainable travel.

The requirement for a derogation was a last resort when considering how to manage protected fauna on the site. The masterplan was constraint led from the outset and the final design was informed by a suite of ecological surveys that were undertaken in advance of and throughout the design process. The ecological surveys identified the areas of greatest importance for biodiversity and the development was designed with this in mind.

In respect of bats, it was noted that the quarry and reservoir sections of the site provided the most suitable habitat for the taxa with existing dark areas and vegetation (that was largely absent from the rest of the site). These are the areas that are currently most utilised by bats. Taking this into account, the development was deliberately designed to replace these habitats. The landscaping and lighting plans

(Appendices 1 and 5) show how the quarry area has been designed to preserve and (where possible) to enhance the existing habitats and connectivity. The scheme was also designed specifically to retain a roost of soprano pipistrelles in the quarry wall. However, the other bat roosts were recorded widely throughout the masterplan site and could not be avoided, whilst still meeting the primary objectives of the development because the buildings are primarily industrial and/or educational, are dated and, in many cases, derelict.

As a result of this, there were no alternatives to the removal of the roosts in the buildings and despite mitigation, the potential for disturbance to the roost being retained could not be excluded given the large scale demolition and construction being proposed.

A do-nothing scenario was also considered. If the proposed development was not to go ahead, the habitats within the site will likely be retained and remain available to bats. However, due to its prominent location within Limerick City, the site is likely to be utilised or redeveloped in some form that would likely result in an alteration of use of the site by the small number that currently use it. Such a scenario where the bat roosts were retained would likely not be supported at national, regional and local policy level for the redevelopment of this city centre location.

Following consultation with NPWS, the construction of an ex-situ bat house was included to enhance availability of roosting habitat for lesser horseshoe bats within the wider environment of Limerick City, in a location well-connected to the existing green and blue infrastructure and less susceptible to potential disturbance than the Cleeves site, whilst still within the urban network in proximity to the site. Other areas in proximity to the Cleeves site were considered before selecting the proposed ex-situ location:

- The Westfield Wetlands, located closer to the Cleeves site, did not provide available space for a construction of this size without encroaching into the wetland habitats, which are part of the SAC. A small area of grassland which did not present habitat associated with the SAC was initially considered, but was determined too public and susceptible to human tampering, as well as being constrained by its location within the SAC, and in an area with little sun exposure.
- Other options in Clonmacken were excluded due to the difficulty of “future-proofing” the locations and maintaining suitable connectivity to the bat house in the event potential future development in lands not owned by LCCC occurs.
- An option adjacent to the existing drains and treelines, approximately 50m south-east of the selected location, was excluded due to the potential for temporary works occurring along the drains and causing disturbance.

4.2.3 Test 3 – Impact of a Derogation on Conservation Status

The proposed development is not anticipated to affect the conservation status of the species encountered roosting on site due to the small number of individuals affected, the provision of compensatory roosting habitats and other mitigations provided during construction and operation to avoid mortality and limit disturbance.

Soprano Pipistrelle

A small roost (non breeding) of this species, will be lost as a result of the proposed development. However, following the implementation of mitigation as described above, no significant effects resulting from the loss of roosting, foraging or commuting habitat, direct mortality or disturbance, are anticipated.

According to the latest Article 17 reporting (2025), soprano pipistrelle are in favourable conservation status and the granting of this derogation licence will not result in any effect on that status as there will be no reduction in roosting resource and no significant disturbance.

Lesser Horseshoe Bat

A small (non breeding) population of approximately two bats utilises a number of locations throughout the site for roosting. Following the implementation of mitigation as described above, no significant effects resulting from the loss of roosting, foraging or commuting habitat, direct mortality or disturbance, are anticipated.

According to the latest Article 17 reporting (2025), lesser horseshoe bat is in inadequate conservation status. This is found in relation to their range, habitats and future prospects. It is noted that the population of only two bats is afforded National Importance due to the urban location of the population and location within their range. Thus it was important to ensure that roosting, foraging and commuting habitat was retained on the site following the redevelopment. This has been achieved through informed design and bespoke mitigation, as well as the provision of ex-situ roosting habitat. As such, the granting of this derogation licence will not result in any effect on that status as there will be no reduction in roosting resource and no significant disturbance.

5. MONITORING

The construction works will be monitored at several levels of seniority as described below to ensure that the environmental best practice prescribed in this document is fully adhered to and is effective. The following system will be put in place to ensure compliance.

Contractors Environmental Representative

An Ecological Clerk of Works (ECoW) will be appointed by the Contractor to ensure that the ecological plan is effectively implemented. The representative will be a suitably qualified ecologist or environmental scientist. All operatives working on the site will be made fully aware of the environmental responsibilities, conditions and requirements along with a full description of the methods to be employed. This information will be imparted at a dedicated site induction prior to commencing work on the site. The induction of any new staff will include an environmental induction. A checklist will be filled in on a weekly basis to show how the measures above have been complied with. Any environmental incidents or non-compliance issues will immediately be reported to the project team and that the project team will take corrective action if necessary. The construction management team will be regularly monitoring the works and will be fully briefed and aware of the environmental constraints and protection measures to be employed. The contractor's environmental representative will work closely with the Employers Environmental Representative as described below.

The ECoW will be responsible for:

- Monitoring the construction works and identifying any additional or refined mitigation measures (i.e. 'adaptive management measures required), in relation to any ecology;
- Reporting the findings of monitoring, including any adaptive management measures recommended and the effectiveness of same;
- Delivering site induction and training on ecological aspects to all construction personnel prior to commencement of construction activities;
- The implementation of ecological mitigation measures
- Updating, renewing and returning the derogation licence in place throughout construction

Employers Environmental Representative

In addition to the above, the employer (Limerick Twenty Thirty), will also provide an employer's environmental representative. This officer will be a suitably qualified ecologist or environmental scientist and will work closely with the contractor's representative to ensure that all environmental/ecological requirements are adhered to and fully monitored. The employer's representative will visit the site on a weekly basis (at a minimum) during the construction phase. An audit of the works will be undertaken during these weekly visits, and it will be ensured that the prescribed methods are employed. Any potential impacts additional to those predicted will be highlighted and if necessary, additional measures put in place to prevent them. Any deviance from the agreed methodology will be highlighted and if necessary rectified. Operational monitoring for biodiversity will include annual surveys for bats to monitor the success of the constructed bat roosts and to ensure that the proposed landscaping and lighting measures are in place and are established and maintained as planned. Monitoring of the bat populations on the site and ex-situ will continue for 5 years following construction and will include activity surveys as well as inspections of the erected bat houses and boxes and other alternative roosting places. The results of the monitoring will be communicated to NPWS in standard reporting format as part of the conditions of the derogation licencing required.

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APPENDIX 1

LANDSCAPING PLAN

APPENDIX 2

EIAR CHAPTER 2

APPENDIX 3

EIAR CHAPTER 3

APPENDIX 4

BASELINE BAT EPORT

APPENDIX 5

PROPOSED LIGHTING PLAN

APPENDIX 6

EX-SITU BAT HOUSE