Bat Survey and Assessment

Cappaghglass

Rossbrin Cove

Ballydehob

Co. Cork

Report prepared for Robin & Zunetta Herbett

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Contents

Appendices

List of Figures

List of Plates

List of Tables

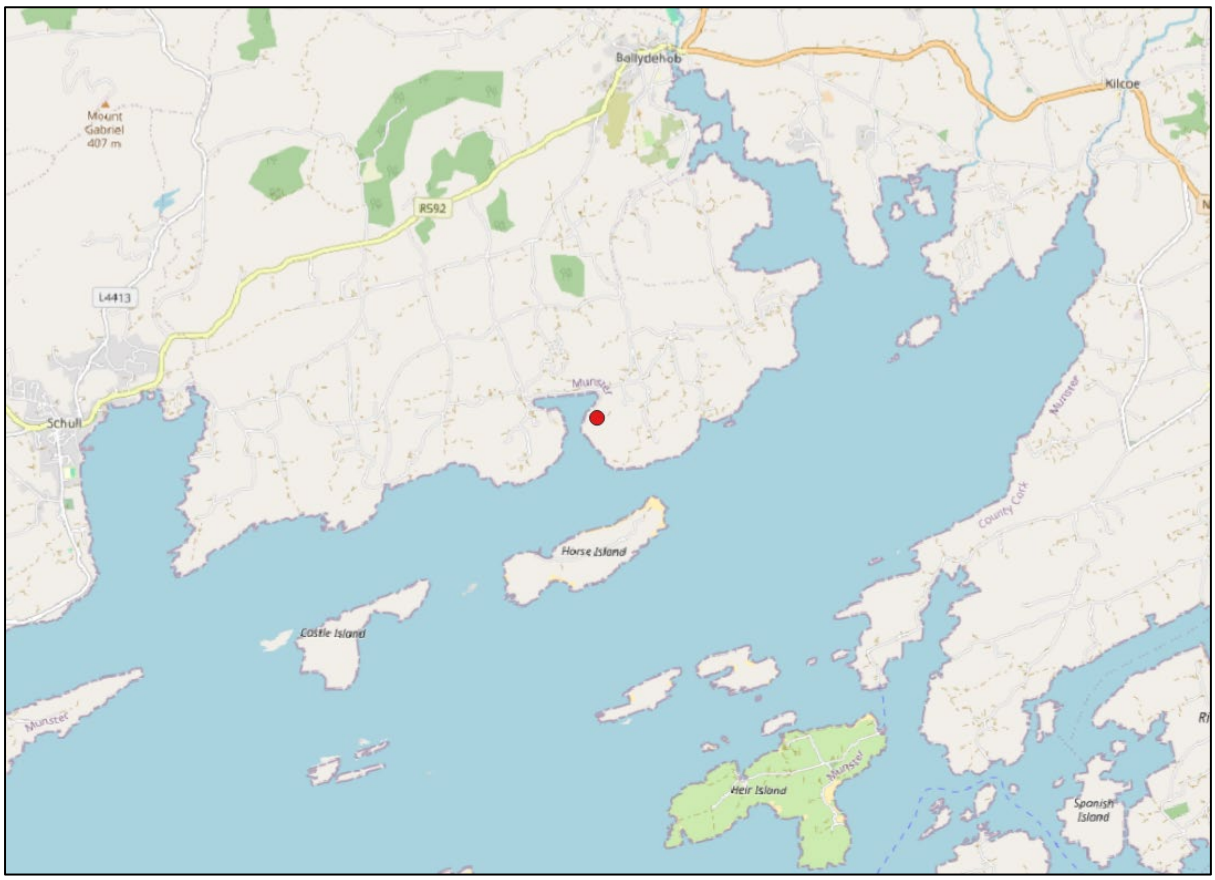
1 Introduction

This report has been prepared by Karen Banks, Greenleaf Ecology, at the request of Robin & Zunetta Herbett. Planning consent is being sought from Cork County Council for works to an existing ruinous former dwelling house at Cappaghglass, Rossbrin Cove, Ballydehob, Co. Cork.

A protected species survey of the proposed site, comprising a bat survey, was undertaken in response to a request for further information from Cork County Council (Planning Ref: 2400687).

The site is located in the townland of Cappaghglass, as illustrated in Figure 1.1.

Figure 1-1: Site Location Map



1.1 Description of the Proposed Project

Permission for refurbishment and extension of an existing ruinous former dwellinghouse. Permission also sought for installation of proprietary wastewater treatment plant with tertiary filter and all associated siteworks at Cappaghglass, Rossbrin Cove, Ballydehob, Co. Cork.

1.2 Background Information

A Bat and Bird Survey at the proposed site was undertaken by Ash Ecology and Environmental (2025), during which a total of 27 bat passes were recorded during the survey period (Common Pipistrelle: 13 passes, Soprano Pipistrelle: 11 passes, Leisler's Bat: 3 passes). The first bat detection occurred at 21:34:18, approximately 33 minutes after sunset (21:01). No bats were observed emerging from the existing buildings at the proposed site during the survey.

On 5th September 2025, Cork County Council issued a request for further information for additional survey work, including the use of night vision aids, to assess the status of the existing building as a bat roost.

1.3 Legislative Context

All Irish bats are protected under the Wildlife Acts. Also, the EU Habitats Directive, and Irish implementing legislation, seeks to protect rare species, including bats, and their habitats, and requires that appropriate monitoring of populations be undertaken. Moreover, the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1982) exists to conserve all bat species and their habitats. The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention 1979, enacted 1983) protects migrant bat species across all European boundaries. Ireland has ratified both these conventions.

All bats are listed in Annex IV to the Habitats Directive (92/43/EC) and the Lesser Horseshoe bat is further listed under Annex II to the same Directive. Article 12 of the Directive requires Member States to establish a system of strict protection for animal species listed in Annex IV. Article 16 provides for derogation from the protection under Article 12 in certain circumstances. Articles 12 and 16 are transposed into Irish law by Regulations 51 and 54, respectively, of the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended).

Destruction, alteration or evacuation of a known bat roost is a notifiable action under current legislation and a derogation licence has to be obtained from the National Parks and Wildlife Service (NPWS) before works can commence. Any works interfering with bats and especially their roosts, may only be carried out under a Regulation 54 licence issued by the NPWS. The details with regards to appropriate assessments, the strict parameters within which derogation licences may be issued and the procedures by which and the order in relation to the planning and development regulations such licences should be obtained, are set out in NPWS Guidance Series 2 – "*Strict Protection of Animal Species: Guidance for Public authorities on the Application of Articles 12 and 16 of the EU Habitats Directive to development/works undertaken by or on behalf of a Public authority*" (Mullen et al., 2021).

1.4 Objectives

The objectives of the bat survey were to assess:

- The potential suitability of the existing building at the site for roosting bats;
- Whether or not bats are roosting within the building and how many bats these roosts support (i.e. size and importance);
- Make an assessment of the potential impacts of the proposed works on bats; and
- To provide appropriate mitigation measures to remove or reduce impacts.

1.5 Surveyor Information

The survey was undertaken by Karen Banks, MCIEEM.

Karen is an ecologist with 19 years' experience in the field of ecological assessment. She holds a BSc in Environment and Development from Durham University and is a full member of the Chartered Institute of Ecology and Environmental Management. Karen is an experienced and skilled bat surveyor, first gaining a scientific licence to disturb bats from Natural England, UK in 2008. Karen is trained in bat handling and capture methods and currently holds a bat disturbance licence granted by the NPWS. Karen has undertaken bat survey and assessment for numerous projects, including bridge repair and replacement works, domestic dwelling repair and demolition works, wind farm developments and large-scale infrastructure projects such as flood relief schemes, road developments and pipeline

schemes. Karen has also represented Cork County Council as an expert witness for bats at an Oral Hearing.

2 Methodology

2.1 Desk Study

A pre-survey data search was conducted in order to collate existing information from the footprint of the site and its surrounding area on bat activity, roosts and landscape features that may be used by bats. The data search comprised the following information sources:

- Collation of known bat records from within a 4km radius[1] of the proposed site from the National Bat Database held by the National Biodiversity Data Centre (www.biodiversityireland.ie); and
- Review of Ordnance Survey mapping and aerial photography of the site and its environs.

2.2 Field Survey

This bat survey and assessment was undertaken in accordance with the following guidelines:

- Andrews, H. (2018) Bat Roosts in Trees. A guide to identification and assessment for tree-care and ecology professionals. Pelagic Publishing.
- Bat Conservation Ireland (2010) G*uidance notes for Planners, Engineers, Architects, and Developers*;
- Collins, J. (ed.) (2023) *Bat Surveys for Professional ecologists: Good Practice Guidelines (4th ed.)*. The Bat Conservation Trust, London; and
- Marnell, F., Kelleher, C. & Mullen, E. (2022) Bat mitigation guidelines for Ireland v2. Irish Wildlife Manuals, No. 134. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

2.3 Surveyor Information

The survey was undertaken by Karen Banks, MCIEEM.

Karen is an ecologist with 19 years' experience in the field of ecological assessment. She holds a BSc in Environment and Development from Durham University and is a full member of the Chartered Institute of Ecology and Environmental Management. Karen is an experienced and skilled bat surveyor, first gaining a scientific licence to disturb bats from Natural England, UK in 2008. Karen is trained in bat handling and capture methods and currently holds a bat disturbance licence granted by the NPWS. Karen has undertaken bat survey and assessment for numerous projects, including bridge repair and replacement works, domestic dwelling repair and demolition works, wind farm developments and large-scale infrastructure projects such as flood relief schemes, road developments and pipeline schemes. Karen has also represented Cork County Council as an expert witness for bats at an Oral Hearing.

2.4 Bat Roost Inspection Survey

On 10th October 2025 the existing building at the site was surveyed for potential roost sites and signs of bats. The survey utilised a high-powered torch, close focussing binoculars and an endoscope (Explorer Premium 8803 with 9mm camera) where required. The external inspection involved looking for bat droppings on the ground, stuck to walls, windowsills or in crevices in the stonework and recording suitable entry and exit points.

[1] A 4km radius search distance was selected to encompass records of bat roosts within Core Sustenance Zones (CSZ) of the study area for Irish species of bat. A CSZ refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the conservation status of the colony using the roost (Collins, 2016).

The internal inspection involved looking for features that may be suitable for roosting bats, such as joints and crevices in wood, holes or crevices between stonework in the walls and searching for bat droppings, urine stains and feeding signs on the floor.

The following criteria were used to determine the potential suitability of the site for bats (Table 2-1)[2].

Table 2-1: Criteria for Assessing the Potential Suitability of the Site for Bats

Suitability	Description Roosting habitats in structures	Potential flight paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/ suitable shelter at all ground/ underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/ protection for flight-lines, or generate/ shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation- the categorisation described in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts e.g. maternity or classic cool/ stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.

[2] Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust, London

		Site is close to and connected to known roosts.

2.5 Bat Roost Emergence Survey

A dusk survey of the dwelling was undertaken on 10th October 2025 in order to watch and listen for bats exiting bat roosts to determine the presence or absence of bats at the time of survey. The dusk emergence survey commenced approximately 15 minutes before sunset and ended approximately 90 minutes after sunset. The survey was undertaken in suitable weather conditions (11°C at sunset, no rain, wind Beaufort Force 1). Two people surveyed the structure (Karen Banks and Cathál MacPartholan), one surveyor was located at the front of the building and one surveyor was located to the rear of the building.

Anabat Walkabout detectors were utilised for the survey, which record bat echolocation calls directly on to an internal SD memory card. Each time a bat is detected, an individual time-stamped (date and time to the second) file is recorded. Data was then downloaded and all recordings were analysed by the Anabat Insight software analysis programme version 2.1.7.

The emergence survey was aided by the use of the TrackIR Pro 19 thermal imaging scope.

2.5.1 Monitoring

In order to supplement the information gathered from the emergence survey, a passive monitoring system of bat detection was also deployed for this survey (i.e. a bat detector is left in the field, there is no observer present and bats which pass near enough to the monitoring unit are recorded and their calls are stored for later analysis). Passive monitoring was completed using 1 no. Anabat Swift bat monitor, which was positioned inside the dwelling. The monitor was set to record from approximately 30 minutes before sunset and were left recording for 14 nights in October 2025.

3 Results

3.1 Existing Bat Data

The review of existing records of bat species in the environs of the site indicates that seven of the ten known Irish species of bat have been recorded within a 4km radius of the site (last checked October 2025). These bats include common pipistrelle (*Pipistrellus pipistrellus*) soprano pipistrelle (*P. pygmaeus*), Leisler's (*Nyctalus leisleri*), brown long-eared (*Plecotus auritus*), Daubenton's (*Myotis daubentonii*), Natterer's (*M. nattereri*) and lesser horseshoe bat (*Rhinolophus hipposideros*) as shown in Table 3-1 below. Of these species, brown long-eared, Natterer's and lesser horseshoe bat have been recorded roosting within 4km of the proposed site.

Table 3-1: NBDC bat records from within a 4km radius of the proposed development

Common Name	Scientific Name	Present (Y/N)	Known Roost (Y/N)	Date of Last Record
Pipistrelle sp.	*Pipistrellus pipistrellus sensu lato*	Y	None	20/08/2018
Common Pipistrelle	*Pipistrellus pipistrellus*	Y	None	20/08/2018
Soprano Pipistrelle	*Pipistrellus pygmaeus*	Y	None	20/08/2018
Nathusius's Pipistrelle	*Pipistrellus nathusii*	N	N/A	N/A
Leisler's Bat	*Nyctalus leisleri*	Y	None	20/08/2018
Brown Long-eared Bat	*Plecotus auratus*	Y	Y	28/07/2015
Daubenton's Bat	*Myotis daubentoniid*	Y	None	21/08/2021
Whiskered Bat	*Myotis mystacinus*	N	N/A	N/A
Natterer's Bat	*Myotis nattereri*	Y	Y	01/07/1986
Lesser Horseshoe Bat	*Rhinolophus hipposideros*	Y	Y	04/02/2015
Brandt's Bat	*Myotis brandtii*	N	N/A	N/A

The bat landscape association model (Lundy *et al,* 2011) suggests that the site is part of a landscape that is of moderate to high suitability for common and soprano pipistrelle, brown long-eared bat, Leisler's bat and Natterer's bat and low to moderate suitability for lesser horseshoe bat, whiskered bat, Daubenton's bat and Nathusius' pipistrelle.

3.2 Habitat Description

The building at the proposed site comprises a derelict cottage constructed of stone with a slate tile roof and two chimneys. The windows and doors are missing, and the walls are partially rendered (Plate 3-1). The roof tiles are mostly intact, however there are some missing tiles on the roof of the southernmost room. Internally, the roof tiles are not backed by render or a roof membrane. There is no roof space (Plate 3-2).

Plate 3-1: Dwelling at Cappaghglass

Plate 3-2: Internal view of the dwelling illustrating the roof

The grounds around the dwelling comprise neutral grassland bound by hedgerows. The proposed site is in a coastal area, and the wider landscape is relatively open, and is predominantly comprised of agricultural grassland with pockets of scrub.

3.3 Bat Roost Inspection Survey

As noted previously, the windows and doors to the dwelling are missing. There are several other potential entry/exit points for bats via missing or slipped roof tiles and gaps between the stonework of the walls.

Approximately 10 scattered bat droppings were present within the central room and 2 droppings were present within the northernmost room. Some of the droppings were fresh and were consistent in appearance with pipistrelle droppings.

The dwelling supports potential roosting habitat between stonework and in crevices in the wooden rafters. However, the windows and doors are missing; the building lacks the shelter required for a roost of high conservation importance but may support individual/ small numbers of roosting bats.

3.4 Roost Emergence Survey

Two common pipistrelle and a soprano pipistrelle were recorded emerging from the northernmost room during the emergence survey conducted on 10th October 2025.

Both the soprano pipistrelle and common pipistrelle foraged around the dwelling for the duration of the survey. No other species of bat were recorded during the emergence survey.

3.4.1 Passive Monitoring

A total of six species of bat were recorded during the passive monitoring: soprano pipistrelle, common pipistrelle, Leisler's bat, lesser horseshoe bat, natterer's bat and brown long-eared bat. Most of the activity recorded was from common pipistrelle, which was recorded from c.25 minutes after sunset, and activity from this species was recorded during every night of monitoring. A lower level of activity from soprano pipistrelle was recorded, with the earliest call recorded 16 minutes after sunset. Lesser horseshoe bat was recorded on 5 of the 14 nights of monitoring. The earliest lesser horseshoe bat call recorded was 105 minutes after sunset, however the calls were predominantly recorded during the middle of the night (between 1am and 3am). Brown long-eared bat calls, including social calls, were recorded during one of the nights of monitoring 176 minutes after sunset, Natterer's bat was recorded during one of the nights of monitoring 251 minutes after sunset and Leisler's bat was recorded c.6 hours after sunset on one night.

A summary of bat passes recorded during the monitoring completed in March and May 2025 is provided in Table 3-2

Table 3-2: Dwelling at Cappaghglass: passive monitoring results 2025

Species	PM1: Recording 10/10/2025- 23/10/2025
Soprano pipistrelle	76
Common pipistrelle	10,722
Leisler's bat	22
Lesser horseshoe bat	136
Natterer's bat	6
Brown Long-eared bat	5
Total	10,967

4 Evaluation of Survey Results

The landscape surrounding the proposed site comprises fields of agricultural grassland, some of which are bound by hedgerows and treelines, with pockets scrub. Rossbrin Cove, which is part of Roaringwater Bay and Islands SAC, is located c.120m to the west of the site; bats are not a qualifying interest species for this SAC. Potential foraging and commuting habitat is present along hedgerows and scrub edges. The proposed site and surrounding landscape is generally of moderate suitability for foraging and commuting bats, noting that the site is relatively exposed and would be subject to high winds at times.

No evidence of roosting bats was recorded at the proposed site during a survey conducted by Ash Ecology and Environmental in May 2025. The results of a roost inspection survey conducted by Greenleaf Ecology in October 2025 indicate that the building is suitable to support individual/ low numbers of bats but due to its condition is not likely to support roosts of high conservation importance. Scattered pipistrelle droppings were recorded within the dwelling, however no live bats were observed at the time of the roost inspection survey.

Two common pipistrelle and a single soprano pipistrelle were recorded emerging from the northernmost room during the dusk survey conducted on 10th October 2025, indicating that the dwelling supports a minor daytime roost for these species. The passive monitor recording within the dwelling for 14 nights in October recorded soprano pipistrelle and common pipistrelle around sunset and sunrise; and also recorded a low level of activity from Leisler's bat, lesser horseshoe bat, Natterer's bat and brown long-eared bat during the night.

As detailed in Table 3-3, the roost is of low to moderate conservation significance (in accordance with the *Bat Mitigation Guidelines for Ireland*).

Table 4-1: Dwelling at Cappaghglass: summary of roost type and conservation importance

Species	Roost Type	Conservation Importance
Soprano pipistrelle	Minor autumn day roost	Low
Common pipistrelle	Minor autumn day roost	Low
Leisler's bat	Occasional Autumn night roost	Low
Lesser horseshoe bat	Autumn night roost	Low - medium
Natterer's bat	Occasional Autumn night roost	Low
Brown Long-eared bat	Occasional Autumn night roost	Low

The bat species recorded at the site are of Least Concern (Marnell et al., 2019). The conservation status of lesser horseshoe bat is categorised as being of Inadequate conservation status (NPWS, 2019).

The latest population estimates for the bat species recorded at the proposed site are detailed in Table 3-4.

Table 4-2: Bat Species Population Estimates

Species	Population Estimate in Republic of Ireland[3]
Soprano pipistrelle	1.2-2.7 million
Common pipistrelle	1.9-4.2 million
Leisler's bat	112,800- 202,300
Lesser horseshoe bat	14,975

[3] Roche, N & Langton, S. 2024 and Roche, N 2024

Natterer's bat	Unknown
Brown Long-eared bat	65,000- 102,000

5 Impact Assessment

It is proposed to extend and refurbish the existing ruinous dwelling. The dwelling is a minor autumn day roost for common pipistrelle and soprano pipistrelle, a night roost for lesser horseshoe bat and an occasional night roost for Leisler's bat, Natterer's bat and brown long-eared bat. There is potential for disturbance to these roosts should the proposed extension and refurbishment works be undertaken while bats are present.

6 Mitigation

6.1 Derogation Tests

Test 1, Reason for the Derogation: The proposed development is required to fulfil a housing need and, as such, is of public interest of a social and economic nature. The provision of a home supports social and economic development and, as such, outweighs the conservation interest of the bat species, particularly as the roost is minor and of low-moderate conservation importance (in accordance with Marnell et al, 2022).

Test 2, Absence of Alternative Solutions: Alternative solutions considered included not renovating the dwelling (i.e. 'do-nothing). However, that option is not feasible as the building is ruinous and will fall further into disrepair from ingress of rain and wind if nothing is done. Its renovation is required to facilitate construction of the new dwelling house. The existing building has not been used for several years and if left unrepaired it may become beyond a reasonably proportionate cost to repair and renovate.

The proposed development is for the renovation of an existing dwelling, therefore an alternative location is not a feasible option.

Test 3, Impact of a Derogation on Conservation Status: The national population estimates of the bat species recorded within the dwelling are provided in Table 4-2. The number of soprano pipistrelle roosting in the dwelling is estimated to be 1 no. individual and the number of common pipistrelle roosting in the dwelling is estimated to be 2 individuals within the autumn period, there is no evidence that the site supports a maternity roost. In the absence of any mitigation, the renovation of the dwelling may potentially result in the mortality of individual/ small numbers of non-breeding soprano and common pipistrelle, if timed inappropriately. This would result in a slight adverse effect on the conservation status of the local population of soprano and common pipistrelle but would not be significant on a national scale. The dwelling is also used by Natterer's bat, Leisler's bat, brown long-eared bat and lesser horseshoe bat as a night roost. In the absence of mitigation, the proposed development would result in a loss of available night roosting habitat for these species, which may result in a slight adverse effect on the conservation status of the local populations of these species but would not be significant on a national scale. With the implementation of the mitigation measures outlined in the supporting report, using established guidelines (e.g. Marnell, 2022) the proposed development and actions outlined within the supporting report will not be detrimental to the maintenance of populations of bat species at favourable conservation status in their natural range (as required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations, either locally or nationally.

6.2 Mitigation Measures

Soprano pipistrelle, common pipistrelle, Natterer's bat, Leisler's bat, brown long-eared bat and lesser horseshoe bat roost within the dwelling, therefore, safeguards are recommended to ensure the safety of this animal during works.

Application for a derogation licence

NB: Work on a known bat roost is a notifiable action under current legislation and a derogation licence has to be obtained from the National Parks and Wildlife Service before works on the roost can commence. Such a licence is required for the proposed works to the dwelling at the proposed site and no demolition or renovation works should be undertaken to the dwelling before the licence is granted by the NPWS.

In accordance with Marnell *et al* (2022), the dwelling at Cappaghglass supports a bat roost considered to be of low to moderate conservation significance. As stated in Figure 20, page 46, this necessitates

"Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements. Minimal timing constraints or monitoring requirements"

The assessment for mitigation requirement for pipistrelle species, Leisler's bat, Natterer's bat and brown long-eared bat is less because they are common species. Further, three bat boxes suitable for crevice dwelling bats (including pipistrelle species, Leisler's bat and Natterer's bat) have already been installed on trees at the site boundary. Therefore, the provision of an alternative roost for lesser horseshoe bat, a rarer Annex II species, will be the priority.

Measure 1: provision of a compensatory bat roost

An alternative bat roost is required to be constructed. It is recommended that this is undertaken as soon as possible in order to have this roost in place prior to works on the dwelling.

The Marnell *et al* (2022) and Schofield (2008) publications have been consulted to design an alternative night roosting site for lesser horseshoe bat, with provisions as a night roost for brown long-eared bat. Design principles followed include:

- The compensatory roost will be located as close to the existing roost as possible- it is proposed to locate the roost adjacent to the northern site boundary (see Appendix B).
- The compensatory roost shall be located in a sheltered area adjacent to an existing hedgerow. This will provide some cover and a flight line from the roost.
- The design takes into consideration the requirements of the species concerned:
    - The design of the roost is informed by Schofield (2008) and, in addition to lesser horseshoe bat, includes provisions for brown long-eared bat, based on their roosting preferences.

The roost plans are based on the Cathedine Night Roost designed by the Vincent Wildlife Trust, which will be adapted so that the structure is anchored into the ground. The dimensions of the roost are as follows:

- 1830mm x 1220mm internal floor space, single storey shed type building with an internal height of 1830mm from floor to highest point of roof space.
- The building shall be constructed of timber panels with shed felt on an A-frame roof.
- An entrance point shall be inserted into the gable end of the shed facing east away from the prevailing wind. The entrance shall be an opening measuring 750mm wide x 500mm high.

Landscaping:

- As noted previously, the compensatory roost shall be located in a sheltered area next to an existing hedgerow. It is proposed to enhance the boundary at the east and south of the site with native tree and shrub species and an orchard area is proposed at the centre of the site.

A bat specialist shall be consulted to ensure that works are located and completed correctly.

Measure 2: timing of works

In accordance with the *Bat Mitigation Guidelines for Ireland*, where the structure is a summer roost, but is not a proven maternity roost, the optimum time for works of all types is between 1st September and 1st May.

Works to the roof of the existing dwelling (the roosting area for pipistrelle) shall occur between 1st September and 1st May.

Refurbishment and demolition works shall only proceed under licence.

Measure 3: extension to and refurbishment of the existing dwelling

The existing dwelling will be subject to a dusk survey or daytime inspection for evidence of bat usage immediately prior to the commencement of works. In the event that no evidence of bat usage is found during the inspection, works can commence. Should bats be found within the building, works will be delayed until they are no longer present (i.e. they have naturally flown from the roost). Prior to commencement of works the bat specialist will brief the contractor on the possible presence of bats on the site, the subsequent need to take appropriate care and attention whilst carrying out the works and the steps to take should bats be discovered at the site at any time (i.e. stop works and inform the bat specialist). Active bats will usually keep out of the way of any operations, but torpid bats may need to be gently temporarily placed in a box until dusk and released on site.

Measure 4: lighting

It is proposed to locate the compensatory roost away from the dwelling where it will not be subject to disturbance or light spill.

7 References

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A: Description of Irish Bat Species

Ireland has ten known bat species from two distinct families. Each is briefly described below. For a more comprehensive overview see Roche *et al* (2014). The conservation status of each species is derived from NPWS (2019).

Vespertilionidae:

Common pipistrelle (*Pipistrellus pipistrellus*)

This species was only recently separated from its sibling, the soprano or brown pipistrelle *P. pygmaeus*, which is detailed below (Barratt et al, 1997). The common pipistrelle's echolocation calls peak at 45 kHz. The species forages along linear landscape features such as hedgerows and treelines as well as within woodland. The conservation status of this species is Favourable.

Soprano pipistrelle (*Pipistrellus pygmaeus*)

The soprano pipistrelle's echolocation calls peak at 55 kHz, which distinguishes it readily from the common pipistrelle on detector. The pipistrelles are the smallest and most often seen of our bats, flying at head height and taking small prey such as midges and small moths. Summer roost sites are usually in buildings but tree holes and heavy ivy are also used. Roost numbers can exceed 1,500 animals in mid-summer. The conservation status of this species is Favourable.

Nathusius' pipistrelle (*Pipistrellus nathusii*)

Nathusius' pipistrelle is a recent addition to the Irish fauna and has mainly been recorded from the north-east of the island in Counties Antrim and Down (Richardson, 2000) and also in Fermanagh, Longford and Cavan. It has also been recorded in Counties Cork and Kerry (Kelleher, 2005). However, the known resident population is enhanced in the autumn months by an influx of animals from Scandinavian countries. The conservation status of this species is Favourable.

Leisler's bat (*Nyctalus leisleri*)

This species is Ireland's largest bat, with a wingspan of up to 320mm; it is also the third most common bat, preferring to roost in buildings, although it is sometimes found in trees and bat boxes. It is the earliest bat to emerge in the evening, flying fast and high with occasional steep dives to ground level, feeding on moths, caddis-flies and beetles. The echolocation calls are sometimes audible to the human ear being around 15 kHz at their lowest. The audible chatter from their roost on hot summer days is sometimes an aid to location. The conservation status of this species is Favourable.

Brown long-eared bat (*Plecotus auritus*)

This species of bat is a 'gleaner', hunting amongst the foliage of trees and shrubs, and hovering briefly to pick a moth or spider off a leaf, which it then takes to a sheltered perch to consume. They often land on the ground to capture their prey. Using its nose to emit its echolocation, the long-eared bat 'whispers' its calls so that the insects, upon which it preys, cannot hear its approach (and hence, it needs oversize ears to hear the returning echoes). As this is a whispering species, it is extremely difficult to monitor in the field as it is seldom heard on a bat detector. Furthermore, keeping within the foliage, as it does, it is easily overlooked. It prefers to roost in old buildings. The conservation status of this species is Favourable.

Natterer's bat (*Myotis nattereri*)

This species has a slow to medium flight, usually over trees but sometimes over water. It usually follows hedges and treelines to its feeding sites, consuming flies, moths, caddis-flies and spiders. Known roosts are usually in old stone buildings but they have been found in trees and bat boxes. The Natterer's bat is one of our least studied species and further work is required to establish its status in Ireland. The conservation status of this species is Favourable.

Daubenton's bat (*Myotis daubentonii*)

This bat species prefers feeding close to the surface of smooth water, either over rivers, canals, ponds, lakes or reservoirs but it can also be found foraging in woodlands. Flying at 15 kilometres per hour, it gaffs insects with its over-sized feet as they emerge from the surface of the water - feeding on caddis flies, moths, mosquitoes, midges etc. It is often found roosting beneath bridges or in tunnels and also makes use of hollows in trees. The conservation status of this species is Favourable.

Whiskered bat (*Myotis mystacinus*)

This species, although widely distributed, has been rarely recorded in Ireland. It is often found in woodland, frequently near water. Flying high, near the canopy, it maintains a steady beat and sometimes glides as it hunts. It also gleans spiders from the foliage of trees. Whiskered bats prefer to roost in buildings, under slates, lead flashing or exposed beneath the ridge beam within attics. However, they also use cracks and holes in trees and sometimes bat boxes. The conservation status of this species is Favourable.

Brandt's bat (*Myotis brandtii*)

According to NPWS (2013), whiskered and Brandt's bats are cryptic species and can only be told apart using DNA techniques. Brand't bat has been confirmed only once from Ireland; a single specimen found in 2003 in Wicklow (Mullen, 2006). Following this discovery, an intensive re-survey, involving DNA testing, was undertaken of all known whiskered bat roosts in Ireland, by the Centre for Irish Bat Research. Woodland mist-netting was also conducted for the species. Despite the extensive survey-work, no further Brandt's bats were identified. The most recent Red Data List for Irish Mammals (Marnell *et al*. 2009) lists Brandt's bat as data deficient. There is no evidence of any roosts for this species in the country and at present the single record for the species is considered an anomaly. Boston et al (2010) concluded that "M. brandtii …. cannot currently be considered a resident species. This species is now considered a vagrant to the country and consequently, a detailed assessment has not been carried out.

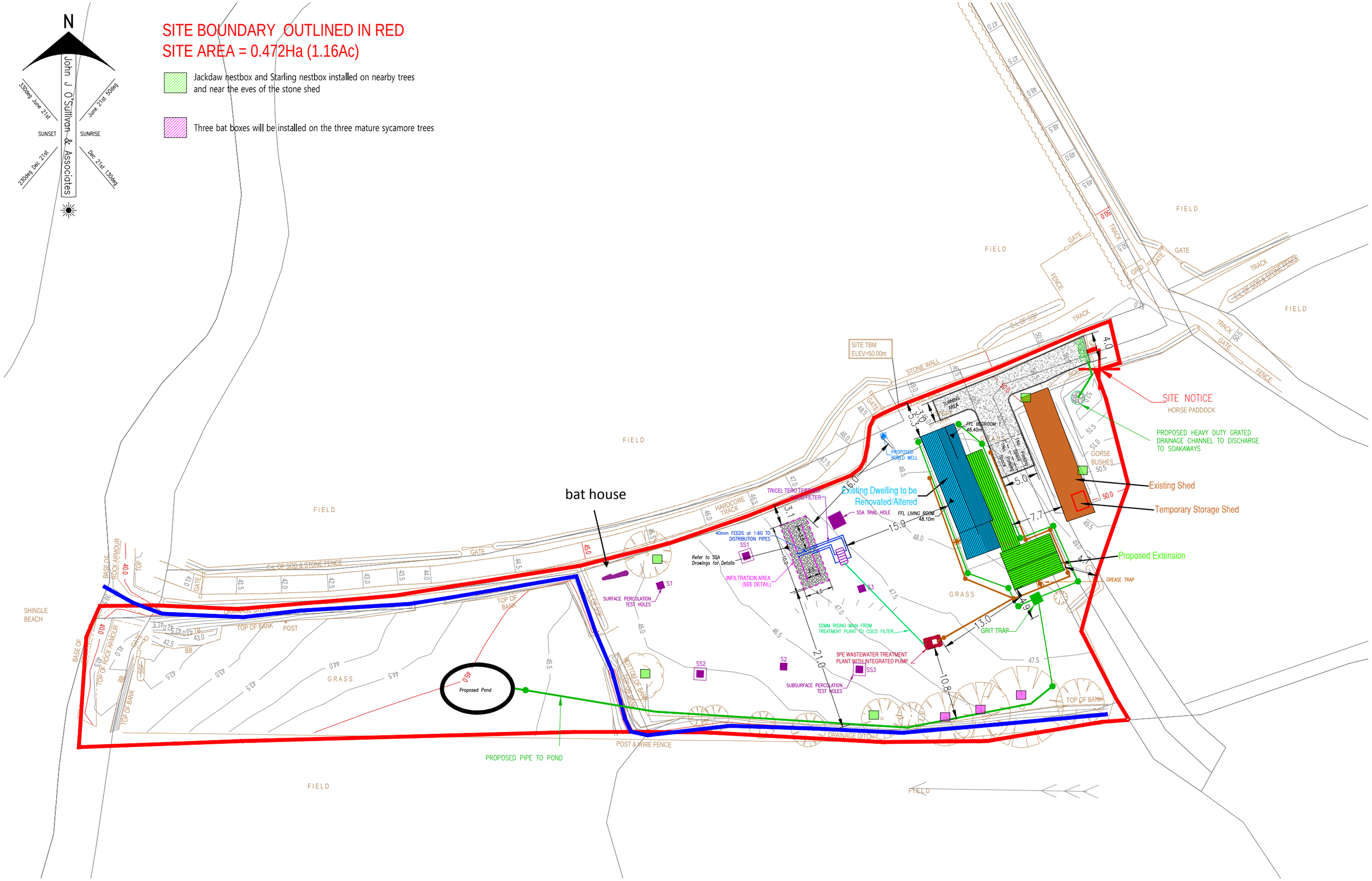
<u>Rhinolophidae:</u>

Lesser horseshoe bat (*Rhinolophus hipposideros*)

This species is the only representative of the Rhinolophidae or horseshoe bat family in Ireland. It differs from our other species in both habits and looks, having a unique nose leaf with which it projects its echolocation calls. It is also quite small and, at rest, wraps its wings around its body. Lesser horseshoe bats feed close to the ground, gleaning their prey from branches and stones. It often carries its prey to a perch to consume, leaving the remains beneath as an indication of its presence. The echolocation call of this species is of constant frequency and, on a heterodyne bat detector, sounds like a melodious warble. The species is confined to six counties along the Atlantic seaboard: Mayo, Galway, Clare, Limerick, Kerry and Cork. The current Irish national population is estimated at 12,500 animals. This species is listed on Annex II of the EC Habitats Directive and 41 Special Areas of

Conservation have been designated in Ireland for its protection. Where it occurs, it is often found roosting within farm buildings. The conservation status of this species is Inadequate.

Appendix B Site Layout



Client: Zunetta & Robin Herbert	Drawing Status: ISSUE FOR RESPONSE TO RFI	Drawn By: Seamus O'Regan B.Sc. Arch. Tech.
Project: Permission for refurbishment and extension of an existing ruinous former dwellinghouse, permission also sought for installation of proprietary wastewater treatment plant with tertiary filter and all associated siteworks at Cappaghglass, Rossbrin Cove, Ballydehob, Co. Cork	Drawing Title: SITE LAYOUT PLAN Scale: A3 – 1:500 O.S.S. CORK	Checked By: John J O'Sullivan BE MIEI CEng Date: 10/07/2025

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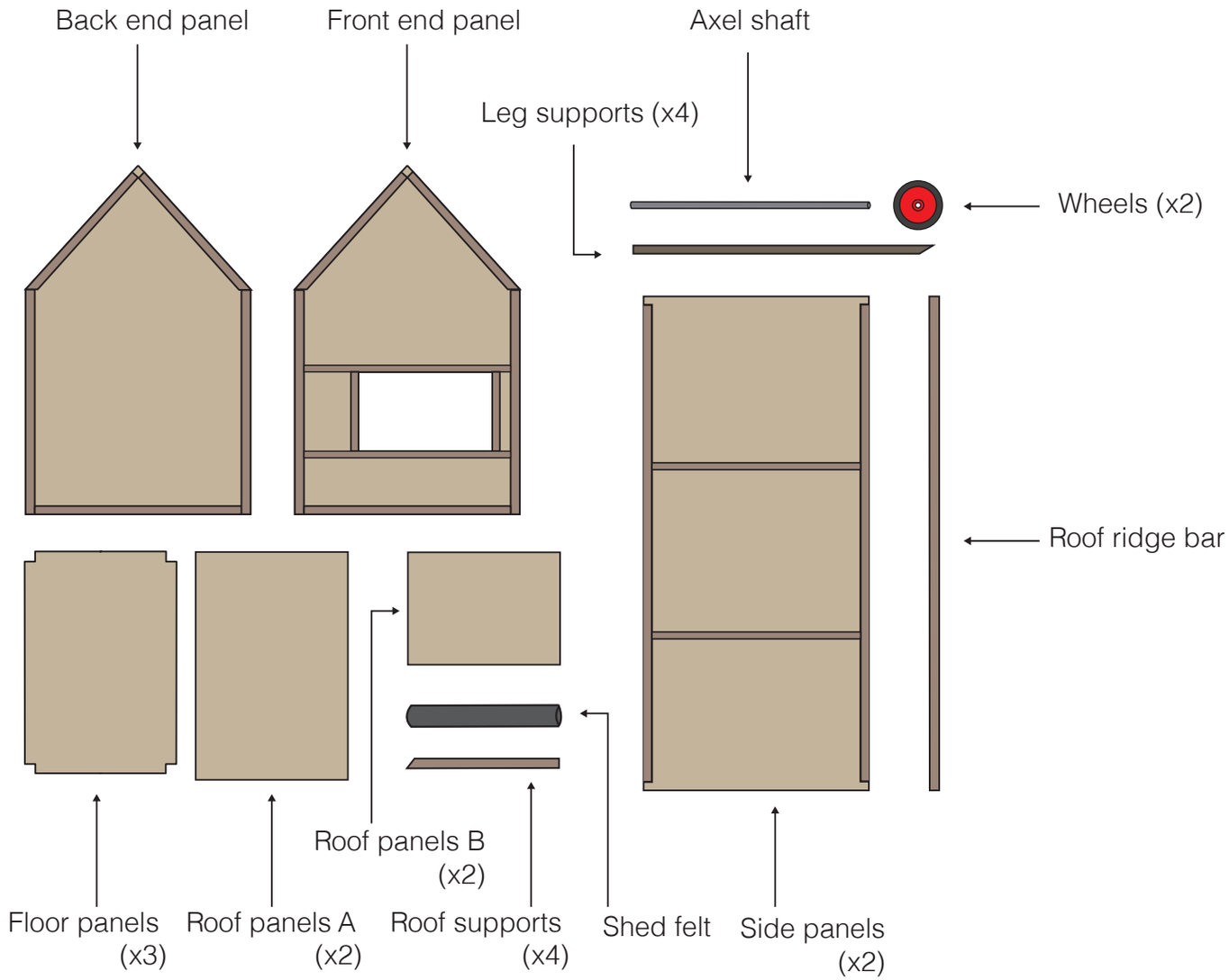
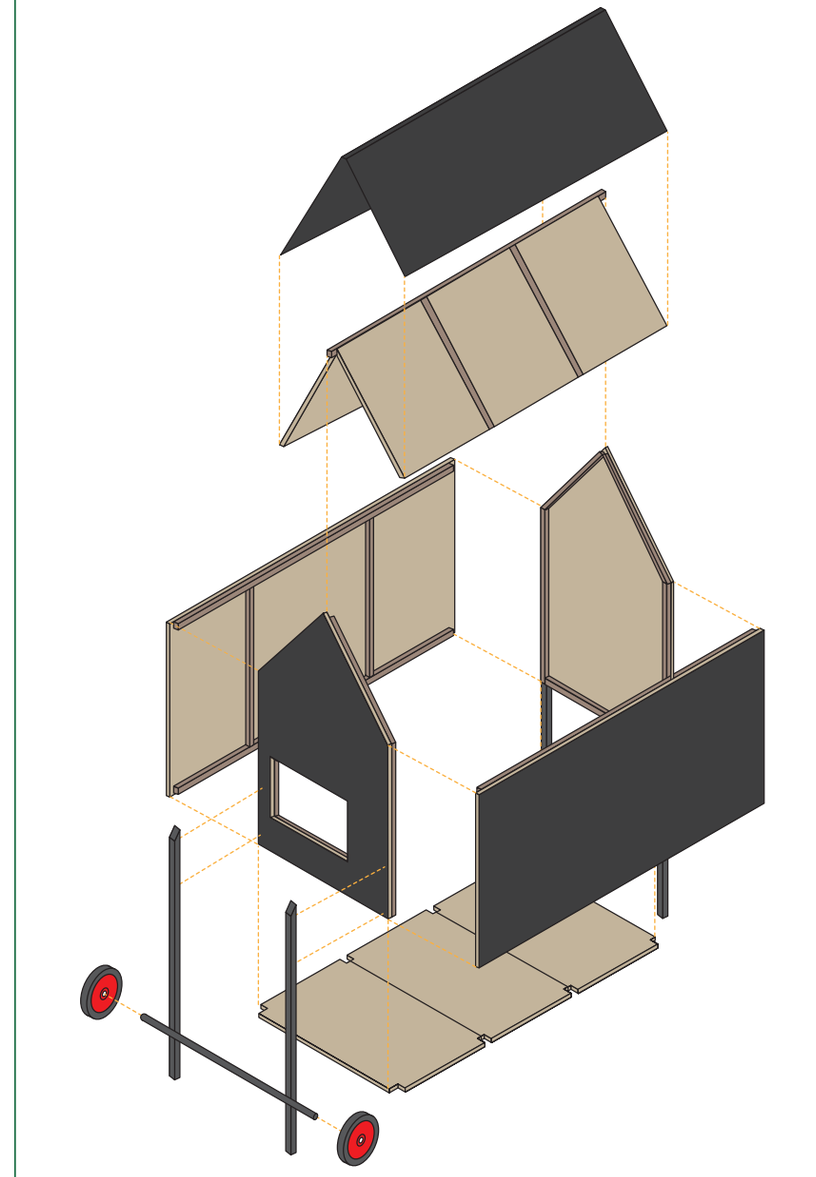
Dwg No: P00282401–02 | 04

Appendix C Cathedine Night Roost Design

Cathedine Night Roost Design

The Vincent Wildlife Trust





Cathedine Night Roost Design

The Vincent Wildlife Trust