

Bat Survey Report & Derogation Licence Application

Lissardagh Coach House
Renovation,
Co. Cork.

October 2024

Prepared for:

Pat O'Leary &
Ann-Marie O'Brien



O'DONNELL 
ENVIRONMENTAL

Summary

Project: Lissardagh Coach House Renovation, Lissardagh, Co. Cork

Coordinates: W 40345 67111 (IG); 51.853375, -8.8665971.

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Statement of Competence: O'Donnell Environmental is an independent environmental consultancy established by Tom O'Donnell BSc (Hons) MSc CEnv MCIEEM in 2019. O'Donnell Environmental is a Chartered Institute of Ecology and Environmental Management (CIEEM) 'Registered Practice' which demonstrates our commitment to high professional standards, accountability and the delivery of the best outcomes for biodiversity and our Clients.

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1 Introduction

O'Donnell Environmental Ltd. were commissioned by Wain Morehead Architects on behalf of Pat O'Leary and Ann-Marie O'Brien to undertake a bat survey report of the Lissardagh Coach House, Lissardagh, Co. Cork. The aims of the study were to assess and evaluate the likely importance of the existing structures to bats. The purpose of the current report is to inform a bat derogation license application which will be made to NPWS.

The Client proposes to renovate Lissardagh Coach House and associated outbuildings.

The existing timber roof of the Couch House will be removed in its entirety, natural slate salvaged and new timber roof constructed and composed of battens, natural slate, fascia, soffit and leadwork. The existing timber intermediate floor will be entirely replaced. External stone walls will be repointed where required, steam cleaned, treated for algae, lintels replaced, and insulated with lime render. The internal stone walls will receive a layer of breathable insulated lime render. All windows and doors will be replaced with Alu-clad timberframe windows. The northern annex of the Coach House will remain uninhabited and uninsulated and bespoke bat compartment fitted in the attic section with two leadwork bat access tiles fitted on the western and eastern roof slopes (see **Appendix A**).

Minor repair works may also be required to make the outbuildings watertight and have been considered within this report.

A site location map is presented in **Figure 1**.

The following documents/drawings (see **Appendix A**) inform the current assessment (Wain Morehead Architects Ltd., 2024):

- Site Location Map
- Outline Scope of Works
- Proposed Roof Plan
- Proposed First Floor Plan
- Proposed Ground Floor Plan
- Proposed East and West Elevations
- Proposed Elevations North and South
- Section at living and terraces
- Proposed Sections 2

Elements of the proposed works which have potential to impact on bats include the following:

- Renovation of the Lissardagh Coach House resulting in the temporary loss of roosting opportunities.
- Minor repairs to associated outbuildings which have potential to cause temporary disturbance to roosting bats.
- Associated works (incl. lighting) which has potential to cause disturbance to bat roosting or foraging in the study area.

Repair works are currently proposed for the attic of the adjacent Lissardagh House which contains known maternity roosting by multiple bat species. These works are subject to a separate derogation licence (Ref: 2024-74) and relevant data from this licence was considered

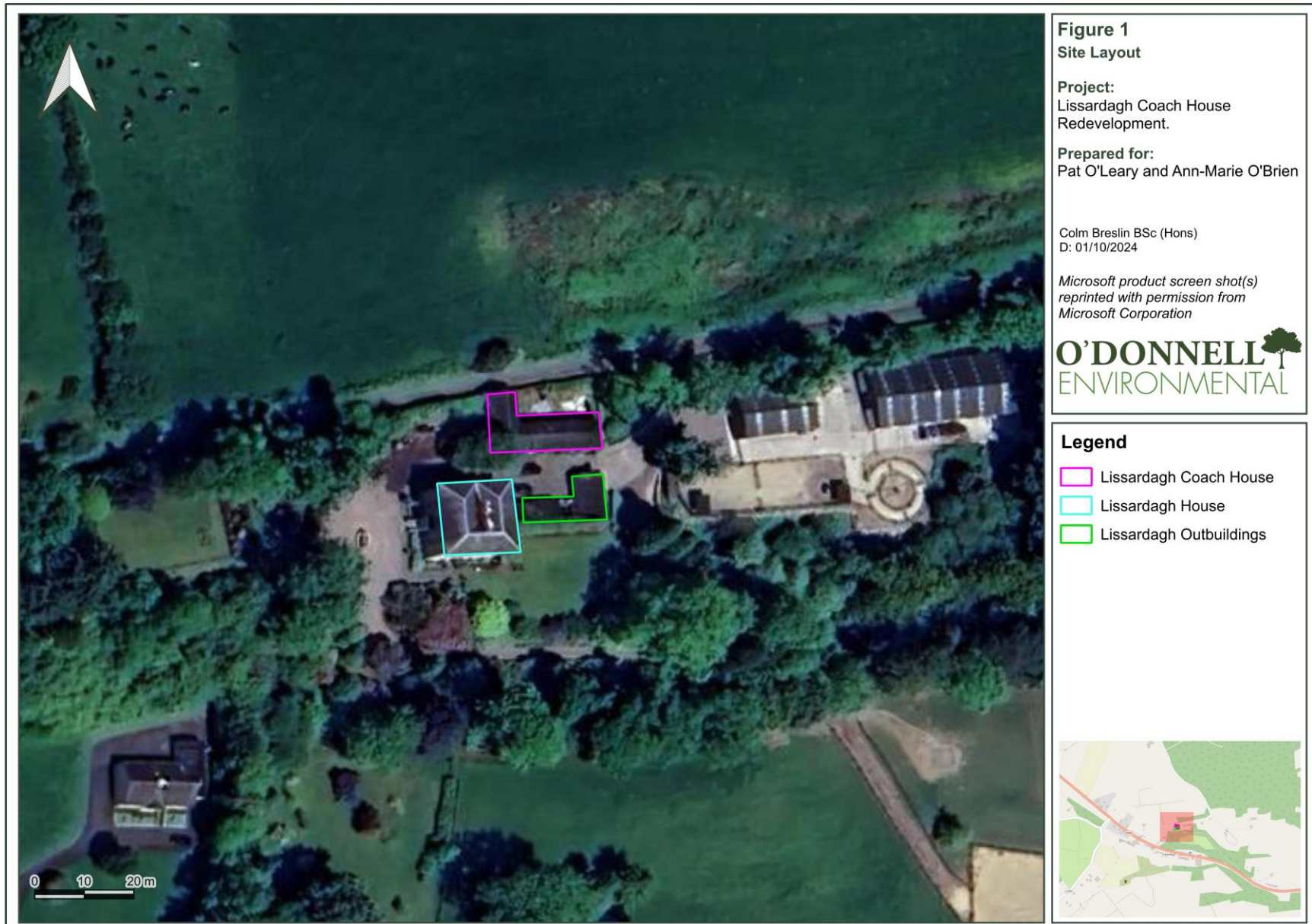
for this report. EcoFact carried out bat surveys of Lissardagh House (not including the Coach House) and roosting by *Myotis* sp. (thought to be Whiskered Bat), Common Pipistrelle and Soprano Pipistrelle was identified within the attic of Lissardagh House (EcoFact, 2024).

1.1 LEGAL STATUS OF BATS

All bat species and their roosting sites are protected under both national and international law. The purpose of this legislation is to maintain and restore bat populations within their natural range. Where human activities have the potential to compromise bat populations, measures are required to be put in place to avoid effects or compensate and mitigate for those effects. A grant of planning permission does not constitute a licence or permit to disturb bats or interfere with their breeding or resting places.

The key legislation which provides protection to bats is as follows:

- Wildlife Act (1976) and subsequent amendments which makes it unlawful to intentionally disturb, injure or kill a bat or disturb its resting place without a licence to derogate from Regulation 23 of the Habitats Regulations 1997, issued by National Parks & Wildlife Service (NPWS).
- The EU Habitats Directive (which has been transposed into Irish law with the European Communities (Birds and Natural Habitats) Regulations 2011) which seeks to protect rare species, including bats, and their habitats and requires that appropriate monitoring of provides additional protection for the Lesser Horseshoe Bat



2 Methodology

Bat surveys were carried out through desk study, initial preliminary roost assessment, and targeted emergence surveys of the Coach House. Consideration was also given to the potential for roosting in the associated outbuildings.

While outside the scope of the current assessment, the adjacent Lissardagh House was considered also to further the understanding of the bat context of the site.

2.1 DESKTOP REVIEW

A desktop review of publicly available relevant data was undertaken on the National Biodiversity Data Centre (NBDC) and National Parks & Wildlife Service (NPWS) websites. The National Biodiversity Data Centre was reviewed for relevant data, specifically i) existing species records for the 10km square in which the study site is located (W46) and ii) an indication of the relative importance of the wider landscape in which the study site is located, based on Model of Bat Landscapes for Ireland (Lundy *et al.* 2011). In the latter, the index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats. The Environmental Protection Agency (EPA) website was reviewed for relevant hydrological or environmental information.

Designated national and international nature conservation sites relevant for bat species were reviewed within the wider hinterland of the proposed redevelopment.

2.2 VISUAL ROOST SURVEY

Daytime visual assessment of the Coach House and outbuildings was carried out by Tom O'Donnell BSc (Hons) MSc CEnv MCIEEM, Colm Breslin BSc (Hons) and Claire McCarthy BSc (Hons) MSc on 13th June and 16th July 2024 in advance of emergence surveys to identify any bat roosting potential which may be associated with Lissardagh Coach House and associated structures. Signs of bat use include bat droppings, feeding remains, potential bat access points identified by characteristic staining and scratches, noise made by bats etc.

A detailed preliminary roost assessment (PRA) of all interior and exterior spaces were carried out following guidance set out in Collins (2023) and classified according to the scheme outlined in **Table 2.1**.

Table 2.1 - Scheme for describing the potential suitability of structures for bats.

Suitability	Description
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).
Negligible	No obvious habitat features likely to be used by roosting bats, but a degree of uncertainty remains as seemingly unsuitable features may be used on occasion.
Low	A feature with one or more potential roost sites that could be used by individual bats opportunistically. Potential roost sites which do not provide 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 or hibernation).
Moderate	A structure with one or more potential roost sites that could be used by bats due to characteristics and surrounding habitat but unlikely to support a roost of high conservation status.
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.

After 'Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)', Collins (2023).

2.3 EMERGENCE SURVEYS

Two emergence (dusk) surveys were carried out on the 13th June and 16th July 2024 as required for a 'moderate' suitability structure following Collins (2023). Four surveyors were present simultaneously during the course of both surveys.

Surveyors were positioned to maximise views of the structures, in combination with night vision aids (NVAs) following best practice guidelines (Collins, 2023). Particular attention was applied to any identified access/egress points noted during previous daytime visual roost assessments. Four Guide IR Pro 19 thermal imaging cameras were positioned to optimise views of structures, following Collins (2023). Echolocation recordings were made on handheld Echo Touch Meter Pro 2 and Anabat Scout full spectrum recorders. Additionally, WA Song Meter Mini full-spectrum detectors were placed within the viewsheds of night vision aids to correlate any potential emergence with echolocation data. Surveys were carried out during suitable weather conditions. Surveys are detailed in **Table 2.2**, below. Images showing the field of views from camera placements are shown in **Plate 2.1** to **Plate 2.6**.

Table 2.2 - Bat activity survey details.

Date	Survey	From - To Times	Sunrise / Sunset Time	Weather
13 th June 2024	Emergence	21:35 – 23:15	21:56	13°C; F1; 8 Oktas; Brief mist at start.
16 th July 2024	Emergence	21:35 – 23:32	21:47	15°C; F1; 3 Oktas; no rain.

2.4 EVALUATION & IMPACT ASSESSMENT

Evaluation of ecological features follows the NRA (now TII) publication 'Guidelines for Assessment of Ecological Impacts of National Roads Schemes' (2009). Impact assessment follows 'Guidelines on The Information to be Contained in Environmental Impact Assessment Reports' published by the EPA (2022). Reporting generally follows Chartered Institute of Ecology and Environmental Management (2018) 'Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater, Coastal and Marine'.

2.5 SURVEY LIMITATIONS

Lissardagh Coach House and associated outbuildings was surveyed in its entirety of both exterior and interior aspects. Full access was provided by the Client. Emergence surveys took place at the optimal time of year following Collins (2023). There are considered to be no limitations associated with this report.



Plate 2.1 Viewshed of thermal camera covering the front/southern aspect of Lissardagh Coach House.



Plate 2.2 Viewshed of thermal camera and surveyor covering the front/southeastern aspect of Lissardagh Coach House(Feral Pigeons on the roof).

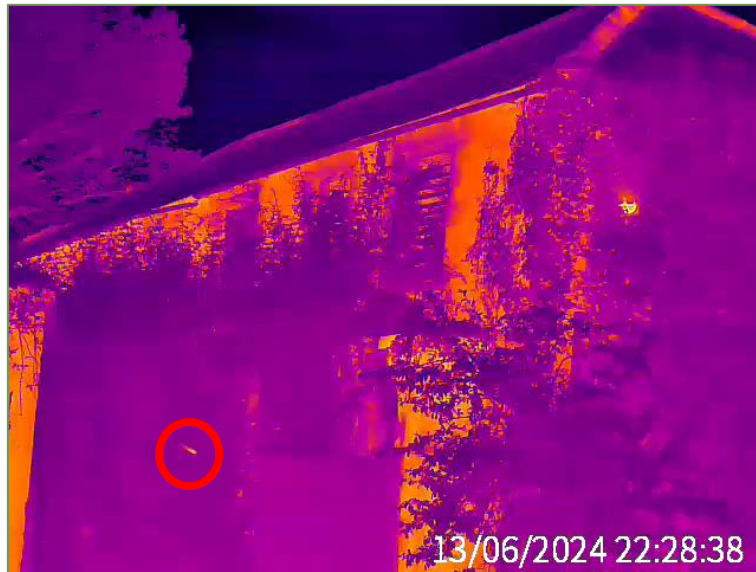


Plate 2.3 Viewshed of thermal camera covering the front/southeastern aspect of Lissardagh Coach House. Soprano Pipistrelle (red circle) foraging locally within courtyard.



Plate 2.4 Viewshed of thermal camera covering the rear/northern aspect of Lissardagh Coach House.

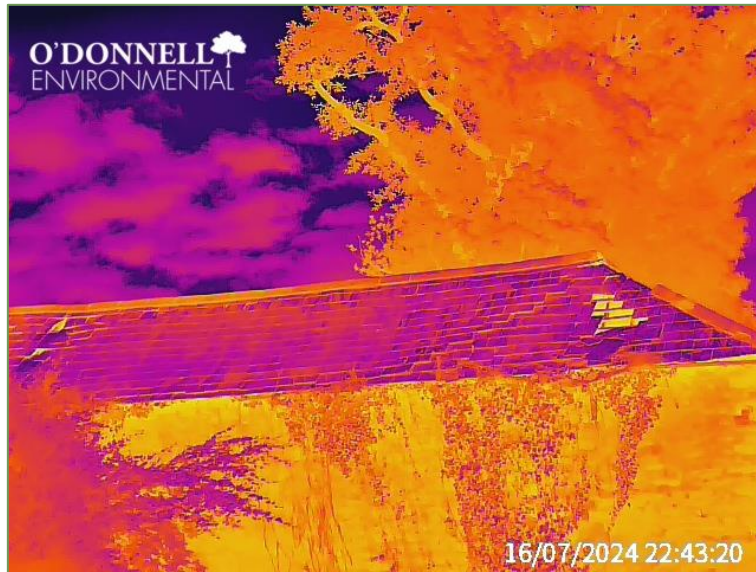


Plate 2.5 Viewshed of thermal camera covering the side/western aspect of Lissardagh Coach House.



Plate 2.6 Viewshed of thermal camera and surveyor covering the outbuildings adjacent to Lissardagh House.

3 Results

The proposed development occurs within the rural landscape adjacent to Lissardagh Village. The surrounding locality receives minimal disturbance in the form of light and noise pollution with the exception of motion-activated security lighting in the courtyard adjacent (see **Plate 3.2.12**). The site is sheltered in nature, with large mature trees in proximity to the Coach House and contiguous ornamental planting in the wider property. The wider landscape is characterised largely by agricultural land-uses.

3.1 DESKTOP REVIEW

3.1.1 Sites of International and National Importance

Special Areas of Conservation (SAC) and Special Protection Areas for birds (SPA) are those sites that are deemed to be of European (i.e. international) importance. They form part of a network of sites to be designated across Europe in order to protect biodiversity within the community, known as Natura 2000 sites. At a national level, the basic unit of conservation is the Natural Heritage Area or proposed National Heritage Area (NHA/pNHA). NHAs are designated to protect habitats, flora, fauna and geological sites of national importance.

No international designated sites (SAC) containing Lesser Horseshoe Bat as a conservation interest are located within 15km of the proposed development. Additionally, no nationally designated sites (NHA/pNHA) listed for bat species were present. As such, no designated sites of international or national importance are considered further.

3.1.2 Bat Data Search

National Biodiversity Data Centre holds previous records of bat presence from within the 10km square (W46) in which the proposed site is located. These records are for the following six species:

- Brown Long-eared Bat (*Plecotus auritus*)
- Natterer's Bat (*Myotis nattereri*)
- Daubenton's Bat (*Myotis daubentonii*)
- Common Pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)

The overall bat suitability index value (32) according to 'Model of Bat Landscapes for Ireland' (Lundy *et al.* 2011) suggests the landscape in which the proposed site is located is of moderate-high suitability for bats in general. Species specific scores are provided in **Table 3.1**. The Annex II species Lesser Horseshoe Bat is assigned a score of '12' due to the presence of suitable habitat features and known proximal records.

Lesser Horseshoe Bat records held by National Parks and Wildlife Service (NPWS) show three records within proximity to the proposed development. These records are all located west of the site at 2.2km last dated 1999, 3.4km last dated 2015, and 5.2km distance last dated 2013.

Table 3.1 - Suitability of the study area for the bat species according to 'Model of Bat Landscapes for Ireland' (Lundy *et al.* 2011).

Common name	Scientific name	Suitability index
<i>All bats</i>		32
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	42
Brown long-eared bat	<i>Plecotus auritus</i>	49
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	40
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	12
Leisler's bat	<i>Nyctalus leisleri</i>	39
Whiskered bat	<i>Myotis mystacinus</i>	31
Daubenton's bat	<i>Myotis daubentonii</i>	30
Nathusius pipistrelle	<i>Pipistrellus nathusii</i>	4
Natterer's bat	<i>Myotis nattererii</i>	41

Source: <https://maps.biodiversityireland.ie/Map>. Accessed 01/10/2024.

3.2 VISUAL ROOST SURVEY

The suitability of structures on site was assessed for roosting bats following Collins (2023) (see **Table 2.1**). The proposed works involves renovation to Lissardagh Coach House and minor repairs to associated outbuildings (see **Figure 1** for location).

The Coach House is an L-shaped two-storey stonework structure with open loft space and natural slate roof, of which a portion are missing allowing light and water ingress in places. The ground floor was historically divided into stables and storerooms. Bitumen felt tile underlay is largely absent and only present in small sections of the roof, most notably the gable ends of the roof structure which were worked on in recent years. The storeys are separated by timber intermediate floors with ladder access to the upper floors. Timber windows and doors largely remain open, though wire-meshed in places, and provide clear access/egress for bat species. This structure is largely intact but possess some gaps in the stonework which present varying roosting suitability for bat species.

The Coach House is surrounded by residential gardens containing a variety of exotic species and mature trees. Pigeons are currently roosting within the northern annex of the Coach House and accumulate in large numbers on the roof during the evening (see **Plate 2.2**). Lissardagh Coach House is considered of 'moderate' suitability for roosting bats following surveys. The structure presents multiple roosting opportunities for individual bats or small numbers of bats, but is unlikely to provide suitable space for significant numbers of bats e.g. for maternity roosting.

During the course of daytime inspections limited evidence of bat roosting was observed within Lissardagh Coach House. A single instance of bat droppings was observed within the ground floor stables on 13th June 2024 although this could not be attributed to a specific species. A single male Whiskered Bat was recording to be roosting within the ground floor stables of the Coach House during the course of emergence surveys.



Plate 3.2.1 View overlooking the front/southern aspect of the Coach House.



Plate 3.2.2 View overlooking the rear/northern aspect of the Coach House.



Plate 3.2.3 View overlooking the western aspect of the Coach House.



Plate 3.2.4 View of the interior roof space of the Coach House. Note the lack of tile underlay and light ingress.

The associated outbuildings comprise of two single-storey stonework structures with natural slate roof not underlain by bitumen felt (see **Plate 3.2.5**; **Figure 1** for location). Both structures possess large open doorways, providing light and water ingress. A double-row of structural timber within the eastern-most outbuilding presented a cavity in which a small accumulation of Brown Long-eared Bat droppings were observed underneath (see **Plate 3.2.6**). A single, male Brown Long-eared Bat was recorded to be roosting in this location during the course of emergence surveys.



Plate 3.2.5 View of the outbuildings associated with Lissardagh House. Structure on the left was identified as a Brown Long-eared Bat roost.



Plate 3.2.6 View of structural timber within outbuilding, of which Brown Long-eared Bat droppings were observed underneath.



Plate 3.2.7 View of the front/eastern aspect of Lissardagh House.



Plate 3.2.8 View of significant accumulation of bat droppings and dead juvenile Whiskered Bat within Lissardagh House.

While outside the scope of the current report, the attic space of Lissardagh House was inspected to further inform the bat context of the site (see **Figure 1** for location). Lissardagh House is a known maternity roost for a variety of bat species, who appear to roost in distinct spaces throughout the attic and are largely contained in the void space between the bitumen felt and slate roof. The attic space was inspected on three occasions by bat-licensed ecologists Tom O'Donnell and Colm Breslin on 3rd April, 10th July and 16th July 2024. Soprano Pipistrelle appear to roost within the southeastern hip-roof section and were seen and heard primarily in this location. Whiskered Bat appear to roost in the western section of the attic space (see **Plate 3.2.9**). It is important to note, however, that the attic space contains a wide variety of potential roosting spaces (voids surrounding bitumen felt, wooden joinery, exposed interior brickwork etc.) and as such, the entirety of the attic space of Lissardagh House should be considered as a roosting space. These surveys were outside the scope of the current report and are thus non-exhaustive. Renovation works are currently proposed for the roof of Lissardagh House and are subject to a separate derogation licence (EcoFact, 2024; Ref: DER/BAT 2024-74; expires 31st December 2024).



Plate 3.2.9 Whiskered Bat roosting along the ridge beam within the attic of Lissardagh House.

(Photo by C. Breslin, NPWS Licence Ref. DER/BAT 2024-09; 008/2024).



Plate 3.2.10 Soprano Pipistrelle within the exposed interior brickwork of Lissardagh House attic.

(Photo by C. Breslin, NPWS Licence Ref. DER/BAT 2024-09; 008/2024).



Plate 3.2.11 Common Pipistrelle roosting in the ridge beam joinery within the attic of Lissardagh House.

(Photo by C. Breslin, NPWS Licence Ref. DER/BAT 2024-09; 008/2024).



Plate 3.2.12 View of the front aspect of Lissardagh Coach House showcasing motion-activated security lighting present.

3.3 EMERGENCY SURVEYS

Four surveyors simultaneously surveyed Lissardagh Coach House and outbuildings on 13th June and 16th July 2024 during suitable weather conditions, aided by the use of ultrasonic detectors and thermal imaging cameras (night vision aids).

The emergence survey on 13th June 2024 was characterised by moderate levels of bat activity which persisted throughout the survey period. Leisler's Bat was recorded flying overhead at height commuting eastwards approximately 10 minutes after sunset and is considered to be roosting within the locality of the site. Early night activity was dominated by Common and Soprano Pipistrelle foraging locally within the courtyard (see **Plate 2.3**) and was largely sustained throughout the survey period. Whiskered Bat was recorded occasionally although to a notably lesser degree. It should be noted that the above three species were previously recorded roosting within the adjacent Lissardagh House and individuals also observed exiting from the structure.

Interior inspections of the Coach House were carried out concurrently with emergence surveys in order to detect evidence of pre-emergence activity of bat species. A single Whiskered Bat was observed conducting pre-emergence flight within the ground floor stables of the Coach House prior on 13th June 2024. The exact roosting location of this species is thus unknown. This individual was caught by hand net and handled under licence by Tom O'Donnell and observed to be male (see **Plate 3.3.1**). No other evidence of bat roosting was identified within Lissardagh Coach House on 13th June 2024 although roosting by other bat species known to occur within Lissardagh House cannot be excluded entirely.

Similarly, the interior of the adjacent outbuildings were inspected during emergence surveys, with particular attention applied to areas where roosting evidence was previously recorded (see **Plate 3.2.6**). A single Brown Long-eared Bat was observed on 13th June 2024 within the western-most outbuilding where droppings attributed to the same species were previously recorded (see **Plate 3.3.3**). This individual was caught by hand net and handled under licence by Colm Breslin and observed to be male (see **Plate 3.3.2**). No other evidence of bat roosting was identified within the outbuildings on 13th June 2024 although roosting by other bat species known to occur within Lissardagh House cannot be excluded.



Plate 3.3.1 Whiskered Bat within the Coach House caught and handled, visually identified to be male.

(Handled by T. O'Donnell, NPWS Licence Ref. C25/2023).



Plate 3.3.2 Brown Long-eared Bat within the outbuildings caught and handled, visually identified to be male.

(Handled by C. Breslin, NPWS Licence Ref. C03/2024).



Plate 3.3.3 Brown Long-eared Bat (red circle) identified roosting within the outbuildings.

(Photo by C. Breslin, NPWS Licence Ref. DER/BAT 2024-09; 008/2024).

The repeat emergence survey carried out on 16th July 2024 was characterised by notably reduced bat activity in comparison to the previous survey. Early night activity, while somewhat limited, was dominated by Soprano and Common Pipistrelle and sustained throughout the night. Repeat inspections of the previously identified roosting locations of Whiskered Bat within the Coach House and Brown Long-eared Bat within the outbuildings yielded no additional evidence of bat roosting and individuals were not present at the time of this survey.

3.4 SUMMARY OF RESULTS

The Coach House and outbuildings have been confirmed as a non-significant roost for individual/small numbers of Whiskered Bat and Brown Long-eared Bat respectively, and appears to be utilised on a transient basis. A single, male Whiskered Bat and Brown Long-eared Bat were present in the ground floor stables of the Coach House and outbuildings respectively on 13th June 2024. Although not recorded, roosting by other bat species, in particular *Pipistrellus* spp. and Brown Long-eared Bat, is likely to occur due to the proximity to roosting locations in the immediate vicinity.

The Coach House and outbuildings are likely to be used as a satellite roost, associated with colonies known to occupy Lissardagh House.

Overall, the Coach House is considered **Local Value (Higher Importance)** following NRA (2009) due to the presence of roosting bats.

4 Potential Impacts

The below sections discuss the potential effects of the proposed development on bats in both the construction and operational phases in the absence of mitigation.

4.1 DO-NOTHING SCENARIO

If the proposed development does not proceed, the 'do nothing' scenario is that the existing environment within the site boundary is likely to remain as described herein in the short term at least. In the medium and long terms, in the absence of intervention, the Coach House and outbuildings are likely to fall into dereliction, ultimately becoming unsuitable for roosting bats.

4.2 CONSTRUCTION PHASE

4.2.1 Loss of Roosting Site

The construction phase of the proposed renovation will see the temporary loss of the identified roost used currently by Whiskered Bat and Brown Long-eared Bat, and construction activity is likely to cause localised disturbance to other roosting bat species present in or close to the development footprint, notably Lissardagh House. Following Marnell et al. (2022) the significance of the identified roost within the Coach House and outbuildings are considered low.

4.2.2 Loss of Vegetation

Any proposed vegetation removal will impact foraging and commuting bats that use hedgerows and other similar features. Hedgerows and treelines maintain landscape connectivity and provide commuting bats with waypoints and corridors through which they commute to and from roosts/foraging areas. The loss of these features will cause a reduction in landscape connectivity in the immediate vicinity of the proposed site. Additionally, vegetation provides a screening effect for artificial lighting disturbance in a local context.

The use of heavy machinery in the root zone of trees can cause damage of the mature trees within the vicinity of the Coach House, most notably the mature Oak trees located to the east of the Coach House, resulting in increased tree morbidity and mortality. Equally, the use of machinery in proximity to trees can result in accidental damage to the trunk and branches of trees. In the medium and long terms this could result in the death of trees which provide bat roosting opportunities, alongside screening disturbance effects of artificial lighting.

4.2.3 Lighting

Illumination surrounding a bat roost during the construction phase can cause disturbance (Downs et al., 2003). Light falling on a roost access point will at least delay bats from emerging and this shortens the amount of time available to them for foraging (Boldogh et al., 2007). As the main peak of nocturnal insect abundance often occurs around dusk, a delay in emergence can mean this vital time for feeding is missed. Additionally, there is evidence that Brown Long-eared Bat roosts can be abandoned completely when entrances are illuminated (Roche et al., 2014).

Inappropriate or excessive illumination of treelines or woodland areas at night can cause disturbance to roosting, commuting and foraging bats. Artificial lighting is thought to increase the chances of bats being predated upon by avian predators (e.g. owls), and therefore bats may modify their behaviour to avoid illuminated areas.

The overall effect on bats at the proposed development during the construction, prior to consideration of mitigation measures, is considered to be **slight negative in the short-term** and is entirely reversible following completion of works (following EPA, 2022).

4.3 OPERATIONAL PHASE

Relative to the construction stage, no additional habitat loss will occur during the operational phase. The maturation of retained vegetation features will continue to increase in ecological value relative to the construction phase for bat species.

As discussed above, artificial illumination can cause disturbance to roosting, commuting and foraging bats. While all bat species have a low tolerance for light levels, the Brown Long-eared Bat are particularly sensitive. Less sensitive species Leisler's Bat and Pipistrelles can be attracted to sources of light to feed on the insects which congregate there (Svensson and Rydell, 1998). This could have the effect of disturbing existing foraging patterns and can introduce competitive advantages to the detriment of more light sensitive species which may be excluded from illuminated foraging resources (Arlettaz et al., 2000).

The overall effect on bats at the proposed development during the operational phase, prior to consideration of mitigation measures, is considered to be **slight negative at the local level** (following EPA, 2022).

5 Avoidance and Mitigation Measures

A mitigate-by-design approach was adopted in the design of the proposed development and O'Donnell Environmental Ecologists collaborated with WMA Architects Ltd. to incorporate measures for bats in the emerging design. While only Whiskered Bat is confirmed to be roosting within the Coach House, provision has been made for other crevice-dwelling bat species known to roost within the outbuildings and wider vicinity (Brown Long-eared Bat, *Pipistrellus* spp.).

Bats and their roosts are protected by legalisation, and the proposed works may only proceed following the grant of a derogation license issued under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations (2011). Notwithstanding any conditions of that license, should it be granted, the following measures will be implemented to minimise risks to bats:

5.1 CONSTRUCTION PHASE

5.1.1 Demolition Supervision/Timing of Works

A bat licensed Ecologist will be engaged to carry out pre-construction surveys and to advise in relation to the exclusion of bats in advance of works.

In advance of any proposed renovation works, repeat daytime inspections will be carried out by a bat licensed Ecologist (as roosting has been identified) in order to confirm that the understanding of the importance of the site to bats as outlined in the current report remains valid. Dependant on the results of that future survey, additional measures may be required (e.g. no works during the maternity season in the event a maternity roost has formed on site in the interim). Following review of the 'Outline Scope of Works' (see **Appendix B**), the following specific features will be inspected prior to any works:

- Any external/internal stonework crevices will be inspected with an endoscope prior to any cleaning/re-pointing works and installation of lime render.
- Inspection of crevices associated with the lintels to be replaced/repared.
- Inspection of crevices associated with the timber intermediate floor, with particular attention paid to the ground floor stables where roosting by Whiskered Bat was identified.
- Inspection of the outbuilding, including slates and timber joinery, where roosting by Brown Long-eared Bat was identified.

Lissardagh Coach House and outbuildings provide a wide range of roosting opportunities for bat species. Reason and Wray (2023) outline the optimal timing of works of known bat roosting structures. The roosting ecology of bats in winter is currently poorly understood. In order to avoid detrimental impacts on individual bats in winter when bats may be in torpor, the optimal time for building or reroofing works is during the autumn or spring when bats are active and least vulnerable to disturbance. As the structure is used by small numbers of non-breeding bats, no seasonal constraints are considered warranted in this instance.

A bat licensed Ecologist will be engaged to provide a toolbox talk on site at commencement of dismantling works. The removal of existing slates and portions of the Coach House intermediate floor proximal to where roosting by Whiskered Bat was identified in the ground floor stables will be carried out with hand tools to minimise the potential impact to any bats roosting within. The

extent of hand-tool removal necessary for the intermediate floor will be assessed by a bat licensed ecologist on the day of works. Additionally, the removal of any slates and timber joinery within the outbuildings will be carried out and assessed by a bat licensed ecologist on the day of works. As an additional deterrent measure, illumination will be installed by a bat-licensed Ecologist within the ground floor stables of the Coach House and outbuildings in advance of any proposed stripping works to deter bats from roosting there. The lighting will be first illuminated at night when bats are active and have been confirmed to have left the roost.

While outside the scope of the current report, repair works are currently proposed for the roof of Lissardagh House and are subject to a separation derogation licence (Ref: 2024-74). To avoid the simultaneous disturbance to the roosting spaces within Lissardagh House attic and the Coach House, works on both structures will not take place concurrently in order to provide suitable alternative roosting spaces for bat species occupying both structures.

5.1.2 Lighting

In order to avoid potential impacts of lighting on roosting/foraging bats, construction works will generally take place during daylight hours, and the site will not be lit during the hours of darkness excluding any existing security lighting which has been in place prior to the commencement of works. If some lighting is required for health, safety or security reasons, lighting shall be directed away from sensitive ecological features (i.e. adjacent bat roosts within the outbuildings and Lissardagh House) and only illuminate the necessary works area. These measures are considered sufficient to prevent any adverse impacts on roosting, commuting and foraging bats.

5.1.3 Alternative (Non-Maternity) Roosting Locations

Prior to commencement of renovation works on the Coach House and outbuildings, a minimum of two artificial bat boxes will be erected on surrounding mature trees in suitably undisturbed locations proximal to the Coach House in consultation with a bat-licensed Ecologist. The following models (or similar specifications) are considered suitable:

- Schwegler 1FD
- Schwegler ANS-4
- Schwegler BT3

Bat boxes provide an appropriate short and medium-term mitigation measure for small numbers of crevice dwellings bats and will provide replacement roosting opportunities for Whiskered Bat and Brown Long-eared Bat during construction. The selection of bat box locations will be decided with cognisance of the following:

- Bat boxes will be installed at a minimum height of 3.5 meters above ground level, and in locations which are inaccessible to unaided climbing (to minimise risk of vandalism).
- Locations will be chosen which are not vulnerable to artificial light or noise pollution.
- Boxes will be installed so that they have southern or westerly aspects and preferably in locations where they will receive some direct sunlight.

These bat boxes will be left in-situ post-works and are intended to be a slight enhancement post-works as a result of the proposed project.

5.1.4 Provision of Permanent Access Post-Works

The identified roosting location of Whiskered Bat within is in the ground floor stables of the Coach House. While it is not feasible to provide permanent access to this space post-works, a

bespoke bat compartment within the uninsulated northern annex attic is proposed to replace the loss of roosting spaces and will be finished with natural slate and bitumen felt (see **Appendix A** for design details). The bespoke bat compartment will begin at the collar tie-in and measure approximately 1.15m height at the apex, 3.3m width and 6.9m length. This compartment will be sealed off entirely from the northern annex. An access-hatch on the interior floor of the bat compartment will be provided to facilitate access for bat-licensed surveyors to monitor the population within the roost. Any items that might need inspection or maintenance (ventilation units, water tanks etc.) should not be located in the bat compartment. No light fixtures will be attached to the floor of the bat compartment to avoid potential future disturbance from maintenance works. A layer of polythene may be rolled along the floor of the bat compartment to catch bat droppings/urine.

Permanent access to the new roosting location will be facilitated via the provision of two dedicated bat-access tiles (see **Plate 5.3**) on the western and eastern aspects of the roof with final locations to be determined in consultation with the bat-licensed Ecologist. No artificial lighting will conflict with the location of bat access tiles.

Brown Long-eared Bat have been identified roosting within the timber joinery of the western-most outbuilding (see **Plate 3.2.5**). The current identified roosting spaces within the outbuildings will be retained and access maintained post-construction.



Plate 5.2 - Example of a lead bat access tile (Photo: Tom O'Donnell).

The use of bat-safe construction materials may only be used within the retained roosting location of the Coach House and outbuildings. Underlay within any areas of attic to which bats may have access (i.e. the areas above the proposed roost at least must use only traditional bitumen felt (1F).

Any timbers must be pressure treated offsite. Onsite application of wood preservative should be avoided, and if necessary, only products certified to be 'bat safe'¹ will be used (see **Appendix C**). The bat-licensed Ecologist will be consulted in relation to any onsite treatment of timber, and details of treatments used will be recorded and included in a post-construction compliance report which will be issued to NPWS.

The bat-licensed Ecologist will carry out a final inspection to confirm that the attic roost has been provide as outlined herein. The report will confirm that the dedicated attic roost is appropriately constructed, that bats should not encounter modern roofing membranes in any part of the structures and that bat access tiles have been appropriately located and installed.

5.2 OPERATIONAL PHASE

5.2.1 Lighting

Additional lighting is not currently proposed for the operational phase of the development. Where lighting is deemed necessary for health, safety or security reasons, the following recommendations outlined by Bat Conservation Trust (2018) will be recommended:

- Lighting in general will seek to avoid, in the first instance, light pollution on nearby ecological features including surrounding vegetation and nearby watercourses.
- LEDs will be used, as these omit ultra-violet light.
- White and blue wavelengths will be avoided; wavelength will be <2,700 kelvin.
- Lights will peak higher than 550nm.

Subsequent replacements will comply with the above specifications also.

Lighting will be avoided on the western and eastern aspects of the northern annex of the Coach House and cowled downwards as this will directly impact roosting bat utilising the proposed bat-access tiles. In addition, lighting will avoid the outbuildings which contains a known Brown Long-eared Bat roost.

5.2.2 Post-Construction Monitoring

Repeat emergence surveys will be carried out on one occasion during the maternity season in each year for two years following the completion of works to confirm the successful implementation of the proposed mitigation measures and to monitor the status of the existing population.

¹ <https://www.gov.uk/government/publications/bat-roosts-insecticides-and-timber-treatments/timber-treatment-products-suitable-for-use-in-or-near-bat-roosts>

6 Residual Impacts and Conclusion

A comprehensive survey effort has been carried out and the proposed site is considered to be of **Local Importance (Higher Value)** from an ecological perspective based on the presence of roosting bats (following NRA, 2009).

There will be a short-term, slight negative effect on roosting bats at a local level during the construction phase as a result of disturbance and the temporary loss of roosting location. With the implementation of the mitigation measures outlined in **Section 5** above, the overall ecological effect of the proposed development (relative to the 'do-nothing' scenario) is considered to be a **neutral** effect (following EPA, 2022). In the event the new roosting location is occupied by an increased number of bats, the overall effect of the proposed development is considered to be **slight positive** (following EPA, 2022).

7 Derogation Licence Application

Bat roosts are protected whether they are occupied or not, and it is an offence to disturb a bat roost. A derogation license issued under Regulation 54 (2) (c) of the Birds and Natural Habitats Regulations (2011) is required to facilitate the proposed works.

A derogation license is requested for the proposed works, with the following details:

- Applicant: **Pat O’Leary and Ann-Marie O’Brien.**
- Supervised by: **Colm Breslin of O’Donnell Environmental Ltd, Lawley House, Monahan Road, Cork City, Co. Cork. T12 N6PY.**
- Species: **Whiskered Bat *Myotis mysticanus*, Brown Long-eared Bat *Plecotus auritus*, Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*.**
- Activity: **Lissardagh Coach House Renovation, Lissardagh, Co. Cork.**
- Timeline: **2024/2025**

Table 4.1 provides responses to four key issues which will be considered during the derogation license decision making process.

Table 4.1 - Derogation License Checklist

<p><i>Explanation as to why the derogation licence sought is the only available option for works and no suitable alternative exists as per Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations.</i></p> <p>Pat O’Leary and Ann-Marie O’Brien proposed to renovate the former Lissardagh Coach House and associated outbuildings. The structure is currently in a state of disrepair, with water, light and wind ingress noted at multiple points, primarily in the form of missing slates and broken windows. While currently in structurally sound condition, continued water ingress and associated decay will begin to degrade the structure in the medium-term (7-15 years) (EPA, 2022). Without management, it is likely that the structure will eventually fall into dereliction and be lost as a roosting space for bat species. Renovation works will require the removal and replacement of the existing roof (slates, timber etc.) and weather-proofing of the lower storeys to be made habitable again and as such no suitable alternative is available for works to proceed.</p>	<input checked="" type="checkbox"/>
<p><i>Evidence that actions permitted by a derogation licence will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations.</i></p> <p>An appropriate level of survey was carried out which complies with current best practice standards, including recent recommendations regarding the use of ‘night vision aids’. Based on best available information, the ground floor stables of the Coach House is resident to individual/small numbers of Whiskered Bat (maximum one recorded at the time of surveys). Roosting was also identified in the adjacent outbuildings by Brown Long-eared Bat (maximum one recorded at the time of surveys). While not confirmed at the time of surveys, roosting by Brown Long-eared Bat and <i>Pipistrellus</i> spp. is</p>	<input checked="" type="checkbox"/>

considered likely to occur occasionally within the Coach House and, as such, provision has been made for these crevice dwelling species.

Avoidance is the primary measure being employed to avoid/reduce disturbance to roosting bats. As the Coach House is utilised by small numbers of non-breeding Whiskered Bat and thus not maternity status, no seasonal constraints on construction works is considered warranted. However, any proposed roofing works should preferentially take place outside of the core maternity season, ideally during autumn and spring when bats are active and least prone to disturbance (Reason and Wray, 2023).

Due to the open nature of the structure, exclusion measures are not considered feasible prior to the commencement of works. As an alternative, artificial lighting will be installed within the interior of the Coach House and outbuildings following the egress of any bats in order to dissuade these individuals returning.

A bat-licensed ecologist will be onsite prior to, and during, the commencement of works in order to ascertain the presence of roosting bats. Of particular note, existing roosting locations will be re-checked using endoscope including any additional stonework crevices, gaps in timber joinery and gaps in dilapidated lintels.

Alternative roosting locations will be provided in advance of works (bat boxes) on nearby undisturbed mature trees.

Following completion of works the proposed alternative roosting location within the northern annex will be retained and sealed off from the main house, with two bespoke bat access tiles incorporated into the western and eastern aspects of the roof. Permanent access in the form of an access hatch will be provided in order to monitor the bat population. Access to the existing roosting space within the outbuildings will also be retained.

It is considered that the proposal will not be detrimental to the maintenance of the bat populations at a favourable conservation status in their natural range and that the proposal will not have a detrimental effect on the local bat populations.

Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere.



Full detail on proposed mitigation measures are outlined above in **Section 5**. Below is a summary of these measures:

- As Lissardagh Coach House and outbuildings are used by a individual/small numbers of bats, no seasonal constraints on construction works is considered warranted.
- Alternative non-maternity roosting locations will be provided prior to the commencement of works. A minimum of two bat boxes will be installed on nearby undisturbed mature trees and will be retained following the completion of works as a slight enhancement measure.
- Illumination may be installed by a bat-licensed ecologist within the Coach House and outbuildings in advance of works to deter bats from roosting here. The lighting will be first illuminated at night when bats are active and have left the roost.
- A bat-licensed ecologist will be onsite during works to oversee demolition and repointing works, and to ensure compliance with the proposed mitigation measures.

<ul style="list-style-type: none"> • A replacement bespoke bat compartment will be provided within the attic space of the northern annex of the Coach House. O'Donnell Environmental have engaged with design teams throughout the design process and appropriate information has been included in the project design. This roosting space will be entirely sealed and set aside for sole use by bats. Permanent access for bats will be provided through two bat access tiles on the western and eastern roof aspects and will be micro-sited as necessary by a bat-licensed ecologist during installation. A permanent access-hatch will be provided on the interior of the northern annex to facilitate monitoring of the roost space. Access to the existing roosting space within the outbuildings will also be retained. • Repeat surveys will take place once during the maternity season for two years post-construction to ensure that the proposed mitigation measures were successfully implemented. 	
<p><i>As much information as possible to allow a decision to be made on this application.</i></p> <p>Full information is outlined in the current report.</p>	☒

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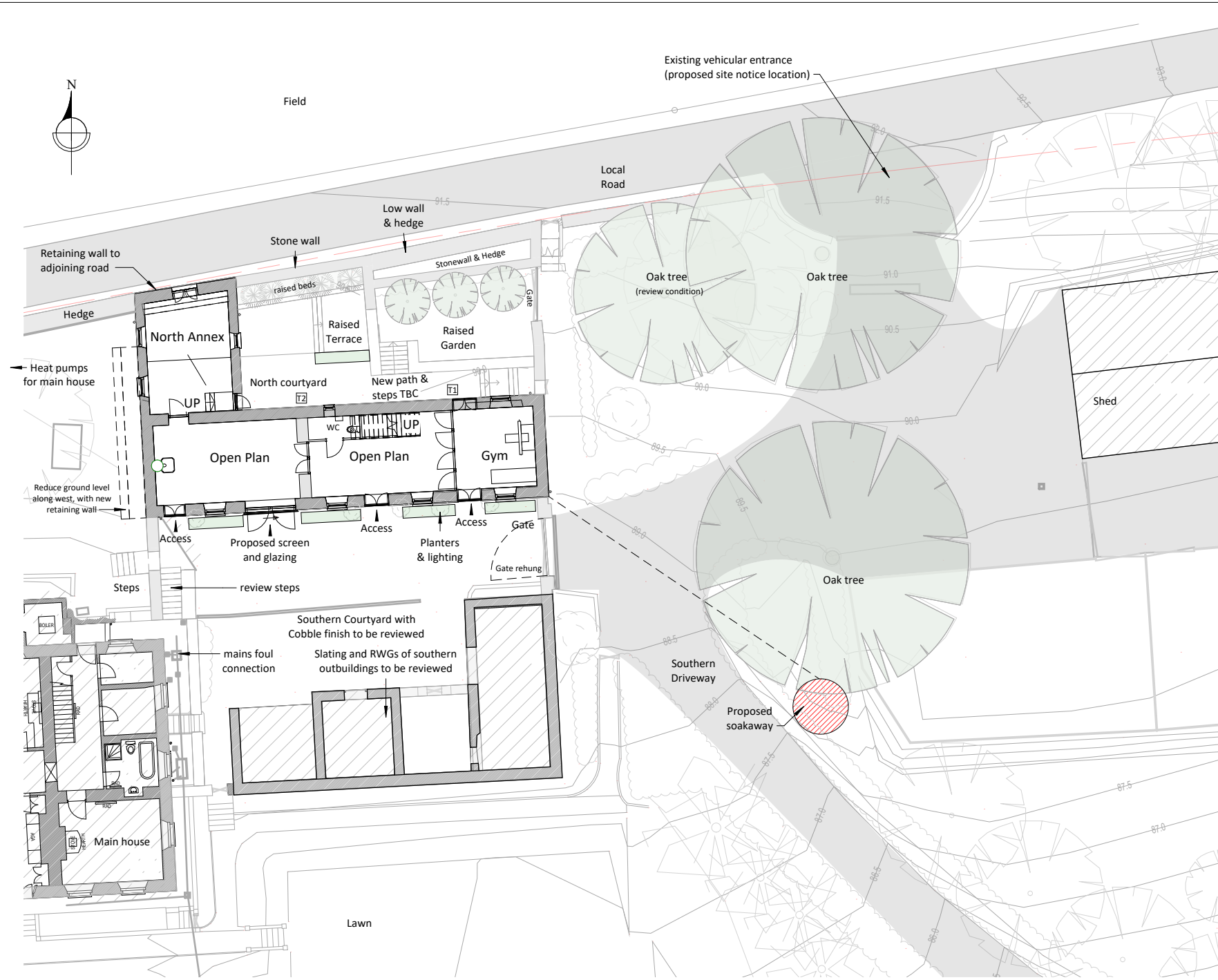
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Appendix A

Design Information

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1 Proposed Ground Floor + Site
1 : 200

Location excavation holes
T1 1200mm deep
T2 1500mm deep

Rev	Date	Description	Iss. by
9	03/10/2024	Bat license dwgs	OMS
8	2024/10/01	Design team update	OMS

Revision Schedule

Client:
Pat O'Leary & Ann-Marie O'Brien

Project:
Lissardagh Coach House
Lissardagh, Co. Cork

WAIN MOREHEAD ARCHITECTS
Architecture
Interior Design
Project Management

A: Pembroke House, Pembroke Street, T12 W7YP, Cork, Ireland
T: 053 (0) 21 2455 700 E: info@wainma.ie W: <https://www.wainma.ie>

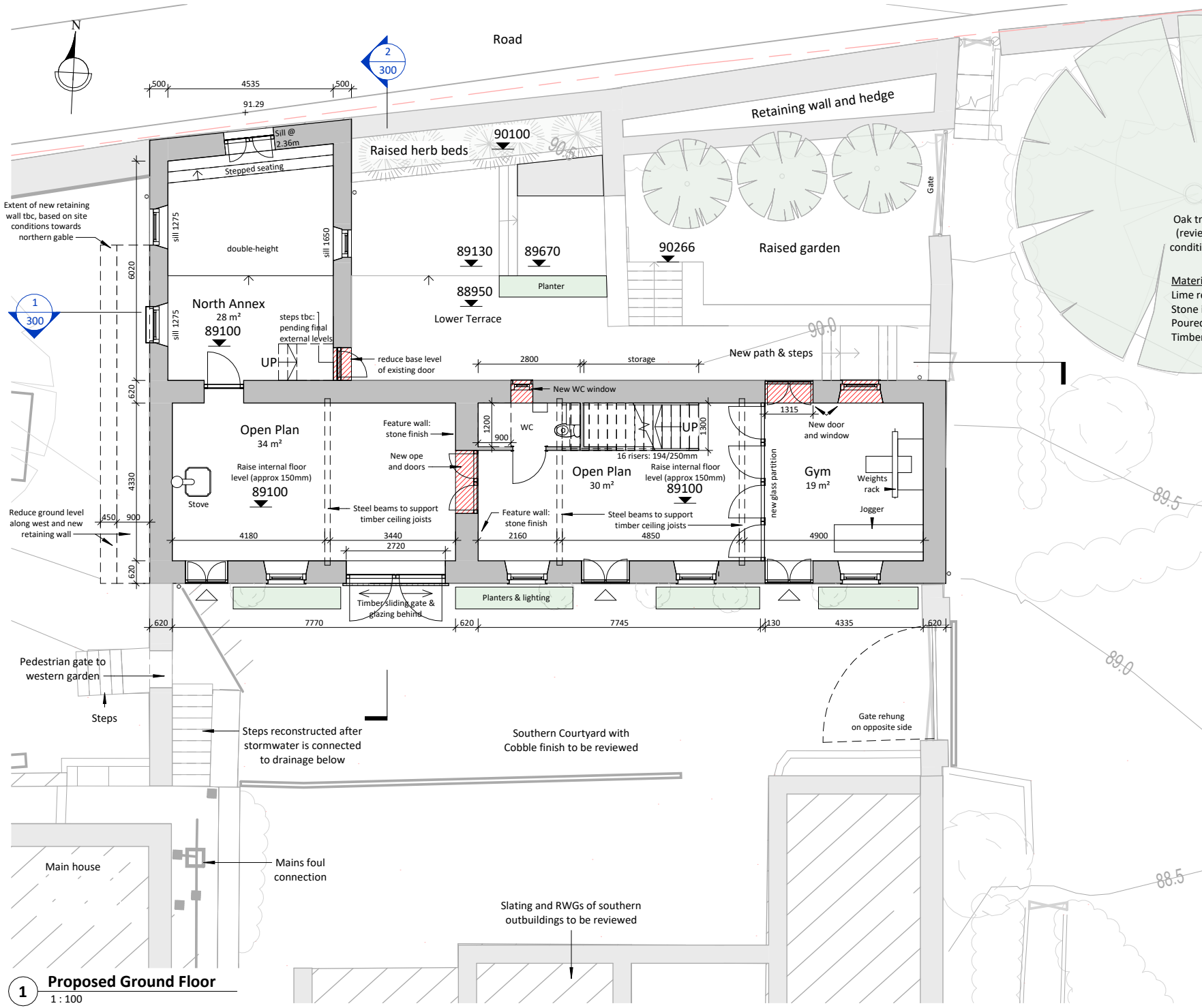
Architectural Institute of Ireland
PASSIVE HOUSE
ENERGY EFFICIENT BUILDING
AECB building knowledge

Drawing:
Proposed Ground Floor Plan + Site

Scale @ A3: 1 : 200	Date: 01/10/24	Drawing No.: 11317-100
Drawn: OMS	Checked: JM	Revision No.: 9

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Legend:

- Oak tree (review condition)
- existing walls
- new or modified openings in existing stone walls
- Insulated roof
- Lime rendered walls
- Stone internal features
- Poured concrete GF floor
- Timber first floor
- Bat access to this uninsulated roof

Area Schedule (GIA)

Name	Area
Ground Floor	121 m ²
First Floor	95 m ²

10	03/10/2024	Bat license dwgs	OM
9	2024/10/01	Design team update	OM
Rev	Date	Description	Iss. by

Revision Schedule

Client:
Pat O'Leary & Ann-Marie O'Brien

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Lissardagh, Co. Cork



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Drawing:
Proposed Ground Floor Plan





Scale @ A3: 1 : 100	Date: 01/10/24	Drawing No.: 11317-101
Drawn: OMS	Checked: JM	Revision No.: 10

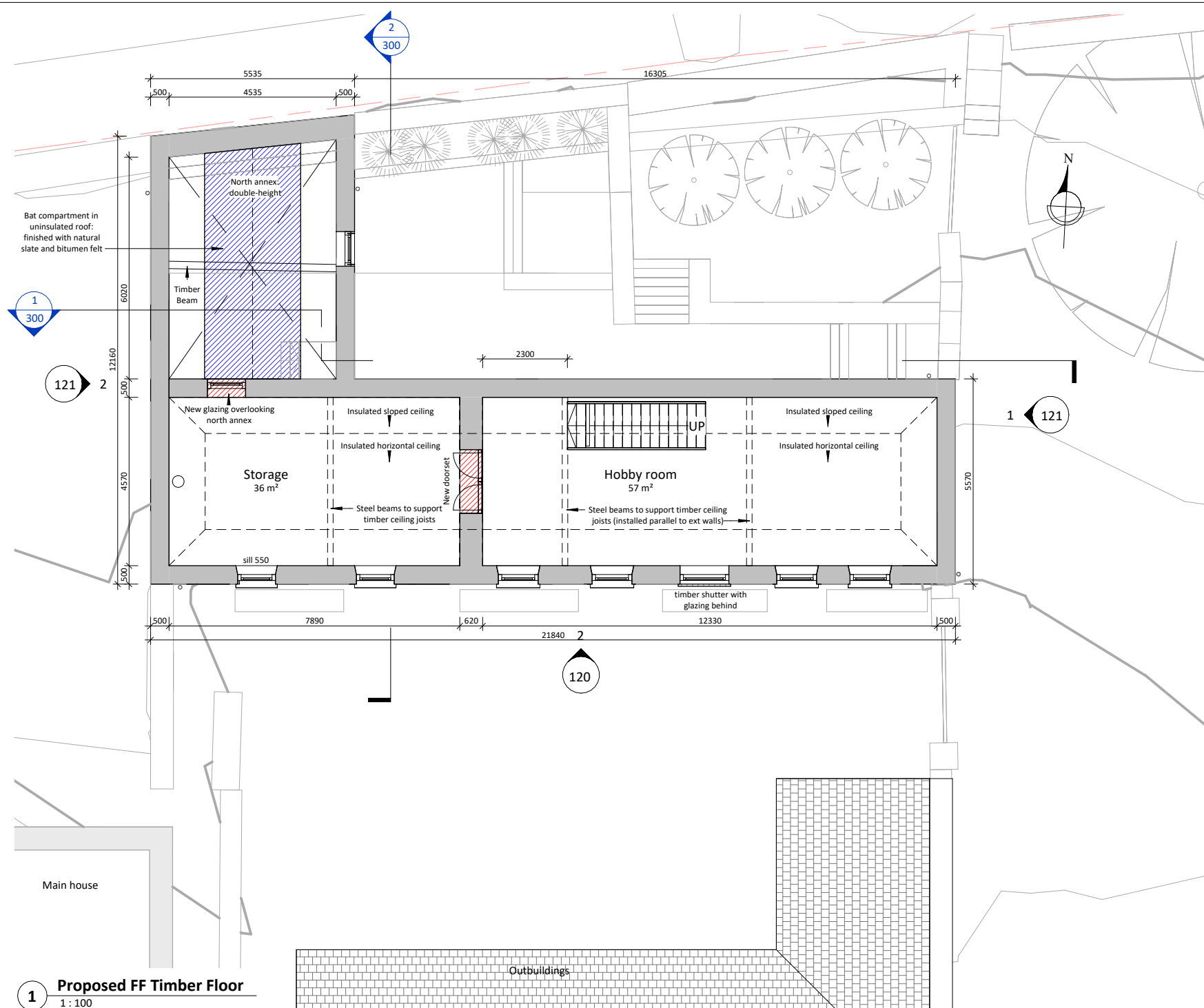
1 Proposed Ground Floor
1 : 100

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Legend:

-  existing walls
-  new or modified openings in existing stone walls
-  Insulated roof
-  Bat access to this uninsulated roof



Rev	Date	Description	Iss. by
10	03/10/2024	Bat license dwgs	OMS
9	2024/10/01	Design team update	OMS

Revision Schedule			
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Client:
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Project:
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Drawing:
Proposed First Floor Plan

Scale @ A3: 1 : 100	Date: 01/10/24	Drawing No.: 11317-102
Drawn: OMS	Checked: JM	Revision No.: 10

1 Proposed FF Timber Floor
1 : 100

Blue hatch: Bat compartment in uninsulated roof, finished with natural slate and bitumen felt.

Two 'Leadwox' bat access vent tiles: one east, one west

1
300

121 2

Flue for new stove

Leaded rolls to hips and to ridge

Dividing wall below

Orange hatch: new insulated roof





2
120

1 121
Leaded rolls to hips and to ridge

1
1 : 100
Proposed Roof Plan

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- Legend:**
-  existing walls
 -  new or modified openings in existing stone walls
 -  Insulated roof
 -  Bat access to this uninsulated roof

Rev	Date	Description	Iss. by
4	03/10/2024	Bat license dwgs	OMS
3	2024/10/01	Design team update	OMS

Revision Schedule

Client:
Pat O'Leary & Ann-Marie O'Brien
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Lissardagh, Co. Cork



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
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Proposed Roof Plan

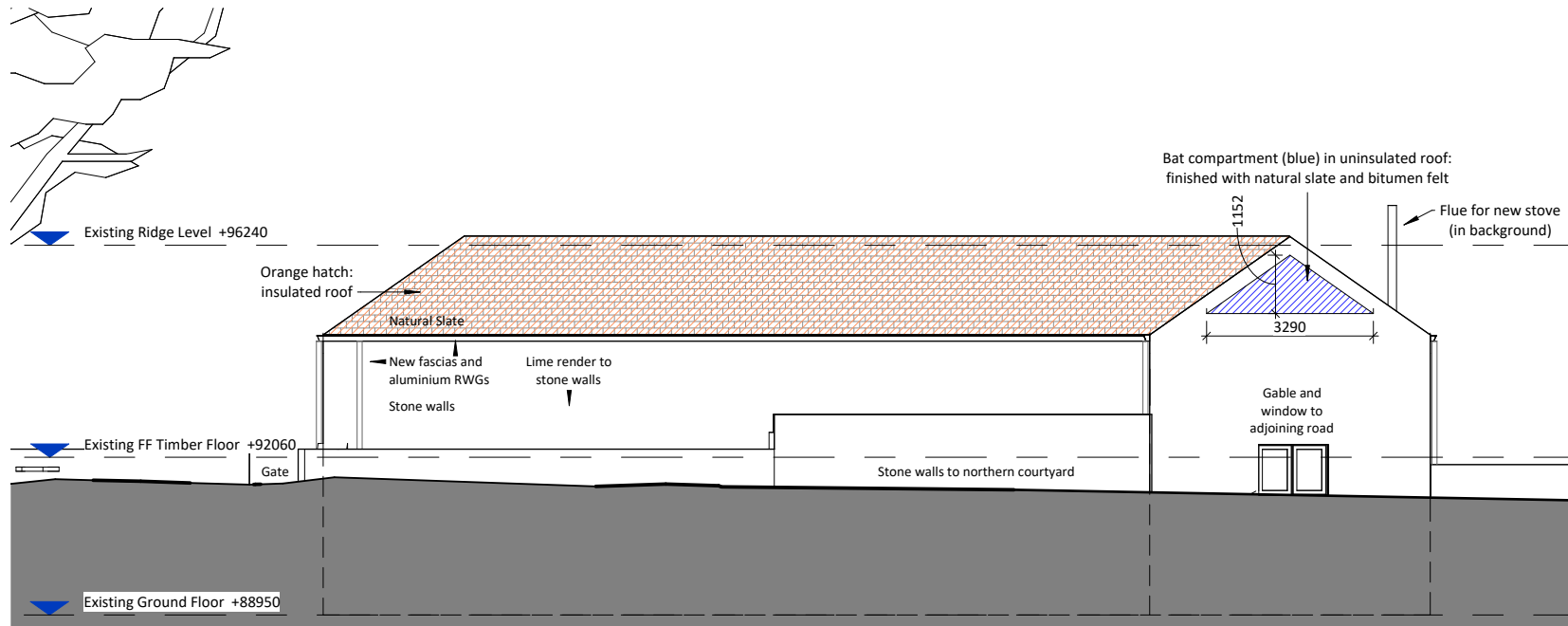
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Drawn: OMS	Checked: JM	Revision No.: 4

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Legend:

-  existing walls
-  new or modified openings in existing stone walls
-  Insulated roof
-  Bat access to this uninsulated roof



1 Proposed Elevation North
1 : 100

9	03/10/2024	Bat license dwgs	OM S
8	2024/10/01	Design team update	OM S
Rev	Date	Description	Iss. by

Revision Schedule			
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Client:
Pat O'Leary & Ann-Marie O'Brien

Project:
Lissardagh Coach House
Lissardagh, Co. Cork

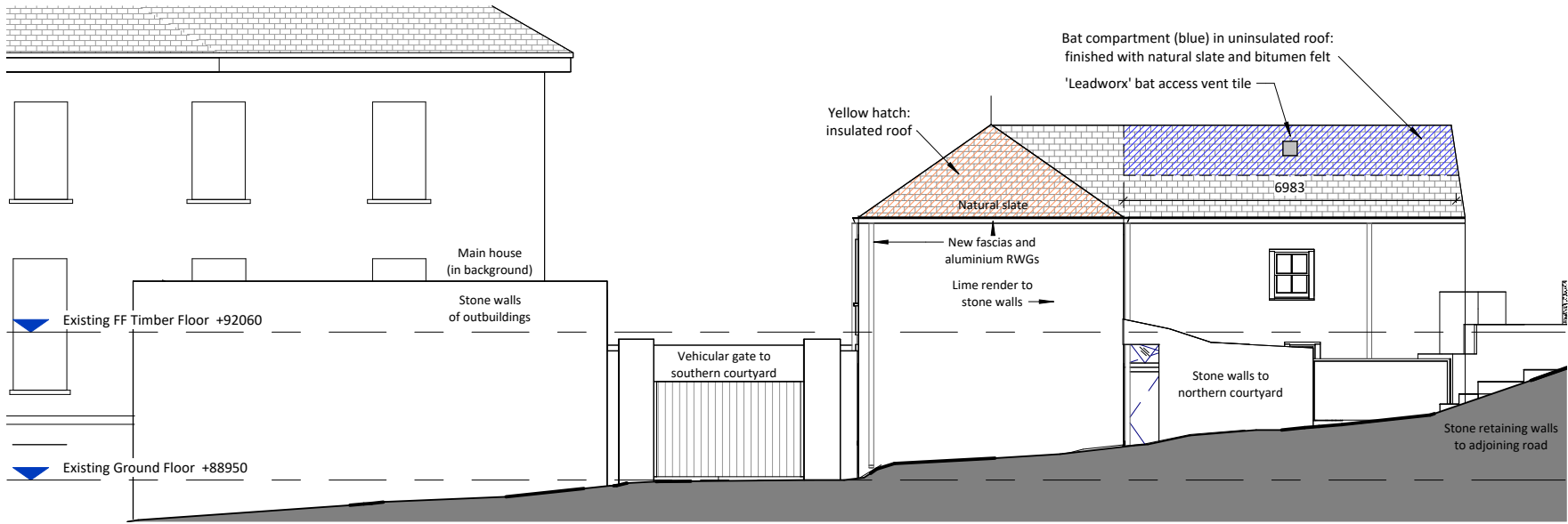


Drawing: Proposed Elevations North & South		
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Drawn: OMS	Checked: JM	Revision No.: 9



2 Proposed Elevation South
1 : 100

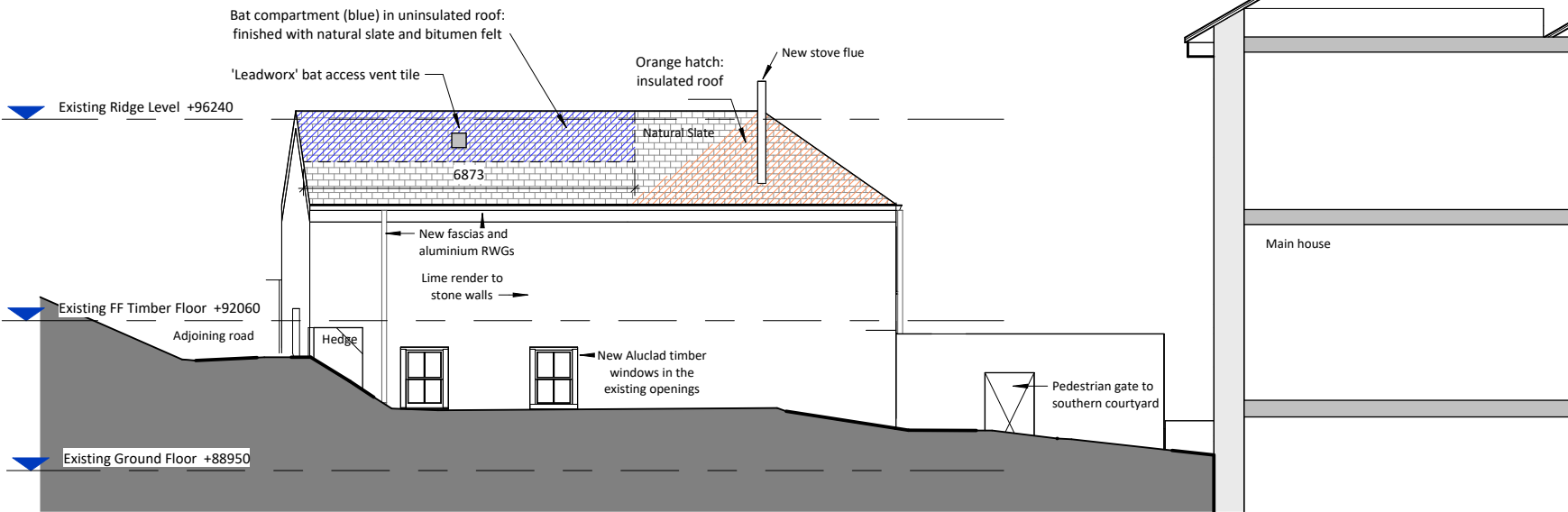
Review door heights in line with increasing the internal floor level



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1 Proposed Elevation East
1 : 100



2 Proposed Elevation West
1 : 100

Rev	Date	Description	Iss. by
9	03/10/2024	Bat license dwgs	OMS
8	2024/10/01	Design team update	OMS

Revision Schedule

Client:
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
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Proposed East & West Elevations

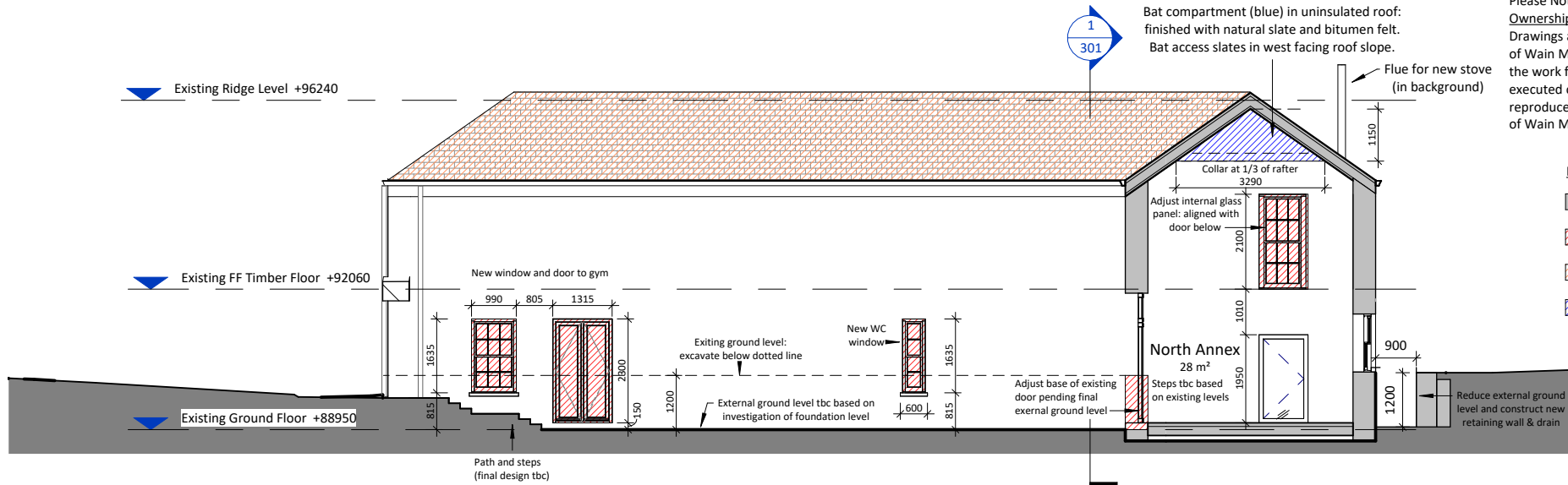
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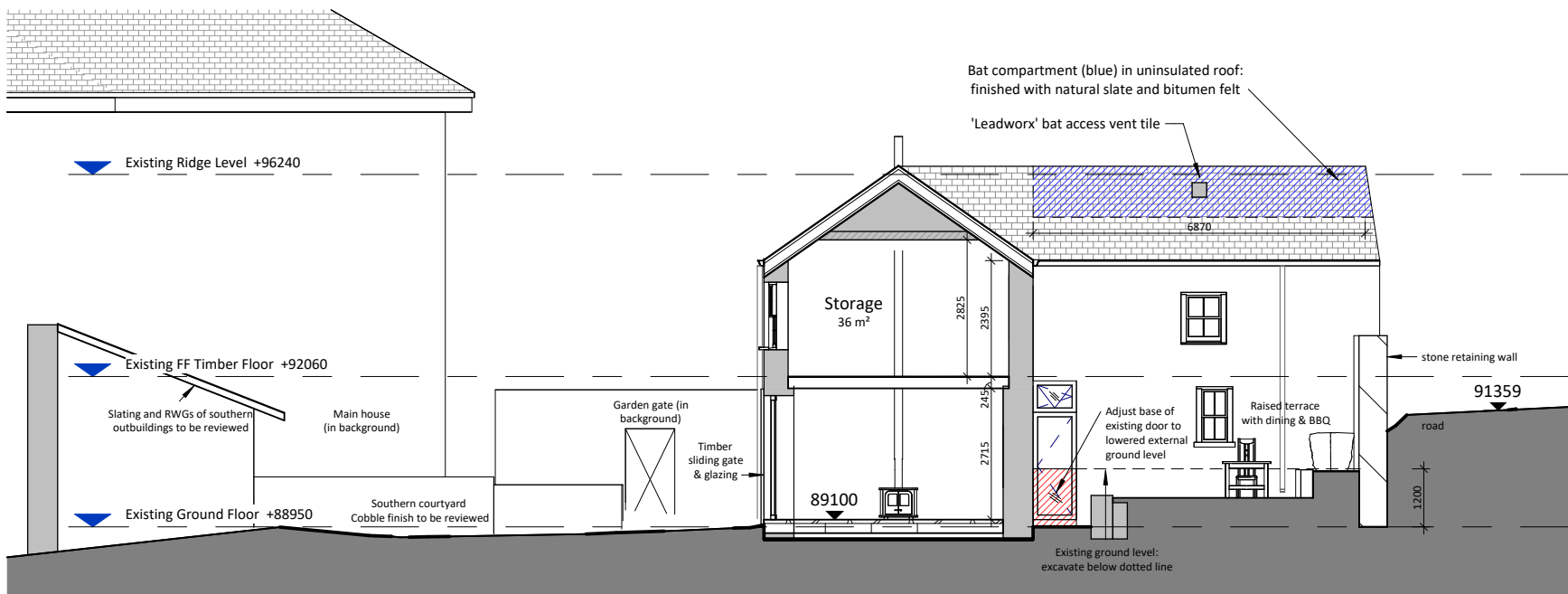
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Legend:

-  existing walls
-  new or modified openings in existing stone walls
-  Insulated roof
-  Bat access to this uninsulated roof



1 Section along path
1 : 100



2 Section at living and terraces
1 : 100

Rev	Date	Description	Iss. by
10	03/10/2024	Bat license dwgs	OMS
9	2024/10/01	Design team update	OMS

Revision Schedule

Client:
Pat O'Leary & Ann-Marie O'Brien

Project:
Lissardagh Coach House
Lissardagh, Co. Cork



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Drawing:
Proposed Sections 2

Scale @ A3: 1 : 100	Date: 01/10/24	Drawing No.: 11317-300
Drawn: OMS	Checked: JM	Revision No.: 10

Appendix B

Outline Scope of Works



11317 Lissardagh CoachHouse:

Outline scope of works: 13/09/2024

1.0. Roof:

Scaffold the entire building and install perimeter safety protection as required.
Demolish the existing timber roof (decayed, undersized and no intrinsic heritage value).
Salvage the natural slate and certain timber roof elements, as appropriate.
Construct a new timber roof, battens, natural slate, fascias, soffits and leadwork.
Install new metal rainwater goods, to be connected to new perimeter drainage.

2.0. Intermediate floor:

Replace existing timber intermediate floor to main building- isolate from masonry.
Include two cross-building steel ties, to laterally restrain the external walls.
Include a new staircase parallel to the north wall, to access the first floor.
The north annex will remain double height, ie without an intermediate floor.

3.0. External stone walls:

Review the condition of existing stone walls and lime render: stonework is generally good.
Treat walls using an appropriate bat friendly biocide to control algae. Steam clean all walls.
Carry out localised masonry repairs as required, including replacing timber lintels windows with concrete lintels (x11) and repairing damage lintel. Review condition of limestone sills.
When repointing masonry, ensure that all wide joints are filled using stone pinnings.
Install insulated lime render (Diasen Evolution or similar) to the external stone walls.

4.0. Internal stone walls:

Review the condition of the existing stone walls and lime render.
Carry out testing of the makeup of the existing internal lime render.
Construct four new openings in the internal stone walls, to improve layout and circulation.
Install breathable insulated lime render (Diasen Evolution) to inside of external stone walls.

5.0. Windows and doors:

Replace the existing windows and doors with new Alu-clad timberframe windows.

6.0. External perimeter drainage:

Reduce external ground level, which is currently higher than the internal floor level.
Install a new retaining wall, offset approximately 1200mm from the external wall.
To reduce dampness, install perimeter drainage and paving to falls away from dwelling.
Where external excavation is not possible and the current retaining situation is unavoidable, an internal liner will be installed for moisture management (eg Wykamol CM8 membrane).
Install a new drain along the roadside gable, preventing water ingress at adjacent window.
Internally: potentially excavate the existing floor and install a new floor with insulation and DPM: This approach is dependent on the existing foundations being sufficiently deep- TBC.

Appendix C

Bat Safe Timber Treatment Products

Marketing company	Product name	Type	User	Active ingredients
Akzo Nobel Coatings Ltd	Cuprinol Trade Decorative Preserver (BP)	S	A	IPBC, Tebuconazole
Akzo Nobel Coatings Ltd	Cuprinol Trade Quick Drying Wood Preserver Clear (BP)	W	A	Propiconazole, IPBC
Akzo Nobel Coatings Ltd	Dulux Trade Weathershield Naked Wood Basecoat (BP)	W	A	Propiconazole, IPBC
Akzo Nobel Coatings Ltd	Dulux Trade Weathershield Preservative Primer + (BP)	W	A	Propiconazole, IPBC
Assured Products Ltd	Spear & Jackson Triple Action Wood Treatment	M	A	Propiconazole, IPBC, Permethrin
Assured Products Ltd	Spear & Jackson Woodworm Killer	M	A	Permethrin
Crown Paints	Sadolin Quick Dry Wood Preserver	W	A	Propiconazole, IPBC
Enviroquest GPT Ltd	Lignum Pro I62.5 (BPR)	Wc	P	Permethrin
Enviroquest GPT Ltd	Lignum Pro D156 (BPR)	Wc	P	Propiconazole, IPBC, Permethrin
Enviroquest GPT Ltd	Lignum Universal Wood Preserver (BPR)	W	A	Propiconazole, IPBC, Permethrin
Enviroquest GPT Ltd	Lignum Woodworm Killer (BPR)	W	A	Permethrin
Enviroquest GPT Ltd	Lignum Wood Preserver (BPR)	W	A	Propiconazole, IPBC, Permethrin
Enviroquest GPT Ltd	Lignum Pro Gel(BPR)	Pa	P	Propiconazole, IPBC, Permethrin
Larsen Building Products	Larsen Construction Timber Preserver	M	A	Propiconazole, IPBC, Permethrin
Larsen Building Products	Larsen Low Odour Woodworm Killer	M	A	Permethrin
Larsen Building Products	Larsen Low Odour Universal Wood Preservative	M	A	Propiconazole, IPBC, Permethrin
Morrells Woodfinishes Ltd	Omnia Preserve	W	A	Propiconazole, IPBC

Permagard Products Ltd	Permagard Woodworm Killer (BPR)	W	A	Permethrin
Permagard Products Ltd	Permagard Universal Wood Treatment (BPR)	W	A	Propiconazole, IPBC, Permethrin
PPG Agritectural Coatings UK Ltd	Johnstone's Trade Woodworks All Purpose Preserver	S	A	Propiconazole, IPBC, Permethrin
PPG Agritectural Coatings UK Ltd	Johnstone's Woodcare Wood Preserver	M	A	Propiconazole, IPBC, Permethrin
PPG Coatings Danmark A/S	Bondex Preserve II	W	A	Propiconazole, IPBC, Permethrin
Premier Q Coatings Ltd	Premier Q Woodworm Killer (BPR)	S	A	Permethrin
Premier Q Coatings Ltd	Premier Q Triple Action Wood Treatment (BPR)	S	A	Propiconazole, IPBC, Permethrin
Protim Solignum Ltd trading as Koppers	Endcoat Wood Preservative	S	A	Propiconazole
Rentokil Initial	Deadline Woodworm Treatment	W	P	Permethrin, IBPC, Tebucanazole, Propiconazole
Rentokil Initial	Woodworm Treatment Solution	W	P	Permethrin, IBPC, Tebucanazole, Propiconazole
Rentokil Initial	Woodworm Treatment Fluid	W	A	Permethrin, IBPC, Tebucanazole, Propiconazole
Rustins Ltd	Rustins Advanced Wood Preserver (BPR)	M	A	Propiconazole, IPBC, Permethrin
Safeguard Europe Ltd	Soluguard Woodworm Treatment (BPR)	M	A	Propiconazole, IPBC, Permethrin
Safeguard Europe Ltd	Soluguard Woodworm and Rot Treatment (BPR)	M	A	Propiconazole, IPBC, Permethrin
Sherwin-Williams Diversified Brands Ltd	Ronseal Total Clear Wood Preserver (MP)	S	A	Propiconazole, IPBC, Permethrin
Sherwin-Williams Diversified Brands Ltd	Ronseal Woodworm Killer (MP)	S	A	Permethrin
Sherwin-Williams Diversified Brands Ltd	Ronseal Multi-Purpose Woodworm Treatment (MP)	S	A	Propiconazole, IPBC, Permethrin

Sherwin-Williams Diversified Brands Ltd	Ronseal Multi-Purpose Woodworm Treatment (LC)	S	A	Propiconazole, IPBC, Permethrin
Sovereign Chemicals Ltd	Sovaq Woodworm Killer (BPR)	Mc	P	Permethrin
Sovereign Chemicals Ltd	Sovereign Boron Timber Rod	R	P	Disodium octaborate
Sovereign Chemicals Ltd	Deepkill Timber Preservative Cream	Pa	A	Propiconazole, IPBC, Permethrin
Sovereign Chemicals Ltd	Sovaq Dual Purpose Timber Treatment	Mc	P	Propiconazole, IPBC, Permethrin
Sovereign Chemicals Ltd	Sovereign Timber Preservative	S	A	Propiconazole, IPBC
STV International Ltd	Defenders Triple-Action Timber Protector	M	A	Propiconazole, IPBC, Permethrin
STV International Ltd	Zero In Woodworm Destroyer	M	A	Permethrin
Troy UK	TWP 085	W	A	Propiconazole, IPBC
Troy UK	TWP 077	S	A	Propiconazole, IPBC
Wykamol Group Ltd	Microtech Dual C RTU (BPR)	M	A	Propiconazole, IPBC, Permethrin
Wykamol Group Ltd	Microtech Woodworm RTU (BPR)	M	A	Permethrin
Wykamol Group Ltd	Microtech Dual P RTU (BPR)	M	A	Propiconazole, IPBC, Permethrin

Type of product:

A - aerosol

Mc - micro emulsion concentrate, to be diluted with water to form a micro emulsion

Pa - bodied paste

R - solid rod, for insertion into pre-drilled hole

S - solvent-based

W - aqueous solution, ready for use

Wc - aqueous solution concentrate, to be diluted with water

Type of user:

P - professional - only people required to use pesticides as part of their work and who have received appropriate information, instruction and training can use the product

A - amateur - the general public can use the product

IPBC is an abbreviation for 3-iodo-2-propynyl n-butylcarbamate.

[Use the HSE number to check product details in the COPR database.](#)

Source: <https://www.gov.uk/government/publications/bat-roosts-insecticides-and-timber-treatments/timber-treatment-products-suitable-for-use-in-or-near-bat-roosts>

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