

E2031, Millbrook House (Coach House) - Bat Derogation Licence

Dear Sir / Madam,

The following information has been prepared by Malone O'Regan Environmental ('MOR Environmental') on behalf of Comhlacht na Feirme Ltd. ('the Applicant') in support of a request for derogation licence to undertake works on the Coach House building located in Abbeyleix, Co. Laois (OSI Reference ITM X:641934 Y:683983) ('the Site'). The proposed works at the Site ('the Proposed Development') include the following:

- The restoration of the external elevations of Millbrook House (including extant original windows) and all of the coach house;
- The reconstruction the three principal reception rooms of Millbrook House, along with other ancillary spaces and new windows;
- The construction of a new roof and corner extension (2.5 storeys) to Millbrook House and standalone 1.5 storey structure to the rear; and,
- The adaptation of the remaining internal spaces of Millbrook House and the Coach House to provide guest accommodation; including upgrade of building services.

A Grant of Planning for the above Proposed Development was obtained from Laois County Council ('LCC') (Planning Ref: 24/60010) on 12/01/2024. As part of the grant of planning from LCC, 19 conditions of planning were set out, as per the Schedule 2 of the Final Grant of planning. These conditions included the below and in Appendix A:

- 1(h) *'The recommendations and mitigation measures set out in the Bat Report received by the Planning Authority on 12/01/2024 shall be implemented in full, unless otherwise agreed in writing with the Planning Authority.'*

The Bat Report (Appendix B) submitted to the Planning Authority on 12/01/2024 identified one soprano pipistrelle entering the roof of the Coach House building during one of the surveys on 20/06/23. No bats were identified during the internal inspections or the follow-up inspection completed on 21/01/25.

Based on the results of the surveys, it is considered that a soprano pipistrelle **Satellite Roost** is present within the roof, as outlined in the Bat Report.

Given the presence of a likely satellite roost within the Coach House building, the following mitigation measures for roosting bats during the Proposed Development were included in the Bat Report and will be adhered to in line with Condition 1(h) of the Final Grant of planning:

- The aspects of the Proposed Development that involve the removal of the roof of the coach house (the location of the bat roost) shall be supervised by a suitably experienced bat ecologist;

- Ridge tiles with traditional bitumastic hessian roofing felt should be used for the roof of the coach house. Breathable membranes should not be used as these can entangle and trap bats in flight. The location and number of these ridge tiles will be determined following the additional surveys by a suitably experienced bat ecologist;
- The optimum season for works carried out at summer roosting sites is 1st September to 1st May. Therefore, all roof works on the coach house should be completed prior to 1st May 2024¹;
- A suitable roof void space for soprano pipistrelles will be incorporated into the Proposed Development that replicates the current features on the Site. Bats will be able to access the roof space of the coach house via bat-specific ridge tiles (see Plate 4-1 for examples of suitable bat access ridge tiles). Additional required design features to be implemented include:
 - Access into the roof via a 15-20mm gap. The Project Ecologist will visit the Site during construction works to ensure that the access points into the Annexe and the Cottage are still suitable for bat species;
 - Smooth plastic roof lining should be avoided as bats cannot hang freely from this;
 - Timber cladding mounted on 20-30mm counter battens with bat access at the bottom or sides; and,
 - Access to roof voids via soffit gaps.
- Only bat safe compounds shall be used during the chemical treatment of roof timbers, further details of this process can be found in '*The Bat Worker's Manual*';
- No rodenticide usage will be permitted within the vicinity of the Site;
- Water tanks in the attic will be covered fully to prevent the drowning of bats in the roof space;
- In the event that any bats are identified during the Proposed Development, the bat(s) will be captured and released at night into the woodlands surrounding the Site. Should night-time temperatures be considered to be unsuitable, the bat(s) will be placed into bat boxes erected onsite/in the woodlands; and,
- All personnel involved in the construction phase will be made aware of the legal status of bat species in Ireland and the role of project ecologists.

Additionally, the following monitoring measures will be implemented as part of the Grant of Planning:

- An updated dusk bat survey will be undertaken at the Site after the construction works have finished to ensure that the structure and the surrounding habitats are still being utilised by bats;
- The findings of any additional surveys will be submitted to the NPWS; and,

¹ Note: Works on the Coach House were not able to be undertaken in 2024. Therefore, all works will be completed prior to the 1st May 2025.

- The use of bat boxes will be monitored during the construction works to ensure they offer a suitable alternative to roosting bats within the vicinity of the Site.

A building-specific design has been prepared by Ryan W. Kennihan Architects at the Coach House building to incorporate a suitable roosting habitat into the Proposed Development. Further details can be found in Appendix C. This will incorporate the following:

- South-facing access points for bat species to access the loft;
- Hessian material for soprano pipistrelles to provide suitable roosting conditions; and,
- A box-out section under the ridge beam suitable for roosting brown long-eared bats.

An updated internal inspection of the loft was undertaken on 21st January 2025. This updated inspection did not identify any bat species roosting within the loft. Additionally, utilising a thermal camera, no heat signatures from any mammals within the roof were identified. Nonetheless, it is recommended that a bat ecologist be present for the entirety of the roof removal works and that the roof be carefully and systematically removed by hand.

In the event that bat species are discovered during the demolition works, the bat ecologist onsite will capture and release the individual(s) into suitable bat boxes that have been erected within the estate.

The proposed schedule is to have the roofing works completed in before the 1st of May 2025 (subject to the derogation licence being in place). Overall, the Coach House building is considered to be of low local importance for roosting bats, given that only one individual soprano pipistrelle was observed accessing the roof and the lack of evidence found during the internal building inspections on 21st August 2023 and 21st January 2025.

It is considered that the Proposed Development will have a negligible impact on bat species. This is based on the inclusion of features to enhance roosting potential for a number of bat species and provided that mitigation measures outlined in the Bat Report are adhered to.

Yours sincerely,

for Malone O'Regan Environmental



Dyfrig Hubble

Appendix A: Final Grant of Planning (Planning Ref: 24/60010).

Appendix B: Bat Report prepared by MOR Environmental.

Appendix C: Bat Loft Design prepared by Ryan W. Kennihan Architects.

APPENDICES

APPENDIX A



PLANNING AND DEVELOPMENT ACT, 2000 AS AMENDED
PLANNING & DEVELOPMENT REGULATIONS 2001 (as amended)

NOTIFICATION OF FINAL GRANT

TO: Comhlacht na Feirme Ltd
c/o Lizzie Donnelly
80 Harcourt Street
St Kevin's
Dublin 2
D02 F449

Planning Register Number: 24/60010
Valid Application Receipt Date: 12/01/2024

In pursuance of the powers conferred upon them by the above-mentioned Acts, Laois County Council have granted PERMISSION to the above named, for the development of land, namely:-change use of Millbrook House, and coach house, from residential use to guest house accommodation, including:

- The restoration of the external elevations of Millbrook House (including extant original windows) and all of the coach house, including the upgrade of the historic timber sash windows with double glazing units;
- The reconstruction the three principal reception rooms of Millbrook House along with other ancillary spaces and new windows;
- The construction of a new roof, including dormer windows, and a full height corner extension (2.5 storey) to Millbrook House, and standalone 1.5 storey structure (139 sq m) to the rear; and
- The adaptation of the remaining internal spaces of Millbrook House and the coach house to provide guest accommodation; including upgrade of building services.

The above works will result in a total of 16 no. guest bedrooms across Millbrook House (with extension) (899 sq m), coach house (145 sq m) and proposed 1.5 storey structure (139 sq m).

The development will also consist of the construction of a restaurant building (688 sq m), comprising two single storey buildings and external terraces, at the western part of the site, arranged within gardens and courtyards.

The development will also consist of car parking, bicycle parking, soft and hard landscaping, servicing yard, waste storage shed (15.5 sq m), alterations to boundary treatment, including the provision of a new service entrance and widening of the main entrance, site lighting, wastewater treatment plant and percolation and all associated works above and below ground. A Natura Impact Statement (NIS) has been prepared in respect of the proposed development at Millbrook House, Abbeyleix, Co. Laois subject to the 19 conditions set out in the Schedule attached.



COMHAIRLE CHONTAE LAOISE
LAOIS COUNTY COUNCIL

Áras an Chontae
Portlaoise,
Co Laois
R32 EHP9

Signed on behalf of LAOIS COUNTY COUNCIL

Handwritten signature of Eoin Brennan in black ink.

ADMINISTRATIVE OFFICER, PLANNING

Date: 15/04/2024

NOTE:

You are hereby advised that unless the development described is carried out within five (5) years from the date of the Grant of Planning Permission, this permission will cease to have effect.

PLEASE RETAIN THIS DOCUMENT CAREFULLY

Laois County Council Planning Authority, Viewing Purposes Only

SCHEDULE 1

Having regard to its nature, extent and location, and planning history of adjacent lands, it is considered that the proposed development would be compliant with the provisions of the Laois County Development Plan 2021-2027 and with the proper planning and sustainable development of the area.

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CONDITIONS

1. (a) The development shall be carried out in accordance with plans and particulars received by the Planning Authority on 12/01/2024 except where altered or amended by conditions in this permission.

(b) The recommendations and mitigation measures set out in the Arboricultural Assessment received by the Planning Authority on 12/01/2024 shall be implemented in full, unless otherwise agreed in writing with the Planning Authority.

(c) The recommendations and mitigation measures set out in the Architectural Heritage Impact Assessment received by the Planning Authority on 12/01/2024 shall be implemented in full, unless otherwise agreed in writing with the Planning Authority.

(d) The recommendations and method statements set out in the Ecological Impact Assessment Report received by the Planning Authority on 12/01/2024 shall be implemented in full, unless otherwise agreed in writing with the Planning Authority.

(e) The recommendations and mitigation measures set out in the Natura Impact Statement received by the Planning Authority on 12/01/2024 shall be implemented in full, unless otherwise agreed in writing with the Planning Authority.

(f) The recommendations and mitigation measures set out in the Construction Environmental Management Plan received by the Planning Authority on 12/01/2024 shall be implemented in full, unless otherwise agreed in writing with the Planning Authority.

(g) The recommendations and mitigation measures set out in the Operational Waste Management Plan received by the Planning Authority on 12/01/2024 shall be implemented in full, unless otherwise agreed in writing with the Planning Authority.

(h) The recommendations and mitigation measures set out in the Bat Report received by the Planning Authority on 12/01/2024 shall be implemented in full, unless otherwise agreed in writing with the Planning Authority.

Reason: In the interests of the proper planning and sustainable development of the area.

2. (a) The works to the protected structure shall be carried out under the direction of an experienced conservation architect with RIAI accreditation at Grade 2 or Grade 1. Prior to the commencement of the development, the Developer shall submit for the written agreement of the Planning Authority the name and professional qualifications of the Conservation Architect.

CONDITIONS

b) The works to the protected structure shall be carried out in accordance with the approach set out in the submitted Architectural Heritage Impact Assessment report received by the Planning Authority on 12/01/2024 and the details submitted with the planning application. The project conservation architect shall immediately inform the Planning Authority in the event that any concealed feature of interest is uncovered during the works and work shall cease in this area pending agreement with the Planning Authority on how to proceed.

c) The project Conservation Architect shall make a photographic record of the works as they proceed, to include photographs of the protected structure at intervals of no greater than one month from commencement of the works until completion of the development. These photographs shall be annotated and dated. This photographic record shall be made available to the Planning Authority, if requested while the works are progressing and shall be collated into a single record of the works, copies of which shall be submitted to the Planning Authority and the Irish Architectural Archive on completion of the development.

d) The Conservation Architect shall submit to the Local Authority a Conservation Compliance report upon completion of the development. Photographs of the areas of change and a record of the main stages of the works shall be included, cross referenced to a suitably scaled drawing showing the existing structure and fabric elements.

Reason: To ensure that the integrity of the Protected Structures is maintained and that the proposed works are carried out in accordance with best conservation practise with no unnecessary damage or loss of surviving historic building fabric.

3. The finish of new work shall be consistent with details received on 12/01/2024, unless otherwise agreed in writing with the Planning Authority prior to commencement.

Reason: In the interests of proper planning, residential amenity and visual amenity.

4. (a) No material change of use or intensification of use shall take place without prior planning permission.

(b) Prior to the commencement of development, the hours of operation of the proposed development shall be submitted to the Planning Authority for written approval.

Reason: In the interests of the proper planning and sustainable development of the area.

5. (a) Only clean uncontaminated surface water from the development shall be discharged to the surface water system.

CONDITIONS

(b) The development shall not interfere with or impair the operation of any existing surface water drainage system or land or roadside drainage currently facilitating the application site. No run-off shall be allowed on to the public road.

Reason: To prevent interference with existing land or road drainage and in the interests of proper development and in the interest of sustainable drainage of the catchment.

6. (a) Effluent disposal from the proposed development shall be in accordance with the Site Characterisation Form and the Site Suitability Report received by the Planning Authority on 12/01/2024, and the requirements of the EPA, Code of Practice.

(b) The applicant shall enter a maintenance contract with the manufacturers/suppliers of the wastewater treatment system to ensure satisfactory performance at all times.

(c) The developer shall submit documentary evidence signed by a suitably qualified person holding indemnity insurance (at least €1 million) stating that the wastewater treatment system has been installed in accordance with EPA guidelines.

Reason: To guard against pollution and ensure the proper servicing of the development.

7. (a) The developer shall sign a connection agreement with Uisce Éireann prior to the commencement of the development and adhere to the standards and conditions set out in that agreement.

(b) All development shall be carried out in compliance with Uisce Éireann Standards codes and practices.

(c) Any proposals by the developer to divert or build over existing water or wastewater services shall be submitted to Uisce Éireann for written approval prior to works commencing.

(d) Separation distances between the existing Uisce Éireann assets and proposed structures and other services have to be in accordance with the Uisce Eireann Codes of Practice and Standard Details.

Reason: To ensure adequate provision of water facilities.

8. (a) During the construction stage of the proposed development, the developer shall comply with the document titled "Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction and Demolition Projects" published by the Environmental Protection Agency.

CONDITIONS

(b) During the development works, the developer is not to permit any material from the site to be spread or deposited along the public roadway. The developer shall be responsible for maintaining the adjoining public thoroughfare and properties in a neat, tidy and safe condition.

Reason: In the interests of the reduction and best practice management of construction waste from the proposed development, public health, pollution control and traffic safety.

9. (a) The proposed development shall be operated so that the processes carried on or the plant or machinery installed are such as could be carried on or installed in any area without any detriment to the amenity of that area by reason of noise, vibration, smell, fumes, smoke and discharge.

(b) Pest control measures shall be operated in accordance with best practice and the entire site maintained and managed in such a manner as not to give rise to a public health nuisance.

(c) All discharges to and through the surface water collection and disposal system from the proposed development shall not be of environmental significance.

(d) Measures to prevent the discharge of polluting matter to waters shall be adequate to ensure there is no negative impact on waters during and post construction stage.

(e) Any accidental discharge, spillage or deposit of any polluting matter from the premises which enters or is likely to enter any waters shall be reported to Laois County Council Environment Section and Inland Fisheries immediately.

(f) Any hazardous liquid, oil or chemical storage containers on site to be bunded. Please note that bunds are to be designed to contain 110 % of the capacity of the largest storage container located within the bund.

Reason: In the interests of visual amenity, pollution control and proper planning.

10. No additional advertisements, signs or advertising apparatuses shall be erected on the site or adjoining public thoroughfare without a separate grant of planning permission, notwithstanding the provisions of Part 2 of Schedule 2 of the Planning & Development Regulations 2001 as amended.

Reason: In the interests of visual amenity, traffic safety and proper planning.

11. (a) Developer is requested to consult with ESB regarding any overhead power line prior to the commencement of any work on this development.

CONDITIONS

(b) Any external lighting shall be cowled and directed away from the public roadway and adjoining properties.

(c) No floodlighting shall be erected without prior planning permission.

Reason: In the interests of traffic safety and residential amenity.

12. No part of the proposed development shall encroach, oversail or otherwise physically impinge upon any adjoining property save with the prior written agreement of the owner(s) thereof.

Reason: In the interest of proper planning and public safety.

13. Site development works shall be confined to the hours of 8:00am to 6:00pm Monday to Friday and 9:00am to 1:00 pm Saturdays and not at all on Sundays and public holidays. No site development works shall take place outside of these hours.

Reason: In the interests of public health, pollution control and traffic safety.

14. (a) Planting shall be planted in accordance with the Landscape Plan drawing received by the Planning Authority on 12/01/2024.

(b) Planting shall be carried out in the first planting season following commencement of development.

(c) In the event of tree/hedge failures, these shall be replaced to the satisfaction of the Planning Authority.

Reason: In the interests of visual and residential amenity.

15. (a) Adequate sight distances of 90m to the north-east and 52m to the south-west shall be created and maintained in both directions at the site entrance. The sight distances shall be measured from a point 2m in from the road edge and from a driver's eye height of 1.05 metres to an object height of 1.15 metres 180 metres away at the inside edge of the road.

(b) All public and private property shall be adequately protected at all times particularly during demolition and construction works.

Reason: In the interests of traffic and public safety.

CONDITIONS

16. [a] Adequate car-parking and bicycle parking facilities shall be provided to accommodate all traffic generated by the proposed development. The facilities shall be laid out, surfaced and demarcated in accordance with the standards of the Laois County Development Plan 2021-2027. No parking shall be allowed on the adjacent public thoroughfare.

[b] 10% of all car parking spaces shall be provided with functioning electric vehicle charging stations/ points. Ducting shall be provided for all remaining car parking spaces.

[c] The developer shall install disabled car parking spaces in line with Laois County Council Development Plan 2021- 2027.

Reason: In the interests of the proper planning and traffic safety.

17. (a) The proposed development shall comply with the requirements of the Chief Fire Officer, Laois County Council with whom the developer shall liaise prior to the commencement of the development.

(b) The proposed development shall comply with the requirements of the Health Service Executive with whom the developer shall liaise prior to the commencement of the development.

Reason: In the interests of public health, public safety and proper planning.

18. All services to the building e.g. cooling devices, extractor fans (wall mounted and roof mounted) etc. shall be contained within the building or located externally with appropriate screening. No such units shall be located above the ridge height of the building or to the front façade of the structure.

Reason: In the interest of visual amenity.

19. Prior to the commencement of development, a contribution shall be payable to Laois County Council, in accordance with the Council's Development Contribution Scheme 2023-2029, in respect of public infrastructure and facilities benefiting development in the area of the planning authority, and that is provided or that it is intended will be provided by, or on behalf of, the Council.

The contribution payable will be based on the contribution rate applicable at the time of payment and not the rate in existence when permission is granted. The amount of the development contribution is set out below and is subject to annual revision with reference to the Wholesale Price Index (Building and Construction), and penalty interest for late payment, in accordance with the terms of the Council's Development Contribution Scheme:-

 CONDITIONS

Commercial		Floor Area	Total per Contribution
Roads	€22.67	1,887m ²	€42,778.29
Amenity	€11.33	1,887m ²	€21,379.71
Total Development Contributions	€34	1,887m²	€64,158.00

Reason: It is considered reasonable that the developer should contribute towards the expenditure incurred or proposed to be incurred by Laois County Council in respect of the provision/improvement of public services/infrastructure benefiting development in the area of the planning authority.

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INFORMATION for the purposes of Building Control:-

- IMPORTANT NOTE THAT YOU HAVE RECEIVED PLANNING PERMISSION or ARE INTENDING TO CARRY OUT BUILDING WORKS.

BEFORE ANY BUILDING WORKS TAKE PLACE ON YOUR SITE YOU WILL NEED TO CHECK THE FOLLOWING Pre-Development Planning Conditions, Commencement Notice, Construction Products Regulations (CPR) (Regulation (EU) No. 305/2011).

- IF SOME OR ANY OF THESE ARE OMITTED YOUR BUILDING MAY BE AN UNAUTHORISED BUILDING AND YOU MAY BE GUILTY OF AN OFFENCE AND/OR YOU MAY BE SUBJECT TO PENALTIES.

YOU SHOULD ALSO BE AWARE THAT IF YOU PROCEED WITH CERTIFICATION OF YOUR BUILD YOU MUST SELECT THE 'COMMENCEMENT NOTICE WITH DOCUMENTATION' PROCESS UNDER THE BCMS SYSTEM. FAILURE TO SUBMIT A VALID COMMENCEMENT NOTICE TO YOUR LOCAL AUTHORITY UNDER THIS PROCESS MAY RESULT IN YOU BEING UNABLE TO GET A COMPLETION CERTIFICATE AND THIS MAY HAVE SERIOUS LONG TERM CONSEQUENCES.

{The information is for guidance purposes only and does not purport to be a legal interpretation or constitute legal or professional advice.}

1. Pre-Development Planning Conditions;

1. If there are any Pre-Development conditions on the schedule of conditions attached to your planning permission you should give your immediate attention to them prior to the commencement of your development.

Note: All conditions must be complied with in full as failure to do so will render your permission invalid and may result in the initiation of enforcement proceedings for compliance with same.

2. Commencement Notice with Documentation; www.nbco.localgov.ie

A completed copy of the commencement notice which must be signed by the owner of the works and must (refer to section 9 S.I. No 9 of 2014) be accompanied by the following:

- a. General Arrangement Drawings
- b. A schedule of design documents as are currently prepared or to be prepared.
- c. An on line assessment via the Building Control Management System of the proposed approach to compliance with the requirements of the Building Regulations 1997 to 2015.
- d. The preliminary inspection plan.
- e. A Certificate of Compliance (Design)
- f. Notices of Assignment in respect of the Builder who will carry out the works and of the Assigned Certifier who will inspect and certify the works, and
- g. Certificates of Compliance signed by the Builder and the Assigned Certifier undertaking to carry-out their roles in accordance with the requirements of the Building Regulations.

In this regard, please note that:

1. The Designer and the Assigned Certifier must be a **Chartered Engineer**, or **Registered Architect** or **Registered Surveyor**.
2. – A Competent Builder must execute the work.
3. Your drawings must show details of how your Building will comply with the Building Regulations- drawings submitted for planning permission purposes are not typically building control compliance drawings.
4. The commencement notice and accompanying documentation must be filed electronically via the online Building Control Management System. Where notices and documentation are submitted in written format, the building control authority will arrange for scanning and uploading of same for which an administrative charge will apply and statutory deadlines relating to such notices may be delayed by up to seven days.

(Note: Statutory approvals relating to fire safety and disabled access continue to apply where relevant and are not affected by the above changes).

See attached BCMS Procedure for Commencement Notice with 'Opt-Out' of Statutory Certification

For more information: <http://www.environ.ie/en/DevelopmentHousing/BuildingStandards/>

3. Construction Products Regulations (CPR) (Regulation (EU) No. 305/2011) CE MARKING of construction products covered by harmonised European Standards is mandatory when the construction product is placed on the market.

You need to ensure that you appoint competent professionals.

Whilst the CPR concerns itself with the conditions which apply when placing a construction product on the market, clients, specifiers, designers and builders etc. should be aware of the following when incorporating construction products into building works:

1. When drawing up specifications, refer to the harmonized technical specifications and specifically to the performance requirements of individual characteristics when necessary,
2. When choosing the products most suitable for their intended use in construction works, review the manufacturer's Declaration of Performance,
3. Check National Annexes or Standard Recommendations which give guidance on appropriate minimum performance levels for specific intended uses of the product in Ireland. NSAI host this information at www.nsaai.ie and

NOTE: All works should be carried out using "proper materials...which are fit for the use for which they are intended and for the conditions in which they are to be used" to ensure compliance with the Building Regulations. For further Information on the Building Regulations see <http://www.environ.ie/en/DevelopmentHousing/BuildingStandards/>

Alternative Process - Opt Out of Statutory Certification:

The most recent amendment to the Building Control Regulations 1997 to 2015 provides **owners of new single dwellings, on a single development unit, and domestic extensions** with an alternative process to that of 'COMMENCEMENT NOTICE WITH DOCUMENTATION'. The key difference involves the facility to opt out of the requirement to obtain statutory certificates reliant on the services of a registered construction professional.

Commencement Notice With Opt Out of Statutory Certification:

www.nbco.localgov.ie

The Proposed date of Commencement must be a date which falls in the period of 14 - 28 days after the submission of the Commencement Notice. When specifying the commencement date, you should account for any delays which may occur in the completion of the Commencement Notice Process.

If Insufficient Notice is given to the Local Authority, it may lead to an invalidation of the Notice.

A completed copy of the Commencement Notice must be signed by the owner of the works and must (refer to section 9 **S.I. No 9 of 2014**) be accompanied by the following three types of Statutory Document;

- ▶ Commencement Notice
- ▶ Notice of Assignment (Builder)
- ▶ Declaration of Intention to Opt Out of Statutory Certification

For a **Commencement Notice with Opt Out Declaration Application**, a minimum of two types of Supporting Document must be added to the system.

These are:

- ▶ General Arrangement Drawings, i.e. plans, sections, elevations, etc.
- ▶ A Schedule of Documents supporting the proposed design

NOTE: When completing any Statutory Notice/Application/Certificate/Declaration, please ensure that all sections of the forms are fully and accurately completed. Any information omitted or found to be inaccurate may render your submission invalid and inspections may take place any time up to 5 years after completion of your buildings or works. Enforcement carries costs.

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Main Points

- From July 2013, CE MARKING of construction products covered by harmonised European Standards is mandatory.
- Manufacturers, Importers and distributors have new obligations and responsibilities when placing a construction product on the market.
- Designers, Specifiers and Builders must be aware and understand the new requirements on construction products.

Introduction

The EU Construction Products Regulation (No. 305/2011 - CPR) lays down harmonised conditions for the marketing of construction products and is directly applicable in its entirety in Irish law. It is therefore essential that all parties to the construction product supply chain learn and understand its requirements.

- This information paper is aimed at:
- Manufacturers,
 - Importers,
 - Distributors,
 - Builders, Specifiers and Designers
- and provides basic information on the CPR for each of these stakeholder groups.
- This information paper was prepared by the Building Regulations Advisory Body (BRAB) in conjunction with the following key stakeholders:
- Department of the Environment, Community and Local Government,
 - National Standards Authority of Ireland,
 - Building Materials Federation,
 - Office of Public Works, and the
 - National Roads Authority.

It is important to note that this paper does not purport to be a legal interpretation of the EU Regulation. More comprehensive information on the EU Regulation is available on the European Commission's website.

WHAT ARE THE MAIN PROVISIONS OF THE CPR?

The general objectives and main instruments of the Construction Products Directive (CPD) have not changed in the CPR. The CPD, as an internal market Directive, aims to

1. While the CPR was adopted in a draft form, the key elements will be applied until July 2013. Until then, the Construction Products Directive (CPD) will remain in force.

2. <http://ec.europa.eu/construction/standards/instructional/regulation.htm>

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overcome the technical barriers to trade which arise where different countries in Europe have different standards, testing and labelling approaches for the same construction products. The CPR shares this goal and is intended to clarify, simplify and improve the credibility of the system. The CPR will continue to use the instruments developed for the CPD, but introduces stricter and more transparent procedures and amends some of the terminology in order to be more precise.

- The four key instruments are:
- (i) A system of harmonised technical specifications,
 - (ii) An agreed system of Assessment and Verification of Constancy of Performance (AVCP),
 - (iii) A framework of notified bodies,¹ and
 - (iv) The CE Marking label (refer to Figure 2).

WHAT ARE HARMONISED TECHNICAL SPECIFICATIONS?

The system of harmonised technical specifications mentioned above include harmonised European standards (ENs), generally for traditional construction products, and European Assessment Documents (EADs), usually for innovative products. These both provide assessment methods for the performance of construction products.

Harmonised European Standards (ENs)

Currently, there are over 420 ENs covering a broad range of construction products. ENs are progressively becoming the norm as conflicting national standards (e.g. Irish and British) Standards commonly used here) are being withdrawn.

All ENs under the CPR have an informative Annex ZA. In general, this annex contains 3 parts:

- ZA.1 A list of product characteristics as well as the clauses in the standard in which the assessment or test method is set out or referred to. The list represents a compilation of all regulated requirements for the product in question across the EU.
- ZA.2 The procedures for conformity assessment, namely the tasks to be carried out by the manufacturer and the notified body. This is currently referred to as the agreed system of assessment of conformity, but will be known as the system of Assessment and Verification of Constancy of Performance under the CPR, and
- ZA.3 The process for CE Marking and labelling.

A list of ENs is available at the following link: <http://ec.europa.eu/enterprise/newapproach/mando/index.cfm?listaction=query&listaction=query>

¹ System of assessment of conformity under CPR

² Designated bodies that carry out the conformity tasks for the purpose of the CPR under the CPR.

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A list of Notified Bodies under the Construction Products Regulation is available at:

<http://ec.europa.eu/enterprise/newapproach/mando/index.cfm?listaction=query&listaction=query>

As the majority of construction products are covered by ENs, they will become the key documents for:

- manufacturers when declaring the performance of a construction product;
- Irish (and other European) authorities when specifying requirements for construction products in regulations, specifications, public procurement documents etc. and
- specifiers and designers (i.e. architects, engineers, builders etc.) when choosing construction products.

European Assessment Documents (EADs)

EADs can be developed for construction products not covered or not fully covered by a EN. An EAD provides the basis on which a European Technical Assessment (ETA) as requested by the manufacturer, can be issued (and the CE Marking affirmed). An updated list of references of the final EADs will be published by the Commission in the Official Journal of the European Union.

How does the CPR affect me?

I AM A MANUFACTURER

From 1 July 2013, manufacturers of construction products which are covered by harmonised European product standards (ENs)² will be required, when placing a product on the market, to:

- make a Declaration of Performance (DoP) for the product, and
- affix the CE mark.

The European Standards Organisation, CEN, is working to modify the template for Annex ZA in ENs to address the changes introduced by the CPR. However, this will not affect the body of the standard or the material content of Annex ZA in terms of product characteristics, test methods or the agreed role of the manufacturer and the notified body. Therefore, its manufacturers to prepare for 1 July 2013.

I AM A MANUFACTURER

Where a construction product is not covered, or not fully covered, by a EN, a manufacturer can voluntarily acquire a European Technical Assessment (ETA) for their product. This involves a manufacturer with a Notified Body (DoP) for the product, and affixing the CE mark. A Declaration of Performance (DoP) under the CPR is allowed for in the UK and some other countries under the CPR in Ireland (see <http://ec.europa.eu/enterprise/newapproach/mando/index.cfm?listaction=query&listaction=query>).

1. While the CPR was adopted in a draft form, the key elements will be applied until July 2013. Until then, the Construction Products Directive (CPD) will remain in force.

2. <http://ec.europa.eu/construction/standards/instructional/regulation.htm>

The Annex ZA currently could be considered as a 'checklist' for CE Marking, where the manufacturer can see all the possible requirements of his products and how they can be tested. This will, under the CPR, form a checklist for the drawing up of a Declaration of Performance (DoP) and for affixing the CE Mark.

All the information supplied with the DoP should be obtained by strictly applying the methods and criteria provided by the relevant EN³. The DoP provides information about the essential characteristics of the product. The manufacturer, by drawing up his DoP, assumes the responsibility for the conformity of the construction product with the declared performance. The application of the CE mark follows the DoP and effectively certifies that the manufacturer has strictly followed all the applicable procedures in drawing up the DoP and that, consequently, the DoP is accurate and reliable.

The manufacturer must also:

- keep documentation for 10 years,
- ensure consistent production,
- monitor the product on the market,
- ensure the product is identifiable,
- indicate a contact point on the product,
- provide instructions and safety information in the appropriate languages,
- take corrective measures, where necessary, and
- cooperate with requests from national authorities.

For more information on these responsibilities see Article 11 of Regulation (EU) No. 305/2011 available at the following link: <http://ec.europa.eu/enterprise/factors/construction/regulation/>

To check if the product you manufacture is covered by a EN, check if figuranda in the form of a National Annex or a Standard Recommendation exists, which set out appropriate minimum performance levels for specific intended uses of the product in Ireland. NSAI host this information at www.nsa.ie.

The obligations on manufacturer are clearly set out in the CPR with regard to the products they place on the internal market.

Failure to comply with any provision of the CPR would be considered a breach of the Regulation and may give rise to prosecution⁴.

1. While the CPR was adopted in a draft form, the key elements will be applied until July 2013. Until then, the Construction Products Directive (CPD) will remain in force.

2. <http://ec.europa.eu/construction/standards/instructional/regulation.htm>

3. <http://ec.europa.eu/enterprise/newapproach/mando/index.cfm?listaction=query&listaction=query>

4. <http://ec.europa.eu/enterprise/newapproach/mando/index.cfm?listaction=query&listaction=query>

FIGURE 1 MANUFACTURERS' CHECKLIST


Step 1 - Refer to table 1 at the rear of this document and check if the product you manufacture broadly falls within the product areas listed.

Step 2 - Check the MANDO website <http://ec.europa.eu/enterprise/newapproach/mando/index.cfm?listaction=query&listaction=query> to establish if the product you manufacture is covered by a standard in the list of ENs.

Step 3 - Check who are the notified bodies for the standard by double clicking on the EN number. These notified bodies may be contacted for further information.

Step 4 - Check Annex ZA of the EN standard for the product's regulated characteristics, the tasks for the manufacturer and the tasks for the notified body. Standards may be purchased from the NSAI at www.nsa.ie.

FIGURE 2 EXAMPLE CE MARKING INFORMATION

	02021	EN 12345	13
	02021	EN 12345	13
Product A			

marked by use of the CE mark, unless the manufacturer is registered in the European Union.

essential characteristics of the product, as set out in the standard, and the tasks for the manufacturer and the tasks for the notified body, as set out in the standard.

essential characteristics of the product, as set out in the standard, and the tasks for the manufacturer and the tasks for the notified body, as set out in the standard.

I AM AN IMPORTER
 The CPR has introduced a 'chain of custody' approach for construction products being placed on the market resulting in a greater legal responsibility for compliance with agents and importers.

To comply with the CPR, importers must:

- safety themselves that the manufacturer has done all that is required to comply with the CPR,
- ensure their (the importers) name and contact details appear on the product, labelling or associated documents,
- ensure instructions and safety information are in the appropriate language of the particular market,
- ensure that products are stored or moved under such conditions that don't alter the products compliance,
- monitor the product on the market,
- take corrective measures where necessary,
- keep documentation for 10 years, and
- cooperate with requests from national authorities.

For more information on these responsibilities see Article 13 of Regulation (EU) No. 305/2011 available at the following link: <http://ec.europa.eu/energy/sectors/construction/legislation/>

If an importer places a product on the market under his trade name, or modifies a product, then he will be treated as the manufacturer.

Importers should also check if additional guidance in the form of a National Annex or a Standard Recommendation exists, which set out appropriate minimum performance levels for specific intended uses of the product in Ireland. NSAI host this information at www.nsa.ie.

It is clearly set out in the CPR what responsibilities importers have with regard to the products they trade. Failure to comply with any provision of the CPR would be considered a breach of the Regulation and may give rise to a prosecution.

I AM A DISTRIBUTOR
 Distributors will have similar duty of care as that applicable to importers.

- Take due care that the product is compliant and has all documentation to verify compliance with the CPR,
- ensure instructions and safety information are in the appropriate language of the particular market,
- ensure the manufacturer has made the product identifiable and the manufacturers / importers contact details are available.

- ensure that products are stored or moved under such conditions that don't alter the products compliance,
- take corrective measures where necessary, and
- cooperate with requests from national authorities.

For more information on these responsibilities see Article 14 of Regulation (EU) No. 305/2011 available at the following link: <http://ec.europa.eu/energy/sectors/construction/legislation/>

If a distributor places a product on the market under his trade name, or modifies a product, then he will be treated as the manufacturer.

Distributors should also check if additional guidance in the form of a National Annex or a Standard Recommendation exists, which set out appropriate minimum performance levels for specific intended uses of the product in Ireland. NSAI host this information at www.nsa.ie.

It is clearly set out in the CPR what responsibilities distributors have with regard to the products they trade. Failure to comply with any provision of the CPR would be considered a breach of the Regulation and may give rise to a prosecution.

I AM A PURCHASER, DESIGNER OR BUILDER
 The transition to harmonised European product standards represents a change for the construction industry. Traditionally, national product standards, such as standards or British standards were prescriptive in relation to performance and the appropriate uses to which products could be put. The new standards differ in this regard, as they provide harmonised testing methods, declaration methods and conformity assessment rules. Ireland, like other Member States, is therefore free to set its own minimum requirements on the performance of building works and construction products incorporated into such works. In this regard, the NSAI has produced additional guidance to some HEKs in the form of National Annexes or Standard Recommendations (SRA) which set out appropriate minimum performance levels for specific intended uses of the product in Ireland. NSAI host this information at www.nsa.ie. Clients, specifier, designers etc are free to demand performance in excess of these levels.

While the CPR concerns itself with the conditions which apply when placing a product on the market, clients, specifiers, designers and builders etc should:

- when drawing up specifications, refer to the harmonised technical specifications and specifically to the requirements of individual characteristics which necessary,

- when choosing the products most suitable for their intended use in construction works, review the manufacturer's Declaration of Performance,
- check National Annexes or Standard Recommendations which give guidance on appropriate minimum performance levels for specific intended uses of the product in Ireland. NSAI host this information at www.nsa.ie, and
- ensure compliance with the Building Regulations, in this regard all works should be carried out using "proper materials", which are fit for the use for which they are intended and for the conditions in which they are to be used" to ensure compliance with the Building Regulations. For further information on the Building Regulations see www.enr.ie.

SOURCES OF ADDITIONAL INFORMATION
 European Commission – Enterprise and Industry
<http://ec.europa.eu/energy/sectors/construction/legislation/>
 NANDO (New Approach Method and Deigned Organisations) Information System
<http://ec.europa.eu/enterprise/ndpo/ndpo/index.cfm?ntofaction=cpd&scpr=1>
 National Standards Authority of Ireland
www.nsa.ie
 National Roads Authority
<http://nra.ie>
 Product Contact Point
<http://www.enr.ie/enr/legif/cp/>

Construction / Business organisations

- Building Materials Federation
www.bmf.ie
- Hardware Association of Ireland
www.hardwarereassociation.ie
- Construction Industry Federation
www.cif.ie
- Irish Concrete Federation
www.irishconcrete.ie
- Irish Timber Framed Manufacturers Association
www.itfma.ie
- British Constructional Steelwork Association
www.bcsa.co.uk
- www.steelconstruction.org



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Figure 1 Extract from Annex IV of Regulation (EU) No. 305/2011

Code	Product Area
1	PRECAST CONCRETE PRODUCTS, FACTORY-CAST OR RELATED CONCRETE PRODUCTS, BLOCKS, BRICKS, TILES, CEMENTS AND RELATED BUILDING MATERIALS
2	GLAZING, INCLUDING TINTED AND LOW-E GLAZING AND LOW-E GLAZING WITH WATER VAPOR CONTROL
3	INSULATION PRODUCTS, COMPOSITE INSULATION PRODUCTS
4	STRUCTURAL BEARINGS, PMS FOR STRUCTURAL WORKS
5	CEMENT PRODUCTS
6	CEMENT PRODUCTS
7	CEMENT PRODUCTS
8	CEMENT PRODUCTS
9	CURBAM WALLING, CONCRETE STRUCTURAL SEALANT GLAZING, FIBRE REINFORCED POLYMER (FRP) REINFORCEMENT, FIBRE REINFORCED POLYMER (FRP) REINFORCEMENT, FIBRE REINFORCED POLYMER (FRP) REINFORCEMENT, FIBRE REINFORCED POLYMER (FRP) REINFORCEMENT
10	SOFTENING PRODUCTS
11	SOFTENING PRODUCTS
12	CIRCULATION PATHWAYS: ROAD EQUIPMENT
13	STRUCTURAL TIMBER PRODUCTS, LAMINATES AND ANGLULARS
14	WOOD BASED PANELS AND ELEMENTS
15	GLASS, BUILDING GLAZES AND OTHER TRANSPARENT PRODUCTS
16	REINFORCING AND RELATED PRODUCTS, REINFORCING UNITS, WOVEN FABRICS AND RELATED PRODUCTS, REINFORCING UNITS, WOVEN FABRICS AND RELATED PRODUCTS
17	WASTE WATER ENGINEERING PRODUCTS
18	ISOBLOCKS
19	STRUCTURAL METALLIC PRODUCTS AND ANGLULARS
20	INTERIOR & EXTERIOR WALL AND CEILING FINISHES, INTERNAL PARTITION WDS
21	ROOF COVERINGS, ROOF DETAILS, ROOF WINDOWS, AND ANGLECAST PRODUCTS, ROOF AIDS
22	ROOF COVERINGS, ROOF DETAILS, ROOF WINDOWS, AND ANGLECAST PRODUCTS, ROOF AIDS
23	ROAD CONSTRUCTION PRODUCTS
24	AGGREGATES
25	AGGREGATES
26	AGGREGATES
27	PRODUCTS RELATED TO CONCRETE, MORTAR AND GROUT
28	SINGLE BEARING APPLIANCES
29	INTENDED FOR HUMAN CONSUMPTION, CONSTRUCTION PRODUCTS CONTACT WITH WATER THROUGHOUT THEIR LIFE CYCLE
30	FOR GLASS, FROTHED GLASS AND GLASS BLOCK PRODUCTS
31	POWER CONTROL AND COMMUNICATION CABLES
32	SEALANTS FOR JOINTS
33	FINISHES
34	BUILDING AIDS, WHITE, AND PREFABRICATED ELEMENTS
35	FINE STRIPPED, FINE STRIPPED AND FINE STRIPPED PRODUCTS IN THE NATIONAL ANNEXES

INFORMATION NOT ON THE CONSTRUCTION PRODUCTS REGULATIONS (BRAB) IN CONJUNCTION WITH

BUILDING REGULATIONS ADVISORY BODY

NSAI
 CPW
 NRS

16. Can I submit my Commencement Notice Online?

Yes, a new Building Control Management System (BCMS) is being developed. The BCMS will allow building owners to nominate an Assigned Certifier and Builder for the development works. Each party must be registered with the BCMS system to fill in or sign their respective parts.

17. What is the Fee for a Commencement Notice?

The fee for a Commencement Notice is €30.00 per building, or if a Commencement Notice relates to multiple buildings requiring a Fire Safety Certificate, €30.00.

18. Is there any other type of Commencement Notice?

Yes. A 7 Day Notice is a notification to a Building Control Authority that a person intends to commence work on the construction of a building before grant of the relevant Fire Safety Certificate.

A 7-Day Notice must be accompanied by a valid Fire Safety Certificate application, all additional documentation referred to in Question 9, and a Statutory Declaration.

The fee for a 7-Day Notice is €5.80 per square meter of applicable floor area.

19. Can I still submit my Commencement Notice at my local County Council offices?

Yes, Commencement Notices can still be submitted at the offices of your local Building Control Authority. The Notice must be accompanied by all relevant documents, as per Questions 8, 9 & 10 and the appropriate fee.

20. What happens if I forget to submit my Commencement Notice?

If you do not submit a Commencement Notice, and commence works or a change of use in the absence of a Notice, there is no provision to submit another type of Commencement Notice.

In this instance, you will have committed an offence. In addition, the commencement of the development will not be recorded on any register.

Finally, you will not be entitled to have your Certificate of Compliance on Completion placed on the official Register, and you cannot occupy, or lease your building and you may not be able to sell it.

21. What is a Certificate of Compliance on Completion?

A Certificate of Compliance on Completion is a statutory document submitted to a Building Control Authority following the completion of works referred to in Question 8. The Commencement Notice to which the works relate must have been lodged after the 1st March 2014.

The Certificate is signed by the Assigned Certifier and the Builder. It confirms that the building or works have been carried out in accordance with the Building Regulations.

The Certificate of Compliance on Completion must be submitted to the local Building Control Authority, and entered onto the Register before a building, or works, or part thereof can be opened, operated or occupied.

22. If I failed to or forgot to submit a Commencement Notice, or a 7-Day Notice, can I still submit a Certificate of Completion for entry onto the Register.

No, if the Commencement Notice relevant to the works or Material Change of use is not on the Register, then a Certificate of Compliance on Completion cannot be validated by a Building Control Authority.

23. What happens if I change my Builder or Assigned Certifier during the construction works?

If you change your Builder or Assigned Certifier during construction, you must notify the Building Control Authority within 14 days.

You can notify the Building Control Authority of such a change by submitting the appropriate Notice of Assignment and the appropriate undertaking, as per Question 9.

24. What happens if ownership of the building, development or works changes during construction?

If ownership of the building, development or works changes during construction, you must notify the Building Control Authority in writing within 14 days.

25. Where can I get more information

You can get more information, or download copies of the Building Regulations by visiting the Department of the Environment website (www.environ.ie), or by contacting your local Building Control Authority.

Guide to the Building Control (Amendment) Regulations 2014



Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

1. What are the Building Control Regulations?
The Building Control Regulations provide administrative and procedural methods and requirements for construction or development in Ireland.

The Building Control Regulations have existed since 1991 and regulate the following:

- Commencement Notices
- 7 Day Notices
- Fire Safety Certificates, Revised Fire Safety Certificates and Regularisation Fire Safety Certificates
- Disability Access Certificates and Revised Disability Access Certificates
- Maintenance of Registers
- Fees

The Building Control Regulations provide administrative processes to regulate the Building Regulations



2. What are the Building Regulations?

Building Regulations are a set of legal requirements for the design and construction of new buildings, extensions and material alterations to and certain changes of use of existing buildings. Building Regulations provide for, in relation to buildings, the health, safety and welfare of people, conservation of fuel and energy, and access for people with disabilities.

3. What happens on March 1st 2014?

On the 1st March 2014, new laws relating to the commencement and certification of construction works come into effect. The new laws include the nomination of a Builder to carry out works in accordance with the Building Regulations, and the nomination of a competent person, an 'Assigned Certifier' to inspect works to ensure compliance with the Building Regulations; the submission of additional documentation with the Commencement Notice at commencement stage; and the introduction of a Certificate of Compliance following completion of works.

4. What is a Commencement Notice?

A Commencement Notice is a notification to a Building Control Authority that a person intends to carry out either works or a material change of use to which the Building Regulations apply

5. Do all developments require a Commencement Notice?

Commencement Notices are required for the following:

- the erection of a building;
- a material alteration or extension of a building, or material change of use of a building;
- works in connection with the material alteration (excluding minor works) of a shop, office or industrial building.

A Commencement Notice is not required:

- for works or a change of use which are exempted development under the Planning Acts, and for which a Fire Safety Certificate is not required;
- or where a 7 Day Notice has been submitted.

6. When do I have to submit a Commencement Notice

The notice must be lodged with the relevant Building Control Authority, in which the works are located, between 14 and 28 days prior to the commencement of works or a material change of use taking place.

7. What happens if I miss my commencement date?

If you miss your commencement date you must submit a new Commencement Notice to the relevant Building Control Authority, prior to the commencement of any works taking place.

8. Which type of development requires the additional documents?

The additional documents are required for the following works

- Construction of a dwelling house
- Extension of a dwelling house of more than 40 square meters (400 sq. feet)
- Works which require a Fire Safety Certificate.

Works which are referred to in Question 5, but are not listed above require a Commencement Notice, but do not require the additional documents listed in Question 9.

9. What additional Documents must I submit with my Commencement Notice?

In addition to the Commencement Notice, a building or site owner must submit the following documents for works referred to in Question 8

- Certificate of Compliance (Design), signed by the Assigned Certifier
- Notice of Assignment of Person to Inspect and Certify Works (Assigned Certifier), signed by the building owner.
- Undertaking by Assigned Certifier, signed by the Assigned Certifier
- Notice of Assignment of Builder, Signed by the Building Owner
- Undertaking by Builder
- Plans, Specifications and particulars which demonstrate how the building or works will comply with all Building Regulations.

10. What is an Assigned Certifier?

An Assigned Certifier must be one of the following

- a person registered with the Royal Institute of Architects of Ireland (RIAI)
- a person registered with the Society of Chartered Surveyors of Ireland (SCSI)
- a Chartered Engineer of Engineers Ireland (EI)

11. I am building by direct labour, who do I nominate as the builder

The Undertaking by a Builder can only be signed by the builder who, preferably is registered with the Construction Industry Federation and can provide a 'Construction Industry Register Ireland' (CIRI) number. Further details can be found on www.cif.ie

12. I am a building owner. I have designed my own building and intend to build by direct labour. Do I still need an assigned Certifier.

If your development is one of the types listed in Question 8 then, Yes, you must still nominate an Assigned Certifier. Additionally, you must, yourself, sign the 'Undertaking by Builder' document. In doing so you will undertake the responsibility for compliance with the Building Regulations.

13. Who is responsible for compliance with the Building Control Regulations

The owner of the building, and the builder who carries out the works is responsible, under law, for compliance with Building Regulations and Building Control Regulations.

14. What happens if I have applied for, and received my planning permission before March 1st 2014

If the works take place after the 1st March 2014, and if your development is one of the types listed in Question 8, you must submit the new type of Commencement Notice, and the required additional documentation prior to the commencement of works, regardless of the date of Final Grant of Planning Permission.

15. Is there any type of development which does not require a Commencement Notice at all?

Yes, If the works are, or the Material Change of Use is exempted development specified under the Local Government (Planning and Development) Acts 1963 -1993 and a Fire Safety Certificate is not required, then you do not need to submit a Commencement Notice.

For a full list of exempted developments you will need to contact your local Planning Authority.

APPENDIX B

Bat Report

Millbrook House Bat Survey Report Comhlacht na Feirme Ltd Abbeyleix, Co. Laois



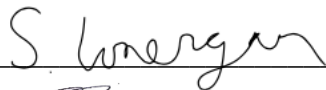


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Job Number: E2031

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Revision Record

Issue No.	Date	Description	Remark	Prepared	Checked	Approved
01	18/12/23	Report	FINAL	SL	DH	DH

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Bat Report
Millbrook House Bat Survey Report
Comhlacht na Feirme Ltd
Abbeyleix, Co. Laois

Contents

1	INTRODUCTION	1
1.1	Relevant Legislation	2
1.2	Statement of Authority	2
1.3	Species Background	3
1.3.1	Types of Bat Roosts	3
1.4	Purpose of Survey Work	5
2	METHODOLOGY	6
2.1	Desk-Based Studies	6
2.2	Field Based Studies	6
2.2.1	Building Inspections and Identification of Bat Habitats	6
2.2.2	Dusk Emergence Survey	7
2.2.3	Dawn Emergence Survey	7
2.2.4	Data Analysis	8
2.3	Survey Limitations	8
3	RESULTS	10
3.1	Desk-Based Results	10
3.2	Field Based Results	10
3.2.1	External & Internal Building Inspection	10
3.2.2	Dusk Emergence and Dawn Re-entry Survey Results	13
3.2.3	Roost Type	16
3.3	Overall Results	16
4	IMPACT ASSESSMENT AND MITIGATION	18
4.1	Potential Impacts on Bats	18
4.1.1	Temporary loss of Soprano Pipistrelle Satellite Roosting Site	18

4.2	Mitigation Measures for Roosting Bats during the Proposed Development	18
4.2.1	Landscaping Plan.....	20
4.2.2	Lighting Plan.....	20
4.3	Bat Enhancement Measures.....	21
4.3.1	Creation of Additional Suitable Habitat for Bats	21
4.4	Monitoring.....	22
5	CONCLUSIONS.....	23
6	REFERENCES.....	24

FIGURES

Figure 1-1: Site Location	1
Figure 2-1: External / Internal Building Inspections Area	7
Figure 2-2: Bat Activity Survey Transects.....	8
Figure 3-1: Bat Activity within the Survey Area.....	16

TABLES

Table 1-1: Status of Irish Bat Species	3
Table 1-2: Types of Bat Roosts [2]	4
Table 2-1: Bat Survey Metadata.....	9
Table 3-1: Habitat Suitability Index.....	10

PLATES

Plate 3-1: Loose roof slates on the coach house.....	11
Plate 3-2: Cracks within wall of Millbrook House	12
Plate 3-3: Re-entry point of one soprano pipistrelle	15
Plate 4-1: Example of a bat access ridge tile to be used for the coach house	20

APPENDICES

Appendix A: Forestry Plan

1 INTRODUCTION

This Bat Survey Report has been prepared by Malone O'Regan Environmental (MOR) on behalf of Comhlacht na Feirme Ltd. ('the Applicant'), to present the findings of bat surveys undertaken at the Site at Millbrook House, Abbeyleix, Co. Laois ('the Site', OSI Reference ITM 641934 683983). Full details of the refurbishment works (the 'Proposed Development') can be found in the Natura Impact Statement (NIS) and Ecological Impact Assessment (EclA) which will be submitted as part of the overall planning application. This Bat Survey Report should be read in conjunction with the NIS and EclA.

The Site is located within a predominantly rural landscape and is comprised of Millbrook House, the coach house building, overgrown grassland and mature trees. The Site is bordered to the north by the Ballymullen stream, an ornamental pond (the Mill Pond), agricultural grassland and scattered farm buildings and houses, and to the south, east and west by agricultural grassland, the Abbeyleix Estate and mature woodland.

A baseline ecological survey of the Site was undertaken on the 13th of February 2023. The baseline ecological survey highlighted the potential for bats to use the derelict buildings onsite for roosting. It was therefore deemed necessary for further survey work to be carried out to determine whether or not bats would be negatively impacted by the works associated with the Proposed Development.

The location of the Site shown in Figure 1-1.

Figure 1-1: Site Location



1.1 Relevant Legislation

All Irish bat species are protected by law under the Wildlife Act 1976 and its subsequent amendments. They are afforded full protection under this act, which makes it a criminal offence for anyone without a licence to:

- Kill, injure or handle a bat;
- Possess a bat (whether alive or dead);
- Disturb a roosting bat; and,
- Damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

In addition to domestic legislation, bats are also protected under the EU Habitats Directive (92/43/EEC). All Irish bats are listed in Annex IV of the Habitats Directive and the lesser horseshoe bat is further listed under Annex II, which make it an offence to:

- Deliberately capture, injure or kill any bat; or,
- Deliberately disturb a bat, in particular any disturbance which is likely;
 - (a) To impair their ability:
 - (i) To survive, to breed or reproduce, or to rear or nurture their young; or,
 - (ii) To hibernate or migrate.
 - (b) To affect significantly the local distribution or abundance of the bat species; or,
- Damage or destroy a breeding site or resting place of a bat.

Therefore, the destruction, alteration or evacuation of a known bat roost is a notifiable action under current legislation and a derogation licence must be obtained from the National Parks and Wildlife Service (NPWS) before works can commence.

Furthermore, it should also be noted that any works interfering with bats and especially their roosts, including for instance, the installation of lighting in the vicinity of the latter, may only be carried out under a licence to derogate from Regulation 23 of the Habitats Regulations 1997, (which transposed the EU Habitats Directive into Irish law) issued by NPWS.

1.2 Statement of Authority

The bat inspection survey and subsequent report were undertaken and prepared by the following MOR personnel: Ms Stephanie Lonergan and Mr. Dyfrig Hubble.

Stephanie Lonergan, Environmental Consultant, has B.A. (Mod) (Hons) in Environmental Science and is a qualifying member of the CIEEM with a particular interest in bat ecology and conservation. Stephanie has completed bat ecology, identification, and mitigation courses from CIEEM, and has experience undertaking bat surveys and building and tree assessments within her role at MOR. Stephanie also regularly attends local bat groups and Bat Conservation Ireland training courses and events, including a bat handling, biometrics and identification course in August 2023. Stephanie has also undertaken training run by Wildlife Acoustics for analysis of bat calls in Kaleidoscope Pro Software and regularly uses this programme within her role at MOR.

This report was reviewed and approved by Mr. Dyfrig Hubble, Associate Director – Ecologist. Dyfrig has a B.Sc. (Hons) in Tropical Environmental Science and an M.Sc. in Environmental Forestry. Dyfrig is a full member of the Chartered Institute of Ecology and Environmental Management. Dyfrig has over 18 years' experience working in the ecological consultancy

sector including habitat appraisals and specialist species specific surveys. Dyfrig has extensive experience in undertaking a variety of bat surveys including dawn / dusk surveys, transects, static monitoring, harp trapping, Lesser Horseshoe roost counts. Dyfrig has also worked on numerous projects that have required supervision of building demolition and tree removal works under licence. These projects have included work both in the UK and Ireland.

1.3 Species Background

There are eleven recorded bat species in Ireland, nine of which are considered resident and two which are considered vagrants (Please see Table 1-1 below).

Table 1-1: Status of Irish Bat Species

Bat Species	Irish status	European Status
Resident Bat Species		
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	Least Concern	Least Concern
Brown Long-eared Bat (<i>Plecotus auritus</i>)	Least Concern	Least Concern
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	Least Concern	Least Concern
Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)	Least Concern	Near Threatened
Whiskered Bat (<i>Myotis mystacinus</i>)	Least Concern	Least Concern
Daubenton's Bat (<i>Myotis daubentonii</i>)	Least Concern	Least Concern
Leisler's Bat (<i>Nyctalus leisleri</i>)	Least Concern	Least Concern
Nathusius' Pipistrelle (<i>Pipistrellus nathusii</i>)	Least Concern	Least Concern
Natterer's Bat (<i>Myotis nattereri</i>)	Least Concern	Least Concern
Vagrants		
Brandt's bat (<i>Myotis brandtii</i>)	Data Deficient	Least Concern
Greater Horseshoe Bat (<i>Rhinolophus ferrumequinum</i>)	Data Deficient	Near Threatened

1.3.1 Types of Bat Roosts

Bats were originally cave and tree dwelling animals, but many now use buildings to roost within. Buildings are highly important as roosting sites for all Irish bat species as they use buildings for all roost types. Most significant in terms of roosts in buildings are maternity roosts, but cellars and attics can serve as hibernation sites for bats. Roosts within buildings can far exceed the numbers encountered in trees, bridges, caves or cliffs and roosts of over 1,000 bats have been recorded in buildings [1].

Bats are social animals, and most species congregate in large colonies during the later spring / summer. These colonies consist mostly of females, with some juvenile males from the previous year. Male bats normally roost individually or in small groups meeting up with the females in the late autumn, when it is time to mate. In summer, bats seek warm dry buildings in which they can give birth and suckle their young. In winter, they seek out places with a

constant low temperature and high humidity where they can become torpid and hibernate during adverse weather conditions. However, bats do not hibernate continuously during winter and will awake and hunt during mild nights when there are insects available and it is energetically advantageous to forage [2].

One purpose of daytime tree or building inspections is to determine the potential of bat roosts within the survey area. Due to the transient nature of bats and their seasonal life cycle, there are a number of different types of bat roosts. Where possible, one of the objectives of the surveys is to be able to identify the types of roosts present, if any.

Bats in Ireland feed exclusively on insects, and in the summer months (May – September) they generally emerge from their roosts around sunset to feed. Bats are known to use a number of different foraging sites in the same night and move between them to locate areas of high insect concentrations. They are also known to exhibit site loyalty and will return to the same foraging sites night after night [3].

Table 1-2 below defines the various types of bat roosts and which time of year they are utilised.

Table 1-2: Types of Bat Roosts [2]

Roost Type	Definition	Time of Survey
Day Roost	A place where individual bats or small groups of males, rest or shelter in the daytime but are rarely found by night in the summer.	Anytime of the year
Night Roost	These are roosts which are used as resting places for bats between foraging bouts. They also provide retreats for bats from predators or during inclement weather conditions. They also function as feeding perches and may be important for socialising. May be used by a single bat on occasion or it could be used regularly by the whole colony.	Anytime of the year
Feeding Roost	A place where individual bats or a few bats rest or feed during the night but are rarely present by day.	Anytime of the year
Transitional Roost	A place used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.	Outside the main maternity and hibernation periods.
Mating Site	Most bat species mate in late summer / autumn but pregnancy does not occur until the following spring. During this time males will take possession of a cavity in a building, tree, bridge, cave or mine and attract females to these sites to establish a harem. Male bats call both from a perch and in flight in much the same manner that male birds sing.	Late Summer into Autumn
Maternity Site	Maternity roosts are the most significant roosts and they are predominantly all female aggregations that are formed from late May onwards and remain as a relatively cohesive unit until late August. Not all female bats give birth annually. These females that do bear young in a given year avail of a suitable roosting site within a building, tree and sometimes cave (or equivalent). The young are flightless for several weeks and hence are vulnerable to dangers such as tree felling and restoration,	Summer Months

	reinforcement or demolition of structures such as buildings and bridges.	
Hibernation Site	Bats have a high metabolic rate and in temperate countries, such as Ireland, flying insects are not available in sufficient numbers during winter to sustain bats. Therefore, bats 'hibernate' during winter. In hibernation sites, bats are often completely inactive for several days and are extremely vulnerable to disturbance by human activities due to the time taken for them to become sufficiently active to allow escape. Hibernation may extend from November to the end of March, during which time bat activity will take place sporadically.	Winter Months in cold weather conditions
Satellite Roost	An alternative roost found in close proximity to the main nursery colony and is used by a few individuals throughout the breeding season.	Summer Months

1.4 Purpose of Survey Work

The implication of these legislative policies is that the Proposed Development needs to take account of the potential effects on bats. Survey work is necessary to establish whether the species are currently present in areas where suitable habitat exists and in areas where bats have previously been recorded. Survey work also enables appropriate mitigation measures to be incorporated into the design of the project and ensures that there are no adverse effects on the conservation status of the species.

Survey work was deemed necessary based on desktop surveys and suitable habitat for roosting, foraging and commuting being identified during the initial walkover of the site.

2 METHODOLOGY

The methodologies used to establish the presence / potential presence of bats are summarised below.

2.1 Desk-Based Studies

A desk-based study was undertaken to identify records of bats within the survey area. The following sources of information were reviewed:

- The National Parks and Wildlife Service (NPWS) website was consulted to obtain the most up to date detail on conservation objectives for the European sites relevant to this assessment [4];
- Aerial mapping was reviewed to identify any habitats and features likely to be used by bats. Maps and images of the Study Area and general landscape were examined for suitable foraging or commuting habitats including woodlands and forestry, hedgerows, treelines, and watercourses;
- The National Biodiversity Data Centre (NBDC) website was consulted with regard to bat species distributions and bat habitat suitability index [5].

2.2 Field Based Studies

The survey design was informed by previous experience and the following publications:

- *Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes* [1];
- *A Conservation Plan for Irish Vesper Bats* Irish Wildlife Manual No. 20 [6];
- *UK Bat Mitigation Guidelines: A guide to impact assessment, mitigation and compensation for developments affecting bats* [7];
- *Bat Mitigation Guidelines for Ireland*. Irish Wildlife Manuals, No. 25 [3] a publication by the NPWS; and,
- *Bat Surveys for Professional Ecologists - Good Practice Guidelines* (3rd ed.). London: The Bat Conservation Trust [8].

2.2.1 Building Inspections and Identification of Bat Habitats

The Site was assessed during the daytime walkover survey on the 13th of February 2023 in relation to potential bat roosting potential, foraging habitat and potential commuting routes. Bat habitats and commuting routes identified were considered in relation to the wider landscape to determine connectivity for local bat populations, and through the examination of aerial mapping.

Internal building inspections of the areas that were confirmed as being safe were completed on the 21st of August 2023.

Figure 2-1 below details the full extent of the external building survey area.

Figure 2-1: External / Internal Building Inspections Area



2.2.2 Dusk Emergence Survey

One (1No.) dusk emergence survey took place at the Site on the 17th of May 2023. The surveys commenced 15 minutes before sunset and ended 2 hours after sunset, therefore encompassing the typical emergence times of Irish bat species. The transects took place for two hours and fifteen minutes and were designed to incorporate all aspects of the building that were identified as having PRFs during the external building inspection. These buildings were surveyed so they could be monitored for bat emergence. The transects also aimed to capture bat activity levels within the wider survey area and to determine what areas within the survey area are important habitats for bats.

Two (2No.) MOR Ecologists surveyed separate locations of the Site- see Figure 2-2 below for full details of the transects walked during the surveys.

A combination of visual observation and listening to ultrasonic bat calls using an Echo Meter Touch2 Pro (Apple IOS) were used throughout the transect survey. Bat calls were recorded using this Echo Meter Touch2 Pro and stored on the EchoMeter App.

2.2.3 Dawn Emergence Survey

The dawn emergence survey took place on 20th of June 2023 by two (2No.) MOR ecologists, with the surveyors following the same pre-determined transects as the dusk survey. The survey commenced 2 hours before sunrise and finished 15 minutes after sunrise.

Figure 2-2: Bat Activity Survey Transects



2.2.4 Data Analysis

The bat recordings taken during the surveys were analysed using the software KaleidoscopePro to aid the identification of bat species present. A combination of the visual observations taken during the survey and the number of bat passes¹ identified on the recordings were used to determine bat activity levels within the area.

2.3 Survey Limitations

Bat surveys are a snapshot of the bat activity within an area at the time of surveying. It is therefore important that bat surveys are comprised of a number of surveys designed to provide as much information on the at usage of the area. Therefore, a combination of surveys was used to determine the importance of the survey area on local bat populations.

All survey work was conducted in accordance with current best practice guidelines, which dictate that bat surveys should be undertaken when there is no rain or wind and the temperature is above 10°C. During the dusk bat surveys, temperatures were between 12°C - 17°C (see Table 2-1 below).

Due to the unstable and unsafe condition of Millbrook House, internal inspections could not be completed for the entirety of the building. However, the building was also subject to emergence / dawn re-entry surveys to check for roosting bats.

¹ It is important to acknowledge that bat calls provide a measure of bat activity rather than the number of individuals in a population. In practice, bat activity (as, for example, represented by 100 recordings) could be from 100 bats passing the detector or one bat passing 100 times [8].

Table 2-1: Bat Survey Metadata

Date	Survey Type	Sunset / Sunrise	Survey Times (Start-End)	Weather	Temperature (°C) Start - End
17/05/2023	Dusk	21.25	21.10-23.30	Dry, light breeze	14°C -12°C
20/06/2023	Dawn	05.05	03.05-05.20	Dry, no breeze	17°C -16°C

3 RESULTS

3.1 Desk-Based Results

Prior to conducting the field surveys, a desk-based review of information sources was completed.

Two (2No.) of the nine (9No.) bat species found in Ireland have been recorded within a 2km radius of the Proposed Development within the past 10 years- Daubenton's bat and common pipistrelle [5].

Table 3-1 provides details of the habitat suitability index for the study area [5]. The habitat suitability index identifies the geographical areas that are suitable for individual species. The index ranges from 0 to 100, with 100 being the most favourable to bats. The index presented is for all species combined, in addition to the individual species indices within the study area.

From the indices, it can be established that the study area has an overall high habitat suitability index range of 28.1-36.4. The habitat suitability for Irish bats within the area ranges from very low to very high. Excluding the lesser horseshoe bat and Nathusius pipistrelle which both have a 'very low' habitat suitability for the Site, all of the other listed species are likely to occur within the area.

Table 3-1: Habitat Suitability Index

Bat Species	Suitability Index Range	Suitability Index Level
All Bat Species	28.1-36.4	High
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	39-45	High
Brown Long-eared Bat (<i>Plecotus auritus</i>)	50-79	Very High
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	48-72	Very High
Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)	0-4	Very Low
Whiskered Bat (<i>Myotis mystacinus</i>)	32-44	High
Daubenton's Bat (<i>Myotis daubentonii</i>)	30-38	High
Leisler's bat (<i>Nyctalus leisleri</i>)	47-71	Very High
Nathusius' Pipistrelle (<i>Pipistrellus nathusii</i>)	0-4	Very Low
Natterer's Bat (<i>Myotis nattereri</i>)	37-48	High

3.2 Field Based Results

The buildings onsite were identified as having the potential to support roosting bats. Additionally, the woodland that borders the north, south and east of the Site was identified as providing suitable foraging and commuting habitats for bats.

3.2.1 External & Internal Building Inspection

The external building inspection identified multiple features and entry points into buildings / roofs of buildings onsite that could be utilising by roosting bats including loose roof slates on the coach house and cracks within the walls of Millbrook House. see Plates 3-1 to 3-2).

However, there was no visual evidence that bats were using these potential access points, such as droppings on the building walls or urine splashes / fur-oil staining.

Plate 3-1: Loose roof slates on the coach house



Plate 3-2: Cracks within wall of Millbrook House



The internal inspection of the buildings undertaken on the 21st of August did not identify any signs of bat activity.

3.2.2 Dusk Emergence and Dawn Re-entry Survey Results

The surveyors identified bats commuting within the survey area, and commuting towards the woodland bordering the Site (see Figure 3-1) during both surveys.

High activity was recorded within the survey area during the dusk survey, while there was moderate activity recorded during the second dusk survey.

The following bats were recorded as a result of the dusk and dawn surveys:

- Common pipistrelle, soprano pipistrelle, Leisler's bat, Nathusius' pipistrelle, brown long-eared bat, Daubenton's bat, whiskered bat and Natterer's bats were recorded foraging and commuting within the survey area. The most frequently encountered species of these were soprano pipistrelle.
- One (1No.) bat, a soprano pipistrelle, was observed flying into the roof of the coach house during the dawn survey. This indicates that a bat roost is present in the roof of this building; and,
- Bats were recorded shortly after sunset during the first dusk survey indicating that bat roosts are likely to be present within the vicinity of the Site.

3.2.2.1 Dusk 17/06/23

Sunset was at 21.25.

T1 (Millbrook House)

The first bat recorded and observed at this transect was a common pipistrelle at 21.31. Throughout the survey bats were observed commuting around Millbrook House, both towards the woodland the woodland that borders the north and south of this building and also circling around the building itself. The species recorded and observed included Leisler's bats, common pipistrelles, soprano pipistrelles, brown long-eared bats and *Myotis* species.

Overall, there was high activity recorded during this transect survey, with ca. 64 bat passes recorded per hour. Leisler's had ca. 16 passes per hour, common pipistrelles had ca. 12 passes per hour, soprano pipistrelles had ca. 23 passes per hour, brown long-eared bats had ca. 8 passes per hour and *Myotis* species had ca. 2 passes per hour. One whiskered bat call was identified, and there were two other unidentifiable *Myotis* species calls taken during this survey.

No bats were observed emerging from Millbrook House during this survey.

T2 (Coach House)

The first bat recorded and observed at this transect was a soprano pipistrelle at 21.30. This bat was seen commuting west over the coach house towards Millbrook House. Leisler's bats were then recorded but not observed when the surveyor was walking to the south of the coach house. The next bat observed was a soprano pipistrelle at 21.33, seen commuting over Millbrook House towards the woodland to the north of the Site. Bats were frequently recorded commuting towards the woodland to the north and east of the coach house for the whole transect survey, including soprano pipistrelles, Leisler's, Natterer's bats and brown long-eared bats. Bats were also seen commuting and circling around Millbrook House and the coach house, as well as commuting to the woodland to the north of the Site through the gap in between the buildings. The last bat observed was at 22.50 and the last bat recorded was at 23.11.

Overall, there was very high activity recorded during this transect survey, with ca. 92 bat passes recorded per hour. Leisler's had ca. 13 passes per hour, common pipistrelles had ca. 17 passes per hour, soprano pipistrelles had ca. 48 passes per hour, brown long-eared bats

had ca. 13 passes per hour, Nathusius' pipistrelles had ca. 1 pass per hour, and *Myotis* species had ca. 3 passes per hour. All three *Myotis* species (Natterer's bat, Daubenton's bat and whiskered bat) were recorded at this transect.

Soprano pipistrelles, common pipistrelles, Leisler's bat and brown long-eared bats were all recorded within 15 minutes of sunset. It is therefore considered likely that roosts for these species are located within the vicinity of the Site.

No bats were observed emerging from the coach house during this survey.

3.2.2.2 Dawn 20/06/23

Sunrise was at 05.05.

T1 (Millbrook House)

Similar species were recorded during this survey at this transect compared to the first dusk survey.

Overall, there was moderate activity recorded at this transect, with ca. 30 bat passes recorded per hour. Leisler's had ca. 14 passes per hour, common pipistrelles had ca. 7 passes per hour, soprano pipistrelles had ca. 8 passes per hour, brown long-eared bats had ca. 1 pass per hour and *Myotis* species had ca. 2 passes per hour. Three calls from a Natterer's bats were recorded and there was one unidentifiable *Myotis* call recorded.

No bats were observed re-entering Millbrook House during this survey.

T2 (Coach House)

The first bats recorded at this transect were a common pipistrelle and Leisler's at 03.21, but not observed by the surveyor. The bats that were observed during this survey were seen commuting in the same directions as the bats in the dusk transect survey- primarily towards the woodland that borders the Site. The last bat observed during this survey was a soprano pipistrelle at 04.45, seen flying into the coach house roof under a loose roof tile on the western side of the building (see Plate 3-3 below). This indicates that a soprano pipistrelle roost is present in the coach house roof.

Overall, there was moderate bat activity at this transect, with ca. 33 bat passes recorded per hour. Leisler's had ca. 10 passes per hour, common pipistrelles had ca. 11 passes per hour, soprano pipistrelles had ca. 10 passes per hour, brown long-eared bats had ca. 1 pass per hour and *Myotis* species had ca. 3 passes per hour.

As mentioned above, one (1No.) soprano pipistrelle was observed entering the roof of the coach house at 04.45. This means that a derogation licence is required for works to proceed on this building.

Plate 3-3: Re-entry point of one soprano pipistrelle



Figure 3-1: Bat Activity within the Survey Area



3.2.3 Roost Type

No bats were observed emerging from Millbrook House or the coach house during the first dusk survey. During the dawn survey one (1No.) soprano pipistrelle was seen re-entering the roof of the coach house.

As soprano pipistrelle maternity roosts can consist of 20 to over 1000 individuals [2] it is considered reasonable to conclude that a maternity roost is not present within the coach house. It is more likely that the bat roosting within the roof of the coach house was using this Site as a satellite roost, which is an alternative roost found in close proximity to the main nursery colony used by a few individuals to smalls groups of breeding females throughout the breeding season [8]. This conclusion is based on the number of bats seen re-entering the roof (one) and the time of year the survey was carried out (June).

3.3 Overall Results

The following bats were recorded as a result of the dusk emergence / transect surveys:

- Common pipistrelle, soprano pipistrelle, Leisler's bat, Nathusius' pipistrelle, brown long-eared bat, Daubenton's bat, whiskered bat and Natterer's bats were recorded commuting / foraging within or above the survey area. The most frequently encountered species of these were soprano pipistrelle. This species is wide-spread and the most commonly encountered species within Ireland;
- Soprano pipistrelles, common pipistrelles, Leisler's bat and brown long-eared bats were all recorded within 15 minutes of sunset during the first survey, indicating that bat roosts are likely to be present within the local area. The survey recorded the majority of the bat commuting activity through the Site towards the woodland adjacent to the Site (Figure 3-2); and,

- One (1No.) soprano pipistrelle was observed entering the roof of the coach house 20 minutes before sunrise on the dawn survey. This indicates that a soprano pipistrelle roost is located in the roof of the coach house.

Based on the levels of activity and movement of the bats recorded during the surveys, it is considered that the Site is of Moderate-High value to commuting bats and of Moderate value to roosting bats.

4 IMPACT ASSESSMENT AND MITIGATION

Following the building inspections and the dusk emergence / dawn re-entry surveys carried out onsite, it can be concluded that a soprano pipistrelle satellite roost is present in the roof of the coach house. Due to the refurbishment works associated with the Proposed Development, it is considered that without appropriate mitigation measures that there will be a significant negative effect on this bat roost.

Any bats utilising the coach house will be affected by both the construction phase and the operational phase of the Proposed Development. The impact assessment and mitigation will be undertaken in relation to all pipistrelle species.

4.1 Potential Impacts on Bats

There will be a potential loss of foraging and commuting habitats for bats as trees will be removed to facilitate the Proposed Development. Additionally, the lighting installed for the construction and operational phases of the Proposed Development must not have significant negative impacts on bats within the area.

Additionally, the Proposed Development will result in the temporary loss of a soprano pipistrelle satellite roost during the construction phase of the Proposed Development.

This potential impact will be further examined below and appropriate mitigation measures will be implemented to compensate for this temporary disturbance. Additionally, bat enhancement measures will be included as part of the Proposed Development, including the creation of suitable long-term habitats for bats (see Section 4.3.1 below).

4.1.1 Temporary loss of Soprano Pipistrelle Satellite Roosting Site

Given that the Proposed Development will result in the temporary loss of a soprano pipistrelle satellite roost that was identified in 2023, there is a requirement for a derogation licence to be obtained for the works to proceed to avoid contravention of wildlife legislation and negative impact on bat species. The mitigation detailed below will be followed during the construction phase of the Proposed Development.

As per the '*Bat Mitigation Guidelines for Ireland*' prepared by the NPWS, it is considered that the scale of impact due to temporary disturbance (outside the breeding season) and temporary destruction, then reinstatement of a night roost is '*Low*' [9]. It is considered that the same impact assessments are relevant to a satellite roost, as this is a non-breeding roosting site used by a small number of individuals. Additionally, as the roost status of the satellite roost in the coach house is considered to be '*individual bats of common species*', the mitigation requirement is considered to be flexible [9].

4.2 Mitigation Measures for Roosting Bats during the Proposed Development

As previously mentioned, all bat species in Ireland, including soprano pipistrelles are protected under Annex IV of the Habitats Directive and the Wildlife Acts 1976. Therefore, the Proposed Development requires a derogation licence from the National Parks and Wildlife Service to allow for works that would create a risk to bats and remove a day roost. Additionally, mitigation measures should also be proposed and meet the requirements for protecting bats within the vicinity of the Site.

The following mitigation measures are proposed:

- The aspects of the Proposed Development that involve the removal of the roof of the coach house (the location of the bat roost) shall be supervised by a suitably experienced bat ecologist;
- Ridge tiles with traditional bitumastic hessian roofing felt should be used for the roof of the coach house. Breathable membranes should not be used as these can entangle

and trap bats in flight [9]. The location and number of these ridge tiles will be determined following the additional surveys by a suitably experienced bat ecologist;

- The optimum season for works carried out at summer roosting sites is 1st September to 1st May. Therefore, all roof works on the coach house should be completed prior to 1st May 2024 [9];
- A suitable roof void space for soprano pipistrelles will be incorporated into the Proposed Development that replicates the current features on the Site. Bats will be able to access the roof space of the coach house via bat-specific ridge tiles (see Plate 4-1 for examples of suitable bat access ridge tiles). Additional required design features to be implemented include:
 - Access into the roof via a 15-20mm gap. The Project Ecologist will visit the Site during construction works to ensure that the access points into the Annexe and the Cottage are still suitable for bat species;
 - Smooth plastic roof lining should be avoided as bats cannot hang freely from this;
 - Timber cladding mounted on 20-30mm counter battens with bat access at the bottom or sides; and,
 - Access to roof voids via soffit gaps [9].
- Only bat safe compounds shall be used during the chemical treatment of roof timbers, further details of this process can be found in '*The Bat Worker's Manual*' [10];
- No rodenticide usage will be permitted within the vicinity of the Site;
- Water tanks in the attic will be covered fully to prevent the drowning of bats in the roof space;
- In the event that any bats are identified during the Proposed Development, the bat(s) will be captured and released at night into the woodlands surrounding the Site. Should night-time temperatures be considered to be unsuitable, the bat(s) will be placed into bat boxes erected onsite/in the woodlands; and,
- All personnel involved in the construction phase will be made aware of the legal status of bat species in Ireland and the role project ecologists.

Plate 4-1: Example of a bat access ridge tile to be used for the coach house



The above mitigation measures in relation to the timing of the works are only applicable for the 2024 winter / spring season. In advance of the works commencing, updated surveys will be carried out at the Site to confirm the presence / likely absence of roosting bats onsite.

4.2.1 Landscaping Plan

A landscaping plan has been prepared by Ryan W. Kennihan Architects and submitted as part of the overall planning application.

4.2.2 Lighting Plan

Bats are averse to excessive lighting, subsequently, impacts could occur as a result of an inappropriate lighting strategy. All lighting installed as part of the Proposed Development will be for safety and security purposes.

An external lighting report has been prepared by Woods PS and submitted as part of the overall planning application. This lighting plan has ensured that lighting will be directed away from the retained trees and away from the Mill Pond, ensuring that bats can still use these features for foraging and commuting.

Additionally, where possible, the lighting proposed as part of the Proposed Development, will include the following measures:

- Avoidance of excessive lighting;
- Light Emitting Diodes (LED's) will be used and the brightness will be set as low as possible;

- Lighting will be aimed only where it is needed, with no upward lighting;
- Lighting should be turned down / off when not required;
- Lighting lux levels along the Mill Pond and retained trees will not exceed 1.0 Lux;
- Accessories such as baffles, hoods or louvres can be used to reduce light spill and direct light only where it is needed; and,
- The height of lighting columns should be reduced as much as possible, as lighting at a low level further reduces ecological impact; and,
- Following the installation of the lighting for the Proposed Development, the project ECoW will undertake a further site inspection in order to check the lighting patterns and lux levels along the Site boundaries.

The following measures should be taken into consideration during the construction phase of the Proposed Development:

- Construction should be limited to daylight hours in order to minimise adverse effects on nocturnal fauna;
- Avoidance of excessive lighting;
- Light Emitting Diodes (LED's) will be used and the brightness will be set as low as possible;
- Lighting will be aimed only where it is needed, with no upward lighting;
- Lighting should be turned down / off when not required;
- Accessories such as baffles, hoods or louvres can be used to reduce light spill and direct light only where it is needed; and,
- The height of lighting columns should be reduced as much as possible, as lighting at a low level further reduces ecological impact.

4.3 Bat Enhancement Measures

Bat boxes will be installed onsite and will remain there after the Proposed Development has been completed. These bat boxes will provide additional roosting sites for soprano pipistrelles and other bats to utilise.

The Coach House Roof needs significant repair work. As part of these works, the identified roost will need to be temporary removed. As part of the repair works to the roof, bat ridge tiles are to be installed to maintain suitable roosting habitat for bats.

4.3.1 Creation of Additional Suitable Habitat for Bats

As part of the management of the estate a Forest Inventory & Management Plan covering 2022-2031 has been prepared by Purser Tarleton Russell Ltd for Abbeyleix Estate, and is attached as Appendix A. This plan emphasises the importance of protecting and enhancing the value of the 270 hectares of woodland in Abbeyleix Estate, allowing them to obtain a high conservation status. Bats will utilise all forest types, from semi-natural to broadleaf and conifer plantations [11]. As facilitating natural regeneration of woodlands on site and promoting native species and diversity are at the forefront of the Abbeyleix Estate Forest Management Plan, this will lead to the creation of additional suitable foraging and roosting habitats for bats. Furthermore, this Forest Management Plan will ensure that these habitats are protected in the long-term and provide vital habitats for bats within the vicinity of the Site.

While it is considered that the Proposed Development may result in the loss of some foraging habitats for bats, this additional planting will offset this loss.

4.4 Monitoring

An Ecological Clerk of Works (ECoW) / Project Ecologist will be appointed for the duration of the works and will undertake the necessary monitoring works as required to ensure the implementation of the ecological mitigation measures.

As mentioned in Section 4.2 above, the aspects of the Proposed Development that involve the removal of the roof of the coach house shall be supervised and monitored by the ECoW / project ecologist. Additionally, the following monitoring works will take place to ensure that the works comply with the recommendations detailed in this report:

- An updated dusk bat survey will be undertaken at the Site after the construction works have finished to ensure that the structure and the surrounding habitats are still being utilised by bats;
- The findings of any additional surveys will be submitted to the NPWS; and,
- The use of bat boxes will be monitored during the construction works to ensure they offer a suitable alternative to roosting bats within the vicinity of the Site.

5 CONCLUSIONS

The Site was surveyed prior to the construction phase of the Proposed Development, including an external building inspection and dusk emergence and dawn re-entry surveys. These surveys identified a soprano pipistrelle roost in the roof of the coach house. Given the number of individual re-entering the Site, this roost is most likely to be a satellite roost.

The Proposed Development will result in the temporary loss of this roosting site, as the coach house will be re-roofed. Given the temporary loss of this roosting site, appropriate mitigation measures will be put in place and supplementary roosting habitats will be created on site and within the vicinity of the development.

Although, it is considered that there will be a temporary loss of roosting habitat associated with the Proposed Development, the long-term benefits of these works will ensure the protection of the coach house as a bat roost. It is considered that if the measures presented within this report are followed, the permanent or long-term potential impacts on bats will be negligible and the refurbishment of Millbrook House & the coach house will ensure the long-term protection of the structure and the availability of suitable bat roosting habitat in the area.

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APPENDICES

APPENDIX A



Abbey Leix Estate

Abbeyleix, Co. Laois

Forest Inventory & Management Plan
2022 - 2031



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VISION

The long term forest management vision for Abbey Leix is to protect and enhance the ecological value of the woodlands allowing them to obtain a high conservation status. This will be achieved through the adoption of a Continuous Cover Forestry Management system using close to nature silvicultural techniques.

Contents

1.	Introduction	2
2.	Long Term Forest Management Vision	2
3.	Interventions in Native Woodland Areas	3
4.	Thinning Interventions in Other Woodland Areas.....	4
5.	Management of Recently Clear-felled Areas.....	4
6.	Deer Management.....	5
7.	First Thinnings.....	5
8.	Tree Marking.....	6
9.	Rhododendron and Laurel Control.....	6
10.	Access	6
11.	Attitude to Non Native Species such as Beech and Chestnut	7
12.	Tending in young stands (pre-commercial thinning)	7
13.	Enrichment Planting (including through laurel chip)	7
14.	Development of a Seed Collection and Nursery Programme	7
15.	Archaeological Features / Walls	8
16.	Potential Grant Aid from the Forest Service.....	8
17.	Felling Licence Requirements.....	9
18.	Production Forecast	9
19.	Energy Wood Production Potential	9
20.	Indicative Cash Flow Forecast Associated with Plan.....	10
21.	Mangement Plan	11
22.	Forest Map	14

1. Introduction

Abbey Leix forest Estate contains 270 hectares (667 acres) of mixed broadleaved and conifer forest and a further undefined area of tree cover in the form of boundary planting, parkland, copses and other trees.

The woods have a significant ecological value and also considerable economic value. The Park Hill Woodlands in the western edge of the estate, close to the River Nore, are listed as Ancient Woodland in Perrin, P.M. & Daly, O.H. (2010) *“A provisional inventory of ancient and long-established woodland in Ireland”*¹. Ancient woodland refers to those woods that have had a continuous history of cover since before the period when planting became common practice (mid-1600s). Such ancient woodlands are important in terms of their biological, ecological and cultural value, and may even form links with prehistoric wildwoods. Park Hill woodlands on the estate are recognised nationally as being particularly unique and reflecting this, the National Parks & Wildlife Service (NPWS) have designated protected sites in the woodlands including within the River Barrow and River Nore Special Area of Conservation (SAC) and the River Nore Special Protection Area (SPA). The formal River Nore SAC designation specifically notes that, *“The best examples of old oak woodlands are seen in the ancient Park Hill woodland in the estate at Abbey Leix”*; and also: *“Abbey Leix Woods is a large tract of mixed deciduous woodland which is one of the only remaining true ancient woodlands in Ireland”*. This highlights the national importance and profile of Abbey Leix woodlands with their unique ecological and environmental value. Outside of the core ancient woodland areas there are also extensive areas of conifer and mixed forest on the estate which act as an extremely important buffer and expansion area. The appropriate management of these is also of great importance to the sustainability of the core ancient woodland areas.

In addition to the ecological value described above, Abbey Leix House, gardens and demesne are set amidst some of the most attractive woodland scenery in Ireland and this must be at the forefront in forest management planning for the estate.

This plan sets out a vision for the future of forests at Abbey Leix Estate. For management purposes, the forest has been stratified into 65 separate plots and these are shown on the accompanying photo-map. Stratification is based on parameters such as woodland type, species, age, required management etc. Inventory details and / or descriptions are provided and a 10 year management prescription and plan is proposed for each of these plots. A cash-flow forecast associated with this plan has also been prepared.

The prescriptions in the plan are summary prescriptions, but these are supported by more detailed discussions on the guiding forest management principles associated with a range of issues pertaining to the estate, which are also presented here as part of the plan.

2. Long Term Forest Management Vision

The long term forest management vision for Abbey Leix is to protect and enhance the ecological value of the woodlands allowing them to obtain a high conservation status. This will be achieved through the following:

- The adoption of a Continuous Cover Forestry (CCF) Management system using close to nature silvicultural techniques i.e.:
 - the cessation of clear-felling as a management intervention;

¹ Irish Wildlife Manuals, No. 46. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland

- the facilitation and promotion of natural regeneration;
- the thinning of conifer woods and mixed broadleaved woods to promote native species and diversity;
- the retention of deadwood, both standing and fallen, as an important micro-habitat;
- the control and eradication of invasive species from the estate, primarily laurel and rhododendron;
- The preparation of specific native woodland conservation plans for the ancient woodland areas on the western side of the estate along the River Nore;
- The management of invasive deer on the property such that they are not impacting adversely on the sustainable management of the woodlands, including development and recruitment of natural regeneration;
- The replacement of felled conifer areas with native woodland;
- Continuity of the management approach over a sustained period.

3. Interventions in Native Woodland Areas

For existing areas of important native woodland, it is proposed to develop specific native woodland conservation plans. These will follow the template required by the Forest Service (FS) and supported by the National Parks and Wildlife Service (NPWS) for entry into the Native Woodland Conservation Scheme (NWCS). These plans are prepared jointly by qualified native woodland managers and ecologists in consultation with the woodland owners. There is no obligation to enter the NWCS but it will provide a funding source / support mechanism for any proposed interventions. This scheme would be suitable for use in Plots 1, 5, 11, 14 & 15 totalling 73.18 hectares. From the walkover assessment carried out at Abbey Leix, these interventions are likely to include:

- **Enrichment planting and maintenance** – Enrichment planting is the introduction of planted trees into woodland areas to help the development of an understorey and to introduce diversity of species where it is not possible to do so naturally. There has been some enrichment planting conducted over the last decade that requires maintenance but an enhanced programme is required. While natural regeneration is the preferred means of woodland development at Abbey Leix, it is suggested that a local seed collection and nursery programme be developed in the garden of the estate to provide transplants for an enrichment planting programme throughout the estate (**Section 14**). While it is intended to reduce deer impact on the woodlands to a sustainable level (**Section 6**), there is a short to medium term need to protect enrichment planting from browsing by deer using a combination of individual tree guards and (very) small deer fence enclosures.
- **Specific Surveys** – Some dedicated specialist surveys may be required to record and monitor ancient woodland indicators in the form of bryophytes, lichens, fungi, ground flora, insects and other invertebrates. The requirement for such surveys will be identified in the native woodland conservation plans.
- **Treatment of Invasive Species** – in the context of the ancient woodland areas at Abbey Leix, this does not only mean rhododendron and laurel but also Beech which, due to its relative shade tolerance, has the potential to dominate the area over time. The native woodland conservation plans will propose measures that will create standing (through ring-barking) and fallen (through felling) deadwood habitat out of large beech trees and in so doing, create lighter conditions in the wood for oak regeneration while also creating deadwood habitat for a range of specialist fungi, invertebrates and birdlife. The role of Spanish chestnut which also is found throughout the ancient woodland will also need to be considered although it is not invasive.
- **Promotion of Natural Regeneration** – the need for supportive interventions for natural regeneration such as scarification or the provision of seed banks for Jay distribution will be considered.
- **Deer Management** – dealt with separately in **Section 6**

- **Access** – while the maintenance of certain access to native woodland areas is desirable, this should be restricted to low impact tracks with no importation of stone and kept for low density recreational / management / research purposes. It is not appropriate to develop roadways through the high value / ancient native woodland areas using imported stone as this has the potential to alter the soil chemistry either side of the roadway and consequently the flora that will grow there.

4. Thinning Interventions in Other Woodland Areas

In many areas, thinning work is necessary to aid the long term transformation to native woodland, these thinnings will be conducted using the following general silvicultural principals:

- Specific harvest plans will be required for each harvest site in advance of operations.
- Long term permanent racks to be installed at approx. 20-25m intervals – these do not require stone like a road but are permanent and dedicated routes for machinery used for harvesting and extracting timber. At each harvest they will be dressed with lop and top to create a brush mat to help carry machinery and minimise soil damage.
- No machinery will be allowed access outside of the dedicated routes described above leaving the zones between routes un-impacted.
- Marking of selected trees for thinning will be carried out professionally by a qualified forester with experience in CCF management.
- Trees of important biodiversity value (e.g. veteran trees or rare species) and future trees of high quality and potential value will be identified in order that they can be protected and favoured during thinning operations.
- Marking and thinning operations will seek to retain trees that meet the following criteria:
 - Native species;
 - Stable trees with good root architecture and viable crowns;
 - Diverse species that are compatible with the long term transformation process;
 - Quality trees with future market potential;
 - Trees of high ecological value, including standing deadwood and veteran trees.
- Initial thinnings will aim to engender stand and individual stem stability (while favouring native and diverse species) and transferring growth on to stems of better quality. This will continue on a regular cycle to be determined for each compartment during marking.

Continuity in thinning practice in CCF is important, particularly given the lack of experienced CCF practitioners in Ireland, and a long term relationship with a harvesting contractor in this regard should be developed

5. Management of Recently Clear-felled Areas

While there is a new policy at Abbey Leix that there will be no further use of clear-felling as a forest management intervention, there are some existing clear-felled areas that require restocking and management. These are plot numbers 10 (where restocking was carried out but has largely failed), 18 & 38 comprising approx. 14 hectares. It is proposed that these areas are wind-rowed, invert mounded, deer fenced and restocked as native woodland. The native woodland type will be oak dominated with hazel, birch, alder and other native species. These trees should also be of native provenance. A standard restock cost for native woodland of €5,000 per hectare in year 1 and €1,000 per hectare for three maintenance years has been used in the cashflow forecast. It is expected that there will be significant natural regeneration on these sites, particularly once deer fencing is in place. This regeneration will be gladly accepted amongst the replanted trees as it will help to diversify structure and engender resilience in the newly establishing forest.

6. Deer Management

There is an unsustainably high population of deer (largely invasive Fallow Deer) present at Abbey Leix. This is having a detrimental effect on woodland ecology and regeneration. This is indicated by the low levels of natural regeneration and evidence of damage to small trees and the shrub layer in existing woodlands. High deer populations will result in considerably higher costs for managing the woodlands at Abbey Leix. Operations such as reforestation will require protection from grazing in the form of deer fencing and/or individual tree guards. Unsustainable deer populations can also have a considerable negative impact on farming, through grazing of pastureland and damaging fences etc. For the goals of sustainable forest management and close to nature silviculture to be achieved, it is imperative that a plan to systematically reduce deer densities is established. Such a plan is understood to be in place in conjunction with Dr. Tim Burkitt. Apart from the ecological damage to woodlands, deer cause physical damage to trees in three different ways:

- **Browsing** – the grazing of regenerating trees so as they either die, are deformed or never get past the herb layer.
- **Fraying** – the rubbing of antlers against young lignified stems causing the removal of tender bark and resulting in tree damage or death.
- **Stripping** – the pulling of bark, particularly in Spring and Summer, away from the stem resulting in tree damage or death and an entry point for other pathogens.

This plan includes measures for the rejuvenation and conservation of some of the ancient woodland with grant assistance from the FS through the NWCS. These plans will include proposals for deer fencing of exclosures and/or using individual deer shelters to provide protection for enrichment planting. The exclosures and shelters will allow free passage for deer to move through the estate to and from the adjoining bog which borders the property. The proposed exclosures do not obstruct the passage of deer and are less likely to be breached as deer will go past or around them.

7. First Thinnings

There are 46.27Ha of woodlands at Abbey Leix scheduled to undergo first thinning treatment as part of this plan. First thinning is an essential operation to facilitate management and also improving biodiversity. It consists of the creation of “racks” which is the removal of all trees within a row of trees and a “selection” of trees between the racks. The racks are used to facilitate the long term access and movement of machinery. When the machines move along these designated racks they also remove a proportion of the trees each side of the rack which are within the machine’s reach, this is the selection.

First thinning will:

- Produce pulpwood which can be utilised in the planned wood chip boiler for internal heat generation within the estate, along with other more valuable products such as stake or pallet which can be sold to local sawmills.
- Create permanent designated access to these woodlands through racks, which are in line with the “close to nature” management system of CCF.
- Greatly improve the biodiversity of the site through creating open space’s within the forest which will allow access of light and the stimulation of ground vegetation.

The first thinning will be carried out in line with the general thinning policies as outlined in **Section 4**. The plots scheduled to undergo first thinning treatment are indicated within the woodland management plan and are spread across the planning period due to their varying ages and stages of development. Areas which are not licensed for first thinning will require a Tree Felling Licence (TFL) which can be applied for from the Forestry Division of the Department of Agriculture, Food & the Marine (DAFM)

8. Tree Marking

Tree marking is where individual or groups of trees are professionally marked for removal or retention in a forest before it undergoes thinning treatment. Tree marking is used to ensure that the right trees are being removed and for the right reasons. Marking is essential to ensure that the woodlands are being managed in line with the short and long term goals of the property. Marking ensures efficacy of the silvicultural treatment that has been prescribed. It also provides a monitoring opportunity, and an important way of protecting veteran trees or trees of high biodiversity value which may otherwise be removed or damaged. All plots at Abbey Leix which are due to undergo treatment will require some level of marking. It is proposed that the ProSilva Ireland Marking Protocol be adopted for use at Abbey Leix. This is a standard approach to tree marking in forests managed under CCF as endorsed by ProSilva Ireland, the advocacy group for CCF / Close to Nature Silviculture in Ireland.

9. Rhododendron and Laurel Control

Large areas of invasive rhododendron and laurel were identified throughout the estate. A significant amount of work has already occurred with regard to controlling these invasive species through different combinations of excavating, cutting and chipping. Most of the most “choked” areas have now been treated and follow up will be required in these areas for a number of years to treat any regrowth that will emerge. For much of the rest of the estate there are sporadic pockets of rhododendron and laurel, often in sensitive areas. A lighter touch approach to the treatment of these pockets is recommended using smaller machinery or simple motor-manual cutting or notching and immediate stump or stem treatment with glyphosate.

It is suggested that a sustained programme over 10 years be put in place. Treatment involves the preparation of a 14% glyphosate herbicide mix using Roundup Bioactive and add a non-toxic colouring dye. Using an axe or chainsaw, cut 2-3 notches around *Rhododendron* stems below the first leaf. Spray small amount of herbicide mixture directly into the cuts. This should be repeated annually until the stem is dead.

10. Access

The harvesting of timber requires good access for machinery and timber haulage. Considerable investment is currently being made in improving such access throughout the estate. This activity is largely down the eastern side of the estate where most of the forest harvesting activities will take place. Some additional stacking and turning points may be required in order to reduce disruption to other estate activities and to improve logistics for haulage operations. These can be prescribed and agreed as part of specific harvest operations. In terms of access for timber haulage vehicles to the estate road network, it is recommended that this be via the southern access point adjacent to Plots 26 & 27.

While the maintenance of certain access to native woodland areas is desirable, this should be restricted to low impact tracks with no importation of stone and kept for low density recreational / management / research purposes. It is not appropriate to develop roadways through the high value / ancient native woodland areas using imported stone as this has the potential to alter the soil chemistry either side of the roadway and consequently the flora that will grow there. It will also lead to greater disturbance levels in these areas which are best kept as undisturbed as possible.

11. Attitude to Non Native Species such as Beech and Chestnut

In the native woodland areas there are large veteran specimens of non-native species such as European Beech (*Fagus sylvatica*) and Spanish Chestnut (*Castanea sativa*). These species while of individual ecological value, do not belong as part of the native woodland flora. They are not invasive and as such they are not an immediate threat to the viability of the native woodland. However, the shade tolerant nature of the beech in particular means that it has the ability to alter the native woodland dynamic over time. This may become more pronounced as the new deer management regime progresses and there are greater opportunities for natural regeneration to progress. While dead-wooding through ring barking of some of these trees is an obvious measure that can be easily implemented, consultation with the NPWS will be required to agree a strategy for the phasing out of these and other non-native species from the core native woodland areas. It is suggested that this be done in the context of a Native woodland conservation scheme application to the Forest Service.

12. Tending in young stands (pre-commercial thinning)

There are 60.86 hectares (Plots 12, 13, 17, 24, 49, 60, 61 & 62) where tending is prescribed. Tending is a low intensity pre-commercial thinning that is carried out by chainsaw following marking (**Section 8**). The purpose of this is to intervene in young stands (and sometimes the understorey of older stands) to favour particular desired trees that may not progress without such an intervention. Typically tending involves halo thinning around these selected trees to allow their progression to a more advanced stage when first thinning (**Section 7**) will take place. Timber cut during tending operations is generally not extracted from the wood but can be removed if accessible / practical.

13. Enrichment Planting (including through laurel chip)

Enrichment planting is the introduction of planted trees into woodland areas to help the development of an understorey and to introduce diversity of species where it is not possible or where natural processes associated with regeneration have failed. There has been some enrichment planting in the native woodland areas over the last decade that requires maintenance but an enhanced programme is required. While natural regeneration is the preferred means of woodland development at Abbey Leix, enrichment planting is required in the short to medium term. Also, while it is intended to reduce deer impact on the woodlands to a sustainable level (**Section 6**), there is also a short to medium term need to protect enrichment planting from browsing by deer using a combination of individual tree guards and (very) small deer fence enclosures. Enrichment planting is prescribed in Plots 7, 11, 12, 13, 35 & 49 totalling 76.67 hectares. This is a low intensity operation and not carried out at normal afforestation rates (which are typically 3,300 per hectare for broadleaves). Stocking should instead be irregular (unevenly spaced), opportunistic (following canopy gap opportunities) and sporadic (in pockets across the wood).

14. Development of a Seed Collection and Nursery Programme

It is recommended that Abbey Leix Estate develop a capacity for raising native trees (and other plants) that can be used for enrichment planting in the estate. This work should focus on the less successfully regenerating species in the woodlands, such as Sessile oak, Scots pine, Yew and Cherry and other species that may be identified as required in the native woodland conservation scheme plans. This function should include locally sourced seed / cutting collection to ensure, where possible, local provenances are utilised. The Forest Service regulates such activities and it will be necessary to engage with them to:

- Register as a supplier of forest reproductive material (both as seed collectors and nursery producers / suppliers)

- Utilise existing seed stands at Abbey Leix and potentially register further seed stands where seed is collected and can be traced through Official Certificates of Provenance

15. Archaeological Features / Walls

Abbey Leix Estate is characterised by the presence of many cultural features in the form of old walls, entrances, engineering works etc. In the preparation of individual harvest and access plans, care must be taken to preserve these. In some instances, old stone walls may need to be breached or entrances may need to be widened in order to develop permanent access to timber. Such operations need to be planned and implemented carefully to ensure there is no significant loss in heritage value.

16. Potential Grant Aid from the Forest Service

The Native Woodland Conservation Scheme has already been discussed as a potential source of grant aid for conservation measures in native woodland areas. There are also other grant aid schemes which may be utilised to assist with the forest management at Abbey Leix. These are set out as follows:

Grant Scheme	Description	Grant & Premium Rates	Curraghmore Potential
Afforestation Scheme	Supports the afforestation of new ground. There are a number of different categories and different grants and premiums apply to each.	This varies per species / category but in general the afforestation grant will cover 100% of afforestation costs. The premium also varies per category but is likely to be approx.. €500 / ha. / annum for 15 years.	Not considered as part of this plan but available should additional new areas be planted.
Forest Road Scheme	Supports the development of new forest roads associated with impending harvest operations	€40 / linear meter and capped at 25 m / ha.	Most roads are in place but could be utilised for any future roading requirements
Tending / Thinning of Broadleaves	Supports early intervention (first and second thinning) into broadleaved stands which can be otherwise uneconomic	€750 / ha. for 1 st thinning and €500 / ha. for 2 nd thinning	Plots 2, 3, 12, 13, 16, 17, 24, 34,
Native Woodland Conservation Scheme	Supports the development and enhancement of native woodland – ecological focus. Plans need to be developed jointly between suitably qualified foresters and woodland ecologists	€5,000 / ha. in 2 instalments plus a premium of €350 / ha. for 7 years Note there is a 12 ha. per annum per applicant limit to entries into the scheme	Plots 1, 5, 11, 14 & 15
Woodland	Supports the	€750 / ha. in years 1, 6	Throughout Abbey Leix

Improvement CCF Scheme	implementation of a CCF focused plan over a max. of 10 ha. although more than one application is possible	& 12 of a 12 year plan.	Estate
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17. Felling Licence Requirements

A felling licence (GFL20622) is currently in place at Abbey Leix that was obtained by the previous owner / managers that was for the clearfelling of Plots 6, 18, 36, 37, 38, 40, 42, 45, 47 & 57. Of these, Plot 18 was clearfelled but the remainder are still standing and will not be clearfelled. These now have new prescriptions and will be transformed to permanent forest using CCF management. The same licence included areas for thinning and this will allow thinning to take place in 2022 in Plots 29, 30, 33, 43, 51, 56 & 59 (totalling 19.64 hectares). The licence expires in February 2028. Most areas are therefore either not licenced at all or are inappropriately licenced for clearfelling and not thinning. A new felling licence is therefore required and this will now be applied for on the basis of this plan. It is expected that this licence will be in place for 2023 and will run for 10 years.

18. Production Forecast

This management plan prescribes thinning operations for each plot (where thinning supports the management objectives) over the 10 year planning period. Thinning volumes have been forecast per hectare as part of this prescription. The timber production forecast per plot is presented separately in the spreadsheet that accompanies this plan but the overall production forecast is as follows:

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Production Forecast (m³)	1528	241	1795	34	1879	0	1715	409	2145	94

Some smoothing of this can be expected to accommodate availability of labour / contractors and to regularise energy wood production for the house and ancillary buildings.

19. Energy Wood Production Potential

The project team at Abbey Leix have raised the possibility of using timber sourced from the woods on the estate for heating / energy creation at the main house and ancillary buildings. While the focus of forest management will be on delivering on the biodiversity and landscape objectives, timber production is a secondary (albeit important) consideration and as part of the plan development a forecast for energy wood production has been prepared as follows:

This is the methodology I have used in producing a potential energy wood forecast for the estate:

1. For each plot there is a prescription, along with a scheduled potential timber production forecast per hectare for the period 2022 – 2031. Some areas will have zero interventions in terms of timber production while others will produce timber regularly as part of their transition to native woodland using “close to nature” Continuous Cover Forestry (CCF) techniques.
2. These per hectare figures are scaled in accordance with the gross area (hectares) per plot. The forecast was then adjusted to account for the fact that, even in productive plots, not all areas will be productive –a netting figure across the board of 80% has been used in this regard.
3. For each plot, an estimate has been made of the percentage energy wood component of the thinnings, these fall into one of 3 broad categories:
 - a. 100% for early broadleaved interventions
 - b. 50% for 1st thinning in conifer dominated stands

c. 25% for later thinnings in conifer and mixed stands

4. This provides a total energy wood production forecast in m³ (volume) per annum which has been converted to green tonnes using a typical volume/weight conversion factor of 1.15. The forecast is based on the silvicultural prescriptions assigned as part of the survey. Obviously this means that there are productive years and lean years. However, this can / will be smoothed if a good energy wood inventory and storage system is put in place. Below are the figures associated with the completed draft plan

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Volumes (m³)	589	174	524	27	438	0	348	309	491	19
Convert to green tonnes	512	151	456	24	381	0	303	268	427	16

The average annual green tonne energy wood production is 253 tonnes / annum. The above figures assume a smooth transition to a new felling licence. In the absence of same, the currently licenced thinning figures are forecast to yield the following energy wood volumes up to the expiry of the licence in 2028:

Year	2022	2023	2024	2025	2026	2027	2028
Volumes (m³)	285	0	117	0	125	0	82
Convert to green tonnes	247	0	102	0	109	0	71

20. Indicative Cash Flow Forecast Associated with Plan

The cashflow forecast is a very general outline forecast associated with implementing the forest management plan. Obviously, more specific market prices will be agreed at the time of each thinning intervention. General volume and value figures have been applied as follows in generating the forecast:

- The Native Woodland Conservation Scheme is used for works in the Native Woodland areas and these operations are cost neutral with the exception of the cost of plan preparations which are budgeted at €2,000 per plan.
- The native woodland conservation premium is drawn on grant aided areas @ €350 / ha. for 7 years
- Broadleaved thinnings are cost neutral (with use of Woodland Improvement Grant) and extracted timber is provided as wood energy for the house and ancillary buildings.
- Early conifer thinnings are cost neutral (from sale of pallet wood) and extracted timber provided as wood energy for the house and ancillary buildings.
- Semi-mature conifer thinnings yield €20 / tonne after harvest costs.
- Mature conifer thinnings yield €40 / tonne after harvest costs.
- Enrichment Planting budget of €500 / ha. in 1st year and €100 / ha. in subsequent 3 years
- Restocking costs of €6,000 / ha in 1st year and €1,000 / ha. in subsequent 4 years
- Sporadic motor manual, low impact, Rhododendron and Laurel Control costs of €1,000 / ha. for 2 years – note this is only for the areas where these invasive species are occasionally clumped and not for the main control areas which have largely been completed / are in hand.
- Annual Forest Management Fees of €80 / ha. to cover all management input including implementation of plan, marking of thinnings, supervision of work, liaison with estate team, preparation of applications to the Forest Service etc.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenues	€36,650	€4,820	€58,721	€8,943	€69,551	€17,343	€74,081	€18,583	€85,603	€13,606
Costs	€132,365	€54,910	€42,448	€41,120	€38,671	€21,903	€21,571	€21,571	€21,571	€21,571
Difference	-€95,715	-€50,090	€16,273	-€32,178	€30,879	-€4,561	€52,509	-€2,989	€64,031	-€7,966

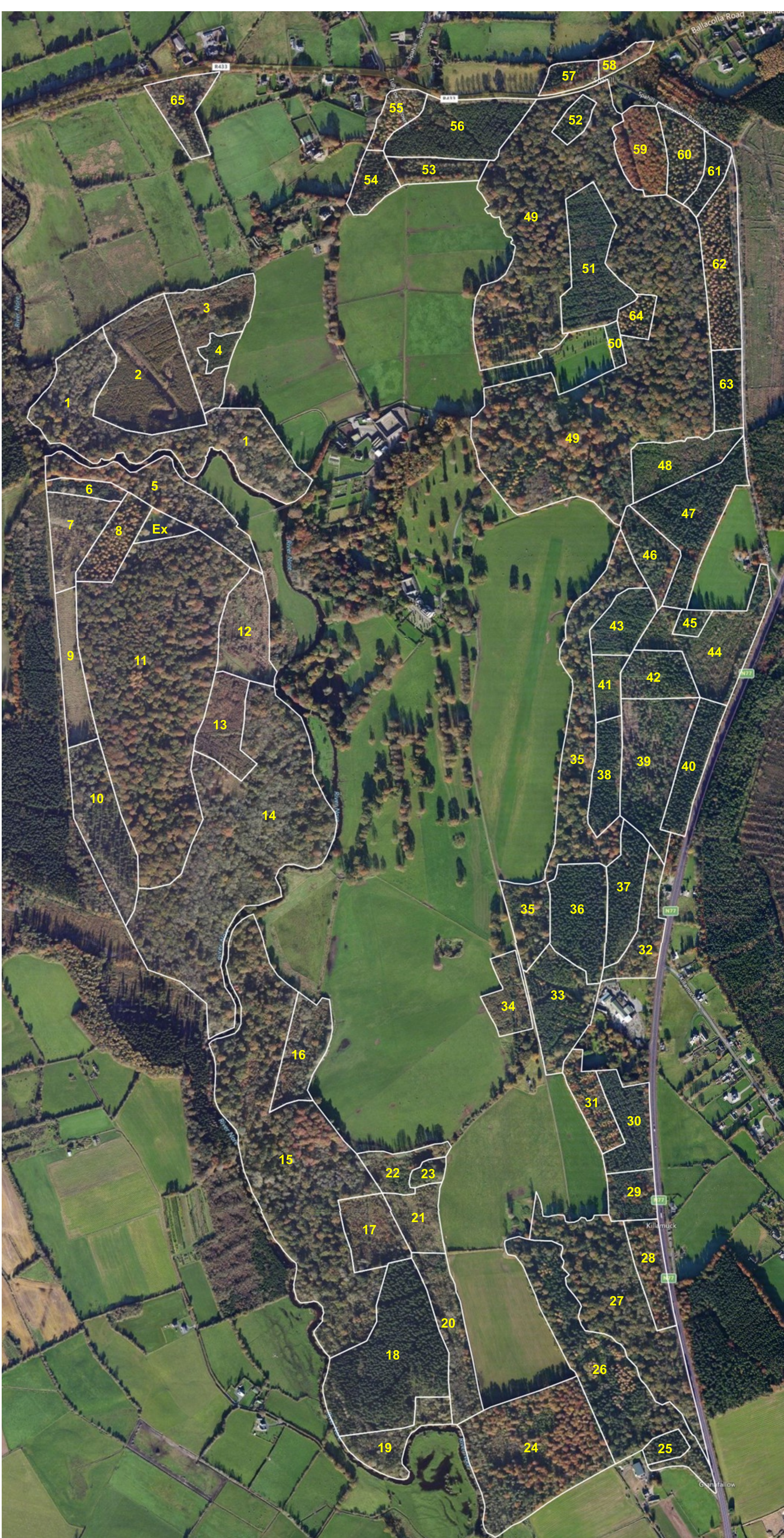
Plot Details				Species Details		Prescription			
Plot No	Land Use Type	Area (Ha)	Year Planted	Species Name	Canopy %	Environmental Designation	Current Licence (Y/N)	Management Prescription	Forest Service Grant Potential
1	BHF	9.42	1800 / 1870	Oak, Ash, Adb - Additional broadleaves & some scrub	70	SAC, SPA along river		Prepare Native Woodland Conservation Plan	NWCS
2	BHF	6.25	2002	Oak, Scots Pine (SP)	80			Thin to favour oak and diversity	WIS
3	BHF	3.59	2002	Oak	70			Thin to favour oak and diversity	WIS
4	CHF	0.62	2002	NS - Norway spruce	90			Selective thin	
5	BHF	4.13	1918	Ash, Beech - BE, Sycamore - Syc, SS & Adb	70	SAC, SPA along River Nore		Prepare Native Woodland Conservation Plan	NWCS
6	CHF	0.76	1974	NS & Japanese larch - JL	65	SAC		Selective thinning 2024, 2030	
7	BHF	2.53	1945	Ash	80	SAC		Selective thinning 2024 & 2030. Enrichment planting in open area's	
8	CHF	1.91	1974	JL, NS	60	SAC		Selective thinning 2024 & 2030 - good understorey development	
9	U/P	2.17	Unplanted	Unplanted		SAC		Bog Area, No intervention. Area is colonising with BI, Ald & Whitethorn along eastern boundary.	
10	MHF	4.09	2018	NS, Oak, Adb, Scrub	50	SAC		Restock has failed - replant with native woodland. Deer fencing required.	
11	BHF	22.19	1800 / 1925	Oak, BE, SP, Cherry-Ch, Adb	60	SAC		Prepare Native Woodland Conservation Plan Enrichment planting and phased removal of beech to favour oak and other natives	NWCS
12	BHF	2.99	2002	Birch - Bi, Ash, Willow, Scrub, Oak, Poplar - POP	50	SAC, SPA along River Nore		Tending and Enrichment Planting	WIS
13	BHF	2.39	2004	BI, Scrub, Adb	60	SAC		Tending and Enrichment Planting	WIS
14	BHF	18.62	1800	Oak, Ash, Adb	70	SAC, SPA along River Nore		Prepare Native Woodland Conservation Plan	NWCS
15	BHF	18.82	1800 / 1970 / 1997	Oak, Adb, Oak understorey in WIS c.2000	70	SAC, SPA along River Nore		Prepare Native Woodland Conservation Plan Leave alone, phased ringbarking of exotic species, invasive control required.	NWCS
16	BHF	2.47	1800 / 1997	Oak, Adb	80	SAC		Depending on access - thin 2023 & 2029 favouring quality Oak stems	WIS
17	BHF	2.29	1997	Oak, Alder - Ald, Syc, Adb	50			Tending to favour Oak in 2025, wet site, thin in 2030	WIS
18	CHF	8.25	1980	SS	80	Part SAC, SPA along River Nore		Restock with native woodland, windrow & inverted mounding needed. Deer fence also required.	
19	BHF	2.04	1800 / 1997	Oak, Adb, Scrub		SAC, SPA along River Nore		Wet woodland, leave for planing period	
20	BHF	2.91	2004	Ash, Ald, Adb				Leave alone, ring bark conifers	
21	BHF	1.69	2005	Syc, Ash, BI regeneration, Ald & Scrub				Rack and thin in 2023 & 2029, fell DF out of plot.	
22	MHF	0.48	1961 & 2002	Douglas Fir - DF, Adb				Broadleaves beginning to become dominant, leave alone	
23	MHF	1.43	1961 & 2000	DF, NS & Adb				Being used for game keeping.	
24	MHF	8.88	1914 / 1998	Ash, Syc, BE, DF, SP, Scrub (sections)		SAC, SPA along River Nore		Tending 2023, thinning 2029, good structure within woods	WIS
25	MHF	0.63	1800 / 1920 / 1962/63	NS, DF, European Larch - EL, Oak, Grand Fir - GF				Selective thin 2024 & 2028	
26	MHF	7.98	1800 / 1920 / 1962/63	Oak, Western Hemlock - WH, GF, NS, JL & DF		SAC		Rack & select, halo thinning favouring native species 2025 & 2030	
27	MHF	8.15	1800 / 1964	Oak, Ash, DF		SAC		Upperplant ash and replant open area's, Selective think 2028, road access is provided to the south	

Plot Details				Species Details		Prescription			
Plot No	Land Use Type	Area (Ha)	Year Planted	Species Name	Canopy %	Environmental Designation	Current Licence (Y/N)	Management Prescription	Forest Service Grant Potential
28	MHF	1.88	1920	EL, BE, GF				Mark & thin 2024 & 2031	
29	MHF	1.39	1987	SS, Oak, BE			Y	Rack & thin 2024 & 2028.	
30	CHF	2.31	1986 /87	SS, some DF, with Oak & BE along roadside			Y	Rack & thin 2024 & 2028.	
31	MHF	1.68	1975	EL, DF, Ash, Lawsons, Adb				Rack & thin 2024 & 2028.	
32	MHF	2.04	1840	Oak, BE, Western Red Cedar - WRC, SP				No thinning treatment, control laurel & rhodo	
33	CHF	3.53	1977	DF & SS, veteran Oak			Y	Rack & thin 2024 & 2028.	
34	BHF	1.59	2000	Oak, some Noble Fir - NF				Rack and halo thin 2024 & 2030, high prune Oak.	WIS
35	BHF	8.78	1800 / 1820	Oak, BE, Adb				Enrichment planting required in open spaces i.e. laurel controlled areas.	
36	CHF	3.45	1977	SS				Selective thinning 2024 & 2028.	
37	CHF	2.46	1962	SS, WH				Selective thinning 2024 & 2028. Already structural development.	
38	CHF	1.89						Clearfelled. Restock with Native Woodland, Oak will need to be planted in tubes or a deer fence erected. Treatment plan for control of rhododendron required.	
39	CHF	4.92	1964	SP, Adb				Rhodo control, no thin on raised bog, WH to be removed on a phased basis before becoming invasive	
40	CHF	2.18	1959	NS, some SP, understorey of beech, holly, WH & Hazel				Selective thin 2024 & 2028, rhodo control.	
41	CHF	1.11	c.2000	DF, SS SP, BI				First thin 2022, second thin 2028, focus on best stems and diversity, rack and selection. DF is poor, soil is too wet.	
42	CHF	1.97	1964	SP, NS, BI & Adb				Rhodo control, no thinning treatment. Largely consisting of raised bog.	
43	CHF	1.91	c.2000	SS			Y	First thin 2022, Second thin 2026, Third thin 2030. Selective treatment plan for control of pockets of laurel and rhododendron	
44	CHF	4.39	2000	SS, DF, Adb				First thin 2026, Second thin 2030.	
45	CHF	0.46	1962	DF				Selective thin 2022, selective thin 2028	
46	CHF	1.82	1992	SS, DF, Syc				First thin 2022, second thin 2026, third thin 2030. Mark and select, favour diversity.	
47	CHF	4.43	1978	SS				First thin 2022, second thin 2026, third thin 2030. Mark and select, favour diversity. Control rhododendron.	
48	MHF	2.61	1820 / 2000	Oak, DF				First thin 2022, second thin 2028, focus on best stems and diversity, rack and selection. DF is poor, soil is too wet.	

Plot Details				Species Details		Prescription			
Plot No	Land Use Type	Area (Ha)	Year Planted	Species Name	Canopy %	Environmental Designation	Current Licence (Y/N)	Management Prescription	Forest Service Grant Potential
49	BHF	37.79	1770	Oak, Adb				No thin - Annual treatment of laurel and Rhododendron for three years, enrichment planting of Oak where light and opportunities arise, Tending of thicket stage regeneration to favour Oak in 2027, judicious removal of conifers (DF, GF, WH)	
50	CHF	0.35	1993	SS				First thin in 2022, favour species for diversity (Bi/Ash etc), second thin in 2026	
51	CHF	4.06	1993	SS			Y	First thin in 2022, favour species for diversity (Bi/Ash etc), second thin in 2026	
52	CHF	0.68	1963	WRC				Thin in 2026	
53	CHF	1.38	1998	NS, Adb				Thin in 2022,2026 & 2030	
54	CHF	1.28	1970	NS, Adb				Thin in 2022,2026 & 2030	
55	MHF	1.12	1978	JL, BE, Adb				Thin in 2022,2026 & 2030	
56	CHF	4.12	1990	NS			Y	First thin in 2022, Second thin in 2026	
57	MHF	0.88	1963	NS,BE, SP				Develop Access, Selective thin 2024, Control Laurel	
58	BHF	0.52	1920	BE, Oak, SP, EL				No intervention, Control Laurel & WH	
59	BHF	2.32	1957	BE			Y	Selective thin 2022, second thin 2029, Occasional Oak located throughout to be favoured during selection. Mark permanent racks to reduce machinery movement.	
60	CHF	1.92	1962	JL & SP (overstorey), Syc, Ash, Be (understorey)				No thin of overstorey, shade tolerant understorey requires tending to waste in 2026, needs to be marked beforehand. Mark permanent racks to reduce machinery movement.	
61	CHF	1.02	1967	NS, JL				Thin of overstorey in 2026, shade tolerant understorey requires tending to waste in 2026, needs to be marked beforehand. Mark permanent racks to reduce machinery movement.	
62	CHF	3.58	1966	NS, JL, Spanish Chestnut - SC				Thin of overstorey in 2026, shade tolerant understorey requires tending to waste in 2026, needs to be marked beforehand. Mark permanent racks to reduce machinery movement. Control rhododendron.	
63	CHF	1.43	1965	NS, Adb				Thin 2026, moderate understorey try to retain during operations. Mark permanent racks to reduce machinery movement.	
64	MHF	0.79	1971 / 1957	JL, some NS, BE				Tidy up blown JL, underplant using Oak where light and opportunities arise.	
65	MHF	1.92	2015	Adb, scrub				Harvested in recent years, coppice regrowth of cut stumps	

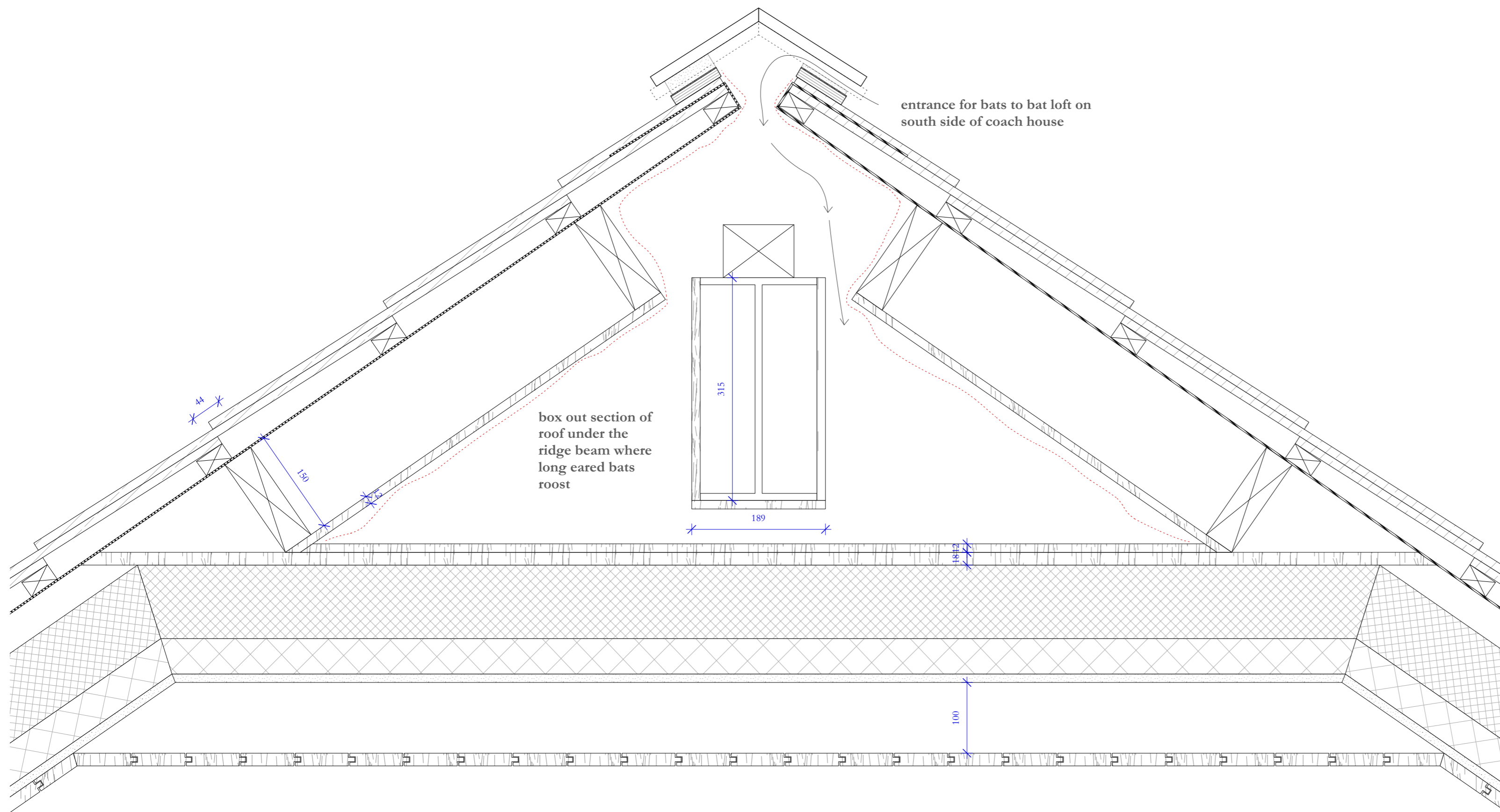
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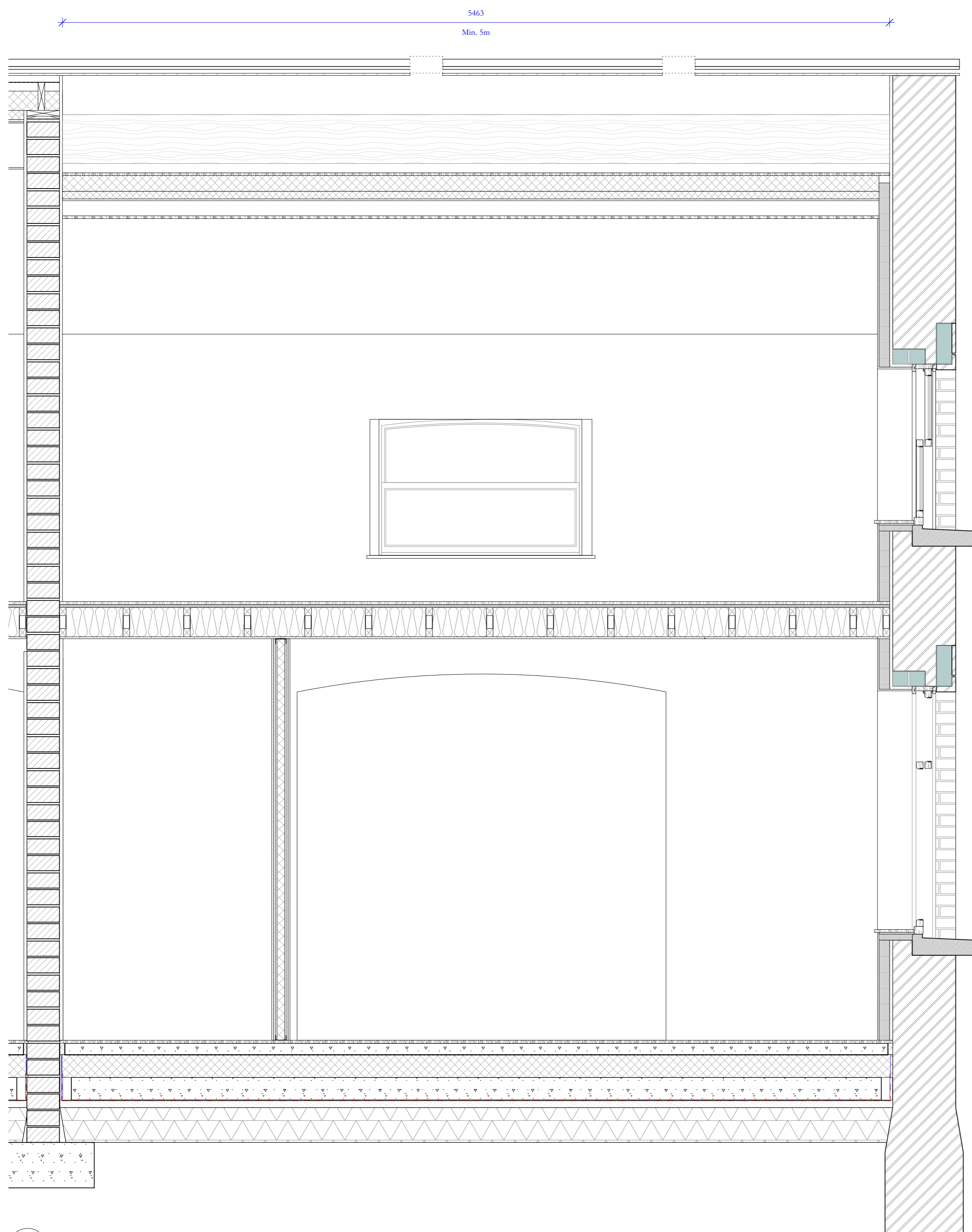


Plot No	Land Use Type	Area in Ha.	Year planted	Species Name
1	BHF	9.42	1800/1870	Oak, Ash, Adb - Other Broadleaves, & some Scrub
2	BHF	6.25	c 2002	Oak, some SP - Scots Pine
3	BHF	3.59	c 2002	Oak
4	CHF	0.62	c 2002	NS - Norway Spruce
5	BHF	4.13	1918	Ash, Beech - Be, Sycamore - Syc, some SS, & Adb
6	CHF	0.76	1974	NS & Japanese Larch - JL
7	BHF	2.53	1945	Ash
8	CHF	1.91	1974	JL, NS
9	UP	2.17	Unplanted	Unplanted
10	MHF	4.09	1975/1870	NS, Adb, Scrub
11	BHF	22.19	1800/1925	Oak, Be, SP, Ch - Cherry, Adb
12	BHF	2.99	c 2002	Birch, Ash, Willow scrub, some Oak & Poplar
13	BHF	2.39	c 2006	Mainly Birch regrowth & scrub & Adb
14	BHF	18.62	1800	Oak, Ash, Adb
15	BHF	18.82	1800/1970/ 1997	Oak, Adb, Oak planted as understorey in WIS c. 2000
16	BHF	2.47	1800/1997	Oak, Adb
17	BHF	2.29	1997	Syc, Alder, Birch, Adb
18	CHF	8.25	1980	SS
19	BHF	2.04	1800/1997	Oak, Adb, Scrub
20	BHF	2.91	c 2004	Ash, Alder, Adb
21	BHF	1.69	c 2005	Ash, Birch regeneration, Alder, Syc & scrub
22	MHF	0.48	1961 & c 2002	DF & Adb
23	MHF	1.43	1961 & c 2000	DF, NS & Adb
24	MHF	8.88	1914/1998	Ash, Syc, Be, DF, SP, Scrub sections
25	MHF	0.63	1800/1920/ 1962/1963	NS - Norway Spruce, EL - European Larch OAK - Oak, GF.
26	MHF	7.98	1800/1920/1962 /1963	Oak, WH, GF, NS, JL & DF
27	MHF	8.15	1800/1964	Oak, Ash, - Some Douglas Fir
28	MHF	1.88	1920	EL - European Larch, Be - Beech
29	MHF	1.39	1987	SS, Oak, Be
30	CHF	2.31	1986/1987	SS with Oak & Be along roadside
31	MHF	1.68	1975	DF, Ash, Adb
32	MHF	2.04	1840	Oak, Be, WRC, SP
33	CHF	3.53	1977	SS
34	BHF	1.59	c 2000	Oak, some NF
35	BHF	8.78	1800/1820	Oak, Be, Adb
36	CHF	3.45	1977	SS
37	CHF	2.46	1962	SS WH
38	CHF	1.89	1980	NS - Norway Spruce, some GF
39	CHF	4.92	1964	SP - Scots Pine, Adb
40	CHF	2.18	1959	NS, some SP
41	CHF	1.11	1961	NS - Norway Spruce, SP - Scots pine
42	CHF	1.97	1964	SP & Adb
43	CHF	1.91	1961	SS
44	CHF	4.39	c 2000	SS
45	CHF	0.46	1962	DF
46	CHF	1.82	1992	SS - Sitka Spruce, DF - Douglas Fir, Syc
47	CHF	4.43	1978	SS
48	MHF	2.61	1820/2000	Oak, DF
49	BHF	37.79	1770	Oak, Adb
50	CHF	0.35	1993	SS - Sitka Spruce
51	CHF	4.06	1993	SS - Sitka Spruce
52	CHF	0.68	1963	WRC - Western red cedar
53	CHF	1.38	1998	NS & Adb
54	CHF	1.28	1970	NS - Norway Spruce & Adb
55	MHF	1.12	1978	JL - Japanese Larch, Be & Adb
56	CHF	4.12	1990	NS - Norway Spruce
57	MHF	0.88	1963	NS, Be, SP
58	BHF	0.52	1920	Be, Oak, SP
59	BHF	2.32	1957	Be - Beech
60	CHF	1.92	1962	Japanese Larch & SP - Scots Pine
61	CHF	1.02	1967	NS, JL
62	CHF	3.58	1966	JL NS
63	CHF	1.43	1965	NS, Adb
64	MHF	0.79	1971/1957	NS - Norway Spruce/Be - Beech
65	MHF	1.92	1962	Ash, Beech, SS, scrub Adb
Total Area		269.64		

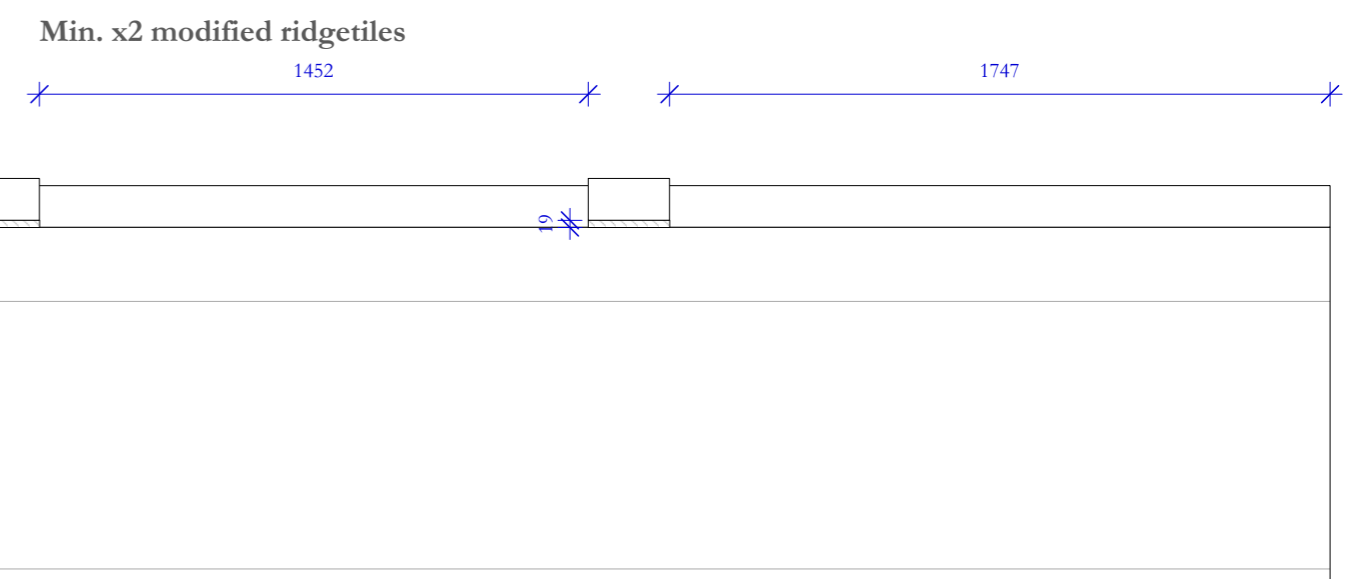
APPENDIX C



1 Bat Loft
810-B
1:5



2 Bat Loft Long Section
810-B
1:20



3 Bat Loft Ridge Elevation
810-B
1:20



Notes:

Bat Loft Design for Soprano Pipistrelle:

A Roost box for suitable crevice dwelling bats will be attached to the rafters within the roof and Hessian Material (see red dashed line) will also be attached to underside of rafters to create suitable roosting sites and surface on which bats can grip and attached

This will replicate the current features on the Site. Bats will be able to access the roof space of the coach house via bat-specific ridge tiles.

Breathable membranes should not be used as these can entangle and trap bats in flight. Smooth plastic roof lining will be avoided as bats cannot hang freely from this.

The optimum season for works carried out at summer roosting sites is 1st September to 1st May. Therefore, all roof works on the coach house should be completed prior to 1st May 2024.