



Bat Conservation Ireland

Bats and Appropriate Assessment Guidelines



Photograph: Lesser horseshoe bat © Brian Keeley

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This guidance is prepared by Bat Conservation Ireland and provides advice for developers, their consultants and competent authorities on how to address adequately potential effects on lesser horseshoe bats in the context of Appropriate Assessment. It complements existing guidance such as “Bat Mitigation Guidelines for Ireland” (DoEHLG 2006) and other guidance on AA listed in Appendix 1.

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Photograph: Lesser horseshoe bat in Kiltartan (Coole) Cave SAC (286) © Tina Aughney

1. Introduction

Appropriate Assessment (AA) is the term given to the formal¹ process by which any plan or project² proposal undergoes an examination of its potential likely significant effects on sites designated as being of European-level importance. These sites, (termed “European sites” in Irish legislation and forming part of the EU-wide Natura 2000 network of protected sites) in Ireland constitute Special Areas of Conservation (currently candidate SACs or cSACs) and Special Protection Areas (SPAs). These sites are selected and designated as such on the basis of the presence and conditions of certain species and/or habitats. [Note selection of sites is on the basis of eligibility criteria and relative importance – Habitats Directive Annex III criteria.] SPAs relate to birds whilst cSACs are designated for Annex I habitats and/or Annex II species, including, in Ireland, one species of bat.

Several cSACs in Ireland have been designated on the basis of their importance for populations of **Lesser Horseshoe Bat**, including breeding and/or hibernating sites for the species. This is the only species of bat listed on Annex II that can be a qualifying interest of cSACs in Ireland and it is the only bat species that should form the focus of any Appropriate Assessment when it is a qualifying interest of a site. Note that the AA process may apply to impacts inside as well as outside cSACs. Other bat species may be present within European sites or other nature conservation sites but these do not form the focus for Appropriate Assessment. Similarly, lesser horseshoe bats may occur in a cSAC but not be listed as a qualifying interest.

All bats in Ireland are protected under national and international law.

- Wildlife Act 1976 and Wildlife (Amendment) Act, 2000 (S.I. No. 38 of 2000)
- European Communities (Birds and Natural Habitats) Regulations, 2011.

It is considered an offence to:

- Deliberately or Intentionally kill, injure or capture a bat;
- Deliberately disturb a bat
- Possess or control any live or dead specimen or anything derived from a bat
- Wilfully interfere with any structure or place used for breeding or resting by a bat
- Wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose
- Damage or destroy a breeding site or resting place of a bat, whether accidental or deliberate.

A grant of planning permission does not authorise any of these activities listed above. A separate derogation licence is required. This derogation should be applied for and preferably acquired in advance of a decision on planning permission being received. The National Parks and Wildlife Service may decide that a licence cannot be granted and the Local Planning Authority are obliged to consider impacts on protected species as material considerations.

Impacts on bats may also be the subject of claims under the European Communities (Environmental Liability) Regulations 2008 where bat and their roosts may have been adversely affected by unauthorised activities. Costs of remediating damage to roosts and bat populations may be recovered from those responsible.

¹Required under Article 6(3) of the *Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora* (as amended). This is transposed in Ireland by the European Communities (Birds and Natural Habitats) Regulations, 2011 and the Planning and Development (Amendment) Act, 2010.

² “Projects” may also constitute small-scale activities such as forestry, landscaping or erection or demolition of structures, outside of the normal definition of “development”.

2. How to deal with Lesser horseshoe bats at different stages of the AA process

The overall AA process is broken down into a series of steps and tests that the proposed project or plan may have to undergo to demonstrate, ultimately, that no adverse effects on the integrity of the cSAC will result. The reason AA is needed may result from/be triggered by the potential for effects on other habitats or species but an AA could necessitate scientific examination of potential effects on lesser horseshoe bats where these are a qualifying interest.

Any cSAC that has LHBs as a qualifying interest will also have a “Conservation Objective”. This aims to manage and protect the qualifying interest. At the time of writing, there are only generic Conservation Objectives for cSACs with lesser horseshoe bats in Ireland. For lesser horseshoe bats this comprises:

*Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:
Rhinolophus hipposideros [1303]*

AA is focused on the impact on this Conservation Objective.

Stage 1: Screening – to determine if AA required: This stage asks “*is there any potential for significant effects on the cSAC in view of its conservation objectives (taking other plans and projects into account)?*”

It also should determine if the proposal is directly related to the management of bat roosts or habitats used by bats – as these are exempt from further assessment.

The competent authority (e.g. Local Planning Authority, An Bord Pleanála and Environment Protection Agency (EPA) – whoever is issuing the consent for the proposal) has overall responsibility for screening. However a proactive proponent will provide all necessary information to allow this stage to be completed.

Good practice advice:

- All cSACs within 15km of the proposal that contain lesser horseshoe bats as a Qualifying Interest should be considered as potential impact receptors at this stage. This generates a long list that may be shortened during the next steps.
- A suitably-qualified bat expert must decide as to whether there is any risk that the proposal could impact on:
 - roosts or associated structures (access to roosts) within the cSAC directly or
 - roosts within the cSAC indirectly via fragmentation of flight paths (or noise, vibration, lighting, etc) or
 - roosts outside of the cSAC that may form an important supporting role to populations resident within the cSAC (e.g. hibernacula outside of a cSAC with a maternity roost) or
 - loss of habitat, feeding resources or disruption to important feeding areas of flight paths for populations resident within the cSAC.
- Whilst there may be data on roost locations (from the National Parks and Wildlife Service (NPWS)) there is usually little data on flight paths and feeding areas. Therefore it is likely that proposals for plans and projects proposed within 6km of a roost that is the basis for the cSAC designation may inevitably be “screened in”.
- Local authorities may make the screening process easier by maintaining a database of roost locations in cSACs and a 6km buffer around these roosts. 6km is often quoted as a maximum foraging range for lesser horseshoe bats – but this may be revised as we study this species more.

- Extensive surveys do not normally need to be carried out at this stage as the trigger for screening is very 'light'. There only has to be a "risk" of an effect or "uncertainty" in relation to an impact, for it to progress to Stage 2. If surveys are required in order to screen it "out" then it is likely that Stage 2 is required. (See below "Data collection and survey techniques").
- At the end of the process the proponent may have already decided that a full Stage 2 assessment is required. Alternatively the competent authority may have to instruct the proponent to carry out a Stage 2 AA, or not, depending on the outcome of the results.

Stage 2: Appropriate Assessment: This involves undertaking a scientific examination of the significance of the potential impact, taking cumulative effects into account, and determining if these can be mitigated such that adverse effects on the integrity of a site do not result. The resulting report is a Natura Impact Statement (NIS – for a project) or Natura Impact Report (NIR – for a plan).

Good practice advice:

- It is unlikely that a proposed project or plan would intentionally propose to remove an important bat roost within a cSAC designated for this species, as this itself would be likely to result in adverse effects on the integrity of the site arising, generally leading to refusal. Therefore the scenario that will be most likely encountered would be modifications or other disturbances to a roost, or its entrance, or the loss of supporting roost and feeding areas both within and outside of cSAC boundaries.
- It may therefore be important to determine if the population of bats resident within the cSAC is reliant on such features. This may involve surveys to determine where these bats are flying and feeding and to identify any other roost or roosts being used.
- Surveys may involve radio-tagging bats under licence at the roost within the cSAC and following their movements over several nights. This is not regarded to be necessary for most scenarios but may be required where it is needed to demonstrate the interaction between the proposed project/plan and the local bat population. Such surveys required site-specific licencing issued by the NPWS. (See below "Data collection and survey techniques").
- Previous surveys of radio-tagged bats have found that they do not necessarily confine themselves to the cSAC area and therefore are vulnerable to impacts that occur outside of the cSAC. This must be taken into account in the assessment.
- Mitigation measures should follow the hierarchy of 1) avoid the impact, 2) reduce or minimise the scale or severity of the impact and, if these are not possible, then 3) abate the impact at the source or 4) abate the impact at the receptor through provision of alternative feeding areas, roosts or flight path features (e.g. hedgerows, treelines).
- In order to meet the strict level of protection afforded to this bat species it will be important for mitigation measures to be site-specific, avoiding generic recommendations.
- All survey data, maps and other relevant information should be presented in a Natura Impact Statement or NIR. Proponents and Competent authorities should satisfy themselves that the following questions have been answered in the Natura Impact Statement:
 - What is the cSAC designated for – the SAC is designated for the species; the feature of importance may be the roost (e.g. maternity roost, hibernacula)?
 - Will the roost within the cSAC be directly affected?
 - Have all roosts that could be affected been identified?

- Data on some cSACs may be old and require additional roost surveys if it is within the zone of influence of the project or plan.
- Will there be any fragmentation or loss of flight paths from the roost or roosts within the cSAC?
- Lighting impacts on roosts, flight paths and feeding areas should be addressed.
- Will there be any loss of feeding resources?
- Are there clear conclusions that identify that there will be no residual impacts on the “integrity” (i.e. population size not being reduced below 100 bats in a maternity roost, no effects on range of national population, no effects on long-term stability of population and range).

The competent authority must be satisfied that the nature of the plan or project is fully described, the potential impacts are fully assessed, and that all necessary mitigation is specified, can be achieved and is likely to be successful within an appropriate timeframe, such that there is confidence that adverse effects on the integrity of a site do not result.

It is envisaged that most AAs will conclude at the end of this stage as most projects or plans can be revised to remove any likelihood of significant impacts. Proposals that proceed beyond Stage 2 may require more radical revisions.

Stage 3: Alternative Solutions: if mitigation measures are not predicted to be successful, alternative locations or strategies may need to be considered. This may include looking at sites beyond the 6km buffer zone, or habitat creation or improvement.

Stage 4: Imperative Reasons of Overriding Public Interest (Article 6(4)): in occasional circumstances, a project or plan may be permitted if it going to affect the cSAC but if there are no reasonable alternatives and it is deemed to be of “overriding public interest”.

These guidelines intentionally do not cover Stages 3 and 4 as they are regarded to be less common scenarios and require more detailed coverage. Published guidance from the EC will inform practitioners and competent authorities of the requirements for these stages.

3. AA of projects vs. AA of plans

There are clear differences between the AA of projects, for example wind turbines, deforestation or urban development's and the AA of plans such as County Development Plans, Wind Energy Strategies and Local Area Plans. In projects and plans, the scale and amount of data needed to prepare an NIS or NIR are quite different and relate directly to the nature, scale and amount of detail on what the physical impacts of the proposal will be. Bat surveys may be required for both AA for projects and plans depending on the level of detail and implications of its implementation. Landscape-level changes are particularly important for bats. Plan-level AAs may rely upon data held by Bat Conservation Ireland and predictions of bat activity by the Bats and Landscape Project (data held by the National Biodiversity Data Centre). In some cases there may be a need for bat surveys for Plan-level AA if there is a known roost within a nearby cSAC (within 6km) that could be directly or indirectly affected. Such surveys could help to identify bat flight paths, feeding areas and supporting roosts that can be protected by sympathetic plan-drafting.

It should be noted that impacts on all bats in all areas (not just cSACs) are relevant for Strategic Environmental Assessments of plans and programmes.

4. Data collection and survey techniques

Surveys for Lesser Horseshoe bats are similar to those for other bat species but must take into account the fact that it is difficult to detect Lesser Horseshoe bats on a handheld heterodyne detector and the species can therefore be present in an area without being identified by this method alone. Therefore, in some cases, it is valid to use long-term, unattended, detectors or to carry out manual bat surveys over several nights to ensure a greater chance of being able to determine use of an area by this species.

- a) **Surveys during Stage 1 Screening:** for many small-scale developments at a distance from a cSAC it is unlikely to be necessary to carry out bat surveys. It may be possible to screen such projects "in" or "out" based upon desktop records or an analysis of the habitats within the site. If the proposal is located within 6km of a roost within a cSAC then it could be difficult to screen it out without scientific studies.
- b) **Surveys during Stage 2 AA:** these should aim to determine the relationship between the lands affected by the proposal, the way they will be affected and the populations of bats using the cSAC. The number of surveys required, number of surveyors and the period of time for survey are dictated by the following factors:
 - a. Area of lands affected;
 - b. Whether the nature of the potential impact is on roosts, flight paths or feeding areas;
 - c. Complexity of lands affected and the ability to cover ground during surveys;
 - d. Weather conditions during surveys (surveys may need to be repeated if temperatures fall below 6° Celsius or if it is very wet and windy).
 - e. Type of equipment being used e.g. manual transects vs. fixed, unattended, long-term monitoring.
- c) In all cases it is expected that multiple surveys, in suitable weather conditions, are required during the period May-September (or winter, when looking for hibernation sites).
- d) Surveys of buildings for evidence of bat usage can be undertaken at any time of year but may require follow-up emergence/occupancy surveys at the appropriate time of year to support any conclusions made.
- e) Intensive radio-tracking of bats is only justified where there is significant doubt over the linkages between the proposal location and the cSAC populations. Since tracking involves capture and marking of bats this can only be carried out under a specific licence by experienced bat workers/ecologists.

5. Skills and competencies

Bat surveyors should be experienced at surveying for Lesser Horseshoe bats (preferably in Ireland) and have experience of the survey techniques being applied. Where roost visits are required to confirm occupancy then the surveyor must be in possession of a valid derogation licence allowing roost disturbance. Licences are also required for capturing and handling bats and for radio-tracking studies.

6. Survey seasonality

Lesser horseshoe bats hibernate during the period November-March although this is dictated by climatic conditions which must be taken into account when surveying. Summer activity surveys are best undertaken from May-September.

All surveys must record the temperature and general weather conditions as this can affect the bat activity patterns from night to night.

Appendix 1 General guidelines and publications

Kelleher, C. and Marnell, F. (2006). *Bat Mitigation Guidelines for Ireland* Irish Wildlife Manuals No. 25, National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

Marnell, F., Kingston, N. and Looney, D. (2009). *Ireland Red List No. 3: Terrestrial Mammals*, National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*, English Nature, Peterborough, UK.

Mitchell-Jones, A.J. and McLeish, A.P. (2004). *Bat Workers' Manual* (3rd edition), Joint Nature Conservation Committee, Peterborough, UK.

Schofield, H. W. (2008) *The Lesser Horseshoe Bat Conservation Handbook*. The Vincent Wildlife Trust, www.vwt.org.uk.

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Bat Conservation Ireland (2012) *Wind Turbine / Wind Farm Development Bat Survey Guidelines*, Version 2.8, December 2012. Bat Conservation Ireland, www.batconservationireland.org.

Bat Conservation Ireland (2010) *Bats in Buildings: Guidance notes for planners, engineers, architects and developers*. Bat Conservation Ireland www.batconservationireland.org.

Bat Conservation Ireland (2010) *Bats & Lighting: Guidance notes for planners, engineers, architects and developers*. Bat Conservation Ireland www.batconservationireland.org.

Bat Conservation Ireland (2010) *OPW Arterial Drainage Maintenance: Guidance notes – protection and enhancement for bats*. Bat Conservation Ireland www.batconservationireland.org.

Bat Conservation Ireland (2010) *Bats and Waterways: Guidance notes for planners, engineers and developers*. Bat Conservation Ireland www.batconservationireland.org.

Roche, N. (2009) *Irish Bat Identification Card*. Bat Conservation Ireland www.batconservationireland.org.

Appendix 1 Basis for Assessment Methodology

The Appropriate Assessment should have regard to the following guidance and publications (as relevant):

- *Appropriate Assessment of Plans and Projects in Ireland – Guidelines for Planning Authorities*. Department of Environment, Heritage and Local Government, (Rev Feb, 2010)
- *Circular Letter NPW 1/10 & PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive: guidance for Planning Authorities*. Department of Environment, Heritage and Local Government, 11th March 2010.
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6 (3) and (4) of the Habitats Directive 92/43/EEC*. European Commission, 2001.
- *Managing Natura 2000 Sites – The Provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC*. European Commission, 2000.
- *Guidance document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC – Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission*. European Commission, 2007.
- *European Communities (Birds and Natural Habitats) Regulations 2011 and Part XAB of the Planning and Development Amendment Act 2011*.

Appendix 2 cSACs designated for Lesser Horseshoe Bat

Each site name includes a clickable hyperlink to the NPWS website where further details may be obtained.

Site Name:	Site Code	County
Ballycullinan, Old Domestic Building SAC	2246	Clare
Danes Hole, Poulnalecka SAC	30	Clare
Dromore Woods and Loughs SAC	32	Clare
East Burren Complex SAC	1926	Clare
Kilkishen House SAC	2319	Clare
Knockanira House SAC	2318	Clare
Moneen Mountain SAC	54	Clare
Moyree River System SAC	57	Clare
Newgrove House SAC	2157	Clare
Newhall and Edenvale Complex SAC	2091	Clare
Old Domestic Building (Keevagh) SAC	2010	Clare
Old Domestic Buildings, Rylane SAC	2314	Clare
Old Farm Buildings, Ballymacrogan SAC	2245	Clare
Pouladatig Cave SAC	37	Clare
Poulnagordon Cave (Quin) SAC	64	Clare
Ratty River Cave SAC	2316	Clare
Toonagh Estate SAC	2247	Clare
Glengarriff Harbour and Woodland SAC	90	Cork
Caherglassaun Turlough SAC	238	Galway
Cregg House Stables, Crusheen SAC	2317	Galway
Kiltartan Cave (Coole) SAC	286	Galway
Lough Corrib SAC	297	Galway
Lough Cutra SAC	299	Galway
Lough Fingall Complex SAC	606	Galway
Ross Lake and Woods SAC	1312	Galway
Blackwater River (Kerry) SAC	2173	Kerry
Cloonee and Inchiquin Loughs, Uragh Wood SAC	1342	Kerry
Glanlough Woods SAC	2315	Kerry
Kenmare River SAC	2158	Kerry
Kilgarvan Ice House SAC	364	Kerry
Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	365	Kerry

Old Domestic Building, Askive Wood SAC	2098	Kerry
Old Domestic Building, Curraglass Wood SAC	2041	Kerry
Old Domestic Building, Dromore Wood SAC	353	Kerry
Curraghchase Woods SAC	174	Limerick
Ballinafad SAC	2081	Mayo
Ballymaglancy Cave, Cong SAC	474	Mayo
Kildun Souterrain SAC	2320	Mayo
Lough Carra/Mask Complex SAC	1774	Mayo
Moore Hall (Lough Carra) SAC	527	Mayo
Towerhill House SAC	2179	Mayo