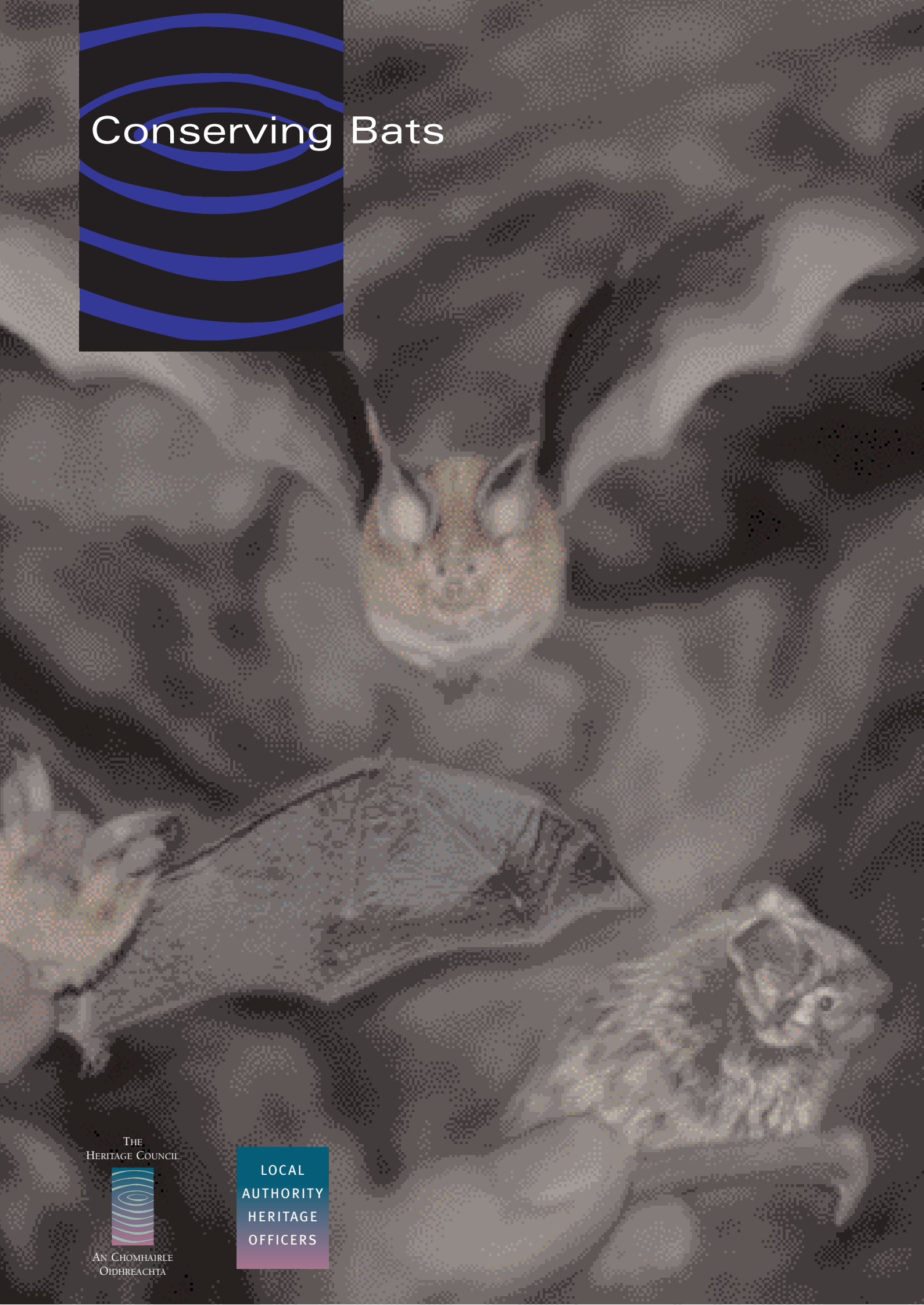
Conserving Bats



The Heritage Council

An Chomhairle Oidhreachta

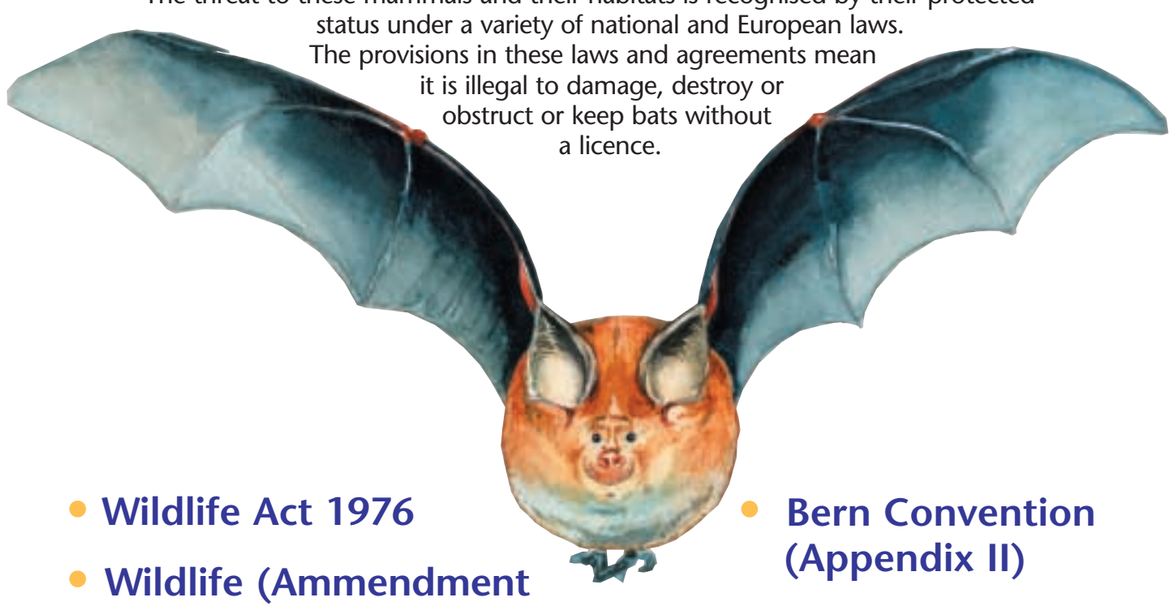
LOCAL AUTHORITY HERITAGE OFFICERS

Leisler's bat © Conor Kelleher

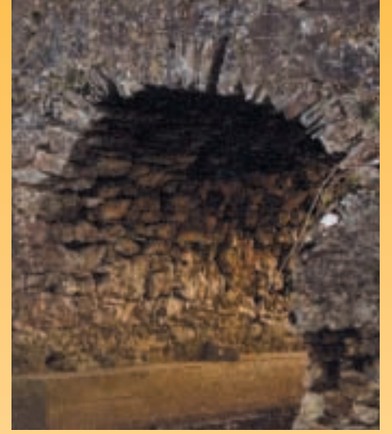
CONSERVING BATS

HOW LOCAL AUTHORITIES CAN HELP

Bats represent more than a third of Irish mammals with a total of nine species. Ireland has the second largest national population of lesser horseshoe bats in Europe. Our population of Leisler's bats is of international importance. Bats are part of our natural heritage and are beneficial for a number of reasons. The main value is insect control. The common pipistrelle can catch up to 3,500 midges in a night. Bats also serve as indicators of the health of the ecosystem. However, bats are an increasingly vulnerable species, being threatened by habitat loss, pesticide use and human disturbance. The threat to these mammals and their habitats is recognised by their protected status under a variety of national and European laws. The provisions in these laws and agreements mean it is illegal to damage, destroy or obstruct or keep bats without a licence.



- **Wildlife Act 1976**
- **Wildlife (Ammendment Act) 2000**
- **Bonn Convention**
- **Bern Convention (Appendix II)**
- **Eurobats Agreement**
- **Habitats Directive (Annex IV)**



Stone bridges may provide many fissures and crevices suitable for roosting bats © Bernadette Guest

Pressure grouting of bridges can cause encasement and eliminate the crevices used by roosting bats © Bernadette Guest

A disused icehouse provides an ideal roosting site © Bat Conservation Group Ireland

WHERE CAN BATS BE FOUND?

Bats in bridges

Bats can be found roosting in a wide range of crevices in bridges, particularly under bridge arches and in bridge walls. Stone or masonry arch bridges are particularly important for bats as their construction leaves cracks and crevices between the stones, which the bats can exploit. Concrete and steel bridges are generally less suitable for bats, but their value as habitats can be increased by the installation of bat boxes and bat bricks.

Bats in hedgerows

Hedgerows and trees are valuable shelter belts, they provide local areas of high insect abundance and create opportunities for bats to forage for food. Trees also provide important roosts for bats.

Bats in buildings

Buildings are the most favoured roosting sites for bats. Bats can be found in all kinds of buildings, ranging from modern dwelling houses to old churches. They are usually found in the roof space, but may not be readily visible, remaining concealed in crevices in attics, cavity walls, under ridge tiles, around window frames, and under flat roofs.

The whiskered bat is one of Ireland's rarest mammals.

Pipistrelles © Conor Kelleher

Long-eared bat

Lesser horseshoe bats

THREATS TO BATS

(i) Remedial timber treatment is probably the greatest threat to bats. Many buildings are treated annually with chemicals that are lethal to bats, and poisonous to mammals generally. Even if bats are not present during treatment, they can pick up poison by inhalation of vapour, or contact with treated surfaces, for many years afterwards.

(ii) Where ongoing repair to bridges is required, unsympathetic maintenance can threaten the bats utilising a bridge. Pointing and infilling of arches by pressure grouting can destroy bat roosts in bridges. By sealing crevices and cavities, bats are eliminated from the bridges and, at worst, become entombed and cannot escape.

(iii) Many underground roosting sites such as caves, mines and tunnels have become inaccessible to bats because entrances have been blocked, either for safety, or by rubbish tipping.

(iv) Disturbance of hedgerows and treelines can interfere with vital commuting routes for bats and lead to island bat populations.

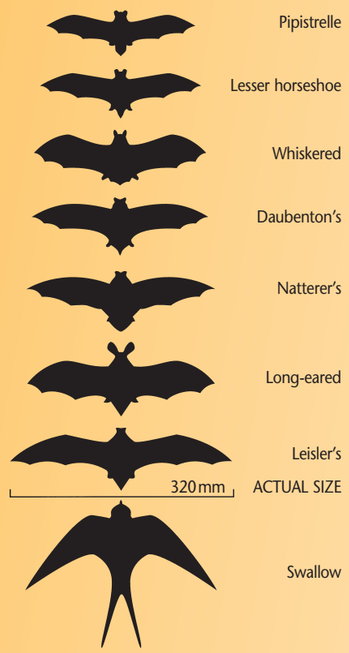
(v) Removal of damaged trees may cause loss of bat roosts. Many bat species use trees as roosts for maternity, hibernation or mating. Damaged trees are particularly suitable. The bats will roost in cracks and crevices, under ivy, or in dead trees.

(vi) Roost sites in buildings are reduced when access holes, such as ventilators, are blocked, and cavity walls are filled for insulation. Retiling and underfelting of old buildings often result in the exclusion of colonies.

A brown long-eared bat © Conor Kelleher

Bat boxes can provide alternative roosting sites
© Bat Conservation Group Ireland

Order Chiroptera - Bats



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WHAT LOCAL AUTHORITIES CAN DO TO HELP BAT CONSERVATION

Bats need to be considered by local authorities when addressing issues such as building construction, habitat management, and bridge maintenance. Much can be done to conserve these mammals if they are considered during remedial works and development plans. Many departments within the local authority can contribute to the conservation of bats and their habitats by surveying for their presence and considering their needs as may arise through planning applications, housing inspections, demolition of buildings, and infrastructural works.

(i) Bats can be found in bridges at any time of the year and a comprehensive bat survey is required before any maintenance works are undertaken. Local authorities must notify Dúchas, the Heritage Service, and the local authority heritage officer, of intention to carry out bridge works before the breeding season in June and July. Bats are also especially vulnerable in winter when hibernating.

(ii) Local authorities must ensure that the timing of operations is sympathetic to the use of bridges by bats. No maintenance or repair works must be carried out on nursery roosts during the breeding season.

(iii) During bridge repair works, efforts must be made to retain crevices being used by nursery colonies.

(iv) Local authorities must undertake installation of artificial roost units on masonry bridges that have been pressure grouted in the past. Installation of artificial roost units should be encouraged on all new concrete and metal bridges to assist in the future conservation of bats.

(v) Native broad-leaved trees must be maintained and/or planted in the vicinity of bridges where possible. Landscaping work along roads and waterways should consist of mainly native species to ensure good insect populations for bats.

(vi) Removal of dangerous and damaged trees for safety reasons must involve consideration of bat habitats. Pollarding should be considered. Mature trees should be checked by a bat expert immediately prior to felling. Branches should not be immediately mulched. Bats may be in torpor in the branches, and it will take them some time to wake up. Trees should not be felled in summer or winter. Dead wood habitat also provides insects and should be retained where possible.

A Daubeton's bat roost, Inistoige © Chris Wilson

A lesser horseshoe bat © Conor Kelleher

(vii) Underground sites such as caves, mines and tunnels could be secured as bat habitats by installing bat grilles that allow bat access and deter predators. Grilles should be designed so as not to alter the air flow pattern which might make the site less favourable for hibernation.

(ix) Greater effort must be made to ensure that illegal dumping is prevented at cave entrances. Domestic rubbish should not be allowed accumulate in, or around, caves.

(x) Design of street lighting must take into account best options for attracting night-flying insects that provide food for bats. Lighting must be focused downwards and avoid roost access points. Lighting must also be restricted on bat commuting routes. Avoid inappropriate lighting, especially if there is only one line of trees.

(xi) Environmental Impact Statements and constraint studies should be checked for details of bat habitats where relevant. Mitigation measures must be included for protection of habitat, such as retaining access points, and providing alternative roost sites.

(xii) Planning conditions must consider bat roosting sites in houses that are undergoing renovation/refurbishment, and must require that construction work be carried out outside the June to August period.

(xiii) Work on derelict sites and burial grounds must be preceded by a survey on the presence of bats at these sites. Where demolition of buildings takes place, alternative sites must be provided. The installation of artificial roosts for bats must be considered in new buildings.

(xiv) Distribution surveys must be encouraged and developed in each local authority area. This is especially important in public buildings.

For more information contact:

Bat Conservation Group, Deerpark House, Maio, Tierworker, Co. Meath. Tel: (046) 42886, E-mail: batline@eircom.net, Website: www.geocities.com/dublinbat/.

Cork County Bat Group, 'Northhants', Spring lane, Carrigagullaa, Ballinagree, Macroom, Co Cork. Tel: (021) 7339247, Mobile: (087) 2980297, E-mail: conorkelleher@eircom.net.

Dúchas, The Heritage Service, 7 Ely Place, Dublin 2. Tel: (1890) 474847, E-mail: dúchas@indigo.ie for contact details of your local conservation ranger.

ENFO, Environmental Information Service, 17 St. Andrew St. Dublin 2. Tel: (01) 8882001, Lo call: (1890) 200 191, E-mail: info@enfo.ie, Website: www.enfo.ie.

The Heritage Council, Rothe House, Kilkenny. Tel: (056) 70777, E-mail: heritagecouncil@heritage.iol.ie for contact details of your local authority heritage officer, Website: www.heritagecouncil.ie.

The Bat Conservation Trust, 10 Bedford Cottages, Gt. Brington, Northhampton, NN7 4JE. E-mail: www.bats.org.uk/.

The Vincent Wildlife Trust, Kate McAney, Donaghpatrick, Headford, Co Galway. Tel: (093) 35304, E-mail: katemcaney@compuserve.com.

Wild Ireland, Leinster Mills, Naas, Co. Kildare. Tel: (045) 894900. Website: www.wildireland.ie.

Illustrations by Billy Clarke with permission from Dúchas The Heritage Service and by Derry Dillon.

This leaflet has been compiled and published as part of a partnership project between the Heritage Council and the Local Authority Heritage Officers.

Glossary of terms

Bat boxes: artificial roost units in the form of a box, with an access slit/hole to a crevice-like internal space. Various models are available to attract a particular range of species. Bat boxes may be attached to walls, trees or bridges.

Bat bricks: specialised walling bricks that create bat access points by incorporating a hollow or rounded corner in the design.

Bat grilles: metal grating over tunnel or cave entrances, which does not interfere with flying bats.

Island bat populations: some bat species will not fly across open spaces, and a break in an existing hedgerow or treeline will force bats to return to where they came from. This cuts that population off from other populations, and can lead to inbreeding and consequently a higher risk of disease and possibility of extinction.

Nursery colonies: congregations of female bats that gather to have their young from June to August. Bats often gather from several hundred square kilometres, and therefore these roosts are very important.

Pressure grouting: a process used to strengthen bridges by pumping liquid grout through small bore holes in the internal cavity of a bridge filling any voids along the injection point.

Roost: living space for bats. In winter they hibernate in cool dark places free from disturbance. Favoured sites includes caves, bridges and trees. In summer they need warm dry roosts and nurseries. Dwelling houses are frequently used.

Pollarding: management technique for tree size by removal of all of the previous year's growth.

Torpor: period of deep sleep.