



# help protect bats

**Guidance for works affecting watercourses:  
protection and enhancement for bats**

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**The Environment Agency. Out there, making your environment a better place.**

Published by:  
Environment Agency  
Rivers House  
Park Square  
Leeds  
Tel: 0870 8506506  
Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

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The number of bats in Britain has declined in recent years. The destruction of roosting and feeding habitat has contributed to this decline. Bats often roost in bridges, culverts, trees and other structures close to rivers and streams because the water provides a good source of insects for them to eat. Repair, maintenance, alteration and demolition of bridges and removal of trees can affect roosting sites and foraging habitats used by bats.

## Legal protection

This leaflet aims to:

- make you aware that bats may roost in bridges, culverts and trees;
- give you advice on what to do if evidence of use by bats is found;
- encourage you to include places for bats to roost in structures near water.

All species of bat in England and Wales are legally protected from any harm, damage or disturbance under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000. It is a criminal offence to knowingly or recklessly harm, damage or disturb bats or their roosts. Bats are also protected under the Conservation (Natural Habitats) Regulations 1994. Any structure or place used by bats for shelter or protection is considered to be a roost. Bats tend to re-use the same roosts year after year so roosts are protected whether or not bats are present at the time.

# Consent for works affecting watercourses

If you plan to carry out any work on structures in or near water, you may need to get consent from the Environment Agency and should ask our advice. If we think that bats might be affected by the work, we may ask you to give us further information before we make a decision.

## Bats known to be present

If there is evidence that bats use the structure as a roost, even if bats are not present at the time, you may need to get a Habitats Regulation licence before doing any work. In England, applications should be made to the Department for Environment, Food and Rural Affairs (Defra), for sites in Wales you should apply to the Welsh Assembly Government (WAG). Information on licensing is not included in this leaflet, you should get advice from a suitably licensed ecological consultant. The Defra/WAG licence is separate from our consent and may affect how you plan to carry out your works. We advise talking to Defra/WAG before making either application.

## Bats likely to be present

If the structure provides a suitable habitat for bats, we will ask you to show that you have considered the possibility that a bat roost may be present. We recommend that a bat survey be carried out as early as possible by a suitably

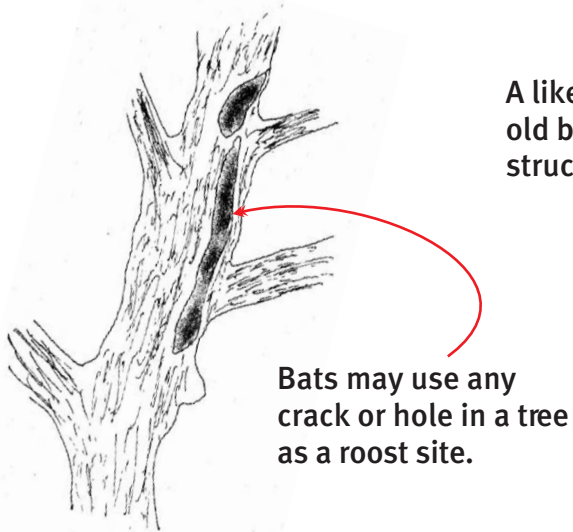
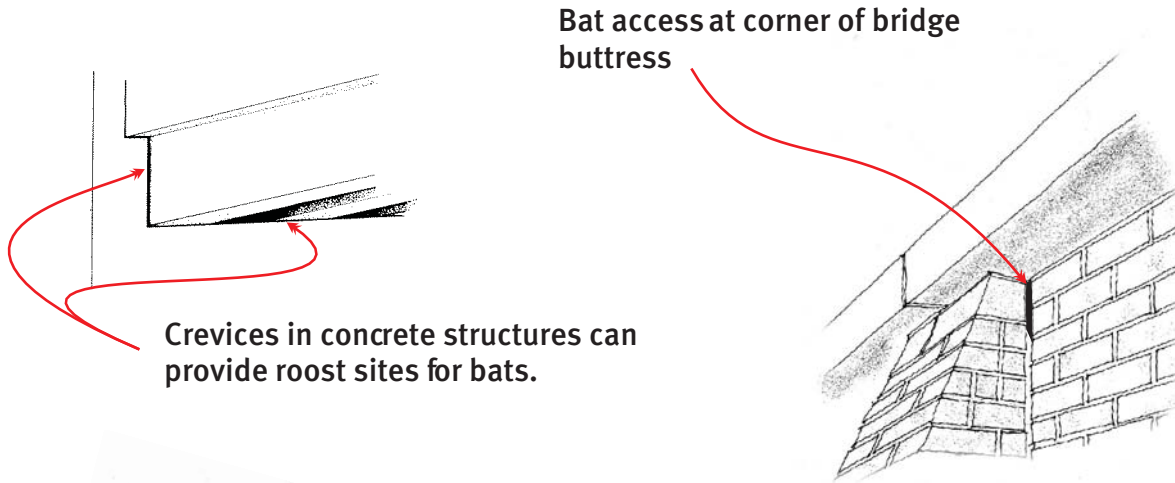
licensed ecological consultant. Surveys for breeding roosts will need to be carried out between May and September. Surveys at other times may require special access arrangements and the use of specialist equipment.

Remember that destruction of a bat roost is a criminal offence, so it is in your own interest to ensure that bats are not present before carrying out any work. If you think about the possibility of bats early it will minimise disturbance to the work schedule and to the bats.

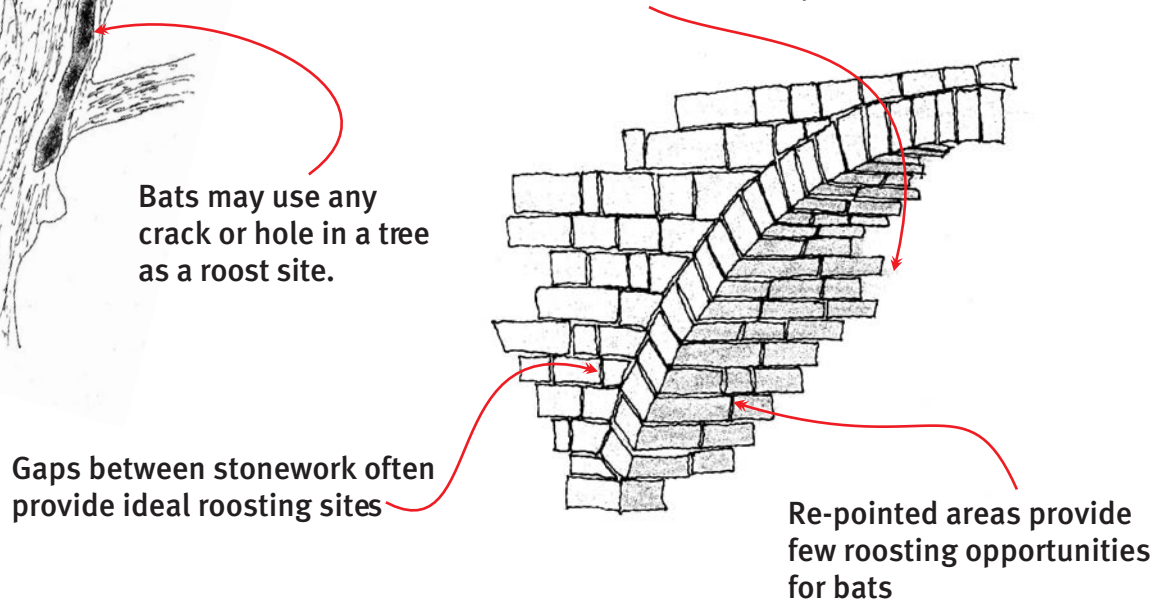
## Bats absent or unlikely to be present

If the structure appears unsuitable for bats we will not insist on surveys being carried out, however, all structures are potential bat roosts and work should always proceed with caution. You should have a contingency plan just in case bats are discovered during the work. If bats are found, contractors must stop work straight away and obtain advice urgently from English Nature (EN) or the Countryside Council for Wales (CCW).

# Locations used by bats

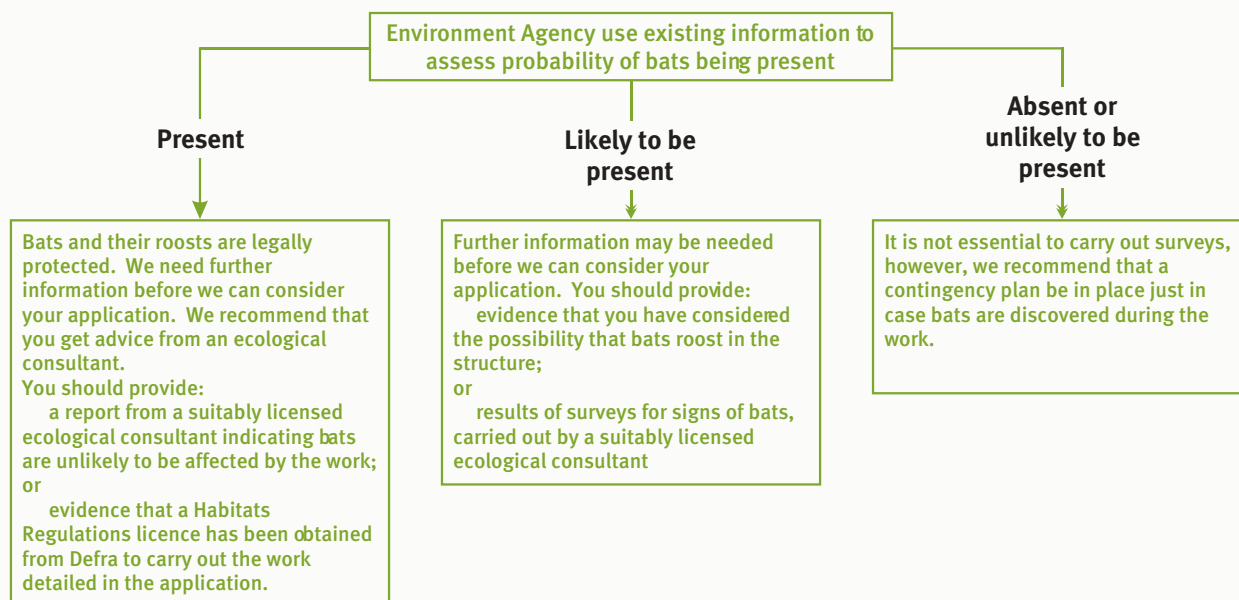


A likely place to find bats is in the 'join' where an old bridge has been widened. There is usually no structural need for this to be re-pointed.





## Applying for consent for works affecting watercourses



Procedure for determining consents

# Recognising potential roost sites

It is very difficult to tell if a structure is used as a roost because evidence of bats is not always obvious. Bats can be found roosting in a wide range of crevices and voids within the structure. Particularly in gaps between masonry or brickwork of bridge arches, in spandrel, parapet, training and retaining walls. Also inside hollow voids within structures, such as in pre-cast concrete bridges in both the supporting abutments or piers or within the deck. Bats also roost in culverts and tunnels, both hanging on the interior face of the structure or within crevices. Hollow trees and trees with small cavities, loose bark and cracks are also very important for bats.

British bats are very small; a crevice greater than 50mm deep and 12mm wide can be used as a roost or to gain access to a bigger chamber behind. Most reported roosts are in the arches of stone bridges although brick, concrete, and even steel bridges can have roosting bats. Where bridges have been widened the central widening joint is frequently used by bats. Bridges over slow flowing water and/or within broad-leaved woodlands are particularly suitable.

There are several things you can look for that may indicate the presence of bats, however lack of these signs doesn't mean bats do not roost in the structure. Bat droppings may be visible on the ground, on ledges or stuck to walls. These are dark brown or black and vary between 4 and 8mm



Existing bat roost

long, the same size as, or a little larger than a mouse dropping. They consist largely of fragments of insects, so they crumble easily to a fine powder when pressed between the fingers. Urine stains may also be visible on the walls.

Dark 'polished' surfaces around access holes are another sign, this is caused by the oil from bats fur as they pass through holes. The presence, or lack, of cobwebs may also give some clues as to whether a crevice is used as a roost, but remember roosts are protected even if bats are not present.

## Timing of work

It is important to remember that bats may use bridges at almost any time of the year and timing of any work must take into account bat activity at each specific site.

# Improving sites for bats

Construction and maintenance work often create opportunities to improve the habitat for bats. There are many easy ways in which bridges and other structures can be made more suitable for bats .

## Foraging habitat

The habitat near to rivers and streams is also important for bats, particularly the Daubenton's bat. Trees form effective shelter belts where insects are often abundant. Lines of trees create wildlife corridors along which bats may navigate and commute between roost and foraging sites. If

trees need to be removed when carrying out work on river corridors their potential to support roosting bats should be assessed. The opportunity to plant trees along river corridors should also be considered.

## Other species affected by work to bridges

Bridges are also important for birds. Ledges and holes should be retained and created during bridge repairs and construction to accommodate birds. All wild birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981.



Daubenton's bat

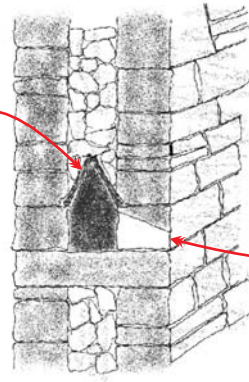
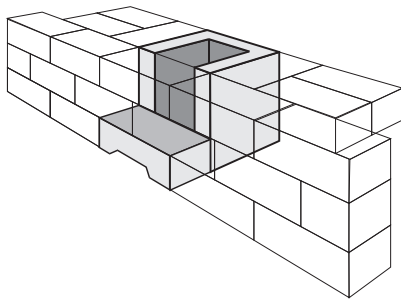


# Creating roosting opportunities for bats



Repointing should be done by hand if possible. To create crevices for bats while re-pointing you can insert small pieces of timber into parts of the bridge where they do not affect the overall stability. These can be removed when the mortar has set leaving crevices for bats. Crevices should be at least 25cm deep by 15 long and range from 1-3cm wide

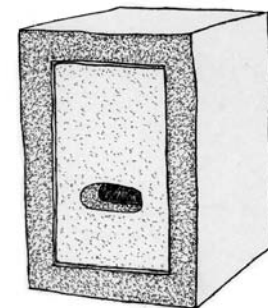
Two tiles can be used to roof a cavity in a rubble filled wall.



Create access by not filling all the joints with mortar.

Ready made artificial roost units are available from a number of manufacturers. For example, a bat roost unit consisting of a hollow cube with three open sides is available from Marshall's Clay Products. This is designed to be placed inside the structure and faced with bat access bricks.

Bat boxes of various designs are available, they are usually made from wood or woodcrete. These boxes, placed on trees or buildings, can attract bats. Bat boxes cannot replace natural roosts, but they can be an important addition in habitats where suitable roosts are scarce. Boxes must be constructed and sited carefully or they will not be used by bats.



# Contacts

**Bat Conservation Trust** can be contacted for advice and free publications about bats, the law relating to bats, what to do if you find a bat, conservation issues and contact details of your local bat group. Tel: 0845 1300 228, Email: [enquiries@bats.org.uk](mailto:enquiries@bats.org.uk) or visit [www.bats.org.uk](http://www.bats.org.uk)

**Defra Wildlife Management Team** should be contacted for information and advice on licensing development activities which may affect bats in England. Wildlife Management Team, European Wildlife Division, Defra, Temple Quay House, Floor 1, Zone 10/D, 2 The Square, Temple Quay, Bristol, BS1 6EB Tel: 0117 372 8903, Fax 0117 372 8182 Email: [species@defra.gsi.gov.uk](mailto:species@defra.gsi.gov.uk)

**English Nature** is the Government Agency that champions the conservation of wildlife and geology throughout England. Details of your local English Nature Area office are available at [www.english-nature.org.uk](http://www.english-nature.org.uk) or contact the National Enquiry Service Tel: 01733 455101, Email: [enquiries@english-nature.org.uk](mailto:enquiries@english-nature.org.uk)

**The Countryside Council for Wales** is the Government's statutory adviser on sustaining natural beauty, wildlife and the opportunity for outdoor enjoyment in Wales and its inshore waters. Details of your local CCW office are available at [www.ccw.gov.uk](http://www.ccw.gov.uk) or contact the enquiry service Tel: 08451 306 229, Email: [enquiries@ccw.gov.uk](mailto:enquiries@ccw.gov.uk)

**Environment Agency** is the leading public body for protecting and improving the environment in England and Wales. Under the Water Resources Act 1991 and byelaws, works in, over, under or adjacent to main rivers require the consent of the Agency. This is to ensure that they neither interfere with the Agency's work nor adversely affect the environment, fisheries, wildlife and flood defence in the locality. Under the Land Drainage Act 1991, you also need consent if you want to construct or repair a culvert or flow control structure (such as a weir) on any ordinary watercourse.

General Enquiries Tel: 08708 506 506.

**Welsh Assembly** should be contacted for information and advice on licensing development activities which may affect bats in Wales. Nature Conservation Branch, Countryside Division, Welsh Assembly Government, Cathays Park, Cardiff, CF10 3NQ. Tel: 02920 823363, Fax: 02920 801353, Email: [countryside.licensing@wales.gsi.gov.uk](mailto:countryside.licensing@wales.gsi.gov.uk)

**Marshalls Clay Products** produce bat access bricks and bat roost units. These units are designed for use in repairs to bridge arches and abutments as well as in many new construction projects. Quarry Lane, Howley Park, Woodkirk, Dewsbury, West Yorkshire, WF12 2JJ. Tel: 0845 6033535

## References

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- Highways Agency (1999) Design manual for roads and Bridges Volume 10. Nature conservation management in relation to bats.
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