



DUSK EMERGENCE BAT SURVEY

at

UNION ROAD, OLDBURY

Job/Report No: P327/2 Version One

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Executive Summary

1. At the request of Claire Donnelly on behalf of Chinook Sciences Limited, Land Care Associates Ltd undertook a dusk emergence and bat activity survey at the former Shell tank farm, Union Road, Oldbury.
2. Dusk surveys were conducted in line with recommendations made in English Nature's *Bat Mitigation Guidelines* (2004), the JNCC's *Bat Workers Manual* (2004) and the *Bat Surveys Good Practice Guidelines* (2007), in order to determine whether bats were using the proposed development site for roosting, resting or foraging purposes.
3. During the dusk emergence surveys, no bats were observed emerging from any of the buildings or trees on site, although Common Pipistrelle bats (*Pipistrellus pipistrellus*) were recorded commuting outside the site boundary, along the River Tame corridor.
4. At the present time, it is considered unlikely that bats are roosting or resting on site, and therefore a Natural England bat development licence is **not** required in order continue with the redevelopment works.
5. Contractors undertaking refurbishment works should be made aware that bats may be present and care should be taken. If any evidence of bat activity is found, work should cease while the advice of Natural England or a qualified and experienced bat ecologist is sought.
6. In accordance with *Planning Policy Statement 9: Biodiversity and Geological Conservation* (OPDM, 2005) bat boxes, bricks or tubes should be incorporated into the final design of the new industrial structures it is proposed to erect on the site.
7. If refurbishment works do not begin within twelve months of this initial survey, an additional survey should be undertaken prior to the commencement of

activities to ensure no bats have begun roosting in any of the buildings on site.

8. The use of low level lighting should be incorporated into the development proposals for the site.
9. Every effort should be made to retain some of the existing foraging habitat.

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1. Introduction

1.1. Background

At the request of Claire Donnelly on behalf of Chinook Sciences Limited, Land Care Associates Ltd undertook a dusk emergence and bat activity survey at Union Road, Oldbury.

The brief of the survey was as follows:

- To determine whether the buildings or trees on site were being, or have been, used by bats as a place of shelter with the consequent implications for development work with respect to the *Wildlife & Countryside Act 1981* (as amended), the *Conservation (Natural Habitats &c.) (Amendment) Regulations 2007*, and relevant Planning Policy Guidelines;
- To make recommendations for further necessary surveys and mitigation works that are required to enable the client to operate within the law.

Information regarding bats and the legislation surrounding them is provided in Appendix I.

1.2. General description

The survey site is a former Shell Oil tank farm, located on Union Road, Oldbury. The site consists of a mixture of habitats including grassland, scrub and immature woodland, as well as large areas of concrete, tarmac and gravel hardstanding with associated brownfield flora. Some derelict and partially collapsed buildings still remain on site, the largest being two workshop buildings close to the north-east boundary. One of the buildings, a large former office building, has been subjected to a recent extensive fire and all of the buildings have been heavily vandalised.

The site is bounded by a number of watercourses: the River Tame to the south; a short section of the Gower Branch Canal to the west and the Birmingham Mainline Canal, which runs along the north boundary, all of which are designated Wildlife Corridors. The surrounding land use is predominately industrial with residential scattered around, particularly to the west, as well as a large amount of open space, which includes the Sheepwash Lane Urban Park.

See Appendix II for a location plan for the site.

1.3. Proposed work

It is Land Care Associates Ltd understanding that the site is to be developed for industrial purposes.

2. Desk study

2.1. Pre-existing information on bat species at or near the survey site

As part of the phase one survey of this site undertaken by Land Care Associates in June 2009 EcoRecord, the ecological database for Birmingham and the Black Country was consulted with regards to bat species within two kilometres of the site at Union Road, Oldbury. Six records for bats were provided. This included records for one species of bat: Common Pipistrelle (*Pipistrellus pipistrellus*).

2.2. Status of bat species in the local/regional area

All species of British bat are listed in the *Biodiversity Action Plan for Birmingham & the Black Country* (2000). The status of bats in the region is tentative as there are relatively few records but it is considered likely that twelve species are present within Birmingham and the Black Country.

British bats are insectivorous, occupying many habitat types. They require warm summer breeding roosts and cool, secure hibernation sites. The main factors currently causing loss or decline in Birmingham and the Black Country are likely to include:

- Intensification of agriculture and inappropriate riparian management leading to a decline in the amount of insect prey for all species;
- Widespread misunderstanding of, or possibly ignored legislation protecting bats, leading to loss or damage of many roosts when consultation procedures have not been carried out;
- Loss, destruction and disturbance of other roosts, particularly maternity roosts, through the use of toxic timber treatment chemicals, intolerance by roost owners, inappropriate building practices and tree felling;

- Loss of winter roosting sites, which need to be cold, humid and undisturbed. Such sites may include buildings, hollow trees and underground sites (mines, old tunnels, ice-houses and cellars); and
- Losses, or changes, to large country properties which can supply both summer and winter roosts that are generally surrounded by potentially good foraging habitat. Lesser Horseshoe bats are particularly affected by this, e.g. barn conversions

2.3. Status of bat species at the national level

Throughout Britain, bat numbers have suffered a decline in recent years and, as a result, all 17 species of British bat are protected by UK and European legislation. All species of British bats and their roosts are fully protected under Schedule 5 of the *Wildlife & Countryside Act 1981* (as amended) with additional protection offered under Schedule 2 of the *Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007*.

Seven of the British bat species are listed as Priority Species in the *UK Biodiversity Action Plan (2007)*: Barbastelle (*Barbastella barbastellus*); Bechstein's (*Myotis bechsteinii*); Soprano Pipistrelle (*Pipistrellus pygmaeus*); Noctule (*Nyctalus noctula*); Lesser Horseshoe (*Rhinolophus hipposideros*); Greater Horseshoe (*Rhinolophus ferrumequinum*) and Brown Long-eared (*Plecotus auritus*). The Government Circular (ODPM & DEFRA, 2005) relating to *Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9) (2005)* states that 'local authorities should take steps to further the conservation of habitats and species of principal importance through their planning function.' The habitats and species subject to this duty are those listed as priorities under the *UK Biodiversity Action Plan (1995)*. Redevelopment of existing roost and foraging sites contribute to the decline in bat numbers and Paragraph 14 of PPS9 states that '*Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, local planning authorities should*

maximise such opportunities in and around developments, using planning obligations where necessary'.

Additional information regarding the legislation and protection afforded to bat species is provided in Appendix I.

3. Methodology

Bat survey activities were carried out in accordance with the methodologies detailed in *The Bat Workers Manual* (2004) and the *Bat Mitigation Guidelines* (2004), *Bat Surveys Good Practice Guidelines* (2007) and comprised two dusk emergence surveys, carried out by two surveyors with bat detectors, to assess bat emergence and levels of bat foraging activity.

The evening activity surveys used the surveyors' knowledge of bat flight patterns and evidence gained using bat detectors (e.g. Pettersson D240x, Batbox Duet and Magenta Bat Box Mark IV) to assess the value of the site to bats. All bat species encountered were recorded using time expansion bat detectors and later analysed to species level using sonogram analysis software. Since levels of bat activity are strongly affected by local weather conditions (due to the influence these factors have on the abundance of insect prey), the surveyors recorded weather conditions at the start and finish of each survey session using a Kestrel 3000 weather meter.

The methodology used provides information regarding the use of the site by bats on the dates visited. The presence or absence of bat species cannot be confirmed without multiple visits throughout the year but this survey is intended to provide an indication of probable bat activity.

4. Results

The dusk emergence surveys were undertaken by Mike Poulton and Lisa Worledge on Tuesday 27th April 2010 from approximately 19:58 hrs to 22:00 hrs and by Mike Poulton and Mark Stefan on Thursday 13th May 2010 from 20:22 hrs to 22:30 hrs.

4.1. Dusk emergence survey – Tuesday 27th April 2010

Sunset time: 20:28 hrs

Start time: 19:58 hrs (17.4°C, 46.4% relative humidity, 1.5 mph mean wind speed)

Finish time: 22:00 hrs (15.2°C, 52.2% relative humidity, wind speed not recorded)

Surveyors: Mike Poulton and Lisa Worledge

Surveyors were optimally positioned to gain maximum coverage of the front and side aspects of both main warehouse buildings. The survey started at 19:58 hrs approximately 30 minutes before sunset. Survey efforts were focused on whether any bats were emerging from the two main buildings and ascertaining whether any foraging activity was taking place generally on the site.

A Common Pipistrelle (*Pipistrellus pipistrellus*) was the only bat to be heard during the survey, in the vicinity of the buildings, approximately 40 minutes after sunset. No visual contact was made.

At 21:30 hrs the surveyors moved over to the south-west corner of the site, by the water storage tanks, overlooking the River Tame. A Common Pipistrelle was recorded commuting along this corridor at 21:32 and again at 21:43. A possible Daubenton's bat (*Myotis daubentoni*) was heard at 21:37 although as a recording couldn't be made this can't be confirmed absolutely.

Table 4.1. Bat activity recorded on Tuesday 27th April 2010

Time	Species	Surveyor locations	Activity
19:58	Start time		
21:08	Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	Southern and eastern sides of main buildings	Bat heard but not seen, briefly flying over two main buildings.
21:32	Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	SW corner of site overlooking River Tame corridor	Briefly heard but not seen
21:37	Possible Daubenton's (<i>Myotis daubentoni</i>)	SW corner of site overlooking River Tame corridor	Bat not seen
21:43	Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	SW corner of site overlooking River Tame corridor	Bat not seen
22:00	Finish time		

4.2. Dusk emergence survey – Thursday 13th May 2010

Sunset time: 21:05 hrs

Start time: 20:22 hrs (10.3 °C, 48.9% relative humidity, 2.2 mph mean windspeed)

Finish time: 22:30 hrs (8.6 °C, 55.1% relative humidity, wind speed not recorded)

Surveyors: Mike Poulton and Mark Stefan

Surveyors were optimally positioned to gain maximum coverage of the front and side aspects of both main warehouse buildings. The survey started at 20:22 hrs approximately 30 minutes before sunset. Survey efforts were focused on whether any bats were emerging from the two main buildings and ascertaining whether any foraging activity was taking place generally on the site.

No bats were observed or heard while surveyors were stationed around the buildings.

Just as the surveyors moved away from the buildings towards the south-west corner of the site just after 22:00 hrs a Common Pipistrelle passed overhead, but was not seen. Common Pipistrelle was recorded commuting along the River Tame corridor at 22:16 and again at 22:20 although the calls were faint in both cases.

Table 4.2. Bat activity recorded on Thursday 13th May 2010

Time	Species	Surveyor location	Activity
20:22	Start time		
22:05	Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	SW of main buildings	Faint call; bat not seen
22:16	Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	SW corner of site overlooking River Tame corridor	Heard but not seen; quite faint
22:20	Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	SW corner of site overlooking River Tame corridor	Heard but not seen; quite faint
22:30	Finish Time		

5. Evaluation

No bats were observed emerging from any of the buildings or trees within the site boundary. As a consequence a Natural England bat development licence is **not** required to continue with the redevelopment work. However, Common Pipistrelle bats (*Pipistrellus pipistrellus*) were recorded commuting along the river corridor to the south west of the sites boundary. In light of this, and in accordance with PPS9, recommendations have been made to minimise the impact of the proposed development on the local bat populations and to reduce the risk of disturbance to any individuals that may be present when work commences.

The site in its present condition contains a large amount of suitable foraging habitat and it is recommended that as much of this is retained as possible. As bats were found on or close to the site, every effort should be made to incorporate a bat friendly planting scheme within the final development plans. See Appendix IV for a list of suitable plants.

Planning Policy Statement 9: Biodiversity and Geological Conservation (ODPM, 2005) states that 'Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design' and recommends that planning authorities should maximise such opportunities in and around developments (see Appendix I). While no evidence of bat roosting activity was found, such structures may act as potential roosting opportunities. As a result, the incorporation of bat boxes, bricks or tubes into the final refurbishment design is suggested to compensate for the loss of these spaces lost during the overhaul. Common Pipistrelle were present in or close to the site and it is suggested that the bat boxes, bricks or tubes are chosen to suit these species, both of which are present on the Birmingham & Black Country Biodiversity Action Plan. Land Care Associates can provide advice and assistance when choosing suitable boxes. Examples are included in Appendix V.

Contractors should be made aware that bats may still be present in the buildings and care must be taken when work is carried out. If evidence of bat activity is found

during any stage of the redevelopment, work should cease while the advice of Natural England or an experienced bat surveyor is sought. Should this be the case, it will also be necessary to apply for a Natural England bat development licence.

As previously mentioned bats are highly mobile and change roost site throughout the year. They can also change roost site from season to season. Therefore, if the redevelopment of the site does not begin within twelve months from this initial survey, it is recommended that an additional survey of the property is undertaken to determine if bats have begun roosting on the site.

6. Recommendations

While the proposed redevelopment of this site at Union Road, Oldbury will not require a Natural England bat development licence, Common Pipistrelle (*Pipistrellus pipistrellus*) bats were observed either foraging and/or commuting over or close to the site, which does contain large amounts of suitable foraging habitat. In line with this, and in accordance with PPS9, a number of recommendations have been made to reduce any negative impacts of the proposed work on local bat populations.

- **R(1)** Contractors undertaking refurbishment works should be made aware that bats may be present and care should be taken. If any evidence of bat activity is found, work should cease while the advice of Natural England or a qualified and experienced bat ecologist is sought.
- **R(2)** Replacement roosting opportunities should be provided by the incorporation of bat boxes, tubes or bricks into the design of the proposed development. See Appendix V.
- **R(3)** If development work has not begun within twelve months of this initial bat survey, a follow up survey should be undertaken prior to the commencement of work to determine current bat activity.
- **R(4)** The development proposals for the site should also incorporate a low level lighting scheme, wherever possible.
- **R(5)** Every effort should be made to retain some of the existing foraging habitat.

7. References

- **Land Care Associates Ltd** Extended Phase 1 habitat survey at the former Shell Tank Farm, Union Road, Oldbury (2009).
- **Birmingham & the Black Country Biodiversity Action Plan Steering Group (2000)** *Biodiversity Action Plan for Birmingham & the Black Country*. UK.
- **Bat Conservation Trust (2007)** *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.
- **Mitchell-Jones, A.J. (2004)** *Bat Mitigation Guidelines*. English Nature, Peterborough.
- **Mitchell-Jones, A.J. & McLeish, A.P. (2004)** *The Bat Workers' Manual, 3rd edition*. JNCC.
- **Office of the Deputy Prime Minister & DEFRA (2005)** *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. TSO, UK.
- **Office of the Deputy Prime Minister (2005)** *Planning Policy Statement 9: Biodiversity and Geological Conservation*. HMSO, UK.
- **UK Biodiversity Action Plan Steering Group (2007)** *Biodiversity: the UK Action Plan*. HMSO, UK.

8. Appendices

Appendix I	Bat information
Appendix II	Location map
Appendix III	Example sonograms
Appendix IV	Native 'bat friendly' plants
Appendix V	Bat box examples

Appendix I

Bat Information

(This is for information purposes only and further legal advice should be sought)

Although bats occur throughout Britain, their numbers have declined dramatically over recent years. It is as a result of these declines that all 17 species of British bat are protected by UK and European legislation. In particular, there is a high risk that certain old rural buildings and structures, such as listed buildings and traditional farm buildings, will support roosting bats for at least part of the year. These can be affected by redevelopment, restoration works or routine maintenance that results in disturbance or the loss of cracks, crevices and other potential roost sites.

All species of British bats and their roosts are fully protected under Schedule 5 of the *Wildlife & Countryside Act 1981* (as amended). Additional protection is offered under Schedule 2 of the *Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007*, which defines “*European protected species of animals*”. Under currently accepted interpretations of these two items of legislation, as outlined in the *Bat Workers’ Manual (2004)*, a bat roost is ‘*any structure or place which any wild animal ... uses for shelter or protection.*’

Bats often occupy different roost sites at varying times of the year; what is suitable as a summer roost may not be as suitable for hibernation due to the variation in temperatures, for instance. Females often occupy maternity roosts when giving birth and return to the communal roost when the young are partly grown. Individual bats may move their roost site dependent on weather conditions. Since bats tend to re-use the same roosts, legal opinion is that the roost is protected whether or not the bats are present at the time.

A key principle of *Planning Policy Statement 9* (ODPM, 2005) is that ‘*planning decisions are based upon up-to-date information about the environmental characteristics of their areas*’ and that ‘*local authorities should assess the potential to sustain and enhance those resources.*’ Paragraph 14 of *Planning Policy Statement 9* also states that ‘*Development proposals provide many opportunities for building-in*

beneficial biodiversity or geological features as part of good design. When considering proposals, local planning authorities should maximise such opportunities in and around developments, using planning obligations where appropriate.' Therefore, where developments requiring planning permission may affect protected species, such as bats, it is essential that appropriate surveys are conducted to ensure that they are protected from the adverse effects of development.

In the case of development work, activities involving the capture, disturbance and/or relocation of bats are subject to a licence from the Natural England. Such licences are only granted:

"... for the purpose of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment, to allow people to carry out activities which would otherwise be illegal. Applicants must be able to demonstrate that they have a suitable amount of expertise to achieve the objectives of the proposed work".

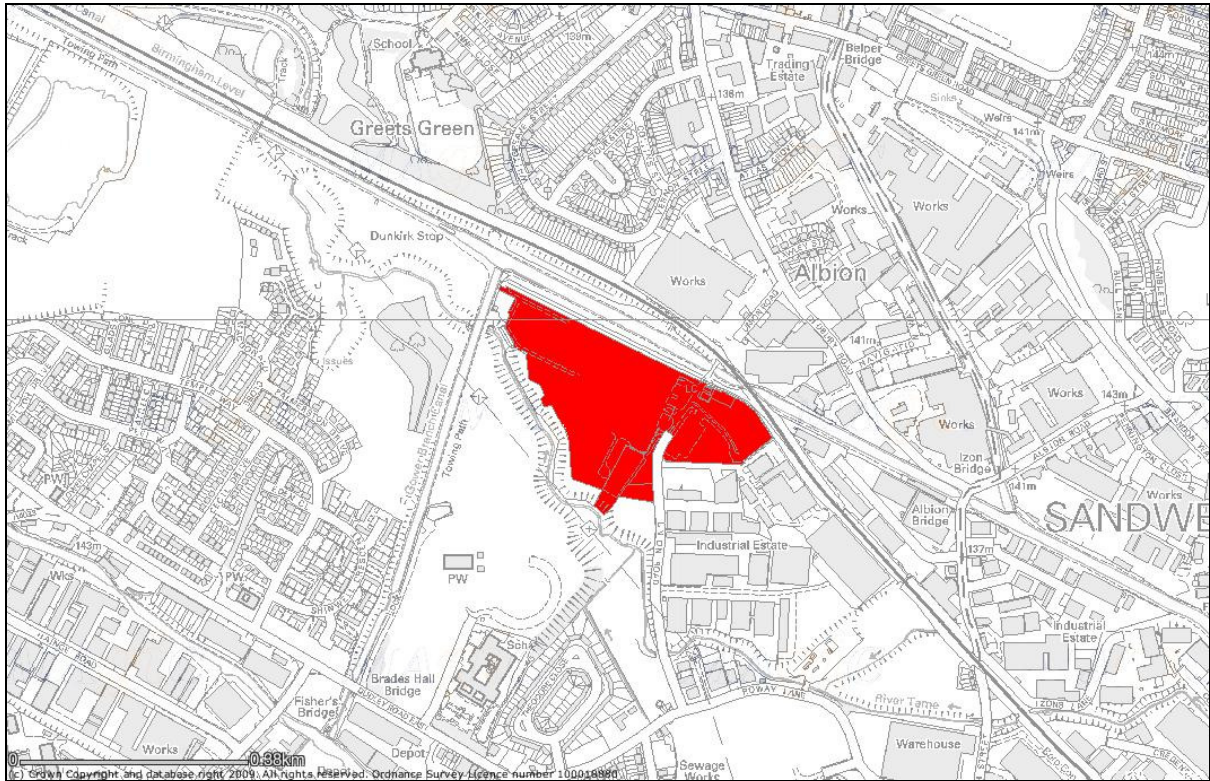
Under the *Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007*, licences can only be issued if Natural England is satisfied that:

- there is no satisfactory alternative; and
- the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

Undertaking work to a bat roost without following appropriate recommendations from Natural England could lead to prosecution resulting in imprisonment, fines of up to £5000 per bat and confiscation of vehicles/equipment used.

Appendix II

Location plan of the site at former Shell tank farm, Union Road, Oldbury

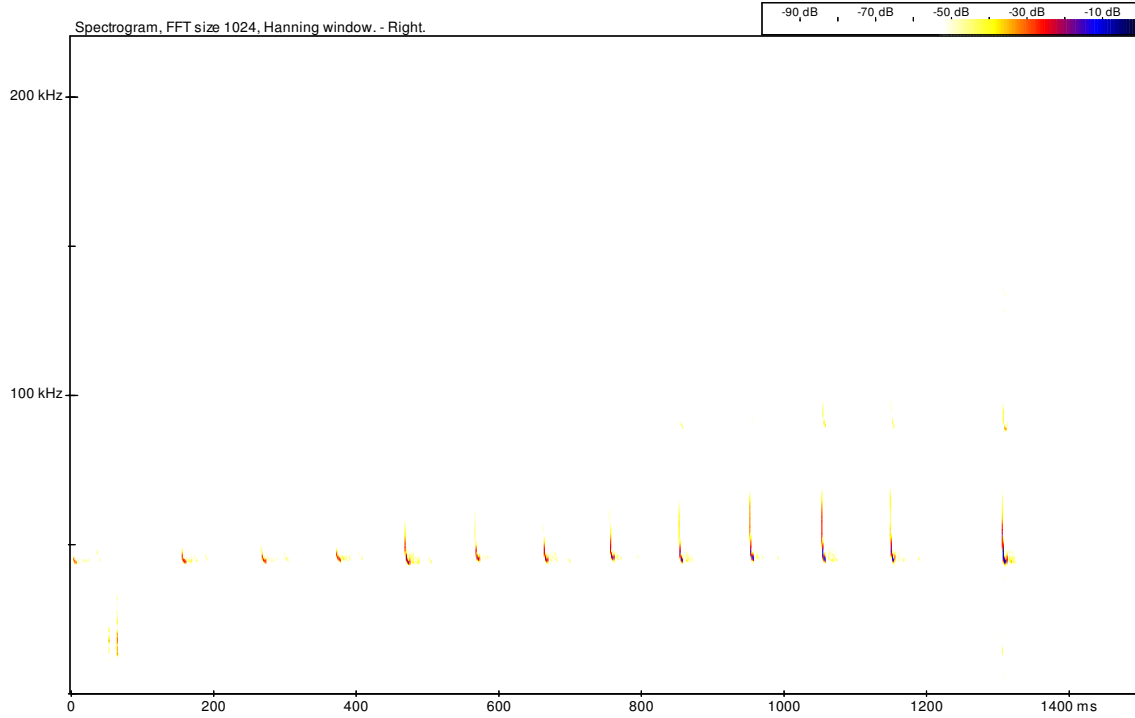


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Appendix III

Example sonograms



Sonogram showing a Common Pipistrelle (*Pipistrellus pipistrellus*) flying across site, recorded on Tuesday 27th April 2010

Appendix IV

Native 'bat friendly' plants

(Taken from the Bat Conservation Trust's leaflet 'Gardening for Bats')

Gardening for bats

Aim at having flowers in bloom through the year, including both annuals and herbaceous perennials.

Below are some suggestions, but this is by no means an exhaustive list. See what grows well in YOUR garden, and what seems most attractive to insects.

Flowering times are approximate, varying in different areas. Regular dead-heading extends flowering period in many flowers. A=annual, HA=hardy annual, HHA=half-hardy annual, P=perennial, W=wild flower.

Flowers for borders			
St John's Wort	<i>Hypericum</i>	P	March-
marigolds	<i>Calendula</i>	H/A	March – Oct.
aubretia	<i>a. deltoidea</i>	P	March-June
honesty	<i>Lunaria rediva</i>	HB	March
forget-me-not	<i>Myosotis sp.</i>	A/P	March - May
elephant ears	<i>Bergenia</i>	P	April
Wallflowers	<i>Erysimum</i>	B	April - June
Cranesbills	<i>Geranium sp.</i>	P	May – Sept.
Yarrow	<i>Achillea</i>	P	May -
Poppies	<i>Papaver sp.</i>	A	May - July
Dames violet	<i>Hesperis matronalis</i>	P	May - August
Red Valerian	<i>Centranthus ruber</i>	P	May – Sept.
Poached egg plant	<i>Limnanthes</i>	HA	June – Aug.
Knapweed	<i>Centaurea nigra</i>	P	June- Sept.
Phacelia		HA	June – Sept.
Ox-eye daisy	<i>Leucanthemum vulgare</i>	P	June – Aug.
Evening primrose	<i>Oenothera biennis</i>	B	June-Sept.
Candytuft	<i>Iberis umbellata</i>	HA	June – Sept.
Sweet William	<i>Dianthus barbatus</i>	B	June - July
Blanket flowers	<i>Gaillardia</i>	P	June -
Verbena	<i>V. bonariensis</i>	HHA	June – Oct.
Scabious	<i>knaulia arvensis</i>	P	July-Aug.
Night-scented stock	<i>matthiola bicomia</i>	HA	July-Aug
Pincushion flower	<i>Scabious sp.</i>	A/P	July – Sept.
Cherry pie	<i>heliotrope</i>	HHA	July – Oct.
Mexican aster	<i>Cosmos sp.</i>	A/P	July – Oct.
Cone flower	<i>Rudbeckia sp.</i>	A/P	August-Nov.
Mallow	<i>lavatera sp.</i>	P	August-Oct
Michaelmas daisy	<i>Aster sp.</i>	P	August-Sept.
Ice plant 'Pink lady'	<i>Sedum spectabile</i>	P	Sept.
Herbs – both leaves and flowers are fragrant			
Fennel	<i>Foeniculum vulgare</i>		July – Sept.
Bergamot	<i>Monarda didyma</i>		June - Sept
Sweet Cicely	<i>Myrrhis odorata</i>		April - June
Hyssop	<i>Hyssopus officinalis</i>		July - Sept
Feverfew	<i>Tanacetum parthenium</i>		June – Sept.
Borage	<i>Borago officinalis</i>		May – Sept.

Rosemary	<i>Rosemary officinalis</i>		March - May
Lemon balm	<i>Melissa officinalis</i>		
Coriander	<i>Coprianrum sativum</i>		June - August
Lavenders	<i>Lavendula sp.</i>		
Marjoram	<i>Origanum sp.</i>		
Trees, shrubs and climbers important to insects			
Oak	<i>Quercus sp.</i>		large gardens only
Silver birch	<i>Betula pendula</i>		
Common alder	<i>Alnus glutinosa</i>		Suitable for coppicing
Hazel	<i>Corylus avellana</i>		Suitable for coppicing
Elder	<i>Sambucus nigra</i>		Small
Pussy willow	<i>Salix caprea</i>		Suitable for coppicing
Hawthorn	<i>Crataegus monogyna</i>		Suitable for coppicing
Honeysuckle	<i>Lonicera sp.</i>		grow a variety for succession.
Dog rose	<i>Rosa canina</i>		Climber
Bramble	<i>Rubus fruticosus</i>		Climber
Ivy	<i>hedera helix</i>		Climber
Buddleia	<i>Buddleia davidii</i>		shrub
Gueider rose	<i>Vibernum opulus</i>		shrub
Gorse	<i>Ulex sp.</i>		shrub
Plants for pond edges and marshy areas			
Purple loosestrife	<i>Lythrum salicaria</i>	W	June – Aug.
Meadow sweet	<i>Filipendula ulmaria</i>	W	June – Sept.
Lady's smock	<i>Cardamine pratensis</i>	W	April - June
Water mint	<i>mentha aquatica</i>	W	July – Sept.
Angelica	<i>Angelica sylvestris</i>	W	July – Sept
Hemp agrimony	<i>Eupatorium cannabinum</i>	W	July – Sept.
Marsh marigold	<i>Caltha palustris</i>	W	March – May
Creeping Jenny	<i>Lysimachia nummularia</i>	W	May - August
Fringed water lily	<i>Nymphoides peltata</i>	W	June – Sept.
Water forget-me-not	<i>Myosotis scorpioides</i>	W	June – Sept.

Allow part of your lawn to grow long in summer and cut in autumn, removing the clippings. Avoid using fertilizers.
Compost heaps are good producers of insects too.

Add a seat to watch your garden come to life!

Appendix V

Example bat boxes



Plates 1 & 2. Bat boxes suitable for attaching to trees or buildings.



Plates 3-5. The bat bricks fitted into masonry (examples shown are available from Ibstock Brick Limited). Other variations on the bat access brick, the bat tube, allows bats to enter cavity walls.