



Community toolkit: when is an invertebrate survey needed?

START HERE

Can you see any of the following habitats on the development site?

- Areas of flowers that are able to flower without interruption or mowing
- Ponds or wet areas such as ditches, seepages, streams etc. - these may only be wet sometimes.
- Patches of Scrub or hedges in combination with other habitats listed.
- Mature trees with dead branches and rot holes with lots of dead or decaying wood.
- Combinations of the above (these can be smallish fragments).
- Habitats of 'conservation priority' such as peat bog, coastal vegetated shingle, etc. Refer to advice on the [Buglife website](#) for more information.
- Don't forget some of these features will not be obvious all year round e.g. flowery grassland in winter.

No

The site is unlikely to be of great value for invertebrates but may have other wildlife value.

Yes

Has the site been developed before?

Yes

The site could be brownfield land of 'high environmental value'. These can be rich for invertebrates and this needs to be investigated.

Write to your local authority stating that an invertebrate survey is needed. Refer to how to write an objection and Buglife's [brownfield hub](#).

No

An invertebrate survey could be needed—has one been carried out?

No

Yes

Is there previous survey data available? Can this be analysed to indicate the value of the site and the impact of the development? Is it less than five years old?

Yes

Have a look at our [survey guidance](#) to see if the appropriate standards have been followed. Contact Buglife or your local Wildlife Trust to find out how significant the species list for the site is.

No

Write to your local authority outlining the need for an invertebrate survey. Have a look at our [survey guidance](#) which gives more details on habitats good for bugs and guidance on influencing a planning application.

What habitat? Which survey?

It is important to ensure the right survey is carried out at the right time of year for the right species. This will help to prevent delays and meet the wildlife protection aims of national planning policies. If any of the habitats below are present alone or in combination an invertebrate study should be carried out.



Brownfield habitat © S Henshall

Previously developed or 'brownfield' land can be incredibly important for wildlife and may support as many rare and endangered invertebrate species as ancient woodland. They often have a patchwork of habitats such as bare ground, flower-rich grassland, wetland and heathland. This, combined with a low nutrient content of the soil which prevents fast growing plant species becoming dominant, provides a continuity of resources for invertebrates and other wildlife throughout the season.

Suggested surveys: Defra open mosaic habitat assessment methodology, (Lush et al 2013) bees and wasps (aculeate Hymenoptera), butterflies and moths (Lepidoptera), flies (Diptera, selected groups) and beetles (Coleoptera)

Areas of flower-rich grassland able to flower without interruption, usually without mowing or cutting. These sites might not contain rare plants, often there will be more common species such as thistles, hogweed, Bird's foot trefoil, clovers and vetches, which provide abundant nectar and pollen sources for many insects.

Suggested surveys: Bees and wasps (aculeate Hymenoptera), beetles (Coleoptera), grasshopper and crickets (Orthoptera), moths and butterflies (Lepidoptera), flies (Diptera, selected groups)

Ponds and wet areas includes damp flushes, seepage lines, pools, streams, rivers, wet woodland, coastal habitats and seasonally flooded areas. High numbers of invertebrates are associated with these habitats and their importance shouldn't be underestimated.

Suggested surveys: Aquatic invertebrates, particularly dragonflies and damselflies (Odonata), water beetles (Coleoptera), flies (Diptera, selected groups), moths (Lepidoptera)

Scrubland, hedgerows and scrubby grassland provide food, nesting areas, perches and shelter. Scrub is of particular value where there are a number of habitats in close proximity (such as flower-rich grassland, woodland or wetland).

Suggested surveys: Beetles (Coleoptera), flies (Diptera, selected groups), moths (Lepidoptera, selected groups)

Mature and veteran trees can be very important for invertebrates due to large quantities of dead and decaying wood. Trees with hollowed trunks are the most valuable to invertebrates and may occur along hedgerows, within parklands, orchards, wood-pasture, woodlands and in commercial plantations.

Suggested surveys: Beetles (Coleoptera), flies (Diptera, selected groups), moths and butterflies (Lepidoptera)

Mosaics and combinations of these habitats can be exceptionally important and can often increase the interest of a single habitat, as one site may not provide all of the features that invertebrates need to complete their lifecycle. For example dragonfly larvae live in streams or pools but use tall grassland and scrub for hunting. Wet grassland will become more interesting as it transitions into a drier grassland as there are different niches for invertebrates to exploit.

Habitats of 'conservation priority' such as peat bogs, coastal vegetated shingle or lowland heathland can support rare and endangered invertebrates. Refer to the [Buglife website](#) for more information about this.



Ancient tree © S Falk



Wetland habitat © S Falk