

# Derelict waste ground, or wildlife haven?

John Newton of Ecology Consultancy Ltd explains why brownfield sites can be havens for protected species and what developers need to know

Brownfield sites are synonymous with fly-tipping, derelict land, remains of building infrastructure and often a seemingly impenetrable jungle of vegetation – something apparently to be cleared up and returned to economically beneficial use as soon as possible. Indeed, the government urges developers to focus on such sites in order to ensure that all land is being efficiently utilised.

However, many of these brownfield sites are havens for wildlife, and before any plans for redevelopment are brought forward, if nothing else, ecological surveys should be carried out. These surveys will highlight the wildlife interest of the site and more importantly will determine whether any special plants or animals are present that may require special conservation measures.

## What is special about brownfield sites?

Very often fly-tipping, demolition or some previous use, will have introduced a variety of substrates that would not otherwise be present on a site. These substrates are often of low nutrient status and free draining, characteristics that enable a wide variety of wild plants to take hold and that in turn attract a variety of interesting invertebrates and the birds that feed on them. Some of the substrates themselves may be ideal for specialist invertebrates to burrow into and nest.

One celebrated brownfield site in West Thurrock, Essex, which largely comprises pulverised fuel ash from an old power station, is host to an amazing collection of rare invertebrates and has recently been the subject of a planning inquiry. Also in Essex, a 93 hectare site on Canvey Island was designated a Site of Special Scientific Interest (SSSI) in 2005, the first brownfield site to be protected specifically for its invertebrates.

It is the unmanaged and wild nature of these sites that makes them so attractive to all forms of wildlife and means that development of them has to be very carefully considered and planned.

## Legislative and planning controls

Certain elements of our native flora and fauna are legally protected by statute, such that breach of the legislation is a criminal offence with fines or even

imprisonment amongst the penalties. In terms of brownfield sites the Wildlife and Countryside Act 1981 (as amended) is the most relevant and protects a variety of plants and animals; the latter including bats, great crested newts, water voles, dormice, reptiles and all wild birds – all species capable of being found on brownfield land. Some of these species receive additional protection under the Habitat Regulations 1994 (as amended) meaning that proposed works where such animals occur may require licensing. Other legislation that may be relevant includes the CRoW Act 2000, and the Protection of Badgers Act 1992. These items of legislation are designed to ensure the conservation of these species of animals (and in some cases important plants and habitats) and a breach of the legislation may occur if development proceeds without the appropriate surveys having been first undertaken.

## Planning guidance

As the need to provide more housing, work places and associated infrastructure puts more and more pressure on land and wildlife resources, then the planning system seeks to respond in a way that ensures these ecological components are given due consideration in the planning process. The most important piece of guidance in this respect is *Planning Policy Statement 9: Biodiversity and Geological Conservation* (2005). Amongst other things this states that:

- Planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests.
- The aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests.
- Planning authorities should ensure that these species of principal importance for biodiversity, i.e. UK Biodiversity Action Plan species, are protected from the adverse effects of development, where appropriate, by using planning conditions or obligations.

In respect of brownfield sites *PPS9* states:

*“The re-use of previously developed land for new development makes a major contribution to sustainable development by reducing the amount of countryside*

*and undeveloped land that needs to be used. However, where such sites have significant biodiversity or geological interest of recognised local importance, local planning authorities, together with developers, should aim to retain this interest or incorporate it into any development of the site.”*

This guidance is being adopted at the local level, and more and more local authorities are requiring ecological survey reports prior to planning applications for brownfield sites being considered.

In regard to the Biodiversity Action Plan (BAP) species and habitats, those that are on the UK BAP list are, under *PPS9*, of principal importance for biodiversity and are, therefore, along with legally protected species and habitats a material consideration in the planning process. In other words if appropriate surveys have not been carried out prior to an application being submitted the planning authority may refuse to consider it. The list of UK BAP species and habitats has recently been revised and expanded and now includes species such as common toad and hedgehog, and the elegantly titled Open Mosaic Habitats on Previously Developed Land – in other words some types of brownfield habitat!

Biodiversity Action Plans are also being formulated at the local level, e.g. county level and some at the borough level, and where they exist these too may influence planning decisions.

## What, how and when to survey?

The critical issue for ecological surveys is timing. Certain species of plant and animal may only be visible or active at certain times of year and it may take several visits over a period of weeks or months to complete appropriate surveys. For example, great crested newts utilise ponds for breeding in the period March to June and thus pond surveys can only be reliably carried out during that period, with at least two surveys being carried out during the peak breeding period of mid-April to mid-May. Surveys outside that season may be difficult or impossible, thus leading to project delays and greater expense.

Similarly, reptiles, a group of animals

## Key points

- Brownfield habitats can be important for wildlife
- Legal protection is completely separate to planning permission. If legally protected species are found on a site even if it has planning permission works may have to stop.
- The number of species and habitats gaining legal and planning guidance protection is increasing.
- Carrying out surveys at the appropriate time of year and to an accepted standard is critical.

## The usual suspects

- Bats
  - Badgers
  - Great crested newts
  - Water voles
  - Otters
  - Dormice
  - Nesting birds
  - Reptiles (slow worms and common lizards)
- But also now Species of Principal Importance for Biodiversity

## Statutory Nature Conservation Organisations

- Natural England
- Countryside Council for Wales
- Scottish Natural Heritage
- Environment and Heritage Service Northern Ireland

Avoid, Mitigate, Compensate and always Enhance

that are commonly found on brownfield sites especially where there is a lot of broken concrete or brick rubble, can only be reliably surveyed between April and September (with July and August not being ideal) and may require 10 or more visits. If they are found on the site and have to be moved out of the way, up to 90 visits may be required in suitable weather and over a substantial period of time. Invertebrates have very short life spans and individual species may only be visible for a few weeks throughout the year. Thus, surveys may have to be carried out throughout the spring and summer to get a full and accurate picture of the interest of a site for that group of species.

The most appropriate way forward with surveys is to carry out what is known as a Phase 1 habitat survey combined with an assessment of the likely presence of protected and BAP species as soon as possible in the site acquisition or development process. This will identify the principal habitats on site and the potential for

important animal species to be present. More detailed Phase 2 surveys may then be required, especially of any animal species likely to be present. Some of these species may require the surveyors to be licensed, for example bats, great crested newts and dormice. The Statutory Nature Conservation Organisation (SNCOs e.g. Natural England) in the region in which the site is situated can provide advice on these issues.

Surveys should be carried out by professional ecologists who are members of the Institute of Ecology and Environmental Management (IEEM). The IEEM website includes a searchable list of all its members and their skills and interests, [www.ieem.org](http://www.ieem.org)

## Mitigation and translocation

If a brownfield site has ecological value, what are the options? The preferred option is to retain that interest on site, ideally in its existing form, that is, avoid damage or disturbance. Where this is not possible, then reducing the scale of impact by designing in some form of mitigation is the next preferred option. This may require careful consideration of the requirements of the species or habitats involved and the setting aside of an area of the site for mitigation purposes.

The final option is translocation to an off-site location of whatever it is that is important. However, the Statutory Nature Conservation Organisations do not favour this, as translocation is not always successful and can be complicated and difficult to administer. With certain species licences may have to be obtained before translocation can be put into effect and this in itself can be a convoluted and time-consuming process. Even where licences are not required the SNCOs or other regulatory bodies such as the Environment Agency may want to see method statements and assurances regarding all aspects of the translocation procedure.

One group of animals that regularly occurs on brownfield sites is reptiles, usually slow worms and/or common lizards. As noted above these require surveys at specific times of the year and if found on site are subject to a large number of capture visits before the site can be considered clear of the animals. The biggest problem, however, often relates to finding a suitable receptor site. Available land can take time to find, surveys to determine if reptiles are already present on site have to be carried out, and if they are, the site may not be suitable as a receptor for more animals. Even if it is suitable, works may have to be carried out to prepare it for the translocated animals. All this takes time and money. To reiterate,



the consideration of ecological surveys has to be early on in the development process, and sufficient time and resources have to be allowed in the programme for dealing with any issues that might arise.

## Green roofs

In urban areas where space is at a premium, mitigation for the loss of brownfield habitat and any important species may be virtually impossible. One solution that Ecology Consultancy Ltd is promoting through a venture with partners Livingroofs.org and EPG Clear is the creation of green roofs. These can be designed to replicate a variety of habitats from the roof garden (intensive green roof) to the free draining low nutrient wasteland site (extensive green roof).

In the centre of cities such as Birmingham and London, the creation of brownfield habitats on roofs is one way of ensuring the continued survival of rare species such as the black redstart, a relative of the robin, and various BAP invertebrates.

## Special places

Brownfield sites can be very special places for wildlife. Surveys should be undertaken early on in the development process to ascertain what is present and, in the face of development, to draw up adequate mitigation strategies. The costs of surveys are usually minor compared to the costs that may result from delays in the construction programme. The use of green roofs is one way forward in mitigating for the potential loss of habitat and species especially in urban areas.

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