Open mosaic habitats high value guidance: when is brownfield land of '*high environmental value*'?

Wildlife and Countryside Link

Wildlife and Countryside Link (Link) brings together 45 voluntary organisations concerned with the conservation and protection of wildlife and the countryside. Our members practise and advocate environmentally sensitive land management, and encourage respect for and enjoyment of natural landscapes and features, the historic and marine environment and biodiversity. Taken together our members have the support of over 8 million people in the UK and manage over 750,000 hectares of land.

This guidance is supported by the following nine organisations:

- Amphibian and Reptile Conservation
- British Mountaineering Council
- Buglife – The Invertebrate Conservation Trust
- Butterfly Conservation
- Campaign to Protect Rural England
- Open Spaces Society
- Royal Society for the Protection Birds
- The Ramblers
- The Wildlife Trusts

Introduction

Redeveloping brownfield land can provide sustainable development opportunities, reduce pressure on the Green Belt and other undeveloped land, and offer chances to promote economic regeneration. However, a minority of previously developed sites are havens for wildlife. Two of the UK's top sites for wildlife diversity are brownfield land, and support some of the UK's most scarce and threatened species. In many cases, they provide the last 'wild space' in urban areas for local communities, allowing them access to nature and consequently improving the communities' well-being.

The National Planning Policy Framework is explicit that 'previously developed' land, treated as synonymous with 'brownfield', should be prioritised for development as long as it is not of 'high environmental value'. Further clarity on this is not provided and there is currently no definition of 'high environmental value'. Whilst the Framework definition of previously developed land excludes sites that have blended into the landscape, often brownfield land of 'high environmental value' will not have blended into the landscape and would therefore not meet this exclusion.

Whilst the value of brownfield land in terms of biodiversity is slowly being recognised, recent research in the Thames Gateway showed that over 50% of wildlife-rich brownfield sites[1] have been lost, damaged or are under threat. This demonstrates that greater guidance is needed on what 'high environmental value' means, how to identify it and how to prevent further losses.

This guide focuses largely on when the issue of 'high environmental value' might arise in terms of biodiversity conservation. However, 'high environmental value' can potentially also encompass other issues such as heritage, landscape, carbon sequestration, microclimate mitigation or water cycle benefits.

Relevant legislation and policy

National Planning Policy Framework states that Local authorities should '*encourage the effective use of land by reusing land that has been previously developed (brownfield land),* ***provided that it is not of high environmental value***[2]

Planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), ***provided that it is not of high environmental value.*** *Local planning authorities may continue to consider the case for setting a locally appropriate target for the use of brownfield land*[3]

The Framework is clear in its objectives but lacks guidance on how to implement the framework in order to achieve these. The **Planning Practice Guidance** accompanying the Framework[4] states that environmental value should be assessed **before development decisions are taken**. However, with no definition of 'high environmental value' available there is a lack of understanding of what this means in practice. This leads to delays in the planning process and ultimately causes sites of high value for wildlife to be lost with little, inappropriate or no mitigation.

When is a site of high environmental value?

A site should be considered of 'high environmental value' in biodiversity terms if:

It contains priority habitat(s) listed under section 41 Natural Environment and Rural Communities Act 2006

The site holds a nature conservation designation such as Site of Special Scientific Interest, or is defined as a Local Wildlife Site (or equivalent).

Brownfield land can support a wide range of terrestrial and aquatic habitats. This diversity has made them increasingly important for endangered and rare invertebrates as well as lichens, plants, birds, bats, reptiles and amphibians. A high quality brownfield site can even be compared to ancient woodland in terms of the number of rare species that they support.[5] Consequently, a range of Section 41 habitats can be found on brownfield land, particularly the Section 41 habitat 'open mosaic on previously developed land' (OMHPDL). A site of 'high environmental' value will also often be home to significant varieties of reptiles (such as Slow worm, Common lizard, Adder, or Grass snake) and may meet the criteria for 'key reptile sites'[6].

Using the criteria above, preliminary government statistics suggest around 6-8% of sites fall into the 'high environmental value' classification; a tiny proportion of brownfield land overall. Protection of such a small number of sites from inappropriate development is unlikely to

prevent the re-use of brownfield sites overall, discourage suitable development sites coming forward or force additional development into greenfield areas.

What is open mosaic habitat on previously developed land?

Brownfield land of 'high environmental value' can be extremely diverse and include a wide range of sites such as railway sidings, quarries, former industrial works, slag heaps and brick pits.

Information on all Section 41 habitats is available from the Joint Nature Conservation Committee.[7] However, the habitat most frequently associated with brownfield land is' open mosaic on previously developed land'. Typically, a site will show evidence of previous disturbance, either through soil being removed or severely modified by previous use, or the addition of materials such as industrial spoil, with spatial variation developing across the site. The resultant variation allows for a mosaic of different habitats to be supported in close proximity creating a patchwork of varied habitats such as bare ground, wild-flower rich grassland, heathland and other habitats. These close proximity mosaics, 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 year.

The full criteria for identification of open mosaic habitats are available in the UK Biodiversity Action Plan Priority Habitat Description for open mosaic habitat.[8] OMHPDL is provisionally being mapped across England and this inventory is the first national inventory of wildlife-rich brownfields, distinguishing OMHPDL from other brownfields or previously modified land.[9]

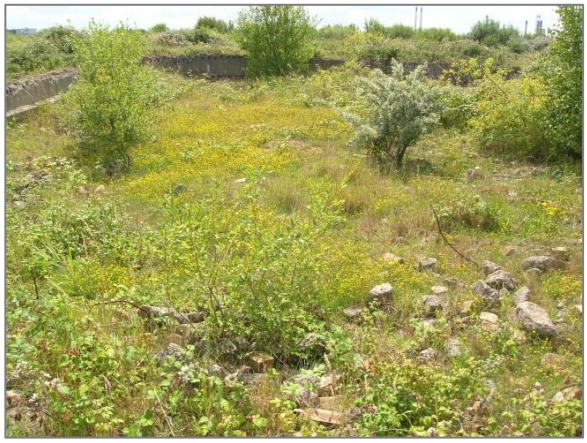
Other benefits of brownfield land of 'high environmental value'

In many built-up areas, brownfield sites may be the sole semi-natural green-space available and the only option for the local community to connect with nature. Many brownfield sites are used informally for recreational activities such as walking, cycling and horse riding. These sites are also used as thoroughfares between other urban areas as part of a green infrastructure network. In such cases, it may be worth noting whether the sites are identified as part of a local green infrastructure strategy. Providing a site is not seriously contaminated, there is great potential to make many of these sites more accessible, safe and enjoyable through imaginative planning and positive management. In turn, this will bring attendant quality of life and health benefits to residents, as well as wider economic advantages.

Examples of brownfield land with 'high environmental value'

Canvey Wick, Essex (93 hectares) - A former oil refinery, extensive amounts of open mosaic habitat has developed on the sandy, free draining sediments. The site borders, on

two sides, open land designated as part of the Metropolitan Green Belt. The site supports over 1400 species of invertebrates and is the most important site in the Thames Gateway for the Shrill carder bee. The site has been designated as an SSSI for invertebrate fauna associated with open mosaic habitat.



The former Harbury Cement Works at Bishops Hill, Warwickshire (38 hectares) - Once a limestone quarry with associated cement works, this site supports diverse wildlife including a large population of Small blue butterflies. Planning permission has been granted for a mixed use development including 200 dwellings and employment usage. The planned development will retain the 'high environmental value' areas by creating a nature reserve and provide for the reserve's long term management.

Examples of rare and scarce species found on brownfield land of 'high environmental value'

© Peter Harvey

Shrill carder bee (*Bombus sylvarum*) – brownfield land in the Thames Gateway supports one of the only remaining populations of this species in the UK

© Craig Slawson

Streaked bombardier beetle (*Brachinus sclopeta*) - completely restricted to a hand full of brownfield sites in London. The loss of these sites could result in its extinction

©Andy Jukes

Dingy skipper butterfly (*Erynnis tages)* - a good indicator species of OMHPDL. Widespread but largely found on brownfield sites with open mosaic habitat, especially in the Midlands.

© Gunther Hasler

Black red start (*Phoenicurus ochruros)* adapted to live in the heart of industrial and urban centres, fewer than 100 pairs in the UK

©Mike Ewart

Reptiles - The presence of reptiles such as the slow worm (*Angius fragilis*) can be another indicator of site quality

© Mnolf

Bats can make use of remaining structures for roosts or use habitats for foraging.

Signposting to survey requirements and mitigation*:

Open mosaic habitat

Any site that classes as previously developed land should be assessed against the standard Open Mosaic Habitat Survey guidelines.

- Open Mosaic Habitat Survey Handbook[10]
- Buglife brownfield hub

Invertebrates

- Terrestrial and Freshwater Invertebrates for Conservation and Evaluation[11]
- Organising surveys to determine site quality for invertebrates [12]
- Buglife invertebrate survey and mitigation guidance

Amphibian and reptiles

To ensure that the reptile value of the development is assessed please refer to the following:

- Froglife Advice Sheet 10: Reptile survey
- Evaluating local mitigation/translocation programmes[13]
- Amphibian Habitat Management Handbook[14]
- Reptile Habitat Management Handbook[15]

Mammals

- Bird surveys may be required, for example breeding bird survey, but this will depend on the specific circumstances and should be assessed on a case-by-case basis.
- Bat surveys: Good Practice Guidelines [16]

General habitat

- Extended Phase 1[17]

Depending on habitats present, further habitat surveys maybe required following standard survey guidelines for that particular habitat.

* This list is intended to signpost to the most commonly required resources. However, depending on the site and the species and habitats present, there may be additional survey requirements.

Wildlife and Countryside Link
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[1] Robins J, Henshall S & Farr A (2013) State of Brownfield in the Thames Gateway. Buglife- The Invertebrate Conservation Trust
[2] NPPF paragraph 17
[3] NPPF paragraph 111
[4] Paragraph 24 http://planningguidance.planningportal.gov.uk/blog/guidance/natural-environment/brownfield-land-soils-and-agricultural-land/
[5] Barker, G. (2000) Ecological recombination in urban areas: implications for nature conservation. Proceedings of a workshop held at the Centre for Ecology and Hydrology (Monks Wood).
[6] Froglife advice sheet 10: Reptiles
[7] http://jncc.defra.gov.uk/page-5706
[8] http://jncc.defra.gov.uk/pdf/UKBAP_BAPHabitats-40-OMH-2010.pdf
[9] The inventory is available at [http://habitatsurveys.esdm.co.uk/home.aspx]
[10] Lush M.J., Kirby P. and Shepherd P. (2013) Open Mosaic Habitat Survey Handbook.
[11] Drake C.M., Lott, D.A., Alexander, K.N.A and Webb, J. (2007) Surveying Terrestrial and Freshwater Invertebrates for Conservation and Evaluation. Natural England Research Report NERR005.
[12] Natural England (2005) Organising surveys to determine site quality for invertebrates. (formerly English Nature)
[13] HGBI Advisory Group for Amphibian and Reptile Groups (1999) Evaluating local mitigation/translocation programme: Maintaining best practice and lawful standards
[14] Baker *et al* (2011). Amphibian Habitat Management handbook: Amphibian and Reptile Conservation, Bournemouth http://www.arc-trust.org/advice/habitat-management/for-amphibians/AHMH
[15] Edgar P, Foster J and Baker J (2010). Reptile Habitat Management Handbook: Amphibian and Reptile Conservation, Bournemouth http://www.arc-trust.org/advice/habitat-management/reptiles/RHMH
[16] Bat Conservation Trust (2012). *Bat Surveys: Good Practice Guidelines, 2nd Edition*. Bat Conservation Trust, London.
[17] Joint Nature Conservation Committee (2010) *Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit*. Reprinted by JNCC, Peterborough