

Carmarthenshire Nature Recovery Plan

Open mosaic habitats on previously developed land

(‘brownfield’ habitat) includes land that is or was once occupied by industrial or other human uses but which has now become disused, derelict or is currently unoccupied (in some cases they may still be in use). Such sites might include:

- former colliery sites and spoil tips,
- disused quarries,
- restored opencast sites,
- pulverised fuel-ash (pfa - the ash resulting from the burning of pulverised coal in coal-fired electricity power stations)
- metal-rich stony waste matter created during the smelting or refining of ore (metalliferous slag) from old furnaces,
- demolished or derelict factory sites,
- industrial lagoons,
- derelict railway land,
- redundant dockland,
- contaminated land,
- former refuse tips, etc.

This land may occur in both built-up and rural settings.

Brownfield sites can often remain unused for many years and recolonisation by plants and animals on these undisturbed areas can lead to the development of a diverse flora and fauna with a complex succession of habitats forming a mosaic (patchwork), from bare ground to grassland, scrub and woodland. These areas often provide alternative habitats for many species that have declined due to loss of their native habitats in the wider countryside because of intensification of agriculture and urbanisation. Often the biodiversity value of these areas is underestimated and can be important for many species, especially plants, birds, mammals, amphibians and reptiles (herpetofauna) and invertebrates.

Remnants of original habitats may remain within post-industrial sites which, although isolated and fragmented, can be important for biodiversity and act as a vital local genetic resource for re-colonisation of disturbed areas. They can act as wildlife corridors in otherwise built-up or urban areas as well as providing valuable habitat in otherwise species-poor rural situations. Species may be introduced in dumped soil and ballast and exotic species may grow that are more often associated with other habitats or countries; these species may reflect the area's

Brownfield, Gardens and Urban Open Spaces

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Natural benefits of ‘brownfield’ habitats

As well as the inherent value of these habitats and for the species they support they provide us with a number of natural benefits:

- Green Infrastructure: biodiversity-rich brownfield sites have potential to deliver high quality green infrastructure, for people and wildlife.
- Brownfield sites can provide valuable opportunities for people to have access to the wildlife on their doorstep
- Urban green spaces can provide a cooling effect to the local environment, clean the air and reduce noise.
- Brownfield sites can help with flood storage.
- Urban green space/brownfield sites can help store carbon.

past international trade and could be seen to have some cultural value, e.g. certain annual species at Burry Port and Pembrey.

These areas are often valued by local people for casual recreation, such as for dog walking and often have informal amenity value. Research findings indicate that nature plays a vital role in human health and well-being. Urban parks and local nature reserves, by providing access to nature for individuals, can play a significant role in maintaining good physical health, recovery from illness, alleviating stress and mental health problems, enhancing social interaction and improving community cohesion.

In recent years, brownfield sites have become increasingly recognized nationally as important havens for wildlife. They often support protected species and may now carry designations in order to safeguard such species. However, increasing numbers are being designated on their own merit as habitats of importance develop. These include, for example, sites of former alkali tips, pulverised fuel-ash (pfa) lagoons, coal-spoil tips and gravel pits.

Many brownfield sites in Carmarthenshire are richer in the number of species (whether plant, bird or insect) than large swathes of the intensively farmed countryside. One former settling lagoon at Pwll of the former Burry Port Power Station is actually a Site of Special Scientific Interest by virtue of an extraordinary mix of fenland and woodland plants, whilst another site nearby ('Ashpits Pond') is important for its wildfowl.

Part of Morfa Berwig Local Nature Reserve at Bynea is made up of areas infilled wetland, once designated for industrial development, now brownfield habitats on the site host a range of species, and is especially good for invertebrates.

The majority of post-industrial sites in Carmarthenshire occur in the south-east of the county, particularly on the Coalfield and the limestone quarrying areas, although most towns have derelict or development sites which are within the scope of this habitat definition.

Over recent years **gardens and allotments** have become increasingly important habitats for wildlife, including many species now rare in the wider countryside. Gardens and allotments can also be important wildlife corridors. In our towns, a large proportion of available wildlife habitat is provided by gardens, which are the 'green lungs' of our urban environment.

Gardens also play an important role in allowing people to have close contact with nature. However many gardening practices are detrimental from a biodiversity perspective and more work is needed to encourage wildlife-friendly gardening. For example, the use of peat has a detrimental

Why are urban/brownfield habitats changing (from the *State of Nature* report

www.rspb.org.uk/stateofnature)?

- Fragmentation of habitat – loss of wildlife corridors.
- Loss of green space.
- Tidier gardening.
- Development.
- Water and air pollution.
- Non-native species.
- Climate change.

Associated priority Section 7 species (NB this may not an exhaustive list!):

Birds

Common linnet
Yellowhammer
Herring gull
Common starling
Northern lapwing
House sparrow
Song thrush
Hedge sparrow
Kestrel
Ringed plover

Mammals

Brown hare
Hedgehog
Bat spp.

Invertebrates

Small Blue
Dingy Skipper
Grayling, Wall
Dark Spinach (moth)
V-moth
The Cinnabar (moth)
Brown-banded carder bee

Reptiles

Slow worm
Common toad
Common lizard
Grass snake
Adder

Plants/lower plants

Cornflower
Deptford Pink
Darnel
Pennyroyal

effect on our peatland habitats.

As the wider environment loses species, gardens provide a refuge for a huge variety of birds and insects. Other species such as hedgehogs and amphibians may now have significant strongholds in urban back gardens.

Garden ponds, have local biodiversity value but can be the source of some invasive non-native aquatic plant species such as Parrot's Feather and New Zealand Pygmy Weed. These can cause significant issues, causing flooding by blocking watercourses and drainage channels. They can rapidly dominate a water body, displacing native species.

Allotments can also cover a significant area of land in towns and can therefore make a valuable contribution to the wildlife potential of urban areas. The diversity of habitats found in allotments – cultivated and fallow ground, grassy areas, empty overgrown plots, compost heaps, sheds etc. – make them important for a wide range of plants and animals. Allotments offer benefits for the whole community and contribute to the sustainable regeneration of towns and cities, providing green areas in urban environments.

Urban open space is a term used to describe parks, green spaces, and other open areas such as playing fields. They can be highly managed environments or relatively natural areas. They are commonly open to public access.

These areas are important because they offer good recreational opportunities for people. They can be islands of nature, supporting biodiversity and providing a habitat for natural species in environments that are otherwise uninhabitable due to urban development. Appropriately managed urban open spaces can be places where local communities can enjoy nature in an urban setting.

Carmarthenshire's towns have some good examples of parks and open spaces. Parc Howard in Llanelli contrasts with the more newly created open space within the Millennium Coastal Park. Betws Park in Ammanford and Penlan Parc in Llandeilo are good examples of formal gardens alongside the natural habitats. Small settlements have areas of recreational open space containing play sports areas.

A key aim of conserving biodiversity where people live is to enable them to have positive/enjoyable contact with everyday wildlife, from sparrows in the park, to butterflies in the garden and frogspawn in the local pond, with the ultimate objective that people will find nature such an inseparable part of their lives that they will be prepared to use their time, energy and influence to conserve it.

Bird's Nest, Round-headed club rush
Small-flowered catchfly
Lead-moss
Maidenhair fern



Where to see these habitats in Carmarthenshire:

Brownfield sites: Pwll Lagoon SSSI and Ashpits Pond, Burry Port; Morfa Berwig Local Nature Reserve, Bynea; Mynydd Mawr Woodland Park, Tumble; Nant-y-Ci Recreation Park, Ammanford.

Parks: Parc Howard, Llanelli, Betws Park, Ammanford; Penlan Park, Llandeilo, Millennium Coastal Park, Llanelli.

Vision statement and objectives

Our vision for these habitats is to maintain and enhance the wildlife value and potential of brownfield habitats, gardens and other urban open spaces, and increase awareness of their importance for biodiversity, and the opportunities they provide for public engagement with conservation at a local level. Any action would seek to meet one or more of the following objectives:

- ▶ To ensure there is the right amount of appropriate quality open space in the right places in built up areas of Carmarthenshire to provide for biodiversity and people's need to have contact with it.
- ▶ To survey, retain and positively manage brownfield habitats in Carmarthenshire that support priority habitats and species.
- ▶ To increase the number of wildlife-friendly features in parks/gardens/schools in the county.
- ▶ To increase the number of allotments in Carmarthenshire.
- ▶ To maintain and expand the range and/or population of species associated with these habitat types.
- ▶ To raise awareness of brownfield habitats and the benefits they bring us
- ▶ To survey key brownfield sites and associated priority species.

Useful links

www.buglife.org.uk/conservation/currentprojects/Habitats+Action/Brownfields

www.wildlifetrusts.org/wildlife/habitats/towns-and-gardens

www.wildlifetrusts.org/wildlife/habitats/brownfield

www.biodiversitywales.org.uk/Urban-Brownfield-Ecosystem