

OPEN MOSAIC HABITATS ON PREVIOUSLY DEVELOPED LAND

Post-industrial land can develop an exceptionally diverse range of flora and fauna. This priority habitat is at risk from policies promoting redevelopment on brownfield land.

UK Priority Habitats covered by this statement:

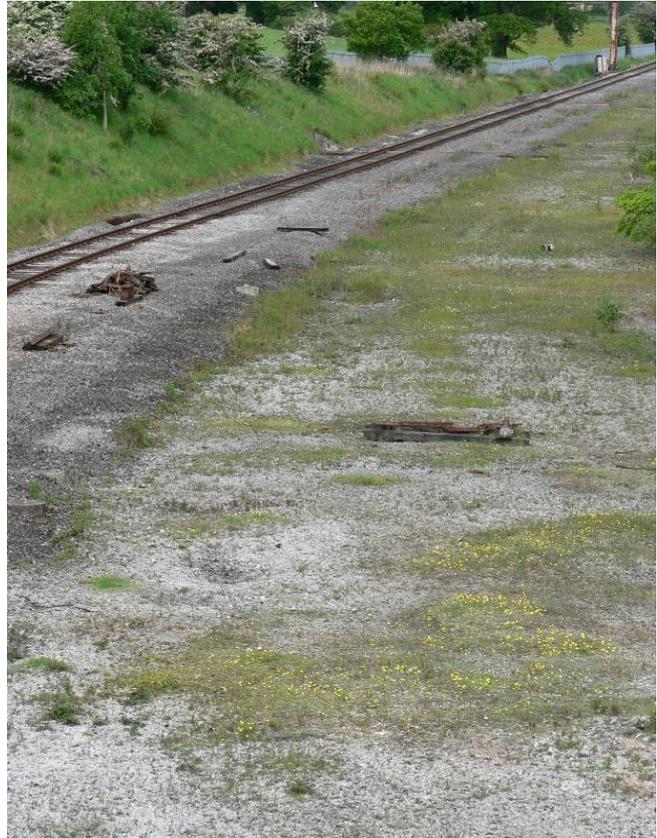
[Open mosaic habitats on previously developed land](#)

Cumbria Biodiversity Action Plan habitats covered by this statement:

None

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Kingmoor Marshalling Yard, Carlisle © Stephen Hewitt

Description

The habitat is best defined in terms of structure, rather than through specific vegetation communities. It comprises mosaics of bare ground with, typically, very early pioneer communities on skeletal substrates, more established open grasslands, usually dominated by fine-leaved grasses with many flowers, scrub, and patches of other habitats such as heathland, swamp, temporary pools and inundation grasslands.

This habitat does not include habitats developed on waste from the lead mining industry which is covered under 'Calaminarian Grassland'.

High quality habitat may be characterised as unmanaged flower-rich grasslands with sparsely-vegetated areas developed over many years on poor substrates. This habitat includes disused base-rich slag tips, coal spoil heaps, lime beds, fly ash lagoons, old industrial sites, demolition sites and disused railways. In Cumbria they are particularly associated with larger industrial towns.

Where there is some base-rich influence, flowers such as Fairy Flax, Ploughman's Spikenard, Common Centaury and Blue Fleabane may be present. These calcareous sites can be rich in orchids, including Marsh Orchids, and Fragrant, Pyramidal and Bee orchids. Indeed in Cumbria Bee Orchids are predominantly found on man-made sites.

More acidic areas support species such as Wavy Hair-grass and Heather. Pools may have Common Reedmace, horsetails or rushes and often have Yellow Flag.

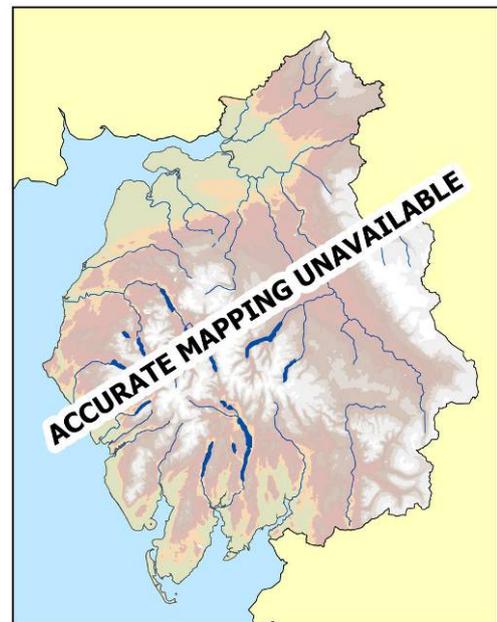
In Cumbria several uncommon plants are associated with this habitat, including Purple Broomrape and Yellow-wort.

These habitats support a wide variety of animals including small mammals and birds (particularly those characteristic of scrub, such as Linnet), and they are especially important for invertebrates including bees, wasps, beetles, flies, butterflies, moths and snails. On the west coast of Cumbria colonies of the uncommon Small Blue butterfly are strongly associated with former steelworks, steel slagbanks and the Port of Workington. Uncommon reptiles and amphibians are also found in this habitat, including Slow-worm, Great Crested Newt and, in coastal situations, Natterjack Toad.

This diversity reflects the complex mosaic of habitats in these sites, the shelter provided by building rubble, as well as the variety of food plants, including flowers for pollen and nectar.

Distribution and Extent

This habitat can exist on any brownfield site and consequently can be found anywhere in the county, though it is more likely to be in and around the larger towns. The former steel works and associated slag banks along the west coast have particularly good examples of this habitat, especially those at the Millom Ironworks Local Nature Reserve and at Maryport. Kingmoor Sidings Local Nature Reserve, in Carlisle, is another good example of this habitat, as are the ports at Workington and Barrow.



Distribution of open mosaic habitats in Cumbria

Conservation Issues

The decline of mining and heavy industry, and the current requirements for any such new development to be restored post development, as part of a planning permission, have virtually halted the creation of new, large-scale post industrial landscapes where colonisation and natural succession are left to prevail. The remaining larger sites are therefore effectively irreplaceable.

In the last 20 years many sites have been lost through either regeneration to public open space or as new development land.

Remaining habitat requires conservation through the planning process, and new developments need to make the most of any new opportunities. Small new sites can be created in suitable locations.

Planning Considerations

- PPS9 states that local authorities should conserve important natural habitat types (priority habitats and habitats of principal importance in England), and identify opportunities to enhance and add to them.
- Any development that may impact upon any of this range of habitats, or their species interests, would require an assessment of the likely effects on the habitat/species and, as necessary, appropriate protection and mitigation measures.
- There is a policy conflict between the national policies to protect UK priority habitats and to redevelop previously developed land. This priority habitat is under-recorded in Cumbria and the majority of the known habitat is unsurveyed for the full range of relevant biodiversity interests. It is therefore difficult for local planning authorities to make informed policy decisions without an improved evidence base. Such surveys are therefore required.
- Sites with this habitat are at risk from redevelopment, landfill, industrial and commercial use, or housing. 'Reclamation' of these habitats as amenity greenspace can be just as damaging, commonly involving re-grading of the land, burial of existing substrates with imported fertile topsoils, and sowing/planting of amenity grass mixes shrubs and trees, usually with the intention of 'quick greening'.
- Large brownfield sites can support very large populations of protected species such as reptiles, Great Crested Newt and Natterjack Toad. Adequate surveys are required of these species and their habitats prior to planning permission being granted and, where permission is granted, measures to mitigate and compensate impacts on these species must be appropriate and of a suitable scale.
- Potential impacts upon populations of European Protected Species such as Great Crested Newt and Natterjack Toad may be significant.
- Retention of this habitat on site, and creation of new habitat, will require the industrial substrate to be retained, such as slag, building rubble, concrete etc.
- The majority of these sites lie outside the SSSI system, though some of the best examples are SSSIs, such as at Maryport and Millom Ironworks. Some are of international importance for the species they support.

Enhancement Opportunities

- Developments on this land can be planned in such a way as to retain and/or recreate these early successional habitats that support rare amphibians, reptiles, plants and invertebrates. They should aim to provide a mosaic of habitat features, including a varied vegetation structure, areas of exposed friable substrate and flower-rich grassland, pools and refuges.
- These habitats are often the only locations where people can enjoy wildlife directly in their day-to-day lives. Opportunities should be taken to retain the best examples as managed public space, such as the nature reserves at Millom Ironworks and Kingmoor Sidings, and to create networks of similar smaller sites.
- Living roofs can provide the opportunity to recreate some forms of this habitat if the roofs are sufficiently extensive.
- Biodiversity Management and Enhancement Plans can be used for longer term developments.

Habitat Targets

- As yet no habitat targets have been prepared

Key Species

The following Key Species could benefit from enhancement of this habitat, or be negatively impacted upon by inappropriate developments on or near this habitat:

Small Blue	Grass Snake	Viviparous (Common) Lizard
Dingy Skipper	Great Crested Newt	Skylark
Grayling butterfly	Natterjack Toad	Linnet
Common Toad	Slow-worm	

Further Information

[UK Biodiversity Partnership, Species and Habitats Review 2007](#), Open mosaic habitats on previously developed land, Summary Statement p107, Habitat Proposal p144

[Habitats of principal importance in England](#) Section 41 NERC Act list

[Buglife: brownfield sites](#)

[Butterfly Conservation: habitat management advice](#)

[Natural England: Living Roofs](#)

Contacts

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Current Action in Cumbria

- None