UK Biodiversity Action Plan
Priority Habitat Descriptions

Blanket Bog

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The definition of this habitat remains unchanged from the pre-existing Habitat Action Plan (https://webarchive.nationalarchives.gov.uk/20110303150144/http://www.ukbap.org.uk/UKPlans.aspx?ID=21), a summary of which appears below.

The term blanket 'bog' strictly applies only to that portion of a blanket 'mire' which is exclusively rain-fed. However, for the purposes of this plan the terms 'bog' and 'mire' will be regarded as more or less synonymous. Blanket bog is a globally restricted peatland habitat confined to cool, wet, typically oceanic climates. It is, however, one of the most extensive semi-natural habitats in the UK and ranges from Devon in the south to Shetland in the north. Peat depth is also very variable, with an average of 0.5–3m being fairly typical but depths in excess of 5m not unusual. There is no agreed minimum depth of peat which can support blanket bog vegetation. It includes the EC Habitats Directive priority habitat 'active' blanket bog, the definition of active being given as 'still supporting a significant area of vegetation that is normally peat forming'.

Although most widespread in the wetter west and north, blanket bog also occurs in eastern upland areas. Blanket bog peat accumulates in response to the very slow rate at which plant material decomposes under conditions of waterlogging. It is not, however, confined to areas of poor drainage but rather can cloak whole landscapes, even developing on slopes of up to 30°. The period over which blanket peat has been accumulating and the depth it can attain are very variable and not necessarily related. Studies indicate that most blanket peat development began 5,000–6,000 years ago, but the range extends from 9,000–1,500 years ago. There is evidence to suggest that some areas of blanket bog began to form following clearance of the original forest cover by early man, but the relative significance of this activity and changing climate on the historical and contemporary extent of the resource has yet to be determined.

The principal vegetation (NVC) types covered by this plan are M1, M2, M3, M15, M17, M18, M19, M20 and M25, together with their intermediates. Other communities, such as flush, fen and swamp types, also form an integral part of the blanket bog landscape. Many of the typical blanket mire species, such as heather *Calluna vulgaris*, cross-leaved heath *Erica tetralix*, deer grass *Trichophorum cespitosum*, cotton grass *Eriophorum* species and several of the bog moss Sphagnum species, occur throughout much of the range of the habitat, although their relative proportions vary across the country. Thus criteria for the assessment of habitat condition based on species assemblage and relative abundance must be determined locally. Some other species have requirements which limit their distribution more dramatically. For example, cloudberry *Rubus chamaemorus* is typically, although not exclusively, confined to high altitude bogs, alpine bearberry *Arctostaphylos alpinus* to northern bogs, and black bog rush *Schoenus nigricans*, as an ombrotrophic species, to western bogs. Even the various bog moss Sphagnum species, which are a constant element of most blanket bog communities, are not entirely cosmopolitan and indeed are largely replaced by woolly hair moss *Racomitrium lanuginosum* over extensive areas in the north and west, particularly in the Western Isles. Recent research suggests that *Racomitrium* may be an entirely natural component of blanket bog in the west.

This plan encompasses all areas of blanket bog supporting semi-natural blanket bog vegetation, whether or not it may be defined as 'active'. It excludes areas which no longer support such vegetation, except where the restoration of such areas is necessary for the protection and/or enhancement of adjacent bog. The total extent of blanket peat in the UK amounts to just under 1.5 million hectares. There is no agreed figure for the extent of blanket bog vegetation. In terms of national cover of blanket peat soil (in the main >0.5m deep) England supports some 215,000ha, Scotland approximately 1,060,000ha, and Wales has

around 70,000ha. Northern Ireland has approximately 140,000ha of blanket bog vegetation. Significant proportions of peat soil, probably in excess of 10%, no longer support blanket bog vegetation.

Comprehensive data for changes to the total UK resource are lacking, but studies in Scotland (where most of the resource lies and where it accounts for some 13% of the land area) suggest a 21% reduction in the extent of blanket mire between the 1940s and the 1980s. The greatest single cause of this reduction (51%) is afforestation, and substantial losses to forestry are reported from Wales. Further losses of extent and condition can be attributed to drainage and heavy grazing, peat cutting and atmospheric pollution, resulting in significant habitat change in, for example, mid and south Wales and the Pennines.

The presence, extent and type of surface patterning is another important feature of blanket bogs. This can range from a relatively smooth surface, with the only irregularities being those created by vegetation features (e.g. *Eriophorum vaginatum* tussocks and Sphagnum hummocks) to the extreme patterning associated with suites of bog pools and the intervening ridges. As with floristic composition, there would appear to be a relationship between geographical location and the nature of the surface pattern. In general, the intensity and complexity of patterning increases towards the north and west. The range of erosion features associated with many areas of blanket bog is another aspect of this structural diversity and an as yet unknown extent of this appears to be natural in origin.

Blanket bogs support a very wide range of terrestrial and aquatic vertebrates and invertebrates. As with plant species, some of these are widespread and common, some are much more local, and quite a number are of international interest for either their rarity or for the densities of their breeding populations on blanket bogs, for example red-throated diver *Gavia stellata* and Eurasian golden plover *Pluvialis apricaria*. Studies of the invertebrate fauna of blanket bogs are extremely patchy and merit collation and synthesis. Blanket bogs also fulfil an important role as repositories of archaeological and palaeoecological material and have functional values as agricultural rough grazing, sporting estate and water catchments. In the context of climate change the role of blanket bogs as a carbon store is also now considered significant.

The extensive nature of blanket bog is such that certain other habitats, although distinctive, are probably most appropriately considered as integral components of the wider blanket bog assemblage of habitats for management purposes. This would include some areas classed as ‘intermediate bog’ (i.e. sharing features of both raised and blanket bog) together with examples of spring, flush and poor fen, a range of oligotrophic water bodies whose catchment is largely or entirely blanket bog, and those relatively small areas of heath and grassland which occur on better drained slopes and by the many streams and rivers which drain areas dominated by blanket bog. Not only are all such areas in hydrological connection with the surrounding peat mass, they frequently contribute to the overall habitat requirements of the peatland fauna. Several of these habitats are also the subject of their own habitat action plans.