Acid Grassland

Acid Grassland is a habitat that occurs on nutrient-poor soils, often on gravelly and well drained substrates. Soils are thin and nutrients are leached out by rainfall. The soils are markedly acid with a low pH. (It differs from chalk grasslands which are over chalky or limestone substrates, which give rise to a very different, alkaline, soil chemistry and plant life). Acid grasslands are sometime known as 'grass heath' and at some other locations in southern England grade into heathland.

London has a number of gravel topped hills (for example, Horsenden Hill, Hampstead Heath) and sandy commons with acid grassland, though these habitats were once more extensive both in London and southern England. Threats include inappropriate developments, the growth of scrub and woodland, and eutrophication (nutrient enrichment).

The acid grassland that remains on Barn Hill is therefore an important habitat, landscape and park. The top of Barn Hill was also the setting for part of the Humphry Repton landscaping (see separate section in this Management Plan). While there were some field boundary hedgerows on Barn Hill, the landscaping design would have been one of the landscaped woodland set amongst the acid grassland. A 'parkland' affect would have been achieved, similar to that in the grounds of other stately homes of the time.

The grasslands would have been grazed, for example by sheep or cattle, a form of grassland management that probably continued until about the mid-20th century. When the grazing animals were removed, the young tree seedlings in the grassland had an opportunity to grow. Slowly at first, but accelerating from about the 1980s, to form large areas of scrub trees and then scrub woodland.

Conservation and restoration of acid grassland at the top of Barn Hill and at the edges of the Repton woodland landscape is one of the major projects on which Barn Hill Conservation Group are working.

The wildlife benefits are the restoration of the acid grassland plants including grasses and wild flowers, and a range of specialist invertebrate species dependent upon the habitat. Yellow Meadow Ants form the characteristic ant-hills and in turn are fed upon by Green Woodpeckers. Slow Worms and butterflies dependent upon the grass species are others, and it is hoped that more species will be identified in time.

On account of the geological interest, the top of Barn Hill has been designated a Locally Important Geological Site.

Task	**Notes**
Restore and conserve acid grassland at the top of Barn Hill and around the slopes just below the Humphry Repton woodland (upper- and mid-slopes of Barn Hill). Work towards connecting areas so as to achieve larger and more linked areas for the wildlife species.	
The same restoration work also recreates part of the setting of the Humphry Repton landscape, and improves paths and views for visitors.	
There are three main stages of the acid grassland restoration: 1. Cut and remove recent oak and other scrub encroaching on the acid grassland, particularly that growing against the edges of the Repton woodland. Season: autumn and winter only. 2. Brambles are typically the first species to respond to the increase in ground-level light. To restore the grassland the brambles and low coppice shoots etc need to be repeatedly cut. Brambles are not adapted to repeated cutting, while grasses are adapted to repeated defoliation, so in time a grassland can be restored. Experience suggests that three cuts are required during the growing season of the first year after scrub removal, and about two cuts per year in years two and three. Season: mainly spring to autumn. 3. Once the grassland is established there is less inter-plant space for brambles etc to establish, but some topping of occasional brambles will be required. In some cases, it is more efficient to cut the whole of an area of the grassland. Season: mainly spring to	

autumn.	
Paths should be several metres wide to provide light for grassland and to spread the wear of walkers.	
Ant hills: maintain ant hills by careful cutting and reducing shade.	
Bracken: Bracken is nationally common but less common in Brent. The small areas of Bracken on Barn Hill adds a habitat and complements the parkland.	
Mown grassland: while the acid grassland in restoration typically requires more frequent cutting, there are areas of acid grassland on the western and southern slopes of Barn Hill where the flora could benefit from a slight relaxation in the frequency of cutting. Since the acid grassland is well-drained and nutrient poor, a low growing and open grassland can be achieved that remains useable for amenity.	

More information

See also the 'Humphry Repton landscape', 'Woodland' and 'Scrub' sections of this management plan.

Barn Hill Conservation Group. www.bhcg.btck.co.uk

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