



The
Hardy Orchid
Society



MANAGEMENT OF ROADSIDE VERGES FOR THE BENEFIT OF ORCHIDS

Introduction

Roadside verges are the strips of land between the edge of the carriageway and the boundary line, which may be a fence, hedge or wall. For orchids, the most important habitats are unimproved grassland, with different species growing in neutral, acidic and calcareous conditions. Wide verges on less fertile soil are most valuable, where previous management has been sympathetic to wildflowers.

In the UK, much of our unimproved grassland including lowland meadows and pasture has been lost and roadside verges now form nearly half of the remaining area. These include significant populations of orchids, including pyramidal orchids, bee orchids and both northern and southern marsh orchids.

Management of Roadside Verges

Until recent years, roadside verges were often maintained as traditional hay meadows, managed by taking a single hay crop or grazing. This led to many verges, particularly along old drove roads and turnpikes, developing as species-rich unimproved grassland, with no history of chemical or fertilizer use.

More recently, roadside verges have been maintained mainly with the safety of road users in mind, particularly the need to keep sightlines unobstructed. A single cut of the vegetation in autumn is often used and cuttings are rarely removed. This adds nutrients to the soil and can stimulate the growth of coarse grasses, docks, thistles and other plants which reduce the ability of orchids to colonise or thrive. If verges are not cut for significant periods, most orchid species will disappear in just one or two years and the verge will ultimately revert to scrub or woodland.

In many areas, a two-level strategy is used to maintain verges. A narrow strip of approximately 1 metre width adjacent to the edge of the carriageway is cut more frequently, whilst the main verge is cut only once or twice a year. This helps to maintain sightlines, whilst ensuring the remaining area has the potential to support many different species of orchid.

Upland road verges generally require less maintenance than in lowland areas as they tend not to grow very vigorously. Where they are unfenced, grazing may be sufficient maintenance, without further intervention. Where they are not grazed, occasional mowing may be needed particularly in more grassy areas. However, the frequency of mowing may be only once every 3 to 5 years.

Where verges have rare species growing in them, it is important that appropriate advice is sought from specialists to ensure that the maintenance strategy is appropriate. The highway authority or the local Wildlife Trust may designate such areas as Road Verge Nature Reserves or as County Wildlife Sites.

Verge maintenance may be carried out by many different organisations, including the highway authority, the local authority, local landowners and farmers. All of these may employ contractors, who in turn may employ sub-contractors. It is therefore of great importance to ensure that there is a coherent and comprehensive plan for roadside verge maintenance in place. A quick search of the Internet will show that lack of communication between all the parties involved in verge maintenance has contributed to a large number of incidents where important colonies of orchids have been damaged or destroyed.

Factors Affecting the Quality of Roadside Verge Habitats

Construction on the carriageway and adjacent footways. Installations and maintenance by utility companies, including cable and pipe laying, may damage habitat. However, utility companies are encouraged to locate their services in verges, rather than in the carriageway or in footways.

Vehicle over-runs. These can be a particular problem on narrow sections and bends. Problems caused by parking may be limited in extent, but can cause total loss of vegetation.

Use of pesticides and herbicides. Direct use of these should be avoided whenever possible, but drift from adjacent agricultural land is more difficult to control.

Invasive species. Invasion by aggressive plant species, garden escapes and inappropriate planting by local residents and groups can all contribute to reducing the quality of habitat by competition for space or by blocking light.

Pollution. Salt spray, oil and other pollutants from passing traffic can restrict growth close to the edge of the carriageway.

Use by pedestrians or equestrians. This may require regular control of vegetation to maintain access.

Hedge cutting. This frequently uses increasingly heavy plant, which can cause significant damage to the verge, particularly in wet weather.

Further information on the impact of engineering factors on roadside verges can be obtained by emailing HOS using this [link](#).

Management of Orchids in Roadside Verges

Mow infrequently at times of the year which are sympathetic to propagation.

Orchids have a simple life cycle of grow, flower, then fruit. Most set seed approximately six to eight weeks after the end of flowering. If they are cut before this, they will be unable to propagate from seed and ultimately the colony will be lost.

Cutting during flowering deprives insects of nectar and pollen and can result in their decline.

Do not cut too early or too late. Details of cutting times for different orchid species are given in the following section. In general, it is important to allow plants to flower and to set seed before cutting takes place. However, some species of orchid are winter green i.e. they produce leaves in autumn as part of the following year's plant. If cutting is carried out too late it can result in damage or removal of these leaves, reducing plant vigour or causing death. Leaving the cuttings may destroy the orchids by causing rotting and depriving them of light.

Keep nutrient levels as low as possible by removing cuttings. This is expensive, but it mimics the way traditional hay meadows were managed and encourages orchids. It depletes nutrients and may lead to less frequent cutting in the longer term. It also allows more desirable species to multiply or colonise. If only a single cut is possible each year, removal of the cuttings is even more important. Removing cuttings may also remove thatch and open up the soil to allow germination of seeds. On steep slopes and where vegetation is thinner, removal of cuttings may be less necessary.

Avoid the use of fungicides, fertiliser and herbicides. Fertiliser and fungicide can both kill the symbiotic fungi that are needed by orchid seed for germination and can result in the death of a colony due to a lack of recruitment. Fertiliser also encourages coarse vegetation and rank growth which deprive orchids of the light that they need to carry out photosynthesis. This quickly results in their death.

Orchids are monocotyledons (like grasses) and could therefore be expected to be immune to selective lawn weed killers. However, they also have large area leaves, providing the capacity to absorb much greater quantities of the weed killer than grasses. In practice selective weed killers can be very harmful to orchids and so should be avoided.

Create areas of bare ground to encourage colonisation by self-seeding. There is some evidence to suggest that utility and other engineering works can contribute here, particularly if sub-soil, which is low in nutrients, is left exposed.

Mowing Times for Specific Orchid Species

Northern & Southern Marsh-orchids, Common Spotted-orchids and Frog Orchids (all species of *Dactylorhiza*). These orchids are winter dormant, flower in June and July and scatter seed about 6 weeks later. They can be cut safely from September to early March.

White Helleborines, Sword-leaved Helleborines, Violet Helleborines and Broad-leaved Helleborines (*Cephalanthera damasonium*, *C. longifolia*, *Epipactis purpurata* and *E. helleborine*). These orchids are also winter dormant but remain in leaf until the first frost. Ideally, they should not be cut until November, but subsequently may be cut safely until the end of March.

Bee Orchids (*Ophrys apifera*). These orchids are winter green, flower in June and July and scatter seed about 6 weeks later: they produce leaves from late September onwards. The best time to cut verges containing this species is early September: subsequently the verges may be cut safely until the end of March.

Pyramidal Orchids (*Anacamptis pyramidalis*). These orchids are winter green, flower in late June and July and scatter seed about 6 weeks later: they produce leaves from October onwards. The best time to cut verges containing this species is early September. Cuts later than this will damage leaves.

Advice on mowing times for other orchid species can be obtained from the HOS [Conservation Officer](#).

Additional Sources of Information

Information on the identification of orchid species can be obtained from the image galleries on the HOS website at [About Orchids](#).

Most highway authorities provide details of their roadside verge mowing regimes and schedules on their Websites. This provides an opportunity for local residents with specialised knowledge of the location of verges in their area containing orchids to contact the authority and help to ensure that mowing regimes are appropriate and sympathetic to the species present.

Many county and district councils have produced Local Biodiversity Action Plans (LBAPs), some drawn up in conjunction with conservation groups, such as local Wildlife Trusts. These provide invaluable advice on local and regional management and should be consulted as part of any management plan for roadside verges. A good example is the [Warwickshire, Coventry and Solihull LBAP for Roadside Verges](#), excerpts from which have been used in preparing this document.

[Plantlife](#) have produced a very good guide on the management of road verges and associated wildlife as part of their road verge campaign. This contains much useful information and excerpts from the guide have also been used in preparing this document.

[The Wildflower Handbook](#) covers all aspects of the introduction, management and maintenance of wildflowers on the motorway and trunk road network in the UK. However, much of it also applies to local roads and at over 120 pages, it is a significant reference work.

Further information and advice on orchids in roadside verges can be obtained from the HOS [Conservation Officer](#).