

Ten Techniques to Enhance Pollinator Biodiversity on Solar Parks

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Pollinators are important but declining

Pollinators, such as bees, hoverflies and butterflies, benefit human society and contribute to food security. However, dramatic declines have been documented in the UK and many are linked to habitat loss and intensive agriculture.

Solar parks have potential to help

Often located in agricultural landscapes, solar parks present unique opportunities to restore pollinator habitat where it is most needed and address drivers of decline.

Considered management benefits both pollinators and the energy sector

Managing solar parks for pollinators may be able to boost populations whilst also ensuring the wider sustainability of such facilities and helping to meet planning policy criteria, statutory requirements and environmental policy targets.

Recommended management techniques

We present ten management techniques to enhance pollinator biodiversity on solar parks. However, cost or physical constraints related to individual sites may limit application and expert local advice should be sought before implementing any techniques.

Find out more

Management techniques are based on the results of an unpublished review study. To be notified when the article is available and to hear about other ongoing research keep up to date on Twitter or visit the Energy & Environment website:

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- 1 Provide a diverse mix of key flowering plant species**

Flowering plants are essential for pollinators and plant diversity benefits bees, butterflies and hoverflies. However, pollinators can be specific and so providing a mixture of the key species they require is important.
- 2 Plant or maintain hedgerows at the site boundary**

Hedgerows at solar park boundaries provide a range of benefits to pollinators (in addition to the co-benefit of visual screening) but are best managed at low intensities and during the winter.
- 3 Ensure season-long access to flowering plant species**

Season-long access to foraging resources is highly important to pollinators. Providing plant species on solar parks that flower throughout the season (March - September) will ensure a continuous food supply.
- 4 Provide a range of reproductive resources**

Reproductive resources (nest sites, specific plant species) are essential for pollinators to complete their life cycles. Requirements are diverse, but the creation of a variety of natural habitat features will be beneficial.
- 5 Manage less intensively and later in the season**

Grazing, cutting or mowing should be undertaken at low intensities and not throughout the summer months, ensuring that flowering plants are available for pollinators at crucial times.
- 6 Create or maintain variation in vegetation structure**

Management actions should create variation in the vegetation across solar parks. For example, excluding areas from management allows vegetation to grow taller, benefitting pollinators such as butterflies.
- 7 Minimise herbicide use**

Herbicides to control weeds can affect non-target species and diminish flowering plants used by pollinators. Herbicide use should therefore be minimal and alternative methods to manage weeds adopted.
- 8 Focus efforts on solar parks in homogenous landscapes**

Pollinator-friendly solar parks will be most valuable in homogenous landscapes where resources are depleted and hence prioritising management on these sites will yield the greatest benefits.
- 9 Promote connectivity to semi-natural habitat**

Semi-natural linear features, such as hedgerows or wildflower strips, on solar parks and in the surroundings can be used to create pollinator corridors and enhance movement across the landscape.
- 10 Generate a range of microclimates**

Pollinators benefit from a range of thermal conditions and variation can be generated through solar infrastructure, natural habitat features and structurally diverse vegetation.