Solar farm ecology guide

The overriding reason for ever building a solar farm is to create clean energy, allowing us to move away from a dependency on coal and gas, reducing pollutant emissions into the atmosphere and therefore helping to prevent climate change.

While we endeavour to achieve this, we also do as much as we can to bring wider benefits from the solar farms.

The biggest threat to UK farming and wildlife is climate change and habitat destruction. By temporarily taking land out of intensive agricultural production, solar farms can offer considerable opportunities for the natural world to thrive.

We work with HabitatAid and the Bumblebee Conservation Trust to ensure that the schemes we put in place are of utmost benefit to a range of wildlife, tailored to suit each individual location. The ecological gain achieved has also led to them receiving the support of the RSPB and Natural England.

Hedgerow planting

Solar farms are always built within existing field boundaries. This ensures the protection of hedgerows and treelines which often already house wildlife.

Gaps in hedgerows are filled, giving extra depth and cover to provide further protection and habitats for local wildlife. Only native species are chosen allowing for the best chance of successful growth, and is within keeping of the location.

If possible we also join up boundary hedgerows to provide ecological connectivity, wildlife corridors, for wildlife to travel through under cover.

An example of the hedgerow mix at our Eynsham solar farm combined Field Maples, Dog Wood, Hazels, Hawthorn, Common Oak, Wild Privet and Blackthorn.

Consideration is given to the timing of the planting, always planned for the first planting season post-construction at the latest. If possible it's implemented sooner to allow plants time to establish their feeder roots before spring.

Hedgerow is lightly trimmed in the first few years to encourage dense growth, and plants are replaced if they haven't successfully taken. Cutting only takes place during winter to avoid impacting nesting birds and small mammals.

Wildflower and hay seeding

If the land was arable originally, it would have been monoculture crop, with little diversity and mainly thin on nutrients. When it becomes a solar farm, for 25 years the land can rest, improving soil quality and allowing wildlife to thrive.

We plant the land around the solar panels with wildflower seed; for every 1MWp of solar panels we plant 5 acres of wildflower meadow.

The ground is levelled so the seed can be distributed, and prepared for planting.

The seed mix has been curated by experts to ensure they it is suitable for the terrain beneath solar panels, specific for that site, and the optimum species for attracting bumblebees and other pollinators.

At Saxley the ground type is chalky so the seed mix most suitable contained Oxete Daisy, Wild Carrot, Wild Margoram, Lady's Bedstraw, Crested Dogstail, Smaller Cat's-tail, Sheep's Fescue, amongst others.

Sometimes we might plant a species-rich green hay, procured from a local source, to establish a meadow grassland community. This follows a specific sowing method to ensure it establishes successfully.

After the seed has been sown there is a process of management that is adopted over the first year to manage re-growth. Systematic cutting allows fauna such as invertebrates, amphibians, birds and small mammals to find alternative cover temporarily. Cuttings are removed quickly to avoid weeds establishing.

Breeding birds

Solar farms, the bordering hedgerows, and the surrounding countryside are often habitats for ground-nesting birds such as skylark Alauda arvensis.

As a matter of course, no construction works are carried out during nesting season to prevent disturbance until the young have fledged. Surveys are carried out by ecologists or ornithologists for nesting species and if identified, the development programme is amended to avoid nesting areas.

Ground nesting birds do not settle on land used for arable farming, since there isn't enough cover, there are interruptions from machinery and spraying, and meal bugs are killed off by pesticides, so the birds often relocate.

The peace, high grasses, abundant insects and cover at solar farms provide an ideal habitat for such species.

Bird and bat boxes

Bird nesting boxes and bat roosting boxes are installed along the edges of the solar farms, as close to woodland as is possible facing different directions. They provide another habitat for the wildlife and safe and protected housing. The bird boxes are suitable for a variety of woodland and common garden species.

solarcentury

50 Great Sutton Street
London EC1V 0DF

T +44 (0)20 7549 1000
F +44 (0)20 7549 1001

www.solarcentury.com

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