The biodiversity value of solar PV projects – a review of guidance, research and current thinking, with reference to a proposal for Moneystone Quarry, Oakamoor, Staffordshire

A report for the Solar Building Company Ltd

CGO Ecology Limited
Bournemouth
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Executive summary

A solar proposal at Moneystone quarry in Staffordshire would be assisted in its passage through planning if supporting evidence of the biodiversity value of solar schemes could be provided.

Also, the approved grassland restoration scheme is optimistic to achieve, and unrealistic given the scrub and enrichment problems. The proposed solar farm provides a more realistic alternative, affording habitat management for the life of the scheme.

Solar energy production is a young industry in the UK, and little guidance has hitherto been available. Most ecological practitioners instinctively see the benefit of solar farms if executed sympathetically, especially on former farmland of poor quality; but there is sometimes resistance.

Natural England and the RSPB generally support solar projects, and have issued guidance on maximising biodiversity on solar farms. Recently the Building Research Establishment (BRE) issued guidance that has been well-received and widely disseminated.

Prominent NGOs such as the National Trust, Plantlife and Buglife have been quick to support the BRE guidance, and indeed were closely involved in producing it. There is generally a positive mood towards solar projects in the UK at present, and a presumption in their favour.

Research so far into solar impacts on biodiversity has mostly focused on flying vertebrates and invertebrates, but one piece of unpublished research available online made positive conclusions. It found that solar schemes are likely to increase botanical diversity and invertebrate numbers if meadow grassland is seeded below arrays, when compared to non-solar meadow plots. The benefits are less pronounced if grazing pasture is seeded beneath arrays.

At Moneystone, any resistance to solar should be objectively re-evaluated, as there is no evidence that the scheme will be deleterious to the habitat restoration goals. Grassland restoration plans should also be adjusted pragmatically to acknowledge existing scrub and enrichment problems on part of the site.

The biodiversity offsetting scores should also be recalculated to reflect uncertainty in the approved restoration plan, i.e. by lowering the impact score.

Finally, it is recommended that additional enhancements be considered. Pond construction may not be possible, but dead wood retention, ‘invertebrate hotels’, and marginal strips of wildflower seeding should be considered. These would lift the mitigation offsetting score significantly.
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1. Introduction and background

1.1. The growth of solar energy

Solar photovoltaic (PV) is still a very young renewable energy industry in the UK, and less than 10 years ago was supplying very little energy to the grid. As recently as 2007 the national solar PV capacity was only 14.3 MW (Tucker et al., 2008). Since then it has multiplied 140-fold, and its current contribution is around 2 GW, and expected to quadruple by 2020.

Solar schemes are much more favourably viewed by the public than windfarms, generally because of their less obtrusive nature. Despite some media resistance and wider concerns about bat, bird and insect collision – of which there is still relatively little research – solar has grown to be a very popular and prolific form of land-use conversion in the last few years.

On land of poor biodiversity quality, solar farms are generally viewed as biodiversity gains, as they tend to offer a better sward and ecological diversity than intensively-grazed pasture or agricultural monocultures, which they often replace.

Until recently there has been little guidance to assist developers, ecologists, planners and land managers justify their approaches; and there is still resistance in some quarters to accept the wildlife potential of solar schemes.

1.1. Moneystone Quarry

At Moneystone Quarry, Oakamoor, Staffordshire, a solar PV scheme is proposed on two restored areas of a former silica sand quarry. In the northeastern part of Quarry 2 (formerly ‘Lagoon 6’), one of the deployment areas is currently in the restoration plan as unimproved neutral grassland (cf. MG5 community, to be strewn with hay from a nearby donor site).

It is the view of Staffordshire County Council’s ecologist that a solar scheme on this area may compromise the agreed restoration type, extent and quality. Hence it has been identified that supporting evidence for the biodiversity value of solar farms on restored grassland would assist the application.

This report aims to present a short review of current guidance and thinking, with special reference to a site currently under planning review. It also offers advice to help the client counterpoise some of the points raised by planners.

Spencer Jansen of the solar developer, the Solar Building Company Ltd, instructed CGO Ecology Ltd to produce a document reviewing evidence and current thinking on the biodiversity value and impacts of solar on restored grassland. Three days were allocated to this mainly desk-based research and reporting exercise, including a site meeting at Moneystone Quarry on 5th November 2014.

At this meeting, a walkover took place, and the site background and planning context were explained by James Cook (Stratus Environmental Ltd) and Peter Swallow (Bolsterstone Group plc) on behalf of the solar developer and landowner (Laver Leisure) respectively.

A phonecall prior to the meeting also enabled input from Jeremy James (Bowland Ecology Ltd) on behalf of the landowner. Documents outlining the quarry restoration plan (Bowland Ecology, 2014) and solar proposals (Stratus Environmental, 2014) were supplied by James Cook. It is also pertinent to record that Laver Leisure Caravan Parks Ltd has a contemporary planning application for a leisure development in other parts of Moneystone Quarry.

1.2. Restoration plan issues

The proposed solar deployment area to the north of Eaves Lane, in the former ‘Lagoon 6’ of Quarry 2 (Stratus Environmental, 2014), has met with resistance at planning as it deviates from the agreed restoration plan (Bowland Ecology, 2013). The restoration plan recommends “Repeat hay strew/seed spread. Scarify and re-seed where required,” with the aim of achieving a species-rich MG5 grassland community. Presumably the strewn hay would come from nearby ex-situ grassland of a suitable nature, but no prescriptive detail is provided.
MG5 grassland is a rare, declining and valued habitat in England, although not notable for rare plants or birds (Natural England, 2013). It is typical of old hay meadows on neutral soils, and once covered larger areas of the English Midlands for example. Walker et al. (2004) discussed restoration techniques for MG5 grasslands, explaining that a hay-bales or ‘sweepings’ from donor sites are the quickest means of attaining the target plant community. Using late-cut fresh hay can minimise problems associated with differential after-ripening.

However, there are constraints to successful (re)creation, including undesirable competitive species, and lengthy timescales. According to Walker et al. (2004), even with extensive management, the restoration of species-rich “mesotrophic grasslands of conservation value” on former arable land can take up to 20 years, although nutrient-stripping can reduce the timescale to 10 years.

The website ConservationEvidence.com presents a comprehensive review of Europe-wide evidence on the restoration of species-rich semi-natural grassland. Edited by W.J. Sutherland at the University of Cambridge, it examined 22 studies from seven countries (Sutherland, 2014): “Six studies saw positive signs of restoration in less than five years, 11 studies within 10 years and two studies found restoration took more than 10 years. Two studies ... found differences in vegetation between restored and existing species-rich grasslands nine or 60 years after restoration.”

The ramifications for successful restoration at Moneystone are two-fold:

- restoration might not succeed without extensive management;
- even if restoration succeeds, it might take many years.

In reality, few quarry restoration schemes are managed with the correct habitat-management prescription for as long as 20 years, let alone one that already has scrub or enrichment problems. The preponderance of birch scrub with thick moss understory along the southern part of former Lagoon 6 at Moneystone presents an enriched litter layer that could not be removed without scarification and/or stripping.

Topsoil stripping is probably not possible, as it would compromise the landfill cap; yet without removing the turf, moss and scrub stumps/roots, restoration to MG5 grassland community is unlikely. There is no discussion of the scrub and enrichment problems in the restoration plan, but these are material considerations that should be introduced to dialogue with the planning authorities.

A good case could be made for deviating from the agreed restoration plan. The current recommendation is not viable, and an alternative prescription is the most pragmatic solution.

The majority of the Lagoon 6 area could be restored to grassland, and may even achieve MG5 in due course, but the southern part requires scrub treatment and aftercare. The placement of solar panels over the grassland should not be seen as a permanent impact; rather it is the means by which the area’s management is guaranteed for several decades. Hay strewing from a suitable donor site would be worthwhile, but there would be no guarantee of success.

The proposed solar PV scheme is probably the only realistic way to keep the southern area scrub-free, and ensure the whole area does not become birch woodland.

1.3. Biodiversity offsetting deficit

Staffordshire County Council and Staffordshire Moorlands District Council operate a biodiversity offsetting scheme for developments in the county, although Staffordshire was not one of the four English counties in the recent pilot exercise. Biodiversity points have been calculated for both schemes, but warrant further attention.

The Moneystone solar scheme’s biodiversity mitigation score is currently in deficit by approximately 45 points. Any enhancements that could improve the offsetting score further would also be welcome.

For the Lagoon 6 solar area, the biodiversity impact score was calculated on a presumption that the current value of the area is that of the aspirational post-restoration grassland (notionally MG5), rather than the actual (poor) value of the site now.
Firstly, impact scores are normally calculated based on the impact now, not impact on an aspirational future state. However, it appears that this approach has already been agreed.

Secondly, even if using aspirational restoration goals to calculate impact scores, the calculation should reflect any difficulty and long timescales (as discussed above), and this will inevitably lower the impact score.

Mitigation scores are subject to risk and timescale weightings, and so too should impact scores, if they are calculated using aspirational states rather than actual impact on current condition. Weighting of the impact score would reduce the mitigation score deficit significantly.

Additional point-scoring offsets should be considered. For example: addition of one or more small ponds for the value of invertebrates, amphibians and other wildlife. Ponds may be problematic if not enough space is available.

Alternatively, retention of dead wood on site is good for invertebrate diversity, and installation of invertebrate features such as log-piles and ‘invertebrate hotels’ are widely-recommended mitigation currency. Lastly, seeding of marginal areas with wildflower seed mixes as feed for insects, birds, and botanical diversity would be favourable. The agreed restoration of marginal areas is to neutral unimproved neutral grassland, but if any wildflower seeding took place, it would be of greater value, and need only be in localised strips within the neutral grassland.

2. Solar biodiversity guidance

2.1. Natural England 2011

Natural England’s (2011) Technical Information Note (TIN) shows that the Government’s nature conservation advisor for England is overwhelmingly in favour of solar PV. It emphasises the need to engage Natural England staff in a timely fashion, and offers caveats and recommendations for enhancing biodiversity, but points out that “To date (June 2011) Natural England has recommended consent to 90% of all onshore [solar] energy schemes.”

The TIN picks out poor grassland as one of the habitat types that can benefit most from solar schemes: “Sites with low wildlife value, for example, intensive arable or grassland fields are likely to offer greatest opportunity for wildlife. Not only will they avoid adverse impacts, but they are also more likely to deliver environmental benefits.”

It goes on to say: “Solar park sites, especially on sites of lower existing biodiversity value may offer opportunities to deliver enhancement measures. These should be considered on a site by site basis and are likely to be most effective when they contribute to local biodiversity priorities. ... Creating grasslands and hedgerows on the areas around the panels is likely to offer most benefits for plant and animal communities.”

Furthermore, it offers proactive management advice for grassland beneath PV arrays: “Some habitats require more management than others. For example if you want to establish flower-rich grassland around panels you will need to graze or cut and remove the herbage. Grazing is best and sheep or goose grazing is likely to be more suitable than cattle grazing, which is unlikely to be practical.”

2.2. RSPB 2011

The RSPB produced a briefing note several years ago (RSPB, 2011), in which it set out the potential risks of solar arrays to birds and other wildlife, and offered advice on mitigation and enhancement opportunities. However, the overall impression is of a wholehearted endorsement.

In relation to large PV array developments, it stated that the RSPB will always be “Supportive, unless there are site specific concerns. Concerns are most likely when located in or close to protected areas, or close to water features where development could pose risks to aquatic invertebrates and waterfowl.”
Of solar PV on restored grassland sites, it said “Biodiversity gains are possible where intensively cultivated arable or grassland is converted to extensive grassland and/or wildflower meadows between and/or beneath solar panels and in field margins.”

In summary, the RSPB’s default position is to favour solar PV projects, unless there are specific threats to wildlife.

2.3. North Somerset Council 2014

There are too many local planning authorities (LPAs) to review and mention here, but many have developed their own policy on solar schemes and biodiversity impacts. North Somerset Council was relatively ahead of the game, and published its supplementary planning guidance with sections on biodiversity, just over a year ago (North Somerset Council, 2013):


The document recommends wildflower and species-rich planting, pond creation, invertebrate habitat enhancements, and a suite of other mitigation and enhancement suggestions that replicate the general thrust of other guidelines.

2.4. RSPB 2014

The RSPB updated its guidance for biodiversity enhancement on solar farms on 14th April 2014 by issuing guidance for meadow restoration on former arable land. It does not make reference to the BRE guidance, as it was released two weeks prior to it. The RSPB guidance is understandably bird-focused, but offers detailed prescriptions on seed-mix composition and planting design.

The new guidance is available to view online or download as pdf at the following page: http://www.rspb.org.uk/forprofessionals/farming/advice/details.aspx?id=367959.

2.5. BRE National Solar Centre 2014

The Building Research Establishment (BRE) National Solar Centre published national biodiversity guidance for solar farms on 28th April 2014 (Parker & Greene, 2014). Its release generated a flurry of coverage on electronic media, generating wide interest and comment from national NGOs and other, and appears to have been well-received.

Although BRE (a former statutory body) is a familiar organisation for Code for Sustainable Homes practitioners, it isn’t a household name for ecologists; and it was probably the endorsement of the guidance by major conservation NGOs that gained publicity and credibility.

The guidance’s inception was a partnership between BRE and a range of high-profile nature conservation interests, including the National Trust, the Royal Society for the Protection of Birds (RSPB), Plantlife, Buglife, the Bumblebee Conservation Trust, and the Eden Project.

The central tenet of the guidance is to produce a Biodiversity Management Plan (BMP) for each site, to set out the objectives and methodologies. These should be site-specific, and tailored to local conservation needs and priorities, such as Section 41 (NERC Act 2006) species and habitats which often do not receive formal legal protection otherwise.

The guidance aims to set best-practice standards, and gives various enhancement options for solar schemes. Improving ecological networks and connectivity feature highly; and post-development monitoring is an important consideration.

Timing is recommended to avoid bird-nesting season, and minimise ground compaction and damage to the seed bank. Recommendations include creation of nectar-rich meadow grassland, local provenance of seeds, and potentially addition of features such as ponds and log-piles.

Of relevance to Moneystone Quarry, the guidance describes grassland options (wild flower meadow vs grazing pasture), their respective values, costs and management regimes:
“A wild flower meadow is species-rich grassland composed of wild flowers and fine grasses which can support a wide range of invertebrates, small mammals, reptiles and birds. A broad spectrum of wild flower meadows exist, from a few species of fine grasses and wild flowers in their simplest form, through to complex, species rich habitats such as lowland chalk grassland, a BAP priority habitat.

The seed mix selected must be suitable for the soil type and should be composed of species that are both sun and shade tolerant, and native to the UK. A qualified ecologist should recommend a suitable seed mix, including provenance. Conditions within the site must be considered: ex-arable sites may not be suitable for immediate conversion to wild flower meadow where higher nutrient values still exist. A soil test to evaluate the nutrient levels is essential, as wildflower meadow establishment is rarely successful on land with a Phosphate index above 1. Advice should be sought from an experienced ecologist during the establishment phase.

A wild flower meadow could be sown beneath the array (successfully implemented at a number of solar farms) or in strips around the edge of the site. Where a meadow is established beneath the array, care should be taken to ensure the vegetation will not over-grow and shade the panels.

Establishing a wild flower meadow can take several years and its important good practice is followed. Once established, meadows tend to be quite stable and with suitable management can remain in perpetuity without the need for fertilizers or herbicides. A meadow requires only cutting or grazing at intervals through the year, with the timing of these activities being dependent upon management goals. As a general rule a hay cut in July or August followed by grazing until Christmas is recommended. It is advisable to stop or reduce grazing through the summer to allow wild flowers to flower and set seed. A maintenance plan should be specified in the BMP, including the timing of cutting or grazing.”

The first observation to make is that the BRE guidance does not stipulate any type of wild flower meadow; it advises that an ecologist tailor the prescription to the site, i.e. to revert to a habitat that was there previously, or to something that is achievable. There should be good reasons to aim for a particular grassland community on former Lagoon 6 at Moneystone.

In summary, a BMP adds strength and transparency to a solar proposal. If a BMP has not been produced yet for Moneystone, it should be a priority, to demonstrate compliance with the national guidance. A BMP could be conditioned under planning consent.

3. NGO response and policy

3.1. National Trust

The National Trust is one of the UK’s biggest nature conservation bodies, and its policy carries weight. The Trust was one of the contributing partners to the BRE guidance, and it was among the first to publish a ringing endorsement:

3.2. RSPB

The RSPB is the UK’s most influential wildlife NGO, and arguably carries more weight than statutory agencies such as Natural England.

The RSPB was a partner organisation in the production of the BRE guidance, and published an endorsement on one of its outreach blog pages:


3.3. Buglife

National invertebrate conservation charity Buglife is not only a partner in the BRE guidance, but it wholeheartedly supported the Solar Trade Association’s “Solar Independence Day” on 4th July 2014. Buglife’s website promotes it here:

https://www.buglife.org.uk/news-&-events/events/solar-independence-day

Buglife is also keen to cooperate with the solar industry, to find ways of incorporation invertebrate conservation into PV schemes:

https://www.buglife.org.uk/partnership-opportunities-solar-farm-operators

3.4. Bumblebee Conservation Trust

Likewise, the Bumblebee Conservation Trust was a partner and rapid endorser of the BRE guidance upon its release:


4. Wider response and policy

4.1. Local Planning Authorities

The responses from local planning authorities (LPAs) to the BRE guidance, and their policies on solar planning in general, are too numerous to review here in the short space of time available. Dorset County Council for example has readily accepted solar developments on poor quality land, and has very recently granted permission for a scheme on a site with high biodiversity value already, on account of the quality of the biodiversity mitigation plan accompanying the application. Other local authorities, such as North Somerset Council, had formal policy and guidance in place well over a year ago.

4.2. Solar industry

Immediately following the release of the BRE guidance, there was a flurry of publicity in the industry and its observers, with wide acceptance of the narrative that solar farms – if managed correctly – can be valuable biodiversity hotspots.

A selection of websites that ran the story include: Click Green, Solar Century, Energy Saving Secrets, Solar Power Portal, Power Technology, Green Utilities. Several screengrabs from their respective websites showing their response to the BRE guidance are shown in the Appendices of this report.
4.3. Popular media

The BRE guidance release was probably not widely observed in popular media, but the story that solar farms can be biodiversity hotspots is occasionally picked up by local media. The 20th June 2014 edition of the Exeter Express & Echo published a positive article regarding a proposed solar farm at Crealy Great Adventure Park near Clyst St Mary in Devon.

Their quote from Giovanni Maruca, Director of Solstice Renewables, ran: “The land will stay in agricultural use for the 25-year lifetime of the solar park, with sheep grazing in winter and wildflower meadows in summer. We expect considerable improvements to biodiversity over time.”

A screengrab of the website article is in the Appendices; the full article is available here: http://www.exeterexpressandecho.co.uk/Exeter-s-Crealy-set-solar-power-park/story-21269807-detail/story.html

5. Research review and conclusions

Solar biodiversity research is young in the UK, and relatively little research has been carried out. Much more research has been carried out abroad, in Europe and the USA; but a comprehensive review is outside the remit of this exercise.

One piece of British research is pertinent to the Moneystone case though, being a study of the quality of grassland beneath solar arrays vs grassland on control plots without solar. The research was carried out within the last few years, and is not formally published yet, but a Powerpoint presentation is available online as a pdf summarising the results (Parker & McQueen (2013)).

Parker and McQueen carried out experimental work on four ex-arable plots that were re-sown with different types of meadow and pasture grassland, and subjected to solar and non-solar (control) land use. In the meadow grassland scenarios, butterflies and bumblebees were significantly more abundant in the solar plots than in control plots, and herb diversity was significantly higher in the solar plots too.

The results are remarkable, as they not only show that solar arrays can match the quality of neighbouring meadow not subjected to solar; but they show that solar is better at increasing botanical diversity and invertebrate density. The knock-on benefits for birds, mammals, reptiles and other dependent species are obvious.

Parker and McQueen’s (2013) research showed less convincing results from solar on grazing pasture experimental treatments. On rye grass pasture plots, butterfly and bumblebee abundance was greater on one solar plot but not the other, and herb diversity was greater on solar plots, but weeds were also more prevalent. They concluded that solar parks provide suitable conditions for grassland herbs and pollinators, which are important for conservation, but meadow sites showed greater biodiversity benefits than pasture.

There are clear implications here for seeding strategy, and selection of grazing vs haylage management. Parker and McQueen (2013) noted that establishment costs are greater for meadow, but post-establishment management costs are greater for pasture. Thus the natural conclusion from this review is that Moneystone would benefit from a meadow grass restoration (as anticipated), not a grazing pasture.

One other piece of research review work is worth mentioning. Ecological consultancy BSG Ecology Ltd produced a review of research into the ecological impacts of ground-mounted solar arrays (Taylor, 2014). It reviewed the literature from Europe and North America, but focused on insects, birds and bats. In each case, she noted research implying a potential risk to these animal groups, mainly through confusion caused by panels resembling water. However, little of the research described is conclusive.
None of the research Taylor (2014) described relates to the ecological impact of solar schemes on the habitats beneath them. Thus the default position remains such that there is no evidence for negative impacts of solar on meadow grassland habitats.

At Moneystone, there is no evidence that the solar scheme will be deleterious to the restored grassland beneath. A pragmatic review of the agreed restoration prescription is needed, to take account of enrichment and scrub problems. Finally, the biodiversity scores for the impact and mitigation response should be amended to reflect current impacts or incorporate uncertainty in restored state; and further enhancements should be considered.

6. References


Parker, G. & McQueen, C. (2014). Can solar parks provide significant benefits for biodiversity? Preliminary study by G Parker and C McQueen. Powerpoint presentation converted to pdf.


Sutherland, W.J. (2014). Restore/create species-rich, semi-natural grassland. http://www.conservationevidence.com/actions/133 (open access, online only)


7. Appendices
National Trust supports new guidance to turn solar farms into biodiversity hotspots

We are supporting new guidance to help transform solar developments into great homes

Solar farms creating a buzz

Published by: Solarcentury
Date: 26/07/2014

This post is a contribution from GR Perkins, Conservation Manager at the Burford Conservation Trust.

There is growing evidence supporting the opportunity for solar farms to help reverse declining bee species, as well as a range of other flora and fauna. Last year, we partnered with Solarcentury to enhance the prospects of farmland bumblebees, including the rare Snail Carder and the Brown-Banded Carder species.

Thanks to Solarcentury’s seeding efforts – each solar farm is built on green with native seeds supplied by Habitat Aid – there are now a range of plant species flourishing at solar farms around England and Wales that are helping to reinvigorate bee species. The opportunity for solar farms to become biodiversity hotspots is detailed in guidance launched earlier this year, backed by the BCCF and several leading UK conservation charities. It contains research from independent ecologist Dr Guy Parker who found that many bee species benefit from the diversity of light and shade that solar arrays provide. And in years to come, the BCCT’s own annual monitoring will hopefully add to this evidence supporting the idea that solar farms can help reinvigorate pollinators.

Bumblebees love the deep, shaded conditions created by solar panels. In fact, the variety of dry and wet and shaded and sunny areas, if properly planted and managed, can encourage a much wider variety of species than improved grassland. Crucially they can also provide safe nesting and hibernation sites for bumblebees. And since many solar farms lie undisturbed by human interference, solar farms can be safe wildlife havens capable of supporting a range of thriving species.

To help raise awareness for the potential of solar farms to become wildflower meadows that can increase the quantity and quality of foraging habitats for bumblebees, the BCCT took part in this year’s first ever Solar Independence Day. On July 4th, a number of solar farms located across the UK were opened to the public to encourage interested citizens to take a look at the benefits solar farms can offer to the natural environment.

National Solar Centre’s biodiversity guidance promotes both ‘clean energy and nature conservation’

By Paul Dillistone 28 April 2014, 15:10; Updated: 28 April 2014, 17:02

BRE National Solar Centre has launched new guidance today designed to optimise the biodiversity potential of solar farms in the UK.

The National Solar Centre partnered with an extensive list of conservation bodies to promote and inform the new guidance, which was authored by ecologist Dr Clive Parker.

Those involved in the guidance include the National Trust, RSPB, Plantlife, Bumblebee Conservation Trust, Eaton Project, Buglife, Wye Valley Wildlife and Westminster Wildlife Trust.

The National Solar Centre hopes that planners, ecologists, developers, clients and landowners will all use the new guidance to help explore the large number of biodiversity options that are available for solar farms.

Jonny Williams, associate-director of the BRE National Solar Centre, explained: “Solar farms are already the most popular local energy development but their potential to protect British
Solar farms could create hotspots of biodiversity for decades

by ClickGreen staff
Published Mon 28 Apr 2014 00:03, Last updated: 2014-04-26

Solar farms could be transformed into an oasis of plant and wildlife wealth by boosting the numbers of butterflies following the publication of new industry guidelines to support biodiversity.

This expert guidance on how to boost nature as solar farms is to be applauded, said Dr. Jane E. Goss, by the WWF National Solar Centre (NSC). The guidelines have been worked on in collaboration with leading conservation groups and the Solar Trade Association (STA).

Solar farms would take up less than 2% of the land they are on, leaving huge scope to develop protected habitats to support local wildlife and plant life. Many

Solar farms – abuzz with biodiversity?
9 October 2014 | by Green News

Despite its ability to generate green electricity, growing, but with small-scale solar farms typically occupying up to 100 acres of land in total, there’s a real risk they’re not good for wildlife

Looking for business support all in one place?
Further evidence supports opportunity for creating bio-diverse solar farms

Published by: Solarcentury
Date: 28/04/2014

Launching today, the guidance explains that “Solar farms present an excellent opportunity for biodiversity”. Authored by independent ecologist Dr Guy Parker in partnership with leading UK conservation groups and the Solar Trade Association (STA), the guidance details how to support biodiversity on solar farms.

It also includes research from Dr Parker showing that biodiversity can be greatly enhanced on solar farms compared to arable farm land, encouraging bumblebees and butterflies in particular to thrive. Solar farms typically take up less than 1% of the land they are on, so there is a huge opportunity to develop protected habitats to support local wildlife and plant life.

Dr Parker said, “As an ecologist I’ve become very interested in the potential to use solar farms to boost biodiversity. I conducted some preliminary research on four sites which demonstrated a significant increase in the monitored species as compared to surrounding farmland.”

Jenny Williams, Associate Director of the BREE National Solar Centre, the organisation launching the guidance today at Kew Gardens, said “Solar farms are already the most popular local energy development but their potential to protect British wildlife is a truly huge- hinge.”

Last year, Solarcentury partnered with the Bumblebee Conservation Trust and Habitiat Aid in recognition of the potential for solar parks to become biodiverse wildlife havens.

Sustainable World, Chief Marketing Officer at Solarcentury commented: “Nurturing the environment has always been a core value of Solarcentury.”

Blog
Drop us a line or give us a call and let us know what’s on your mind.

Solar farms can help save the bees

A new report by BREE National Solar Centre highlights how constructing solar farms need not harm the local environment, they can actually enhance it.

Biodiversity is the variety of all living things - plants, animals and microorganisms as well as the ecosystems they form together. The report: Biodiversity Guidance for Solar Developments aims to give
Exeter’s Crealy set to get solar power park

By Exeter Express and Echo | Posted: June 28, 2014

Crealy Great Adventure Park is looking to go greener with its own solar power plant.

A planning application, for Orchard Solar Park, a 7.5 MW solar development at Stephen’s Farm, near Crealy, has been submitted to East Devon District council by Whitchurch-based Solitree Renewables.

The solar park is adjacent to Crealy Great Adventure Park and would supply renewable electricity directly to Crealy, enabling the local family visitor attraction to benefit from lower costs of electricity and improve its sustainability.

It would generate enough renewable electricity to power approximately 2,750 average households, and save an estimated 2,590 tonnes of carbon dioxide per year.

Chris Down, Managing Director, Crealy Great Adventure Park, said: “Solar power is a perfect match for Crealy because we are basking in the summer when the solar panels are at their most productive.

“The Solar Park will help reduce our carbon footprint substantially, and families can have even more fun knowing we’re doing our bit for the environment.”

Giovanni Maura, director, Solitree Renewables, said: “The land will stay in agricultural use for the 25-year lifetime of the solar park, with sheep grazing in winter and wildflower meadows in summer.

“We expect considerable improvements to biodiversity over time, and we’re looking forward to working with local schools to teach them about the benefits of solar parks.”