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23rd May 2024

Response to: NatureScot pre-application guidance for solar farms consultation

Scottish Renewables (SR) is the voice of Scotland's renewable energy industry. Our vision is for Scotland to lead the world in renewable energy. We work to grow Scotland's renewable energy sector and sustain its position at the forefront of the global clean energy industry. We represent over 350 organisations that deliver investment, jobs, social benefit and reduce the carbon emissions which cause climate change.

Our members work across all renewable technologies, in Scotland, the UK, Europe and around the world, ranging from energy suppliers, operators and manufacturers to small developers, installers, and community groups, as well as companies throughout the supply chain. In representing them, we aim to lead and inform the debate on how the growth of renewable energy can provide solutions to help sustainability heat and power Scotland's homes and businesses.

SR welcomes the opportunity to provide the views of our members to NatureScot in their consultation on the redrafted pre-application guidance on solar farms.

In response to this consultation, our members have highlighted the following key points which are covered in further detail below:

- There needs to be clarity around 'glint and glare'. We are against the production of visualisations on solar farms in each and every case. This is disproportionate to the level of assessment that might be required for water bodies, car parks or agricultural activities, for example.
- We strongly disagree with the precautionary approach of permanent habitat loss below solar panels. There is much evidence of solar farms increasing biodiversity as it stops other negative management practices on the site. They are also contributing to the decarbonisation of electricity generation to benefit both the climate crisis and nature crisis.

Scottish Renewables would be keen to engage further with this agenda and would be happy to discuss our response in more detail.

Yours sincerely,

A handwritten signature in black ink that reads "Helen A. Melone". The signature is written in a cursive, flowing style.

**Helen Melone | Head of Heat and Solar
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Consultation Response

We have structured our response according to the section headings in the guidance document.

Landscape and visual.

The language in this section should not assume that a Landscape and Visual Impact Assessment (LVIA) which is normally part of an Environmental Impact Assessment (EIA) will be standard practice. Most solar farms are screened out as not requiring an EIA. In this case, a Landscape and Visual Appraisal (LVA) or a similar process will be used to assess potential effects.

The document states that “*In some circumstances, where there is related potential for likely significant effects, the LVIA should include an assessment of the impact of glint and glare*”. There needs to be coherence around ‘glint and glare’ and whether it is needed on every site. This needs to be clarified as the current language suggests it is a serious problem where there are significant effects on the LVIA. Other members noted that ‘glint and glare’ is a separate technical topic, not part of LVIA.

The guidance states that: “*To help achieve more consistent standards, we recommend that visualisation-related materials (photographs, wirelines and photomontages) are produced following the principles outlined in our wind farm visualisation guidance*”. This is disproportionate and not appropriate as this guidance is specifically tailored for wind farms and would require cumulative baseline wireline, wireline and photomontages for all viewpoints. The 53.5 degree photomontage is problematic for solar farms which are often wider than this from close viewpoints. The guidance should refer to LI TGN 06/19 “[Visual representation of development proposals](#)” which already applies to all non-wind visualisations.

The document also asserts that “*the sensitivity of a landscape to solar development will often depend on its landscape character*”. This wording has implications of ‘capacity’. This wording should be rephrased in line with sensitivity guidance.

In addition, most solar farms do not include visible lighting, however CCTV cameras are common. These are normally on poles approximately 3 metres high and are unlikely to have significant impacts. This needs to be handled in a proportionate manner.

National Scenic Areas and National Parks

Wild land areas and national parks should be able to accommodate large scale solar both inside their boundaries and outside subject to EIA and not act as a defacto barrier. NPF4 intended to address renewables within national parks and wild land areas so that they can now be considered and implemented where appropriate. This should be reflected in this guidance. As currently drafted it could have the opposite effect. Where there are settlements within national parks with grid capacity, these communities should not be excluded from having the potential to generate and connect sustainable forms of energy close to source.

Wild Land Areas

Please see above comment.

Ecology

Birds

We acknowledge the collision risk comments and agree that it is not relevant to solar but question the fact that wind farm survey guidance be used for solar farm development. NatureScot should produce solar specific guidance which is consulted upon with the industry to avoid unintended consequences from using wind farm specific guidance.

We agree that one year is sufficient for bird studies and recommend that additional work is only required in exceptional circumstances. The examples used are too vague and could allow more years to be required for very little benefit or for weak reasoning.

The guidance states: “*Up to one year of bird surveys will typically be appropriate for most solar farm PV developments, although developers and consultants must clearly demonstrate that the chosen duration is robust and appropriate to the specific proposal*”. There needs to be clarity on how long the data will remain valid, that is, should data be no older than 1 or 2 years since it is collected before applications are submitted?

Bats

We agree with the standing advice for bats and that the risk of collision is low so bat activity surveys are not required. What is not considered here is that there are other impacts apart from collision. For example, these could be the fragmentation of commuting routes and hunting corridors or felling of a tree with a bat roost. However, this should not be a standard requirement and instead should be limited to projects where trees are being felled. This section should be expanded to provide more clarity for developers.

Other protected species

Deer

We agree that developers should not be held to account for neighbouring management practices.

Peatland

We strongly disagree with the precautionary approach of permanent habitat loss below solar panels. There is much evidence of solar farms increasing biodiversity as it stops other negative management practices on the site. They are also contributing to the decarbonisation of electricity generation to benefit both the climate and nature crises.

There is insufficient research to make definitive claims on how solar panels will impact peatlands. A blanket assumption that the area under the solar panels is considered as ‘loss of peatland’ is inappropriate and should consider the current condition of the peatland on a site-by-site basis. For example, if the peatland is in a degraded state, then it will already be a carbon source.

While building solar panels on top might limit vegetation recovery due to reduced solar radiance, it is possible that actions to re-establish connection with the water table (e.g. re-wetting) could still improve the overall condition of the peatland and reduce the loss of carbon. The re-wetting works would primarily focus on raising the water table over a large area and there is a certain amount of hydraulic connectivity in the top 30cm of peat so the water table should/could remain fairly consistent over a site. There could be losses in performance if the solar panel foundations were wet all the time.

It is frustrating for solar developers to see the inconsistencies with how NatureScot is assessing peatland loss. For example, in this case the justification is set out to be changes in floristic diversity but in other cases it is carbon. For example, recommending that developers use piled foundations for wind turbines so that the peat (and CO₂) remains in-situ. If the peat remains in-situ under the solar panels, we would not consider this ‘loss of peatland’ based on the previous precedent.

The sentence from “a sensitive approach will therefore be required” should be reworded to “a precautionary approach should be adopted with mitigation unless it is demonstrable that no impacts would occur with data monitoring”.

There are also issues in this section with definitions of “peatland” and “peatland vegetation cover”. A definition of what NatureScot defines as peatland is required as there are a few different definitions in use in Scotland. For example, the Wildlife Management and Muirburn (Scotland) Bill states that “peatland” means land where the soil has a layer of peat with a thickness of more than 40 centimetres.

In the paragraph beginning “*Reductions in sunlight (and rainfall) under panels could mean that the peatland is not sequestering carbon, or growing, and therefore there will be no new accumulation of peat, which is a crucial element of a functioning peatland*”, this depends on the definition of ‘peatland vegetation cover’ as it is possible to have some peatland indicator species present in a non-functioning peatland that is emitting carbon.

Alternative wording should be: “A reduction in sunlight reaching vegetation under solar panels could cause a significant decrease in the abundance and cover of peat building vegetation such as thick branched sphagnum species. This, combined with potential changes to the hydrological regime of the peatland due to panels interfering with rainfall patterns, could cause further impacts on the potential of the peatland to sequester and store carbon”.

In the statement “*certain solar panel designs will allow more sunlight to reach underlying peatland vegetation, for example, the use of bi-facial panels*” clarity and refinement is needed on the details of the panel design and the associated infrastructure.

In addition, access tracks are kept to a minimum on solar farms to avoid land take from panel areas therefore we recommend removing this assertion from the ‘avoiding and minimising disruption’ section.

Clarity is needed on what would entail “*suitable compensation and enhancement measures and these being set out in a sufficiently detailed Habitat Management Plan*”. An agreed standard for this is required for this.

As noted above, the research in this area is very limited however most experts agree that the biggest factor in reducing carbon emissions is water table height so the closer the water table to the ground surface, the less carbon is emitted. We recommend NatureScot commissioning research on solar panels and peat as bryophytes and some sphagnums are shade tolerant and solar panels may shade the ground, that is, reduce temperature and reduce loss of moisture from evaporation. This could be potentially significant if rainfall is in short supply.

References in this document to the 2023 NatureScot guidance “Advising on peatland, carbon-rich soils and priority peatland habitats in development management” should be withheld as it is under review and will change significantly.

Avoidance, Mitigation, Compensation and Enhancement

The first few paragraphs in this section refer to the draft biodiversity guidance being developed by the Scottish Government. The work on the biodiversity metric should be referenced here as being in development. Also relevant in this section is the fact that the draft biodiversity guidance is a living document that will be updated as practice beds in across planning authorities. Therefore, including this here will increase feedback on how the guidance document is being used to assist implementation delivery.

The approach to this should be the encouragement of partnership working to secure long term biodiversity benefits rather than seeking to enforce an impractical regulatory system.

In the list of site-specific measures for biodiversity and landscape enhancement, it should be noted that security lighting is generally resisted on solar sites due to largely being in rural locations.