

Scottish Natural Heritage

Micro renewables and the natural heritage

Revised guidance



January 2016



1. Introduction

We support the development and installation of all renewable energy technologies and recognise the significant contribution that they can make towards tackling climate change. We view climate change as the single greatest threat to the natural heritage and we strongly support measures to reduce carbon emissions.

We also recognise that micro renewables can make an important contribution, especially in reducing carbon emissions from both domestic and commercial buildings, supporting rural development and reducing the need for centralised, fossil fuelled generation. Therefore we support the installation of micro renewables in locations where they do not have significant adverse impacts on the natural heritage and, in particular, species which are protected by law. In most locations and in most circumstances, micro renewable technologies can be successfully installed with minimal effect on the natural heritage.

2. Purpose

This guidance aims to help applicants, installers and planning authorities to consider the impacts of micro-renewable energy proposals on the natural heritage without the need to consult with us directly. The guidance seeks to promote a consistent and proportionate level of assessment, but ultimately it is for the Local Planning Authority (LPA) to determine what is required. In some locations this may differ from what we suggest.

SNH is unable to engage with the majority of individual micro-renewable energy proposals due to the large number of proposals and the number of staff we have to respond to these. We will normally engage only with proposals that require an EIA (which will be rare), or where a protected area is likely to be affected (see our [Service Statement for Planning & Development](#)).

Further guidance on micro renewables can be found on the [Scottish Government's online planning advice](#), which should be read alongside this guidance note.

3. What are micro renewables?

Micro renewables refers to installations of **less than 50kW** (electrical) or **less than 45kW** (thermal). The technologies considered in this guidance note are:

- Micro wind turbines (including building mounted and free standing)
- Solar photovoltaic (PV)¹
- Solar hot water (sometimes referred to as Solar Thermal)
- [Micro hydro](#)
- Biomass
- Heat pumps

Other SNH guidance is available for installations of greater than 50kW (electrical) or 45kW (thermal).

¹ [Our commercial scale solar guidance is available on-line](#)

4. Planning applications, consultation and legal obligations

Planning and when to contact SNH

Some forms of micro renewables are classed as '[permitted development](#)', meaning that they do not require planning permission. However, there are a number of circumstances in which permitted development rights do not apply. Some micro renewables still require planning permission in certain circumstances and the LPA will determine whether it needs advice from SNH.

SNH has a [Service Statement](#) that sets out when to consult us. In practice this means SNH does not need to be involved in planning applications for the installation of these technologies, except in the circumstances described below.

It is important that householders and installers conduct some basic checks prior to installation (**appendix 1**). Householders and installers should contact the relevant LPA for further advice if required.

Consultation on proposals affecting designated sites

In certain locations, some of these technologies could have a significant impact on designated natural heritage interests e.g. Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), National Scenic Areas (NSAs), and National Parks (NPs). SNH therefore requests consultation on any proposals within or potentially impacting (with connectivity) certain designated sites as outlined for each technology below. Where a householder, installer or LPA is unsure about potential impacts they should contact the local SNH office for advice. Information on designated sites can be found via '[Sitelink](#)'. A summary of the relevant legislation is included as **appendix 2**.

Species licensing

A licence allows somebody to carry out an action in relation to a protected species that might otherwise be against the law. Licences can only be issued for [specific purposes](#). Scottish Natural Heritage is responsible for wildlife licensing in Scotland (Wildlife and Natural Environment (Scotland) Act 2011). Under the [Wildlife and Countryside Act 1981](#) (as amended), it is not possible to licence actions that would otherwise be an offence in relation to wild birds, for the purpose of development. Because there is no development licensing purpose for wild birds, this means that any development that could result in these actions should not proceed until the breeding season is over for these species.

If bats, their roosts, or even signs of bats are found by a suitably qualified surveyor during a survey linked with a proposal, they should identify what impact the development might have on the bats. Wherever possible these impacts should be avoided or minimised. However, if they can't be avoided and the development might otherwise result in an [offence](#) being committed, then a licence would be necessary to be able to proceed.

Licenses to permit development can only be granted subject to [strict tests](#) being met. We answer common queries about licensing in our [list of frequently asked questions](#).

5. Natural heritage impacts associated with each technology

5.1 Micro wind turbines

Most micro wind turbines can be sited to have little or no impact on the natural heritage. However, in some locations potential impacts could be significant.

Birds

Some species of birds, such as house martins, swifts, swallows, house sparrows and starlings commonly fly close to, and nest on or within, buildings. There is little research into the impacts of micro turbines on these birds but the potential for collision and disturbance is clearly greater for birds which dwell on or near buildings.

SNH will not comment on impacts on birds from wind power proposals of this scale, unless it can be established that the proposal could affect a designated site.

Importantly, all bird nests are fully protected from damage, destruction or interference whilst in use or being built under The Wildlife & Countryside Act 1981 as amended by the Nature Conservation (Scotland) Act 2004. You should not move a nest or attempt to move a nesting bird to another site during the breeding season. However, there are some actions which you can take to reduce the negative effects on birds around buildings and premises. **If a micro wind turbine is installed on or near a building, locate it as far from regular nest sites as is practical to minimise the risk of collision and avoid work close to nest sites during the breeding season (March – September).**

Bats

All species of bats in the UK are protected by law and it is illegal to deliberately or recklessly kill, injure or disturb a bat, or obstruct access to a bat roost. It is also an offence to damage or destroy a bat roost (whether deliberately or recklessly). If impacts can't be avoided and the development might otherwise result in an [offence](#) being committed, then a licence would be necessary to be able to proceed. Licences to permit development can only be granted subject to [strict tests](#) being met.

SNH will only comment on impacts on bats from wind power proposals of this scale when a recent survey (undertaken in relation to the proposal) shows that bats could be affected, but LPA's are uncertain that the mitigation proposed by the applicant is sufficient to avoid an offence under relevant legislation. LPA's should contact us informally to discuss such cases. SNH will then judge whether a formal consultation on the case is justified - [seek specialist advice from SNH](#). Guidance on searching for bats and what to do if you find bats is on the SNH webpage '[Are bats likely to be present?](#)'

Bats appear to avoid the immediate vicinity (0–5 m) of operating micro turbines. A similar effect may occur up to and beyond 25 m from micro turbines, suggesting that they can affect habitat use by bats.² The consequences of losing a relatively small

² <http://sti-cs.org/projects/birds-bats-and-small-wind-turbines/>

area of habitat around an operating micro turbine is limited but displacement away from commuting routes or foraging areas could have disproportionate impacts on a local population, especially in landscapes with little suitable habitat (e.g. hedgerows and tree lines).

We recommend siting micro turbines at least 30m away from potentially suitable bat habitat, especially in landscapes with little suitable habitat. Give careful consideration to roof mounted and free standing turbines installed:

- **On buildings known, or suspected, to contain bat roosts**
- **Within 30m of a known bat roost**
- **On buildings where bats are frequently observed**
- **On known bat flyways (commonly along watercourses, hedges, woodland edges)**

If there is evidence of repeated casualties at a turbine, then we advise that the operator retains any carcasses (for future identification), and contacts SNH for advice on a possible mitigation solution, which might include an appropriate shut-down regime.

Research

Ongoing work is helping to develop understanding into the impacts of wind turbines on bats. Installers and householders can help us build up our knowledge of these impacts by reporting collisions and fatalities associated with micro wind turbines to SNH local offices (Contacts at the end of this document). Further related information can be found in the Stirling University research paper '[Experimental Evidence for the Effect of Small Wind Turbine Proximity and Operation on Bird and Bat Activity](#)'.

Landscape and Visual impact

The visual impacts of micro wind turbines, up to 50kW, are likely to be localised. However, as some turbines in this category could be up to 25m in height they may require careful assessment in certain locations. Cumulative impacts from micro turbines should also be assessed. **We recommend that:**

- **Micro wind turbines which are attached to a building should be assessed by the LPA;**
- **Free standing turbines up to 15m in height (to blade tip) are assessed by the LPA;**
- **Free standing turbines of between 15m and 50m in height (to blade tip) may require a basic level of landscape and visual assessment, depending on the location and this should be determined by the LPA;**
- **SNH should be consulted on all proposals within [National Scenic Areas](#) where the height of the turbine(s) exceeds 12m (to blade tip)³;**

³ **Activities in a NSA requiring a planning application and consultation with SNH:** [SDD Circular 9/1987]

- Erection of buildings and structures over 12 metres high.

- **Proposals to install a turbine within a National Park should be discussed with the National Park Authority.**

Further guidance on the [siting and design of micro wind turbines](#), can be found in the [Scottish Government Online Planning Advice](#) and in '[Assessing the impact of small-scale wind energy proposals on the natural heritage](#)'.

5.2 Micro hydro

Installations at this scale are unlikely to cause significant impacts on the natural heritage, unless the proposal, including associated infrastructure, could affect:

- a Special Area of Conservation;
- a river which contains important fishing interests (developers /installers should contact the local fisheries board to establish the importance of a particular watercourse);
- a European Protected Species (e.g. otter) or other protected species, e.g. [bryophytes](#);
- a Site of Special Scientific Interest;
- an [area of wild land](#);
- a National Scenic Area.

Micro hydro development may also cause significant cumulative effects if other hydro developments affect the same catchment.

All micro hydro installations will require a licence from the Scottish Environment Protection Agency (SEPA) and developers should consult SEPA as early as possible. SEPA and SNH have produced joint guidance on hydro installations and further information on impacts and licensing can be found on the [SEPA website](#).

SNH will not comment on micro hydro proposals at this scale, unless they could affect a protected area, protected species or an area of wild land.

5.3 Solar PV and hot water

Installations of solar PV and solar hot water panels are unlikely to cause significant natural heritage impacts, unless they block access to a bat roost or a bird's nest. If they are large scale (for example covering an entire roof), and in a sensitive location, they could have a significant visual impact, due to the size of the device or its reflective surfaces. These impacts should be assessed by the LPA.

SNH will not comment on solar PV or hot water installations unless bats are known to be present and detailed advice is required.

5.4 Biomass

Biomass installations at this scale are very unlikely to cause significant natural heritage impacts. Exceptionally, the flue or external storage hopper required for fuel might result in visual effects. However, neither is likely to be of a scale which would require advice from SNH.

We do not require consultation on biomass installations at this scale and this will generally be a matter for the LPA. It is conceivable but very unlikely that SNH would advise on installations in highly visible locations within a National Scenic Area or Wild Land Area where the installation would significantly alter the appearance and / or setting of a building.

5.5 Ground source / Air source heat pumps

Ground source and air source heat pumps are very unlikely to give rise to significant natural heritage concerns, unless the installation of ground loops / boreholes are likely to cause significant changes to local hydrology, or damage to sensitive habitats during installation.

SNH will not comment on air source heat pumps, and will only advise on ground source installations when they could affect a protected area e.g. in or adjacent to a freshwater SAC or SSSI.

Installers should refer to SEPA's CAR Practical Guide to determine the applicability of the [General Binding Rules](#) of the Water Framework Directive.

6. Impacts arising at the construction stage

The construction stage of a micro-renewable development may lead to a number of impacts on the natural heritage, depending on scale and location. It is the LPA responsibility to ensure that developers address these risks adequately. To identify potential impacts and possible mitigation the developer should refer to '[Good practice during Windfarm Construction](#)'. In most cases construction effects will be manageable through appropriate design, mitigation and, where necessary, planning conditions.

7. Contact

To discuss a specific application please contact your local **SNH Area Office**. Contact details can found [on our website](#) or by calling our Headquarters on 01463 725000

To discuss our approach to micro renewables and the guidance contained within this document, please contact **Kenny Taylor** on 01786 435 387 or email kenny.taylor@snh.gov.uk

Appendix 1: pre installation checklist

<i>General</i>	No	Yes	If yes...
Is the proposed installation within, or could it affect a designated site (SPA, SAC, SSSI, Ramsar)?			Consult SNH local office
Are bats present within the building where the device is to be installed ?			Consult SNH website with regard to the proposal. Contact local office for further advice if necessary.
Is there a known bat roost within 30m of the proposed installation ?			Survey and consult with the LPA. This may trigger a SNH consultation

<i>Micro wind turbines</i>	No	Yes	If yes...
Are any birds known to occupy / nest in or on the building at any time of the year?			It is recommended that you do not install a micro wind turbine near to regularly used nest sites, especially during the breeding season (March to September). No requirement to consult SNH
If the proposed turbine is free standing, is it within a National Scenic Area and greater than 12m in height?			Contact the LPA for further advice. Contact SNH for pre-application advice.

<i>Solar photovoltaic / hot water</i>	No	Yes	If yes...
Have you checked the roof-space for bats and nesting birds ?			If evidence of bats or birds is found, you should consult SNH for further advice.
Have you checked the proposed location of the panel(s) for holes used by bats ?			

<i>Hydropower</i>	No	Yes
Have you consulted SEPA's 'Guidance for developers of run-of-river hydropower schemes'		

Appendix 2: related wildlife legislation

The following links will take you to the relevant pages on the SNH website for further information on legislation:

[Nature Conservation \(Scotland\) Act 2004.](#)

[European Natura legislation](#) (relating to SPAs, SACs)

[European protected species](#)

[Legislation and guidance relating to bats](#)

[**www.snh.gov.uk**](http://www.snh.gov.uk)