

LIFE EXTENSION AND DECOMMISSIONING OF ONSHORE WINDFARMS

1. Purpose

To provide a SEPA position on the life extension and repowering of on-shore wind farms as they relate to areas within our remit such as sustainable resource use, carbon and the water environment. This will facilitate a more efficient and effective response to planning consultations and licence determinations and provide a framework for engagement with other stakeholders to drive innovative approaches to delivering a sustainable and low carbon economy.

2. Background

We are now entering a new phase of onshore windfarm development as the first tranche of 25-year planning permissions/consents for onshore wind farms are reaching expiry and a new generation of more efficient turbines are becoming available. It is anticipated that the repowering market for onshore wind will accelerate over the next few years. The Scottish Government's 2020 Routemap update for Renewable Energy in Scotland (September 2015) identifies the potential to repower existing sites as an opportunity for Scotland to continue to work towards our renewable energy targets through maximising site availability and enhancing cost competitiveness.

To accommodate this change there is an operational need to expand our planning and regulatory guidance on windfarm developments to encompass the specific issues raised by the continued use of sites for wind energy generation and any associated decommissioning activities. This position establishes high level principles upon which operational guidance can be based. It should be noted that there is a rapidly developing evidence base to guide best practice, for example around the potential to re-use turbine bases and restoration techniques, and as further evidence becomes available we may need to reflect any findings in our position and related guidance.

3. Our position

Table 1 provides a hierarchical framework to support decisions on the life extension and potential decommissioning of sites. The hierarchy is underpinned by the principles of sustainable resource use, effective mitigation of environmental risk (including climate change) and optimisation of long term ecological restoration. Proposals for extending the life of windfarms and decommissioning should demonstrate how these principles, as expressed in the hierarchical framework, have been applied within the context of latest knowledge and best practice. In applying the hierarchy consideration will need to be given to site specific circumstances, such as local environmental conditions and other matters such as landowner agreements.

Our approach will be underpinned by collaborative working with other stakeholders, including the renewables industry, to maximise the opportunities and benefits arising from innovative approaches to extending the use of existing onshore wind farm sites including:

- Supporting the delivery of climate change targets;
- Establishing a successful, low carbon economy; and,
- Stimulating the circular economy within Scotland.

Table 1: Hierarchy of environmental impact for the extension of onshore windfarm use

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| Lower environmental impact | 1. LIFE EXTENSION: extend life of existing development | <ul style="list-style-type: none"> Extend life of development using existing infrastructure |
| | 2. RE-USE MAX: replant turbines on existing bases | <ul style="list-style-type: none"> Maximise re-use of existing infrastructure including the replanting of turbines on existing bases. This will enable the re-use of existing tracks, crane pads and cable trenches Maximise recovery of materials from removed turbines and treat as high up the waste hierarchy as possible |
| ↑ | 3. REPOWER: new turbine bases installed | <ul style="list-style-type: none"> New turbine bases sited to minimise impact on the environment and carbon emissions and to maximise reuse of existing infrastructure Maximise re-use of supporting infrastructure Optimise habitat restoration of areas affected by infrastructure removal Maximise recovery of materials from removed turbines and treat as high up the waste hierarchy as possible |
| Higher environmental impact | 4. DECOMMISSION: cessation of use of part or whole of site | <ul style="list-style-type: none"> Remove infrastructure unless the potential environmental risks posed by removal (e.g. carbon loss, impacts on the water environment) would outweigh the benefits. Maximise recovery of materials from removed infrastructure and treat as high up the waste hierarchy as possible Optimise habitat restoration of areas affected by infrastructure removal Long term aftercare programme established to monitor/manage any potential long term environmental risks |