



Visual Mitigation of Overhead Lines in Loch Lomond and the Trossachs National Park:

Killin

A submission to Ofgem as part of VISTA: An Assessment of the Visual Impacts of Scottish Transmission Assets

February 2021



Scottish and Southern Electricity Networks (SSEN) is promoting VISTA (Visual Impact of Scottish Transmission Assets), an initiative instigated to assess the impact of existing electricity infrastructure in the ownership of SSEN on National Parks and National Scenic Areas (NSAs) in Scotland, and where possible, to identify and develop appropriate mitigation. To play a part in conserving Scotland's designated landscapes, SSEN hopes to access a proportion of a £500m fund that is administered by the electricity industry regulator OFGEM.

SSEN's VISTA Policy document defines objectives that projects must meet:

- *"deliver the most beneficial enhancements for Scotland's precious landscapes while keeping undesirable environmental impacts associated with particular mitigation measures (such as undergrounding) to a minimum;*
- *enable users of National Parks and NSAs to benefit from their recreational, educational and social offering;*
- protect the technical viability of the wider transmission network;
- be economical and efficient; and
- involve a wider range of stakeholders."

In order to deliver the maximum benefit, it is necessary to identify the transmission infrastructure with the greatest impacts on nationally protected landscapes, but also with greatest potential for mitigation. This was evaluated through a landscape and visual impact assessment that considered all of SSEN's infrastructure in protected landscapes in Scotland.

Two parallel 132kV overhead lines, carried on steel lattice towers, run from Killin substation into Glen Dochart within Loch Lomond and the Trossachs National Park. Around Lix Toll these lines separate, one heading west along Glen Dochart and the other south into Glen Ogle. The lines cross the high shoulder of Creag Bhuidhe (a steep hill which overlooks Killin), above the Falls of Dochart at Killin, and are highly visible from the A827, Killin village and surrounding locations. The impact of these overhead lines on the landscape and visual amenity of the National Park, as well as the potential for successful mitigation, was judged to merit further investigation as part of VISTA.

Stakeholder support (local community, community council and key statutory stakeholders i.e SNH, Scottish government and the National Park) was expressed for undergrounding, as it was thought that this would benefit the largest number of visitors to this area of the National Park. Following a technical review undertaken by SSEN, the feasibility of undergrounding was confirmed, and a project developed. Stakeholders were involved throughout this assessment and development process. Stakeholder meetings have been held, and a virtual consultation was held due to the COVID-19 Pandemic. Stakeholders were notified of this event via mail drops, emails and press adverts. Throughout the process, stakeholders, including the Loch Lomond and Trossachs National Park Authority, have expressed support for undergrounding in this well-visited part of the National Park.

The project will involve the removal of 31 steel lattice towers across both overhead lines, and approximately 7.8km of overhead line, from Killin substation in the north, to points close to Lix Toll. The overhead line will be replaced with approximately 4.5km of underground cables, which have been routed to avoid key environmental constraints. Horizontal directional drilling (HDD) will be employed to cross the River Dochart and A827 to minimise impacts on ecological receptors and the special qualities of the National Park. The projects aim to remove visibility of the line in an area where it is viewed by the largest numbers of visitors, thus mitigating the moderate landscape and visual effects identified during the earlier stages of the project.

Consideration against VISTA objectives

Objective	Evaluation
Deliver the most beneficial enhancements for Scotland's precious landscapes...	The proposals will enhance the character and special qualities of the Breadalbane area within the LLTNP, in an area which is visited and travelled through by a large number of people.
...while keeping undesirable environmental impacts to a minimum	The overhead line will be replaced with an underground cable. The cable follows a route through rough grazing designed to minimise impacts on other environmental receptors. Where the cable passes through wooded areas the working corridor will be reduced to minimise the need for tree removal. HDD will be utilised to cross the A82, railway line and watercourses, and best practice construction and installation methods will be used to minimise environmental impacts. During construction, there will be temporary negative visual impacts for recreational users along the West Highland Way. Temporary diversions of the route will be carried out in a highly sensitive manner in order to minimise impacts as far as possible.
Enable users of National Parks and NSAs to benefit from their recreational, educational and social offering	The proposals have been designed to benefit the maximum number of people, by focusing on a well-visited part of the National Park that is visible from the A82, the West Highland Railway line and the West Highland Way. On completion, the scheme will enhance the enjoyment of the landscape and its special qualities for many people who visit or travel through the area.
Protect the technical viability of the wider transmission network	The proposals will not adversely affect the technical viability of the wider transmission network.
Be economical and efficient	The total cost is £13.45M. The majority of this project cost has been provided via SHE Transmissions 132kV underground cable framework rates and assessed to be economic and efficient when considering market competitiveness. In addition, where cost estimates have been derived from non-tendered sources, costs have been estimated from similar projects or using the experience of individuals who have worked for SHE Transmission on similar projects.
Involve a wider range of stakeholders	A range of stakeholders have been involved in the development of these proposals, from the initial assessments through project selection and detailed design. Stakeholder inputs are described throughout this submission document and its appendices. The proposals benefit from the support of key stakeholders.