

THURSO SOUTH SUBSTATION
THURSO, CAITHNESS, HIGHLANDS, SCOTLAND
SCOTTISH AND SOUTHERN ELECTRICITY NETWORKS

BIG Biodiversity Challenge Award Category: Medium - Large

Project overview

Thurso 275/132/33 kV substation is part of a larger development to reinforce the electricity transmission network allowing connection of renewable generation projects in the north of Scotland. It is located close to the A9 7 miles south of Thurso. Consent was granted in 2013 and construction completed in late 2017.

What were the biodiversity conditions on site, prior to the enhancement?

The site was previously used for grazing and the ecological report stated that the area was low in plant diversity and of low ecological value. Phase I surveys did not identify any particular species of note and the surrounding area has few areas of wildflowers. The trees in the area are non-native conifers primarily planted as a shelter belts, which were maintained as part of the development. The planning permission required tree planting to screen the substations and a generic wild flower mix was specified. The objective of the initial planting scheme was principally to provide landscape mitigation.

What were the reasons behind this project ?

As a responsible developer, our developments have a minimal impact on the local communities and environments. During project construction it was recognised that changes to the consented landscape plan species mixes would present an opportunity to enhance local biodiversity. After consulting local wildlife experts changes to the landscape plan were made to benefit the Great Yellow Bumblebee, a rare endemic species found only in the Northern Scotland. The substation site would also complement other efforts to create pollinator habitats in the wider area. The project aligns with the SSE sustainability strategy and our goal of working towards biodiversity net gain.



Great Yellow Bumblebee: David Wood

What were the biodiversity measures taken?

In providing ecological enhancements the Bumblebee Conservation Trust (BCT) BCT provided tailored advice and guidance to benefit the rare Great yellow bumblebee by supporting SSEN and the contractor in restoring and creating high quality habitat. This included;

- Hydro seeding of 10ha of flower-rich grassy meadows with different flowering plants in Caithness, such as bird's-foot trefoil, red clover and knapweed.
- Enhanced tree planting with native broadleaves including species which provide important early season nectar such as willow.
- A SUDS pond planted with wetland vegetation which already supports amphibians.
- Small bare areas of ground and rock piles using reused material on south facing slopes to allow nesting and hibernation habitat.
- Toolbox talks and identification materials available on site to engage the whole project team at an early stage.
- Plans for long term monitoring of the wildflowers and the pollinators on site by volunteers.
- Ongoing contact with the BCT to allow for adaptive management if required.
- Agreement with local landowner for grazing to ensure maintenance of the sward.
- Helps support the aims of the 'Thurso: Gateway to the Great Yellow' BCT project.
- Work compliments the Highland and Caithness Biodiversity Action Plans (Great yellow bumblebee and other pollinators).
- Supports the aims of The Pollinator Strategy for Scotland.

The creation of the meadows, a SUDS pond and the areas of broadleaf planting have created a wider diversity of habitats on the site and with contribute to a biodiversity enhancement.



Site in 2015 during early earth works.



Site in 2018 in the first growing season after reinstatement.

