**Tomatin Substation**
**Garbole, by Tomatin, Inverness, Scotland**
**Scottish Hydro Electric Transmission Plc**

# BIG Biodiversity Challenge Award Category: *Biodiversity Legacy Award*

**Project overview**

The new 275/132 kV substation is part of a larger development to reinforce the electricity transmission network. It is located c.6km from Tomatin, Scotland and is adjacent to priority peatland habitat in a conifer plantation. Consent was granted in November 2016 and construction will be completed in late 2019.

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

Prior to commencement the site was dominated by closed canopy coniferous plantation (consisting of sitka spruce and larch, with occasional scots pine). Smaller areas of marshy grassland (soft rush) and blanket bog (deer grass, hare's tail cotton grass, heather, round-leaved sundew, crowberry, sphagnum species, bog asphodel and purple moor grass) were also present.

The objective of the initial planting scheme was to provide localised landscape mitigation as part of a planning condition, with a generic native tree mix specified.

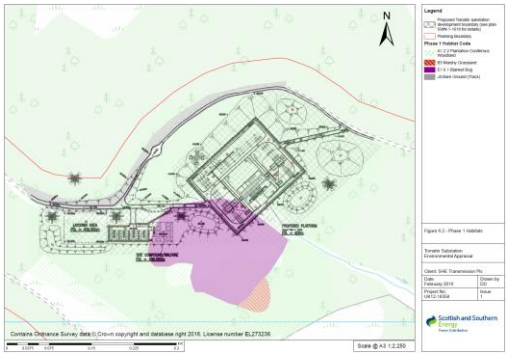
**What were the reasons behind this project ?**

Changes to the substation design were required to address concerns raised by SEPA. This resulted in a platform redesign to minimise impacts to peatland habitats.

A revised landscape design was prepared and assessed via a biodiversity net gain to see if improvements to avoid and minimise biodiversity impacts (in line with the mitigation hierarchy), and also to enhance local biodiversity. The assessment concluded that with changes a net gain could be achieved, despite working with limited space and sensitive peatland habitats.

The project aligns with the SSE sustainability strategy of working towards biodiversity net gain on all of our developments.

*Tomatin Substation: May 2015 (Photo: Kenneth Reid)*



*Tomatin Substation Phase 1 Habitat Map*

**What were the biodiversity measures taken?**

Priority species and habitats, such as juniper, blanket bog and heathland habitats, identified in the Inverness and Nairn Biodiversity Action Plan (BAP) are found within the site. Enhancements for invertebrates will not only support the actions and goals of the Inverness and Nairn BAP, but provide a real benefit to other species in the food chain.

A biodiversity net gain analysis noted a net gain could be achieved with amendments to the proposed landscape design. Through collaboration with WSP and the Bumblebee Conservation Trust (BCT) the landscape design is being amended to include an upland grass/wildflower/heather mix to increase biodiversity specifically for invertebrates and pollinators.

Further enhancements were undertaken via collaboration with the British Dragonfly Society (BDS) who provided tailored advice to create better habitat for dragonfly and damselfly by repurposing temporary silt mitigation ponds, with rocks placed nearby for basking and deadwood to provide habitat for other invertebrates. Additionally, a woodant nest was relocated out with the works area which is thriving.

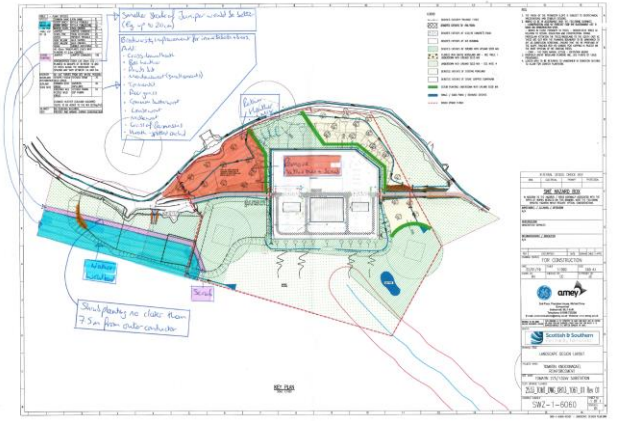
Site operatives are engaged via toolbox talks on topics such as wildlife and nesting birds. Plans are being developed to engage the local school regarding the biodiversity enhancements. SHET volunteered with the Strathnairn Community Woodlands to help with maintenance of the community woodlands.

Most large developments use temporary settlement ponds during construction. Adapting these ponds, and using external stakeholders for advice, to support invertebrates is replicable across these type of projects.

Post-implementation SHET will monitor the site to ensure the landscape works succeed. In addition, the BDS will monitor the ponds to ascertain species present.

This site shows it is possible to find solutions to enhance peatland habitats through careful reinstatement to create opportunities for invertebrates that would have been present on site prior to the commercial conifer plantation.

*Reinstatement of construction silt mitigation ponds into invertebrate habitat in consultation with the Dragonfly Trust (Photo: Kenneth Reid)*



*Landscape Design Updates*

**Further information**

First draft of the biodiversity net gain noted the design would show no net loss. Through a collaborative approach the design has been amended and an initial assessment suggests a significant net gain, despite it being a challenging site, located at c.410m AoD, adjacent to priority peatland habitat, with limited space.

Mitigation was proposed within our consent application, which was delivered through the CEMP. Post construction management will be undertaken by SHET, as the landowner, and as such have the opportunity to take a long term view.

BDS will revisit the site to undertake monitoring to better understand the species present and ascertain how well the new ponds are being used. Learning from this project can be replicated elsewhere to show how former silt mitigation ponds can effectively be repurposed for biodiversity gain.

The benefit from the BIG Challenge is that it acted as a good way to promote biodiversity within the project by showing that with a little extra effort works can be reinstated to benefit biodiversity to a greater extent. The advice from experts was essential to ensure maximum benefit could be realised in the longer term.

SSE undertake an annual Biodiversity Report and there is also and industry Environmental Discretionary Award. The biodiversity works undertaken in this project will feed into both these aspects as well as working towards biodiversity net gain for all our projects.


*Dragonfly observed during construction (Photo: Nigel Coulshed)*

*Wood ants relocated to their new home (Photo: Kenneth Reid)*

**Project Team**

- Scottish Hydro Electric Transmission plc
- Amey
- WSP
- British Dragonfly Society

**What was the motivation for carrying out the enhancement?**

The main motivation of the project team was to enhance habitats for biodiversity net gain. Site enhancements focus on invertebrates, which will promote wider benefits to local biodiversity. For a relatively small and inexpensive amendment there is a potential for a large benefit for biodiversity, as well as learning that can be taken forward to other projects.

SHET will be promoting greater sustainability within our projects and biodiversity net gain will become standard practice. This project is ahead of business expectations at the current time.