**Beauly-Denny Transmission Line**

**Trial Restoration Proposals**

The Beauly-Denny power line passes through the CNP and 76 of its towers lie within the CNP as well as approximately 28km of tracks constructed to enable its erection. Part of the conditions for the building of the line is to restore the tracks and tower bases back to a near-natural state.

SSE are proposing to reinstate the bases and tracks to mimic the soil profile, and then leave them for 2 years to re-vegetate naturally before considering any intervention. I think this process is likely to fail (in the short-term) due to the nature of the majority of the soils along the route (very low in nutrients and thin) and the climate and altitude.

I advise, therefore, that a number of different restoration techniques are trialled along the route to compare the effectiveness of intervention against non-intervention as well as the different techniques. This will then provide a very useful guide to which technique works best and if intervention is needed along the whole route, the most effective intervention.

The following proposals would see re-vegetation trials on 18 of the 76 towers, and 3.2km of the 28km of tracks. A range of altitudes, aspects and soil types should be chosen.

**Re-vegetation techniques**

1. Sow 2 tower bases, and 4 X 100m sections of track with an appropriate native plant seed mix
2. As 1 above (2 towers, 4 x 100m of track) but include fertiliser/lime or other products such as “seed aid” based on soil assessment
3. Apply bryophyte-rich heather or cotton grass brash to 2 tower bases, and 4 x 100m of track, with a dwarf-shrub seed mix
4. Apply bryophyte-rich heather or cotton grass brash to 2 tower bases, and 4 x 100m of track with dwarf-shrub seed mix, plus fertiliser and/or lime based on soil assessment
5. Apply bryophyte-rich heather or cotton grass brash to 2 tower bases, and 4 x 100m of track, with a “nurse grass crop”, dwarf-shrub seed mix and fertiliser/lime based on soil assessment
6. Plant appropriate plug plants (dwarf-shrubs and cotton grass, 1 per square metre) to 2 tower bases and 4 x 100m of track
7. Apply geo-textile to 8 x 50m of steep slopes with a seed mix and fertiliser/lime (as in 3 above)
8. Apply bryophyte-rich heather or cotton grass brash to 8 x 50m steep slopes with a seed mix and fertiliser/lime (as in 3 above)

**Brash quantities**: typically 1 hectare requires 156 bags of brash (large dumpy builders bags), or 1 bag can cover 64m2 of ground to a depth of 1cm.

**Lime:** If the pH is below 4 lime will be required to provide the conditions needed to establish a vegetation cover. Lime should be applied as granulated (prilled) lime (e.g. Calciprill) at a rate of 1 tonne/ha to brashed bare peat areas ideally 6 weeks before fertiliser application and after the bare soil has been stabilised with brash.

**Dwarf-shrubs:** a dwarf-shrub seed mix of 85:10:5 mix of *Calluna vulgaris*, *Erica tetralix* and a small amount of other species applied at a rate of 650g per hectare).

**Nurse grass crop:** Studies have shown that establishment of dwarf shrub species on heather moorland is enhanced if a grass “nurse” is grown to stabilise the bare peat by developing a root mat that dwarf-shrub and other moorland species can gain a foothold into. The aim is to utilise grass species that will only thrive for a short period (up to 5 years) in the presence of increased lime and fertility. The nurse grass crop is based on a 50:20:30 mix of *Agrostis capillaries*, *Festuca rubra rubra* and *Lolium perenne* spread at 40kg per hectare.

**Fertiliser:** Soils are naturally very nutrient poor in the CNP and damaged soils even more so. In order to establish the grass nurse and provide favourable conditions for initial dwarf-shrub growth it is necessary to provide a short-lived low dose of nutrients using artificial fertiliser applied at the same time as the grass nurse. The exact rates are determined by the soil sample.

More information on some of these restoration techniques is available on the Yorkshire Peat Partnership’s website: <http://www.yppartnership.org.uk/restoration/technical-guidance-notes/>; and on the Moors for the Future’s website: <http://www.moorsforthefuture.org.uk/repairing-bare-peat>

While these are primarily for the re-vegetation of bare peat, they are also suitable for re-vegetating the other poor quality, low nutrient soils found along the power line.

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