

Slamannan Bog Restoration Project- Summary of the second year

The Slamannan Bog Restoration Project began in September 2014 with the aim of restoring at least 150 hectares (ha) of degraded raised bog habitat in the Slamannan Plateau. The project is focused on an area of peatland called Fannyside Muir, 3km from Cumbernauld.

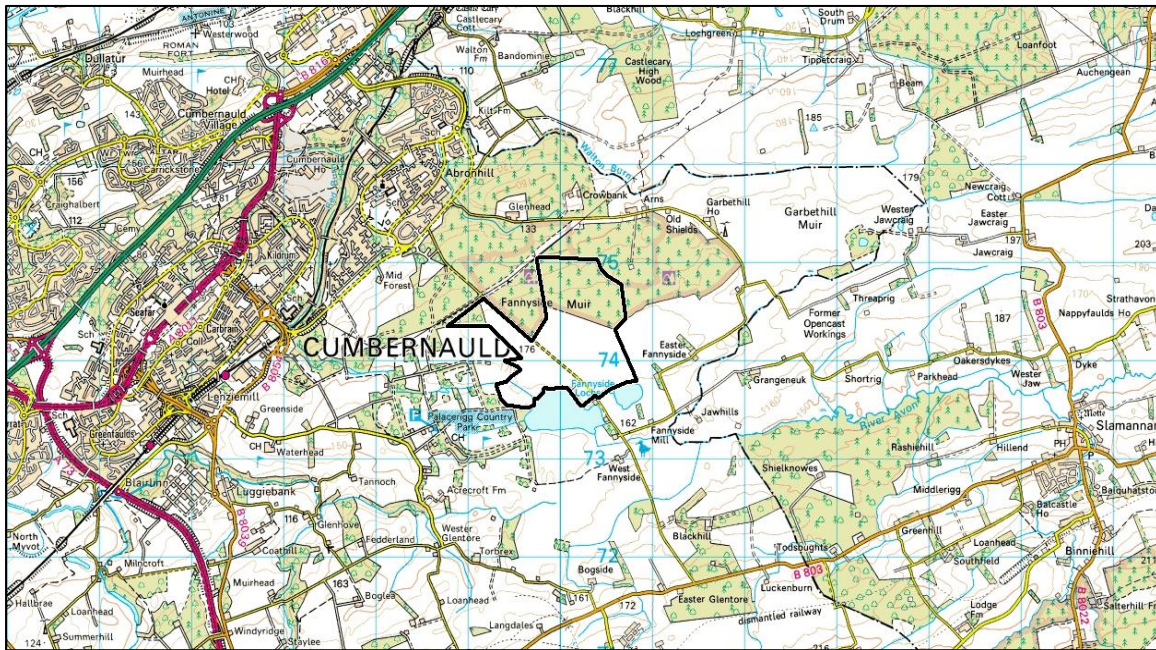
The project is managed by Buglife Scotland in partnership with landowners Forest Enterprise Scotland (FES), North Lanarkshire Council (NLC), Scottish Wildlife Trust (SWT) and additional stakeholders Royal Society for the Protection of Birds (RSPB), Cumbernauld Living Landscape (CLL) and Scottish Natural Heritage (SNH).

The production of a Management Plan and the work associated with the restoration of bog habitats at Fannyside Muir has been funded by WREN grant BAF14 - 'The Slamannan Bog Restoration Project' and through contributions of the European Union to the EcoCo LIFE+ project LIFE13 BIO / UK / 000428 '*Implementation of integrated habitat networks to improve ecological coherence across the CSGN*'. This work was supported by SNH as part of the [Peatland Action](#) project and contributes to Scotland's National Peatland Plan and North Lanarkshire Council's Bog Action Plan.

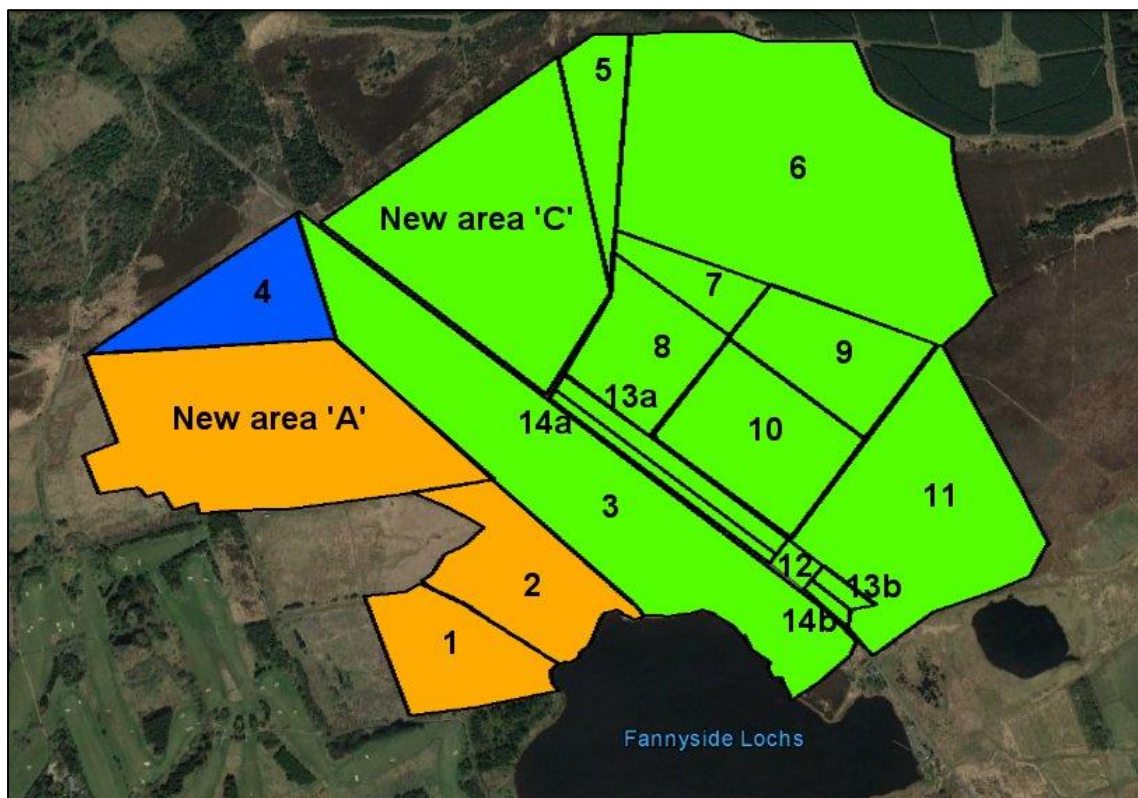
Progress in the second year of the project is summarised below:

- A Habitat Regulations Assessment (HRA) of proposed works in newly identified areas in 2016 was carried out by SNH based on the original management plan and work plans provided by Buglife.
- Two phases of restoration work (Phase 2 & Phase 3) were carried out during 2016:
- Phase 2 was carried out by Openspace (Cumbria) Ltd (between 21st March and 6th May). Phase 3 was carried out by Conservefor Ltd (between 16th August and 15th September). The contracts for both phases were awarded following a public tendering process (Public Contracts Scotland website). The deadline for completion of all works this year was 20th September, which is the earliest date that wintering Taiga bean geese have returned to the Slamannan Plateau.
- During 2016, A further 3230 peat dams and 46 reinforced plastic piling dams were installed across ~119 ha of the site to raise and stabilise ground water levels on the bog.
- 26 hectares of cell-bunds were installed to raise ground water levels and retain surface water. 170 m of steep-sided gully was reprofiled to slow water movement across the site
- 8 ha of birch scrub was cleared and stump-treated, and 29.5 ha of regenerating lodgepole pine were removed. Volunteer work parties cleared over 23 ha of the conifers (under 2m tall), while contractors cleared an additional 6.5 ha of dense conifer regeneration and approximately 45 larger trees.
- Monitoring of the site included monthly hydrological checks of 32 dipwells across the site, checking 7 fixed vegetation monitoring quadrats, 32 mini vegetation quadrats, protected species surveys, nesting bird surveys, moth trapping, butterfly timed counts, aquatic invertebrate surveys and other invertebrate surveys were carried out.
- Over 430 peat depth readings were measured across the site and surrounding peat deposits. The deepest reading within the project site was 915cm, while a reading of 930cm was recorded just outside the project area.
- Fixed point photography and aerial photographs and video of the site were taken.
- A grass fire in April 2016 damaged approx.12 ha of Compartment 11 (area with goose roost pools), however surrounding re-wetted areas were unaffected.
- A total of 717 species have been recorded on the site since the start of the project.
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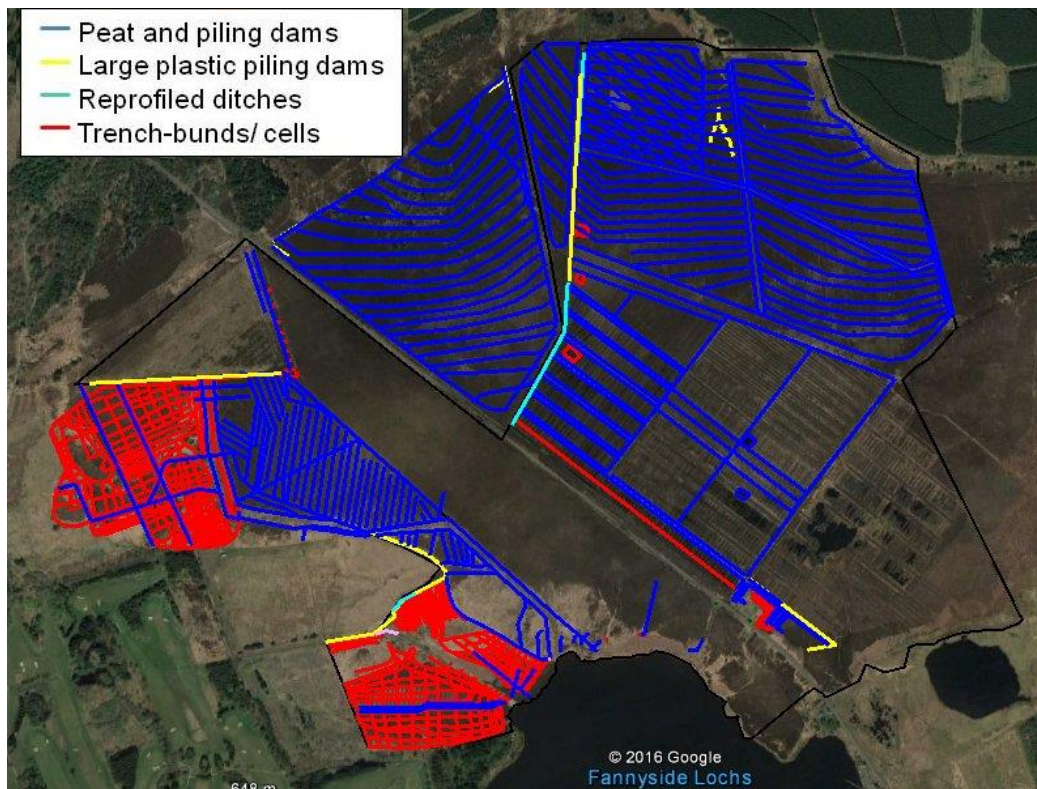
Appendix i. Maps



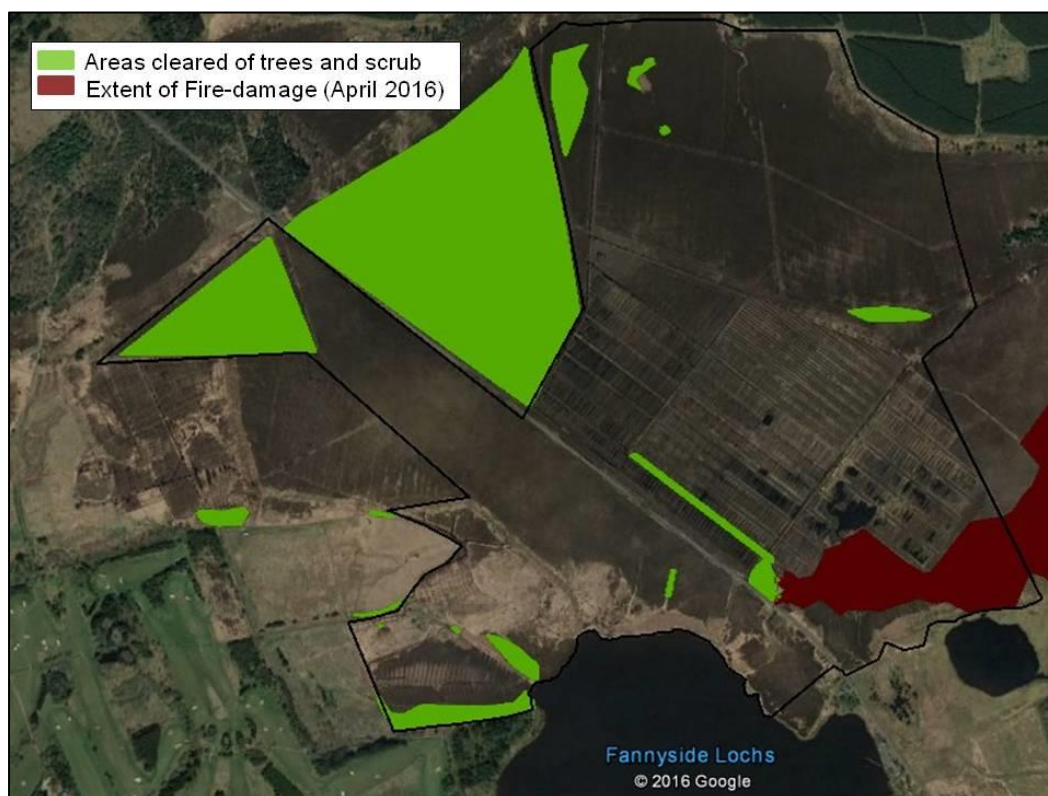
Map 1: Location of Fannyside Muir bog restoration site
Core project area outlined in black. 3km east of Cumbernauld on the Slamannan Plateau.



Map 2: Compartments and land ownership within restoration area.
North Lanarkshire Council (NLC) in orange; Forest Enterprise Scotland (FES) in green and Scottish Wildlife Trust (SWT) in blue. Numbers relate to Compartments mentioned in the Management Plan.



Map 3. Overview of restoration work carried out at Fannyside Muir (dams and bunds).



Map 4. Overview of tree-felling and scrub removal work carried out at Fannyside Muir.
Also showing Area of Compartments 11, 12 and 13b damaged by fire on 21st April 2016.

Appendix ii. Photographs



Figure 1. Installation of linear trench bund in Compartment 13a.

Top Left: Excavator installing trench bund (2 m deep) in August 2015. Top Right: Bund and peat dams working to raise water level to surface of compartment in August 2016.

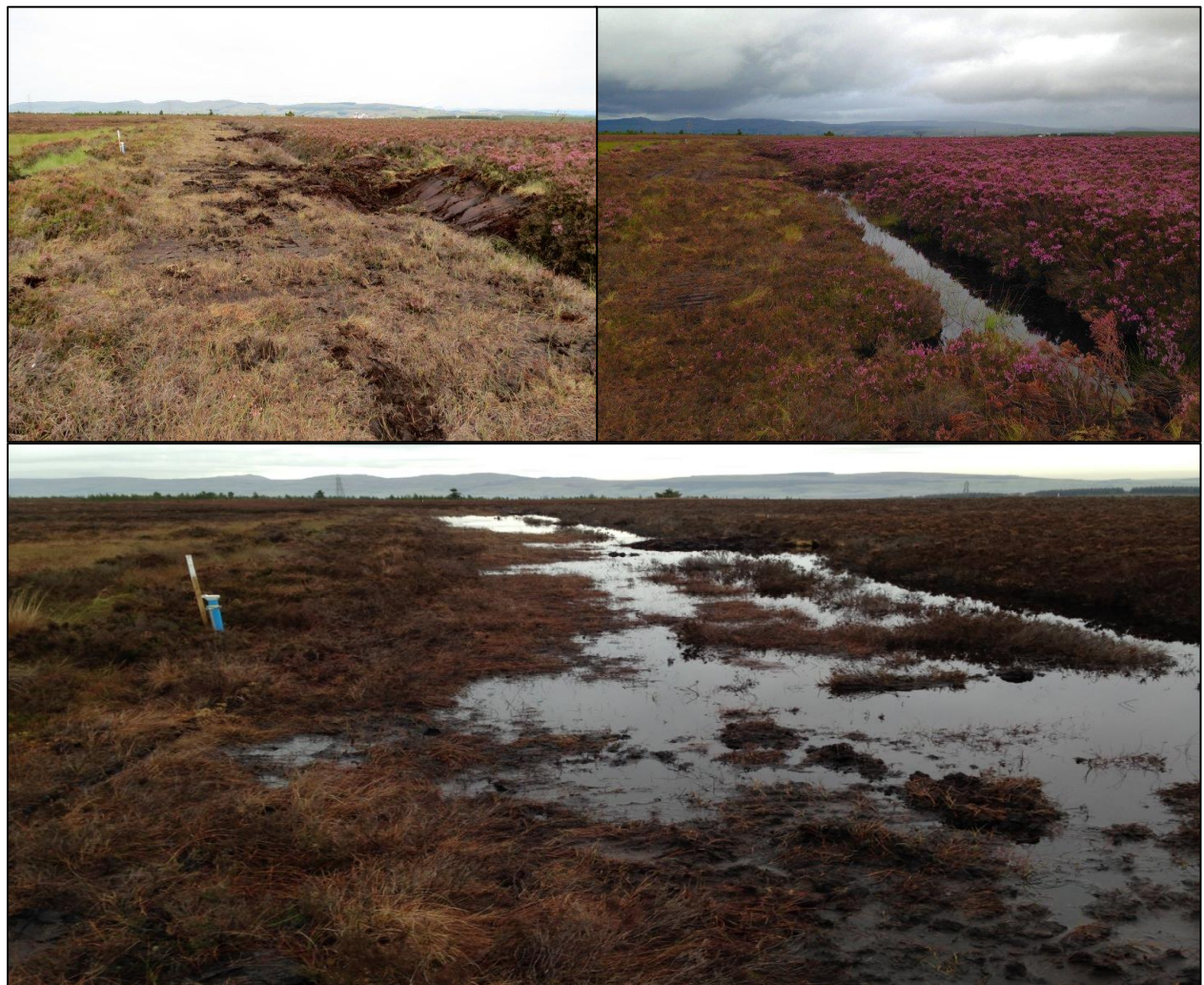


Figure 2. Peat dams on ditch between Compartments 7 and 8.

Top Left: Just after dam installation. Top Right: Late September 2015- blocked ditches filling with water. Bottom: March 2016- ground water raised to surface level of the peat.



Figure 3. Installation of cell-bunding in hand-cut area of Compartment 1

Top Left: Preparing trench of compressed peat to block ditches and peat cracks prior to topping with surface bund. Top Right: After adding surface bunds. Middle Left: View facing south-west across completed cell-bunds. Middle Right: Surface water retained 2 months after cell-bund installation (June 2016). Bottom Left: Cell-bunds flooded with ~10-15cm of surface water (June 2016). Bottom Right: Four-spot chaser dragonfly one of 8 species of Odonata recorded at the newly cell-bunded area in 2016.



Figure 4. Large ditch in Compartment 2 at Fannyside Muir before and after installation of reinforced plastic piling dams.

Top Left: Before work began. Top Right: Ditch in late October 2015 after dam installation. Bottom Left: Ditch in June 2016 after further dams added, lower section reprofiled and existing dams backed with peat and vegetation. Bottom Right: Ditch showing *Sphagnum cuspidatum* colonisation and ovipositing dragonflies (Common hawker and Black darters)



Figure 5. Clearing regenerating lodgepole pines with volunteers.

Left: Wild Reekie volunteers (August 2016) at end of workparty. Right: Some of felled conifers before they were added to blocked ditches to help slow water evaporation.



Figure 6. Aerial photographs of restoration work

Top: Cell-bunding in Compartment 1. Middle: Looking north-west over Fannyside Muir from carpark on Fannyside Road. Showing extent of roost pools in Compartment 11 and new pools created in Compartment 10. Bottom: Reprofiled, dammed ditch between re-wetted Compartment 8 (left) and new area 'C' (right) after removal of lodgepole pines and installation of peat dams on larger ditches. All photos taken September 2016 with kind assistance of RSPB Glasgow & South West Scotland staff using an aerial drone.



Figure 7. Monitoring at Fannyside.

Top Left: Dipwell (flooded in compartment 1). Top Right: Downloading hydrology data from logger. Centre Right: Pitfall trap. Centre Left: Bog sun-jumper spider survey using Bug-Vac (with Caledonian Conservation Ltd). Bottom Left: Aquatic invertebrate sampling in goose roost pools (Compartment 11). Bottom Right: Diving beetle larva from recently blocked ditch.