Forestry and Land Scotland
Coilltearachd agus Fearann Alba

Appendix VI: Glenisla peatland restoration plan

Forestry and Land Scotland
Coilltearachd agus Fearann Alba

APPENDIX VI

1.1 Introduction

The purpose of this Appendix is to provide the supplementary information to support peatland restoration. FLS believe the proposed restoration should fall out with the scope an EIA screening determination, as the restoration is proposed for existing open areas, therefore there will be no deforestation.

This appendix demonstrates alignment with the following Scottish Government and Scottish Forestry restoration practises:

- Forests and Peatland Habitats (forestry.gov.scot)
- The UK Forestry Standard - Forest Research (4th Edition)
- Scotland's biodiversity: a route map to 2020

1.2 Location and context

Glenisla forest bounds several large estates to the east and west in the Angus Glens, whilst the north-east corner march fences adjoins the Cairngorm National Park. The upper slopes of the most northerly coupes within Glenisla, are in an area where tree planting has never taken place due to the high DAMS scores, and the presence of deep peats and the high elevation.

1.3 Long term vision

The long-term vision for the northern areas of Glenisla is for restoration of the deep peat areas. Restoration of these areas via stabilising and restoring the hydrological units should lead to key peat building species like sphagnum and cotton grasses establishing. The three areas identified for peat restoration are currently managed as open ground. As these areas have never been afforested, FLS are proposing the restoration of 104.20 ha of peat on the areas of open ground identified with deep peat (See Table 1 & the Peat Restoration Area map in this appendix for further detail). The peatland units identified by James Hutton Institute (JHI) overlap with neighbouring landowners and there is scope for landscape scale restoration on adjacent land holdings.

1.4 Management objectives

1. Systematically restore the deep peat to a functioning peatland system which will act as a long-term carbon store and increase its biodiversity value and improve water quality.
2. Reduce and restore the peat haggs, as this will lead to a reduction in frost heave on hagged areas and a reduction in sediment and Dissolved Organic Carbon (DOC) loss.
3. Liaise with neighbours to promote cross boundary peat restoration so hydrological units can be restored to promote better peatland functionality.
4. Protect the existing bog habitat by the removal of any conifer regeneration which may encroach the site.
5. Share experience of restoration of these sites to promote best practise with adjacent neighbours, such as Scottish Water.

1.5 Critical success factors

1. Apply best practise in restoration operations through appointing experienced peatland contractors.
2. Utilise low impact machinery in operations to minimise ground disturbance.
3. Encourage cross boundary work so degraded areas of peat can be restored as a discrete hydrological unit.
4. Manage deer population to reduce poaching and disturbance on restored peat areas.

1.6 Management of deep peat on open ground

1.6.1 Summary

1. The northern areas of Glenisla have areas identified by JHI as blanket bog, a habitat listed on the Scottish Biodiversity List and the UK BAP as Priority Habitats. Therefore, the site is a restoration priority on ecological grounds.

2. Restoration of blanket bog is a key action of the Scottish Biodiversity Strategy. FLS as a Scottish Government agency has a duty to further the protection and enhancement of these habitats under the Nature Conservation Act (2004).

3. Proposed peat restoration areas may overlap with plans of the adjoining landowner, Scottish Water to create landscape scale restoration.

4. Peatland indicator species on site suggest that successful restoration of the peat would lead to a reduction in peat erosion, hagging and DOC loss.

5. Restoration of this site should be more straightforward than forest to bog restoration, given there is less ground disturbance involved and reduced soil movement in the restoration process.

Current management of peatlands in the LMP	Hectares (ha)	Comments
Afforested deep peat *	56.4	Total size of afforested peatlands based on analysis and site surveys
Existing open habitat on deep peat	104.2	Total area of open peatland (ha)
Total – all deep peat soils	160.6	Total area size (ha) of deep peat soils within the forest block/ LMP area based on the soils data. Deep peat soils are defined as per the SF Practise Guide: Scenario A, B and C soils.
Future management of afforested peatlands		
'Presumption to restore' peatlands. Forest-to-bog restoration of afforested peatlands including the hydrological catchment.	0	
'Assessed' peatlands. Forest-to-bog restoration to secure carbon store and sequestration, and maximise ecosystem services	0	
Peatlands to be restocked	0	

Table 1: Summary of Current Management of Peatlands

1.7 FLS approach to peatland management

Restoration of blanket bog is a key action of the Scottish Biodiversity Strategy, a habitat which is recorded on the Scottish Biodiversity List. Beyond its value as a carbon store, peatlands contain a huge diversity of organisms. FLS' s approach to peatland management is different to the rest of the forestry sector. FLS' s objectives and legislative framework has an added dimension. Being a Scottish Government agency, FLS has a 'Biodiversity Duty', as stated in the Nature Conservation Scotland Act (2004).

Protection of conservation value is required as part of UKWAS certification and principles of sustainability are required under UKFS.

The restoration potential is considered to be high for the identified peat areas in the north of Glenisla, given these open areas have never been planted, and the high rainfall and altitude of the restoration site. FLS are committed to a restoration programme of Blanket Bog and Upland Heath priority habitats. Objectives for peat restoration in Glenisla are:

1. Expand the area of peatland habitat by applying restoration treatments and restoring hydrological function.

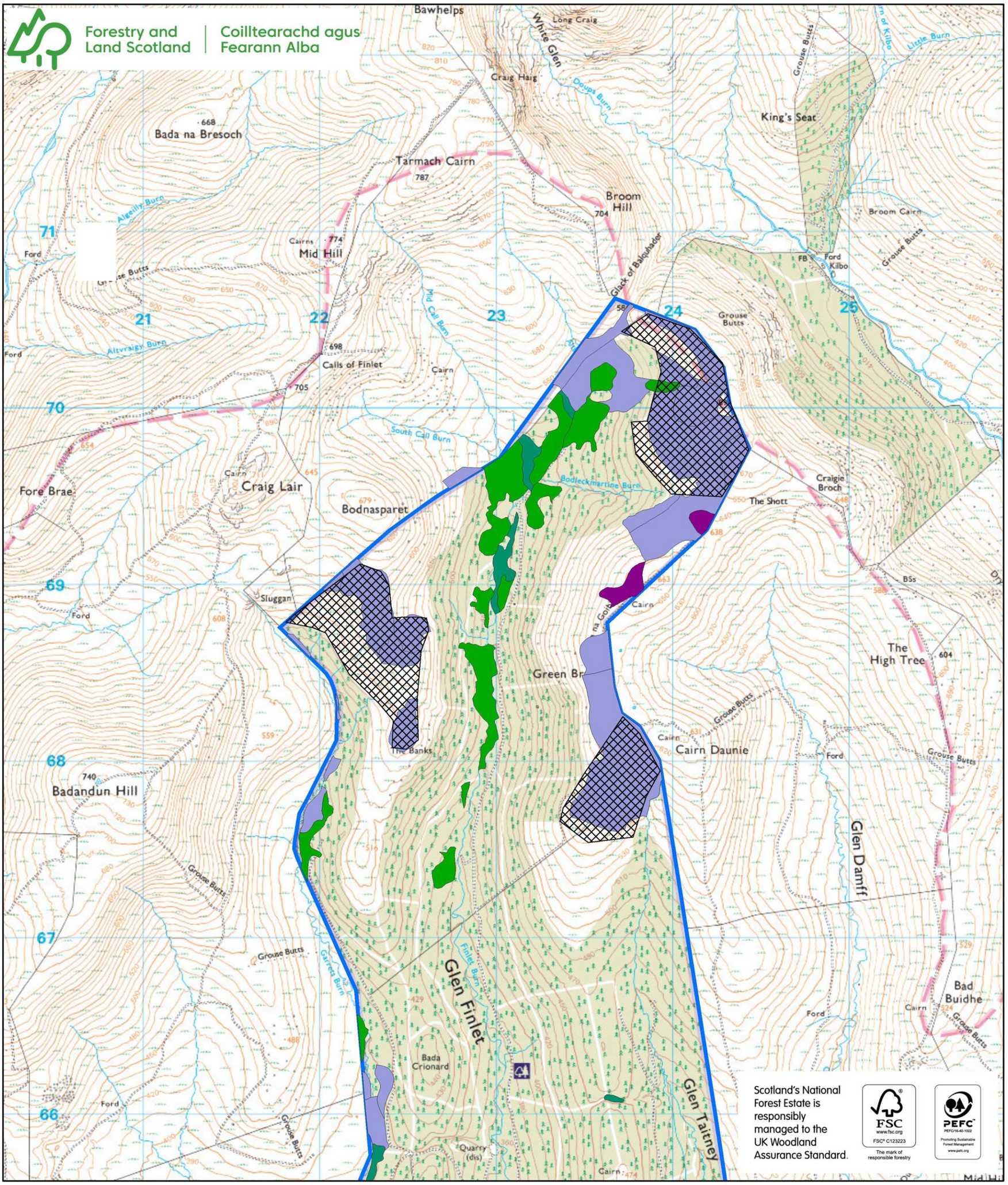
2. Protect the storage of carbon within the soil (peats).

3. Maximise the sequestration of carbon by the peatland in the future.

4. Improve the water quality leaving the site and to increase storage capacity of the peatland to help regulate the hydrological flow.

* An area of afforested deep peat will be retained as it is an important to European Protected Species in Glenisla. The area will be reviewed in the next LMP renewal in 10 years.

Forestry and Land Scotland | Coilltearachd agus Fearann Alba



Scotland's National Forest Estate is responsibly managed to the UK Woodland Assurance Standard.

FSC www.fsc.org FSC® C123223 The mark of responsible forestry

PEFC PEFC/16-40-1002 Promoting Sustainable Forest Management www.pefc.org

Title Peat Restoration Areas

Scale @ A3: 1:20,000

Date: 26/10/2023

Author: u322501

Legend

Peat Restoration Areas

Soil Type

- 8c [Juncus effusus Bog]
- 9c [Tussocky Molinia, Eriophorum vaginatum Bog]
- 9d [Non-Tussocky Molinia, Eriophorum vaginatum, Trichophorum Bog]
- 9e [Trichophorum, Calluna, Eriophorum, Molinia Bog (Weakly Flushed)]
- 11a [Calluna Blanket Bog]
- 11b [Calluna, Eriophorum vaginatum Blanket Bog]
- 14 [Shallow Hagged Eroded Bog]

0 0.15 0.3 0.6 0.9 1.2 Km

N