



Forestry and
Land Scotland
Coilltearachd agus
Fearann Alba

Clunes Forest Natural Reserve Plan



Location

Clunes Forest (see Location map)

NN 2032 8895

The natural reserve is located on the upper forest margin between 165m and 270m elevation to the north of Clunes hamlet. Its position on the south facing slopes of Clunes Forest makes it visible from the minor public road between Gairloch and Mucomir which lie around 6km to the southwest.

Access

The southern part of Clunes Forest is accessed from the B8005 public road at NN 2009 8868 next to Clunes hamlet. The upper forest road passes along the southern edge of the natural reserve.

Stand Description

The natural reserve is 7.1ha in size and is described as of plantation origin. The crop comprises of

- Scots pine planted in 1936, 4.43ha, YC 10
- Sitka spruce planted in 1936, 1.72ha, YC 12
- Norway spruce planted in 1932, 0.27ha, YC 12
- Felled area – 0.72ha felled in 2013.

The Scots pine and Sitka spruce have been planted in mixture, around 1.3ha of which is windblown on the lower slopes in the western section of the reserve. This likely occurred when a mature conifer crop to the southwest was felled around 2013. (see Current Status map)

What is a natural reserve?

The definition of a natural reserve is described in the UK Woodland Assurance Standard v4 as: “Natural reserves are predominantly wooded, are permanently identified and are in locations which are of particularly high wildlife interest or potential. They are managed by minimum intervention unless alternative management has higher conservation value”.

“Natural reserves can be derived from semi-natural woodland, planted native woodland and non-native plantations.”

“Within natural reserves, natural processes will normally predominate, intervention should only take place to protect the natural reserve or adjoining areas of forest”.

Why is it important?

The management of FLS forest and land must adhere to the policy, set out in the UK Forestry Standard 2017 and UK Woodland Assurance Standard v4, that identifies our requirements to protect biodiversity. (See Appendix I for the UK Forestry Standard, Appendix II for the UK

Woodland Assurance Standard and Appendix III for FLS objectives). (Also see Ecological Context map)

The Clunes natural reserve complies with the UK Forestry Standard ecological processes compliance by playing a role in developing structural diversity through natural processes and minimum intervention. It enhances the biodiversity through its link with open habitat, old birch woodland, young PAWS restoration and watercourses.

This natural reserve complies with the UK Woodland Assurance Standard as forming part of the requirement of a minimum of 15% of the woodland area managed with conservation and enhancement of biodiversity as a major objective. The Clunes natural reserve also forms part of the compliance of at least 1% of plantations will be designated as natural reserves. This compliance is calculated at a Forest District scale rather than at a land management plan scale. In this case it refers to all FLS forests in Lochaber.

Current issues

The natural reserve contains 1.7ha of mature Sitka spruce. The reserve lies in close proximity to open heathland, old birch woodland and young native woodland. This presents a non-native seeding threat to existing native habitat and future PAWS (Plantation on Ancient Woodland Sites), restoration areas.

The Allt a' Mhanain is partially impacted by mature conifer within the riparian area.

Management prescription

Initial set-up

(see Operational map).

Fell and remove the Sitka spruce component to eliminate the future non-native seeding impact on the surrounding PAWS restoration areas and open priority habitats. This harvesting operation can be part of the felling of the mature conifer crop immediately to the south of the natural reserve.

Post set-up

Allowable interventions will normally be limited to:

- Wildlife management
- Removal of invasive exotics that could reduce value for biodiversity or colonise surrounding stands.
- Actions to benefit species of conservation priority.
- Firefighting.
- Ensuring tree safety along access routes.

Appendix I: UK Forestry Standard (UKFS)

Ecological processes

The ecological processes that shape natural forest ecosystems include vegetation succession, natural regeneration, windthrow, flooding, drought, the activities of herbivores, insect attack, disease and fire. All these agents add a degree of unpredictability, work to develop structural diversity, and can assist with the establishment of new species assemblages.

Allowing ecological processes to operate, and mimicking them within silvicultural systems, can therefore benefit biodiversity – providing this is done within the framework of a forest management plan with clear management objectives.

Within a managed forest, the areas with the most potential for this approach will have had limited recent intervention and will be linked to areas of high biodiversity value, for example continuous cover forestry systems and semi-natural habitat. However, designated sites such as SSSIs and ASSIs and other areas can also be set aside as ‘minimum intervention’ reserve areas, where no active woodland management takes place – providing the biodiversity value is understood and the ecological processes maintain and enhance the site.

In practice, some intervention may still be necessary, for example to manage deer, remove invasive species such as rhododendron, or to ensure particular characteristics are favoured. Risk assessments may reveal that some management of access may be advisable as retained dead trees and branches can constitute safety hazards.

- Consider using ecological processes as a way of delivering biodiversity objectives within a forest management plan – both in silvicultural systems and minimum intervention areas.
- Assess possible areas for minimum intervention and, where these will deliver habitat objectives, allow ecological processes to develop.

Appendix II: UK Woodland Assurance Standard (UKWAS)

Relevant section of UKWAS (version 4): 4.6.1

Requirement

Natural reserves shall:

- Be located where they will deliver the greatest biodiversity benefit.
- Constitute a proportion of the WMU (woodland management unit), equivalent to at least 1% of plantation area and 5% of the semi-natural woodland area.

Example verifiers

- Management planning documentation including maps.
- Field observation.

Guidance

Where a WMU is made up of more than one woodland, the owner/manager should locate natural reserves where they will deliver greatest biodiversity benefit, rather than necessarily in every individual woodland.

There should be no loss of existing natural reserves.

Areas managed as natural reserves within the areas identified by sections 4.1 – 4.5 may fulfil this requirement.

These areas contribute to the minimum of 15% of the WMU where management for conservation and enhancement of biodiversity the primary objective is as identified in section 2.1.1.1.

Appendix III: FLS Objectives

The FLS objectives for the establishment of Natural Reserves are:

- To develop woodlands rich in biodiversity through use of natural processes and long periods of ecological continuity.
- To provide excellent habitat conditions for sedentary species.
- To provide study sites for our successors to identify the nature conservation benefits of minimum intervention in semi-natural and plantation origin woodland in Scotland.

The selection of the Clunes Forest Natural Reserve is based on the following criteria:

- Land History – “the area is planted significantly earlier than the bulk of the forest”. The trees were planted in 1932 and 1936.
- Terrain complexity – “plantation potential as a natural reserve will increase where there are features such as crags and gullies have been difficult to manage in the past and consequently retain a high degree of inherited naturalness”. The natural reserve is located close to crags and three watercourses pass through the site.
- Stand characteristics – the natural reserve has the following structural diversity present:
 - Old windblow patches and large patches of fallen deadwood.
 - Areas of low stocking.
 - Old trees and standing deadwood from the previous rotation.
- Landscape setting and forest interior conditions – natural reserves of plantation origin will be richer if located adjacent to semi-natural woodland. This should not have a detrimental impact on the semi-natural woodland provided the plantation is not composed of invasive species. The Clunes natural reserve lies within 250m of ASNW which lies to the west and 160m of ASNW to the south. Scots pine planted in 1936 lies adjacent to the west of the reserve with young native woodland to the southwest. Open habitat and areas of old birch woodland around some of the streams lie to the north. The remaining adjacent woodland consists of mature commercial conifer species on PAWS sites.
- Size and shape of natural reserves – they should be at least 0.5ha in size and external boundaries should reflect the surrounding landform and scale should be in keeping with the wider landscape. The Clunes natural reserve is 7.1ha and lies on the upper margin of the forest adjacent to PAWS areas, old Birch woodland and open habitats.

Location map

Clunes Forest Natural Reserve

Author: Catriona MacLennan
 Scale @ A3: 1:50,000
 Date: 30/05/2023

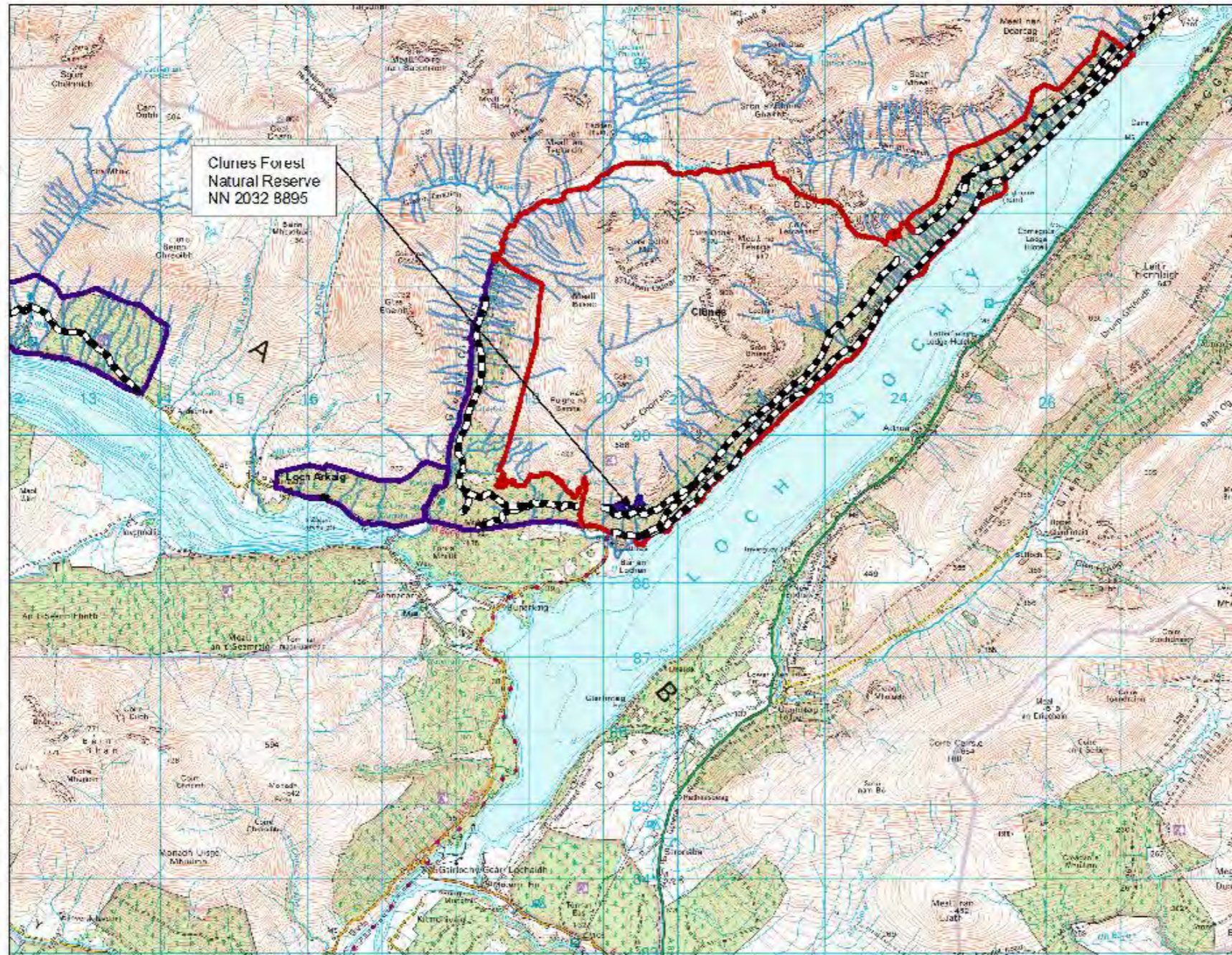
Legend

Forest Roads

-  Forest Roads
-  Natural Reserves

Blocks

-  Clunes
-  Loch Arkaig
-  Watercourses



0 0.250.45 0.9 1.35 1.8 km

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Ecological Context map



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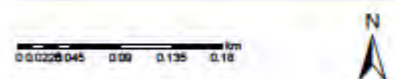
Scale @ A3: 1:5,000

Date: 30/05/2023

Restock Species Pure and Mixtures

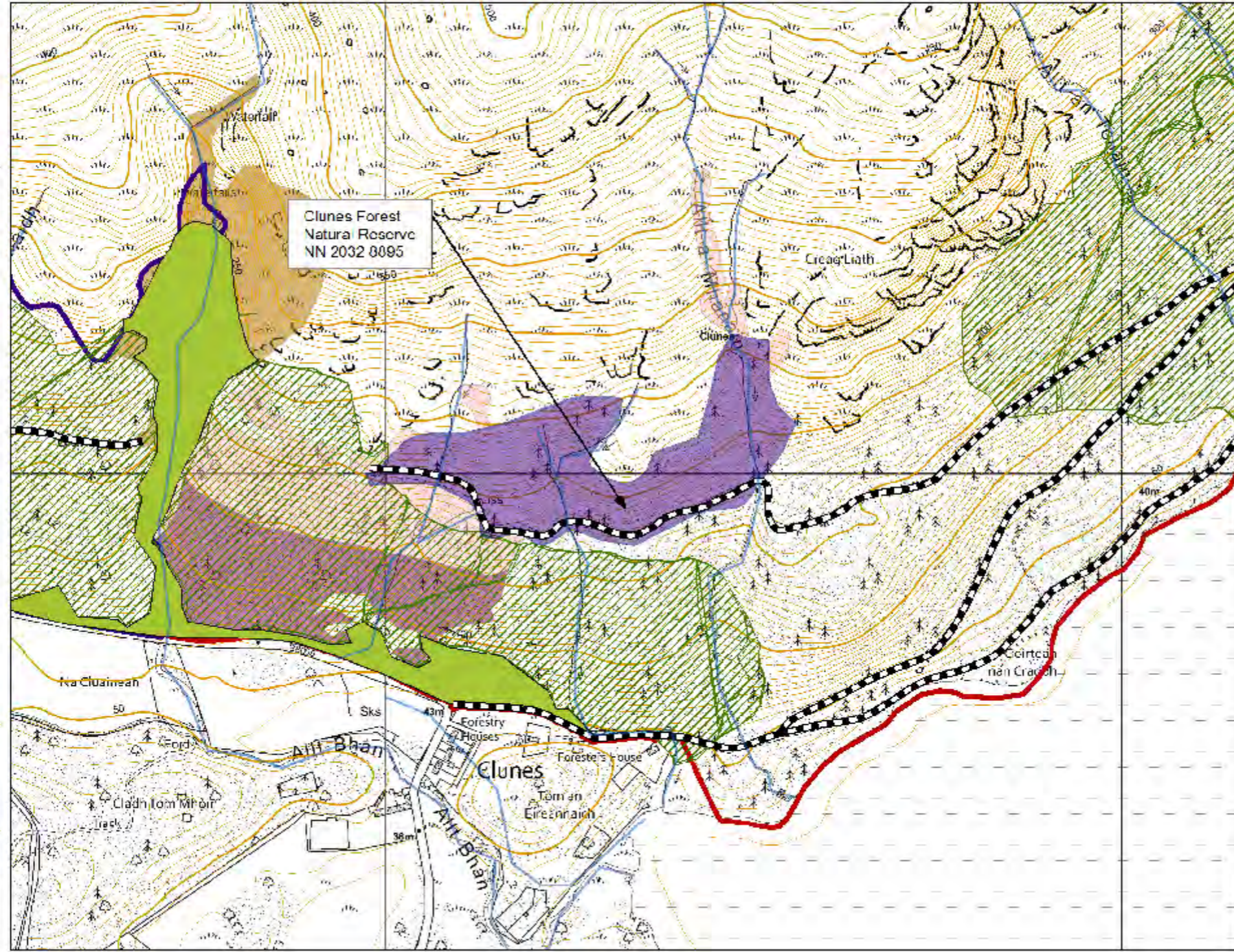
- Ash
- Beech
- Birch
- Douglas Fir
- Larch
- Lodgepole Pine
- Norway Spruce
- Oak
- Native Mixed/Other Broadleaves
- Other/Mixed Broadleaves
- Other/Mixed Conifers
- Scots Pine
- Sitka Spruce
- Open

Species Mixture
Main colour - Dominant species
Dots - Secondary species
Sitka spruce with Birch shown here



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Current Status map



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Clunes Forest Natural Reserve

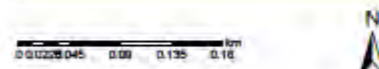
Author: Catriona MacLennan

Scale @ A3: 1:5,000

Date: 30/05/2023

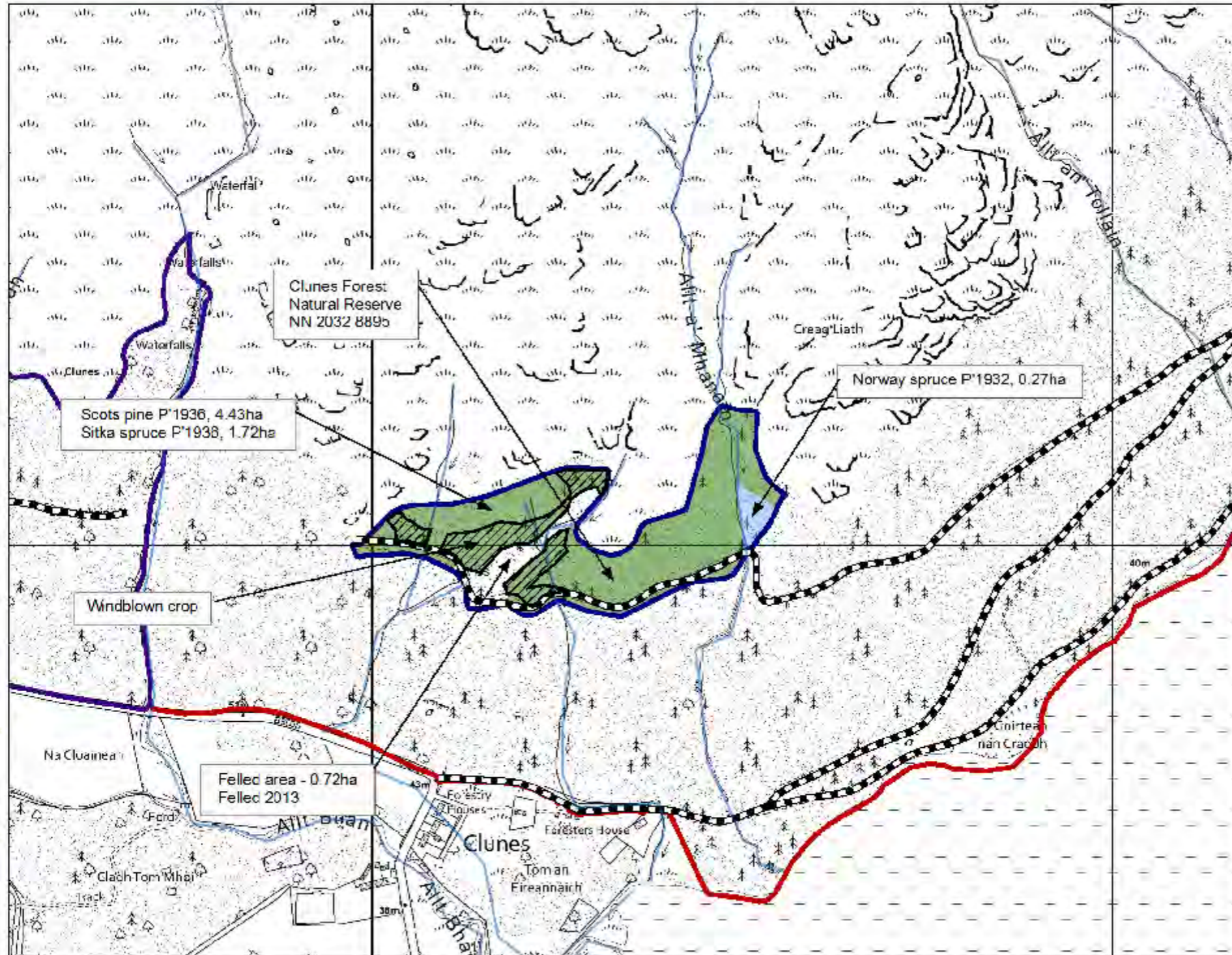
Restock Species Pure and Mixtures

- Ash
 - Beech
 - Birch
 - Douglas Fir
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 Main colour - Dominant species
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Operational map



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Author: Catriona MacLennan

Scale @ A3: 1:5,000

Date: 07/07/2023

Restock Species Pure and Mixtures

- Ash
 - Beech
 - Birch
 - Douglas Fir
 - Larch
 - Lodgepole Pine
 - Norway Spruce
 - Oak
 - Native Mixed/Other Broadleaves
 - Other/Mixed Broadleaves
 - Other/Mixed Conifers
 - Scots Pine
 - Sitka Spruce
 - Open
- Species Mixture
Main colour = Dominant species
Dots = Secondary species
Sitka spruce with Birch shown here

0 0.025 0.045 0.09 0.135 0.18



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