Camastorsa

Camastorsa, with the deciduous coastal woodland and conifers on upper slopes.

KEY FEATURES

Area

Total	257.3ha
Designated area	56.6ha

Woodland types (habitat extent)

ASNW	11.8ha
PAWS	90.6ha
Open	8.1ha

Woodland description

By the coast the road, the B8007, winds through broadleaf (oak, birch, rowan, hazel) woodland with alder, willow and iris marking particularly damp ground. There are Scots pine trees on some of the promontories. On the upper slopes the SSSI part of the woodland supports relatively well-growing conifers for which the long term intention in the Forest Design Plan is to re-create native woodland and support local woodland industry in the interim period. There is a considerable area of conifer plantation above the SSSI. Broadleaves, particularly by watercourses e.g. wych elm and ash, reflect the underlying soil conditions. Areas of coppiced ash, birch and hazel are visible from the road, as is the grass-dominated broadleaf ground flora. Bracken is abundant along the wayleaves corridor.

There is an area of the SAC priority woodland type Mixed woodland on base rich soils associated with rocky slopes in mosaic with Western acidic oak woodland, located by the road (NM 670621). This is the only occurrence of this habitat type recorded on the NFE in Sunart although there may be other small pockets present such as the ravine woodland that runs up above the recorded mixed woodland area.

History of management

Purchased in 1954 from the estate of C.B. Holman, along with Dun Ghuallain.
The site was afforested in the early 1960's.
Some felling has taken place in Camastorsa from 1995 onwards.

Fell to recycle, c.1995, 9ha between hydro line and public road (NM677626).
Clear felling, c.2000 (NM669620).
Halo thinning c.2005; stem injection either side of main watercourse. (NM670623).
Fire damage has also occurred in Camastorsa on two separate occasions:
First fire, c.1970/73 (NM673627). Fire started while Hydro Company cutting wayleave for hydro line. Re planted 1974/75.
Second fire, c.2000. Started in private garden at Camus Inas and burnt down from top fence into the block down as far as public road, mainly in same location as 1970 fire. Some conifer burnt but mostly damage to undergrowth. Not replanted.

Conservation features

Otters are present on the shore within the lower woodland areas, while the mature trees provide opportunities for nesting raptors.

Wood ants Hairy wood ant *Formica lugubris* also occur within the SSSI part of the woodland.

Early Orache *Atriplex praecox*, a plant of the strand line (NM 68070 63060), forms part of the SSSI **vascular plant** assemblage.

Lichen assemblages

Three Nationally Scarce lichens have been recorded in areas that overlap with the PAWS areas, but the records are only localized to a 1 km square (NM6762). The species are:

1. *Bactrospora homalotropa* (Least Concern)
2. *Fuscopannaria sampaiana* (Near Threatened)
3. *Thelotrema macrosporum* (Least Concern)

The Nationally Scarce *Arthonia stellaris* (Least Concern) has been recorded in the extreme SW of the management unit, in a strip of Ancient Semi-natural Woodland.

These species are all epiphytes of broadleaf trees.

Bryophyte assemblages

The area of SSSI within this defined area has not been surveyed for bryophytes with the exception of some areas to the north. The bryophyte records from the NE of the site, close to the picnic site, include the oceanic ravine indicator species (ORIS) *Aphanolejeunea microscopica, Colura calyptrifolia, Harpalejeunea molleri, Plagiochila atlantica* and *Radula aquilegia.* Some of the major burns running down through the site have been surveyed as part of the Sunart SAC oceanic bryophyte survey; whilst none of these are Category A watercourses, some have ravine specialist species recorded such as *Aphanolejeunea microscopica* and *Harpalejeunea molleri*.

Heritage features

There are a number of recessed platforms throughout the southern part of the woodland indicating previous management for charcoal. Oak trees derived from maiden stems, singled coppice and multi-stemmed neglected coppice, occur throughout the woodlands. Very occasional senile pollarded trees suggest an earlier woodland management regime, possibly dating from the late medieval period.

Some of these may also have been hut circles. There is some evidence of runrigg on the upper slope.

The site of a depopulated Camastorsa settlement is recorded on the shore comprising 3 buildings and an enclosure.

At the north end of the woodland, a second larger township of Tarbert is recorded. It was inhabited at least by 1716 although the extant structures may not have been built until after 1849, and the site was abandoned by 1872. The settlement consists of at least twelve drystane houses with evidence of cruck-framing, accompanied by a head-dyke and evidence of cultivation in the form of clearance cairns, rig and furrow and terraces. Some of the houses have sustained damage as a result of harvesting operations.

PAWS

The ASNW in Camastorsa amounts to 12ha associated with the gullies and the shore. A further 102ha is identified as PAWS planted with conifer in the late 1950s/early 1960s. Relative to the national context, all the PAWS is considered to have a high ecological potential for restoration. The areas of highest ecological value are associated with the watercourses, particularly the incised ravines. Within the SSSI boundary 9ha of mixed woodland was cleared of conifer around 2000. A further 3ha was clearfelled in 2009 and a road access constructed. These areas are being monitored for native species regeneration.

Species composition

Species	Ha
Open/U/P	83.6
Birch	10.5
Corsican pine	4.4
Douglas fir, Grand fir, Norway spruce	<1ha
Larch	12.4
Lodgepole pine	27.6
Mixed BL	14.8
Scots pine	27.3
Sitka Spruce	77.1

Age structure

Planting year	Ha
1900	6.5
1950	5.0
1958-63	124.2
1972-75	18.8
1981	15.4
open	68.7

Access

Two forest road access points. SU2 provides access to a communication mast but is too steep for timber haulage after the first section. SU10 is a large transfer point intended to be the start of future forest roads.

Further access will be required in order to extract the timber. Careful location of the road line is needed to minimise the impact on the qualifying features.

Recreation

Picnic area on shore.

Other
Electricity wayleave runs along the full length of the woodland, which creates open space but also a constraint on harvesting.
Timber haulage along the public road (consultation route) through the village needs to be managed carefully.

MANAGEMENT PROPOSALS

LT AWS management
The long term intention is to return the whole of Camastorsa to native woodland. Within the SSSI the intention is to use minimum intervention to keep any disturbance to features in the areas of highest ecological value at a minimum level. Away from the important watercourses and existing native woodland, it is proposed to use a low impact silvicultural system to manage the woodland for biodiversity Above the SSSI the proposal is to use a low impact silvicultural system in order to manage the developing native woodland for timber objectives. This management should ensure that areas important for bryophytes are undisturbed and retain a denser canopy than the areas with fewer remnants of ancient woodland. Those areas will be more actively managed, with resulting lighter canopy shading and conditions suitable for species groups requiring more open habitat, such as lichens and wood ants.

Initial operations
The gradual removal of the current conifer crop will dominate the management of the woodland over the next 20 years. The proposal is to remove the crop in three coupes at five yearly intervals. The more mature crops will be removed first taking the eastern coupe and then the western coupe. It will allow more time for the rhododendron control outside the NFE boundary to remove the principal seed source along with any encroachment into the west of Camastorsa.

Proposed felling coupes

Coupe	Av Planting year	Av YC	Area Gross	Age MMAI	MMAI fell year	Proposed Fell period
87144 87379	1959	16-18	64ha	50	2009	Phase 1
87119	1962	10-12	54ha	55	2017	Phase 2
87113	1981	6-8	50ha	61	2042	Phase 3

All based on SS NT 1.7m models

In order to facilitate the removal of conifers, around 1.8km of additional road will need to be constructed over the next 10 years, as well as some forwarder tracks. The terrain is steep and rough which limits the options for roadlines. This is further complicated in Camastorsa by the presence of a powerline through the woodland on the lower slopes. The lines need to be surveyed closer to the time of construction so the road lines shown on the management map are

indicative only. A separate EIA determination and prior notification will be needed once the line is agreed on the ground.

Proposed forest roads

Period	Road number	Length	Coupe
Phase 1	SU21	560m	87144 87379
Phase 2	SU10 extension	630m	87119
Phase 3	SU11	600m	87113

The route of one of the planned road segments SU10 (NM 67086214) is through the area of base rich mixed woodland. In order to determine the impacts of this road proposal, further survey work will be needed as described in table 9 of the main LMP text.

The intention is to keep the roads to a minimum, balancing the need for access in order to harvest the current crop and facilitate the future management of the native woodland, with minimising the impact on the key features of the SSSI. Longer extraction distances will also be used to replace forest roads with lighter constructed forwarder tracks.

The conifer removal will be followed by restocking of the site with native woodland appropriate to the soil conditions and the objective. There may be some scope for natural regeneration, particularly in the central coupe but elsewhere the seed source is likely to be limited and planting will be required to achieve woodland that can be managed in the future for timber, largely out-with the SSSI. In these areas, consideration will be given to establishing native Scots pine if the conditions are suitable.

The proposals also aim to modify the impact of the upper margin of the current plantation by following best practice in design and allowing a more natural upper line to develop over time.

Provision for the removal of non-native regeneration will need to be made, to ensure that the native species are able to dominate the woodland. The removal from east to west aids crop stability but does increase the potential for natural regeneration from the remaining stands.

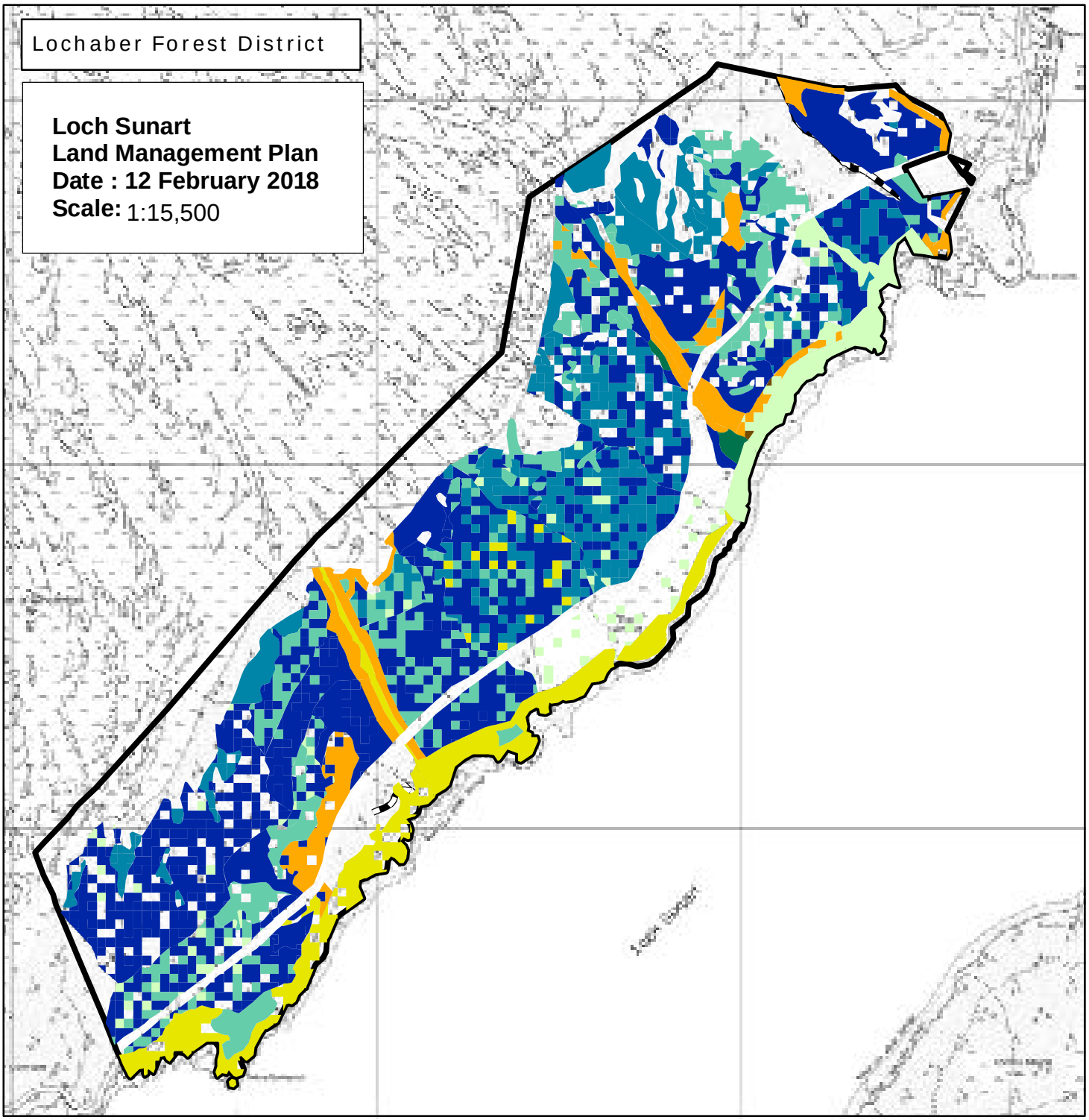
Monitoring of natural regeneration and the success of planting will be undertaken. Currently only the felled area (4ha including 1.9ha of PAWS) is being monitored.

Forest Enterprise Scotland
Managing the National Forest Estate

Forestry Commission Scotland
Coimisean na Coilltearachd Alba

Lochaber Forest District

Loch Sunart
Land Management Plan
Date : 12 February 2018
Scale: 1:15,500



Camastorsa
Current Species

- Scots pine
- Other pines
- Spruces
- Larches
- Other Conifer
- Oak
- Birch
- Beech
- Other broadleaves

- LMP Boundary
- Forest Roads

N

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

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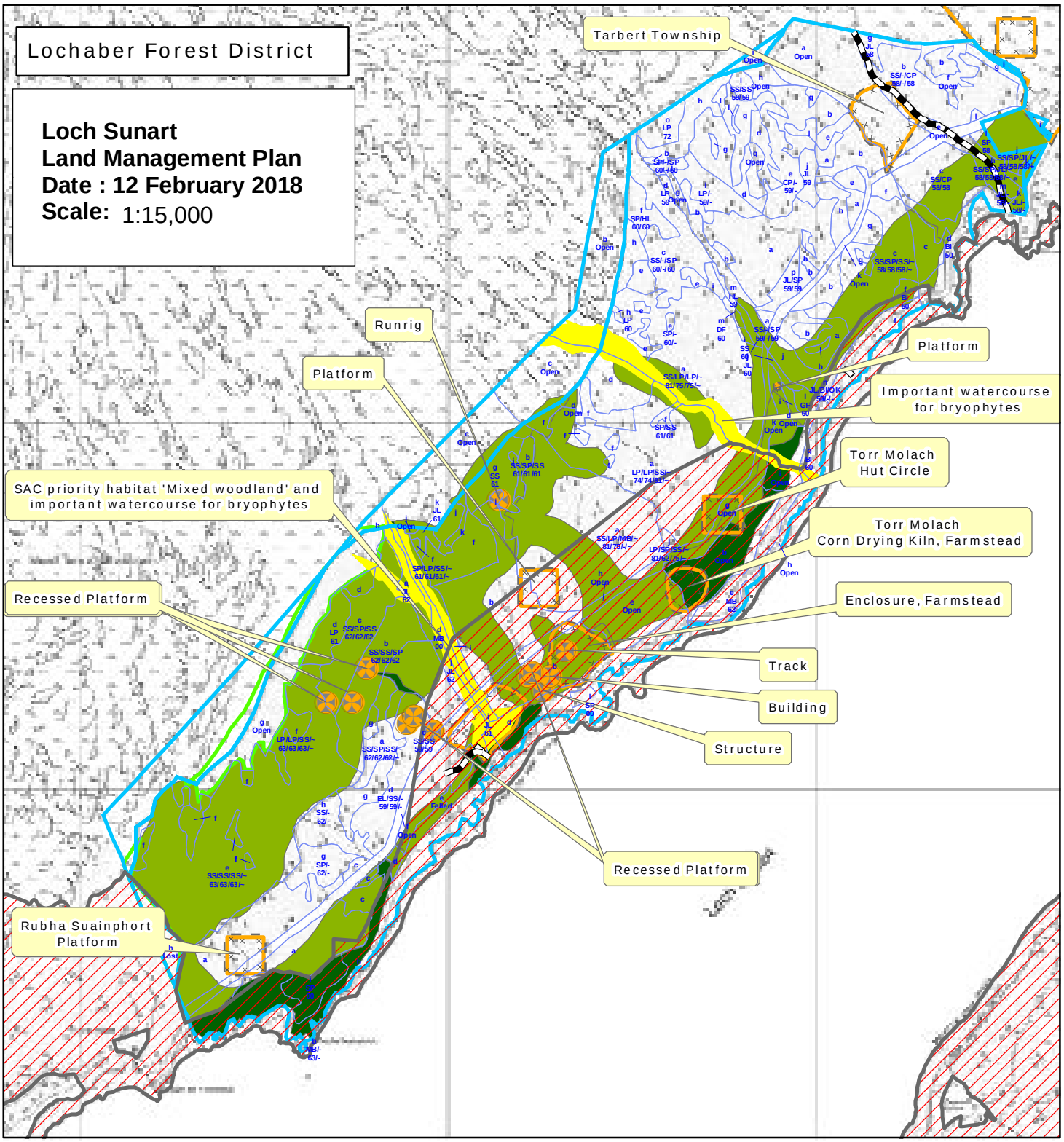

Camastorsa

AWS, SSSI, Conservation And Heritage Features

AWS

Classification

- Ancient Semi-Natural Woodlands
- Open Ground
- PAWS
- Planted Site Native Woodland

- A861 Road
- National Forest Estate
- Sub-Compartments
- Conservation features
- Forest Roads
- SSSI

DESIGNATION TYPE

- Scheduled Monument
- Heritage Features Point
- Heritage Features Line
- Heritage Features Polygon

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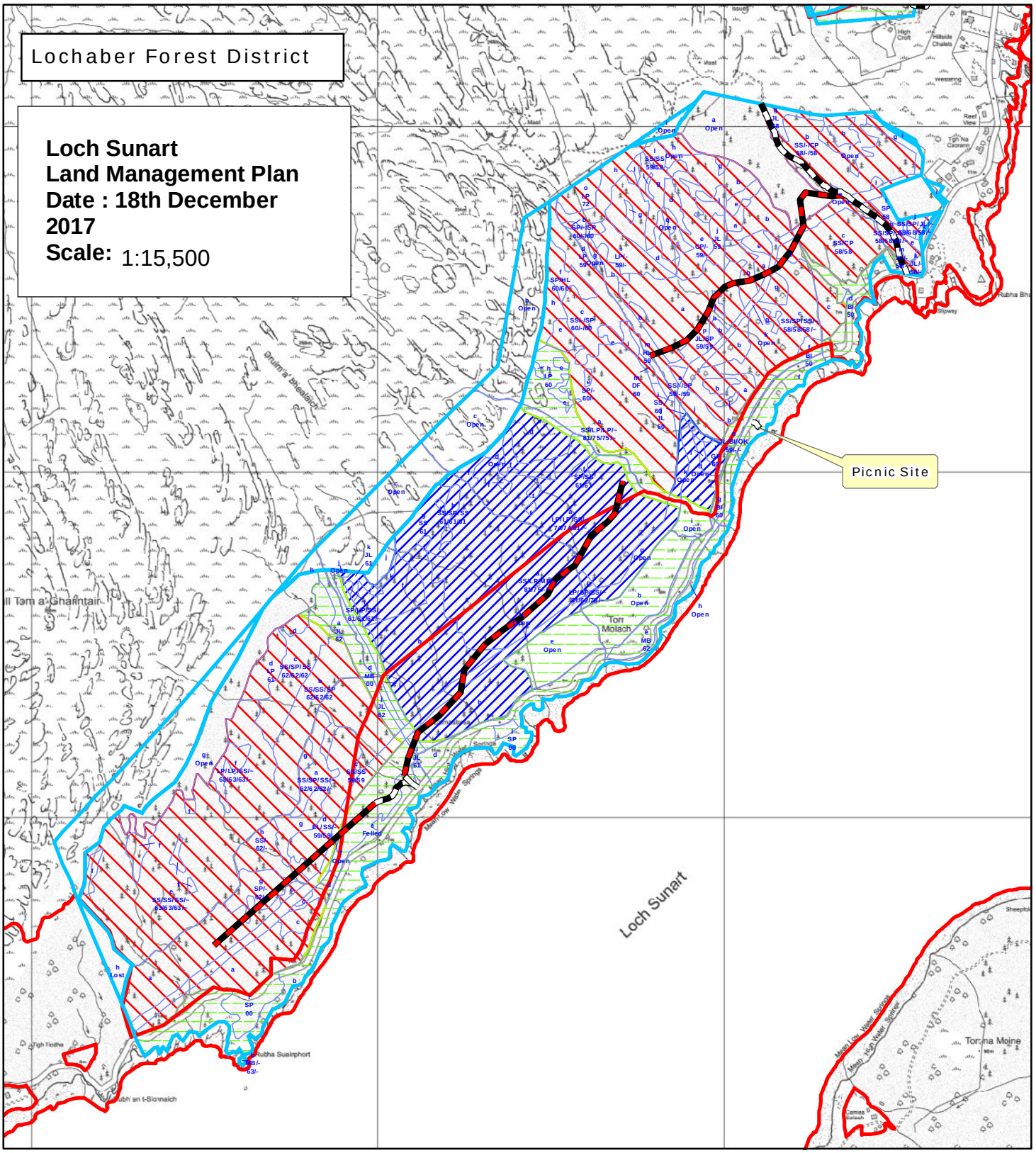
Land Management Plan
Date : 18th December 2017
Scale: 1:15,500



Long term AWS management models

Model

- 1 - Minimum intervention (inc Nat Res)
- 2 - LISS for biodiversity
- 3 - LISS for timber

- SSSI
- National Forest Estate
- Sub-Compartments
- A861 Road
- Forest Roads
- Planned Road Segments
- Existing ATV Access Track
- Existing Recreation Routes

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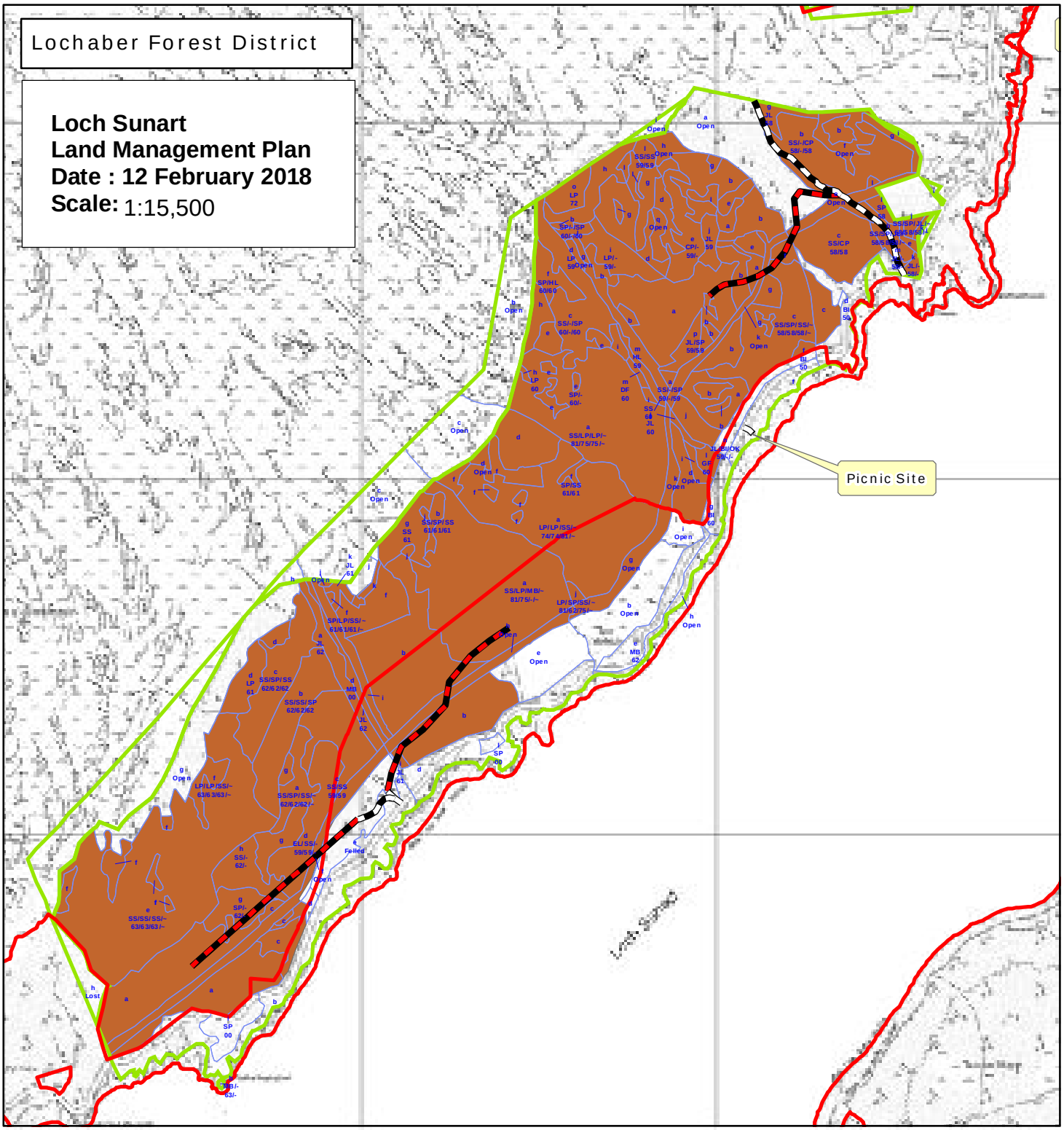

Camastorsa
10 Year Management

10 Year Management Operation

- Clearfell conifers
- Enrichment plant
- Re-space broadleaves
- Selective fell of conifers

- SSSI
- National Forest Estate
- Sub-Compartments
- A861 Road

- Existing ATV Access Track
- Existing Recreation Routes
- Planned Road Segments
- Forest Roads

N

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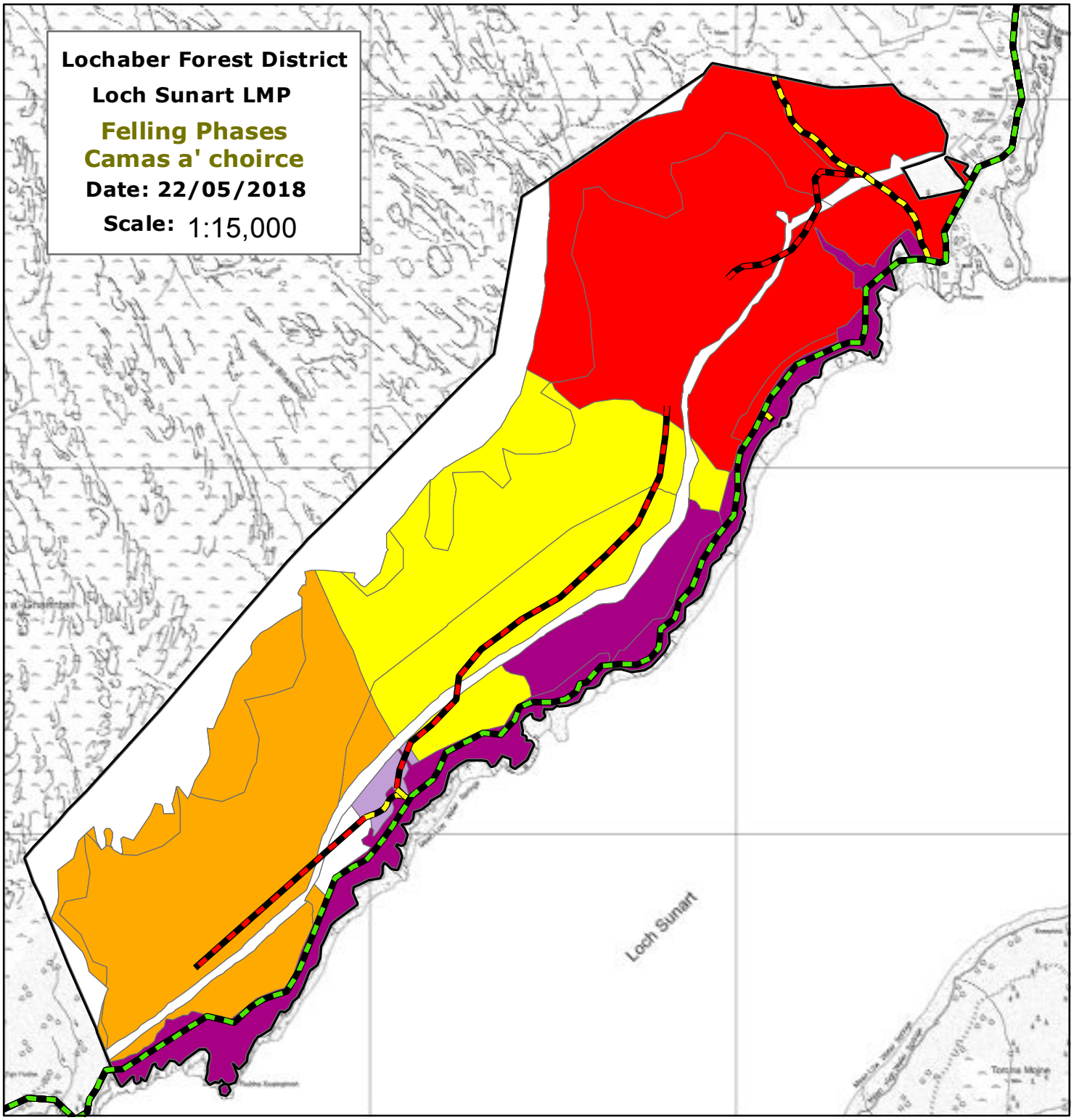

Phase 1 felling (2018 - 2022)
Phase 2 felling (2023 - 2027)
Phase 3 felling (2028 - 2032)
Phase 4 felling (2033 - 2037)
Phase 5 felling (2038 - 2042)
Phase 6 felling (2043 - 2047)
Phase 7 felling (2048 - 2052)
After 2052
Natural reserve
Long term retention
Minimum Intervention
Low impact silviculture
Open

LMP Boundary
A861 Road
B8007
Forest Roads
Planned Road Segments

N

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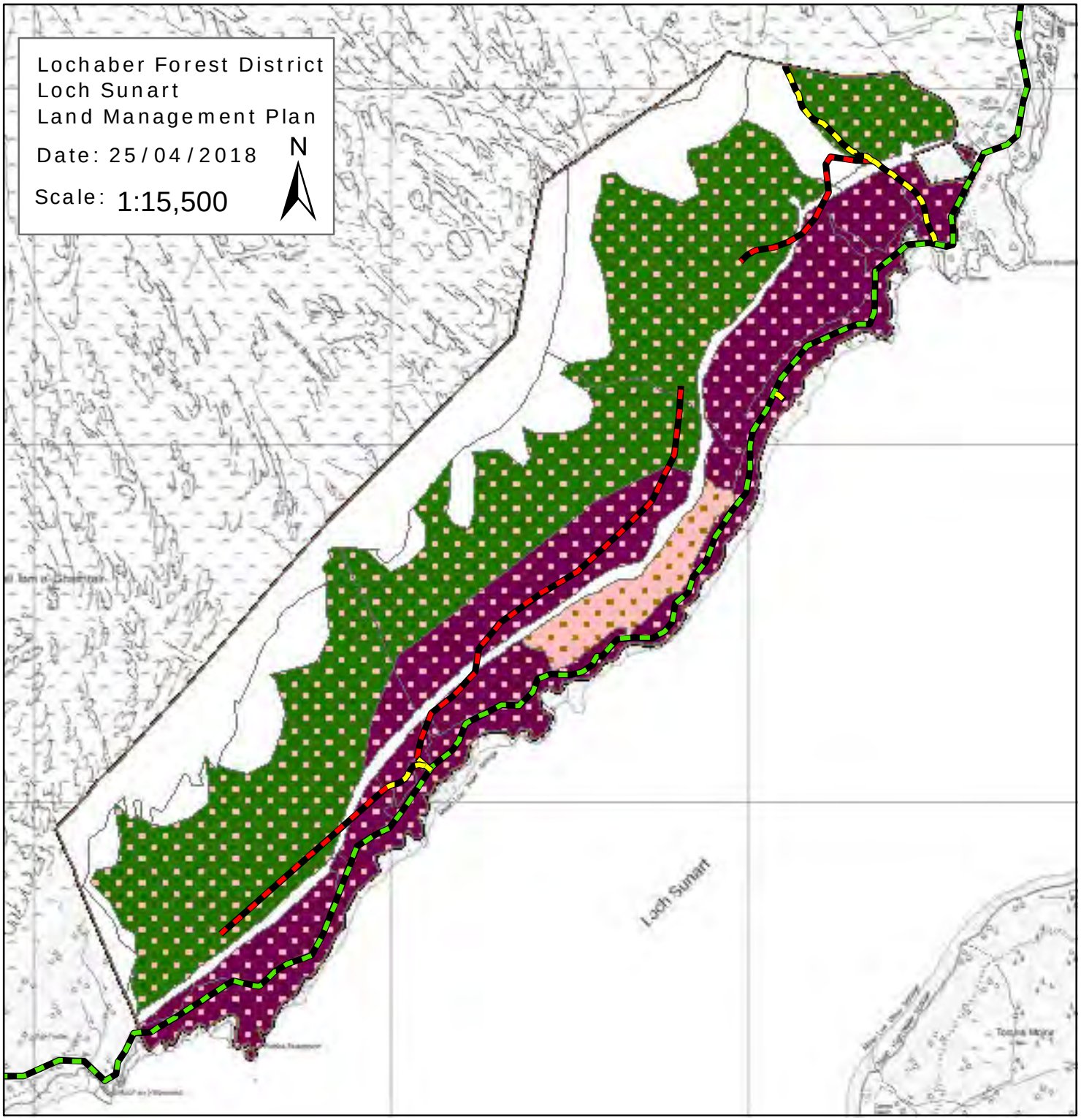

Restock Camastorsa

- Birch/Broadleave
- Broadleave/Scots Pine
- Douglas Fir/Birch
- Norway Spruce
- Oak
- Oak/Birch
- Open
- Scots Pine
- Scots Pine/Birch
- planting_area
- LMP Boundary
- Sunart_tracks
- Existing ATV Access Track
- Forest Roads
- Planned Road Segments
- A861 Road
- B8007