Forestry and Land Scotland
Coilltearachd agus Fearann Alba

Appendix VI

Deer Management Plan (DMP)
Glen Loy (including Gairlochy and Mucomir)

Background

This DMP outlines the deer management issues and priorities in the National Forest Estate holdings in the Glen Loy LMP area (Glen Loy, Gairlochy and Mucomir forest blocks) which are managed by Forestry and Land Scotland. The DMP presents the objectives and key targets for the next 10 years. It is a supporting document for the Glen Loy Land Management Plan (LMP) and should be used in conjunction with the FLS Deer Management Strategy.

All three forests lie along the lower part of the Great Glen between Loch Linnhe and Loch Lochy. The total LMP area covers 1,418 ha. The forests are predominantly spruce with a greater diversity introduced in the second rotation stands, and the restructuring of all three forests has been ongoing for around twenty years. The Caledonian pinewood SSSI of Coille Phuiteachan lies within Glen Loy and there are other semi-natural and Plantation Ancient Woodland Sites (PAWS) in both Glen Loy and Gairlochy. Areas of deep peats are present throughout Mucomir. The eastern part of this forest lies within the Parallel Roads of Lochaber SSSI and some defining geomorphological features have been identified in this forest area.

Glen Loy and Gairlochy Forests cover a wide altitudinal range from 50m above sea level to 350m at the upper margins. These forests are located on the lower slopes of Beinn Bhan and Druim Fada and comprise a mixture of brown earth soils with low fertility mineral soils on the lower slopes. Fertility decreases on the upper margins. Mucomir is generally low lying at 100 to 120m. It lacks the landform of the other two forests and contains a high proportion of peat slopes with impeded drainage.

Approximately 69% of the LMP area is under woodland cover, with a further 9% having been felled awaiting restocking. The remainder (22%) is given over to internal open ground including some agricultural land and wetlands. Sitka spruce accounts for 49% of the woodland with other conifers accounting for 10%. Broadleaves currently account for approximately 10% of the woodland area.

Continued production of sawlog timber will remain a key objective for these forests, while protecting Ancient Semi-Natural Woodland, expanding areas of native woodland and restoring and protecting peatland, where appropriate.

In line with the Scottish Government's consultation on Scotland's Strategic Framework for Biodiversity "Tackling the Nature Emergency" FLS recognises that reducing herbivore impacts is one of the most effective ways to reduce biodiversity loss and enable regeneration at scale. This is relevant to this LMP area where plans include protection of the SSSI native pinewood at Phuiteachan and the ASNW oakwoods at Erracht; native broadleaf restoration in riparian areas and in PAWS areas of high ecological potential; and peatland restoration or development of peatland edge woodland habitat at Mucomir.

National & Local objectives

Contributing to Scottish Forestry - Forestry Strategy (also includes Climate Change)

Adaptation and resilience are strategic drivers for delivery of Scotland's Forestry Strategy (2019 – 2029) objectives. Deer and other herbivores are an identified threat to woodland establishment and management, which in turn impacts forest resilience to pests, diseases and other pressures and the ability to adapt to a changing climate and environment. Priorities for action include the need to mitigate the risks posed by deer and other herbivores.

Deer will be managed to help ensure Scotland has a healthy, diverse ecosystem, contributing to our climate change objectives, whilst also contributing to our national and local economy in line with Scottish Government objectives and public interest.

- Lower deer densities to 2-7 per km^2 to ensure the above objectives can be met sustainably.
- Ensure all designated sites are in favorable condition
- Achieve less than 10% leader browsing damage on all first year restock coupes.
- Ensure Stocking Density Assessment at year 5 achieves productive forest objectives of 2500 per hectare.
- Ensure all designated sites are in favorable condition meaning that the features for which SSSIs or Natura sites are designated are in satisfactory condition; or are recovering, with the necessary management measures in place, such that Naturescot (SNH) predicts, using expert judgement, that the land will in due course reach favourable condition.

Deer Management Strategy Deer management strategy - Forestry and Land Scotland

Deer will be managed to help ensure Scotland has a healthy, diverse ecosystem, contributing to our climate change objectives, whilst also contributing to our national and local economy in line with Scottish Government objectives and public interest.

Management of the deer population will be done in a professional, humane and cost-effective way, ensuring the physical wellbeing of the remaining deer populations within the forest boundaries. Venison income will be optimised and opportunities to create revenue from

recreational deer management permissions (RDMP) will be taken, but without compromising the over-riding issue of minimising negative impacts by grazing herbivores. FLS will work with relevant organisations, NatureScot and neighbours in managing the deer populations, recognising the objectives of all parties. Preventative management will be undertaken,- regarding the spread of non-native deer species into new areas. Compliance with legislation, certification and quality assurance schemes will add value to both the forest estate and venison products that come from it.

Scottish Biodiversity Strategy Biodiversity strategy: consultation - gov.scot (www.gov.scot)

The proposed outcome for Scotland's Rural Environment – Farmland, Woodlands and Forestry, Soils and Uplands by 2045 is to have: A range of nature recovery activity that enables a sustainable natural regeneration of woodlands; greater diversity of woodland species and age structure, increased woodland cover and woodland connectivity; soils as a nature-based solution for issues contributing to restoration of degraded ecosystems; deer range management contribute to high standards of sustainable land use in upland areas that supports regenerating habitat and wildlife interests.

FLS Corporate Plan 2022 – 2025: Corporate Plan 2022-2025 | Forestry and Land Scotland

Outcome 2 of the FLS Corporate Plan 2022 – 2025: Looking after Scotland's national forests and land is most relevant to this Deer Management Plan and specifically:

- Tackling the twin crises of climate change and biodiversity loss
    - Helping the Scottish Government to meet forest and woodland management and creation targets
    - Increasing our contribution to the Peatland Action programme
    - Managing the national forests and land to further the conservation and enhancement of biodiversity
    - Working beyond designated sites at the landscape scale with partners where we can – for example in Scotland's rainforests
    - Increasing ancient woodland restoration
- Protecting our forests and land from other threats
    - Implementing a programme to improve the resilience of the national forests and land to the impacts of climate change and tree health threats
    - Continuing to implement the FLS Deer Management strategy while working in partnership with others to support the Scottish Government's response to the Independent Panel's recommendations on deer management in Scotland
- Working at the landscape scale and in partnership, to make a bigger difference
- Collaborating with partners on integrated landscape scale approaches to habitat management and restoration, using our capabilities to complement and support the work of others.

Local Objectives

The main objective of deer management within the West Region is to manage deer populations at a level that is compatible with FLS environment and other management objectives. The aim is to:

- prevent unacceptable damage to commercial tree crops;
- protect young establishing planted and naturally regenerating conifer and broadleaved trees;
- maintain or enhance biodiversity in key areas, including ancient woodland restoration;
- protect all designated sites;
- work beyond designated sites at the landscape scale with partners where we can – for example in Scotland's rainforests;
- manage sites on steep and unstable slopes;
- protect soil health and stability;
- contribute to the Peatland Action Programme

FLS deer management teams generally try to maintain deer densities at 2-7 deer per km^2 (and ideally below 5 per km^2). In the Glen Loy LMP area, the lower range of this population density is appropriate for protecting the SSSI and other ASNW, expanding native woodland development and restoring peatland habitat.

What are we going to protect?

Glen Loy:
Coille Phuiteachain SSSI (approx. 39.74 ha)
ASNW (97.04 ha, which includes the SSSI)
PAWS (179.8 ha, of which 166.4 ha is recorded as high ecological potential, the remainder as medium). 38.7 ha to be restored during the LMP lifetime

178.89 ha young restock

Gairlochy:
ASNW (0.69 ha)

101.82 ha young restock

Mucomir:
Parallel Roads of Lochaber SSSI (approx. 119.2 ha of which lies within the Mucomir block)

112.99 ha young restock

See sections 1.2 and 3.2 in the LMP for more information

Deer Species (and other herbivores/feral pigs)

In Glen Loy and Gairlochy, Red deer are common and Roe are present but Sika are found in very low numbers. However, In Mucomir, Roe deer are the predominant species, with significant numbers of Sika deer, whereas Red deer are uncommon.

The most recent Deer Population Assessment (DPA) for Mucomir was undertaken in 2014/15 by Strath Caulaidh, using the Faecal count method. (Assessment of Deer Population Dynamics: Nevis Complex, Strath Caulaidh 2015). This estimated a deer density of 12.3 deer/km^2 (all species) in March 2014 with a starting density (for setting cull targets) in 2015 of 16.2 deer/km^2.

A drone survey has been undertaken for FLS in Glen Loy forest, by BH Wildlife Consultancy (21/01/2025) – see Annex 1. The minimum density overall was 10.9 animals / km^2 comprising 8.4 Red deer, 1.3 Roe deer and 1.2 Boar (feral pigs) / km^2. This is in the same range as the population estimates for the West Lochaber Deer Management Group (in which the Glen Loy and Gairlochy lie) which average at 11 – 15 deer / km^2, with local densities ranging from 8 – 18 deer / km^2.

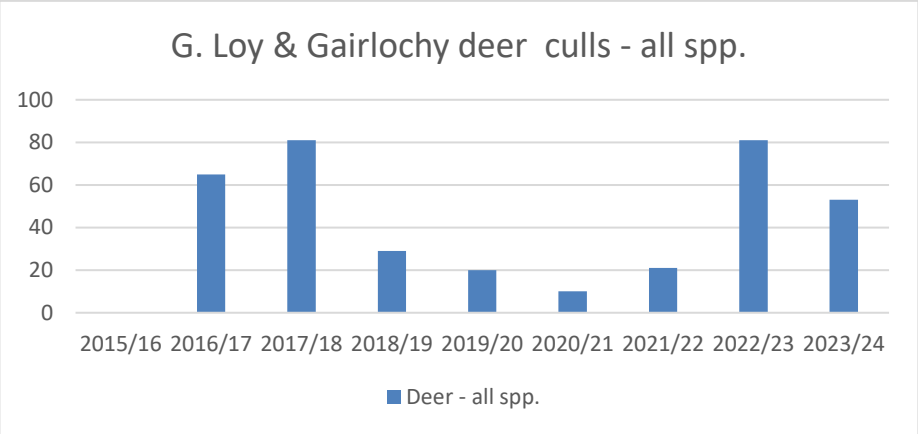
No DPA or survey has been undertaken for Gairlochy forest. It might be possible to model the deer population to produce cull projections, estimating the starting density using an average of the estimated starting densities (ascertained by DPA) for three close-by DMUs (Mucomir, Nevis-Brackletter and North Laggan/ Clunes). This is 16.2, 8.8 and 12.4 respectively, i.e. 12.5 deer/km^2. Alternatively, if we assume that 25% of the population has been culled and using the cull average for the past nine years, this equates to a starting density of 13.4 deer/ km^2. The average of these two figures is 12.95 deer / km^2. This is also in line with the West Lochaber DMG estimates. However, due to the very small scale of the forest within a much larger landscape of large Estates and a mobile deer population, it was decided that evidence of herbivore impacts should instead inform the cull targets for Gairlochy.

What have we done to date?

Significant numbers of Red deer have been culled in Glen Loy and Gairlochy over the past nine years, with cull figures varying widely over that time. Almost twice as many stags were culled than hinds; this difference is most pronounced at Gairlochy where 83% of the Red deer cull overall were male but at Glen Loy also, where 56% were male. This may reflect the culling that is undertaken under a sporting lease or could indicate migration of stags.

Glen Loy and Gairlochy cull figures:

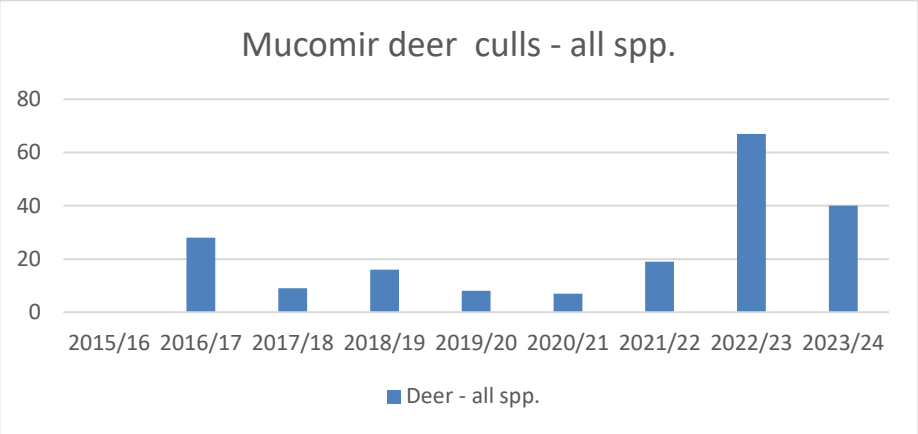
	Red F	Red M	Roe F	Roe M	Sika F	Sika M
2015/16	0	0	0	0	0	0
2016/17	15	39	3	8	0	0
2017/18	10	57	12	2	0	0
2018/19	3	21	1	4	0	0
2019/20	5	15	0	0	0	0
2020/21	0	1	5	4	0	0
2021/22	7	10	2	2	0	0
2022/23	35	28	6	9	0	3
2023/24	15	25	8	4	0	0
2024/25	12	26	7	7	0	1



Small numbers of Red deer have been culled at Mucomir. Roe are most prevalent; cull figures have varied widely over time and more bucks have been culled than does (62% of the Roe cull). Small numbers of Sika deer have been culled over the past three – four years but were absent from the cull previously.

Mucomir cull figures:

	Red F	Red M	Roe F	Roe M	Sika F	Sika M
2014/15	0	0	0	0	0	0
2015/16	0	0	0	0	0	0
2016/17	3	14	3	8	0	0
2017/18	1	1	6	1	0	0
2018/19	2	10	1	3	0	0
2019/20	5	3	0	0	0	0
2020/21	0	1	4	2	0	0
2021/22	9	8	1	1	0	0
2022/23	32	27	4	4	0	0
2023/24	17	23	0	0	0	0



Deer damage is monitored through Nearest Neighbour and Herbivore Impact Assessments. Survey assessments have been conducted In Glen Loy and Mucomir; there is no survey data for Gairlochy. Although the data is variable, there is evidence of high browsing pressure, including on Sitka spruce, which is generally less palatable and more resilient to browsing. High levels of damage have been found in all blocks, including 81% deer damage to Sitka; 39% to soft conifers and 86% to broadleaves in Glen Loy, and 41% soft conifer damage and 54% damage to broadleaves in Mucomir. In Glen Loy, high levels of deer damage will impact natural regeneration of the oakwood at Erracht and the development of broadleaved riparian woodland. Also, the establishment of alternative conifer species that are required to achieve species diversity and improve resilience. The SSSI pinewood at Phuiteachain is deer fenced but high browsing levels, if unchecked, could lead to ingress through the fence and there is evidence of past herbivore pressure within the fence. High levels of browsing would also constrain peatland restoration and the development of peatland edge woodland at Mucomir.

Block	Year	coupes	species	% crop dieback	% SS deer damage	% soft con deer damage	% BL deer damage	% all crop deer damage
Glen Loy	2016	53765	SC / BL	0	81.3		86	85.4
Glen Loy	2016	53728	SS / SC	6	23.2	39.3		25.2
Glen Loy	2010	53138?	SS / SC		32	33.3		32.1
Glen Loy	2011		SS / SC		20.7			20.7
Mucomir	2013	33736	SS / SC	3	3.8			3.8
Mucomir	2016	33955	SS/SC/BL	2	6.7	41.8	72.1	40.2
Mucomir	2016	33763	SS	2	4			4
Mucomir	2016	33496	SC / BL	1		12.5	54.7	29.9

SC = soft conifers; SS = Sitka spruce; BL = broadleaves

Deer management is carried out by contractors, although Achnacarry Estate have a sporting lease at Glen Loy. Deer numbers are managed across the three blocks but Mucomir is, effectively, in a different Deer management Unit (DMU). Glen Loy and Gairlochy lie in the West Lochaber Deer Management Group, in which FLS participates. Mucomir is in the Monadhliaths DMG but is a tiny element within a huge area.

Glen Loy is bounded on the West side by a deer fence, which is currently being replaced. Other marches are bounded by stock fences, which are in reasonable condition. A deer fence protects the pinewood SSSI at Phuiteachan.

Livestock fences protect Gairlochy and Mucomir blocks, which are in good condition.

Surrounding land use is a combination of sporting estates; farmland and rough grazing; and both commercial forests and native woodland. Glen Loy will be protected from the West by the replacement deer fence. Deer migration from the East is less likely as neighbouring landowners are controlling deer more intensively, to protect their woodland schemes.

Geography

The Landscape Character Type that covers Glen Loy and Gairlochy is classified by NatureScot as Smooth Moorland Ridges, which comprise gently rolling hills that are found alongside the wide glaciated valleys of the Great Glen. Hills have smooth elongated ridge profiles. The Landscape Character Type at Mucomir is Broad Forested Strath. This is a gently undulating landscape with a broad mosaic of coniferous and deciduous woodland and open pasture - broad, low-lying straths with rolling relief and sculptural glacial landforms.

The three forests are well – roaded and there are ATV tracks or rides across much of the ground. In Glen Loy, access for deer control and carcass extraction is generally more challenging on the upper slopes, particularly in the SW, and in the far western section of the block at Phuiteachan.

The three forest blocks are popular for walking. Strava heatmaps indicate that Glen Loy has the highest visitor use; routes mainly follow forest roads, with some informal links between roads, and to the open hill. Glen Loy is popular for mountain / trail biking and several informal trails are frequented by enthusiasts. The FLS Visitor Services team maintain dialogue with Lochaber Trails Association, to help ensure that biking activity is compatible with forestry operations. There is a campsite locally at Mucomir and forest users include visitors staying here as well as locals. There are various new house builds here, which increase the size of population local to the forest. Public access across the whole LMP area is maintained under the Scottish Outdoor Access Code (SOAC). Deer management activity must take account of public access within the forest.
See section 2.2 Glen Loy LMP: key challenges

Have an evidence based approach

As described, deer population assessments conducted in Mucomir to-date have been based on the faecal count method, with the last assessment carried out in 2015. A deer count in Glen Loy was undertaken in January 2025 using drones. No DPA has been undertaken for Gairlochy.

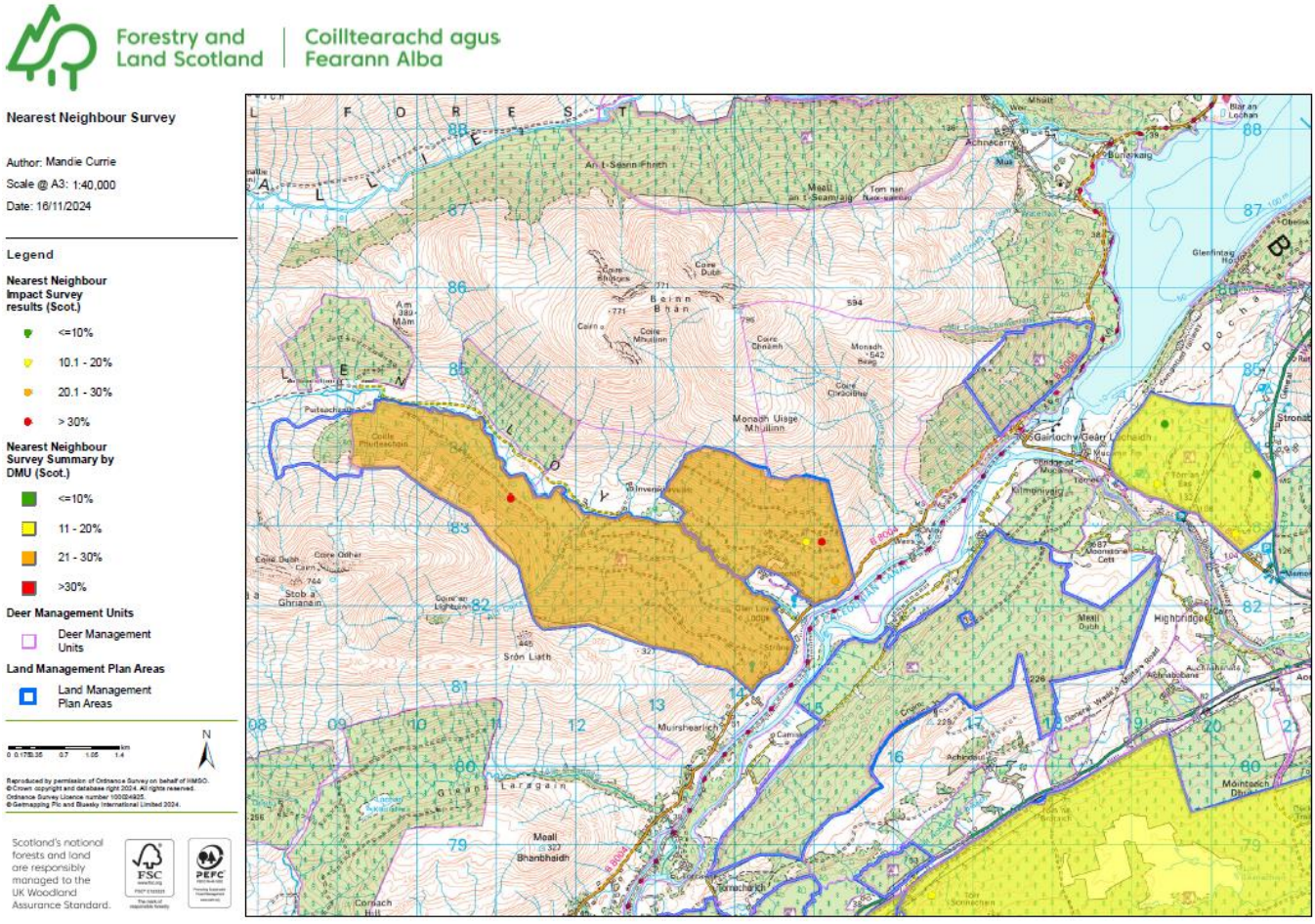
The level of deer damage that exists, while variable across the blocks, does indicate that deer populations are too high in each of the three blocks, or that there are problem areas where deer are congregating.

Deer impacts are measured by FLS using various surveys: Nearest Neighbour (NN); Herbivore Impact Assessments (HIA); natural regeneration surveys; Stocking Density Assessments (SDA); ASNW and PAWS surveys.

Nearest Neighbour Surveys:

The map below shows the results from the Nearest Neighbour Surveys for Glen Loy and Mucomir, which are designed in a systematic way to ensure accuracy and consistency in measurements across the crop. Surveys were undertaken in 2010, 2011, 2013 and 2016. The red points show coupes where higher than 30% damage has been recorded (see table presented earlier on page 7 for details). The overall summary for each block is also shown, which indicate moderate levels of damage in Glen Loy overall, although some coupes have suffered high levels of damage. Low to moderate levels of damage overall were recorded in Mucomir. Nearest Neighbour surveys have not been conducted in Gairlochy.

See table on page 7 for survey details.

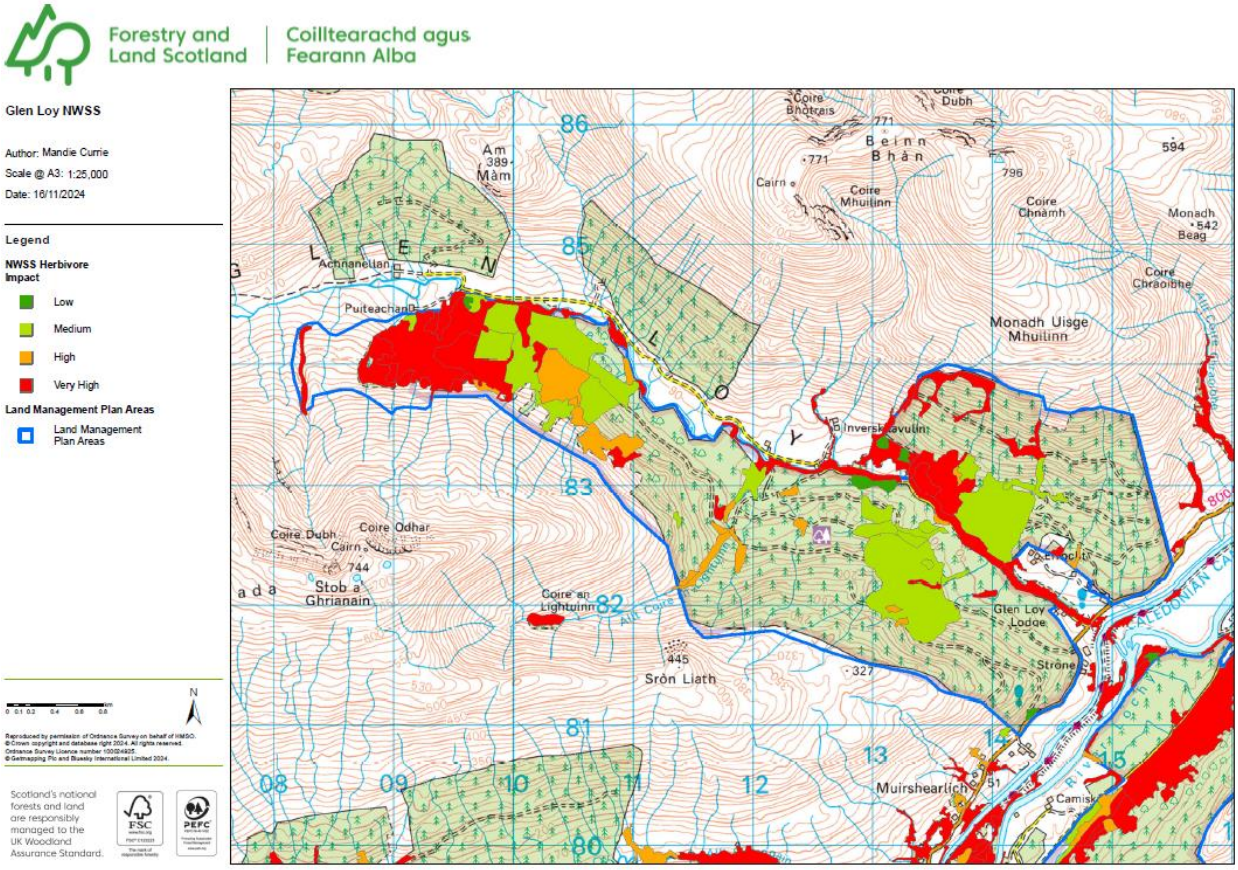


Map 1: Nearest Neighbour Surveys – red points show coupes where > 30% deer damage has been recorded; orange points = 21-30% deer damage; yellow = 11 – 20% deer damage; green = 10% or less deer damage.

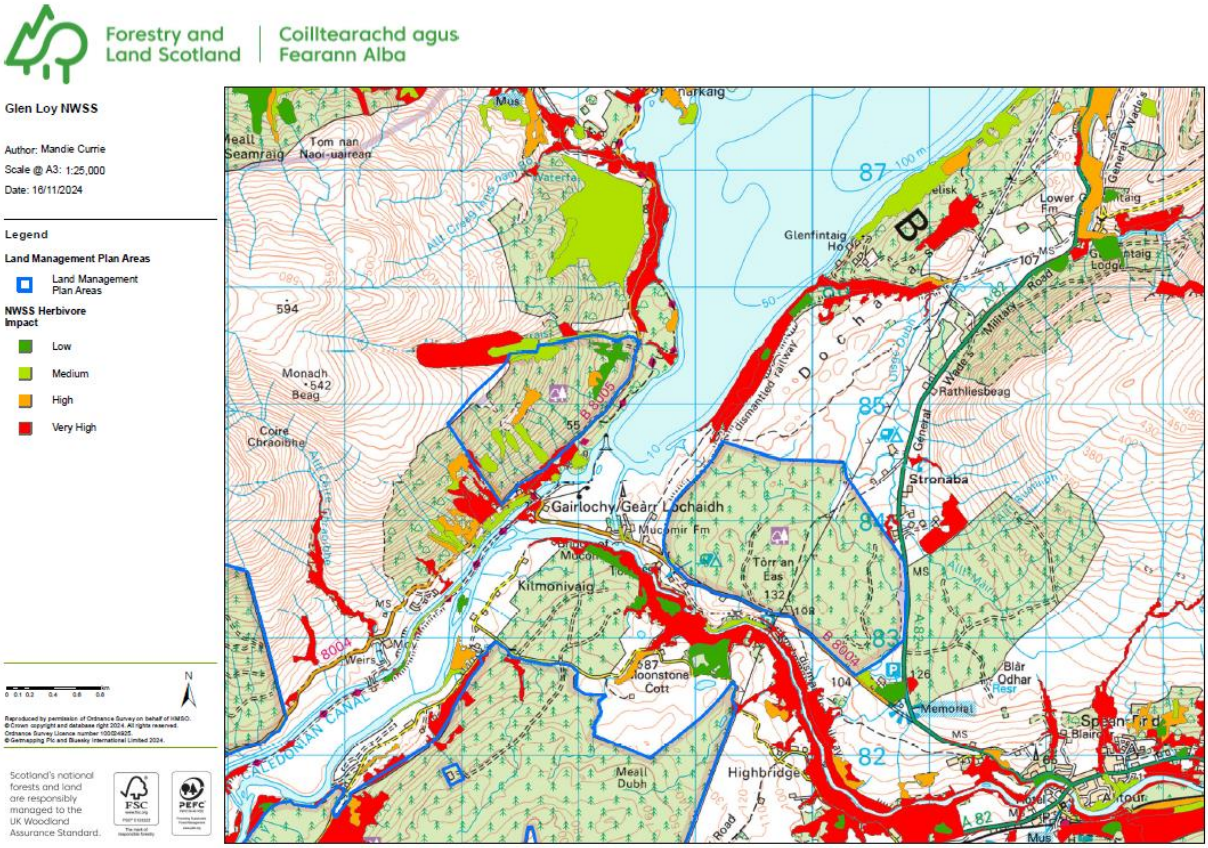
Native Woodland Survey for Scotland (NWSS) HIA:

Herbivore Impacts were also recorded in the Native Woodland Survey for Scotland (NWSS). These maps shows areas of herbivore damage in native woodland sites, which includes damage to trees and woodland flora. The NWSS was conducted between 2009 and 2013. The survey indicates high levels of damage in Glen Loy, with low-medium damage within Gairlochy forest but high and very high levels of damage on the ground neighbouring both Gairlochy and Mucomir.

Glen Loy



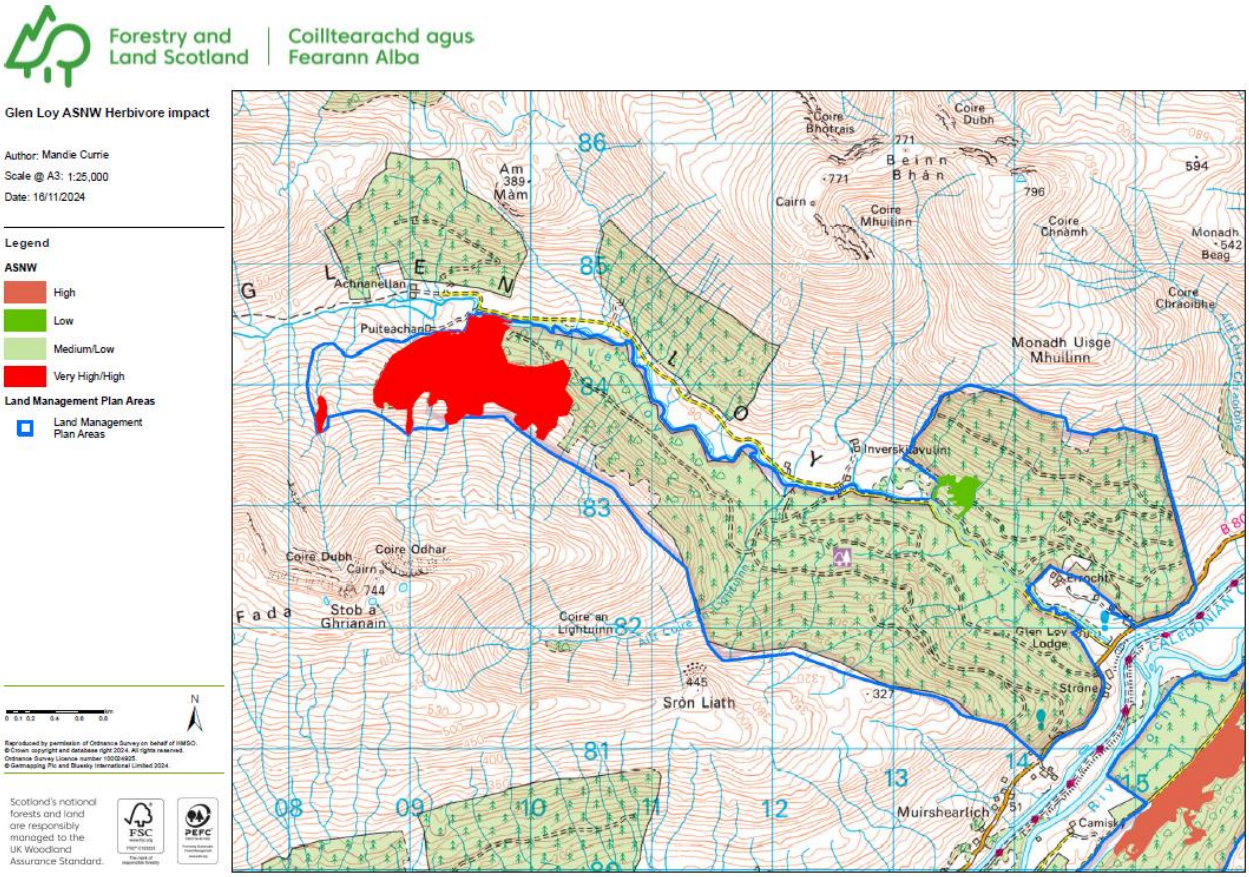
Gairlochy and Mucomir



Maps 2 a & b: Levels of herbivore damage on native woodland sites (Herbivore Impact Assessments)

Ancient Semi-Natural Woodland (ASNW) surveys:

ASNW surveys also capture herbivore impact. The ASNW (SSSI) at Phuiteachan was surveyed in 2019, where very high levels of deer damage were recorded. The oakwood at Errocht had low levels of herbivore impacts. There is no ASNW present in Gairlochy or Mucomir forests.



Map 3: Herbivore impacts in Ancient Semi-Natural Woodland (ASNW)

Plantation on Ancient Woodland Sites (PAWS) surveys:

PAWS surveys capture the herbivore impacts and threats to woodland features in sites that are restored or establishing as native woodland and sites that will be restored from non-native to native species. The maps below shows areas of PAWS with medium to high / very high levels of herbivore impacts. Some of these areas are yet to be restored to native woodland.

Maps 4 a & b: Plantations on Ancient Woodland Sites (PAWS) with medium to high/ very high levels of herbivore browsing (see below)

Glen Loy

Forestry and Land Scotland | Coilltearachd agus Fearann Alba

Glen Loy PAWS Herbivore impact

Author: Mandie Currie
Scale @ A3: 1:20,000
Date: 16/11/2024

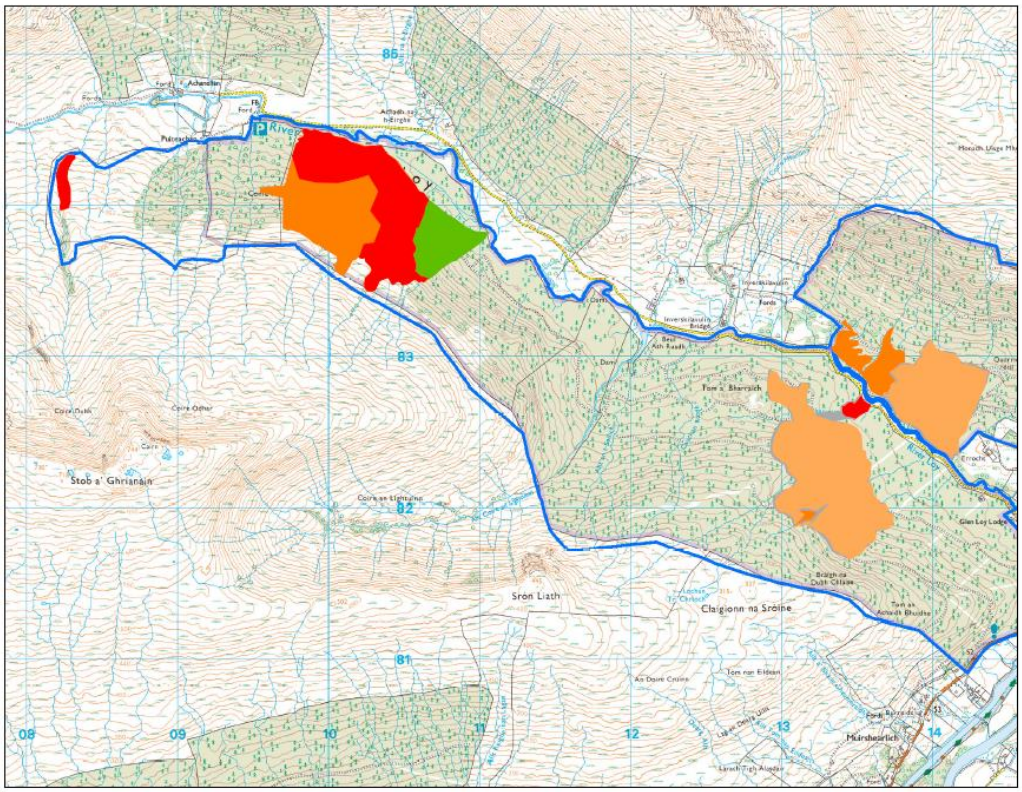
Legend

PAWS

- All other values
- High
- Low
- Medium
- Medium\Low

Land Management Plan Areas

- Land Management Plan Areas



Scotland's notional forests and land are responsibly managed to the UK Woodland Assurance Standard.

Gairlochy

Forestry and Land Scotland | Coilltearachd agus Fearann Alba

Gairlochy PAWS Herb'v. Impacts

Author: Mandie Currie
Scale @ A3: 1:12,500
Date: 16/11/2024

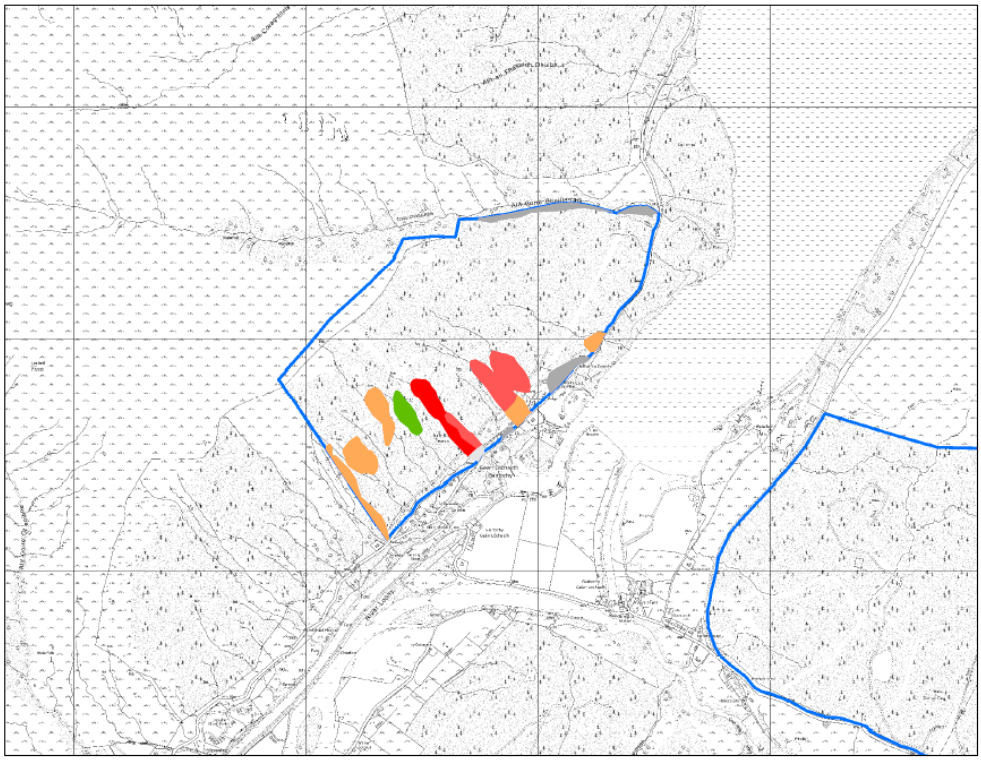
Legend

PAWS

- All other values
- High
- High\Medium
- Low
- Medium\Low
- NA

Land Management Plan Areas

- Land Management Plan Areas



Scotland's notional forests and land are responsibly managed to the UK Woodland Assurance Standard.

Stocking Density Assessments are also routinely carried out at years 1 and 5 of a planted woodland's stage of establishment. These assessments determine if the crop is growing successfully and at the stocking density appropriate to agreed site objectives. These assessments now incorporate HIA and thus can help identify where appropriate deer management operations are required.

Objective	FLS Target(s)	Assessment method
Produce quality timber of all conifer species	2,500 live stems per ha at Year 1 of re-stocks	Crops assessed in the 1st year by the FM team
	No more than 10% of leading shoots on new trees browsed by deer in Year 1 and Year 2	Crops assessed annually after their 1st year by Strath Caulaidh as part of the national 'Nearest Neighbour' survey
	2,500 live stems per ha at Year 5 on re-stocks	Crops assessed in the 5th year by the planning team
	Less than 20% stem forked trees at Year 5 on re-stocks	Crops assessed in the 5th year by the planning team
Protect the environment	Deliver 'Favourable Condition' of designated sites (e.g. SSSI, SAC)	Habitat assessed by the Environment Team as required
	Protect native woodland or expand (PAWS)	Native woodland assessed by the Environment Team as required
	Establish planted broadleaf trees at 1,600 stems per ha at Year 5 on re-stock sites	Planted trees assessed in the 5th year by the planning team
	Establishment of native woodland through natural regeneration	Assessed between yr 5 and yr 10 following felling by the planning team
	Restoration of 5.19 ha of peatland over 10 years	Assessment as part of the peatland contract delivery

The FLS wildlife team have invested in drones and although at an early stage of use, these have produced useful real-time information on the numbers and distribution of deer throughout FLS properties. This method can identify deer through much of the tree canopy. It will be adopted as the most reliable method of population assessment and where possible, may be carried out several times annually to gauge overall deer density.

Link to Deer Dashboard

Most of data is used to create this DMP can be found in the Deer Dashboard

Population Modeling and Future Culls

A population model was prepared for Glen Loy, using the drone survey data provided in January 2025. Population estimates were prepared for Mucomir, working from the Deer Population Assessment produced by Strath Caulaidh in 2015 and using subsequent cull figures. For Gairlochy, estimated starting densities for nearby blocks were used, combined with population estimates across the DMG area and an estimate of the proportion of the population that has been culled in Glen Loy / Gairlochy over the past nine years (see explanation provided earlier).

Mucomir

Mucomir is a very small block, surrounded by large estates with both sporting and nature conservation interests. Red deer are likely to be passing through - as indicated by cull figures, which are predominantly male – and in very small numbers. Sika and Roe deer continuously move into the forest from surrounding ground, so culling may remove all these species (as indicated in the above model) only for numbers to be replenished soon after.

A Deer Population Assessment by Strath Caulaidh in 2015 estimated 12.16 deer / km^2 at the end of March 2015. Using the cull figures over the past eight years, the population comprises approximately 5% Red and 47% Roe/Sika deer, so approximate densities by species were 0.6 Red deer / km^2, 5.78 Roe deer / km^2 and 5.78 Sika deer / km^2. Immigration is estimated at 10% Sika stags.

The priority will be to continue to cull Sika in sufficient numbers to prevent the forest block being a breeding centre and stepping-stone to colonise outwards. The cull aims to reduce deer numbers while trying to minimise population pressures and avoid animal welfare issues.

The focus will be for continued culls at slightly above the cull targets achieved to-date (at about 20 – 25 deer annually, predominantly Sika) with the main aim of preventing the establishment of a Sika herd that can expand and move outwards from the block.

Gairlochy

No Deer Population Assessment has been carried out for Gairlochy. As described earlier, an attempt was made to make a rough estimate of population size using Deer Population Assessments from nearby Deer management Units together with cull figures. These produced a starting density of 12.95 deer / km^2, which is in line with the West Lochaber Deer Group estimates. However, modelling predicts very high cull targets, which align with neither the actual cull to date, nor to the recorded herbivore impacts, which range from high to low/moderate.

Gairlochy is another small block surrounded by large estates with both sporting and nature conservation interests and where deer management takes place on a landscape scale. Deer move in and out of the block regularly.

It is proposed therefore, to increase culls to 20 deer annually over the next five to ten years, which will comprise predominantly Roe, with some Red. Sika have also been culled on occasion in recent years.

Glen Loy

Deer numbers in Glen Loy have been estimated following a drone survey, undertaken in January 2025. Recruitment rates are based on cull figures.

Red deer:

Glen Loy

Yr 1 EUD km2 @ 1st April	8.4
Start Yr Population	87.36
Area (ha)	1040

Sex Ratio	Female	Male	
	50%	50%	100%

Financial Year (FY)	Pop'n at 1st April (Start FY)	Pop'n at 1st April (Start FY)	Total Pop'n	No per 100ha 1st April
2025	44	44	87	8.4
2026	35	39	74	7.1
2027	29	33	62	6.0
2028	23	28	52	5.0
2029	19	24	43	4.1
2030	15	20	35	3.4
2031	12	17	29	2.8
2032	10	14	24	2.3
2033	8	12	20	1.9
2034	7	10	16	1.5

Kid % of pop at 1st April	Recruitm't Female	Recruitm't Male	Total Recruitm't
49	11	11	21
49	9	9	17
49	7	7	14
49	6	6	11
49	5	5	9
49	4	4	7
49	3	3	6
49	2	2	5
49	2	2	4
49	2	2	3

Est Annual Mortality/Immigration %	Male Immigration/mortality
10	4
10	4
10	3
10	3
10	2
10	2
10	2
10	1
10	1
10	1

Female pop 31st Aug	Male pop 31st Aug	Population 31st Aug	No per 100ha 31st Aug
54	59	113	10.9
44	51	95	9.2
36	44	79	7.6
29	37	66	6.3
23	31	54	5.2
19	26	45	4.3
15	22	37	3.5
12	18	30	2.9
10	15	25	2.4
8	12	20	1.9

Set % Cull	Female Cull	Male Cull	Total Cull	% Cull Achieved	Female Pop at 31st March (End FY)	Male Pop at 31st March (End FY)	Total Pop 31st March
35.0	**19**	**20**	**39**	**34.5**	35	39	74
35.0	**15**	**18**	**33**	**35.0**	29	33	62
35.0	**12**	**15**	**28**	**35.0**	23	28	52
35.0	**10**	**13**	**23**	**35.0**	19	24	43
35.0	**8**	**11**	**19**	**35.0**	15	20	35
35.0	**7**	**9**	**16**	**35.0**	12	17	29
35.0	**5**	**8**	**13**	**35.0**	10	14	24
35.0	**4**	**6**	**11**	**35.0**	8	12	20
35.0	**4**	**5**	**9**	**35.0**	7	10	16
35.0	**3**	**4**	**7**	**35.0**	5	8	13

Roe deer:

Glen Loy

Yr 1 EUD km2 @ 1st April	1.3
Start Yr Population	13.52
Area (ha)	1040

Sex Ratio	Female	Male	
	50%	50%	100%

Net annual mortality/ immigration are set at zero for M and F.

Financial Year (FY)	Population at 1st April (Start FY)	Population at 1st April (Start FY)	Total Population	No per 100ha 1st April	Kid % of pop at 1st April	Recruitment Female	Recruitment Male	Total Recruitment
2025	7	7	14	1.3	69	2	2	5
2026	7	7	14	1.4	69	2	2	5
2027	7	7	14	1.4	69	2	2	5
2028	7	7	14	1.4	69	2	2	5
2029	7	7	14	1.3	69	2	2	5
2030	7	7	14	1.3	69	2	2	5
2031	7	7	14	1.3	69	2	2	5
2032	7	7	14	1.3	69	2	2	5
2033	7	7	14	1.3	69	2	2	5
2034	7	7	14	1.3	69	2	2	5

Chart Area

Female pop 31st Aug	Male pop 31st Aug	Population 31st Aug	No per 100ha 31st Aug	Set % Cull
9	9	18	1.7	26.0
10	10	19	1.8	26.0
9	9	19	1.8	26.0
9	9	19	1.8	26.0
9	9	19	1.8	26.0
9	9	19	1.8	26.0
9	9	19	1.8	26.0
9	9	19	1.8	26.0
9	9	18	1.8	26.0
9	9	18	1.8	26.0

Female Cull	Male Cull	Total Cull	% Cull Achieved	Female Pop at 31st March (End FY)	Male Pop at 31st March (End FY)	Total Pop 31st March
2	2	4	22.0	7	7	14
2	2	5	26.0	7	7	14
2	2	5	26.0	7	7	14
2	2	5	26.0	7	7	14
2	2	5	26.0	7	7	14
2	2	5	26.0	7	7	14
2	2	5	26.0	7	7	14
2	2	5	26.0	7	7	14
2	2	5	26.0	7	7	14
2	2	5	26.0	7	7	14

Total Summary:

All species

Glen Loy

Yr 1 EUD km2 @ 1st April	9.7
Start Yr Population 1st April	100.88
Area (ha)	1040

Cull Target			
Yr	Female	Male	Total
Yr 1	21	22	**43**
Yr 2	18	20	**38**
Yr 3	15	18	**33**
Yr 4	13	15	**28**
Yr 5	11	13	**24**
Yr 6	9	11	**21**
Yr 7	8	10	**18**
Yr 8	7	9	**15**
Yr 9	6	8	**13**
Yr 10	5	7	**12**

WMU Population

Financial Year (FY)	Population 1st March	Population 1st March	Total Population	No per 100ha 1st April
Yr 1	42	46	88	**8.5**
Yr 2	36	40	76	**7.3**
Yr 3	30	35	66	**6.3**
Yr 4	26	31	57	**5.5**
Yr 5	22	27	49	**4.7**
Yr 6	19	24	43	**4.1**
Yr 7	17	21	38	**3.6**
Yr 8	15	18	33	**3.2**
Yr 9	13	16	30	**2.9**
Yr 10	12	15	27	**2.6**

Species Population	Red	Roe	Sika	Fallow
Yr 1	74	14	0	0
Yr 2	62	14	0	0
Yr 3	52	14	0	0
Yr 4	43	14	0	0
Yr 5	35	14	0	0
Yr 6	29	14	0	0
Yr 7	24	14	0	0
Yr 8	20	14	0	0
Yr 9	16	14	0	0
Yr 10	13	14	0	0

Based on these estimates, a deer population density (all species) of less than 5 deer / km^2 may be achieved in Glen Loy by year five of the DMP/LMP, with a population of around 2-3 deer / km^2 (more appropriate for broadleaved establishment) being achieved by year nine.

The situation is more variable in Gairlochy and Mucomir as deer will move in and out of these forest blocks more frequently and rapidly. Modest increases in current cull figures are proposed for those blocks, as outlined previously.

Protection Options – cull/fence/tubes

Deer culling within the Glen Loy LMP area is carried out by contractors. Achnacarry Estate hold a sporting lease at Glen Loy. Key challenges include some inaccessible ground in the western part of Glen Loy and on upper slopes. Weather conditions (drifting snow) can make it easier for deer to cross and may damage fences. Mature crops provide shelter from where deer can foray into newly restocked areas to graze and browse.

Deer culling is required, to achieve sustainable population levels that promote habitat recovery as well as creating healthy deer populations.

A deer fence that runs along the West side of Glen Loy is currently being replaced. Livestock fences along the northern and eastern boundaries of Glen Loy and around the Gairlochy and Mucomir blocks are in reasonable condition.

How will objectives be met?

FLS are obliged to manage deer to sustainable levels under the Scottish Forestry Strategy and Biodiversity Strategy, as well to achieve compliance with the UK Forestry Standard and the UK Woodland Assurance Standard.

FLS aims to manage a deer population of 2-7 deer/km^2 in national forests; ideally less than 5 deer/km$^{2.}$ Although Sitka spruce will remain the main commercial species, alternative conifers will be included in restock where conditions are suitable and these species are more vulnerable to herbivore impacts.

Protection of the SSSI at Phuiteachain and the ASNW oakwood at Errocht are priorities; also, the areas of PAWS to be restored and the development of riparian native broadleaved woodland that is proposed. All are highly dependent on reducing browsing pressure and maintaining sustainable deer populations. Lower deer population densities (2- 3 deer / km^2) are generally required for successful establishment of broadleaved species. Species such as Aspen are particularly palatable and require even lower herbivore densities (and consequently, are extremely infrequent). As noted earlier, densities of <5 deer / km^2 may be achieved by year 5 in Glen Loy.

Objectives will be met through:

- Culls carried out by contractors, overseen by the FLS wildlife management team and enhanced activity around young restock coupes and areas planned for natural regeneration
- Where possible, use of drone counts to provide accurate and real time information on deer numbers and deer behaviour, to inform and provide flexibility in management
- Fences – completion of the new deer fence, with ongoing maintenance. Maintenance of livestock fences
- Upgrade and maintenance of existing ATV tracks throughout the LMP area
- Creation of new ATV tracks in felled coupes - where possible, creating links to existing paths to benefit visitor access

- Upgrade of track in western part of Glen Loy, to facilitate ATV access to Phuiteachain
- Early clear fell of relevant coupes in Mucomir where this also meets other business needs, to reduce the amount of cover and increase opportunities for deer control
- Annual review (wildlife, FM and planning teams) to monitor achievement of targets and analyse results of beat-up surveys against nearest neighbour and SDA surveys.

This DMP will be reviewed regularly, as a minimum at years 5 and 10, to consider if the proposed actions have led to reductions in herbivore pressure and if these impacts are sufficient to promote acceptable growth of desired species.

Infrastructure

The three forest blocks are served by the FLS deer larder at Torlundy (Leanachan).

The LMP area has an established network of forest roads, which enable access throughout the forest. Post- harvesting, further tracks will be considered within coupes where topography allows, to facilitate establishment operations, including deer management. Track upgrades will also be considered, where required .

Collaborative working opportunities

Effective deer management is required to restore and protect native woodland on FLS land. As part of the Deer Working Group Recommendations, opportunities will be sought where FLS can take a collaborative approach to achieving Deer Management Objectives. This will include working with immediate neighbours / DMG to identify where there is a mutual benefit to cross boundary culling agreements.

DMG present

Glen Loy and Gairlochy lie within the West Lochaber DMG. FLS is an active member of the DMG. Mucomir is covered by the Monadhliaths DMG but is a tiny element within a huge geographical area that includes neighbouring estates of significant scale, with both sporting and nature conservation objectives.

Venison

FLS subscribes to the Scottish Quality Wild Venison (SQWV) scheme. All venison is quality assured and sold to Highland Game via the Torlundy larder.