Affric and Kintail Deer Management Group

Part 1: Collaborative Land Management Plan Information



DMG Chairman: Willie FraserEmail: info@seatoskyexperience.co.ukDMG Secretary: Linzi SeivwrightEmail: Linzi@caorann.comDMG Website: http://affrickintaildmg.deer-management.co.uk/

Prepared by: Dr Linzi Seivwright BSc Phd

Caorann Tel. 07547 676509 Email: <u>linzi@caorann.com</u> www.caorann.com



Image 1: View along the Affric Kintail Way. Image 2: View west from Mullardoch.

Foreword (to be completed by Chair)

Part 1: Affric & Kintail CLMP Background Information 13/4/17 Page 2

Contents

Image 1: View along the Affric Kintail Way. Image 2: View west from Mullardoch	1
1.1. Introduction	5
Figure 1: Group Location	5
Figure 2: Affric & Kintail Management Units	6
1.2. Deer Populations, Movements and Management	8
Figure 3: DMG Count Data (including figures for Corrielair).	9
Table 1: Helicopter Counts	9
Table 2: Group and Individual Property Culls.	11
Figure 4: Historic Group Deer Culls	11
Table 3a: Individual Management Unit Culls	12
Table 3b: Individual Management Unit Culls	12
1.3 Actions to develop mechanisms to manage deer	13
Figure 5: Neighbouring properties to Affric & Kintail DMG	16
1.4 Actions for the delivery of designated features into Favourable Condition	17
Table 4: Designated sites by Management Unit	17
Table 4: Designations and Management Units	19
Figure 6: DMG Designations	21
Table 6: Designated Site Feature Condition	23
1.5 Actions to manage deer to retain existing native woodland cover and improve woodland condition	24
Table 7: Summary of Native Woodland Survey for Scotland Herbivore Impacts	25
Figure 7: Herbivore Impacts on Native Woodland (NWSS Data)	26
1.6 Actions to demonstrate DMG contribution to the Scottish Government woodland expansion target of 25 woodland cover.	
Table 8: Summary of National Forest Inventory Data	27
Figure 8: National Forest Inventory and Woodland Grant Schemes	29
Table 9: Summary of Woodland and Forestry Grant Schemes	29
1.7 Actions to monitor and manage deer impacts in the wider countryside.	30
Table 10: Habitat types by Property	30
Figure 9: Blanket bog & peatland and Heather moorland across the Group (Land Cover Scotland Data 88)	31
Table 11: The total number and percentage of sample plots in each aggregate current herbivore category for each habitat surveyed in 2015 within the West Affric property	32
1.8 Actions to improve Scotland's ability to store carbon by maintaining or improving ecosystem health	34
1.9 Actions to reduce or mitigate the risk of establishment of invasive non-native species	36
1.10 Actions to protect designated historic and cultural features from being damaged by deer	37

1.11 Actions to contribute to delivering higher standards of competence in deer management
1.12 Actions to Identify and promote opportunities contributing to public health and wellbeing
1.13 Actions to maximise economic benefits associated with deer
1.14 Actions to minimise the economic costs of deer, and ensure deer management is cost-effective
1.15 Actions to ensure effective communication on deer management issues
1.16 Actions to ensure deer welfare is taken fully into account at individual animal and population level 47
1.17 Management Units: East Benula South
Figure 3: Ptarmigan on Mullardoch52
Image 4: East Benula South Looking west52
1.18 Management Units: National Forest Estate Strathglass & National Forest Estate Fasnakyle53
1.19 Management Units: National Forest Estate South Affric55
1.20Management Units: Mullardoch
Image 5: North Affric Estate looking west towards West Affric60
Image6: Woodland regeneration in Glen Affric60
1.21 Management Units: North Affric
1.22 Management Units: NTS Kintail and West Affric63
1.23 References

1.1. Introduction

1.1.1 Affric and Kintail Deer Management Group

Located in Wester Ross in the North West Highlands (Figure 1), Affric and Kintail Deer Management Group (DMG) boundary covers an area of approximately **34,194 ha** and includes an area of land from Kintail to Cannich including Glen Affric. The area is bounded by Loch Mullardoch to the north and the northern marches of Glen Moriston DMG to the south.

Whilst recognised as a DMG in its own right, the Group is part of the wider South Ross cluster of DMGs which includes Glen Moriston DMG to the immediate south, Lochalsh DMG to the north west and Glen Strathfarrar to the north east. Strathconnon DMG is also part of South Ross but is not an immediate neighbour. There is also communication with Glenelg DMG to the south.

With active engagement between all neighbouring DMGs in the area including, this ensures a landscape collaborative approach to deer management.

Figure 1: Group Location



1.1.2 Management Units

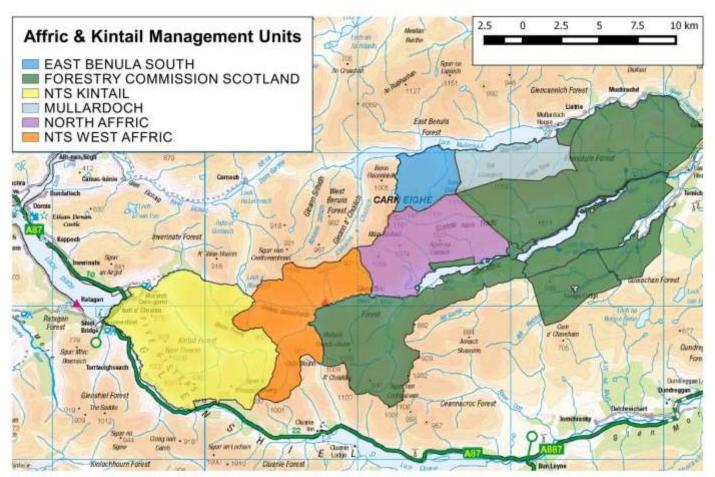
The Group is made up of 8 main management units (Figure 2).

- East Benula South Estate
- Mullardoch Estate
- North Affric Estate
- NTS West Affric & NTS Kintail Estate (The National Trust for Scotland)
- National Forest Estate (NFE) South Affric, NFE Fasnakyle, NFE Strathglass: all managed by Forest Enterprise Scotland (FES).

The NFE Strathglass management unit is entirely deer fenced and there are other areas of fenced woodland on the lower ground but deer movement is largely unconstrained between properties throughout the open range of the group.

Combinations of land use objectives and priorities vary from property to property throughout the DMG management area but as a whole Conservation is a common and strongly shared focus of all. Further information on individual management units is contained in contained in Sections 17 to 23.

Figure 2: Affric & Kintail Management Units



Data produced by Scottish Natural Heritage. Contains Ordnance Survey data © Grown copyright and database right [2015]

1.1.3 Sustainable Deer Management and the Public Interest

The management of red deer at a landscape population level as set out in the <u>Code of Practice on Deer</u> <u>Management</u> (The Deer Code) requires a collaborative approach. Deer are regarded as a natural resource and as such all those who manage them have a 'responsibility' to:

- manage deer as a resource sustainably;
- minimise negative deer impacts on public interest;
- safeguard deer welfare.

The land management objectives of members of the DMG currently contribute to delivering a wide range of public benefits as set out in The Deer Code. This plan will demonstrate how the DMG is currently contributing to sustainable deer management and will identify further opportunities for the DMG to deliver the Public Interest.

1.1.4 The purpose of the Collaborative Land Management Plan

The overall purpose of this Collaborative Land Management Plan (CLMP) is to provide:

- An agreed framework for the management of wild deer and habitat improvement in the area covered by the Group;
- An agreed set of actions to deliver the public interest associated with sustainable deer management;
- An agreed pattern of arrangements to ensure that the actions are implemented and their effectiveness monitored.

1.1.5 DMG Vision Statement

• The vision of the Affric and Kintail DMG is to maintain a healthy deer population at a density which recognises habitats in good condition, which maintains jobs and supports the local economy and which provides a range of positive benefits both to those living locally and to those visiting the area.

1.1.6 Collaborative Land Management Plan Structure

The Collaborative Land Management Plan (CLMP) consists of three main parts:

- **Part 1: Collaborative Land Management Plan Information.** This sets out background information and details the Public Interest relating to Deer Management in the local area. Information on individual management units is also contained here. A systematic review of the whole plan will take place at the end of 5 years.
- Part 2: Group Operation. Contains information relating to the Operation and Functioning of the DMG.
- **Part 3: The Working Plan:** The Working Plan will be reviewed at least twice annually. The Working Plan sets out the most up to date information on culls, counts and population targets as well as a summary of the specific actions (detailed in Part 1) that the Deer Management Group will undertake throughout the life of the plan This document will contain live population models which will be subject to continuous amendment.

1.1.6 Deer Management Plan Implementation

The plan will identify specific actions for the Group and targets to be delivered by 2021. These will be reviewed on an annual basis in the Working Plan. The DMG will use information gathered from habitat monitoring, population census and cull reporting to agree and set culls on an annual basis. Each management unit is committed to implementing the necessary culls to achieve this although it is accepted that there may be specific geographical areas within the Group area where deer management requires to be focussed.

The Group are committed to working collaboratively to achieve deliver the objectives of the plan and will meet regularly to discuss deer management and issues that arise in the local and wider area. This Plan will therefore take account of all land management interests as well as those of other Statutory Organisations and the wider public interest.

1.1.7 Deer Management Adoption and Consultation

This is the third 5-year plan that the Group has agreed and delivered. This Collaborative Land Management Plan has been formally adopted by all the Members of the Group and will run from 2016 to 2021. It has been through a consultation process and a copy of the current CLMP has been given to the local Community Councils.

The Group previously had a Deer Management Plan (Putman, 2011) that ran from 2011 to 2016. The previous plan contains a wealth of detailed ecological and geological information about individual management units that is still relevant to the Group. Rather than duplicate this information, the current plan will therefore make reference to the previous plan throughout.

1.2. Deer Populations, Movements and Management

1.2.1 Deer Populations

- Red deer (*Cervus elaphus*): The available range for Red Deer throughout the area amounts to approximately **27,508** ha. Aside from the grazing of around 1000 sheep on NTS Kintail, red deer provide the main grazing impact over the hill ground.
- Roe deer (*Capreolus capreolus*): Roe Deer (*Capreolus capreolus*) are widespread but at lower density and with a discrete, patchy distribution.
- Fallow Deer (Dama dama) are not currently present within the DMG area.
- Sika deer (*Cervus nippon*) are considered to be established within the NFE Strathglass management unit. There have also been reports of the occasional sika to the west of the Group.

In order that culls can be set to achieve a target density that enables all objectives of the Group to be met, it is essential to be able to estimate the current deer population. The last full deer count of the whole South Ross DMG was carried out in 2010, although the most recent count of the DMG was in 2015 (Figures 3, Table 1 and Figures 4a & 4b). It should be noted that the increase in stag and hind numbers on Kintail in 2015 (Figure 4a and 4b) is thought to have arisen from the erection of a deer fence on a neighbouring property within Glenelg DMG.

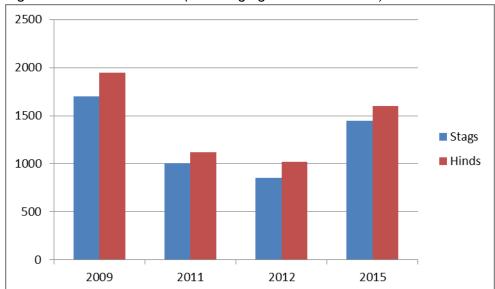


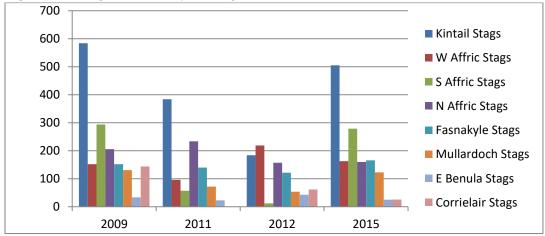


Table 1: Helicopter Counts

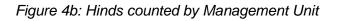
		A & K Totals (including Corrielair)											
Count Type	Year	Stags	Hinds	Calves	Total	Density							
Heli Count													
(Unclassified)	2009	1697	1950	627	4274	15.5							
Partial													
Count*													
(Unclassified)	2011	1006	1123	335	2464	9.0							
Heli Count	2012	853	1020	337	2210	8.0							
Heli Count	2015	1447	1602	499	3548	12.9							

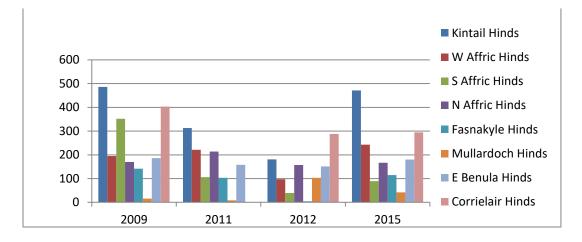
(*Note: Corrielair was not counted in 2011)





Part 1: Affric & Kintail CLMP Background Information 13/4/17 Page 9





1.2.2 Deer Movements

One of the main considerations for the Group is to keep under review temporal deer densities and deer movements that may occur throughout the life of this plan as a result of fencing or changes in deer management activity, particularly increased culling activity.

The deer population is largely geographically contained within the group boundary to the north-east, but there are movements of deer between NTS Kintail, NTS West Affric and properties to the north. The Group therefore continues to maintain on-going communication with the neighbouring Estates of Inverinate, (which manages Inverinate and West Benula) and Glen Cannich. There is also movement to the east (to/from Glen Shiel and Cluanie).

It is recognised that there is considerable movement of deer with members of Glen Moriston DMG to the south of the group area, in particular Corrielair Estate.

As a result of these deer movements, Corrielair and Inverinate figures will be included initially in population modelling for this plan. Future population models however may incorporate other properties in Glen Moriston DMG as appropriate. To ensure a landscape collaborative approach to deer management, the Group therefore maintains active communication, engagement and cooperation with all neighbouring DMGs and estates in the area.

Given that some of the properties in this DMG and immediate neighbours wish to continue to utilise deer as a resource (East Benula South, North Affric as well as Inverinate and Corrielair), determining the overwintering areas of stags will be an important element of this plan. Whilst overwintering areas provide essential shelter for deer generally, there is a risk of localised impacts to natural heritage as well as agricultural/crofting interests through temporal concentrations of deer. Figure 4a shows the relative importance of NFE South Affric and Kintail as current stag wintering ground.

1.2.3 Deer Culls

Cull data have been recorded consistently for the last 10 years (Table 2, 3a &3b, Figure 4). The cull figures for NFE Strathglass have not been included in the Open Range Cull figures, as this management unit is deer fenced and considered to be a separate population from the open range Red deer population.

Table 2: Group and Individual Property Culls.

	То	otal Ope	n Range	Cull			Tota	al Cull	
	Stags	Hinds	Calves	Total		Stags	Hinds	Calves	Total
2005-2006	304	349	110	763	2005-2006	465	444	158	1067
2006-2007	267	292	96	655	2006-2007	397	364	136	897
2007-2008	283	362	121	766	2007-2008	445	436	160	1041
2008-2009	242	301	93	636	2008-2009	405	355	129	889
2009-2010	332	508	193	1033	2009-2010	375	558	211	1144
2010-2011	505	465	153	1123	2010-2011	764	541	195	1500
2011-2012	236	363	86	685	2011-2012	424	426	114	964
2012-2013	206	317	102	625	2012-2013	359	410	155	924
2013-2014	225	320	109	654	2013-2014	383	403	161	947
2014-2015	248	345	111	704	2014-2015	516	461	171	1148
2015-2016	247	313	99	659	2015-2016	353	389	137	879

Figure 4: Historic Group Deer Culls

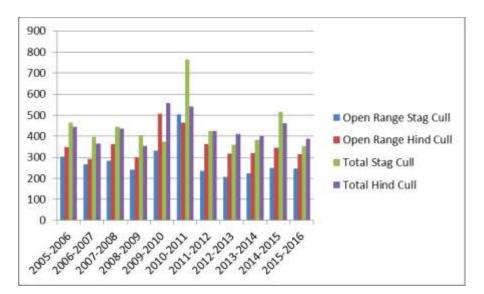


Table 3a: Individual Management Unit Culls

		Corr	ielair		East	b Beni	ula So	outh			Kintai	I			We	st Af	fric			Mu	llardo	och			North	Affrio	C
	s	н	С	т	s	н	С	т	SIN	S OUT	н	С	т	SIN	S OUT	н	с	т	SIN	S OUT	н	С	т	s	н	С	т
2005-2006	24	56	14	94	16	27	14	57	84	0	80	24	188	40	0	52	10	102	19	12	9	11	51	42	35	16	93
2006-2007	17	51	22	90	9	27	9	45	83	3	56	13	155	34	2	35	11	82	19	12	7	6	44	38	44	15	97
2007-2008	14	47	20	81	14	33	14	61	81	19	105	34	239	34	0	51	16	101	12	15	12	6	45	42	31	11	84
2008-2009	16	24	4	44	11	47	34	92	66	33	87	15	201	39	0	57	16	112	17	1	5	2	25	0	0	0	0
2009-2010	20	29	15	64	20	56	28	104	110	8	92	40	250	40	0	78	23	141	10	2	7	3	22	35	39	12	86
2010-2011	18	43	16	77	13	36	16	65	98	8	72	25	203	33	27	73	30	163	7	2	4	5	18	30	30	5	65
2011-2012	19	42	17	78	12	21	6	39	75	0	39	9	123	28	0	54	8	90	11	0	6	0	17	28	50	10	88
2012-2013	18	41	10	69	15	25	11	51	45	0	39	7	91	24	0	45	9	78	9	0	3	3	15	21	31	7	59
2013-2014	21	42	28	91	17	25	7	49	45	0	35	7	87	25	0	42	9	76	12	0	5	3	20	23	30	5	58
2014-2015	17	44	24	85	11	25	8	44	50	0	41	5	96	25	0	51	10	86	14	0	5	3	22	20	30	6	56
2015-2016	17	29	7	53	13	21	9	43	80	0	44	4	128	40	0	80	14	134	11	0	5	0	16	18	28	10	56

Table 3b: Individual Management Unit Culls

	NF	E Fas	naky	le	NF	EGlea	ann N	a Cic	he		NF	E Sou	th Aff	ric			NF	E Stra	thgla	SS			NFE A		
	S	Н	С	т	SIN	S OUT	н	С	т	SIN	S OUT	ΗIN	H OUT	С	т	SIN	S OUT	ΗIN	Н ОЛТ	С	Т	S	Н	С	т
2005-2006	16	44	10	70	0	0	0	0	0	46	5	46	0	11	108	86	75	58	37	48	304	0	0	0	0
2006-2007	15	32	12	59	0	0	0	0	0	33	2	39	1	8	83	57	73	47	25	40	242	0	0	0	0
2007-2008	17	36	10	63	0	0	0	0	0	34	1	43	4	10	92	39	123	46	28	39	275	0	0	0	0
2008-2009	23	38	9	70	0	0	0	0	0	34	2	41	2	13	92	43	120	21	33	36	253	0	0	0	0
2009-2010	30	84	41	155	0	0	0	0	0	57	0	123	0	31	211	43	0	50	0	18	111	0	0	0	0
2010-2011	27	52	16	95	53	0	0	0	53	49	140	138	17	40	384	62	197	45	31	42	377	0	0	0	0
2011-2012	31	46	10	87	20	0	0	0	20	11	1	99	6	26	143	66	122	26	37	28	279	0	0	0	0
2012-2013	26	30	5	61	34	0	2	7	43	13	1	100	1	43	158	39	114	56	37	53	299	0	0	0	0
2013-2014	24	38	9	71	22	0	0	0	22	30	1	103	0	41	175	28	130	47	36	52	293	5	0	0	5
2014-2015	24	34	9	67	1	32	11	1	45	50	0	100	0	45	195	31	237	60	56	60	444	4	4	0	8
2015-2016	9	24	5	38	32	0	0	0	32	1	0	80	0	50	131	106	0	76	0	38	220	26	2	0	28

1.2.4 Other herbivores

Over the last 30 years, sheep numbers over the whole DMG area have been reduced significantly and now only NTS Kintail has grazing sheep (approximately 1000) along with some goats that access the open hill. Otherwise, red deer are the main grazing herbivore throughout the DMG area.

1.3 Actions to develop mechanisms to manage deer

1.3.1 Background

- To manage deer populations at a landscape scale a collaborative approach is required and the need to negotiate and compromise may be necessary.
- This requires a Deer Management Group to be functioning effectively, to be inclusive and to operate in the spirit of openness and transparency. The Association of Deer Management Groups (ADMG) has provided some guiding principles through the <u>ADMG Benchmark</u>.
- Affric and Kintail DMG is made up of 8 main management units (three of which are managed by Forest Enterprise Scotland and two by National Trust for Scotland) who are regularly represented at meetings. Management units are a mixture of public, private and NGO owned land and are managed for a wide range of objectives. On several properties deer are managed as a resource, however all properties share a common conservation objective.
- Deer have the potential to impact (positively and negatively) on these objectives and collaborative deer management at a landscape level is essential in order for the objectives of the whole Group to be met. To achieve an overall target population density that delivers sustainable deer management, it is essential to be able to estimate the current deer population. The last full helicopter count of the area was in 2015. The current population density in spring 2015 was estimated to be 12.9 deer per km2.
- Future management however will be informed through results of Habitat Monitoring carried out across the group as well as a whole Helicopter Deer Count for South Ross (scheduled for spring 2016).
- At a meeting in January 2016, members expressed an interest in monitoring the age structure of stags in order to ensure a continued availability of mature stags for let stalking. It was agreed that cull returns would include stag numbers categorised into age classes.
- Following <u>Best Practice Guidance</u> on age determination, the following age categories will be used:
 - 0 -24 months Calf and yearling
 - o 2 -4 Years Young
 - o 5 -7 Years Medium/Mature
 - o 8+ Years Old

1.3.2 Plan Objectives

- The Collaborative Land Management Plan (CLMP) should ensure that representation and Membership of the Deer Management Group enables integration of different land-uses at a local level.
- The planning process should also be consultative, transparent and open.

1.3.3 Current Delivery.

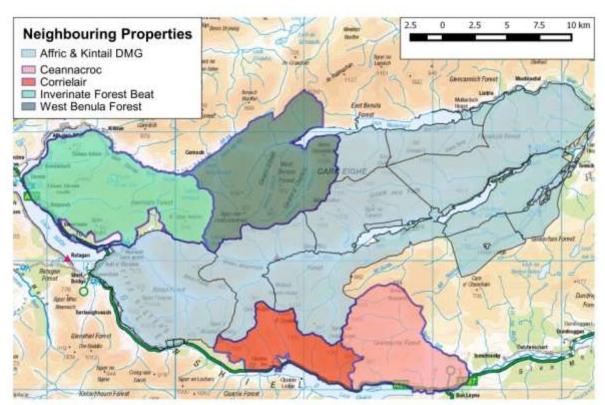
- Affric and Kintail DMG has a <u>Web Site</u> and a summary of the group information can be found on the <u>Association of Deer Management Groups</u> (ADMG) web site.
- DMG currently works in Partnership with Government Agencies (SNH & FCS) and the Local Community.
- All the deer management units in the current Affric and Kintail area are members of DMG.
- Two meetings were held with representatives of Glen Moriston DMG in 2015 to discuss opportunities for closer future cooperation and collaboration between the two Groups. As a result cull and count data from Corrielair (Figure 5) will be incorporated into future management decisions for this Group. Representatives of the Group also attend meetings of the neighbouring DMGs. This provides a mechanism for discussing landscape-wide deer management issues.
- DMG meets bi-annually and Group Members report on previous culls, and discuss and agree future culls.
- The DMG is represented at annual meetings of the South Ross Deer Management Liaison Group which provides an informal overview of deer management across the 5 groups which used to make up the South Ross DMG.

Actions to develop mechanisms to manage deer	When?	Who?	How?
Group will meet quarterly.	March, June, September & November Annually	DMG Members	Group will meet in March (to discuss previous hind cull), June (to discuss count information and agree stags culls), September (to discuss stags culls and agree hind culls), November (to discuss on- going culls).
Final Plan and Minutes of Meetings will be made publically available and published on DMG Website.	By Spring 2016 and ongoing	DMG Secretary	DMG Website.
Repeat DMG Assessment.	By Spring 2016 and ongoing	DMG Chair and Secretary	Use baseline DMG Assessment carried out in 2014.

1.3.4 Targets to be delivered by 2021

Working plan will be reviewed and updated annually. Management actions will be	Annually	DMG Secretary	Provision of data from DMG members in advance of and during Bi-annual meetings. Secretary will
adjusted and agreed accordingly. An annual report will be produced.	, unidelity	and DMG Members	update Working Plan and produce an Annual Report to be published on the DMG Website.
Culls will be delivered and reported on accurately. Cull targets will set and agreed based on information relating to habitat condition, population census, deer welfare and any other relevant information (i.e. where deer are impacting negatively on the Public Interest).	Annually	DMG Members	Population models will be updated annually and cull targets set, agreed and delivered according.
The helicopter count conducted in 2016 will be repeated in Year 3.	Spring 2019	Chair & DMG Members	DMG will ensure adequate resources in place for repeat helicopter count in 2019 and liaise with neighbouring DMGs to coordinate count at the same time if possible.
Recruitment counts will be carried out annually.	Ideally first two weeks in April but by May.	DMG Members	Stalkers will undertake sample counts of groups of deer recording stags, hinds and calves.
Larder data to be included.	Annually at March meeting	DMG Members	FES Template data sheet to be used. Members to record reproductive data (ie sex of calves and sex of foetus, pregnant hinds), average carcass (larder) weight of hinds and stags, aging of stags into four categories, cull grid references. Stags aged as Calf and yearling, Medium/Mature and Old.
Group will carry out a review of deer movements within the DMG and contribute to wider discussions on deer movements within the wider South Ross area.	Autumn 2016	DMG Members	Deer count data from 2016 and 2019 will be reviewed by the DMG and by wider South Ross DMGs. DMG boundaries will be reviewed and amended if necessary.
DMG will liaise with Glen Moriston DMG and Lochalsh DMG to carry out a review of current DMG boundaries and membership of respective DMGs following the deer count in 2016.	Autumn 2016	DMG Chair and Chair of Glen Moriston DMG	DMG Chairs will consult with membership to review current DMG boundaries.

Figure 5: Neighbouring properties to Affric & Kintail DMG



Data produced by Scottish Natural Hentage. Contains Ordnance Survey data (© Crown copyright and database right [2015]

1.4 Actions for the delivery of designated features into Favourable Condition

1.4.1 Background

- It is expected that DMGs will contribute to the Scottish Government target of achieving 80% of designated features in Favourable or Unfavourable Recovering condition by 2016 by facilitating the reduction of herbivore impacts where this is contributing to the unfavourable condition.
- The Group area is very heavily designated, containing a number of high profile sites of national importance (Figure 6). Deer management is potentially relevant to many of these. A total of 10,502.9 ha (32% of the Group Area) is designated as Strathglass Complex Special Area of Conservation (SAC) and as Glen Affric Site of Special Scientific Interest (SSSI) covering 2262.3 ha and Affric-Cannich Hills SSSI covering 8240.52 ha.
 - Part of the area is designated under the Glen Affric to Strathconon Special Protection Area (SPA).
 - Much of the area falls within Glen Affric National Scenic Area (NSA) and also Kintail National Scenic Area.
 - Glen Affric is a National Nature Reserve (14,360 ha)
- All management units within the DMG have at least one designation (Table 4) with one management unit (NFE Fasnakyle) having six.

Table 4: Designated sites by Management Unit

- Strathglass Complex SAC has extensive northern Atlantic wet heaths and is especially notable for the extensive development of a northern form of wet heath at high altitude. These have abundant Cladonia lichens, woolly fringe-moss Racomitrium lanuginosum, alpine bearberry Arctostaphylos alpina, dwarf birch Betula nana and crowberry Empetrum nigrum. It has the second-largest area of Alpine and Boreal heaths after the Cairngorms and the largest extent of the Alpine and Boreal heaths in the north-west Highlands.
- Strathglass is the best representative of Sub-Arctic Salix spp. scrub Salix lapponum Luzula sylvatica scrub. This occurs in a series of localities in two widely separated corries, and scattered plants also occur in a few other places. The main occurrences are on ungrazed rock ledges, on steep rocky ground (including boulder fields) and on open slopes, where the willows are heavily grazed.
- The Affric-Cannich Hills within Strathglass Complex have the second-largest extent of Siliceous alpine and boreal grasslands in the UK, and are representative of the habitat type in the north-west Highlands.
- The Caledonian forest areas in Strathglass Complex are some of the largest remaining intact stands of native pinewood in Scotland. Glens Strathfarrar and Affric are the most important pinewoods in the UK for the epiphytic lichen communities they support. A number of nationally rare lichen species occur in the woods, including *Bryoria furcellata* and *Pannaria ignobilis*. Birds typical of Caledonian forest, including capercaillie *Tetrao urogallus* and Scottish crossbill *Loxia scotica*, are represented.

1.4.2 Plan Objectives

- The CLMP will incorporate agreed management actions to manage deer impacts in order to achieve 95% Favourable Condition across the SAC/SSSI conservation (habitats/plants) features. The DMG will monitor and review progress.
- The CLMP will incorporate agreed any future management actions for the National Scenic Areas that may influence deer management.

1.4.3 Current Delivery

- There are a total of 22 designated features within the Group area. Of these 20 or **91% are in** Favourable/Unfavourable Recovering condition (Table 6).
- There are 2 in 'Unfavourable' condition where herbivore impacts are considered to be a contributing factor to the site condition (see Table 6).
- Site Condition Monitoring (SCM), which includes assessment of deer and their impacts, has been
 undertaken by SNH over the past decade on Strathglass Complex SAC or parts of it. The most
 recent assessment of features was in 2009. There are no sheep on the open hill within the DMG
 area therefore all herbivore impacts are attributed solely to deer. The SAC covers East Benula
 South, Mullardoch, North Affric, FCS Fasnakyle, and FCS Strathglass (Table 4).
- The SSSI native pinewood feature (Mullardoch) has not been recently formally assessed but Estate is in discussion with FCS.

1.4.4 Monitoring Results Strathglass Complex SAC

- An assessment of 5 upland habitats was undertaken by Headley in 2009 (Tables 2, 3 & 4).
- Overall 50% of impact levels across the whole site fall within Low to Low/Moderate.
- Dry and wet heath and Blanket Bog show the highest levels of impact.
- The percentage of impacts falling into the Low-Low/Moderate impact class for management units within Affric and Kintail DMG were:
 - NFE Fasnakyle 76%
 - Mullardoch -76%
 - North Affric 65%
 - East Benula South (Syndicate) 36%

Table 4: Designations and Management Units

			DI	IG Designatio	ns		
Management Unit	Strathglass Complex SAC	Affric & Cannich Hills SSSI	Glen Affric SSSI	Glen Affric to Strathconon SPA	Glen Affric NNR	Glen Affric NSA	Kintail NSA
East Benula South	✓	\checkmark					
NFE Fasnakyle	✓	\checkmark	\checkmark	✓	\checkmark	\checkmark	
NFE South Affric					\checkmark	\checkmark	
NFE Strathglass	✓		\checkmark	✓	\checkmark	\checkmark	
Mullardoch	✓	\checkmark					
North Affric	✓	\checkmark				\checkmark	
NTS Kintail							\checkmark
NTS West Affric						\checkmark	

Table 5a. The total number and percentage of sample plots in each impact class for overall, grazing, trampling and dunging impacts for all habitat surveyed in 2009 (Headley)within the Strathglass Complex SAC.

Impact Class	Overall		Grazing		Tramplin	g	Dunging	
inipact Class	Number	%	Number	%	Number	%	Number	%
High	98	11	141	16	130	14	77	10
High/Moderate	77	8	84	9	88	10	179	22
Moderate	282	31	269	30	213	23	141	18
Moderate/Low	160	18	150	17	259	29		
Low	288	32	252	28	215	24	406	51
Total	905		897		905		803	
Indeterminate/not assessed	0		9		0		102 (flushes)	

Table 5b. The number of sample plots in each overall herbivore impact class for each of the five habitats assessed in 2009 (Headley). Numbers in parentheses are % of total for the habitat.

Habitat	Overall h	erbivore impact				Total
	High	High/Moderate	Moderate	Moderate/Low	Low	TOLAT
Alpine heaths	4 (2)		3 (2)		157 (96)	164
Blanket bog	19 (8)	31 (14)	115 (51)	14 (6)	46 (20)	225
Dry heaths	24 (14)	18 (10)	45 (25)	74 (42)	16 (9)	177
Flushes	6 (6)	6 (6)	39 (38)	14 (14)	37 (36)	102
Wet heath	45 (19)	22 (9)	80 (34)	58 (24)	32 (14)	237
All habitats	98	77	282	160	288	905

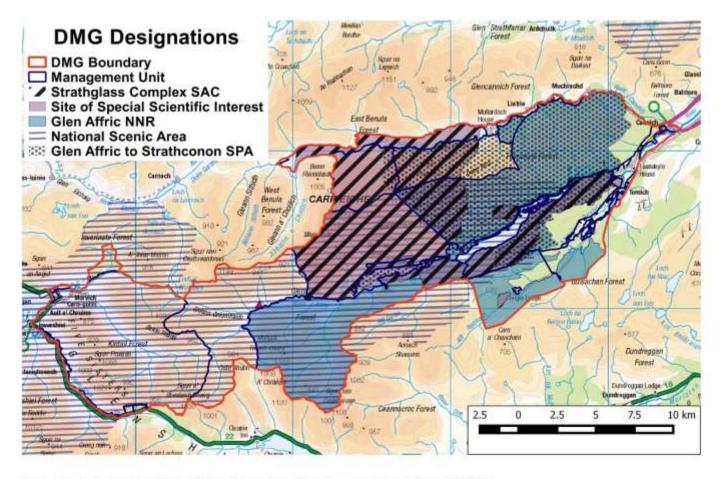
Table 5c. The number of sample plots in each overall herbivore impact class in 2009 (Headley) for each of the management units within the Strathglass Complex SAC. Numbers in parentheses are % of total for the management unit.

Management	Overall herbivore impact					
unit	High	High/Moderate	Moderate	Moderate/Low	Low	Total
Braulen	11 (10)	4 (4)	42 (37)	21 (18)	36 (32)	114
East Benula	31 (31)	17 (17)	37 (38)	5 (5)	9 (9)	99
FCS	1 (1)	1 (1)	24 (22)	27 (25)	55 (51)	108
Glen Cannich	9 (7)	12 (9)	34 (26)	24 (18)	54 (41)	133
Mullardoch	2 (2)	0 (0)	29 (23)	52 (41)	45 (35)	128
North Affric	7 (8)	1 (1)	24 (27)	14 (16)	44 (49)	90
Pait	6 (8)	14 (18)	47 (61)	3 (4)	7 (9)	77
Syndicate	14 (16)	19 (22)	23 (26)	11 (13)	20 (23)	87
West Benula	17 (25)	9 (13)	22 (32)	3 (4)	18 (26)	69
All management units	98	77	282	160	288	905

1.4.5 Deer Management Actions

- Four properties with the DMG (NFE Fasnakyle, Mullardoch, North Affric and East Benula South) have been working with SNH to reduce deer numbers to agreed hind numbers within the SAC boundary. The last deer count in March 2015 showed a density of **11.75 deer per km2**.
- Forest Enterprise Scotland have implemented a Designated Sites Management plan (2011 -2016) which sets out management actions specifically aimed at improving the condition of Pine Woodland and Open Habitat designated features.
- Mullardoch Estate is discussing the erection of additional exclosures with FCS/SNH which would move the site towards 'Unfavourable Recovering' status.

Figure 6: DMG Designations



Data produced by Scottish Natural Heritage. Contains Ordnance Survey data © Grown copyright and database right [2015]

1.4.6 Targets to be delivered by 2021

Actions for the delivery of designated features into Favourable Condition	When?	Who?	How?
Strathglass Complex SAC: Current action underway to maintain "Unfavourable Recovering" Condition status of features according to management targets agreed with SNH. Group to discuss management actions for Mountain Willow Scrub to bring into Unfavourable Recovering condition.	2016 and On-going	East Benula South, NFE Fasnakyle, Mullardoch, North Affric	Repeat HIA (summer 2016) and deer count information (spring 2016) will be used to inform on- going deer management. Current agreement with SNH to achieve hind population targets on SAC.
Affric and Cannich Hills SSSI: Current action underway to maintain "Unfavourable Recovering" Condition status of Upland Assemblage features according to management targets agreed with SNH.	2016 By 2021	East Benula South, NFE Fasnakyle, Mullardoch, North Affric & SNH	Members will use 2016 SAC Habitat Assessment results (to be conducted by SNH) to inform management. Individual members will discuss and implement agreed management with Agencies including use of Agri-Environment Climate Schemes through SRDP.
Affric and Cannich Hills SSSI: Members to work with SNH and Forestry Commission Scotland to implement "appropriate management" on the 'Unfavourable' Native Pinewood feature. Woodland monitoring to be implemented.	By 2017	Mullardoch & SNH/FCS	Individual members will discuss and implement agreed management with Agencies including use of Forestry Grant Schemes through SRDP. Any proposed use of fencing will be discussed with the DMG. Mullardoch to implement woodland monitoring
Glen Affric SSSI: to implement actions to maintain 'Favourable' Condition of features.	Ongoing	FES	FES will implement actions set out in the Designated Sites Action Plan (2011 to 2016).
In areas where Designated Sites are believed to be under threat, to foster cooperation between neighbouring estates to manage deer numbers and densities as appropriate.	Ongoing	All DMG Members	Deer managers will communicate on an on-going basis with regards to deer movements and identify opportunities for collaborative management.
Properties to continue to target deer management on sensitive areas to reduce localised impacts.	Ongoing	DMG Members	Deer managers will use local knowledge to target deer management where required.
Consider impact of future deer management activities (i.e. fencing) on Designated Sites.	DMG Members	On-going	Through formal consultation process.

Table 6: Designated Site Feature Condition

Designation	Site	Feature	Condition Status
SSSI	Affric - Cannich Hills	Native pinewood	Unfavourable
SSSI	Affric - Cannich Hills	Upland assemblage	Unfavourable Recovering Due to Management
SSSI	Glen Affric	Native pinewood	Favourable
SSSI	Glen Affric	Lichen assemblage	Favourable
SSSI	Glen Affric	Dragonfly assemblage	Favourable
SSSI	Glen Affric	Breeding bird assemblage	Favourable
SAC	Strathglass Complex	Bog woodland	Favourable
SAC	Strathglass Complex	Caledonian forest	Unfavourable
SAC	Strathglass Complex	Dry heaths	Unfavourable Recovering Due to Management
SAC	Strathglass Complex	Wet heathland with cross-leaved heath	Unfavourable Recovering Due to Management
SAC	Strathglass Complex	Plants in crevices on base-rich rocks	Favourable
SAC	Strathglass Complex	Tall herb communities	Unfavourable Recovering Due to Management
SAC	Strathglass Complex	Plants in crevices on acid rocks	Favourable
SAC	Strathglass Complex	Acidic scree	Favourable
SAC	Strathglass Complex	Alpine and subalpine heaths	Unfavourable Recovering Due to Management
SAC	Strathglass Complex	Montane acid grasslands	Favourable
SAC	Strathglass Complex	Mountain willow scrub	Unfavourable
SAC	Strathglass Complex	Blanket bog	Unfavourable Recovering Due to Management
SAC	Strathglass Complex	Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels	Favourable
SAC	Strathglass Complex	Otter (Lutra lutra)	Favourable
SPA	Glen Affric to Strathconon	Golden eagle (Aquila chrysaetos), breeding	Favourable
SSSI	Affric - Cannich Hills	Moine	Favourable

1.5 Actions to manage deer to retain existing native woodland cover and improve woodland condition

1.5.1 Background

- Total area of native woodland in Scotland is 311,153 ha. The Native Woodland Survey of Scotland (NWSS) was published in 2014. This maps non-designated native woodland cover, reports condition and highlights herbivore impacts which threaten medium to long term condition of these important woodlands.
- <u>Wild Deer- A National Approach (WDNA)</u> and the <u>2020 Challenge for Scotland's Biodiversity</u> has set a national targets that 60% of native woodlands should be considered to be in "satisfactory condition" by 2020 and that approximately 10,000 ha of native woodland should be in satisfactory condition through Deer Management Plans.
- The NWSS has identified 5450 ha of native woodland within the Group (Figure7). This represents 1.75% of the total area of native woodland in Scotland.

1.5.2 Plan Objectives

- DMG Members will implement management to reduce the proportion of native woodland area identified within the 'High' and 'Very High' categories of herbivore impact in order to contribute to targets set by Scottish Government Agencies.
- The CLMP will identify all existing woodland and its condition (including Riparian Woodland) and will consider actions for the next 5 years to ensure that the long term woodland objectives can be met.

1.5.3 Current Delivery.

- According to the survey, 45% percent of the herbivore impacts from NWSS were considered to fall in the <u>Low to Medium impact</u> category within the DMG (Table 7).
- 97% of native woodland within the DMG area falls on the National Forest Estate. FCS are responsible for an ongoing programme of monitoring of woodland condition and deer populations within woodland (using dung counting methodology).
- Approximately **1479.81 ha** of native woodland thought to have Very High identified on the National Forest Estate has been deer fenced within the Strathglass management unit.
- A further area of **119.59 ha** of native woodland thought to have High impacts from the survey identified on NFE South Affric has also been fenced.
- Assuming impacts have been reduced within enclosures, this would bring the total native woodland in Low –Medium impact category to 4058.4 ha (**74.5%**).
- In 2008 Strath Caulaidh Limited undertook a baseline habitat impact survey on the open range plots in South Affric, which was repeated in 2012. The survey involved measuring a number of indicators including presence of montane scrub bushes, natural tree natural regeneration distribution and density, regenration tree height. Presence of target montane scrub was low on both visits (<2%). Approximately 25% of transects had tree natural regenration present in 2008. These were found mainly at low altitudes. A slight rise was apparent in 2012 to c. 27%. The density of tree regeneration was low in 2008 (20 tree/ha) and showed little clear change by 2012. The mean height of regenerating trees was c. 28cm in 2008 and remained very low in 2012 (c.25cm).

Table 7: Summary of Native Woodland Survey for Scotland Herbivore Impacts

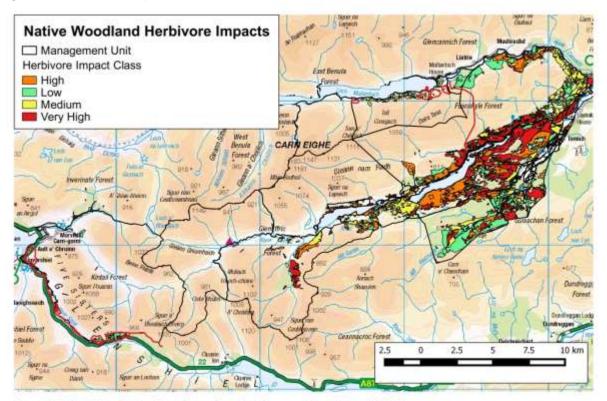
Management Unit	Very High	High	Medium	Low	Total
East Benula South		1	1		2
NFE Glen Affric	1601	1346	1199	1133	5279
NTS Kintail	15	18		46	79
Mullardoch		1	69	1	71
North Affric	8	1	9		19
Total	1624	1366	1279	1180	5449

1.5.4 Targets to be delivered by 2021

Actions to manage deer to retain existing native woodland cover and improve woodland condition	When?	Who?	How?
FES will continue to reduce deer numbers to less than 7 deer per km2 within the fenced exclosures in order to achieve good condition in its native woodlands.	By 2021	FES	FES will use their own monitoring of herbivore impacts as well as woodland population census/utilisation methodology to inform on-going management.
For properties with SRDP Natural Regeneration Schemes in place, provide evidence of woodland condition in the form of an appropriate survey report if available.	Year 3	DMD Members	Woodland Survey reports.
To use ECAF bid to undertake a review of native woodland condition in the Group area (including Riparian woodland), consolidating existing survey reports and implementing woodland herbivore impacts assessment monitoring protocols where required. See monitoring Schedule in Working Plan.	Year 3	DMG Members & Consultant	Subject to successful ECAF bid, delivery of DMG Native Woodland Review Report and recommended actions.
To implement management to reduce negative impacts including useof Forestry Grant Schemes where practical and appropriate.	By 2021	SG Members	Monitoring results used to inform management actions. Entry into SRDP Schemes.
FES will implement the Land Management Plan for Upper Beauly (2010 to 2020)	By 2020	FES	FES will consult with DMG on the deer management implications of actions to deliver the LMP.
FES to collaborate with the DMG to implement a regeneration/extension programme for Montane Willow colony on NFE South Affric.	By 2021	FES	FES will consult with DMG on the deer management implications for any future Montane Willow regeneration programme within Gleann nan Ciche.

Part 1: Affric & Kintail CLMP Background Information 13/4/17 Page 25

Figure 7: Herbivore Impacts on Native Woodland (NWSS Data)



Data produced by Scottish Natural Heritage. Contains Ordnance Survey data () Crown copyright and database right [2015]

1.6 Actions to demonstrate DMG contribution to the Scottish Government woodland expansion target of 25% woodland cover.

1.6.1 Background

- Woodland and forest covers over 1.3 million ha in Scotland (around 16% of Scotland).
- The Scottish Government woodland expansion target of 25% woodland cover will require 10,000 ha of woodland per year to be created.
- The DMG network area covers some 3,249,442 ha with significant opportunity to contribute to the delivery of this target through identifying areas for further woodland creation and managing deer impacts to allow for successful establishment of new woodland. Priority should be given to expansion opportunities where this improves habitat networks. It is expected that DMGs will be proactive in contributing to this target.
- The Plan assumes that the state of deer fences remains constant. Members are encouraged to report any changes in fencing policies, particularly those which will affect the free movement of deer between estates.

1.6.2 Plan Objectives

- Plan will identify all new woodland in last 5 years (Rural Development Contracts) and beyond (WGS & SFGS) and any new proposals likely to be adopted during the life of the plan.
- Plan will consider future impact of woodland expansion and timetable for removal/erection of fences and possible expansion/reduction of deer range, where there may be changes in deer densities or movements as a result.

1.6.3 Current Delivery.

- Woodland habitat covers around **5430 ha** (Table 8, National Forest Inventory Data) which represents around **16.4%** of the Group area. This includes both native woodland and commercial woodland.
- Over the last 15 years **2338 ha** of woodland has been newly created across the whole Group through Woodland/Forestry Grant schemes that cover over **5400 ha** (see Figure 8 and Table 9).
- In the next 5 years of the plan, a further **75 ha** of native woodland will created.

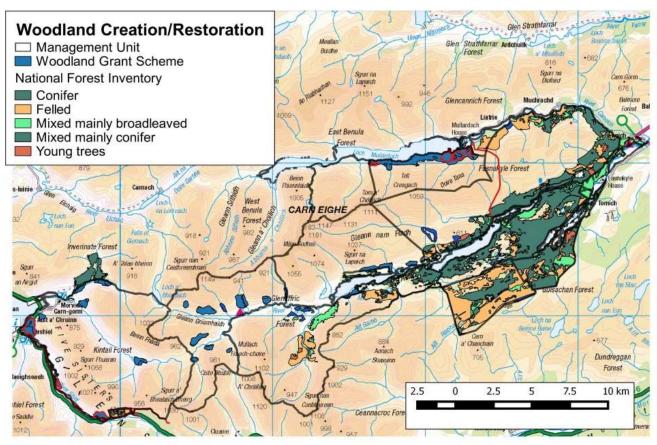
National Forest Inventory Woodland Type (ha)								
					Mixed	Mixed		
	Assumed			Low	mainly	mainly	Young	
	woodland	Broadleaved	Conifer	density	broadleaved	conifer	trees	Total
East Benula South		1						1
NFE Glen Affric	207	542	2726	22	207	816	137	4657
NTS Kintail	169	36	4		0		11	221
Mullardoch	208	44	12	33	10			307
North Affric	8	8	4				2	23
NTS West Affric	219						2	220
Total	811	632	2746	55	217	816	152	5429

Table 8: Summary of National Forest Inventory Data

1.6.4 Targets to be delivered by 2021

Actions to demonstrate DMG contribution to the Scottish Government woodland expansion target of 25% woodland cover.	When?	Who?	How?
FES will establish 45 ha of new native woodland at Allt a' Chomlain, South Affric.	2017	FES	New fenced exclosure completed in 2015.
FES will establish a new montane woodland at Fasnakyle (30 ha)	By 2021	FES	15 ha to be completed in 2016/17. A second exclosure will be completed by 2021.
FES will increase the rate of regeneration in the Glean nan Ciche exclosure.	By 2021	FES	FES will ensure herbivore impacts are minimised within the exclosure.
FES will continually look for opportunities to expand native woodland and improve habitats across all NFE management units.	Ongoing	FES	FES will keep the DMG informed of any new woodland expansion proposals and of progress with existing projects.
To inform the DMG about any future woodland proposals and incorporate in the CLMP - taking account of potential implications for deer management.	Ongoing	DMG Members	Members will circulate/present proposals to DMG for discussion.
DMG to use ECAF bid carry out a strategic review of potential opportunities for new woodland schemes using the Scottish Government's Forestry Strategy. Review will consider need from a DMG perspective ie shelter provision for deer population at landscape scale.	Year 2	DMG Members & Consultant	Subject to ECAF bid, delivery of DMG Woodland Expansion Report and recommended actions.

Figure 8: National Forest Inventory and Woodland Grant Schemes



Data produced by Scottish Natural Heritage. Contains Ordnance Survey data © Crown copyright and database right [2015]

Table 9: Summary of Woodland and Forestry Grant Schemes

	Approved for New	Approved for Restocking and/or	Scheme
Management Unit	Nat Regen	Management	Boundary
KINTAIL	103.41	178.6	899.7
MULLARDOCH		11.06	19.34
NFE GLEN AFFRIC	14.1	974.28	2497.37
KINTAIL	167.28	221.3	683.2
MULLARDOCH	225.14	58.7	1388.48
NORTH AFFRIC	7.5		87.1
WEST AFFRIC	68.88	308.24	577.91
Total	586.31	1752.18	6153.1

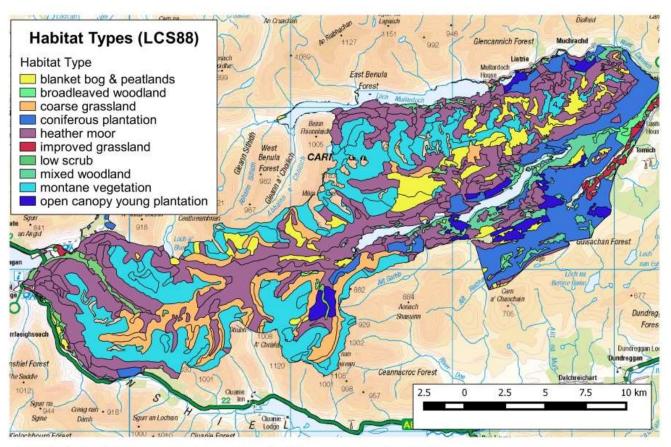
1.7 Actions to monitor and manage deer impacts in the wider countryside.

1.7.1. Background

- A summary table of the full extent of habitats per property across the DMG area is shown below in Table 10 (excluding woodland habitats).
- Blanket bog and peatland (which covers **2330 ha**) and heather moorland (dwarf shrub heath methodology) (covering over **11980 ha**) are two of the habitats that Scottish Natural Heritage have recommended upland deer managers monitor for herbivore grazing and trampling impacts (see Figure 9).
- Strathglass Complex SAC encompasses much of the east-west gradient that occurs in blanket bog north of the Great Glen. Both wet, oceanic blanket mire and the drier, more upland blanket mire occur extensively.
- The DMG will take responsibility for the monitoring of herbivore impacts on across the deer range and seek to manage these to contribute to wider ecosystem health.

	blanket					
	bog &	coarse	heather	improved	montane	smooth
Management Unit	peatlands	grassland	moor	grassland	vegetation	grassland
	To be					
EAST BENULA SOUTH	calculated		532		259	
NFE SOUTH AFFRIC	80	1021	1137		1601	37
NFE FASNAKYLE	1294	135	3208	1	373	36
KINTAIL	51	346	2780	45	217	331
MULLARDOCH	293		1298		1064	
NORTH AFFRIC	248	55	472		1394	
WEST AFFRIC	363	1356	2552		3110	
Total	2330	2912	11980	46	8016	404

Table 10: Habitat types by Property



Data produced by Scottish Natural Heritage. Contains Ordnance Survey data © Crown copyright and database right [2015]

1.7.2 Plan Objectives

Plan will seek to implement a programme of monitoring to assess herbivore impacts and manage those impacts within acceptable ranges (MacDonald et al 1998¹). Previous NTS surveys have used both the Joint Nature Conservation Committee's Common Standards Monitoring (CSM) guidance for upland habitats (JNCC 2009), and Macdonald et al 1988 methodology, however, the latest NTS report (Headley 2015) suggests that if the aim of the monitoring is to assess the impact of current grazing and trampling impacts on the various habitats then the method of MacDonald et al. (1998) should be used in preference to the CSM methods which gives an indication of the condition of the habitats from a nature conservation perspective.

• Properties will work towards achieving Herbivore Impact Targets targets of 90% of survey samples (overall impacts: grazing/browsing and trampling) to be in the range of Low to Moderate/Low. For woodland, a minimum of 60% of herbivore impacts to be in the Low, Moderate category.

1.7.3 Current Delivery.

- Currently all properties within the DMG have some form of monitoring of open range habitats either through Strathglass Complex SAC Habitat Impact Assessment (East Benula South, NFE Fasnakyle, Mullardoch and North Affric) or through individual monitoring programmes where there are no designated sites such as those conducted by Forestry Commision Scotland and National Trust for Scotland.
- National Trust for Scotland: In order to assess the success of the restoration of 'natural' habitats within the West Affric property the condition of the key habitats was assessed in 2010 by Highland Ecology (Rafferty & Proctor 2011). This was done in order to establish how much of an impact large herbivores are having on the various habitats within West Affric. The conclusions in the report from that survey were that the 'Key habitats at West Affric were found to be mainly in good condition with the greatest impacts arising from localised trampling by red deer and historic grazing pressures.' A repeat survey was conducted in 2015 using both a (Headley, 2015). From the data collected in this survey the vast majority (86 to 93%) of the Blanket bog, Wet heath and Dry heath habitats were found to be in unfavourable nature conservation condition. The Alpine summit communities habitat was in generally good nature conservation condition with 82% of the sample plots passing all the targets. About 50% of the flushes were also in good nature conservation condition. Overall there appears to have been no apparent significant change in the condition of the Alpine summit communities since the last survey in 2010. This contrasts with the Blanket bog, Wet heath and Dry heath habitats where there has been a large increase in the number of plots that failed one or more of the CSM targets and an increase in the absolute number of failed targets. Impacts are summarised in Table 11.
- Forestry Commission Scotland: In 2008 Strath Caulaidh Limited undertook a baseline habitat impact survey on the open range plots in South Affric, which was repeated in 2012. The survey involved measuring a number of indicators including bare browsing of heather and deformity in heather bushes. Over winter browsing of Heather (Calluna vulgaris) long shoots, weighted by cover levels, was c. 23% in 2008 and 21% in 20012 (very slightly lower). In 2012, the % of heather showing deformity due to long term browsing was high at 68% (deformity not assessed in 2008).
- Mullardoch has a woodland monitoring programme in place using woodland transects and will repeat an assessment in 2016.
- Members of the DMG attended a Habitat Impact Assessment training day in 2015.

		Overall herbivore impact category					
НАВІТАТ	HIGH	HIGH/MODERATE	MODERATE	MODERATE/LOW	LOW	TOTAL NUMBER	
Alpine Summit					22	28	
Communities	0 (0)		6 (21)		(79)	20	
Blanket Bog	6 (21)	3 (11)	11 (39)	3 (11)	5 (18)	28	
Dry Heath	6 (29)	4 (19)	9 (43)	0 (0)	2 (10)	21	
Wet Heath	26 (93)	0 (0)	1 (4)	0 (0)	1 (4)	28	
Springs, Rills and Flushes	1 (4)	2 (8)	4 (16)	6 (24)	12 (48)	25	

Table 11: The total number and percentage of sample plots in each aggregate current herbivore category for each habitat surveyed in 2015 within the West Affric property.

1.7.4 Targets to be delivered by 2021

Actions to monitor and manage deer impacts in the wider countryside	When?	Who?	How?
NTS to reduce deer densities to 7 deer per km2 to reduce herbivore impacts across 5 key habitats.	By 2021	NTS	Reduction culls in collaboration with the wider group will be implemented by the Trust.
For those properties without monitoring in place, using revised BPG Guidance undergo training, set up plots and carry out a baseline habitat impact assessment (HIA) of the current grazing and trampling impacts on blanket bog & dwarf shrub heath.	May & June 2016	DMG Members & Consultant	Subject to ECAF bid, Consultant will work with DMG to set up random plots and to provide assistance with data analysis and the production of a report.
Members with existing habitat monitoring methodology will share existing results with DMG where appropriate and will consider implementing a unified system across the DMG.	Ongoing	DMG Members	Members will circulate monitoring results to DMG. DMG to consider moving to a unified system of Monitoring.
Summary of habitat assessment results reported to DMG. DMG will implement a deer reduction programme to reduce deer impacts to improve overall habitat condition. Targets and management actions to be agreed.	Ongoing	DMG Members	DMG will agree management decisions based on Habitat Impact Assessment Reports.
Repeat HIA and management actions agreed.	May & June 2019	DMG Members	Members will collect repeat monitoring data. Consultant will provide assistance with data analysis and the production of a report. Members will use report to inform management.
DMG will run a demonstration event to share best practice management for open habitats and woodland management in the absence of deer fences.	FES	By 2021	FES will organise for members to visit an appropriate site.

1.8 Actions to improve Scotland's ability to store carbon by maintaining or improving ecosystem health.

1.8.1 Background

- Carbon rich soils and peatland areas provide multiple benefits, e.g. good water quality, biodiversity and climate change mitigation as soil carbon stores and through <u>carbon sequestration</u>. Soils are the main terrestrial store of carbon in Scotland and Peatlands hold most of our carbon store (53%).
- <u>Blanket bog</u> is a type of peatland found in the uplands covering some 1.8 million hectares, 23 % of our land area. Although Blanket bog is a rare habitat globally and is restricted to cool, wet, typically oceanic climates, Scotland holds a significant proportion of the European and world resource.
- Growing trees is another way to increase the natural carbon reservoir. Woodland and forest currently covers over 1.3 million ha in Scotland (around 16% of Scotland).
- In partnership with Government agencies, DMGs are expected to contribute to research and implement and deliver actions to deliver optimum habitat condition for carbon capture and storage.

1.8.2 Plan Objectives

The plan will aim to acknowledge all contributions to carbon storage through woodland and peatlands within Group area and detail actions to address any negative herbivore impacts.

1.8.3 Current Delivery.

- The Group manages over 5430 ha of woodland and an area of over 2330 ha of peatlands.
- The actions currently being undertaken by the DMG to monitor Peatlands and to retain existing native woodland and encourage woodland expansion have been detailed in Section 6 and 7.
- In 2008 Strath Caulaidh Limited undertook a baseline habitat impact survey on the open range plots in South Affric, which was repeated in 2012. The survey involved measuring a number of indicators including bare peat extent, Patches of bare peat were recorded frequently on wet heath and blanket bog (fairly common habitats on site) but the absolute amount of bare peat cover was very small across the study area (c. 1%) in 2008. No marked change was seen in bare peat extent between visits.
- The DMG has not yet been asked to contribute to River Basin Management Planning.

1.8.4 Targets to be delivered by 2021

Actions to improve Scotland's ability to store carbon by maintaining or improving ecosystem health.	When?	Who?	How?
Using revised BPG Guidance set up plots and carry out a baseline habitat impact assessment (HIA) of the current grazing and trampling impacts on blanket bog and native woodland.	As per monitoring schedule in the Working plan	DMG Members	As per Actions for woodland and managing impacts in the wider countryside. Members to provide existing survey reports or conduct baseline monitoring and reports.
Potential areas for Peatland Restoration identified and options for Peatland restoration or management through the Peatland Action Fund promoted to DMG Members	By end 2016	DMG Members DMG Chair and Secretary	Members to use Blanket Bog monitoring results as well as assistance from SNH to identify opportunities for Peatland Restoration.
FES/NTS will complete a survey of damaged peatland which will point the way to a programme of peatland/bog restoration work.	End of 2017	FES/NTS	Completion of survey work on NFE/NTS land and implementation of recommended actions.
Contribute to River Basin Management Planning as appropriate	By end of 2016 and ongoing	DMG Members	Subject to ECAF bid, include a review of the potential for riparian woodland improvement e.g. practicalities, landscape assessment, water quality and fisheries benefit.

1.9 Actions to reduce or mitigate the risk of establishment of invasive nonnative species

1.9.1 Background

- Sika are now established in woodland towards the east of the group.
- Since 2005 a total of 842 Sika have been shot across the Group but mainly within FCS Strathglass.
- Feral pigs have become become established in Glen Moriston and there have been sightings of them in NFE Strathglass so there is potential for them to become established in the DMG area.

1.9.2 Plan Objectives

- The plan will aim to reduce or mitigate the risk of establishment of invasive non-native species of deer (Sika and Muntjac). Plan to detail an agreed policy and actions required by DMG to monitor.
- Plan to highlight other invasive species such as Feral Pigs and plants such as rhododendron and Japanese Knotweed.
- Plan to develop a policy for management of Feral Goats.

1.9.3 Current Delivery.

- The DMG reports on any sightings or Sika culled currently.
- SNH management policy on this species is currently in development. FES currently has a control policy for Feral Pigs.
- FES is controlling rhododendron and Japanese Knotweed at Hilton/Guisachan.

Actions to reduce or mitigate the risk of establishment of invasive non-native species	When?	Who?	How?
Muntjac Deer managed as per the Non- native Species Policy (Part 3 of plan).	Ongoing	DMG Members	Members will contact local SNH Wildlife Management Officer immediately on suspected sighting of Muntjac.
Sika Deer managed to prevent their establishment within the DMG area and managed as per the Non-Native Species Policy (Part 3 of plan).	Ongoing	DMG Members	Where Sika Deer not currently established, Members will report sightings to DMG and will prevent their establishment shoot (within current legal restrictions).
Feral Pigs managed according to Policy Guidelines currently being agreed by SNH.	Ongoing	DMG Members	Members will report sightings of feral pigs and shoot on sight (subject to welfare considerations) within DMG area. Implement Feral Pig management policy once agreed by SNH. FES currently has a control policy for this species.
Feral goat management policy to be agreed.	By end 2016	DMG Members	Group will agree a policy for the management of Feral Goats.
Record invasive plants species and encourage their control.	Annually	DMG Members	Members will inform DMG of invasive plant species at annual meetings and will report on control undertaken.

1.9.4 Targets to be delivered by 2021

1.10 Actions to protect designated historic and cultural features from being damaged by deer.

1.10.1 Background

- Certain types of historic or culturally significant features may be impacted positively from deer and deer management activity through for example, grazing to keep sites exposed. Impacts may also be negative however, where deer may cause damage through trampling or by jumping over stone-work for example.
- DMGs should contribute to conserving and enhancing the cultural and historic landscape e.g. ensure that trampling of sites is avoided particularly in the case of protected designated historic features.
- There are a range of archaeological features some of which appear on the <u>CANMORE</u> website. These include the likes of Shielings.
- Historic and cultural features within the landscape are important to the group and the group undertakes to protect these from negative impacts by deer. Red deer, because of their size and herding behaviour are the species with most potential to cause negative impacts to these sites.
 Highland Council Historic Environment Record holds over 1600 Historic Environment Records for the North Ross DMG which can be viewed in a map based format at http://her.highland.gov.uk/Map.aspx?clear=true
- Deer fencing, when properly planned for, constructed and maintained, can be an effective way of controlling deer to allow different land-uses to co-exist in close proximity, and to protect public safety. Deer fencing can however impact the landscape and public access. Joint-Agency Guidance has been developed to help land managers decide what is the best management option for their land http://www.snh.gov.uk/land-and-sea/managing-wildlife/managing-deer/sites/fencing.

1.10.2Plan Objective

• Plan to consider deer management actions which contribute or impact on delivery of conserving and enhancing the local cultural and historic landscape.

1.10.3 Current Delivery.

- NTS Kintail has two Scheduled Ancient Monuments: the site of the 1719 Battle of Glen Shiel, and Cill Fhearchair, a 2,000-year-old standing stone and burial ground.
- The DMG is currently unaware of any cultural or historic features that are being impacted on by deer
- Any woodland creation projects are currently required by Forestry Commission Scotland to carry out this assessment.

1.10.4 Targets to be delivered by 2021

Actions to protect designated historic and cultural features from being damaged by deer e.g. by trampling.	When?	Who?	How?
Identify any features within DMG area that may be impacted on by deer.	By end of 2016	DMG Members	DMG members to report at Autumn DMG meeting on features identified.
If features identified, ensure the appropriate management is implemented and report to DMG.	Ongoing	DMG Members	Verbal report/update to DMG.
All future fencing proposals to follow Joint Agency Guidance	Ongoing	DMG Members	Part of the DMG area falls within National Scenic Areas. New fencing proposals will follow Joint Agency Guidance on National Scenic Areas and will be reported to DMG.

1.11 Actions to contribute to delivering higher standards of competence in deer management.

1.11.1. Background

The DMG recognises the importance of delivering higher standards of competence in all aspects of deer management through:

- promoting and offering opportunities for Members to take up formal training opportunities;
- facilitating continuous professional development activities;
- and ensuring Wild Deer Best Practice guidance is adopted in deer management activities throughout the Group area.

1.11.2. Plan Objectives

• CLMP to ascertain training levels among Group Members and to develop a training policy and programme of training and Continual Professional Development.

1.11.3 Current Delivery.

- On National Forest Estate land all those shooting on the property require to be DSC 2 trained.
- Across the other properties, there is a total of 6 personnel carrying out deer management (plus additional contractors/leases and supervised volunteers). Of these 4 are known to have DSC Level 1 and 2.
- The DMG has identified training requirements in the form of Habitat Impact Assessment training.

Actions to contribute to delivering higher standards of competence in deer management.	When?	Who?	How?
DMG will adopt the training policy statement (Part 3 of plan).	Spring 2016	DMG Members	Adopted as part of CLMP.
Report on training levels and progress on an annual basis.	By Autumn 2016 & Annually	DMG Secretary and Members	All members asked to provide an update of staff qualifications to DMG Secretary. Verbal report at Spring meeting.
Develop and implement a training programme to assist in the provision of training for DMG Members who lack the necessary qualification or for individuals who wish to enhance their skills.	Annually	DMG Chair and Secretary	Annual training programme to be agreed at Spring meeting. Secretary to organise courses/events. Opportunities for CPD events to be explored by members.

1.11.4 Targets to be delivered by 2021

1.12 Actions to Identify and promote opportunities contributing to public health and wellbeing.

1.12.1 Background

- Deer are of great social and cultural value to Scotland. As one of Scotland's top iconic wildlife species they provide a range of benefits, for example through their contribution to tourism and people's enjoyment of the outdoors. Venison is also a healthy meat enjoyed by many.
- Deer can, however, also lead to health and safety risks e.g. road traffic accidents and deer related disease such a Lyme disease.
- The DMG area is a popular tourist destination, and wildlife tourism in particular is important to the local economy as a whole. Deer, as one of Scotland's top iconic species, are an important element of this.
- The Group area is heavily utilised by visitors.
- The <u>Affric Kintail way</u> officially opened in 2015 and runs from Drumnadrochit on the shores of Loch Ness, to Morvich in Kintail, through Glen Affric.
- Responsible access is encouraged and welcomed by all properties within the Group area.

1.12.2 Plan Objectives

- To identify and promote opportunities contributing to public health and wellbeing benefits associated with deer and deer management;
- To identify, raise awareness and where possible minimise the local health and safety risks by;
- To identify and increase the opportunities for people to enjoy and benefit from deer and their associated habitats;
- To raise awareness of road safety issues associated with deer to reduce the risks of road traffic accidents (covered in Section 14);
- To co-ordinate action to minimise deer-related human disease risks;
- To promote responsible Access and the Scottish Outdoor Access Code.

1.12.3 Current Delivery.

- Tick awareness already discussed with staff on all properties. Tick information provided for visitors through leaflets and signage.
- DMG is collectively signed up to principles of Best Practice which provides guidance on safeguarding public safety and food safety.
- Information on access is available on NTS and SNH websites and through the <u>Heading For The</u> <u>Scottish Hills</u> Website. The <u>Affric Kintail way</u> is actively promoted and has its own website.
- DMG members currently actively promote positive deer management throughout the area through a series of initiatives and information provision. All the Group members, in a varierty of different ways, seek to make the visitor experience pleasant, informative and memorable.
- Mullardoch has a policy of acitively encouraging hill-walkers and helping them to acquire a better understanding of the environment, it's biodiversity, management and contribution to public enjoyment and well-being. It also seeks to foster better relations with those members of the public who use the hills through its contacts with the Mountaineering Council of Scotland and the Scottish Mountaineering Club.
- NTS hosts educational events and guided walks through the Affric and Kintail Ranger Service.

- NTS Kintail and Glen Affric NNR are both high profile tourist destinations and both have developed infrastructure and facilities for visitors. Glen Affric NNR is a member of the <u>Association of Scottish</u> <u>Visitor Attractions</u>.
- NTS offers opportunities for volunteers to assist with and develop skills in conservation management.

1.12.4 Targets to be delivered by 2021

Actions to Identify and promote opportunities contributing to public health and wellbeing.	When?	Who?	How?
Provide information on access, CWD and health information about tick awareness to visitors/clients.	By end of 2016 and ongoing	DMG Secretary	Secretary to circulate leaflets/literature at Spring/Autumn meetings for members to distribute. Information made available on DMG website.
Complete relevant Access information for the Heading For the Scottish Hills initiative.	By end 2016	Secretary & Relevant DMG Members	Secretary to liaise with DMG members to coordinate information to SNH and ensure information is kept up to date. Information on Access to be made available on DMG web. site.
Raise awareness of threats relating to Chronic Wasting Disease and sign up to CWD Biosecurity Policy (Part 3 of plan).	By end of 2016 and ongoing	DMG Members	Members to raise awareness of CWD with Clients and Visitors from USA and Canada.
Investigate opportunities for awareness raising/educational events for the local community.	Ongoing	DMG Members	Members to discuss opportunities at Spring meeting. Open events to be advertised on DMG website.
Provide opportunities for any concerns from the local community to be addressed. Ensure Community Council representation at meetings.	Ongoing	DMG Chair and Secretary	Meeting dates and Agendas will be publically available on DMG website and circulated to community councils in advance. DMG Chair and Secretary contact details will be available on website. DMG to consider holding an annual public meeting.
Explore opportunities for greater liaison/collaboration with Scottish Mountaineering Club and other Organisations such as Mountaineering Council for Scotland.	By autumn 2016	DMG Chair and SMC Chair	DMG and SMC to work together to improve information provision through social media.
Investigate opportunities to carry out a visitor survey to assess visitor perceptions of deer and land management and identify areas for action.	By 2018	FES and DMG	DMG to scope questions to be included in Visitor Surveys conducted by FES and local tourism initiatives.

1.13 Actions to maximise economic benefits associated with deer

1.13.1 Background

Wild deer are considered a resource and can play an important role in promoting and sustaining economic activity, especially in rural areas where they can contribute to businesses, particularly tourism and food production. The properties within the Group have a range of land management objectives. Common to all, is the need to balance deer management to deliver conservation objectives as well as economic opportunities on the open ground through the sustainable harvest of deer.

1.13.2 Plan Objectives

CLMP to identify the economic interests of DMG members and identify opportunities to maximise these including employment, stalking, tourism and venison.

1.13.3 Current Delivery

- Not all properties have a requirement to harvest deer, but for those that do, in order to achieve an annual sustainable harvest of around 93 stags, a collective minimum density of around 6.4 deer per km2 across the whole Group area is required.
- The following properties would ideally like the following numbers of stags to harvest: East Benula South (25), Mullardoch (10), North Affric (25), Kintail (8) and Corrielair (25).
- The income generated from the sale of venison carcasses provides an income in excess of around £82,000 annually.
- There are deer management employees associated with deer management activities plus additional personnel acting under contract/lease or voluntary basis.
 - 2 part-time employees on NTS
 - 1 part-time employee on East Benula
 - 0 employees on Mullardoch (management carried out by owner & supervised volunteers)
 - 1 Ranger manager employed by FE plus contractors/lease holders.
 - o 2 full-time employees on North Affric
- All properties use local services in the local surrounding area such as shops, fuel, hotels and B&Bs, local tradesmen.
- Most properties have access to larders with chills and 2 are currently members of Scottish Quality Assured Wild Venison accreditation scheme.

1.13.4 Targets to be delivered by 2021

Actions to maximise economic benefits associated with deer	When?	Who?	How?
Investigate opportunities for membership of SQWV Quality Assurance Scheme.	By 2021	DMG Members	On-going discussion at DMG meetings.
Investigate opportunities for more effective collection of carcasses and negotiation of prices. DMG to investigate possible collaborative opportunities for the processing of venison/game. Members to seek opportunities to market venison locally.	Annually	DMG Members with FCS	Discussion at Spring meeting. Chair & Secretary to negotiate with Game Dealers on DMG behalf. DMG to discuss opportunities for development of venison processing facilities with FCS.
DMG Members to continue to monitor sustainable harvest of stags for let stalking and to investigate opportunities for cross- property letting of stalking. Opportunities to collectively market stalking also explored.	Spring 2016 and Annually.	Chair & DMG Members	Population model used to monitor sustainable harvest of stags. Members discuss stalking requirements at Spring meeting. Deer movement meetings following the deer count in 2016 used to monitor stag movements/distribution across the Group.
DMG Members to explore the scope for opportunities for greater local community involvement in deer management on FCS land.	Prior to possible contract renewals.	FCS and Members	FES to discuss future deer management arrangements and possible potential opportunities with Group.
DMG to carry out an economic survey of deer management in the area, including an assessment of investment, employment, infrastructure etc.	By end 2017	Secretary & DMG Members	Questionnaire will be developed and completed by members to produce a DMG report of Local Economic Implications of Deer Management.

1.14 Actions to minimise the economic costs of deer, and ensure deer management is cost-effective

1.14.1 Background

• Wild deer are considered a resource and can play an important role in promoting and sustaining economic activity. However they can also create costs to other land-use objectives and have a negative impact on other economic activities including agriculture and forestry. Deer Vehicle Collisions may also incur an economic as well as social cost.

1.14.2 Plan Objectives

- The CLMP will seek to minimise the economic cost of deer through identifying issues and implementing management to reduce or mitigate deer impacts where this results in an economic cost.
- The plan will aim to identify where deer are having an economic cost particularly with regard to forestry and agricultural impacts.
- Incidents of Deer Vehicle Collisions (DVCs) will be monitored. Opportunities to work collaboratively to reduce these costs will be identified and actioned.

1.14.3 Current Delivery

- The Collaborative Land Management Planning process currently seeks to minimise the economic impacts associated with deer and deer management through a combination of negotiated deer culls, the use of fencing throughout the DMG area and a commitment by all members to work collaboratively to deliver objectives.
- The Group is aware of particular black spots along the A87 where deer frequently cross the road.
- The Group is actively encouraging communication and collaboration with neighbouring Estates outwith the DMG and neighbouring DMGs to discuss and quantify possible implications of reduction culls on NFE and NTS land. The Group is continuing to collate count and cull figures to monitor the sustainability of the stag harvest.
- Night shooting and Out of Season Authorisations have been applied for in the past by members of the DMG to protect woodland and information shared with the Group.
- On Kintail, the loss of over-wintering ground for deer through deer fencing a neighbouring estate has changed deer movements and distribution locally. The property is monitoring the situation and addressing any issues that arise with regards to DVCs, deer moving onto croft ground or accessing enclosed woodland through porous fencing.
- The Crofting community on Kintail has been consulted on the CLMP.

1.14.4 Targets to be delivered by 2021

Actions to minimise the economic costs of deer, and ensure deer management is cost-effective	When?	Who?	How?
DMG to consider the future costs of maintaining fences and financial provision for repairs.	By end of 2016	FCS & DMG Members	Those responsible for fences report on current condition and likely repair timetable.
Ensure local agricultural/ forestry interests are consulted on CLMP and invited to/represented at DMG meetings.	Spring 2016	DMG Chairman and Secretary	DMG Chair will correspond with relevant parties. Possible representation of Kintail Crofting interests on DMG.
Set up monitoring and reporting of DVCs through website, DMG meetings and local Police contact.	Spring 2016 and ongoing	DMG Secretary	Members of the public asked to report DVCs to DMG Secretary on <u>www.deercollisions.co.uk</u> website. Members record and report DVCs to meetings.
Implement actions to mitigate against DVC hotspots including localised deer management, use of signage, fencing etc.	Ongoing	DMG Members	Where hot-spots occur, DMG to discuss appropriate actions at meetings.
Report on out of season and night shooting authorisations.	Annually	DMG Members	Members to inform DMG Chair/Secretary in advance of intention to apply for authorisations. Members to report numbers of deer culled under authorisation at meetings.

1.15 Actions to ensure effective communication on deer management issues

1.15.1 Background

• Effective collaborative deer management requires effective communication on deer management issues both within the Group, the DMG and throughout the wider community in order to promote better awareness and education of deer and deer management.

1.15.2 Plan Objectives

- To ensure that the DMG is inclusive, open, transparent and that local issues have been addressed the CLMP will include a Communications policy to encourage participation and collaboration and to communicate the public benefits being delivered through local deer management activity.
- The DMG Constitution will set out methods for conflict resolution.

1.15.3 Current Delivery.

- The Group has a web site.
- The DMG works in partnership with SNH, FCS, the Local Community and wider stakeholders. Local Community Council Deer representative attends meetings.
- A public meeting was held as part of the Consultation phase of the plan development.
- DMG will seek to identify opportunities to develop links with the Community as well as promoting deer management and wider conservation through the <u>Glen Affric Community</u> website and <u>Strathglass Marketing Group</u>.

1.15.4 Targets to be delivered by 2021

Actions to ensure effective communication on deer management issues	When?	Who?	How?
Stakeholders consulted on draft plan.	Spring 2016	DMG Secretary	Draft CLMP made available on public website. Relevant stakeholders identified and invited to consult. Interested parties invited to attend a consultation meeting on 5th February in Cannich.
Final Plan and Minutes of Meetings will published on DMG Website.	Spring 2016	DMG Secretary	DMG Website.
DMG Constitution and ADMG Principles of Collaboration adopted (Part 3)	Spring 2016	DMG Members	Adopted as part of CLMP.
Agree and adopt a DMG Communications Policy	Spring 2016	DMG Members	Adopted as part of CLMP.

1.16 Actions to ensure deer welfare is taken fully into account at individual animal and population level

1.16.1 Background.

- The definition of welfare in relation to wild deer is 'concern for their physical and psychological well being'. This definition can be applied to both the individual animal and population level. <u>Wild Deer</u> <u>Best Practice Guidance</u> states that with increasing intervention (e.g. fencing, feeding, culling) comes increasing responsibility for their welfare.
- *Fencing:* This is a management tool that has been used extensively throughout the Group area. The exclusion or prevention of deer movements to areas of natural areas of shelter in winter through the erection of enclosures or use of strategic fenced may pose a threat to welfare. Similarly, areas where fencing is no longer required and can be removed, can open up areas of natural shelter which will be attractive to deer.
- Supplementary Feeding: Within the Group one member provides some level of diversionary winter feeding specifically for deer.
- Winter Mortality: Members of the Group already monitor and report any significant levels of winter mortality to the Group, as well as any significant health issues encountered. It is considered that mortality within the group is approx 6% for calves, and 2% hinds for hinds and stags. These figures will be used in population models for the Group in future, but will be varied depending on local knowledge and practical experience.

1.16.2. Plan Objectives

CLMP will promote and safeguard deer welfare through effective planning and the undertaking of training for deer managers and the carrying out of deer management activity to <u>Wild Deer Best Practice Guidance</u> industry standards.

1.16.3 Current Delivery.

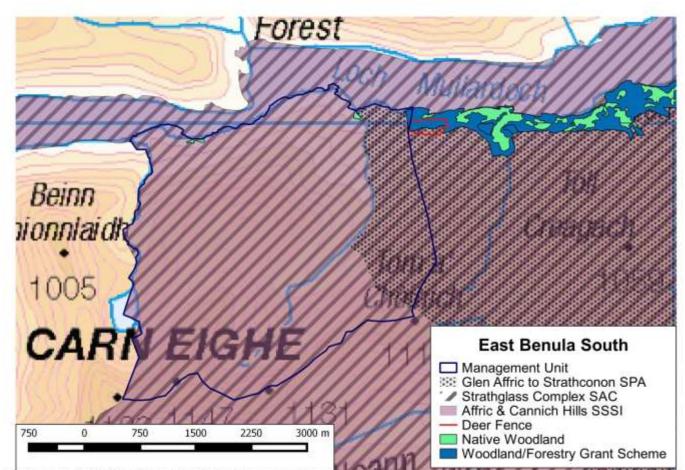
• Members of the Group currently monitor and report on levels of winter mortality as well as any other significant health issues encountered.

1.16.4Targets to be delivered by 2021

Actions to ensure deer welfare is taken fully into account at individual animal and population level	When?	Who?	How?
Agree and adopt welfare policy (Part 3 of plan).	Spring 2016	DMG Members	Implemented through every day Best Practice in deer management.
Consider opportunities for CPD/Training in relation to deer welfare.	raining in Autumn FES will run at least one e share Best Practice Manag for open habitats and woo		FES will run at least one event to share Best Practice Management for open habitats and woodland management in the absence of deer fences.
Provide information on welfare indicators annually. Baseline information established in year 1 of CLMP and welfare indicators reported on annually. Any resulting management actions agreed and implemented by members.	Ongoing	DMG Members	Deer managers to provide information on hind reproduction and average larder weights.
Any new fencing in DMG area will consider welfare implications in design and extent and the appropriate management undertaken.	Ongoing	DMG Members	New fencing proposals will be consulted with DMG.
Monitoring and reporting of significant levels of winter mortality.	Ongoing	DMG Members	Deer managers will provide information (figures & location) on winter mortality.
Carry out a review of fencing and wintering ground and identify opportunities to open up woodland to deer.	Year 2	DMG Members & Consultant	Subject to ECAF bid, carry out as part of the delivery of the DMG Woodland Expansion Report and recommended actions.

1.17 Management Units: East Benula South

Property	East Benula South
Area	1378 ha
Owner	Mr Peter Urquhart
Deer management	Angus Hughes



Data produced by Scottish Natural Heritage. Contains Ordnance Survey data 🕤 Crown copyright and database right [2015]

	Deer Counts				
	Stags	Hinds	Calves	Total	Density
2005	34	186	80	300	21.8
2009	23	158	47	228	16.5
2012	43	151	51	245	17.8
2015	25	180	40	245	17.8

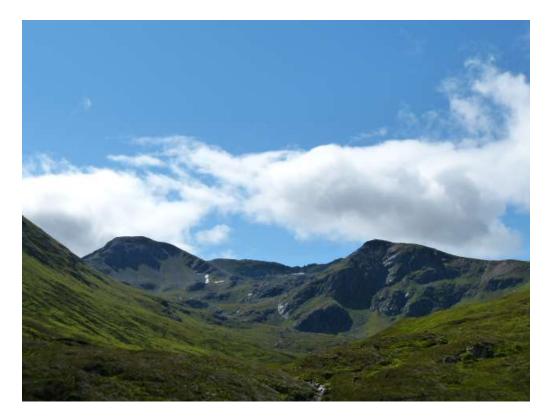
Deer Culls					
Year	Stags	Hinds	Calves	Total	
2005 -2006	16	27	14	57	
2006 -2007	9	27	9	45	
2007 -2008	14	33	14	61	
2008 -2009	11	47	34	92	
2009 -2010	20	56	28	104	
2010 -2011	13	36	16	65	
2011 -2012	12	21	6	39	
2012 -2013	15	25	11	51	
2013 -2014	17	25	7	49	
2014 -2015	11	25	8	44	
2015-2016	13	21	9	43	

Background	 East Benula South lies to the northwest of the Group area and is bounded by Loch Mullardoch to the north.
	 To the east the property neighbours Mullardoch with North Affric Estate to the south and West Benula Estate (Lochalsh DMG) to the west.
	 The Estate combines conservation objectives with the sustainable harvest of store
	stags.Red deer are the main species.
Designated sites	 The property falls entirely within Strathglass Complex SAC and Affric-Cannich Hills SSSI.
	 The Estate falls partially in the Glen Affric to Strathconon SPA.
Deer Management Objectives	 To balance deer management to deliver conservation objectives along with the sustainable harvest of stags.
Future Management Objectives	 To deliver favourable condition across the Designated Site features and maintain a healthy deer herd.
Woodland	 1.51ha of native woodland. The Estate was interested in a scheme to create more woodland but the ground was deemed unsuitable.
	The Estate is currently exploring opportunities for native woodland
	restorations to link in with neighbouring estate proposals. The proposals will include the riparian woodland along the main Allt a Choire Dhomhain burn.
Land management	The property has got small areas of blanket bog in Coire Lochan and Coire Dhomhain.
	 The Estate will explore opportunities for peatland restoration work in the future.
	 The Estate recently put in a hill-track to assist with carcass extraction.
	 Access to the property (and carcass extraction off the property) is entirely by boat.
	Access can be difficult and often inaccessible during bad weather and when
	Loch Mullardoch levels are low exposing a silt/mud layer at the landing site.
	In the last three years, the Estate has experienced an increase in land-slides
	and avalanche damage which has left significant scarring on the landscape
Deerlmusete	and resulted in removal of vegetation over large areas.
Deer Impacts	 25 to 30 years ago, there were 1000's sheep roaming freely through the Affric hills. Since then there have been removed and there haven't been sheep on the Estate for a minimum of 25 years.
	 The Estate's observations indicate that the habitat has been continuing to
	improve and that the numbers of summering deer on the ground have been drastically reduced in the last 5 years.
	 The Estate used to have significant numbers of summering stags which are
	now not seen in nearly as many numbers.
	 The Estate will await the results of the SAC Habitat Impact Assessment due
	to take place in 2016 and will implement management accordingly.

Deer Distribution & Movements	 The Estate is primarily a hind-forest with little movement of hinds (only the marches) between North Affric and Mullardoch. During the summer deer move between Coire Lochan to Coire Buidhe via the Bealach na h-Eighe. Deer also congregate in a small inaccessible coire known as the Sanctuary which makes extraction almost impossible. The deer are getting hefted into areas such as these (including areas of blanket bog) by increased numbers of hill walkers that are on the ground. During winter hinds move down onto lochside face but very few stags overwinter. There is considerable movement of stags and hinds with West Benula. Stags migrate onto the Estate in the rut and during the winter, if there are periods of easterly winds, this will draw hinds onto the Estate.
Supplementary Feeding	None
Access	 Popular ridge with walkers run round the Estate march with 6 Munros including Carn Eighe (1183m) and Tom a Choinich (1112m). Information available on the Heading for the Scottish Hills Website. No access issues.
Socio- Economics	 Estate employs 1 full time stalker. Stalker is a member of the local Mountain Rescue Team. Stalker operates a ferry service on Loch Mullardoch for walkers and others (www.lochmullardochferry.co.uk).

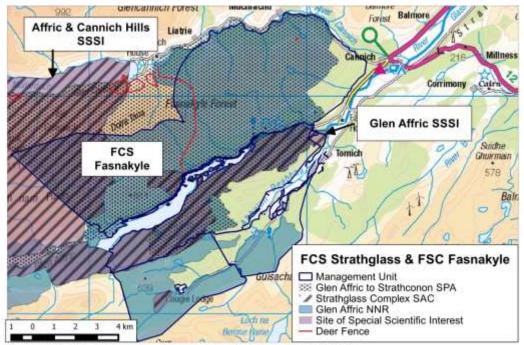


Image 4: East Benula South Looking west.

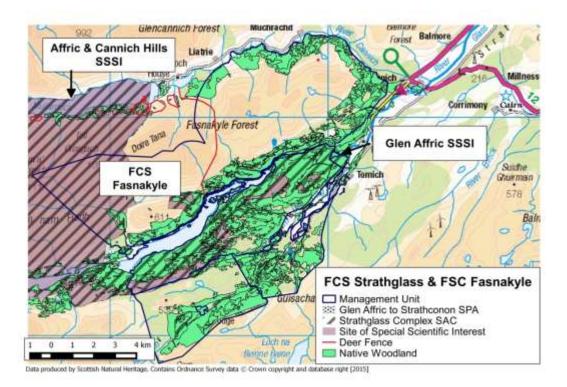


1.18 Management Units: National Forest Estate Strathglass & National Forest Estate Fasnakyle

Property	NFE Strathglass & NFE Fasnakyle
Area	10,036 ha (deer fenced) & 2687 ha (open range)
	Forestry Commission Scotland, managed by Forest
Owner	Enterprise Scotland
Estate Personnel/ Deer Management	Willie Lamont



Data produced by Scottish Natural Hentage. Contains Ordnance Survey data © Crown copyright and database right [2015]



NFE Fasnakyle Deer Culls							
Year Stags Hinds Calves Total							
2005 -2006	16	44	10	70			
2006 -2007	15	32	12	59			
2007 -2008	17	36	10	63			
2008 -2009	23	38	9	70			
2009 -2010	30	84	41	155			
2010 -2011	27	52	16	95			
2011 -2012	31	46	10	87			
2012 -2013	26	30	5	61			
2013 -2014	24	38	9	71			
2014 -2015	24	34	9	67			
2015- 2016	9	24	5	38			

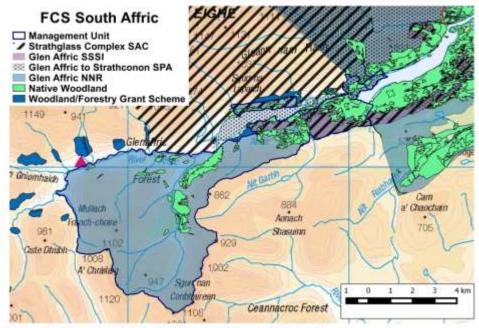
NFE Strathglass Deer Culls							
Year	Stags In	Stags Out	Hinds In	Hinds Out	Calves	Total	
2005 -2006	86	75	58	37	48	304	
2006 -2007	57	73	47	25	40	242	
2007 -2008	39	123	46	28	39	275	
2008 -2009	43	120	21	33	36	253	
2009 -2010	43	0	50	0	18	111	
2010 -2011	62	197	45	31	42	377	
2011 -2012	66	122	26	37	28	279	
2012 -2013	39	114	56	37	53	299	
2013 -2014	28	130	47	36	52	293	
2014 -2015	31	237	60	56	60	444	
2015- 2016	106	0	76	0	38	220	

	NFE Fasnakyle Deer Counts							
	Stags	Hinds	Calves	Total	Density			
2005	152	142	42	336	12.5			
2009	140	103	30	273	10.2			
2012	122	4	2	128	4.8			
2015	166	115	29	310	11.5			

Background	 NFE Fasnakyle and NFE Strathglass lie to the east of the Group area. NFE Fasnakyle is bounded by Mullardoch to the north and North Affric to the West. A deer fence encloses part of the management unit known as Fasnakyle Hill.
Designated sites	 Both management units fall within the Strathglass Complex SAC. Both Affric-Cannich Hills SSSI and Glen Affric SSSI fall within NFE Fasnakyle. FCS Strathglass management unit covers much of the Glen Affric SSSI. Both management units fall within Glen Affric NNR. Both properties fall within Glen Affric NSA and Glen Affric to Strathconon SPA.
Deer Management Objectives	 To minimise negative impacts of deer on woodland and conservation objectives within the exclosure.
Future Management Objectives	 To continue to work collaboratively with neighbours and the DMG to manage deer at a landscape level.
Woodland	Considerable scope for native woodland restoration in Upper Guisachan.
Deer Impacts	 Impacts on native woodland all considered low/medium. Monitoring carried out on new planting.
Deer Distribution & Movements	 The property is entirely deer fenced. •
Supplementary Feeding	None
Access	No access issues.
Socio- Economics	•

1.19 Management Units: National Forest Estate South Affric

Property	NFE South Affric
Area	4882 ha
	Forestry Commission Scotland, managed by Forest
Owner	Enterprise Scotland.
Estate Personnel/ Deer Management	Willie Lamont



Data produced by Scottish Natural Heritage. Contains Ordnance Survey data © Grown copyright and database right [2015]

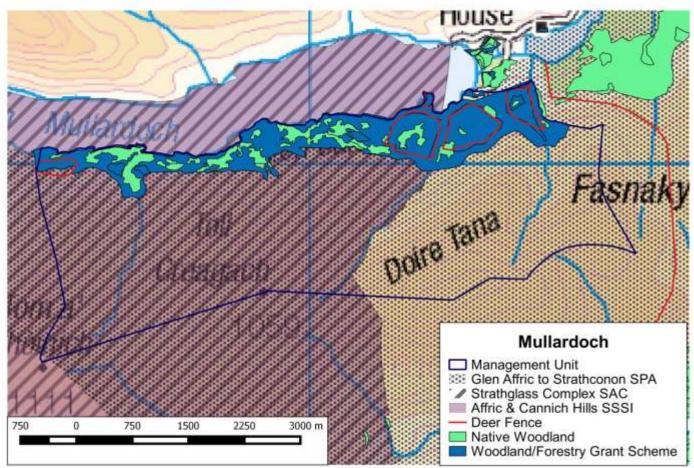
	Deer Counts							
	Stags	Stags Hinds Calves Total Density						
2005	294	352	105	751	15.4			
2009	57	106	32	195	4.0			
2012	12	39	10	61	1.2			
2015	279	89	23	391	8.0			

	Deer Culls							
Year	Stags In	Stags Out	Hinds In	Hinds Out	Calves	Total		
2005 -2006	46	5	46	0	11	108		
2006 - 2007	33	2	39	1	8	83		
2007 -2008	34	1	43	4	10	92		
2008 - 2009	34	2	41	2	13	92		
2009 -2010	57	0	123	0	31	211		
2010 - 2011	49	140	138	17	40	384		
2011 -2012	11	1	99	6	26	143		
2012 -2013	13	1	100	1	43	158		
2013 - 2014	30	1	103	0	41	175		
2014 -2015	50	0	100	0	45	195		
2015-2016	1	0	80	0	50	131		
	Deer	Culls C	Blean i	na Cich	e			
	Stags	Stags	Hinds	Hinds				
Year	In	Out	In	Out	Calves	Total		
2010-2011	53	0	0	0	0	53		
2011-2012	7	13	0	0	0	20		
2012-2013	3	31	0	2	7	43		
2013-2014	2	20	0	0	0	22		
2014-2015	1	32	11	0	1	45		
2015-2016	32	0	0	0	0	32		

Background	 NFE South Affric is one smaller unit of the larger Glen Affric Management Unit (17,605 ha) which lies to the southwest of the Group The property is bounded by North and West Affric and also by Corrielair and Ceanncroc (both of which sit within Glen Moriston DMG).
Designated sites	 Management unit sits entirely within Glen Affric NNR. The management unit sits partially within Glen Affric SSSI (and Strathglass Complex SAC)
Deer Management Objectives	 To minimise negative impacts of deer on woodland and conservation objectives both within and outside enclosures.
Future Management Objectives	 To encourage the improvement of and development of natural habitat networks at the landscape scale. To continue to work collaboratively with neighbours and the DMG to manage deer at a landscape level.
Woodland	 Gleann na Ciche is an important site for montane willow. A study was carried out in 2015 (D. Gilbert) to assess the current status of populations. The main conclusions of the study were that populations of Wooly Willow and Downy Willow are unlikely to perpetuate without intervention and intial protection from herbivores. Due to low numbers of Tea/Dark-Leaved Willow it is unlikely this species will perpetuate through seed production without intervention.
Deer Impacts	 Impacts on native woodland all considered low/medium. Monitoring carried out on new planting.
Deer Distribution & Movements	Currently this area overwinters stags.
Supplementary Feeding	None
Access Socio- Economics	No access issues.
Leononics	

1.20Management Units: Mullardoch

Property	Mullardoch
Area	1749 ha
Owner/ Deer Management Contact	John Hay



Data produced by Scottish Natural Hentage. Contains Ordnance Survey data © Crown copyright and database right [2015]

	Deer Counts						
	Stags	Hinds	Calves	Total	Density		
2005	131	16	5	152	8.7		
2009	72	8	2	82	4.7		
2012	54	103	26	183	10.5		
2015	123	42	14	179	10.2		
2016	64	6	2	72	4.0		

Deer Culls								
Year	Stags In	Stags Out	Hinds	Calves	Total			
2005 -2006	19	12	9	11	51			
2006 -2007	19	12	7	6	44			
2007 - 2008	12	15	12	6	45			
2008 - 2009	17	1	5	2	25			
2009 -2010	10	2	7	3	22			
2010 -2011	7	2	4	5	18			
2011 -2012	11	0	6	0	17			
2012 -2013	9	0	3	3	15			
2013 -2014	12	0	5	3	20			
2014 -2015	14	0	5	3	22			
2015-2016	11	0	5	0	16			

Background	 Mullardoch Estate lies to the northeast of the Group area. The Estate is bounded by Loch Mullardoch to the north. To the west the property neighbours East Benula South with NFE Fasnakyle to the south. The Estate is primarily focused on conservation objectives. Red deer and the occasional Roe. Strathglass Complex SAC.
sites	 Affric-Cannich Hills SSSI. Property lies entirely within Glen Affric to Strathconon SPA.
Deer Management Objectives	To balance deer management to deliver conservation objectives sustainably across the DMG.
Future Management Objectives	 To seek opportunities to optimise the conservation potential of the estate whilst delivering wider public interest. Specifically, to bring the designated features into Favourable condition. To pursue its long term objective of demonstrating natural regeneration of the woodlands through deer control rather than deer fencing. To encourage public enjoyment.
Woodland	 295.00 ha assumed woodland (National Forest Inventory) and 70.70 ha native woodland (Native Woodland Survey Scotland). Total woodland area within SAC – 173 ha. 5 x fenced enclosures (33.4 ha, 31.4 ha, 2 ha, 25.9 ha and 5.14ha woodland creation/regeneration schemes). Total: 97.84 ha. Proposal for a further two enclosures: 4.6 ha and 9.9 ha. No compensatory cull required.
Land management	 Peatlands 293.32 ha. The Estate will implement a programme of Habitat & Species Monitoring across habitats. No Muirburn undertaken.
Deer Impacts	 The Estate is undertaking a combined programme of collaborative deer management and fencing to bring designated features into favourable condition. Fences regularly checked and impacts in woodland monitored regularly. Estate will apply for a 5(6) Authorisation to shoot deer in woodlands if required. It is considered that woodland regeneration is occurring out with the fences and a woodland survey will be completed in 2016.

Supplementary Feeding	None
Deer Distribution & Movements	 A deer fence on Fasnakyle largely prevents deer movement east. Although it is possible for stags from Glen Cannich to access the estate during winter this rarely happens as the stags tend to stay at the feeding sites on Glen Cannich. Most deer movement is with neighbours to the west (East Benula South) and the open ground of Fasnakyle to the south. During the summer there are virtually no deer on the lower ground aside from a few resident hinds.
Access	 The southern Estate march is a popular ridgeline for walkers with two Munros Toll Creagach (1059m) and Tom a'Choinich (1111m). Information is available on the Heading for the Scottish Hills Website. No access issues and access encouraged and welcomed.
Socio-	Deer management is carried out entirely by the owner.
Economics	 The Estate has access to a larder and chill through a collaborative arrangement with East Benula North Estate.
Biodiversity	 The Estate has a number of important species including Creeping ladies tresses, Twinflower, Golden eagle, Merlin, Pine marten, Black Grouse, Crested Tit, Dipper and Ptarmigan. The Estate has particularly rich biodiversity with its wide range of habitats extending from the ancient pine and birch woodlands along the lochside at 800 ft to the arctic type summits at 3600 ft. It has benefited from a minimal amount of human impact over many centuries.

Image 5: North Affric Estate looking west towards West Affric.

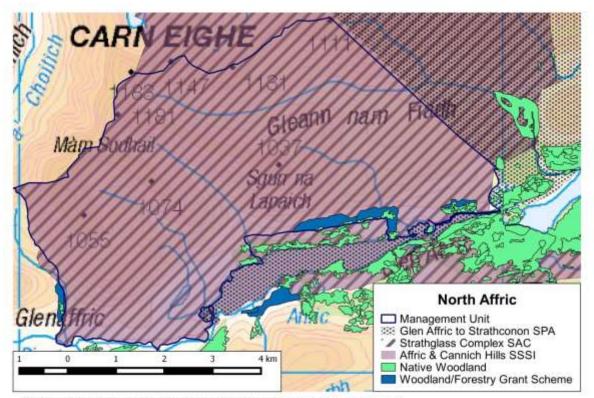


Image6: Woodland regeneration in Glen Affric



1.21 Management Units: North Affric

Property	North Affric Estate
Area	3623 ha
Owner	Beaufort Glen Affric Ltd
Deer Management Contact	Chris Macleod



Data produced by Scottish Natural Hentage. Contains Ordnance Survey data © Grown copyright and database right [2015]

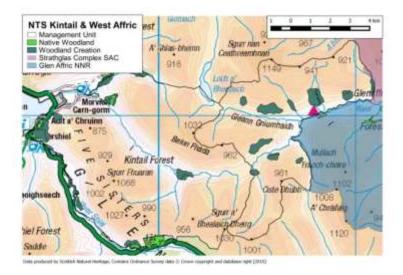
			Deer Count	s	
	Stags	Hinds	Calves	Total	Density
2005	206	170	72	448	12.4
2009	234	214	64	512	14.1
2012	157	157	57	371	10.2
2015	160	167	48	375	10.4

Deer Culls					
Year	Stags	Hinds	Calves	Total	
2005 -2006	42	35	16	93	
2006 -2007	38	44	15	97	
2007 -2008	42	31	11	84	
2008 -2009	0	0	0	0	
2009 -2010	35	39	12	86	
2010 -2011	30	30	5	65	
2011 -2012	28	50	10	88	
2012 -2013	21	31	7	59	
2013 -2014	23	30	5	58	
2014 -2015	20	30	6	56	
2015- 2016	18	28	10	56	

Background	 North Affric Estate lies to at the centre of the Group area. The Estate marches with West Benula to the northwest, East Benula South to the north, NFE Fasnakyle to the west. To the south the property marches with NFE South Affric and to the west NTS West Affric. The Estate combines conservation objectives with the sustainable harvest of deer and tourism. Red and Roe deer species present with occasional Sika.
Designated	The Estate falls entirely within:
sites	 The Strathglass Complex SAC. The Affric-Cannich Hills SSSI. The Glen Affric National Scenic Area.
Deer	To manage deer collaboratively, sustainably and at a landscape level.
Management Objectives	 To reduce deer impacts to bring designated features into Favourable condition and to deliver wider conservation benefits.
Future Management Objectives	 To optimise both conservation and socio-economic opportunities on the estate to deliver a wide range of public benefits.
Woodland	To encourage and support local community involvement in deer management.
woodiand	18.68 ha of native woodland. 27.1 ha of woodland eraction
	87.1 ha of woodland creation.
Lond	Estate will consider opportunities for further woodland expansion.
Land management	 Area of Peatland - 248.33 ha. Estate may consider opportunities for Peatland Restoration if appropriate. No sheep or cattle.
Deer Impacts	 In the most recent survey of herbivore impacts on the SAC (Headley 2009) overall impacts were mostly in the range from Low to Moderate (91% of sample plots). Only 9% of plots were in the High or High/Moderate classes and these were on wet heath, dry heaths and flush habitats. These were concentrated in the western half of the Estate, especially round Creag Coire nan Each.
Deer Distribution	 During the winter deer tend to congregate on the lower ground by the lochside with hinds concentrated more to the western end of the Estate.
and Movements	 Stags tend to congregate at the eastern end of the Estate towards the Lodge. Regular movement with Fasnakyle and some movement with South and West Benula.
Supplementary Feeding	Yes.
Access	 There are several Munros on the march with NTS West Affric: Sgurr na Ciste Duibhe, Beinn Fhada and Sgurr nan Ceathreamhnan. Also An Socach and Mam Sodhail. No access issues but walkers are encouraged to stick to the ridges. Information updated on the Heading for the Scottish Hills website.
Socio-	 2 full-time employees associated with deer management.
Economics	The Estate has a Lodge and holiday accommodation.

1.22 Management Units: NTS Kintail and West Affric

Property	NTS Kintail and NTS West Affric
Area	Kintail 6161 ha. West Affric 3678 ha.
Owner	National Trust for Scotland
Manager/ Deer Management	Willie Fraser (wfraser@nts.org.uk) & Finlay Macrae.
Website	National Trust for Scotland



	Deer Counts (Kintail)				
	Stags	Hinds	Calves	Total	Density
2005	584	486	145	1215	19.7
2009	384	313	94	791	12.8
2012	184	181	65	430	7.0
2015	505	471	177	1153	18.7
	Deer Counts (West Affric)				
	Stags	Hinds	Calves	Total	Density
2005	152	195	58	405	11.0
2009	96	221	66	383	10.4
2012	219	97	30	346	9.4
2012	219	51	0		- · ·

Deer Culls (Kintail)						
Year	Stags In	Stags Out	Hinds	Calves	Total	
2005 -2006	84	0	80	24	188	
2006 -2007	83	3	56	13	155	
2007 -2008	81	19	105	34	239	
2008 - 2009	66	33	87	15	201	
2009 -2010	110	8	92	40	250	
2010 - 2011	98	8	72	25	203	
2011 -2012	75	0	39	9	123	
2012 -2013	45	0	39	7	91	
2013 - 2014	45	0	35	7	87	
2014 - 2015	50	0	41	5	96	
2015-2016	80	0	44	4	128	
Deer Culls (West Affric)						
		Stags				
Year	Stags In	Out	Hinds	Calves	Total	
2005 -2006	40	0	52	10	102	
2006 -2007	34	2	35	11	82	
2007 -2008	34	0	51	16	101	
2008 -2009	39	0	57	16	112	
2009 -2010	40	0	78	23	141	
2010 -2011	33	27	73	30	163	
2011 -2012	28	0	54	8	90	
2011 -2012 2012 -2013	28 24	0	54 45	8 9	90 78	
-	-	-	÷.	-		
2012 -2013	24	0	45	9	78	

Background	 NTS Kintail and NTS West Affric are two adjacent management units that lie to the far west of the Group area. Kintail is bounded by Inverinate Estate to the north and the A87 to the south. West Affric marches with West Benula to the north, North Affric Estate and NFE South Affric to the east and Corrielair to the South. Conservation objectives are habitat management with Crofting/Common Grazings (Kintail only).
	Red deer mainly with some Roe and occasional Sika
Designated	Very small area of W Affric lies within Strathglass Complex SAC.
sites	Both properties fall entirely within the Glen Affric National Scenic Area.
Deer	Conserve/Enhance Biodiversity and maintain balanced integration between
Management	natural heritage, agriculture, forestry and commercial stalking.
Objectives	Safeguard welfare of all deer species.
	 Minimise costs associated with damage/negative impacts by wild deer.
	 Ensure that deer management is proactive and to an industry recognised standard (Bost Practice)
	 standard (Best Practice) Contribute to a safe and healthy environment for people
	Contribute to a safe and nearing environment for people
Future	Habitat restoration/improvement.
Management	 Long-term objective to remove woodland fences.
Objectives	
Woodland	Existing native woodland 78.79 ha (Kintail.
	Fenced woodland creation 407.58 ha.
Land	• Peatlands & Blanket Bog habitat 363.15 ha (W Affric), 50.89 (Kintail). Mostly
management	heather moorland and montane habitat. May be interested in Peatland
	Restoration work.
	Crofting & Agricultural tenancy on Kintail. Approximately 1000 sheep but these
	have been reduced.
	No muirburn.
	Around 60 goats.
Deer Impacts	Habitat monitoring carried out.
Deer	Property willing to participate in a collaborative approach to counts and culls
Distribution	across the group area.
and Movements	The 2015 showed a large increase of stags that have been displaced onto Kintail from points houring foread woodland exhamps out with the DMC
	from neighbouring fenced woodland schemes out with the DMG.
	 Kintail's population is one that is hefted for the bulk of the year with stags moving to the corries in the summer and wintering in Glen Lichd and Glen Shiel. There is
	some influx of hinds from Inverinate and the properties to the east in heavy
	some minux of minus from inventiate and the properties to the east in heavy snow.
	 West Affric has much mobile population with hinds and stags moving across
	marches depending on the time of year and weather conditions.
Supplementary	None
Feeding	
Access	• 9 Munros: A'Ghlas Bheinn (918m), Beinn Fhada (1032m), Ciste Dhubh (979m),
	Aonach Meadhoin (1001m), Sgurr a'Bhealaich Dheirg (1036m), Saileag (956m),
	Sgurr na Ciste Duibhe (1027m), Sgurr na Carnach (1002m), Sgurr Fhuaran
	(1067m)
	 Information provided on the <u>National Trust web site</u> and the <u>Heading for the</u>
	Scottish Hills web site.
Socio-	 1 part-time stalker plus assistance from site manager.
Economics	 Kintail Outdoor Centre for up to 20 guests. Local B&Bs used. Outdoor activities
	provided including guided walks and sea-kayaking.

Invasive non- native species	No sika established but occasionally seen.
Additional information	 Willie Fraser is Chair of DMG. Important species include plant colonies, rare mosses and lichens, blue hares, golden eagles (nesting) and ptarmigan.

1.23 References

Deer Management Plan for the Affric and Kintail Deer Management Area. 2011 – 2016. Professor R.J Putman.

Habitat Impact Assessment of Strathglass Complex SAC. Headley 2009

Loch Mullardoch Estate – Baseline survey of natural regeneration of native woodland. Cummings 1998 FES Environement Team Briefing. Deer Management South Affric. Strath Caulaidh 2012.

National Trust for Scotland West Affric Property: Repeat Condition assessment and herbivore impact assessment. (Headley, 2015)