Glen Strathfarrar Deer Management Group

Part 2: Deer Management Plan Information


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Image 1:Glen Strathfarrar Image 2: Regeneration exclosure on Culligran

The Third

Glen Strathfarrar Deer Management Plan

2016 - 2021

Foreword By

Frank Spencer-Nairn

The wild Red Deer of the Scottish hills are a mobile shared natural resource; they are not aware of the lines we have drawn on maps and called estate boundaries. Whilst co-operation between estates will always have been an option, collaborative deer management had its origins in the 1960s and gradually became the norm. South Ross was one of the first Deer Management Groups to be formed. As it grew, it split into more manageable units; the Glen Strathfarrar Deer Management Group (GSDMG) is one of these. Neighbouring groups co-operate and communicate with each other and all groups operate under the umbrella of the Association of Deer Management Groups (ADMG).

In simple terms, the GSDMG is principally based on the catchment area of the River Farrar and the northern part of the River Cannich catchment. Parts of the Orrin and Beauly catchments also fall into the GSDMG.

The nine different main landowners take deer management very seriously and are acutely aware of our responsibilities; we are passionate about the land we manage and our rare and precious natural heritage. This is our 3rd five year Deer Management Plan. Whilst it is an important management tool for ourselves, it has also become part of the way deer management is generally being made more transparent and accessible.

Contents

1. Introduction

1.1 Glen Strathfarrar Deer Management Group

Located in the Highlands, Glen Strathfarrar Deer Management Group (GSDMG) lies to the north of the A831 and Strathglass and to the west of Beauly - taking in the northern side of Glen Cannich as well the whole of Glen Strathfarrar (see Figure 1). Originally part of South Ross DMG which was formed in the 1960's, South Ross DMG was divided into smaller management areas in 2012.

Figure 1: Group Location

Whilst now recognised as a group in its own right, GSDMG still maintains on-going communication with neighbouring Deer Management Groups (Lochalsh to the west, Strathconnon to the North and Affric & KIntail to the south) to ensure a landscape collaborative approach to deer management.

The overall Group area extends to **45,540 hectares**, however not all of this area is open to deer and the current count area is 43,395 ha. The management area is effectively bounded to the south by Loch Mullardoch, from where a continuous deer fence runs east along the River Cannich, then along the River Glass above the A831 road, then on the eastern boundary the fence continues from Farley in the south through Fairburn in the north. This fence essentially prevents any loss of deer from hill to farm land in Strathglass or on to Glen Affric nature reserve. To the north the boundary follows the line of the old county boundary between Inverness-shire and Ross-shire for some distance, then deviates to take in most of the catchment area around Loch Monar, before finally heading south back to the head of Glen Cannich. To the west and northwest, the area abuts the Estates of West Benula, Killilan, Attadale and South Achnashellach (the Lochalsh Area DMG), while to the north a rather complex boundary (following the line of the old county boundary between Inverness-shire and Ross-shire), divides the Glen Strathfarrar Management area from Glencarron and other Estates of the Strathconon Area DMG.

1.2 Management Units

The Group is made up of 10 main management units (Figure 2).

- Braulen
- Culligran
- East Benula North (under the same management as Glen Cannich).
- East Monar
- Erchless
- Farley
- Glen Cannich (under the same management as East Benula North).
- Pait (under the same ownership as West Monar but for the purposes of the DMP, considered to be a separate management unit).
- Struy
- West Monar (under the same ownership as Pait but for the purposes of the DMP, considered to be a separate management unit).

There are areas of 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 Deer Management Group area but as a whole Conservation is a common and strongly shared focus of all. Further information on individual management units is contained in Sections 18 to 26.

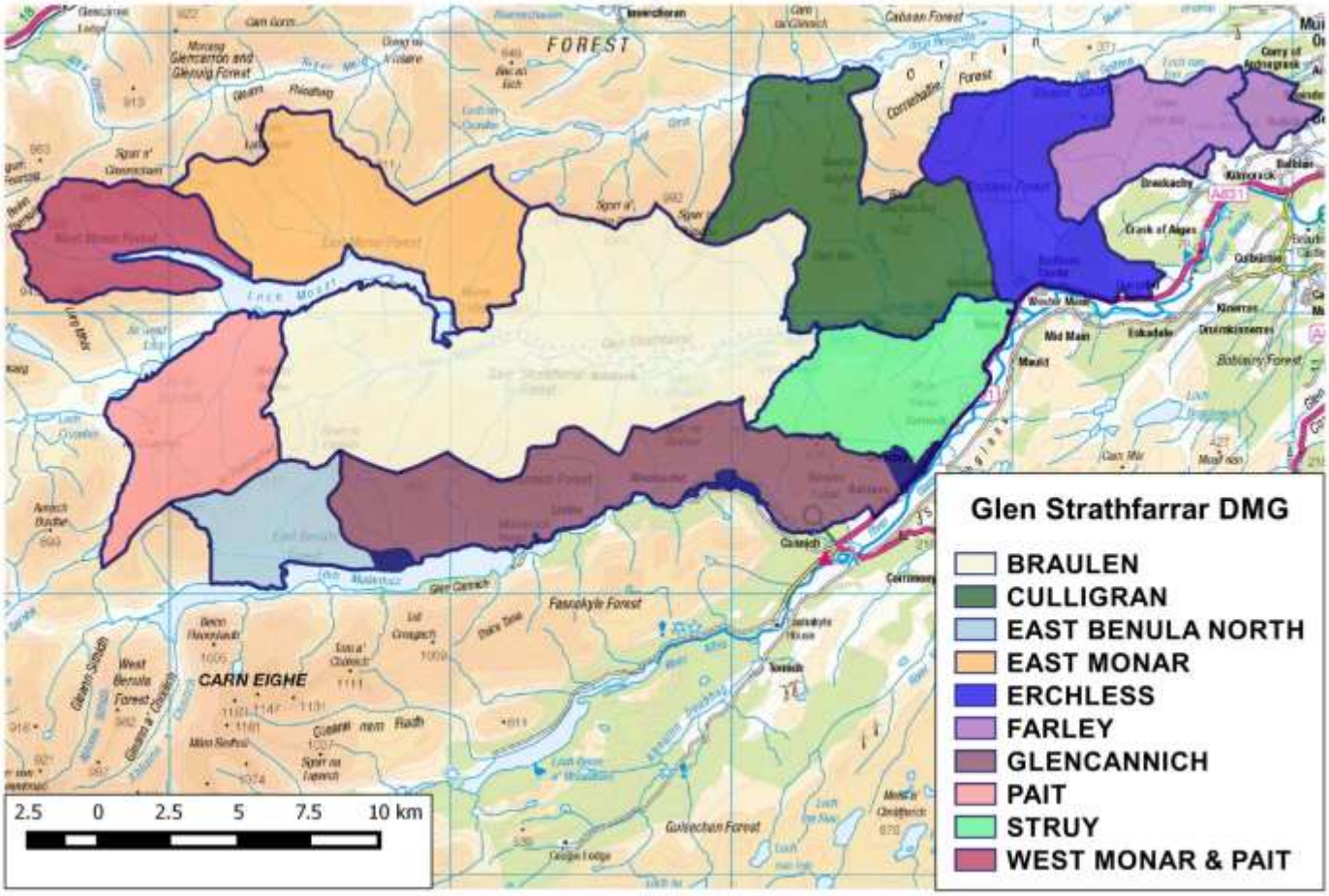
1.3 Sustainable Deer Management and the Public Interest

The management of red deer at a landscape population level as set out in the Code of Practice on Deer Management (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 deer 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.

Figure 2: Deer Management Units



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1.4 The purpose of the Deer Management Plan

The overall purpose of this Deer Management Plan (DMP) is to provide:

- An agreed framework for the management of wild deer in the area covered by the Group;
- An agreed set of actions;
- An agreed pattern of arrangements to ensure that the actions are implemented and their effectiveness monitored.

1.5 Deer Management Plan Structure

The DMP consists of three main parts:

- ***Part 1: Deer Management Working Plan*:** The Working Plan sets out the most up to date information on culls, counts and population targets as well as specific actions the Deer Management Group will undertake throughout the life of the plan. The Working Plan will be reviewed at least annually, with a systematic review of the whole plan taking place at the end of the five year period.

- ***Part 2: Deer 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.

- ***Part 3: Group Operation*.** This section contains information relating to the Operation and Functioning of the DMG.

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.

1.7 Deer Management Plan Adoption and Consultation

This is the third 5-year plan that the Group has agreed and delivered. This Deer 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 DMP has been given to the local Community Councils.

2. Deer Populations, Movements and Management

2.1 Deer Populations

The available range for red deer (*Cervus elaphus*) throughout the area amounts to approximately **43,395** ha. With sheep numbers having been greatly reduced over the last 20 - 30 years (from well in excess of 2700 to a current figure of around 475), red deer provide the main grazing impact over much of the hill ground. Roe deer (*Capreolus capreolus*) are also widespread but at lower density and with a discrete, patchy distribution and Sika deer (*Cervus nippon*) have been regularly reported over recent years and there are likely pockets of establishment.

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. Since 2003, there have 4 full helicopter deer counts over the DMG area which provide an estimate of the open-range deer population (see Table 1 below). The last full helicopter count was conducted in 2012 and the previous deer management plan projected a likely total population within the Glen Strathfarrar Management Area at the end of the 5 year period to be around 6040 deer. Using a combination of known cull data since 2012, population modelling predicts a current population of around 5659 deer (**13.0 deer per km2**).

A number of properties have agreed to meeting specific target densities for hinds for conservation purposes. Incorporating these densities in to the figures (the “desired” population of hinds of 3267 and an overall density of **14.4 deer km2**), gives a figure which is higher than current predicted densities - meaning that the population is broadly currently in keeping with all current conservation requirements.

Figure 3: Actual and Predicted Deer Populations

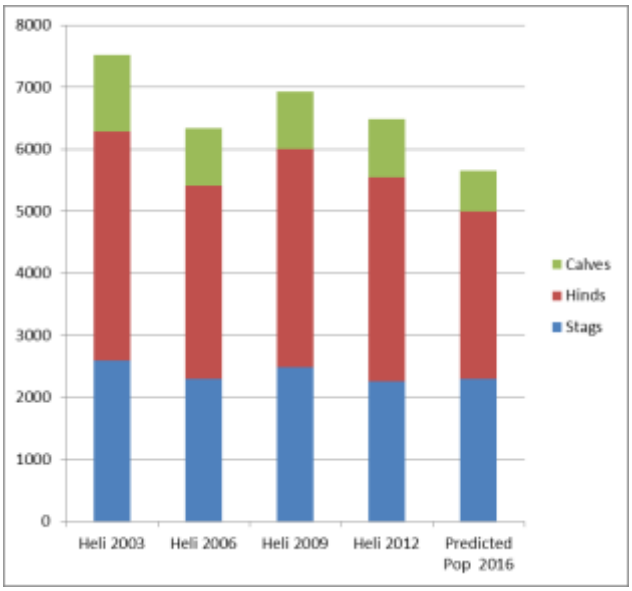


Table 1: Helicopter Counts
(Hind, stag and calf figures for 2016 have been estimated using population models)

Helicopter Census	Year	Stags	Hinds	Calves	Total	Density
Heli 2003	2003	2596	3682	1243	7521	17.33
Heli 2006	2006	2300	3105	939	6344	14.62
Heli 2009	2009	2488	3519	925	6932	15.97
Heli 2012	2012	2260	3291	936	6487	14.95
Predicted Pop 2016	2016	2304	2695	661	5659	13.00

2.2 Deer Movements

One of the main considerations for the Group is to determine changes in deer movements that have occurred noticeably over the last few years. The previous plan reported that a number of Estates (especially those hind forests dependent on an influx of stags from the wider area, in season) experienced significant declines in the number of mature stags in season. It was thought that this may be a medium-term consequence of reduction culls carried out over the years on a number of properties (Braulen, Strathconon, Inverinate and others).

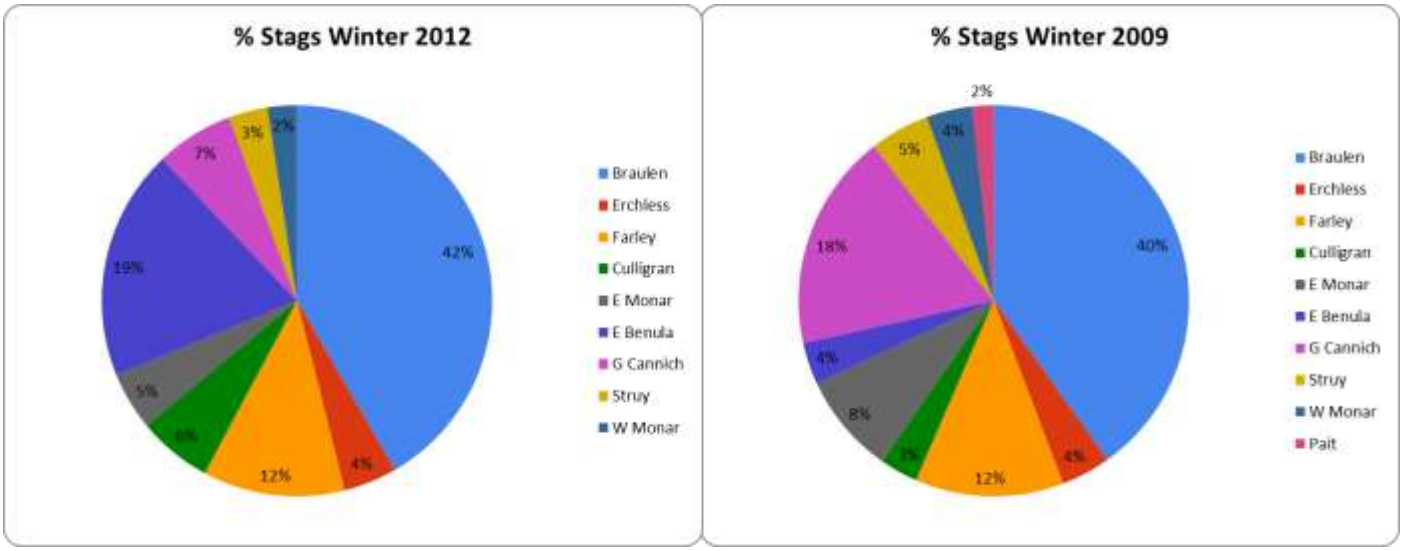
The previous plan discussed that hind numbers overall are sufficient to provide adequate recruitment of calves to grow through, and that any shortage of stags resulting from such reduction culls will have been relatively short-term, with populations of mature stags recovering as newer recruits grow through to maturity. That is still the case with regards to the hind numbers, and indeed, those holding stags are seeing a spread throughout the age classes. While there is an acknowledged movement of deer between, for example, West Monar and neighbouring East Monar (both within the Glen Strathfarrar group), there is also considerable movement of animals between West Monar and Attadale in the Lochalsh DMG.

There is some interchange of animals between Pait and Braulen in the area of Sgurr na Lapaich, and between Pait and East Benula North - but management of deer populations at Pait and the Western end of East Benula North is also strongly influenced by deer movements between these Estates and neighbouring Killilan and West Benula (both in Lochalsh DMG).

The majority of the Estates to the north of Glen Strathfarrar itself march with neighbours within the Strathconon sub-group: Glencarron, Strathconon itself and Fairburn. Two Estates in particular (Culligran and Erchless) even cross the watershed between the two Management Areas and include land within Glen Orrin. Deer from this glen have little interaction with populations of the main Glen Strathfarrar, and are far more connected with populations of Strathconon and Fairburn. This may have some significance in determining future management policies. There is also movement of stags from Affric and Kintail through Mullardoch.

Given that all the properties in this DMG wish to continue to utilise deer as a resource, 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 increased localised impacts to natural heritage as well as agricultural and woodland interests through temporal concentrations of deer. Winter count figures from 2012 and 2009 (Figures 4a and b) show the relative importance of Braulen, Glen Cannich and Farley that, at the time, provided the majority of stag wintering areas.

Figures 4a and 4b: Stag population wintering per property



Although it is considered that the deer population is largely geographically contained within the group area, there are a couple of areas where deer may move between neighbouring properties out with DMG. The Group therefore maintains on-going communication with the neighbouring Strathconon DMG to the north and Lochalsh DMG to the West. The group therefore maintains active engagement with all neighbouring DMGs and estates in the area, ensuring a landscape collaborative approach to deer management.

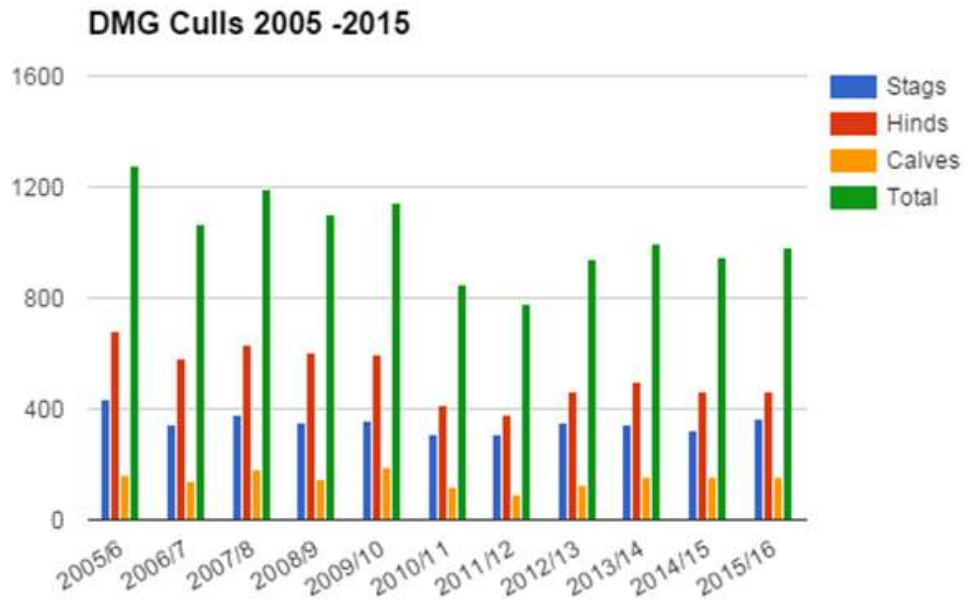
2.3 Deer Culls

The historic culls for each property are shown in Table 2 below. Following the count in 2003, the DMG increased the cull significantly in 2004/ 2005 (not shown) reducing the overall population from 17.3 deer per km2 to 14.6 deer per km2 in 2006. Up until 2012 culls appear to have relaxed resulting in a population of 15.0 deer per km2. Since 2012, culls increased once again resulting in a current predicted population of about 13.0 deer per km2. A helicopter count of the whole South Ross DMG area is due to take place in spring 2016 and will be used to inform future culls for this plan.

Table 2: Group and Individual Property Culls.

Culls	Total				Braulen				Erchless				Farley				Culligran				E Monar				East Benula				Glen Cannich				Struy				West Monar & Pait			
	S	H	C	T	S	H	C	T	S	H	C	T	S	H	C	T	S	H	C	T	S	H	C	T	S	H	C	T	S	H	C	T	S	H	C	T	S	H	C	T
2005 -2006	438	714	164	1316	208	283	58	549	29	74	23	126	0	2	0	2	41	55	17	113	30	49	8	87	19	49	7	75	47	52	9	108	24	50	8	82	40	100	34	174
2006 -2007	343	567	128	1038	116	176	34	326	34	46	15	95	3	0	0	3	32	64	18	114	34	43	7	84	12	85	17	114	50	66	7	123	22	15	3	40	40	72	27	139
2007 -2008	374	609	169	1152	163	152	43	358	35	52	22	109	4	3	0	7	32	64	16	112	30	53	12	95	12	93	19	124	42	64	9	115	23	30	12	65	33	98	36	167
2008 -2009	349	624	164	1137	149	166	43	358	40	57	17	114	5	7	1	13	33	61	23	117	25	52	7	84	8	83	14	105	40	81	12	133	27	55	25	107	22	62	22	106
2009 -2010	354	604	192	1150	131	139	61	331	23	47	12	82	5	6	3	14	34	57	33	124	36	48	5	89	21	101	23	145	40	99	18	157	24	34	9	67	40	73	28	141
2010 -2011	311	414	124	849	111	129	34	274	23	37	11	71	5	5	1	11	30	44	28	102	33	22	2	57	17	45	7	69	40	60	14	114	22	9	5	36	30	63	22	115
2011 - 2012	311	373	88	772	131	129	35	295	32	41	8	81	6	3	1	10	23	25	7	55	25	16	3	44	10	48	6	64	40	50	7	97	21	3	1	25	23	58	20	101
2012 -2013	345	502	138	985	132	141	39	312	34	41	10	85	6	6	0	12	30	56	21	107	28	18	2	48	16	96	27	139	45	91	23	159	22	5	1	28	32	48	15	95
2013 -2014	346	499	155	1000	135	142	49	326	39	61	15	115	10	6	1	17	29	65	27	121	20	16	5	41	15	90	25	130	47	75	21	143	29	13	1	43	22	31	11	64
2014 -2015	326	462	154	942	129	147	47	0	24	42	14	80	11	3	6	17	31	66	32	129	24	19	2	45	14	54	16	84	46	66	18	130	25	16	3	44	22	49	16	87
2015 -2016	294	462	157	913	121				24			24	10				30			30	15			15	12			12	41			41	23			23	18			18

Figure 5: Historic Group Deer Culls



2.4 Other herbivores

Throughout the Management Area, it is apparent that the nature of much the open hill vegetation is markedly affected by past and current management through sheep grazing, and in particular a long-established history of regular periodic muirburn (for sheep and for grouse). This has clearly modified the heathland vegetation in particular, with grazing leading to a suppression of heather in general and an increase in grass inclusion within the sward overall (a higher percentage cover of grass even within the 'heather' patches), and with muirburn and subsequent heavy grazing tending to impose a mosaic pattern of alternating grass and heather patches within the overall matrix. Over the last 20 years, sheep numbers on the open-hill have been reduced significantly. Previously most properties had sheep, with numbers in excess of 2700. Currently, sheep numbers are closer to 465.

3. Natural Heritage and Biodiversity Interests

3.1 Geology

The geology of the area is relatively simple; from west to east the rocks almost all belong to the Moine series: sedimentary rocks laid down in shallow waters over a basement of Lewisian Gneiss (Putman 2011). The sandstone elements of these sedimentary rocks tend to support more acidic vegetation, while mudstone schists are characterised by a series of lime-rich inclusions. Where these are apparent at the surface they tend to be associated with a richer, more calcicolous vegetation. The limestone inclusions are highly soluble and lime-associated vegetation is particularly apparent on the alluvial fans at the base of watercourses running through the parent mudstones, which commonly support *Agrostis-Festuca* grasslands and flushes. The entire area shows classic effects of glacial scour and the deposition of moraines associated with glacial retreat and is of considerable significance in its clarity of illustration of such glacial features.

3.2 Vegetation Cline

Across the DMG area there is a distinct cline of vegetation from west-east reflecting a shift from a more oceanic to continental climate. The transition is not a gradual but occurs quite suddenly. One of the reasons for the inclusion of Glen Cannich Estate within the Affric-Cannich Hills SSSI was the fact that it illustrates this transition from heathlands (showing a characteristic western style) to those showing a more typically east coast influence within a distance of a few kilometres (west and east of the Allt Mullardoch).

The western part of the DMG Area tends to be much wetter than the east and this has a pronounced influence on the vegetation, leading to a greater dominance of *Erica* heathers and wet heath communities in the west. Inclusion of *Calluna* heath is notably less within the overall 'mix' and in general it performs rather poorly. Dry heathland is largely restricted to the steepest, most freely draining slopes, or on well-drained knolls or morainic hummocks within wetter areas. Towards the east, growth of heather is extremely strong and vigorous, so dry heathlands are less restricted in nature and often cover very extensive areas.

The character/composition and the productivity of the vegetation have a number of implications for management. Differences in vigour and growth potential of, in particular, Ling Heather , but also other heathland species, mean that communities west and east may respond very differently to management (as in recovery from muirburn) or respond differently even to the same level of grazing impact. Thus the actual impact of even the same grazing pressure may be very different between western and eastern parts of the DMG Area.

Effects of burning in particular are more marked towards the west part of the Management Area (where heather recovery is extremely slow and thus burnt patches tend to become colonised and subsequently dominated by grasses), and less marked in the east, where heather growth is much more vigorous, recovery from burning is rapid, and thus the risk of invasion by grasses reduce

This difference in 'reaction' means that the actual assessment of grazing impacts cannot rely on using the same subjective indicators of grazing pressure across the entire area. One of the most commonly-used indicators of grazing pressure on open hill communities is to assess the extent of cover of *Calluna* heather overall. But since the growth of *Calluna* is in any case much more vigorous towards the east, both percentage cover overall, and speed of recovery from grazing may be intrinsically much greater. By converse, 'damage' to heathland communities may occur at much lower levels of grazing impact in the west, simply because the communities are already more stressed.

Image 2: Distinctive East - West Vegetation Cline on Glen Cannich

3.3 Plants

A large number of rare plants have been recorded including Highland Cudweed, Starwort Mouse-ear Chickweed and Russet Sedge as well as a number of nationally rare mosses and liverworts. Dwarf Birch is also widely established within many heathland areas. Other notable species include Creeping Lady's Tresses, Dwarf Juniper, Alpine Bearberry, Twinflower, One-flowered Wintergreen, Medium Wintergreen and Serrated Wintergreen.

Small Cow-Wheat is a Nationally scarce, UKBAP priority species. This flowering plant prefers to grow in birch woodlands in conditions of light shade and high humidity. In a study by Scobie, between 2007 and 2014, 14 different locations of this plant were found in the most intact and extensive remnants birch woodland to the west of Braulen. With a population size of 3000-5000 plants this represents one of the top 3 sites in the UK.

Glens Strathfarrar and Affric are the most important pinewoods in the UK for the rare epiphytic lichen communities they support.

3.4 Mammals

Red Squirrels, Pine Marten and European Otters are all present within the Management Area; all species are of national importance. Foxes and Badgers are also present with the latter becoming increasingly common. Water Voles have been recorded in the past in a number of locations but the current status of these populations is unknown. Hedgehog numbers have declined and badger numbers have increased. No rabbits and few Mountain Hares. There is an established population of feral goats within Glen Strathfarrar (Braulen/Culligran), with another at East Benula.

3.5 Birds

Golden Eagle, Peregrine Falcon, Red-throated Diver, Black-Throated Diver and Common Scoter, Scottish crossbills and are listed in Annex 1 of the EC Birds Directive and are Red Data Book species.

Also present are Buzzard, Greenshank, Dotterel, Merlin, Golden Plover, Siskin, Twite, Redpoll, Oyster Catchers, Dippers, Herons, Whooper Swans, Mergansers, Goosanders and Crested Tits.

Ptarmigan) and Red Grouse are found but not in any great numbers but indications of Black Grouse leks increasingly slightly, particularly within some of the woodland enclosures. Occasional visits from ospreys and occasional nesting.

3.6 Invertebrates

Glen Strathfarrar is considered of National importance for beetle, fly and dragonfly groups. One Red Data Book Category 1 fly has been recorded *Callicera rufa* and three RDB Category 3 species *Chaemasyrphus scaevoides, Dolicephala ocellata and Pelidnoptera nigripennis*. The area is of regional importance for the Red Data Book flies (*Callicera rufa, Chaemasyrphus scaevoides, Dolicephala ocellata* and *Pelidnoptera nigripennis*) and also of importance for a number of nationally scarce beetle species characteristically associated with dead and decaying pinewood.

3.7 Reptiles and Amphibians

The DMG Area is recognised as being of Regional importance for both Reptiles and Amphibians. Although it is somewhat under-surveyed, there are known to be populations of European Adder, Common Lizard, Common Frog and Palmate Newt.

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

4.1 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. Wild Deer Best Practice Guidance states that with increasing intervention (e.g. fencing, feeding, culling) comes increasing responsibility for their welfare.

Fencing
This is a management tool that is used extensively throughout the DMG. The exclusion or prevention of deer movements to areas of natural areas of shelter in winter through the erection of exclosures 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 DMG, all but one property provide some level of supplementary/diversionary winter feeding specifically for deer, and mainly for stags. This is mainly in the form of silage and blocks, although combinations of cobs, potatoes, beet pulp and grain are also provided.

Winter Mortality
Members 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 approximately 6% for calves, and 2% hinds for hinds and stags. These figures are used in the current population models for GSDMG, but will be varied depending on the location and practical experience.

4.2 Plan Objectives
DMP 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 Wild Deer Best Practice Guidance industry standards.

4.3 Current Delivery.

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

4.4 Targets to be delivered by 2021

Actions to ensure deer welfare is taken fully into account at individual animal and population level	When?
Agree and adopt welfare policy (Part 3 of plan).	Spring 2016
Provide information on welfare indicators annually. Baseline information established in year 1 of DMP and welfare indicators reported on annually. Any resulting management actions agreed and implemented by members.	Ongoing
Any new fencing in DMG area will consider welfare implications in design and extent and the appropriate management undertaken.	Ongoing
Monitoring and reporting of significant levels of winter mortality.	Ongoing

5. Actions to develop mechanisms to manage deer

5.1 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 ADMG Benchmark.

- Glen Strathfarrar Deer Management Group is made up of **the 10 main management units** in the area who are regularly represented at meetings. All management units are privately owned but are managed for a wide range of objectives. On all properties conservation is a common objective but deer are also managed as a resource. Other objectives include farming and livestock production, forestry and tourism.

- There are 3 properties which, although collectively are only 218.88 ha in size and represent only 0.5% of the total DMG area, are nonetheless important to be included in the Group as their contribution to deer management activities and upkeep of the strategic fence will be important to include in the overall delivery of the Group objectives.

- Deer have the potential to impact (positively and negatively) on many of 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. Since 2003, there have been 3 full and one partial helicopter deer counts over the DMG area which provide an accurate estimate of the open-range deer population. A more detailed description of trends in deer numbers and historic annual cull figures can be found in Section 2.

- Using population models, with a recruitment rate of 27%, the current spring population for 2015 is estimated to be **13.0 deer Km2**. Taking into consideration hind population targets that have been set on individual properties for current conservation purposes, the total number of deer that could theoretically deliver the collective objectives of this plan is around 6421 (**14.4 deer per km2**). It would seem that this group is therefore currently managing deer in line with conservation objectives. However, future management will be informed through the Helicopter Deer Count (scheduled for Spring 2016) and a Habitat Impact Assessment to be carried out in Summer 2016.

5.2 Plan Objectives

The Deer Management Plan (DMP) will aim to identify specific actions to deliver local public interest and ownership objectives. The DMP should also ensure that representation and Membership of the Deer Management Group enables greater integration of different land-uses at a local level. The planning process should also be consultative, transparent and open.

5.3 Current Delivery.

- An agreed Deer Management Plan is in place which was adopted in 2011.
- DMG has a web site and a summary of DMG information can be found on the Association of Deer Management Groups web site.
- The DMG currently works in Partnership with Government Agencies (SNH & FCS) and the Local Community.
- All the main deer management units in the area are Members of the DMG, and regular meetings of all neighbouring DMGs, formerly part of South Ross, provide a mechanism for discussing landscape-wide deer management issues.
- Cull targets are set and reported on annually.
- The Group meets bi-annually and Group Membership is encouraged to continue its practice of open discussion of cull levels at all meetings.

5.4 Targets to be delivered by 2021

Actions to develop mechanisms to manage deer	When?
Final Plan and Minutes of Meetings will be made publically available and published on DMG Website.	By Spring 2016 and ongoing
Repeat DMG Assessment.	By Spring 2016 and ongoing
Working plan will be reviewed and updated annually. Management actions will be adjusted and agreed accordingly. An annual report will be produced.	Annually
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
The helicopter count conducted in 2016 will be repeated in Year 3. Recruitment counts will be conducted annually.	Spring 2019 and Annually.
Group will seek to formally include the 3 properties who are currently not members of the Group in future Group activities.	By end 2016
Group will encourage representation at meetings of local community councils.	Annually

6. Actions for the delivery of designated features into Favourable Condition.

6.1 Background

- Nationally, there are around 356 designated features (15.8% of total) within the current DMG network where herbivores impacts are contributing to the unfavourable condition of the feature. A Scottish Government target aims to achieve 80% of features in Favourable or Unfavourable Recovering condition by 2016.

- The Glen Strathfarrar area as a whole has high conservation importance and is very heavily designated, containing a number of high profile sites of national importance. Deer management is potentially relevant to many of these. Clearly these designations and the accompanying Operations Requiring Consent may in some cases limit the options available for management of deer or vegetation.

- Much of the area to the southeast (11,306 ha) falls within the Strathglass Complex Special Area of Conservation (SAC). A total of 14,823 ha has been designated as a Site of Special Scientific Interest (SSSI) covering 4 sites (See Figure 6a and 6b):
    - Affric-Cannich Hills SSSI (which covers parts of Pait, East Benula North and Glen Cannich)
    - Liatrie Burn SSSI (Glen Cannich)
    - Glen Strathfarrar SSSI (which includes parts of Struy, Braulen and Culligran).
    - Monar Forest SSSI (covering parts of West Monar and East Monar Estates).

- The DMG area is within a National Scenic Area and part of the DMG falls within the Affric to Strathconon SPA which is an area of 50419 ha designated for Golden Eagles deemed to be in Favourable Maintained condition in 2010 (Figure 6b) .

- The eastern part of Glen Strathfarrar was also previously recognised as a National Nature Reserve although in the recent review of NNRs and their status, it was de-declared in November 2006. The purpose of the NNR was the recognition of the stand of Caledonian pinewood which is of National importance.

6.2 Plan Objectives

The Deer Management Plan (DMP) will incorporate agreed management actions to manage deer impacts to delivering favourable condition on designated sites in the area. The DMG will monitor and review progress.

6.3 Current Delivery.

There are 29 designated features within the DMG area (see Table 3). Of these, currently 18 features are considered to be in 'Favourable Maintained' condition.

- **Remaining sites in "Unfavourable" condition**: 11 features are undertaking management under SNH Management Agreements or SRDP schemes to bring them into 'Favourable Recovering' status.
- **Glen Strathfarrar SSSI**: In the past all of the SSSI woodland on Struy has been covered at one time by either a Woodland Grant Schemes (WGS) or latterly by a SFGS Scheme, which concluded in 2014. SSSI on Culligran was covered by an SNH Natural Care Scheme (until 2013). Culligran has also recently entered into partnership with Trees for Life to enter into Rural Development Contracts (RDC). On both of these properties the condition of the woodland feature is considered to be favourable.
- **Glen Strathfarrar SSSI**: Historically Braulen has erected a series of exclosures over the SSSI area through WGS. Despite this, the extent of regeneration is not considered to be sufficient to bring the whole site into Favourable Recovering condition. The Estate is considering entering into RDC to create a number of smaller exclosures in due course.
- **Liatrie Burn SSSI:** Approximately half of the SSSI (50 ha) has been enclosed. The Estate is considering entering into RDC to fence another section which would bring the site into Favourable Recovering status. Fence 18.75 ha to be fenced and SRDP management agreement underway –seen to be moving to Unfavourable Recovering condition. No need for compensatory cull.
- **Affric-Cannich Hills SSSI**: Both East Benula North and Glen Cannich have had SNH natural Care Schemes in place from 2008 to 2013. Since then, East Benula North has entered into a RDC and Glen Cannich currently has a management agreement in place (to expire in 2017) with the possibility of entering into a RDC. A summary of the impacts from Habitat Impact Assessment carried out in 2009 by Headley (2009) are summarised in Tables 4, 5 and 6.

6.4. Targets to be delivered by 2021

Actions for the delivery of designated features into Favourable Condition	When?
Deer numbers managed to maintain "Favourable or Unfavourable Recovering" Condition status and according to any management targets agreed in SNH Management Agreements or RDC.	On-going
Properties with "Unfavourable" features to work with SNH and Forestry Commission Scotland to implement "appropriate management".	By 2021
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
Estates to continue to target deer management on sensitive areas to reduce localised impacts.	Ongoing

Figure 6a: Designated Sites (SSSI) and associated condition

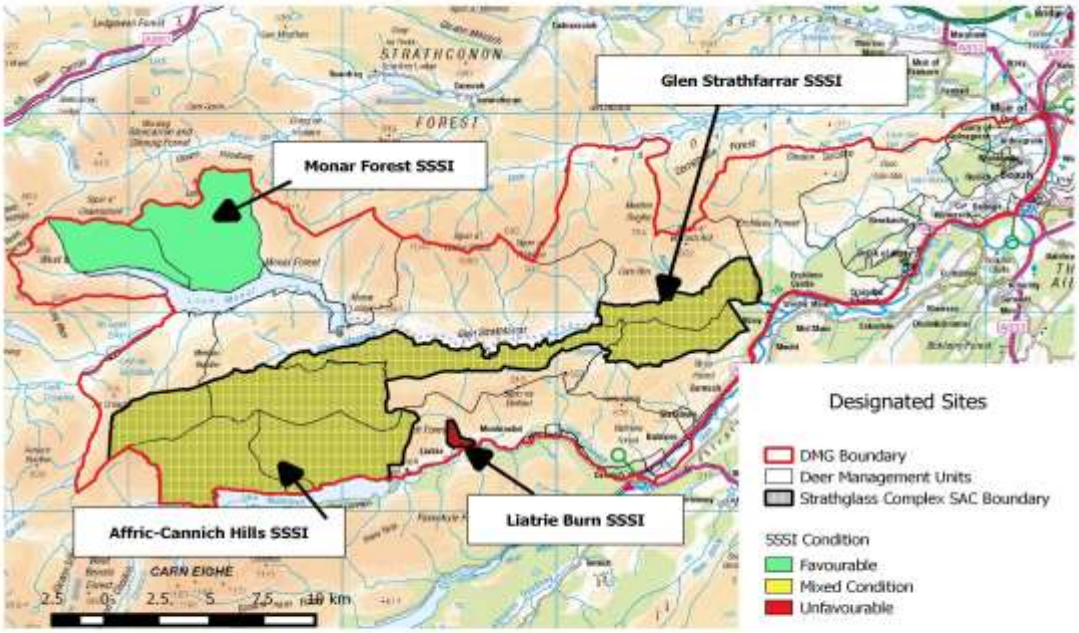


Figure 6b: Designated Sites (SAC, SPA and NSA)

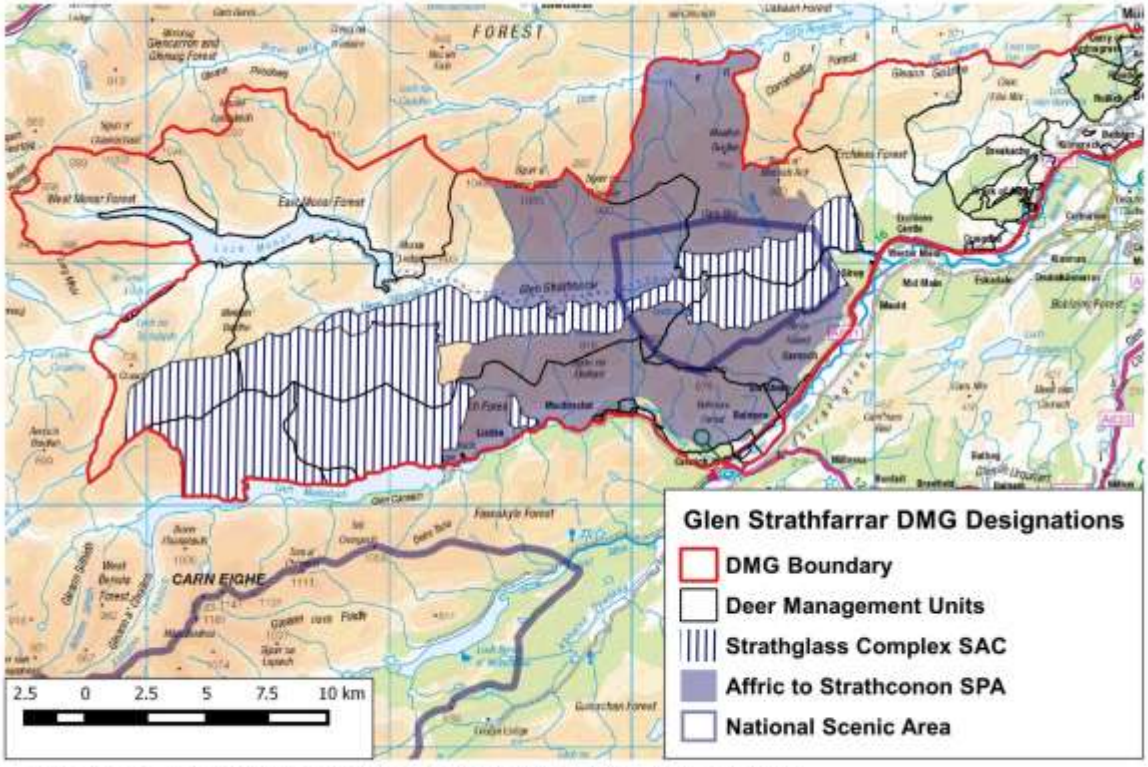


Table 3: Designated features with potential herbivore impacts

Des	Site	Feature	Assessed Condition	Agreements
SSSI	Affric - Cannich Hills	Native pinewood	Unfavourable No change	Public Body Management Plan, SNH management Agreement, Forestry Grant Scheme
SSSI	Affric -	Upland	Unfavourable	RDC and SNH Management agreements in place on E Benula and Glen Cannich
SSSI	Glen Affric	Native pinewood	Favourable Maintained	
SSSI	Glen Affric	Lichen assemblage	Favourable Maintained	
SSSI	Glen Affric	Dragonfly assemblage	Favourable Maintained	
SSSI	Glen Affric	Breeding bird assemblage	Favourable Maintained	
SSSI	Glen Strathfarrar	Native pinewood	Unfavourable No change	In the past all of the SSSI woodland on Struy has been covered at one time by either a Woodland Grant Schemes or latterly by a SFGS Scheme, which concluded in 2014. SSSI on Culligran was covered by a Natural Care Scheme (until 2013). On Braulen there are exclosures in place through WGS.
SSSI	Glen Strathfarrar	Vascular plant assemblage	Favourable Maintained	
SSSI	Glen Strathfarrar	Lichen assemblage	Favourable Maintained	
SSSI	Glen Strathfarrar	Dragonfly assemblage	Favourable Maintained	
SSSI	Glen Strathfarrar	Breeding bird assemblage	Favourable Maintained	
SSSI	Liatrie Burn	Native pinewood	Unfavourable No change	SNH Management Agreement
SSSI	Monar Forest	Upland assemblage	Favourable Maintained	
SAC	Strathglass Complex	Bog woodland	Favourable Maintained	
SAC	Strathglass Complex	Caledonian forest	Unfavourable No change	SNH Management Agreement
SAC	Strathglass Complex	Dry heaths	Unfavourable No change	SNH Management Agreement
SAC	Strathglass Complex	Wet heathland with cross-leaved heath	Unfavourable No change	SNH Management Agreement
SAC	Strathglass Complex	Plants in crevices on base-rich rocks	Favourable Maintained	
SAC	Strathglass Complex	Tall herb communities	Unfavourable No change	SNH Management Agreement
SAC	Strathglass Complex	Plants in crevices on acid rocks	Favourable Maintained	
SAC	Strathglass Complex	Acidic scree	Favourable Maintained	
SAC	Strathglass Complex	Alpine and subalpine heaths	Unfavourable No change	SNH Management Agreement
SAC	Strathglass Complex	Montane acid grasslands	Favourable Maintained	
SAC	Strathglass Complex	Mountain willow scrub	Unfavourable No change	SNH Management Agreement
SAC	Strathglass Complex	Blanket bog	Unfavourable No change	SNH Management Agreement
SAC	Strathglass Complex	Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels	Favourable Maintained	
SAC	Strathglass Complex	Otter (Lutra lutra)	Favourable Maintained	
SPA	Glen Affric to Strathconon	Golden eagle (Aquila chrysaetos), breeding	Favourable Maintained	
SSSI	Affric - Cannich Hills	Moine	Favourable Maintained	

Table 4. Overall Impacts

(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		Trampling		Dunging	
	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 5. Impacts by Habitat Type

(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 herbivore impact					Total
	High	High/Moderate	Moderate	Moderate/Low	Low	
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 6. Impacts by Management Unit

(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 unit	Overall herbivore impact					Total
	High	High/Moderate	Moderate	Moderate/Low	Low	
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

7. Actions to manage deer to retain existing native woodland cover and improve

7.1 Background

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. Wild Deer- A National Approach (WDNA) has set a national target that 60% of native woodlands should be considered to be in "satisfactory condition" by 2020.

- Total area of native woodland in Scotland is **311,153 ha**
- Area in satisfactory condition (%) – **143163 ha (46%)**
- Area in unsatisfactory condition (%) – **167990 ha (54%)**
- Additional area needing improvement to reach 60% - **43529 ha**

The NWSS has identified **2442.46 ha** of native woodland within the GSDMG area (Figure 7). This represents **0.78%** of the total area of native woodland in Scotland. According to the survey, 54% percent of the herbivore impacts from NWSS were considered to fall in the Low to Medium impact category within GSDMG. A map of NWSS Survey Results can be found in Appendix 4.

7.2 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 DMP will identify all existing woodland and its condition and will consider actions for the next 5 years to ensure that the long term woodland objectives can be met.

7.3 Current Delivery.

- Currently **1328.49 ha (54.39%)** of woodland are considered to have **Low/Medium Impacts** (Table 7).
- Braulen, Culligran, and Struy estates have all been involved for nearly 40 years in various programmes of fenced exclosures to encourage natural regeneration of native woodland with significant success (Figure 8). A total of **237.06 ha** of native woodland thought to have Very High or High impacts from the survey has either been enclosed or come under a SFGS (Table 8). Including these areas of reduced impacts, this brings the total of **Low/Medium Impacts to 64%**
- Furthermore, within Erchless, there are **110.96 ha** of woodland considered to be Very High/Highly impacted - however, this woodland is completely enclosed and any deer found within the enclosure are controlled. Adding this area to the total area of Low/Medium impacts increases the total overall to **69%.**
- In Glen Strathfarrar there is current concern over the presence in very small numbers of the Lapis Pine Moth and FCS have put in place a research programme to monitor this.

Figure 7: Native Woodland

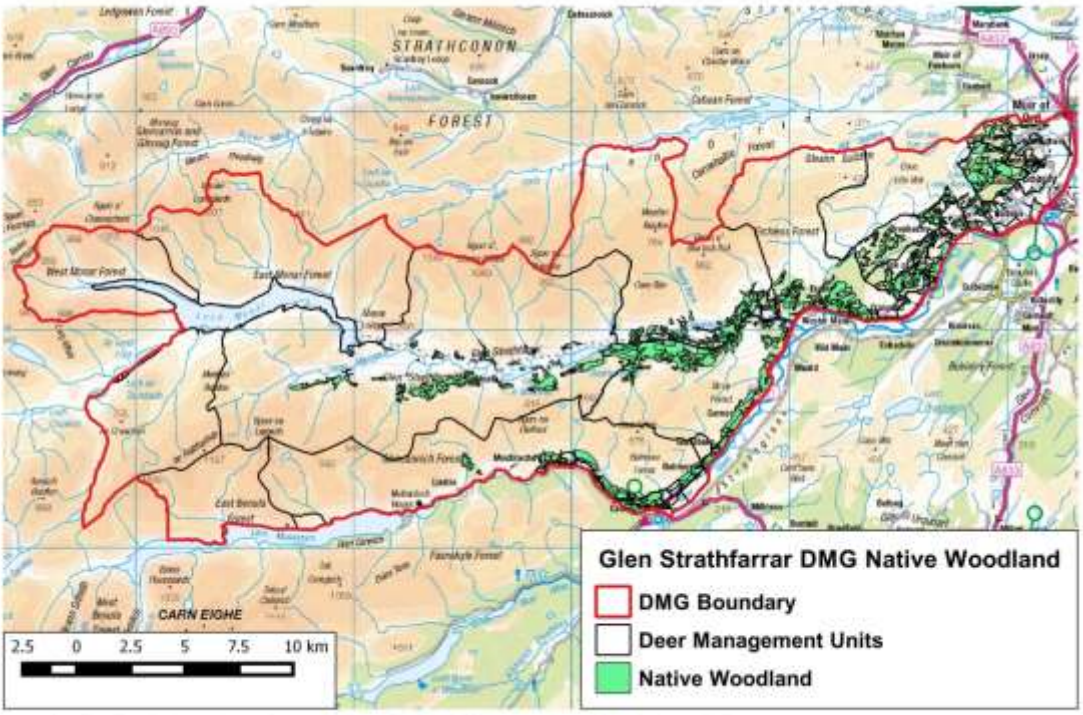


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Figure 8: Woodland Grant Schemes

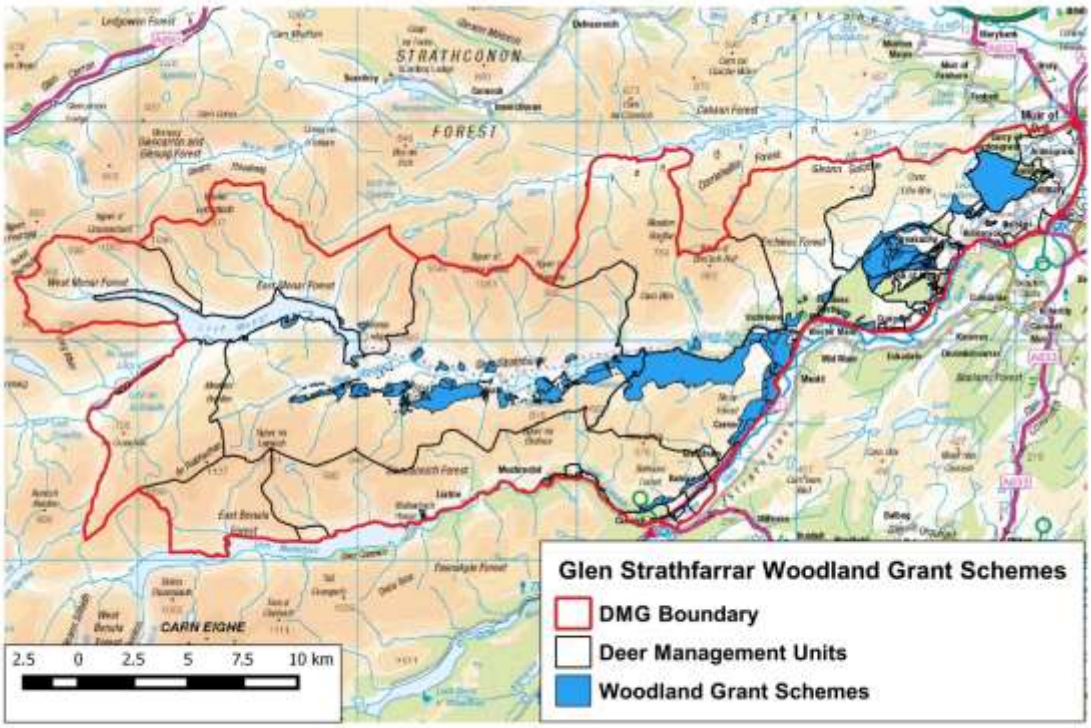

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Table 7: Native Woodland Survey for Scotland Herbivore Impacts

Property	Impact (ha)			
	Very High	High	Medium	Low
BRAULEN	280.08	113.43	160.70	39.48
CULLIGRAN	230.92	43.43	122.19	6.93
EAST BENULA NORTH	0.55			
EAST MONAR	0.58		1.27	
ERCHLESS	69.60	41.36	126.49	155.78
FARLEY		1.64	78.59	4.30
FARLEY & UPPER LEANASSIE DISP 4	1.48	3.07	1.39	12.53
FARLEY WOOD	13.36	5.71	198.01	35.16
GLENCANNICH	96.91	103.16	109.54	9.38
LOWER GLASSBURN		3.39	0.06	0.60
PAIT		1.73		
STRUY	22.22	81.35	226.54	37.76
PAIT				1.76
Total	715.71	398.27	1024.78	303.71
Percentage of Total (2442.46 ha)	29.30%	16.31%	41.96%	12.43%

Table 8: Summary of property contribution.

Property	NWSS - Very High and High (ha) covered by management
Struy	103.57
Culligran	111
Braulen	22.49
Total	**237.06**

7.4 Targets to be delivered by 2021

Actions to manage deer to retain existing native woodland cover and improve woodland condition	When?
For properties with SRDP Natural Regeneration Schemes in place, provide evidence of woodland condition in the form of an appropriate survey report if available.	By 2021
Group will undertake a review of native woodland condition in the Group area, consolidating existing survey reports and implementing woodland herbivore impacts assessment monitoring protocols where required. See monitoring Schedule in Working Plan.	Year 3
To implement management to reduce negative impacts including use of Forestry Grant Schemes where practical and appropriate.	By 2021

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

8.1 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.

Deer Fences

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. With the programme of exclosures on Culligran, Struy and Braulen, once trees have established, fences will come down.

8.2 Plan Objectives

- Plan will identify all new woodland in last 5 years and beyond (WGS) and the potential for/ 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.
- Plan will consider need for new woodland from a DMG perspective- ie are there areas short of shelter?

Table 9: Total Area of Woodland Type (National Forest Inventory)

Woodland type	Area (ha)	% of total area (45540 ha)
Assumed woodland	606	1.33%
Broadleaved	951	2.09%
Conifer	1883	4.13%
Felled	295	0.65%
Ground prep	12	0.03%
Young trees	269	0.59%
Mixed mainly broadleaved	97	0.21%
Mixed mainly conifer	487	1.07%
Total	4016	8.82%

8.3 Current Delivery.

- Woodland represents almost **9%** of the total land area of GSDMG. This includes both native woodland, commercial and amenity woodland (see Table 9 above). The extent of boundaries of woodland schemes (**2,610.97 ha** - Table 10 and Figure 8) represents **65%** of the total current woodland area at present and **5.7%** of the total land area of Glen Strathfarrar.
- There is currently a Long Term Forest Plan in place for Erchless, with plans being finalised for Braulen and Struy. Braulen has created 108.2 ha new natural regeneration.
- On Struy, there are 2 blocks of commercial forestry (scots pine, sitka, douglas and larch) on the south side towards Cannich and Struy wood which have been deer fenced 100m from edge to provide shelter for deer. There are no plans for any more large exclosures during the plan, but the possibility of a small 15-20 ha native woodland enclosure.
- On Braulen, proposals are being considered for establishment of further enclosures, but these likely to be relatively small (50 ha) so unlikely to have implications for deer management. Braulen may consider removing fences on the north side of some enclosures in due course.
- To date 22.7ha of native woodland enclosures have been opened up to deer on Culligran.
- On Farley, approximately 400 ha of commercial woodland has been opened up to deer.
- On Glen Cannich, there are 3 commercial blocks of forestry open to deer, totalling 132.4 ha. These may possibly be subject to felling and restocking at some point, but the timescales are uncertain. A further 61.37 ha of new native woodland may be opened up to deer during the life of the plan.
- Glen Cannich has created 61.37 ha of new woodland in last 20 years.

Table 10: Summary of Woodland Management Schemes

	Woodland Management Scheme					
Property	SFGS (2005 -2014)	WGS1 (1989 - 1993)	WGS2 (1993 - 2000)	WGS3 (2004 - 2009)	RDC	Total
Struy	740.95	0.00	639.76	0.00	14.78	1,395.49
East Monar	0.00	12.30	0.00	0.00	0.00	12.30
Braulen	0.00	0.00	768.24	20.90	0.00	789.14
Erchless	0.00	0.00	62.50	53.54	0.00	116.04
Farley & Farley Wood	0.00	63.20	0.00	187.31	30.86	281.37
Cullgran	0.00	0.00	0.00	0.00	16.63	16.63
Glen Cannich	0.00	0.00	0.00	61.37	0.00	58.28
Total	740.95	75.50	1,470.50	261.75	62.27	2,610.97

8.4 Targets to be delivered by 2021

5. Actions to demonstrate DMG contribution to the Scottish Government woodland expansion target of 25% woodland cover.	When?
To inform the DMG about any future woodland proposals and incorporate in the DMP - taking account of potential implications for deer management.	Ongoing

DMG to 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 i.e shelter provision for deer population at landscape scale.	Year 2

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

9.1 Background

- The DMG area has a number of Habitats with characteristics of conservation importance (Table 11).
- As a part of the DMG's ongoing commitment to carrying out environmentally responsible deer management in line with the Code on Deer Management, the aim is to implement a programme of herbivore impact assessment across the DMG in order to better inform future deer management.
- Blanket bog and peatland (which covers 5411 ha) and heather moorland (dwarf shrub heath methodology) (covering approximately 23986 ha) are two of the habitats that Scottish Natural Heritage have recommended upland deer managers monitor for herbivore grazing and trampling impacts (Figure 9). The DMGs 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. See Table 12 for habitat distribution per property.

9.2 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 1998 [1]). As a guideline, on designated sites the targets set by SNH are for 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.

9.3 Current Delivery.

- DMG has undergone a Habitat Impact Assessment training session but has yet to implement HIA across the DMG.
- Braulen have implemented HIA Monitoring in 2015 and will continue to monitor.

9.4 Targets to be delivered by 2021

Actions to monitor and manage deer impacts in the wider countryside	When?
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
Members with existing habitat monitoring encouraged to share results with DMG where appropriate.	Ongoing

Summary of initial assessment results reported to DMG. Targets and management actions agreed.	Ongoing
Repeat HIA and management actions agreed.	May & June 2019

Table 11: Habitat Types and Characteristics

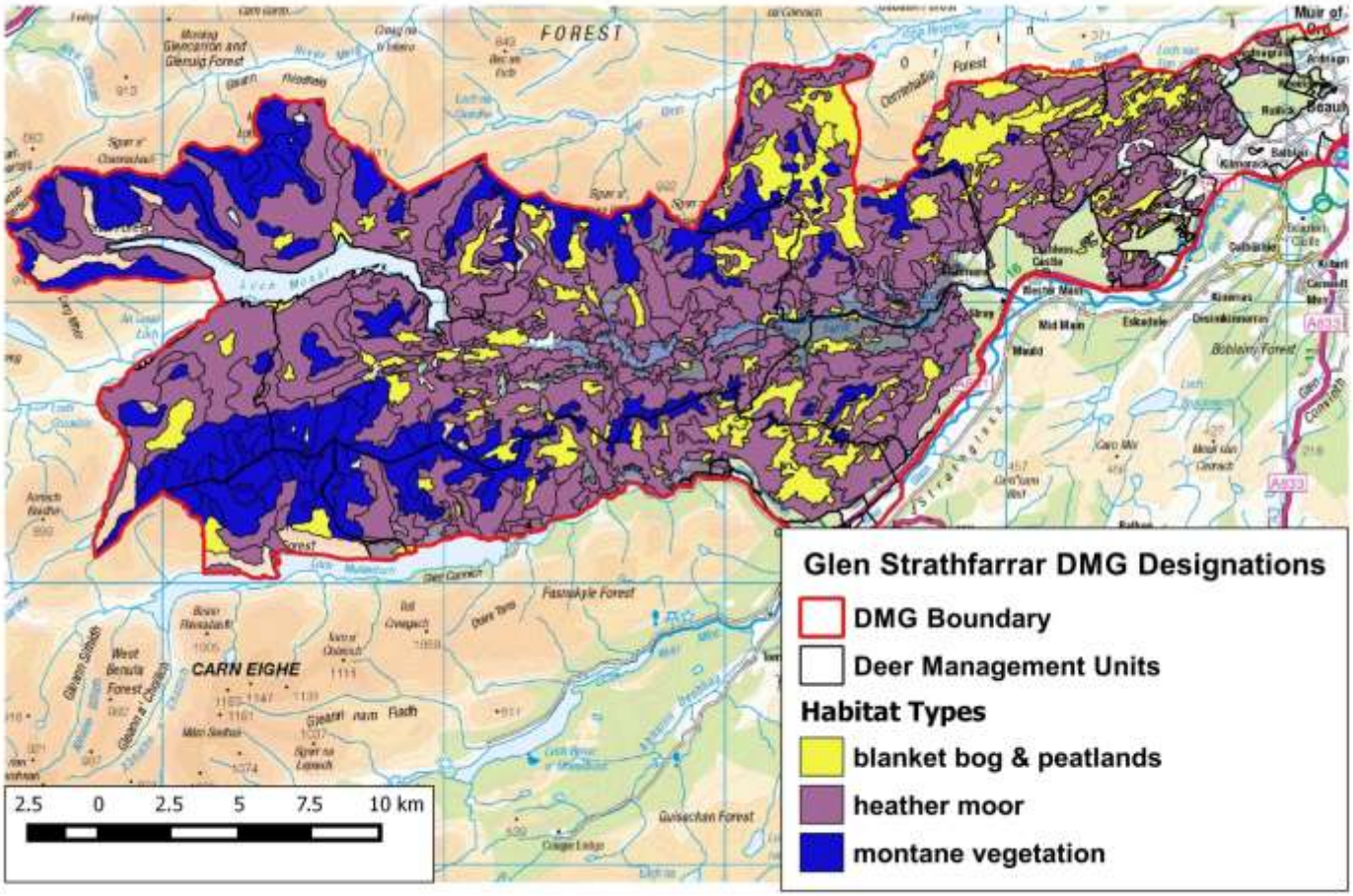
Habitat Type	Characteristics
Northern Atlantic wet heaths	The site is especially notable for the extensive development of a northern form of wet heath at high altitude. The wet heaths are intermediate between examples on the hyper-oceanic western seaboard and Western Isles, those on the more continental Cairngorms, and those in the Northern Isles.
Alpine and Boreal heaths	The DMG area has the second-largest area of Alpine and Boreal heaths in the SAC series, after the Cairngorms. These are intermediate between heathland types of the east and the less extremely oceanic parts of the north-west.
Sub-Arctic Salix spp. scrub	DMG area is the best representative in the SAC series of W20 *Salix lapponum – Luzula sylvatica* scrub on generally base-poor schist up to high altitude in the north-west Highlands.
Siliceous alpine and boreal grasslands	The Affric-Cannich Hills have the second-largest extent of Siliceous alpine and boreal grasslands in the UK. Associated communities include the most extensive areas of U13 *Deschampsia cespitosa – Galium saxatile* grassland in Britain.
Blanket bogs	Strathglass Complex encompasses much of the east–west gradient that occurs in blanket bog north of the Great Glen.
Siliceous rocky slopes with chasmophytic vegetation	Strathglass Complex has some of the most extensive outcrops of siliceous rock in the UK.
Caledonian forest	The Caledonian forest areas in the DMG area 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.

Table 12: Summary of Blanket Bog and Heather Moor Habitat by Property

Property	heather moor	blanket bog & peatlands	montane vegetation	coarse grassland	improved grassland
BRAULEN	10363	1338	3869	160	60
CULLIGRAN	1835	1328	193		16
EAST BENULA NORTH	348	158	1176	217	
EAST MONAR	3256	187	1915	36	
ERCHLESS	2631	903	46		34
FARLEY	1023	294			172
FARLEY WOOD	18				113

GLENCANNICH	2807	826	224	14	6
PAIT	465	196	541	181	
STRUY	1030	180	88	10	13
WEST MONAR & PAIT	210		170	350	
Total (ha)	23986	5411	8224	967	415

Figure 9: Habitat distribution across DMG



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

10.1 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 carbon sequestration. Soils are the main terrestrial store of carbon in Scotland and Peatlands hold most of our carbon store (53%). The depth of peat is important: the deeper the peat soil the more carbon it stores. Undisturbed, active peatlands accumulate about 0.25 tonnes of carbon per hectare per year which is broadly equivalent to around 10% of the amount of carbon accumulated over the duration of a forest crop.

Blanket bog is a type of peatland found in the uplands. 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. It is one of the most extensive semi-natural habitats in Scotland, covering some 1.8 million hectares, 23 % of our land area. Blanket bog is found throughout the Scottish uplands but is most extensive in the North Highlands and Western and Northern Isles in areas with gentle slopes and poor drainage. Growing trees is another way to increase the natural carbon reservoir. There is an estimated 50 megatonnes of carbon locked in Scotland's vegetation, most of it being held in natural woodland and forest plantations. 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.

10.2 Plan Objectives

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

The plan will identify opportunities to secure carbon by quantifying areas of Blanket Bog which could be restored by drain blocking and through the re-profiling and revegetating of haggard peat.

10.3 Current Delivery.

- DMG manages around **4000 ha of woodland** and an area of **5411 ha of blanket bog** has been identified within the DMG Area.
- DMG has undergone Habitat Monitoring Training and Blanket bog is one of the habitats that the DMG will be including in the monitoring programme.
- The actions currently being undertaken by the DMG to retain existing native woodland and encourage woodland expansion have been detailed in Sections 6 & 7.
- The DMG has not been asked to contribute to River Basin Management Planning

10.4 Targets to be delivered by 2021

Actions to improve Scotland's ability to store carbon by maintaining or improving ecosystem health.	When?
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
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
Contribute to River Basin Management Planning as appropriate	By end of 2016 and ongoing

Image 3: Existing exclosure on Braulen

11. Actions to reduce or mitigate the risk of establishment of invasive non-native species

11.1 Background

- There are no Sika deer established within the immediate DMG area, although there have been the occasional Sika shot over the last ten years on Culligran, Erchless, Glen Cannich and Struy (mostly stags) and they are present on Farley.
- Sika are established relatively locally to the DMG, and annual culls of sika within FCS properties such as Glenurquhart and Strathglass have been steadily increasing over the last 10 years. The sika cull rose from 61 on FCS Strathglass in 2005/6, to 156 in 2013/14.

11.2 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 GSDMG to monitor.

11.3 Current Delivery.

The DMG reports on any sightings or Sika culled currently.

11.4 Targets to be delivered by 2021

Actions to reduce or mitigate the risk of establishment of invasive non-native species	When?
Muntjac Deer managed as per the Non-native Species Policy (Part 3 of plan).	Ongoing
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

12. Actions to protect designated historic and cultural features from being damaged by deer e.g. by trampling.

12.1 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.
- 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

- There is one scheduled monument within GSDMG: Urchany Barrow on Farley (595m SW of NH442455). In addition, there are a range of archaeological features some of which appear on the

CANMORE website. These include Shielings, Hut Circles, Watchers Ruins, Allt Tigh Cumhaig, Maol Nan Ceapt and Tom a' Mhein Lead Mines, Prince Charlie's Cave, Allt na Feith Riabhaich Distillery Site, Chisholm Historic Graveyard and a possible old Bobbin Mill to name but a few.

- Most of the remaining records relate to undesignated historic sites areas around existing settlements. Grazing can have positive impacts on historic and cultural features by maintaining a low sward and preventing tree and shrub regeneration and thereby maintaining their visibility and context in the landscape. Damage to historic features by deer could possibly be associated with high concentrations of animals such as at winter feed sites. Group members will avoid providing winter feed at sites where there is evidence that this could result in negative impacts to these features.

12.2 Plan Objectives

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

12.3 Current Delivery.

- The DMG is currently unaware of any cultural or historic features that are being impacted on by deer.
- An archaelogical survey on Struy has revealed 100+ sites (some of which are Shielings) but none threatened by deer impacts. The Shieling Project has been set up to provide benefit to the Community and will provide and will provide residential camps for 30+ children. Shielings will be restored with heather thatch and will be fenced to protect the area from deer.
- Any woodland creation projects are currently required by Forestry Commission Scotland to carry out this assessment

12.4 Targets to be delivered by 2021

Actions to protect designated historic and cultural features from being damaged by deer e.g. by trampling.	When?
Identify any features within DMG area that may be impacted on by deer.	By end of 2016
If features identified, ensure the appropriate management is implemented and report to DMG.	Ongoing

Image 4: Newly opened up woodland on Culligran

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

13.1 Background

The DMG recognises the importance of delivering higher standards of competence in 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 DMG.

13.2 Plan Objectives

DMP to ascertain training levels among Group Members and to develop a training policy and programme.

13.3 Current Delivery

Currently 60% of individuals involved in practical Deer Management have DSC Level 1 and 20% Level 2.

13.4 Targets to be delivered by 2021

Actions to contribute to delivering higher standards of competence in deer management.	When?
DMG will adopt the training policy statement (Part 3 of plan).	Spring 2016
Ascertain training levels among DMG Members and report on progress on an annual basis.	Annually
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

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

14.1 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 such as Lyme disease. Actions relating to

venison production are included in Section 14 and road traffic accident actions are covered in Section 15. One property (Culligran) has a deer farm.

- Glen Strathfarrar is a popular tourist destination, and wildlife tourism and provision of accommodation in particular are important to many of the DMG properties as well as the local economy as a whole. Deer, as one of Scotland's top iconic species, are an important element of this. There are several popular Munros and Corbetts listed in Table 2 on the Heading For The Scottish Hills website. Many of these summits are difficult to access from the Glen Cannich/ Glen Strathfarrar side, however a private ferry boat service runs throughout the summer months on Loch Mullardoch to enable easier access to some of the more inaccessible summits and ridges in the western part of the DMG.

- Responsible access is encouraged and welcomed by all properties within the DMG with walkers being encouraged to stick to ridges and avoid descending into corries where possible during the main stag stalking season (August to 20th October).Many estates have adopted a no stalking policy at weekends.

14.2 Plan Objectives

- The aim of the plan is to:
- Identify and promote opportunities contributing to public health and wellbeing benefits associated with deer and deer management;
- Identify, raise awareness and where possible minimise the local health and safety risks;
- Identify and increase the opportunities for people to enjoy and benefit from deer;
- DMG should raise awareness of road safety issues associated with deer to reduce the risks of road traffic accidents (covered in Section 15);
- Co-ordinate action to minimise deer-related human disease risks;
- Promote responsible Access and the following of the Scottish Outdoor Access Code.

14.3 Current Delivery.

- Access is promoted across DMG and up to date information is provided in the Table 2 of the Heading For The Scottish Hills website.
- Tick awareness already discussed with estates and staff on all estates. Tick information provided for holiday cottage visitors.
- DMG collectively signed up to principles of Best Practice which provides guidance on safeguarding public safety and food safety.
- DMG currently actively promotes positive deer management throughout the area. Examples include Eaglebrae residential tourism facility on Struy which actively promotes deer and deer management to visitors, a Deer Management Awareness day hosted by Culligran and East Monar estates for local Highland Council Ranger Service. Aigas field centre also bring regular groups by mini bus to the glen to see deer.
- On Culligran, the Estate provides guided tours of the deer farm for holiday cottage visitors. A car park is provided at the entrance to the Glen. The Glen road is popular with walkers and bicyclists. In 2015 the Estate provided facilities for the Scottish 6 day Orienteering Championship, the local Scout Group, the local Primary School Fun Run and 7 days of Mountain Training for the Royal Marines.

14.4 Targets to be delivered by 2021

Actions to Identify and promote opportunities contributing to public health and wellbeing.	When?
Update and make access leaflet available on-line and to relevant tourism operators - possibly include health information about tick awareness.	By end of 2016 and ongoing
Complete relevant Access information for the Heading For the Scottish Hills initiative.	By end 2016
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
Investigate opportunities for awareness raising/educational events for the local community.	Ongoing
Provide opportunities for any concerns from the local community to be addressed.	Ongoing

Image 5: Young stag in woodland

15. Actions to maximise economic benefits associated with deer

15.1 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 stalking, tourism and food production.

- The properties within GSDMG have a range of land management objectives. Common to all, is the

need to balance strong conservation objectives whilst maximising the potential value of deer as a resource – through stalking, tourism and venison production.

- Collectively, some 370 stags are ideally required by the group to be harvested annually but the average stag cull for the last 5 years has been around 329. In order to achieve a sustainable harvest of stags, a total population of between 5676 (**12.7deer per km2**) and 6382 (**14.2 deer per km2**) is required.

15.2 Plan Objectives

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

15.3 Current Delivery

- Currently 240 stags and 120 hinds are let for stalking providing an income in the region of £114,000 annually
- A total of 945 venison carcasses are produced annually providing an additional further income of £100, 000+ annually
- There are 10 full-time deer management employees with an additional 7 full-time and 23 part-time employees associated with deer management activities.
- Across the DMG there are 18 holiday let properties accommodating 2 to 16 people.
- All properties use local services in Struy, Cannich, Beauly and the local surrounding area - such as shops, fuel, hotels and B&Bs, local tradesmen.
- All properties have access to larders with only two properties not having larder chills. None of the estates are currently members of Scottish Quality Assured Wild Venison.
- Struy actively sells their own venison to visitors to the Eaglebrae cabins.
- At a meeting in July 2015, members expressed an interest in monitoring the age structure of stags in order to ensure a continued availability of mature stags for sport shooting. It was agreed that cull returns would include stag numbers categorised into age classes. Following Best Practice Guidance on age determination the following age categories will be used:
    - 0 -24 months - Calf and yearling
    - 2 -4 Years - Young
    - 5 -7 Years - Medium/Mature
    - 8+ Years - Old

15.4 Targets to be delivered by 2021

12. Actions to maximise economic benefits associated with deer	When?

Investigate opportunities for membership of SQWV Quality Assurance Scheme.	By 2021
Investigate opportunities for more effective collection of carcasses and possible collaborative pricing of venison/game dealer prices on behalf of the DMG.	Annually
DMG Members to seek opportunities to market venison locally.	Ongoing
DMG Members to continue to monitor sustainable harvest of sporting stags (including provision of age-class information).	Ongoing

Image 6: Deer grazing on Braulen

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

16.1 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.

- Deer fencing has been used extensively throughout the DMG, both to prevent damage to woodland (both commercial and native) but also to prevent damage to agriculture.

16.2 Plan Objectives

- The DMP 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.

16.3 Current Delivery

- The strategic fence that runs from Loch Mullardoch, along the River Cannich and the River Glass and above the A831 road through to Farley prevents deer coming from the open hill and crossing this road onto the agricultural ground of Strathglass. Nonetheless, DVCs have been recorded along the A831 road but this is either due to roe deer or the occasional red deer crossing from the south. Numbers of DVCs are reported at DMG meetings.
- Night shooting authorisations have been applied for in the past by the DMG, but this is to control deer within enclosed woodlands and is unlikely to have any impact on the open range population.
- Add in economic activities stalking,

16.4 Targets to be delivered by 2021

Actions to minimise the economic costs of deer, and ensure deer management is cost-effective	When?
DMG to consider the future costs of maintaining the strategic fence and financial provision for repairs.	By end of 2016
Ensure local agricultural/ forestry interests are consulted on DMP and invited to/represented at DMG meetings.	Spring 2016
Set up monitoring and reporting of DVCs through website, DMG meetings and local Police contact.	Spring 2016 and ongoing
Implement actions to mitigate against DVC hotspots including localised deer management, use of signage, fencing etc.	Ongoing
Report on out of season and night shooting authorisations.	Annually

17. Actions to ensure effective communication on deer management issues.

17.1 Background

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

17.2 Plan Objectives

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

17.3 Current Delivery.

- DMG has a web site.
- The DMG works in partnership with SNH, FCS, the local Ranger Service, the Local Community and visitors.
- The DMG has signed up to a Constitution in November 2011.

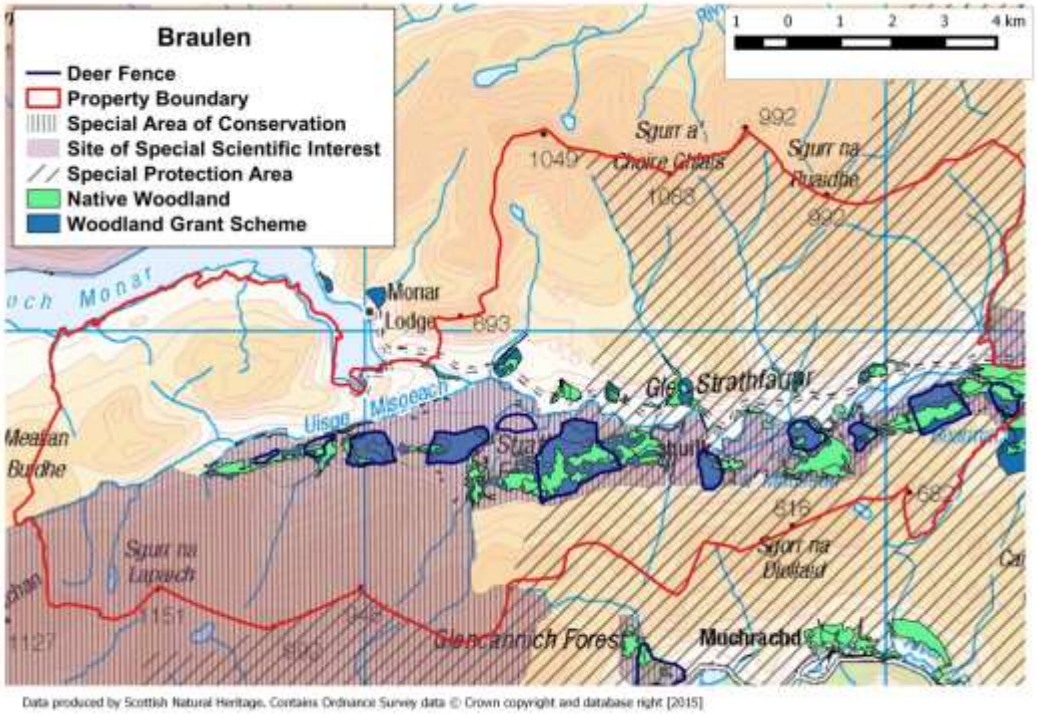
17.4 Targets to be delivered by 2021

14. Actions to ensure effective communication on deer management issues	When?
Stakeholders consulted on draft plan.	Spring 2016
Final Plan and Minutes of Meetings will published on DMG Website.	Spring 2016
DMG Constitution and ADMG Principles of Collaboration adopted (Part 3)	Spring 2016
Agree and adopt a DMG Communications Policy	Spring 2016
Agree and adopt DMG signage on deer management at access points	2017

18. Management Units: Braulen Estate

Property	**Braulen**
Area	12950 ha. Count area 12023 ha

Owner	Andras Ltd
Manager	Bidwells (Clive Meikle and Fiona Mackie)
Estate Personnel	Richard Smith (Head Stalker) Chris Shankland (Stalker) Debbie Behan (Administrator)



Deer Counts					
Year	**Stags**	**Hinds**	**Calves**	**Total**	**Density**
2001	1032	1072	290	2394	19.91
2002	1168	869	225	2262	18.81
2003	1093	979	252	2324	19.33
2004	939	997	418	2354	19.58
2005	868	1080	266	2214	18.41
2006	734	740	176	1650	13.72
2007	907	778	264	1949	16.21
2008	892	850	264	2006	16.68
2009	1014	696	208	1918	15.95
2010	792	779	230	1801	14.98
2011	0	0	0	0	0.00
2012*	874	801	215	1890	15.72
2013	0	0	0	0	0.00
2014	0	0	0	0	0.00
2015	946	893	244	2083	17.33

*Note the 2012 count was conducted before the end of the hind season

Deer Culls				
Year	**Stags**	**Hinds**	**Calves**	**Total**
2005 -2006	208	283	58	549
2006 -2007	116	176	34	326
2007 -2008	163	152	43	358
2008 -2009	149	166	43	358
2009 -2010	131	139	61	331
2010 -2011	111	129	34	274
2011 - 2012	131	129	35	295
2012 -2013	132	141	39	312
2013 -2014	135	142	49	326
2014 -2015	129	147	47	0
2015- 16	130			

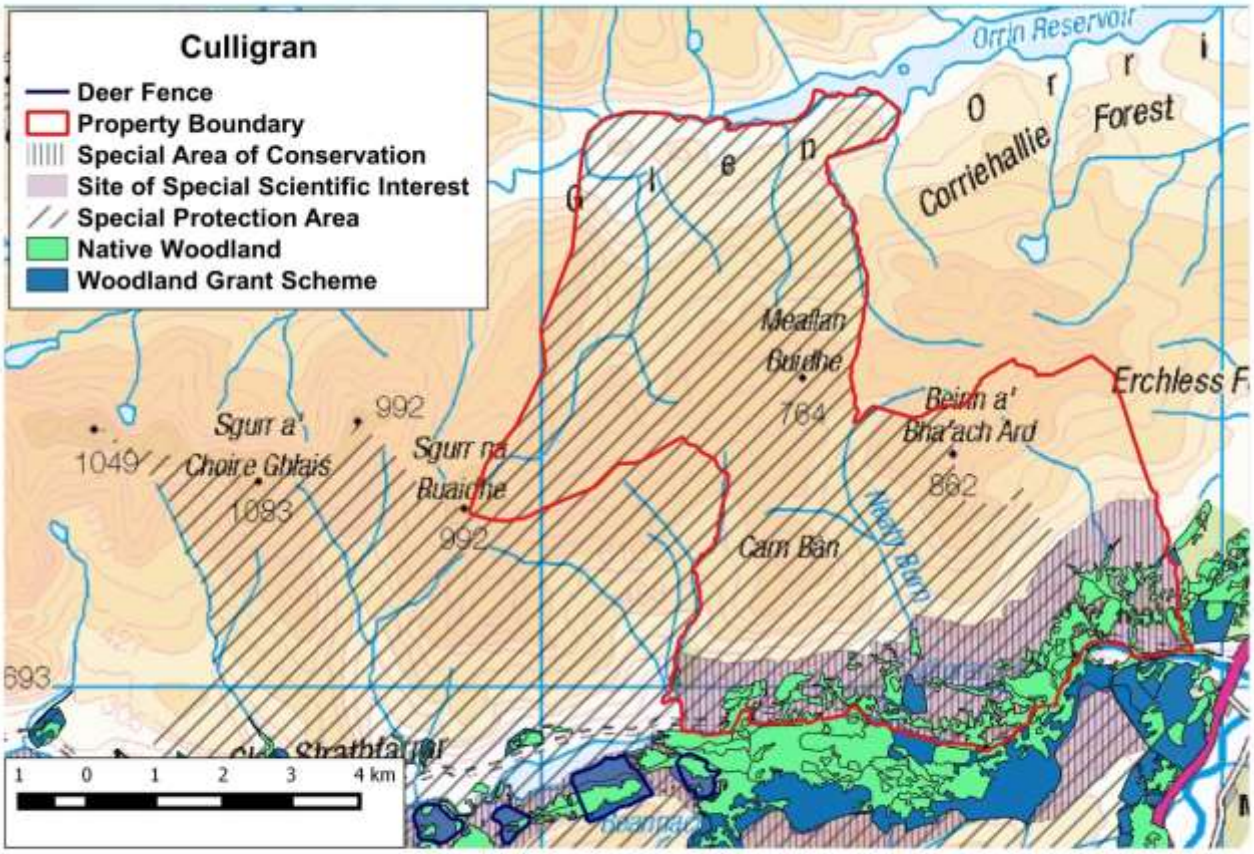
Background	• Braulen occupies a central position within Glen Strathfarrar, straddling the River Farrar itself. • The Estate is bounded by East Monar and Pait to the west, Strathconon to the north, Culligran and Struy to the east and Glen Cannich and East Benula North to the south. • The Estate combines conservation objectives with the sustainable economic harvest of deer.
Designated sites	• All woodland areas to the south of the River Farrar lie within the Glen Strathfarrar SSSI and within the Strathglass Complex SAC. • Open hill ground of the southwest corner of the Estate falls within the separate Affric-Cannich Hills SSSI (also part of Strathglass Complex SAC).
Deer Management Objectives	• Subject to 2016 count, to achieve a target population of 800 stags and 800 hinds in balance with range of habitats. • Provide a sustainable annual harvest of 100 stags and hinds.
Future Management Objectives	• Further exclosures may be considered to bring Glen Strathfarrar site into Favourable Recovering Condition. At the scale of 50 ha plantations - unlikely to affect deer. • Culls will continue to be targeted in the Affric-Cannich Hills SSSI where impacts are highest and concentrated within and around woodland areas to reduce impacts on unfenced areas. • A Habitat Impact Assessment is to be carried out on the upland features of the SAC in Summer 2016. This will help inform future management. • The Estate will continue to collaborate with neighbours to reduce impacts on Designated Sites.
Woodland	• The Estate considers that the only realistic option for enhancement of woodlands is through fencing. Since 1991, 16 exclosures have been created (totalling an area of 912 ha -see map above) including small patches of birch/pine associated with deeper gorges and stream-gullies. • Despite exclosures of extensive stands of Caledonian pine south of the River Farrar, the level of pine regeneration in them is low overall and the woodland within the SSSI still considered to be in unfavourable condition. • Most exclosures have been erected on areas of heather where regeneration of colonising birch, rather than pine, is now impressive and extensive. Over time it is expected that this will be likely to lead to regeneration of pine over timeThe original programme of woodland restoration agreed with SNH within the Glen Strathfarrar SSSI was for restoration through a rolling programme of exclosures, of which only the first phase has been completed.
Wider Habitats	• More detailed descriptions of vegetation can be found in Putman (2009). • Typical assemblage of open hill communities: with wet heaths on the shallower and poorly-draining lower slopes and drier heaths on the steeper slopes dissected by green ‘runners’ on spring lines or along burn-sides. • Montane areas support classic summit heath and herb-rich moss heath assemblages. Loch Beag Corrie in particular is noted for its rich oceanic-montane and arctic-alpine bryophyte communities.

Biodiversity	• Small cow-wheat (*Melampyrum sylvaticum*) is a Nationally scarce, UKBAP priority species. This flowering plant prefers to grow in birch woodlands in conditions of light shade and high humidity. In a study by Scobie, between 2007 and 2014, 14 different locations of this plant were found in the most intact and extensive remnants birch woodland to the west of the Estate (see map above). With a population size of 3000-5000 plants this represents one of the top 3 sites in the UK. Action to promote the regeneration and expansion of a variable mosaic of birch woodland without the use of fencing, should be a key management priority as this species is unlikely to survive amongst dense thickets of trees and rank vegetation layer resulting from complete exclusion of grazing animals. • Black Grouse are considered to be on the increase within fenced off area. Numbers are not monitored but lek sites are present.
Land management	• Open heath has been extensively managed over the years through burning, to improve grazing for deer and to re-establish grouse populations. • Over 10 years ago grassland areas on either side of the River Farrar were fertilised and reseeded. Two or three areas are enclosed annually for production of silage.
Deer Impacts	• In the east successful pine woodland regeneration (along with birch and rowan) has been occurring outside any fences (Wright & Wortham 2009) to an extent that the woodland is being maintained. The condition of the understorey vegetation has also been reported as good, with strong growth of *Calluna* and strong inclusion of Blaeberry. • To the west, there is relatively little regeneration in pine woodland areas except where protected by fencing. In the past, localised poaching damage within woodland areas have been noted on the approach routes to the riverine grazing and winter feed sites. • Most of the open-hill sample plots have overall impacts in the Low to Moderate classes (87%), but there are individual sample plots with High or High/Moderate impacts, especially for blanket bog, alpine and subalpine heath habitats. These are primarily concentrated onto the south and west of the management unit on the Lapaich ridge and significantly, also in the area towards the Pait march.
Deer Distribution and Movements	• To the north of the River, hinds and stags are concentrated in the three main corries with little movement with Strathconon Estate. • Some movement of stags and hinds to and from Pait. • To the south there are relatively fewer resident stags - which more freely between Braulen and Glen Cannich during June through November. • Densities of hinds increase towards the middle of the estate (above and through the woodlands) before decreasing again to the eastern boundary with Struy. • In the last few years, prevailing East Winds seemed to have changed deer movements and are likely to have an effect on the estates to the east of the Group such as Struy.
Supplementary Feeding	• Ad-lib silage is provided with approximately 30 bales of silage in different locations at any one time to encourage wider distribution of animals and dispersion of access tracks.
Access	• Main summits of Sgurr Fhuar-thuill, Sgurr a'Choire Ghlais, Carn nan Gobhar and Sgurr na Ruaidhe (Strathfarrar). • Estate is active member of HFTSH scheme. Stalking between 1st July and end of November. Some stalking in January through to 15th Feb. No stalking on Sundays. The routes are always OK. If further information is needed, please phone 01463761204 (office hours only).

Socio-Economics	• Estate employs two full time stalkers, a part-time administrator and seasonal Ghillies (July to end of December). • Estate maintenance is carried out by local contractors and local businesses in Beauly and Struy provide additional accommodation, fuel and provisions. • 6 weeks let at Cambussory Cottage on the Estate. • Estate has a larder with chill and all venison sold to Game Dealer. All Estate venison is Quality Assured.

19. Management Units: Culligran

Property	**Culligran**
Area	5452 ha
Owner	Mr Frank Spencer-Nairn
Manager	None
Estate Personnel	Frank Spencer Nairn & Hamish Fraser (Head Stalker)



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

Culligran Count Figures					
Year	Stags	Hinds	Calves	Total	Density
2003	69	520	224	813	14.91
2006	72	453	163	688	12.62
2009	80	609	223	912	16.73
2012*	129	702	172	1003	18.40
2014**	16	157	68	241	10.93

*Note the 2012 count was conducted before the end of the hind season.
**Part Count only over 2204 ha.

Culligran Cull Figures				
Year	**Stags**	**Hinds**	**Calves**	**Total**
2005 -2006	41	55	17	113
2006 -2007	32	64	18	114
2007 -2008	32	64	16	112
2008 -2009	33	61	23	117
2009 -2010	34	57	33	124
2010 -2011	30	44	28	102
2011 - 2012	23	25	7	55
2012 -2013	30	56	21	107
2013 -2014	29	65	27	121
2014 -2015	31	66	32	129
2015- 2016	30			30

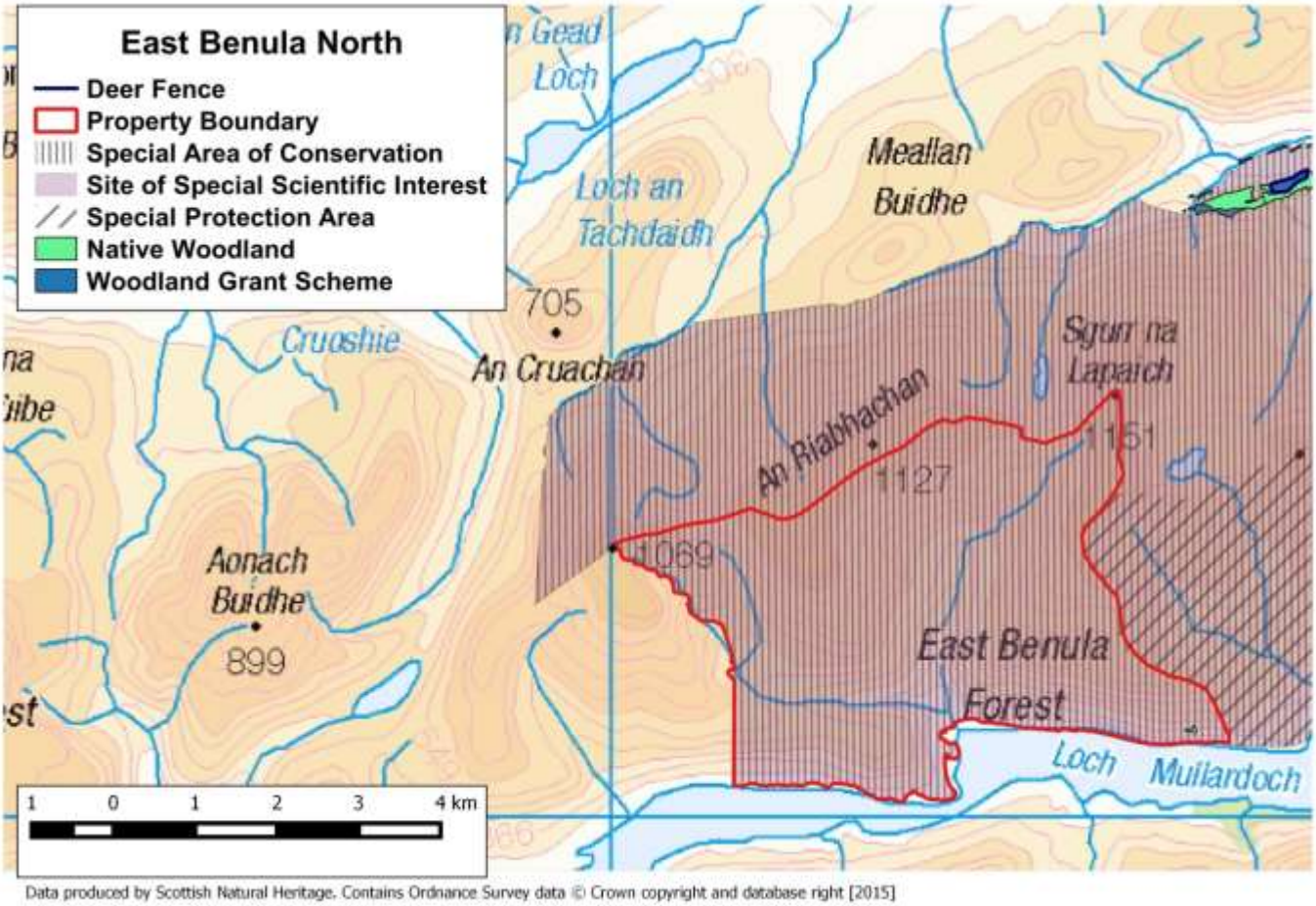
Background	• Culligran occupies a central position within Glen Strathfarrar to the north of the River Farrar. • The property has a complicated boundary and falls into two distinct parts, divided by the watershed from the Sgurr a' Phollain to the head of Coire na Caorach. • The ground to the south of this ridge falls within Glen Strathfarrar with neighbouring properties: Braulen to the west, Erchless to the north-east and Struy to the South. • North of the ridge, the land falls away towards the Orrin River, and is effectively part of the wider Glen Orrin Catchment, with Fairburn, Strathconon and Scatwell as neighbours (all within Strathconon DMG). Owner attends Strathconon DMG meetings to facilitate collaborative deer management. • These two areas are not only geographically quite distinct, but would appear to support two largely separate populations of hinds. • The estate is primarily focussed on conservation but with additional land uses of agriculture (including a deer farm), tourism, stalking and fishing. A new 700KW Hydro-scheme was completed on the Neaty Burn in 2014 which has had little impact on deer and provided a new access road to assist with deer management.
Designated sites	• All woodland areas lie within the Glen Strathfarrar SSSI and within the Strathglass Complex SAC. • This area is designated as a National Scenic Area (NSA) and until 2006, as Glen Strathfarrar National Nature Reserve. • Much of the Estate lies within the Affric to Strathconon SPA designated for Golden Eagles which is considered to be in Favourable condition.
Deer Management Objectives	• To continue to balance deer management to deliver conservation objectives with the sustainable harvest of around 30 stags. • To increase the hind population to a sustainable level in Glen Orrin.
Future Management Objectives	• To continue conservation objectives and maintain the rolling programme of regeneration of the native pine and deciduous woodland. • The Estate has established an informal partnership with Trees for Life to assist with this programme following the de-notification of the NNR.

Woodland	• The upper limit of Glen Strathfarrar SSSI (designated for Native pinewood) is defined by the 1000 foot contour. • A Site Condition Monitoring report of the pinewood feature (SNH Wright & Wortham 2009) suggests good rates of regeneration of the pinewood feature, with natural regeneration occurring in the presence of deer. • In general the woodland resource is considered to be in good condition. Specific efforts have been made in the past to enhance areas of the woodland and encourage regeneration through exclosures (see Sections 7 and 8). Fenced exclosures were erected between 1979 and 1985 by the Nature Conservancy Council as part of an NNR management programme, within an area below Dubh-glac (10.6 ha; 1979), north of Polcharian Bridge (12.1 ha; 1980) and along the western march with Braulen (to the west of Creagan Mor: 18.5 ha; 1985). Since then 22.7ha of native woodland enclosures have been opened up to deer on Culligran. • An area of approx. 9.3 ha was fenced in 1992 immediately to the east of the Allt a' Duine at Creag a' Bhealaidh and10ha was enclosed and planted in 2014 with an additional 1.4 + 2.66 ha planted by Trees for Life . • Below the road the bulk of the ground is wooded, presenting good riparian woodland cover of oak/alder, holly and willow with juniper also present. Within one area, significant amounts of aspen. • There are a number of other areas of native woodland on the lower slopes immediately above the road and behind Culligran House. These are primarily of birch (and notably *Betula pendula*) although there are areas of both Caledonian pine and oak. • The SSSI on Culligran was previously covered by a Natural Care Scheme (until 2013).
Wider Habitats	• More detailed descriptions of vegetation can be found in Putman (2009). • The open hill vegetation to the north is mainly *Erica*-dominated grass-moorland falling away to wet heath and thicker peat on the flats towards the Orrin. • The higher slopes of the summit ridges support classic moss-heath, summit-heath communities, with extensive areas of snowbed, dominated by areas of *Nardus* grassland and *Juncus squarrosus.* • To the south, the mid-altitude slopes support extensive areas of *Calluna* dry heath grading to wet heath (*Erica/Molinia/Scirpus)* on less well-drained ground. • On steeply sloping faces on the highest ground, *Calluna* becomes more dominant, with mosaics of distinct heather and grass patches, reflecting a history of past management through regular muirburn. • On the Glen Strathfarrar side, there are few real areas of blanket bog.
Biodiversity	• Species of interest include lichens, moths and dragonflies.
Land management	• The estate has a commercial flock of around 400 sheep and followers held mostly on the fenced parks at Culligran House and Inchmore. The majority are turned out twice to the open hill with 50/60 ewes (with no lambs) and gimmers on the open hill between May and August and an additional 150 on the open hill in September and October. Lambs are sold as store-lambs at Dingwall market. • The Estate also runs a deer farm with 170 hinds and 12 stags on enclosed ground at the eastern march above Inchmore. These enclosed areas are not continuous with the open range. Calves are sold for finishing or breeding. • There are no cattle but some feral goats occasionally come in from Braulen. • Some muirburn is carried out on the high ground north of the SSSI boundary as and when time and weather permit. • The Estate also rents several fields from Struy Estate for lambing, grazing and cutting silage.

Deer Impacts	• Much of the lower ground (along the roadside) is grazed seasonally by sheep, and flatter areas of managed grassland above the road are also used as sites for winter feeding for sheep and deer. • Despite this there are patches of vigorous regeneration of both birch regeneration and some pine, particularly in the west. • Surveys of the impact of grazing and trampling carried out by MLURI (Stolte *et al*, 2001) showed heavier impacts towards the eastern side of the Estate, within Glen Strathfarrar, and also around the area frequented by the Estate sheep on the lower parts of the Neaty Burn below Carn Coire na Muic. Both areas were scored as receiving moderate impacts. Other areas were uniformly recorded as experiencing light or light to moderate impacts, as was the whole of that part of the Estate within Glen Orrin.
Deer Distribution and Movements	• Culligran is largely a hind forest and therefore largely dependent on stags coming into the Estate for the rut. • Although there is opportunity for a few days' stalking towards the end of August, the bulk of the stag stalking is confined to mid -September and October. • For the first three weeks of the season, most of the stalking takesplace in Glen Orrin, and a third of the cull is taken from this part of the Estate. The shortage of daylight over winter, and the distances involved for access makes hind culling difficult. • Stags used to overwinter on Farley and summer at the top of Coire Chairbe below Sgurr na Ruaidhe. Estate used to get stags on Orrin largely from Strathconon and the Estate is still seeing mature stags but not so many. • Starting to see younger stags coming from Struy in the winter.
Supplementary Feeding	• Feed blocks (and silage when snow on the ground) provided traditionally in seven locations for hinds but seeing more stags from Struy coming to sites.
Access	• Main summit of Beinn a'Bha'ach Ard. • Estate is an active member of HFTSH and information is available on the website. Stalking takes place between mid Sept and 20 Oct. No stalking on Saturdays or Sundays. If further information is needed please e-mail frank@culligran.co.uk or phone 01463761285 or 07917 166539.
Socio-Economics	• Estate employs one full time stalker and a part-time assistant to help with tourist accommodation. A seasonal stalking Ghillie is also employed (usually a student). • Additional part time help is also required for lambing and other livestock management. • The Estate owner and his wife are resident and fully involved in the day to day management of the Estate and holiday cottages. • Estate maintenance is carried out by local contractors. 5 cottages on the Estate provide accommodation for up to 29 bed-spaces on a weekly basis (but are closed over winter). • Local B&Bs and hotels provide additional accommodation and local businesses provide fuel and provisions. • Estate has a larder and nearly all venison sold to a Game Dealer. • Estate has hosted a training day for local Countryside Rangers on all aspects of deer management which it is willing to repeat in collaboration with other properties. • A car park is provided at the entrance to the Glen. The Glen road is popular with walkers and bicyclists. In 2015 the Estate provided facilities for the Scottish 6 day Orienteering Championship, the local Scout Group, the local Primary School Fun Run and 7 days of Mountain Training for the Royal Marines.

20. Management Units: East Benula North

Property	**East Benula (North) Estate**
Area	1850 ha
Owner	Chooky Corporation
Manager	Donald Fraser
Estate Personnel	Donald Fraser (Head stalker) and Andrew Fraser



Deer Counts					
Year	**Stags**	**Hinds**	**Calves**	**Total**	**Density**
2003	26	369	111	506	27.35
2005	0	308	86	394	21.30
2006	68	327	115	510	27.57
2009	87	314	109	510	27.57
2010	39	211	63	313	16.92
2012*	101	284	96	481	26.00
2015	61	212	82	355	19.19

*Note the 2012 count was conducted before the end of the hind season

Deer Culls				
Year	**Stags**	**Hinds**	**Calves**	**Total**
2005 -2006	19	49	7	75
2006 -2007	12	85	17	114
2007 -2008	12	93	19	124
2008 -2009	8	83	14	105
2009 -2010	21	101	23	145
2010 -2011	17	45	7	69
2011 - 2012	10	48	6	64
2012 -2013	16	96	27	139
2013 -2014	15	90	25	130
2014 -2015	14	54	16	84
2015 - 2016	12			12

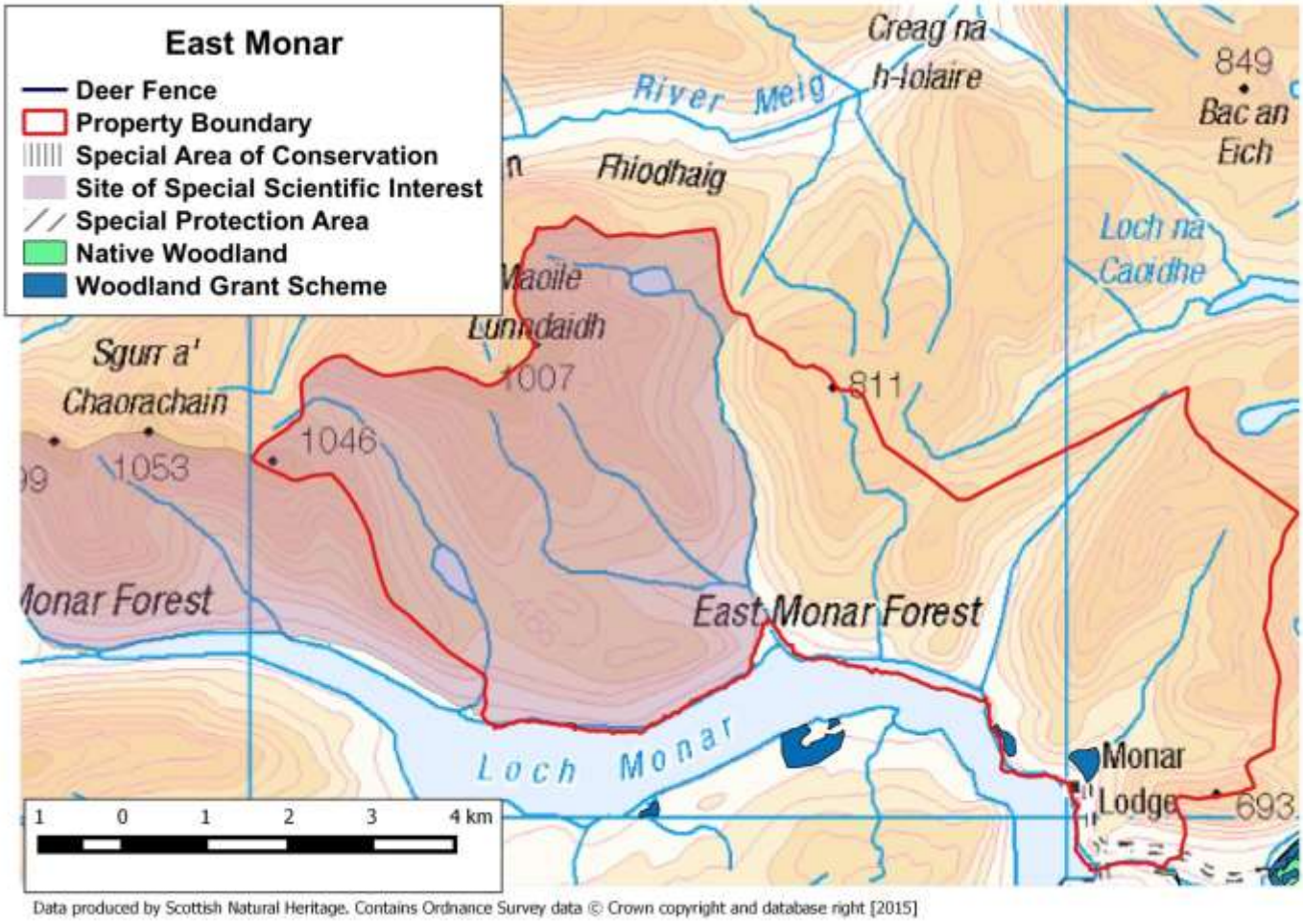
Background	• East Benula North lies to the west of the DMG, to the north of Loch Mullardoch. • To the west, it marches with West Benula (Affric & Kintail DMG) and to the east Glen Cannich Estate – a separate property but managed with the estate under a joint management agreement. • The north boundary marches with Pait and Braulen Estates. • The main priority for the Estate is to deliver conservation objectives along with the sustainable harvest of stags.
Designated sites	• The Estate falls entirely within the wider Affric-Cannich Hills SSSI and the Strathglass Complex SAC. • Over the last 15 years since the estate was acquired by the new owners, hind numbers have been reduced significantly on the estate from approximately 700 to 200. • Under a previous management agreement with SNH, the access track to the west of the Estate (giving access to Coire Mhaim) was restored/ upgraded in to aid deer management. • Co-ordinated culls with neighbouring properties have been carried out recently.
Deer Management Objectives	• To work collaboratively with the DMG and SNH to avoid deterioration of the SAC habitats whilst ensuring that the deer resource is maintained in line with the DMG Deer Management Plan. • The Estate has its own Management Plan outlining its long term objectives. • A Habitat Impact Assessment is to be carried out on the upland features of the SAC in Summer 2016. This will help inform future management.
Future Management Objectives	• To focus culls in areas of highest impact within the Affric-Cannich Hills SSSI under a current SRDP Contract (2013 – 2018) and to maintain the hind numbers at a maximum total population of 200 (subject to the outcome of the 2016 Habitat Impact Assessment). • To continue to cull collaboratively with neighbouring estates. • To better understand changes in deer movements and distributions across the DMG to better inform future collective management. • To achieve a sustainable harvest of 15-20 stags per year.
Woodland	• There is relatively little woodland in the area although some relict fragments of birch woodland remain on low/mid-altitude slopes above the loch. These are restricted to steeper burnsides and below inaccessible crags and bluffs. • To the west of the Bothy at the head of Loch Mullardoch, the estate has erected some small enclosures to safeguard and expand existing fragments of native woodland cover.

Wider Habitats	• The bulk of the south-facing ground is predominantly wet grass-heath (*Erica/Molinia/Deschampsia*), with the lowest slopes immediately above the lochside grassy with moss and extensive areas of Bog Myrtle. • Mostly Bell Heather present. Where Calluna is present on emergent patches of drier ground, this is in poor condition and heavily grazed. • East Benula is classically at the western end of the west-east cline in heather performance therefore sparseness of heather cover is in part due to the generally poorer vigour of heather further to the west, and its greater sensitivity to grazing and other pressures. Rainfall levels have increased significantly over the past 40 years and the heather is showing signs of stress from waterlogged soil conditions, with widespread damage from heather beetle (Putman, 2011). • The steepest faces at the heads of the main corries support a mixed vegetation of heather and high altitude Agrostis-Festuca 'greens' and moss-heath and wind-clipped heath are associated with the northern boundary ridge.
Land management	• There is no livestock grazing on East Benula, although there is an established population of feral goats.
Deer Impacts	• Assessments of impact by grazing and trampling carried out by MLURI in 2000 (Stolte et al, 2001), suggested generally moderate or light-moderate impacts across the site, but with moderate-heavy impacts recorded at Coire Mhaim and Coire Bog, and heavy/severe impacts noted along the lochside from the Lodge to Creag a'Chaise. • Heavy or moderate-heavy impacts on both alpine heath and blanket bog vegetation, in particular towards the western part of the estate around Coire Mhaim were recorded by O'Hanrahan (2005). • Despite targeted hind reductions in sensitive areas, a repeat survey by Headley (2009) suggested that the overall herbivore impacts remained mostly (86%) in the Moderate to High classes in the blanket bog, wet heath and dry heaths. • The sample plots with Low and Moderate/Low overall herbivore impacts were generally located on higher ground and are in the alpine heath and flush habitats. • A repeat Habitat Impact Assessment of the SAC will take place in 2016. • Given some concerns about the time lag between reduction of herbivore impacts and slow vegetation recovery, the estate has erected some small enclosures in areas of blanket bog in order to provide completely deer-free control plots for future comparison. • In 2015, the estate set up 4 habitat monitoring plots (1 inside an exclosure).
Deer Distribution and Movements	• With deer increasingly moving across the marches between neighbouring West Benula and Pait Estates, a collaborative approach to culling has been taken recently. • As well as reducing impacts on sensitive vegetation within the SAC, it is hoped that the historic reduction in hind numbers may also encourage a resident population of stags within the estate. • Although the estate used to hold relatively few stags, over-wintering stag numbers have increased recently from 40 to 80.
Supplementary Feeding	• No supplementary winter feeding of stags.

Access	• The summits of An Socach, An Riabhachan and Sgurr ne Lapaich fall within the estate and are part of a series of popular Munros and Corbetts which also includes Carn nan Gobhar and Sgorr na Diollaidh (which are on Glen Cannich). • The following information is provided on the Heading for the Scottish Hills website: *Stalking between August and 20 Oct. No stalking on Sundays. Access via the main paths and ridges is always OK (avoiding cutting down through Coire Socrech). If further information is needed, please phone Donald or Andrew on 01456 415339.* During September and October it would be useful if the Estate could be contacted prior to going to the hill.
Socio-Economics	• 2 full-time deer managers are employed and part-time seasonal assistance (split with Glen Cannich Estate). • Businesses (shops, fuel, restaurants) in the local village of Cannich and Beauly are supported. • A modern larder and chill (also used by Glen Cannich and Mullardoch Estates).

21. Management Units: East Monar Estate

Property	**East Monar**
Area	4857.5 ha
Owner	Allan Family
Manager	None
Estate Personnel	Stephen Potter



Deer Counts					
Year	Stags	Hinds	Calves	Total	Density
2003	371	374	131	876	18.03
2006	296	222	47	565	11.63
2007	442	287	72	801	16.49
2009	212	305	92	609	12.54

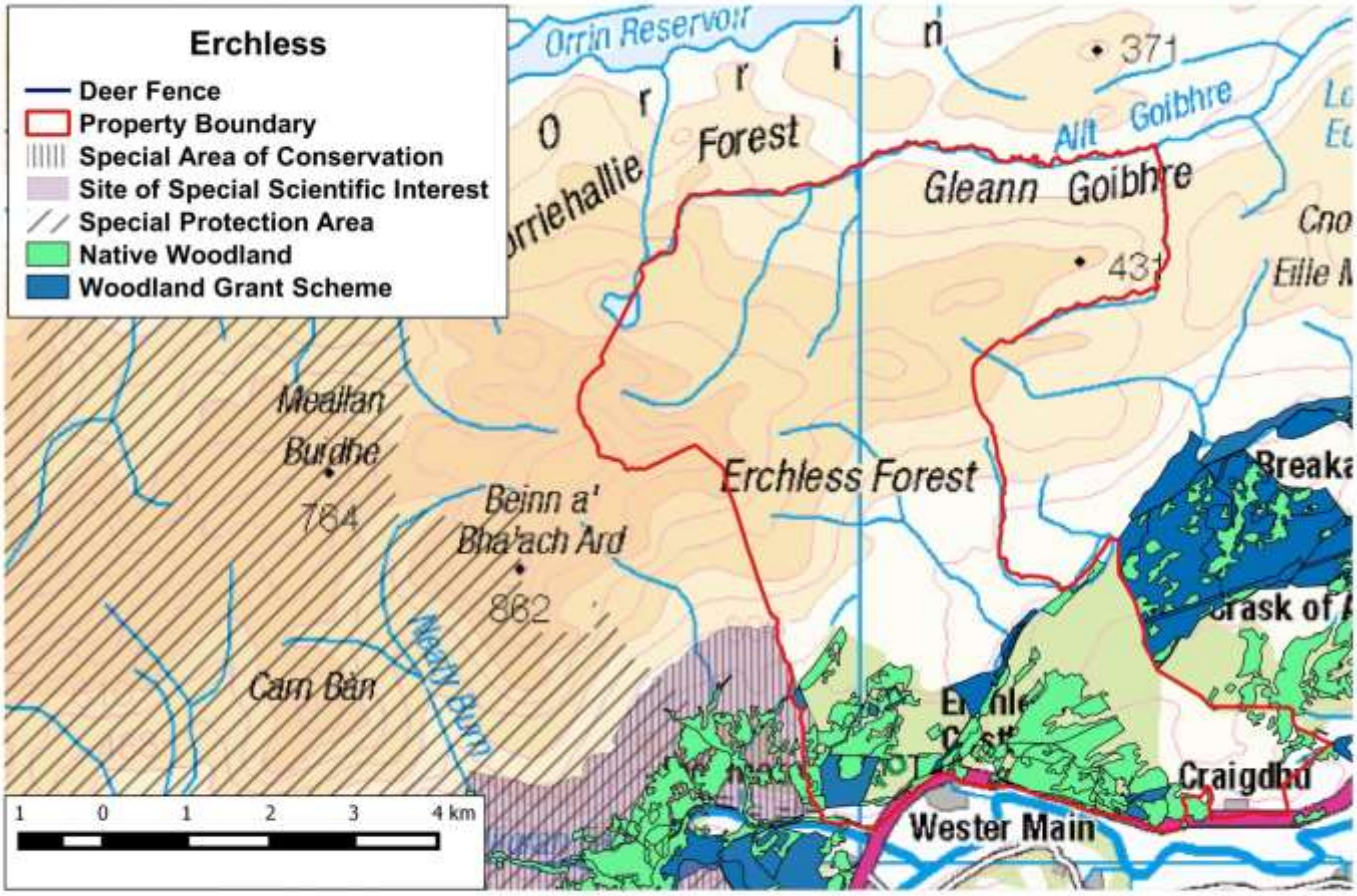
Deer Culls				
Year	Stags	Hinds	Calves	Total
2005 -2006	30	49	8	87
2006 -2007	34	43	7	84
2007 -2008	30	53	12	95
2008 -2009	25	52	7	84
2009 -2010	36	48	5	89
2010 -2011	33	22	2	57
2011 - 2012	25	16	3	44
2012 -2013	28	18	2	48
2013 -2014	20	16	5	41
2014 -2015	24	19	2	45
2015- 2016	15			35

Background	• East Monar lies to the western end of the DMG area to the north of Loch Monar with neighbours West Monar to the west and Braulen to the east. • The long northern march runs with Glencarron to the northwest and Strathconon to the northeast (both within Strathconon DMG). • The estate is combines conservation objectives with stalking and renewable energy (a new Hydro-scheme was recently completed).
Designated sites	• Approximately half of the Estate falls within the Monar Forest Site of Special Scientific Interest (SSSI). Summit heaths are the most outstanding feature – dominated by woolly hair-moss with abundant cushion alpine plants and a variety of other species.
Deer Management Objectives	• To balance deer management to keep the SSSI in Favourable Condition whilst maintaining a sustainable annual harvest of 30-35 stags.
Future Management Objectives	• The aim is to optimise conservation and economic potential of the Estate whilst delivering the wider Public Interest.
Woodland	• The Estate has limited opportunities for woodland habitat, although there are some small fragments of native broadleaves in the deepest gullies of the burns towards the lochside. • There is a small clump of Caledonian pine by the loch, and astride the march burn with West Monar, and a more extensive area of native pine closer to the Lodge and covering a small offshore island. • There are two small areas of planted pine along the lochside and one to the southwest of the road between the Lodge and the Hydro dam. In addition, two small enclosures have been established at the eastern end of the Estate to try and extend the cover of native Caledonian pinewood. • A 200m plantation has recently been planted with rowan and Caledonian pine immediately above the Lodge. • The Estate has a LTFP.
Wider Habitats	• More detailed descriptions of vegetation can be found in Putman (2009). • Most of the ground on East Monar is dominated by grass-dominated wet-heath (*Molinia/Erica/Scirpus* with some *Calluna*) on the lower slopes. • *Calluna* is struggling on the lower slopes due to the wet conditions, and generally not recovering well after burning, so that there is a tendency in burnt areas to a greater dominance of *Molinia/Erica/Scirpus*. • On the higher slopes a mosaic of more discrete patches of *Calluna* and grass - a patchwork created and maintained by a long tradition of muirburn. • There has, in the past, been extensive damage due to heather beetle affecting very significant areas. • The summits and summit ridges support extensive moss-heath and wind-clipped heath communities, as well as species rich tall herb communities on the more inaccessible ledges.
Land management	• Some limited muirburn has been undertaken recently however, recovery has tended to be slow. • No sheep or cattle on the ground.

Deer Impacts	• Assessments of grazing and trampling impacts in the MLURI survey of 2000 (Stolte *et al*., 2001) recorded universally light or light-moderate impacts throughout the site, with heaviest impacts, on the higher slopes of the Carn Eiteige ridge, reported as moderate. • SNH have at present no concerns over condition of the vegetation or other designated features within the SSSI although hind culls will continue to be targeted primarily to the west of the Estate, which address any potential build-up of hind populations within the SSSI
Deer Distribution and Movements	• East Monar holds stags as well as hinds all year round although there have been significant changes in deer numbers and movements. • An area in the middle of the ground known as the Sanctuary (because it is largely inaccessible) would have held 700 stags 25 years – now numbers closer to 70 -80.
Supplementary Feeding	• Winter feeding is carried out in two sites (corresponding to the two main overwintering areas to the west and east). • Mineral blocks fed in the east and the west of the Estate. When conditions bad, around 5 tonnes of potatoes and cobs are fed.
Access	• Summits of Maoile Lunndaidh and An Sidhean**.** • Estate is an active member of HFTSH. Stalking takes place between Aug and 20 Oct. No stalking on Sundays. Access via the main paths and ridges is always OK. If further information is needed, please phone 01463 761210. • Hills on East Monar easiest accessed from the west or Braulen.
Socio-Economics	• The Estate employs one full time stalker, a full-time college placement student and a full-time assistant in the Lodge. In addition the Estate employs a part-time Ghillie. • Estate maintenance is carried out by local contractors. Local businesses in Beauly provide fuel and provisions. • Estate has a larder and a chill and all venison sold to Game Dealer. • Estate has hosted a training day together with Culligran for local Countryside Rangers on all aspects of deer management.

22. Management Units: Erchless

Property	Erchless
Area	3862 ha (unfenced area 2647 ha)
Owner	The Hon. Maurice Robson
Manager	Lt Col Peter Sinclair-Knipe & Nigel Fraser (Strutt and Parker)
Estate Personnel	Peter Sinclair-Knipe and George Fraser



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Deer Counts					
Year	Stags	Hinds	Calves	Total	Density
2003	42	322	100	464	17.53
2006	76	231	84	391	14.77
2009	104	117	63	284	10.73
2012*	93	206	56	355	13.41

*Note the 2012 count was conducted before the end of the hind season

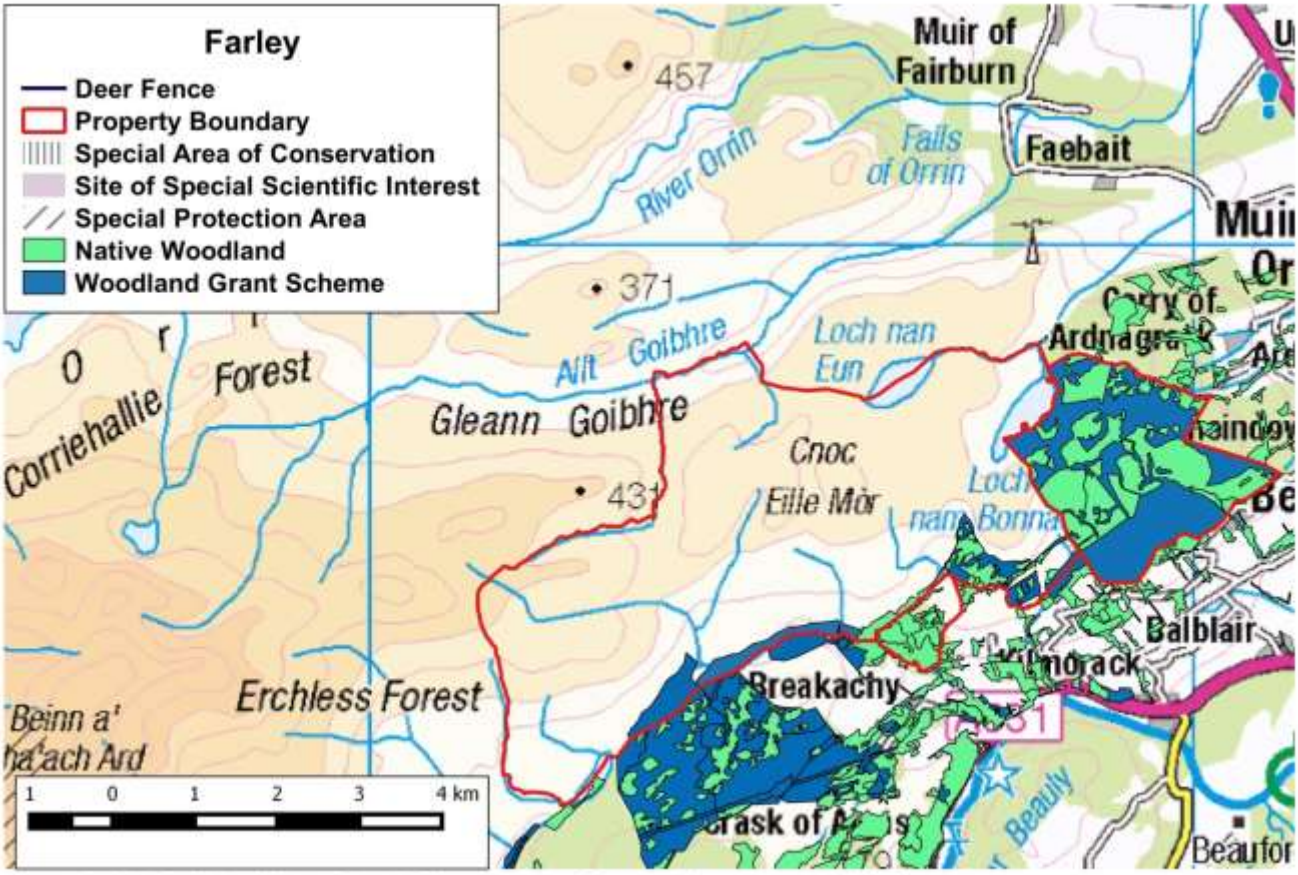
Deer Culls				
Year	Stags	Hinds	Calves	Total
2005 -2006	29	74	23	126
2006 -2007	34	46	15	95
2007 -2008	35	52	22	109
2008 -2009	40	57	17	114
2009 -2010	23	47	12	82
2010 -2011	23	37	11	71
2011 - 2012	32	41	8	81
2012 -2013	34	41	10	85
2013 -2014	39	61	15	115
2014 -2015	24	42	14	80
2015- 2016	24			24

Background	• Erchless lies towards the east of the DMG - open range covers approx 2647ha. • Fairburn and Strathconon Estates neighbour the property to the north and northwest, Culligran to the immediate west, and Farley to the east. • A central west-east ridge (Carn a' Ghorm-locha to Carn na Gearrsaidh and towards Beinn a' Chlaonaidh on Farley) divides the hill ground. To the south, south or south-east facing slopes fall away to the forestry blocks. To the north of the ridge, the land falls away towards Glen Orrin and the march with Fairburn. • The Estate is focussed on conservation but with additional land uses of agriculture, tourism, stalking and fishing.
Designated sites	• There is a small strip of ground that falls within the Affric-Cannich Hills SSSI and the Strathglass Complex SAC on the march with Culligran.
Deer Management Objectives	• To balance deer management to deliver forestry and conservation objectives with economic opportunities on the open ground. • A Natural Care Scheme with SNH was previously in place.
Future Management Objectives	• The Estate runs a commercial tourism business and will look to optimise the economic opportunities associated with deer for visitors.
Woodland	• The entire woodland area is currently under a LTFP. • Commercial forestry has been planted in two separate blocks. Both are well-fenced along the top-line so that they are not currently open to the hill ground. • A small native woodland restoration scheme enclosing some remnants of birch woodland and Caledonian pine links these two separate plantations, creating a continuous fence line closing off the hill ground. • The western side of the western forestry block (Coille Mhor), against the Culligran march, is also securely fenced down to the road. • The eastern block of forestry has also had the lower part of the eastern fence restored against land at Bad a' Chlamhain. The northern section of this eastern fence is porous with movement of deer with adjacent woodland at Breakachy.

Wider Habitats	• The north-facing ground is largely wet heath or blanket bog with some dry heath which has suffered historic heather beetle damage and is now recovering only slowly. • On the south-facing side, the vegetation largely consists of extensive cover of wet, grass-heath (*Erica/Scirpus/Molinia*). • The higher ground is mainly dry heath *(Calluna)* with blaeberry and crowberry. • Some natural *Agrostis/Festuca* grasslands are present along burnsides and seepage channels, but the majority of grass patches have been created artificially within the heather cover by past or recent muirburn due to slow heather recovery. • Tops of the "summit" ridges support extensive wind-clipped heath and moss-heath communities, with good growth of *Cladonia* within the *Calluna* and extensive bearberry (*Arctostaphylos uva-ursi* and *A. alpina*).
Land management	• Estate possibly looking to carry out Rhoddie control. • Opportunities for Peatland Restoration may be considered. • No sheep or cattle on open hill (historic sheep use on open hill). • There has been an established practice of muirburn but recovery has slow. • Estate has a tenanted farm.
Deer Impacts	• Assessments by Stolte *et al.* (2001) and Putman in 2004 recorded uniformly light or light-moderate impacts across Erchless. • There was very heavy localised poaching adjacent to winter feed sites but no evidence of tracking damage on access routes.
Deer Distribution and Movements	• Erchless is primarily a hind forest and depends on an influx of stags in the rut. • Some wintering of stags on the low ground above the forestry fences which are encouraged by some winter feeding. • For the most part stags tend to pass through the Estate, moving to the more extensive wintering concentrations on neighbouring Farley. • The possible implications of any wind-farm development on deer movements and distribution (both in the short term and the long term) will be considered and discussed with the DMG.
Supplementary Feeding	• Some winter feeding is carried out, along the track above the Erchless Burn. • This was initially started for hinds as a diversionary measure to keep pressure off new fence-lines but this now attracts number of younger stags.
Access	• There are no Munros or Corbetts with the highest point on the march with Culligran at Sgurr a'Phollain at around 800m.
Socio-Economics	• Part-time (self-employed) deer manager. • Estate has deer larder. • Local trades employed and use of local businesses in Beauly. • Letting of castle (sleeps 16) for 40 weeks and 1 holiday cottage (sleeps 6).

23. Management Units: Farley Estate

Property	**Farley**
Area	2371 ha of hill ground with 400 ha commercial forestry open to deer.
Owner	Hatfield Farms Ltd
Manager	Martin Mackay. Forestry managed by Sylvestrus Ltd.
Estate Personnel	Charlie Thomson



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Deer Counts					
Year	Stags	Hinds	Calves	Total	Density
2003	348	56	21	425	17.92
2006	357	119	42	518	21.85
2009	311	193	75	579	24.42
2012*	247	142	41	430	18.14

**Note the 2012 count was conducted before the end of the hind season

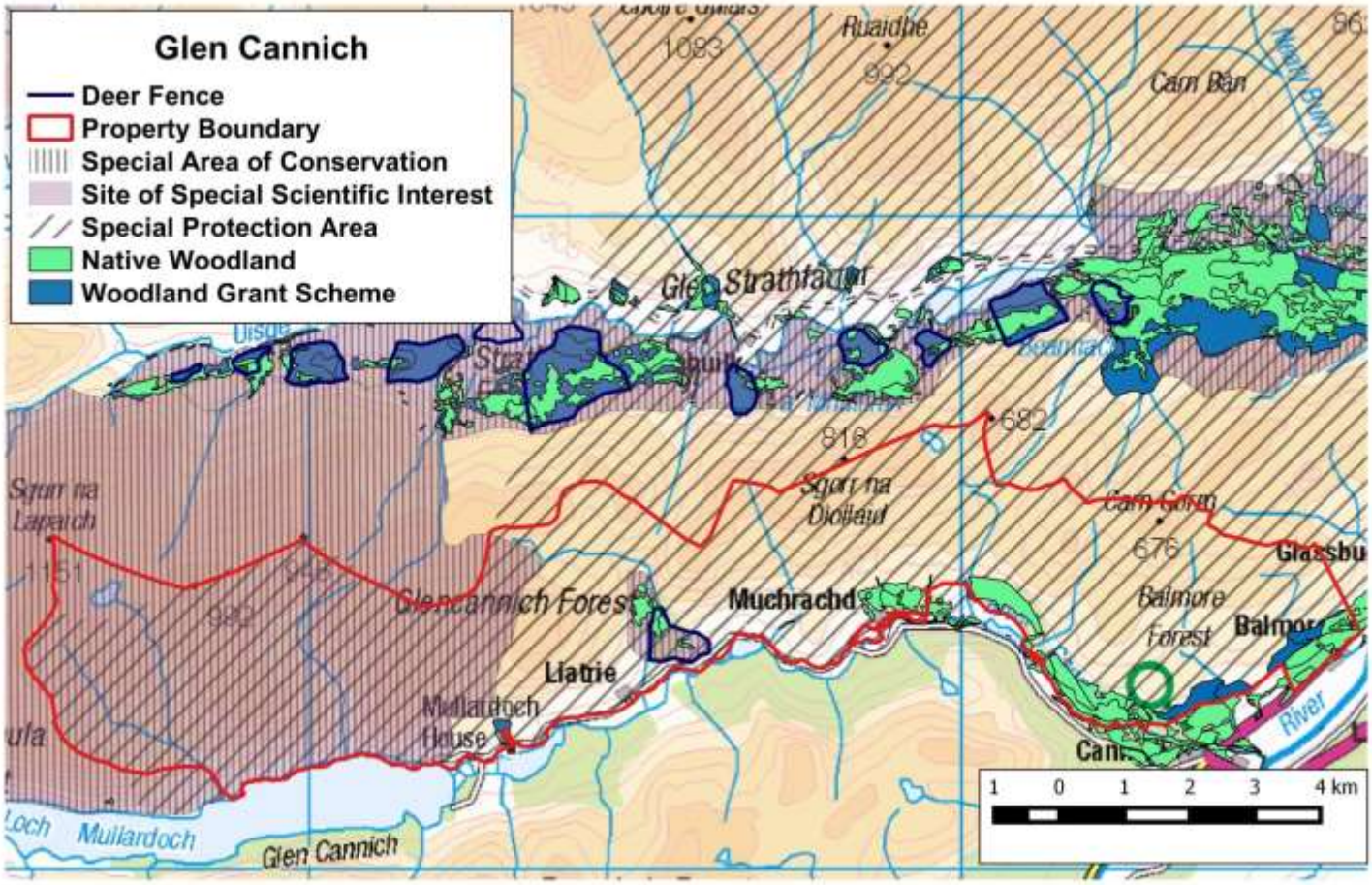
Deer Culls				
Year	Stags	Hinds	Calves	Total
2005 -2006	0	2	0	2
2006 -2007	3	0	0	3
2007 -2008	4	3	0	7
2008 -2009	5	7	1	13
2009 -2010	5	6	3	14
2010 -2011	5	5	1	11
2011 - 2012	6	3	1	10
2012 -2013	6	6	0	12
2013 -2014	10	6	1	17
2014 -2015	11	3	6	17
2015- 2016	10			

Background	• Farley Estate lies at the far eastern end of the DMG Area. • The main hill ground of Farley is continuous with neighbouring Fairburn Estate (Strathconnon DMG) to the north and Erchless Estate to the west. • The Estate is fenced securely along its southern and eastern boundaries with new fencing in the south continuous with that of neighbouring Erchless. Despite not having any designated sites, the estate has wider conservation objectives with additional land uses of commercial woodland, agriculture and shooting (deer, partridges and pheasants). • Much of the land is let under a Short Limited Duration Tenancy to a local farmer.
Designated sites	• Farley does not have any designated land.
Deer Management Objectives	• Farley's deer management policy is to encourage a resident stock of hinds to attract stags in season whilst managing deer in the interests of welfare.
Future Management Objectives	• Subject to minimising deer impacts on wider habitats, to maintain a population summer density of between 6 and 7 deer per km2.
Woodland	• The Estate has a Long Term Forest Plan in place. • To the east, there is a large (former) commercial plantation of c 400 ha. of sitka spruce and Scots pine which is now partially open to deer but with some parts restocked within smaller, individually-fenced enclosures. • There are three areas which have been fenced for woodland restoration schemes. • There are a number of areas where there has been significant natural regeneration without fencing and planting with fencing, since the removal of heavy sheep grazing, most notably above the principal estate house.
Wider Habitats	• Within commercial woodlands approx. 50 ha of peatland have been restored by removing unsuitable tree cover. Estate will continue to try to improve hydrology and ground cover. • The open hill ground is a mixture of wet and dry moorland, with wet heath (*Erica/Scirpus*) less well-drained slopes, and good growth of *Calluna* even on shallower slopes and not restricted to the steepest slopes as on many of these other areas. • There is a lesser inclusion of grasses (*Molinia*) amongst the heather cover, with *Calluna* present with very high percentage cover overall. • Due to drier soil conditions overall, the heather seems to recover well following muirburn, so that even after burning, grasses do not become more dominant.
Biodiversity	• Roe deer are present and Sika deer are resident within the forestry.
Land management	• The estate has an ongoing programme of moorland management including annual muirburn. • One area of formerly agricultural/ land associated with the Hut Circles is maintained as permanent grassland providing grazing for sheep and deer. • Previously bracken spraying has been traditionally used to improve grasslands. Bracken control is an on-going issue. • Part of the commercial forestry plantation has been opened to deer and woodland management in general is directed enhancing its value for deer in the long term.
Deer Impacts	• There is an area of mature birch woodland above the march burn which currently sustains some browsing pressure from deer but has regeneration potential if fenced

Deer Distribution and Movements	• With low-lying ground Farley traditionally maintains few stags over the summer period but is a significant wintering ground for stags (approx. 12% of total DMG population) from the wider area which leave in April/May. • Stalking is dependent on an influx of stags for the rut but with low numbers of hinds there is nothing to attract or hold such stags, so that at present the Estate actually attracts very few mature stags in season. There is some influx of younger animals, but since there are no hinds to break them up, these tend to stick together in groups, making stalking difficult. • There are few hinds resident on the open hill ground but there is a population resident within the plantation to the east. Estate is considering future woodland restoration/creation more centrally to improve shelter for deer in long-term.
Supplementary Feeding	• Some winter feeding is provided on a single feed site established below Torr Breac for overwintering stags and for some of the resident deer in the plantation.
Access	• Farley is low-lying ground, mostly below 450m, and there are no Munros or Corbetts. • Due to the proximity to the town of Beauly, there are a number of walks and trails across the estate used regularly by the local community. Estate currently reviewing arrangements for more access to public.
Socio-Economics	• One full-time deer manager and casual seasonal help. 1 part-time admin-manager (self-employed) and part-time cleaner for lodge. • Estate has deer larder. • Local trades employed in building of new lodge and use of local businesses in Beauly. • All supplies and materials are sourced locally and local contractors used for all Estate work.

24. Management Units: Glen Cannich Estate

Property	**Glen Cannich Estate**
Area	5749 ha
Owner	Mr Anthony Fuller, CBE and Sir James Fuller
Manager	As above
Estate Personnel	Donald Fraser (Head stalker) and Andrew Fraser



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Deer Counts					
Year	**Stags**	**Hinds**	**Calves**	**Total**	**Density**
2003	426	485	179	1090	18.96
2005	0	446	149	595	10.35
2006	412	362	162	936	16.28
2009	454	483	194	1131	19.67
2010	422	387	119	928	16.14
2012*	401	436	125	962	16.73

*Note the 2012 count was conducted before the end of the hind season

Deer Culls				
Year	**Stags**	**Hinds**	**Calves**	**Total**
2005 -2006	47	52	9	108
2006 -2007	50	66	7	123
2007 -2008	42	64	9	115
2008 -2009	40	81	12	133
2009 -2010	40	99	18	157
2010 -2011	40	60	14	114
2011 - 2012	40	50	7	97
2012 -2013	45	91	23	159
2013 -2014	47	75	21	143
2014 -2015	46	66	18	130
2015 - 2016	41			41

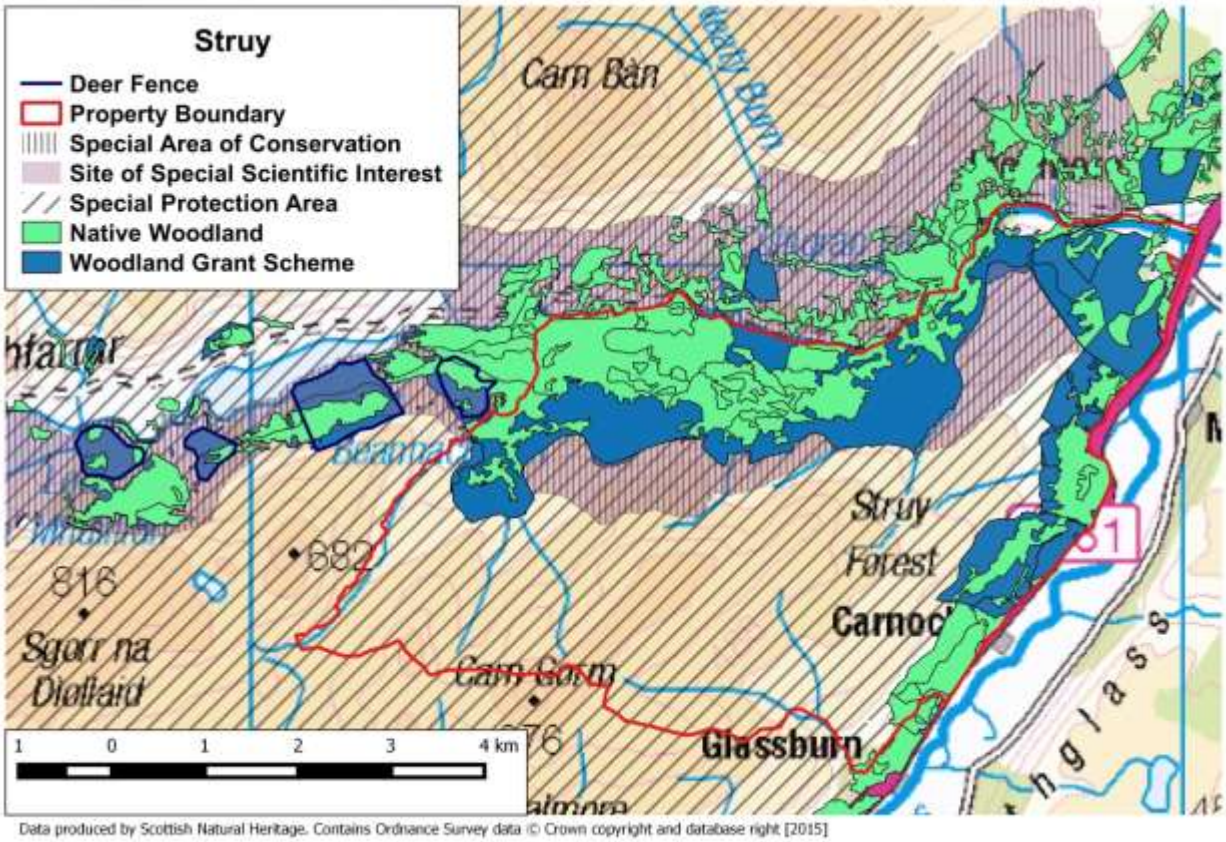
Background	• Glen Cannich Estate sits centrally in the DMG to the north of Loch Mullardoch and the River Cannich. • To the west, it marches with East Benula (North) – a separate property but managed alongside with Glen Cannich under a management agreement. • The long northern boundary marches with Braulen, and Struy and to the east, the Estate is bounded by the A831 and Strathglass. • The whole of the southern boundary is deer fenced up to Mullardoch dam preventing leakage of deer on to Glen Affric Nature Reserve (Fasnakyle) and to farm land in Strathglass. • A main priority for the Estate is conservation but with additional land uses of agriculture, tourism, renewable energy and stalking.
Designated sites	• The western end of the Estate falls within the wider Affric-Cannich Hills SSSI. Improved access to the SAC to aid deer management was put in place under a previous management agreement with SNH. • Liatrie Burn SSSI (90ha) is an area of Caledonian pine -approx 50ha has been enclosed for the last 25 years. Within the enclosure regeneration has been slow possibly due to a thick understory. Cattle have been introduced to break up the ground. An area of 18.75 ha of woodland will be fenced in 2016 bringing the site into Unfavourable Recovering condition status. • Both SSSIs (a total area of 2175 ha) fall within the Strathglass Complex SAC.
Deer Management Objectives	• To work collaboratively with the DMG and SNH to avoid deterioration of the SAC habitats whilst ensuring that the deer resource is maintained in line with the DMG Deer Management Plan. • The Estate has its own management plan which details its objectives.
Future Management Objectives	• To focus culls within the Affric-Cannich Hills SSSI under an SNH Management Agreement (2014 – 2017) and to maintain the hind numbers at a maximum total population of 380 (subject to the outcome of the 2016 Habitat Impact Assessment) with a maximum of 150 (7.16 hinds per km2) within the SSSI. • To continue a rolling programme of enclosures of the Liatrie Burn SSSI over a 100 year period under a long-term management agreement with SNH. • To identify any possible areas for future Peatland Restoration projects. • To achieve a sustainable harvest of 50 stags per year. • To keep under review the status of fences in the area, particularly in the south. • A Habitat Impact Assessment is to be carried out on the upland features of the SAC in Summer 2016. This will help inform future management.

Woodland	• There is relatively little woodland in the western part of the estate although some small fragments remain on more inaccessible crags or steeper burnsides. • To the east, there are 3 blocks of commercial woodland (132 ha in total) that are open/accessible, which deer use largely for shelter, moving out to open ground to feed. These may be felled and restocked at some point in the future. • Above and behind Muchrachd there are some good areas of (unfenced) native woodland including mixed birch and Caledonian pine. • Extensive mature birch woodland along the banks of the River Cannich itself between Craskie and the Craskie burn, is used as shelter by cattle with little active regeneration. • Native woodland schemes have been fenced and planted with pine. • The existing native woodland exclosures above Invercannich and Balmore (62 ha) could possibly be opened up to deer in time.
Wider Habitats	• Its long west-east axis means that the estate embraces a significant gradient in vegetation structure and condition. There is a particular cline in vegetation within the western part of the estate, with a sudden marked increase in heather cover apparent from west-east to the east of the Allt Mullardoch. • The extreme western part of the property, on the south-facing slopes is predominantly wet heath, or moorland. There are some areas of wind clipped heath (*Calluna*) or moss heath on the summit ridge, but below this the ground is wet and dominated by grass-heaths. • There are areas above Loch Mullardoch, Liatrie Corrie and large areas of Balmore that have suffered extensive damage from heather beetle, particularly in wetter sites. • Towards the march with Struy, past management through burning has created a patchwork of heather patches interspersed with grass patches. • The summit ridges (eg. Carn Gorm) tend to support classic summit heath /moss-heath communities with short cushion moss, wind-clipped heather and lichens (*Cladonia*) with occasional patches of club moss (*Lycopodium*). • The open hill ground of Balmore to the east has mosaics of wet moor and bog, with patches of *Nardus* and *Juncus squarrosus* on the deepest areas of peat.
Land management	• The entire stock of 220 ewes (and followers) was removed from the estate over the last 5-10 years, reducing herbivore pressures. • The estate has an agricultural interest with approx. 36 cows and their followers. • Vegetation management (muirburn) has been carried out throughout the estate. • There has been relatively less muirburn on Balmore since 1997 after serious and widespread damage on this part of the Estate from heather beetle. • Glen Cannich Estate is concerned about the spread of bracken over the Estate. In the past they have entered into a 4 year eradication programme using a helicopter which proved costly and ineffective. • The Estate is also concerned about the appearance of Ragwort on East Benula in the last 2 years and it seems to be spreading.
Deer Impacts	• The last assessment of the SAC habitat condition (Headley, 2009) reported continuing heavy or moderate heavy impacts in the alpine heaths and flush habitats, whilst most of the blanket bog and wet heath sample plots had moderate overall herbivore impacts. Heavier impacts were primarily located in Glas Toll and the valley running up to Coire Beag in the west of the management unit. The assessment is due to be repeated in 2016.

Deer Distribution and Movements	• Glen Cannich Estate supports a relatively constant population of hinds year-round, which tend to be concentrated towards the western end and the march with East Benula, with lower densities to the east. • The estate overwinters around 20% of the total population of stags within the DMG, focused in two main areas, one in the centre east of the Mullardoch dam the other on Balmore. Most stags move north to Braulen, or to Mullardoch and South Benula (Affric & Kintail DMG) from around mid-June therefore the estate is dependent on an influx of stags from neighbouring properties during the rut
Supplementary Feeding	• Stags in the centre of the estate are fed *ad lib* silage over the winter period, partly to sustain condition, and partly as a diversionary measure to reduce impacts on the two designated sites.
Access	• The summits of Carn nan Gobhar Sgorr na Diollaidh Sgurr ne Lapaich fall within the estate and are part of a series of popular Munros and Corbetts which also includes An Socach, An Riabhachan (which are on East Benula). • The following information is provided on the Heading for the Scottish Hills website: *Stalking between August and 20 Oct. No stalking on Sundays. Access via the main paths and ridges is always OK (avoiding cutting down through Coire Socrech). If further information is needed, please phone Donald or Andrew on 01456 415339.* During September and October it would be useful if the Estate could be contacted prior to going to the hill.
Socio-Economics	• 2 full-time deer managers are employed and part-time seasonal assistance (split with East Benula). • 2 holiday cottages rented from March to October. • Businesses (shops, fuel, restaurants) in the local village of Cannich and Beauly are supported. • The Estate have their own chilled deer larder but use the bigger East Benula larder and chill.

25. Management Units: Struy Estate

Property	**Struy**
Area	3255 ha
Owner	Over Rankeilour Farms Ltd
Manager	Jim Hair (Estate Factor)
Estate Personnel	Michael Spencer-Nairn & Greg Fraser



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Deer Counts					
Year	Stags	Hinds	Calves	Total	Density
2001	189	282	82	553	16.99
2003	180	142	61	383	11.77
2003*	0	63	22	85	2.61
2006	184	204	50	438	13.46
2009	125	92	51	268	8.23
2012**	135	85	28	248	7.62

*Late winter count from December 2003 is included to emphasise the difference between pre-winter and late-winter counts.
**Note the 2012 count was conducted before the end of the hind season

Deer Culls				
Year	Stags	Hinds	Calves	Total
2005 -2006	24	50	8	82
2006 -2007	22	15	3	40
2007 -2008	23	30	12	65
2008 -2009	27	55	25	107
2009 -2010	24	34	9	67
2010 -2011	22	9	5	36
2011 - 2012	21	3	1	25
2012 -2013	22	5	1	28
2013 -2014	29	13	1	43
2014 -2015	25	16	3	44
2015- 2016	23			23

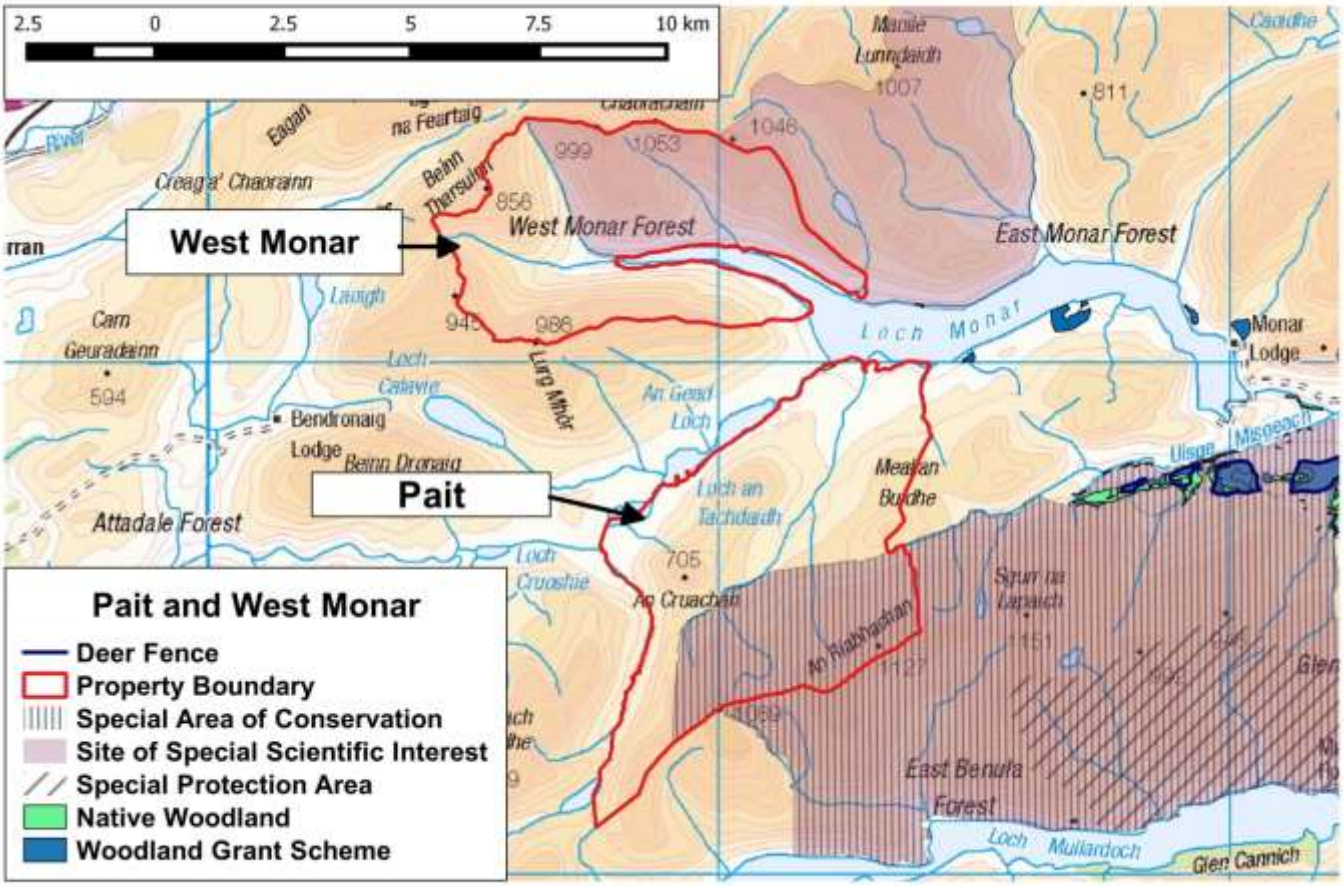
Background	• Struy Estate lies to the south of the River Farrar. It neighbours Glen Cannich Estate (Balmore) to the south, Braulen to the west and Culligran to the north. • A deer fence separates the open ground of property from the A831 and agricultural ground (150ha) below. • The ground is all relatively low-lying, (highest point at Carn Gorm 677 metres). • Struy has strong conservation objectives and a priority focus of the Estate is the maintenance and enhancement of the natural heritage interests. • The estate is primarily focussed on conservation but with additional land uses of commercial woodland, agriculture, eco-tourism and shooting and fishing. • Red and Roe deer species, with occasional Sika.
Designated sites	• The northern part of Struy lies within the Glen Strathfarrar SSSI/Strathglass Complex SAC, designated largely in recognition of Caledonian pine woodland. • Estate was part of Glen Strathfarrar National Nature Reserve (de-notified in November 2006).
Deer Management Objectives	• In delivering the objectives of the Estate, deer populations and impacts have been successfully reduced to encourage regeneration within the native pine woodlands. • The Estate wishes to maintain hind numbers sufficient to ensure recruitment towards population targets and to draw stags onto the Estate during the rut. • Within the constraints imposed by other objectives the Estate seeks to support a sustainable harvest of between 20-30 stags per year. • Management efforts will be focused on trying to sustain hind populations in the south of the estate while continuing to maintain low impacts within the pinewood areas to the north. • Efforts will also continue to effect some redistribution of animals from the main heft at Dumnaglass to reduce impacts there. • A small woodland deer population, established in the commercial plantation to the east of the Estate, is completely independent of open-hill populations.

Future Management Objectives	Recognising the exceptional environmental attributes on the Estate, management objectives are: • To manage the Estate in such a way as to balance the often conflicting needs of nature conservation, deer management, public access and other commercial activities. • To work with SNH, FCS and other interested parties in the good management of the native woodlands and other rare species on the Estate. • To adopt a policy of deer management which will facilitate the regeneration of native forestry, whilst maintaining a deer population compatible with requirements of the local Deer Management Group. • To operate the Estate as close to financial viability as possible, so ensuring its viability as a long term investment and securing the future of at least one full time employee. • To ensure that visitor use of the Estate for scientific and recreational purposes is compatible with other management objectives, whilst safeguarding rights of way and traditionally used routes.
Woodland	• The Estate has a Long Term Forest Plan. • The north part of the Estate is characterised by an extensive stretch of Caledonian pine. This runs along the north-facing slopes above the River Farrar, from Dunmaglass woods (mainly oak and birch) to the western march with Braulen Estate with increasing inclusion of pine moving west. • Historically exclosures have been used to successfully establish regeneration within the Caledonian pine forest however active expansion as well as regeneration of pine is being encouraged and occurring out with these exclosures, particularly towards the western part of the wood. • The lower slopes of the eastern side of the estate, north to south, are largely commercial forestry, with a significant area of plantation fenced away from the open hill ground at Carnoch Wood and a major, mature plantation at the North East towards Struy village (through which the main access track to the hill ground passes). • New fencing/re-fencing within the Carnoch blocks (undertaken when the area was felled for restocking), has been set 100m or so back into the woodland edge. The perimeter was left unfelled, with the new fencing established behind it, allowing deer access to this narrow band of mature woodland. • A small native broadleaved woodland exclosure (Three-Gates Plantation) links the main enclosures of Struy and Carnoch, and provides secure fencing against the A831, with most of the fenceline well back into the Estate ground apart from one small section between Tighchuig and Crelevan. • There are additional small areas of unfenced native broadleaved woodland adjacent to the southern end of Carnoch Wood, towards the march with Glen Cannich and as a discrete clump at Dunmaglass. • There are no plans to erect extensive further enclosures at this time to avoid increasing pressure within areas of regenerating Caledonian pine or dispersing hefted hinds. However, there may be scope to erect smaller enclosures in due course - specifically once the fences can be removed round the existing enclosure at Stron Dubh and there is potential to accelerate this programme if required.
Wider Habitats	• A more detailed description of vegetation can be found in Putman (2009). • The open hill vegetation is mainly a mosaic of wet grass-heath (*Molinia/ Erica/ Scirpus*), dry *Calluna* heath and peatier flats with patches of true blanket bog (*Scirpus/ Erica/Eriophorum*). • On the highest faces dry heathland mosaic of alternating patches of *Calluna* and grassier areas reflects a long management history of regular muirburn.

Biodiversity	• The Estate lies partially within the Affric to Strathconnon SPA designated for Golden Eagles which is considered to be in Favourable condition. • Two active Black Grouse leks with 8+ males. Open heath areas next to old feed sites where the ground was once poached are particularly attractive. • It is hoped to increase numbers of Red Grouse.
Land management	• The estate used to run 400 sheep on the hill but not in the last 2 years. • 150ha of agricultural managed in partnership between Struy Estate and Culligran, half of which is used for silage and half for grazing for 35 breeding Hebridean sheep (which may go back onto the hill) and Highlander Cattle.
Deer Impacts	• A Site Condition Monitoring report of the pinewood feature (SNH Wright & Wortham, 2009) and a more recent report of the monitoring of 100 points on 4 transects in 2006, 2011 and 2012 (Clifford, 2012) suggests good rates of regeneration of the pinewood feature, with natural regeneration occurring in the presence of deer. • Due to management pressure elsewhere, hinds tend to concentrate in Dumnaglass birchwoods both in winter and summer suppressing woodland regeneration. To reduce deer impacts fences have been realigned within the adjacent conifer block and an additional feedsite established to relieve pressure.
Deer Distribution and Movements	• Hind populations are largely resident year-round. The main heft has largely been concentrated above Dunmaglass to the north east of the Estate. • The Estate wishes to increase hind numbers back to 200 and is now seeing hinds coming back to the south side of the estate and using the whole estate. • As low lying ground Struy over-winters stags, which draw away again from April. • Although the Estate now over-winters less stags, they appear earlier in the summer before the rut, but only up on the high ground at the west end.
Supplementary Feeding	• Use of diversionary feeding feed blocks combined with unfenced conifer shelter to the southeast of the birchwood at Dunmaglass. • The Estate may consider improving deer grazing at Glasburn Greens to minimise risk of damage to unfenced native woodland regeneration. • Silage is only provided in response to bad weather conditions.
Access	• There are no Munros or Corbetts on the Estate and access is encouraged.
Socio-Economics	• Estate employs one full time stalker. The Eagle-Brae eco-tourism element provides a further 3 full-time and 4 part-time positions. • Local businesses in Beauly and Struy are supported and estate maintenance is carried out by local contractors. • Eagle-Brae provides accommodation and tourism experiences (camera stalking, wildlife safaris etc) for 20 people at a time in 7 custom made cabins which are booked all year round. • Environmental education is encouraged through Estate tours and through the Shieling Project. • Estate has a larder venison sold to Game Dealer – although some is bought back to provide to visitors.

26. West Monar and Pait Estates

Property	**West Monar and Pait**
Area	West Monar – 2401 ha Pait -3183 ha
Owner	Mr C.S.R Stroyan and Family
Manager	Fred Stroyan
Estate Personnel	Dougie Lippe



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	West Monar				
Counts	**Stags**	**Hinds**	**Calves**	**Total**	**Density**
2003	36	186	71	293	12.20
2005	0	308	86	394	16.41
2006	64	189	41	294	12.24
2009	96	157	46	299	12.45
	Pait				
2003	5	249	93	347	10.90
2005	0	308	86	394	12.38
2006	37	258	59	354	11.12
2009	45	290	87	422	13.26

	West Monar & Pait			
Culls	**Stags**	**Hinds**	**Calves**	**Total**
2005 -2006	40	100	34	174
2006 -2007	40	72	27	139
2007 -2008	33	98	36	167
2008 -2009	22	62	22	106
2009 -2010	40	73	28	141
2010 -2011	30	63	22	115
2011 - 2012	23	58	20	101
2012 -2013	32	48	15	95
2013 -2014	22	31	11	64
2014 -2015	22	49	16	87

Background	• Pait lies at the extreme western end of the DMG area and neighbours West Benula, Killilan and Attadale, which all lie within Lochalsh DMG. • West Monar Estate is treated here as a separate entity, since deer populations are quite distinct and interact mostly with East Monar, Glencarron, Achnashellach and Attadale.

Designated sites	• A large section of the southern part of Pait falls within the Affric-Cannich Hills SSSI (Strathglass SAC). • In West Monar, land to the east falls within the Monar Forest Site of Special Scientific Interest (SSSI).
Deer Management Objectives	• To balance deer management to deliver conservation objectives and a sustainable annual harvest of between 40-45 stags. • Pait and West Monar are run as a single management enterprise.
Future Management Objectives	• Using the count data from 2015/16 and the results of the SAC Habitat Impact Assessment to take place in 2016, Pait will manage hind numbers accordingly and in collaboration with neighbouring estates, particularly East Benula. • On West Monar, the aim is to maintain the current "Favourable" status of Monar Forest SSSI. The summit heaths are the most outstanding feature – dominated by woolly hair-moss with abundant cushion alpine plants and a variety of other species.
Woodland	• On Pait, there is a small area of policy woodland (1.73ha) immediately around the Lodge which provides some shelter for deer. Otherwise native woodland is restricted to a few fragments in more inaccessible gullies and stream beds in the lower part of the Allt Riabhachan and to the northwest of An Cruachan. • On West Monar some fragments of mixed birch/rowan/alder remain in more inaccessible gullies such as the main burn of the Allt Bealach an Sgoltach and its tributaries, and at the foot of the Allt Toll a' Chaorachain. There remains a small clump of Caledonian pine by the loch, and astride the march burn with East Monar.
Wider Habitats	• More detailed descriptions of vegetation can be found in Putman (2009). • On Pait, there is extensive wet grass heath (*Erica/Scirpus*) with patchworks of heather (predominantly *Erica* species) interspersed with grass which is a likely reflection of past management of livestock grazing and muirburn. There are also extensive areas of high 'greens' on the highest faces below An Riabhachan and An Socach/Mam Ruisgte, as well as on both aspects of the more westerly ridge of An Cruachan/Beinn Bheag. To the north-west of An Cruachan/Beinn Bheag are areas of more extensive heather cover with good growth of *Calluna*. • Most of the ground on West Monar is dominated by grass-dominated wet-heath. At the head of the loch itself, at the base of the Bealach an Sgoltaidh, are grassy flats associated with the river flood plain otherwise this lower ground is predominantly relatively thick wet peat with patches of Bog Myrtle. • In the west heather cover is largely suppressed, with a low percentage cover.
Biodiversity	• The area supports a number of plants of rather restricted distribution, including one, the curved wood-rush (*Luzula arcuata*) which is a national rarity.
Land management	• Some limited muirburn on both Pait and West Monar has been undertaken recently however, recovery has tended to be slow. • Used to be sheep and cattle on ground but not for 35 years.

Deer Impacts	• Assessments carried out by MLURI in 2000 for the whole South Ross Deer Management Group (Stolte *et al*, 2001), suggest impacts as light-moderate for much of the site. • On West Monar, assessments of grazing impacts by Putman in 2004 suggested that grazing pressures were moderate around the head of Loch Monar and in the corrie of the Bealach an Sgoltaidh. • Heather cover increases west-east as soil conditions become drier and grazing pressure also appears to decrease towards the eastern side while remaining high within the two main corries (Allt Bealach Crudhain; Allt Toll a'Chaorachain) . • The highest densities of animals/animal usage within West Monar tends to be in the northern part of the Estate, adjacent to or within the Monar Forest SSSI. • On Pait, the highest impacts appear to occur in the southerly parts with a progressive increase in grazing pressure from north to south generally. • Most recently Headley (2009) recorded moderate to high grazing and trampling impacts on key habitats (61% were recorded as moderate with another 18% of plots in the moderate-high and 8% in the high impact class). • All but one of the six sample plots with High impacts are in the north-eastern corner of the management unit at Fearan Riabhachain in the coll between Gleann Innis an Loichel and Coire Riabhachain. • Where heavy impacts were recorded these were on areas of dry heath, with at least 75% of the canopy clearly browsed in all sample plots that were assessed. • Significantly more sample plots were recorded where the overall herbivore impacts had increased than decreased. All sample plots where the herbivore impacts had increased were located between Fuaran Riabhachan and Meallan Buidhe an Feadain, in Coire Riabhachan and on the lower slopes of An Socach. • Since heaviest impacts have been recorded in areas subject to summer increases as deer move between Pait and neighbouring properties of Braulen and East Benula, a collaborative approach to managing hinds in this area is required and is on-going.
Deer Distribution and Movements	• On West Monar and Pait, since the big snows of 5-6 years ago when hinds moved off the ground, deer movements have changed considerably. There is significant movement of hinds in the south between the Estate and Attadale. Stags are resident in summer and winter, with more young stags seen recently. • On Pait there are 3 main groups of hinds. • During the summer, there is a group of mostly hinds and some stags on the lower ground to the north of An Riabhachan that moves between the estate and Braulen. This group doesn't overwinter in this area making deer control difficult to target. • A second group to the south and east of An Cruachan sometimes utilises the area in summer but is not considered to be resident. This group moves in winter possibly to East Benula North or West Benula. • The third main group utilises the area of flats on the march with Inverinate (Killilean) moving readily east to west between the two properties. This group is resident in summer and winter. • Hinds used to be resident behind Pait Lodge but now this area tends to hold stags (mostly young) that move between the flats at Attadale and the area north of An Cruachan and south of Beinn Beag.
Supplementary Feeding	• Feedblocks are used over the winter period in an attempt to try and attract and hold stags.

Access	• West Monar is surrounded by a series on summits that run along the estate boundary. To the north are the summits of Sgurr Choinnich and Sgurr a'Chaorachain. These are mainly accessed from Achnashellach Estate on the main path from Craig to the Bealach Bhearnais. To the west and south are the summits of Beinn Tharsuinn, Bidean a'Choire Sheasgaich and Lurg Mhor. On the march with, and generally accessed via routes from Attadale estate. • Pait has two (An Socach and An Riachachan) of a popular series of summits on the march with East Benula North that also includes Carn nan Gobhar – however, many also access An Cruachan by cutting across the estate. • Acces information can be found on the Heading for the Scottish Hills website. On both estates, stalking takes place between August and 20 Oct, with no stalking on Sundays. Access to all summits via the main paths and ridges is always OK. If further information is needed, please phone Dougie Lippe on xxxxxxxxxxxxx.
Socio-Economics	• Pait and West Monar Estates employ one full time stalker, a part-time ghillie and a part-time assistant in the Lodge. • Estate maintenance is carried out by local contractors. • Local businesses in Beauly provide fuel and provisions. • Estate has a larder and all venison sold to Game Dealer.

27. References

Strathfarrar Deer Management Plan (2011 -2016). Professor R. Putman, 2011.