

SFGS Application Number **EXAMPLE 1**

Scottish Forestry Grant Scheme, Reduction in Deer Numbers (S2)

Part 1 Scheme Details

(Application For Funding under Stewardship Grant)

A. Scheme details

Location:

High Forest DPU (Deer Plan Unit)

OS Ref: NT464012

Owner(s):

M.E Rich - Dead Doe Cleugh
S.R. Wee - Passing Waters
Utd.Squirrels Inc. - Buckshot Wood
No Mune Ltd. - Nohope
Deer Refuge Assoc. - Bark Strip

Agent:

Into Forestry, An Office, Somewhere Close

Tel: & e-mail

Management Plan Author:

Young Buck
Wildlife Manager, Into Forestry

Tel: & e-mail

Type of woodland:

Upland Commercial Conifer Forest
Dead Doe Cleugh (451ha) - 5yrs into restructuring.
Passing Waters (349ha) - 5yrs into restructuring.
Buckshot Wood (299ha) - 3yrs into restructuring.
Nohope (381ha) - 2yrs into restructuring with 2 small satellite woods.
Bark Strip (301ha) - thicket stage (10-20yrs) & mid rotation (>20yrs).

Deer Species:

Roe Deer
Potential for colonisation by Sika Deer from established population about 20km north.

Application area of deer management unit (hectares): 1,781 Ha

B. Rationale to justify SFGS payments for deer control, clarify planned work with indicative costs (see table D below to quantify by year)

Deer damage during restock establishment could have long term repercussions for timber quality, financial viability and biodiversity value of the woodland.

In light of this we have in place a system conforming to DCS and UKWAS best practice, which revolves around monitoring impacts on an annual basis and making predictive management strategies to alleviate such detrimental impacts and achieve objectives (see 2A).

Central to this is our actual culling, which takes place at levels that we hope counters annual recruitment and immigration.

Culls need to be increased to reduce deer numbers (particularly in Nohope) and to counter population increases resulting from the habitat improvements associated with restructuring.

We have come to the conclusion that culling at this level along with necessary monitoring can only be carried out effectively by professionals and hence employ a full-time wildlife manager to carry out these duties and to manage recreational stalkers who are used as an additional control resource (accounting for up to 30% of the annual cull).

Over the next ten years we see it as essential to reduce and maintain a reduction in deer numbers to a level that achieves our objectives (see 2A).

Net Costs can currently be demonstrated to be running at £5.80/Ha/Annum and are forecast to average £5.60 over the next 10 yrs (see 1D for details).

Successful application for the 'SFGS Grant for Reducing Deer Numbers' would help to improve and maintain our position for the next ten years, ensuring that the woodland within the DPU is best placed to deliver it's financial and environmental objectives.

C. Describe Rationale for boundary of grant-aided area on map

Mapping: Please attach map(s) which clearly delineate the application area to be included as eligible woodland and appropriate relevant open ground. Identify adjacent land uses which may impact on the DMP, any internal different ownership boundaries, location of vulnerable crops, intended monitoring areas and any relevant "operations" maps.

The DPU is an area of five adjacent forests where common objectives and budgets have been agreed.

Dead Doe Cleugh, Passing Waters, Nohope and Buckshot Wood are in the process of felling/restocking now with Forest Plans in place for continued restructuring over the next ten years.

Bark Strip is an adjacent thicket stage property (p.yrs.84-87) implicated by its proximity and potential to harbour many of the deer immigrating to sensitive sites within the DPU.

Monitoring is carried out on all vulnerable sites.

See attached mapping for details.

D. Costs (Specifically related to deer management costs only)

- Production of DMP
- Reduction and management culls
- Monitoring and assessment

Anticipated Itemised by individual years (1-10)

	<u>Year1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>
<u>Expenditure</u>							
Produce DMP	480						
Implementation of Cull including transport & eqpt.	12000	12000	12000	12000	12000	12000	1200
Monitoring & Assesment	1400	1400	1400	1400	1400	1400	1400
Infrastructure Highseats Paths etc.	400	1000	400		400	1000	400
<u>Revenue</u>							
Part-Time Controller Fees	2160	2160	2160	2160	2160	2160	2160
Venison	1750	1750	1687	1687	1687	1687	1687
<u>Net Costs</u>	10340	10490	9953	9553	9953	10553	9953

Total Net Costs (10 yrs) = £99,854

Mean Annual Net Costs = £99,854 / 10 yrs = £9,985 per yr

Net Cost per Ha = £9,985 / 1,781 Ha = £5.60 per Ha (> £4/Ha)

SFGS Grant = 60% x £4/Ha x 1,781 Ha = £4,274 per year

Total Grant = £4,274 x 10 yrs = £42,274

Part 2

Deer Management Plan

A. Management Plan Objectives

(Include Statement of intended outcomes)

1. Limit cumulative browsing impact on Sitka Spruce at < 10% leader damage on each restock site with <5% leader damage in any year.
2. Establish (>1.5m by yr 5) Native Broadleaves (including natural regeneration) in line with forest plan using 0.6m shelters or no barrier protection with < 15% leader damage in any year.
3. Establish (>1.5m by yr 5) conifer spp. other than SS in line with forest plan and without resorting to fencing with <15% leader damage in any one year.
4. Limit bark fraying to < 5% (cumulative) on any broadleaved or (non SS) conifer area.
5. Maintain healthy deer population within density parameters dictated by other objectives (certainly < 8 / 100Ha).

Deer Management Policies.

To control negative impacts arising from deer by reducing and maintaining densities at a level whereby the aforementioned objectives are met in as cost effective a manner as possible.

This must be done without compromise to the stated objectives or welfare of the deer in question, adhering to the law and DCS best practice guides.

Utilise suitably qualified recreational stalkers in addition to our professional wildlife manager for diurnal stalking activities at appropriate times of year in a manner that does nothing to inhibit the effectiveness of our overall efforts.

Sensitive operations such as 'night shooting' will only be undertaken by the Wildlife Manager and those directly supervised by him in his presence.

All shot deer will be processed for human consumption and stored and sold via our larder facility at the wildlife manager's home address.

B. Cull Targets**(i) Reduction Culls**

Year	Male				Female				Juveniles				Totals
	Red	Roe	Sika	Fallow	Red	Roe	Sika	Fallow	Red	Roe	Sika	Fallow	
2003		35				35				35			105
2004		35				35				35			105

Comments / Additional Information

For the bulk of the properties we are confident that management objectives are currently being met, with a cull of 5 deer per 100 Ha.

Nohope however, is only joining the DMU now and is suffering from obvious deer pressure, (see attached damage assessments). We intend to cull at a rate of 8 deer per 100Ha within this area for two years in order to alleviate this pressure.

It is anticipated at this moment that this level of culling will not be sustainable and should settle back into 5 deer per 100Ha for the whole of the area during 2005 assuming management objectives are being met.

C. Cull Targets (Cont)**(ii) Management Culls**

Year	Male				Female				Juveniles				Totals
	Red	Roe	Sika	Fallow	Red	Roe	Sika	Fallow	Red	Roe	Sika	Fallow	
2005		30				30				30			90
2006		30				30				30			90
2007		30				30				30			90

Comments / Additional Information

Whilst assuming that culls above will achieve our management objectives we remain flexible and responsive to impacts observed on the ground.

It may well be that culls will increase again as the proportion of thicket stage restock sites increase, affording greater potential to harbour larger numbers of deer.

D. Nominated Controller/s

(Notify FC if any changes occur)

	Nominated controller	Owner	Estate ⊕ Employee	Contract Stalker	Shooting Tenant	Place of Residence	Firearms Certificate No
1	Young Buck		✓			Nearforest	11223
2	John Wayne				✓	Nearforest	33445
3	Billy the Kid				✓	Nearforest.	55667
4	Doc Holloway				✓	Littlefurther.	77889
5	Wyat Earp				✓	Nearforest.	99876

⊕ Section 26(i) of the deer act clarifies definition of "employee".

Controller's Relevant Experience and Calibre of Rifles Authorised	
1	Full time employee of forest agent, responsible for deer management over a total of 5k Ha, 16yrs experience as professional deer controller. DSC Level 1. Rifle Calibres: .243, 6.5-284
2	Recreational Stalker, 3yrs experience helping with management culls for the occupier. DSC Level 1. Rifle Calibres: .243
3	Recreational Stalker, 3yrs experience helping with management culls for the occupier. DSC Level 1. Rifle Calibres: .243
4	Recreational Stalker. Qualified deer vet. 25yrs experience, 6yrs helping with management culls for the occupier. DSC Level 1. Rifle Calibres: .22/250, 25-06
5	Recreational Stalker. 2yrs experience helping with management culls. DSC Level 1. Rifle Calibres: .243

E. Record Keeping Methods.**(As Per DCS Best Practice Guide)**

(To be provided to DCS)

Must include:- Date killed, species, sex, estimated age, body weight, female reproductive status.

Records are initially entered on a larder sheet documenting all relevant data.

They are then transferred to a computer spreadsheet in the same format but inclusive of venison sale information.

Cull records conforming to DCS best practice will be submitted annually to DCS and FC by end June.

F. Method(s) used to annually assess damage to woodlands.

(Annual returns to be compiled by applicant. These will be reviewed at year 5 or as requested by FCS).

All survey and monitoring is carried out by the wildlife manager.

Restock sites are evaluated for deer fraying and leader loss due to browsing annually for at least the first two years after planting. SS are only assessed in subsequent years if the objectives (see 2 A) have not initially been met. Most other conifers (non SS) and broadleaves will be monitored for at least 5 years until established (>1.5m tall).

Assessment is via the 'Nearest Neighbour' method, as per FC Practice Note 1, to an accuracy of +/- 10% and is normally carried out in May. A minimum of 20 cluster points per species group are marked with canes (and GPS co-ordinates) so that the same clusters (of 5 trees) are assessed in subsequent years. Report writing is normally completed by the end of June. Assessment for tree survival and other damage (weevil, hares, sheep etc) is carried out at the same time.

Natural Regeneration is on a small scale and generally confined to riparian zones and roadsides. It is hoped that in the future such areas will become more extensive and worthy of survey. If such a situation should become apparent we would monitor improvements or lack of it via fixed point photography and/or exclusion plots. At the moment no formal assessment is carried out on natural regeneration within the DPU.

All sites are monitored individually with the data then being reviewed to give a holistic idea as to whether objectives are being met. In addition to the formal annual monitoring, crops are regularly inspected by both wildlife and forest staff in case of localized 'hot spots'. This monitoring has been in place for the last three years.

G. Applicant's brief description of methods used to evaluate and review progress of Deer Management Plan

Results from deer damage assessments are written up in formal reports then cross referenced with known cull data for the areas, any particular problems or hotspots are then highlighted for action with increased effort and/or improvements in infrastructure, (highseats access paths etc.).

Cull data is formally reviewed three times a year in an effort to keep focused, particularly on areas highlighted in the previous years damage assessments.

Progress on the Deer Management Plan will be formally reviewed annually in June after report writing is completed with all information being available to FC and our local deer management group EDMG.

Part 3 Supporting Information**A) Information Relating to Known Deer Densities (counts etc)**

	Present	Density in Woodland Per 100ha	Density On open hill Per 100Ha	Source of Count		Dung Count Info	Year Of Count
				DCS	Estate		
Red							
Roe							
Sika							
Fallow							

Comment /Additional Information

No specific information is available with reference to deer densities on these sites. The forest has sustained average Roe Deer Culls in excess of 4.7 deer /100 ha/annum for the last three years.

A resident population would probably have to be in excess of 18 deer /100 ha in order to maintain this level of recruitment.

We do not consider the population to be this high but believe that there is an exceptional level of immigration from surrounding woodland with less favourable habitat.

B. Woodland Deer Density Indicators

<u>Evidence</u>	4-8 / 100 Ha Low Density	8-15 / 100 Ha Medium Density	15+ / 100 Ha High Density
Tracks	Difficult to find deer slot marks or defined paths.	Defined paths slot marks easy to find in areas of soft ground.	Many well defined tracks and paths often black with constant use.
(Tick)	✓		
Dung	Difficult to find with just the odd isolated pellet group.	Pellet groups relatively easy to find, particularly on woodland edges and good feeding areas.	Pellet groups very easy to find. Highly concentrated on favored feed areas.
(Tick)	✓		
Browsing of Vegetation	Natural regeneration of broad-leaved trees taking place with no or little damage to current years incremental growth.	Broad-leaved saplings present but showing significant damage.	No seedlings growing above dominant vegetation height. Often well defined browse lines on established shrubs and plants.
(Tick)		✓	

C. Previous Cull Data

<u>Year</u>	<u>Stags/Bucks</u>	<u>Hinds/Does</u>	<u>Calves/Kids</u>	<u>Totals</u>
98-99	10	30	21	61
99-00	5	12	19	36
00-01	23	18	25	66
01-02	29	18	16	63
02-03	24	27	19	70

Comments / Additional Information

Cull figures above do not include returns for Nohope as this property has only just come under our management with regard to the deer control.

Significant reduction of cull during 99-00 attributable to increased reliance on recreational stalkers that year, returned to mostly professional control 00-01.

With the exception of Nohope and Bark Strip (where the forest structure is unsuitable) the properties have been subject to Night Shooting as authorised by the DCS.

These gradually increasing figures were achieved with similar high effort (except 99-00) but gradual improvements in visibility/access following the start of restructuring.

D. Habitat Information

<u>Habitat</u>	<u>Area</u>	<u>Vulnerable to deer pressure</u>	<u>Comment</u>
SAC/SPA			
SSSI (Geology, Flora, Fauna)			
Vulnerable Restock	172.5	yes	Set to increase year on year for the ten year period.
Open Hill Ground			
Internal Open Space	73	no	Useful for stalking.
Native Woodland			
Broadleaves	35.4	yes	Set to increase year on year for the ten year period.
Conifers	1500.1	no	This component will obviously decrease.

Other

Natural Regeneration of Native Broadleaves is sparse and generally confined to willows, alder and rowan, it is hoped that such regeneration will become more frequent and successful in the

future.

E. Integrated or Adjacent Land Use

	<u>Comment</u>
<u>Existing Woodland</u>	The DPU is adjacent to existing commercial conifer forest over 65% of its perimeter, most of these are pre-fell structures with the exception of Deer Forest, an Into Forestry managed forest complex of thicket stage forestry adjacent to Nohope. It is anticipated that this area will provide a ready source of recruits and problems to areas within the DPU. Most of the areas adjacent to the DPU are managed by Into Forestry but do not at the moment conform to the SFGS eligibility criteria (i.e. net income from let stalking).
<u>Mixture of Woodland / Arable Land</u>	
<u>Unimproved Pasture / Open Hill</u>	The remaining 35% perimeter is adjoined by open hill. Boundary fences are stock proof at the moment.
<u>Other (Specify)</u>	
<u>Public Access / Recreation Facilities</u>	The DPU is infrequently used by walking members of the public.
<u>Deer Road Traffic Issues</u>	None.
<u>Public Safety issues</u>	All controllers frequenting the forest are aware that the pedestrian public have full access to all areas of the forest and must take every precaution to ensure a safe backstop before any bullet is discharged.

F. Factors which might influence deer use

Is the site part of a Red deer wintering area?	No.
Immigration / Emmigration Knowledge.	Whilst there is no specific evidence it would be reasonable to assume that we do suffer to a degree from regular influxes of juvenile deer particularly from Deer Forest.

G. Evidence of historical / existing damage**(i) Damage to woodlands and habitats**

Damage assessments and reports are available from all vulnerable sites within the DPU for the last three years.

Please find them attached (Damage Summary Dead Doe Cleugh 2003).

Methodology, although less systematic, has generally been as described in section 2F.

(State any method of assessment eg; transects, fixed plots, fixed point photography)

(ii) Damage to natural heritage interests

Suppression of limited natural regeneration of native trees and black grouse habitat is suspected.

(State any method of assessment)

H. Deer Fencing (See FC Guidance Note 11)

Deer Fencing: If deer fencing is proposed explain what measures will be taken if required to compensate for the loss of deer range to ensure its effectiveness. Also highlight whether a risk assessment has been carried out to mitigate against bird strikes.

None contemplated at this time.