
**The Contribution of Deer
Management to the Scottish
Economy**

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1 Study Context

Introduction

This study was commissioned by the Association of Deer Management Groups (ADMG) in order to assess the current contribution of deer management to the Scottish economy.

Deer management in Scotland is undertaken for population control, for environmental reasons and for the sport of stalking. Deer are unusual in the sense that they are viewed as both asset and pest, and management for control and for sport largely go hand in hand.

A parallel “National” study commissioned by the British Association of Shooting and Conservation (BASC), The Countryside Alliance and the Country Land and Business Association (CLA), and in consultation with the Game Conservancy Trust (GCT) assesses the economic and environmental impact of sporting shooting in the UK and includes the impact of deer shooting for sport in Scotland. However, given that this study concentrates solely on the impacts of sporting shooting, the non-sporting aspects of deer management are not included. It is for this reason that PACEC was approached by the Association of Deer Management Groups and asked to write a separate report for the Association, which would focus on the impact of all deer management (for both sporting and other purposes) on the Scottish economy. The resulting report makes use of relevant results from the National study as well as additional data, collected specifically by PACEC on behalf of the ADMG.

Aims and Objectives

The study combines qualitative and quantitative research to provide a comprehensive and comprehensible analysis of the contribution of deer management to the Scottish economy.

An input-output modelling approach is at the heart of the methodology. This methodology permits estimates to be made of direct and indirect economic impacts of deer management, including: the range and extent of relationships between deer management and other ‘sectors’ of the economy;

estimates of the indirect supply chain (2nd and subsequent round indirect effects) and induced expenditure effects of deer management on employment and incomes;

an assessment of downstream impacts in terms of the economic value of deer management.

Methodology

The study makes use of the main study’s programme of research (including the questionnaires written for the purposes of the main study), as well as additional activities undertaken specifically for the ADMG. As such, the Association benefits from the following research activities:

Desk research

Review of previous reports and any available statistics relevant to deer management and its economic, environmental and social impact on the Scottish economy

Drafting and piloting of a specific deer management survey questionnaire

Discussion with client to agree additions to the questionnaire

Data collection and survey research covering

Providers/organisers of deer stalking opportunities and professional deer stalkers who undertake deer management

Participants (stalking sportsmen) and supporters

Suppliers to organisers and participants

Data presentation and Input-Output analysis

Data base assembly

Development of input-output model

Estimation of direct and indirect economic impact of deer management

Reporting

Draft report

Final reports.

Questionnaire design and piloting

Data relating to the management of deer for sport was collected using a suite of questionnaires written for the National study (organisers/providers, participants, suppliers). Data relating to the non-sporting elements of deer management was collected using an additional questionnaire.

The questionnaires were designed for self-completion and despatch and return by post. The Association of Deer Management Groups were supplied with 1,000 copies of the National study's provider questionnaire and 1,000 copies of the supplementary deer management questionnaire to mail through their member deer management groups (of which there are approximately 70) to their members¹. Both questionnaires were piloted in order to ensure that they were 'bug-free', reasonably easy to complete and generally fit-for-purpose.

- 2 The principal aims of the questionnaires sent to ADMG members were to:
- a obtain income and expenditure data from providers/organisers/managers relating to deer management for sporting and for other purposes, showing in reasonable detail the amount and type of income/expenditure they derive/incur by designated geographical areas (local economy, region)

identify respondents' employment patterns and levels; e.g. number of staff, by job category and status (ft/pt, seasonal/year-round, hours worked)

establish contact details of suppliers used by those responsible for deer management

Based on a maximum of 1,000 questionnaires sent out and estimate of 300 businesses approached, the response rate for questionnaires sent to ADMG members was 20-24%.

Questionnaires returned by ADMG members

	National Provider questionnaire	ADMG deer management questionnaire
Questionnaires sent (maximum)	1,000	1,000
Estimated number of deer management businesses ²	300	300

¹ The exact number of members who received a copy of the questionnaire and supplementary questions is unknown, given that the management groups' effectiveness of distribution and the number of members in each group varies.

Questionnaires received	73	61
Response rate	24%	20%
Source: PACEC		

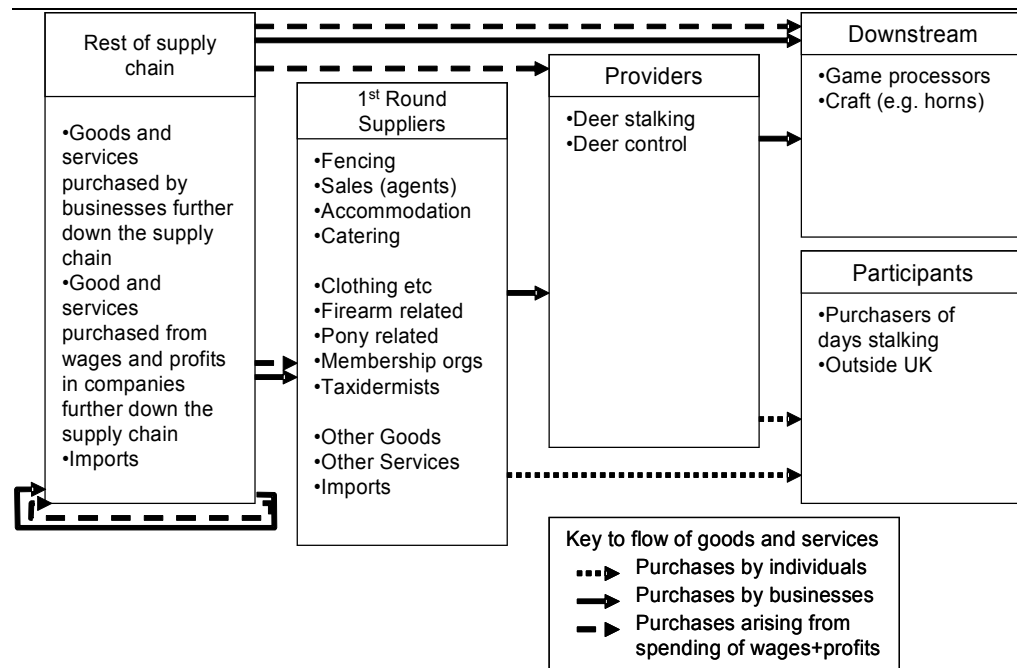
Input-output modelling

Direct and first round indirect economic effects of deer management in Scotland have been generated using survey results and second and subsequent indirect (i.e. supply chain) effects and induced (i.e. income multiplier) effects using input-output modelling. The basis of the input-output model is the ONS (i.e. official) UK input-output tables, adjusted to distinguish shooting from similarly categorised, but unrelated, activities.

To estimate the total number of jobs supported by deer management in Scotland, it is necessary to establish both direct and indirect jobs associated with deer management. Direct jobs are those arising from the control of deer and the provision of stalking opportunities. Indirect jobs are also generated and, indeed, no economic analysis of the sector would be complete without taking into account all wider effects (so called ‘ripple’ effects) of the transactions associated with the sport. These wider effects are derived from the type and extent of expenditure reported by both providers and participants.

3 The upstream and downstream impacts are shown in the following diagram.

Economic Framework



Source: PACEC

² The total number of holdings carrying out deer management in Scotland will exceed this figure. Those referred to here are only deer management businesses which can be accessed through ADMG membership.

Beginning with the participants, individuals make purchases from both stalking providers (in the form of day fees for example) and from other suppliers (such as guns, ammunition and membership of shooting organizations).

Providers also make purchases, including expenditure on fencing, stalking ponies and other deer stalking equipment. Some providers employ one or more stalker to manage the deer on their land. Larger stalking operations may also employ ancillary staff to undertake administration, catering or accommodation functions.

In addition to supplying participants with stalking opportunities, providers also supply downstream industries with goods and services. For example, the sale of venison to game processors and dealers.

Every transaction which takes place among providers and participants incurs further economic effects. Linkages take place as firms buy from other firms, referred to as 'supply chain effects'. Furthermore, additional purchases arise from first and subsequent round suppliers spending their wages and profits which have been generated by the shooting activity. These are referred to as 'expenditure multiplier effects' and the multipliers applied to generate these figures are based on data from the Office of National Statistics Input-Output tables. These two types of effects have been amalgamated and are presented under the heading 'rest of supply chain'.

Grossed up results

Introduction

Estimates for all sporting shooting in Scotland (including grouse, pheasant, wildfowl, pigeon, rabbit and Deer) of shooting activity, employment, expenditure and environmental activity were taken from the National Study. The deer related component of sporting shooting was not estimated in the national study due to the considerable amount of multiple quarry provision in the sporting shooting sector. However, for each of key activity, employment, expenditure and environmental activity variables regression analysis was used to estimate the deer component, which is shown in the first column of each table.

The non-sporting deer management data was estimated based on the typical (median) values obtained from the ADMG survey (in the next section), and an estimate of 300 economically significant³ deer management sites in Scotland. The same input-output parameters estimated for Scotland in the national study were used to calculate the indirect employment and Gross Value Added effects.

Activity

	Deer Management (including sport)
Providers	4,200*
Shoot Days	47,000
Gun Days (provider estimate)	67,000
<i>Deer shot (both roe and red)**</i>	Unknown
Unknown: This was not part of PACEC's research	
*All respondents who carried out deer management (not for sport) also provided the sporting shooting of deer.	
**It is estimated by ADMG that 100,000 are shot in total	
Source: PACEC	

The total deer management (including sport) figures are the sum of the sporting shooting of deer and deer management (not for sport) figures. The following tables present the economic impacts of deer management in Scotland. Employment impacts are broken down into direct employment and indirect employment, calculated using providers' direct expenditure (staff costs and other expenditure). The Gross Value Added (GVA) in Scotland as a result of deer management is calculated using providers' total staff expenditure (direct GVA) and the spending of wages and profits by processors and first round suppliers, multiplied by the appropriate supply chain 'multiplier', as derived from the ONS input-output tables (indirect GVA).

Expenditure associated with deer management (Direct Costs) (£m)

Deer Management in Scotland

³ Although the number of deer management businesses accessed through the ADMG might appear to be a relatively small proportion of all those in Scotland, those businesses who are members of the Association are typically those with the largest scale of deer management operations. Thus we are confident that the sample is representative in terms of economic contribution.

	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Provider Staff costs	9.3	3.6	12.9
Staff accommodation cost to provider	0.7	0.0	0.7
Staff additional payments from participants	2.8	0.0	2.8
Other expenditure by providers	29.0	4.5	33.5
Other expenditure by participants	55.2	0.0	55.2
Total costs	97.0	8.1	105.1
Total spend retained in Scotland	62.8	7.6	70.4

Source: PACEC

Employment Impacts

Direct Employment

	Deer Management in Scotland		
	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Workers (inc part time & casual)	10,000	600	10,600
FTE work done (paid & unpaid)	990	126	1,116
Paid workers	7,900	300	8,200
FTE paid jobs	840	126	966

Source: PACEC

Indirect Employment (FTE paid jobs)

	Scottish Employment arising from Deer Management in Scotland		
	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Game processors and craft e.g. horn	40	40	80
First round suppliers e.g. fencing, ammo	690	37	727
Rest of supply chain e.g. timber, lead	710	38	748
Total indirect jobs (in Scotland)	1,440	114	1,554

Source: PACEC

Total Employment (FTE paid jobs)

	Scottish Employment arising from Deer Management in Scotland (FTE paid jobs)		
	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Direct Employment (Table 2.3)	840	126	966
Indirect Employment (Table 2.4)	1,440	114	1,554
Total jobs (in Scotland)	2,280	240	2,520

Source: PACEC

*Gross Value Added (GVA)⁴***Direct GVA (£m)**

	Deer Management in Scotland effect on Gross Value Added in Scotland		
	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Provider staff costs	9.3	3.6	12.9
Staff additional payments	2.8	0.0	2.8
Total Direct GVA	12.1	3.6	15.7

Source: PACEC

Indirect GVA (£m)

	Deer Management in Scotland effect on Gross Value Added in Scotland		
	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Game processors and craft e.g. horn	1.4	1.4	2.7
First round suppliers e.g. fencing, ammo	23.7	1.3	25.0
Rest of supply chain e.g. timber, lead	25.6	1.4	26.9
Total Indirect GVA	51.0	4.0	55.0

Source: PACEC

Total GVA (£m)

	Deer Management in Scotland effect on Gross Value Added in Scotland		
	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Direct total (Table 2.6)	12.1	3.6	15.7
Indirect total (Table 2.7)	51.0	4.0	55.0
Total GVA	62.8	7.6	70.4

Source: PACEC

Environmental Impacts

The environmental impacts resulting from deer management were looked at but, owing to the multiplicity of land uses (including the common provision of multiple types of shooting) on a given site, the impacts specifically attributable to deer management were not easily disentangled from those resulting from agriculture, forestry and other forms of sporting shooting taking place on the land.

⁴ **Gross Value Added (GVA):** The standard monetary measure of the value of economic activity. Usually estimated as the sum of employment costs plus profits, but since many providers run at a loss, profits of shooting providers have been excluded in this study.

Non Sporting Deer Management

Introduction

The following results are taken from the deer management survey sent to ADMG members. The questionnaire⁵, which looked exclusively at deer management not for sporting purposes, was designed to compliment the national study's survey which considered the impacts of deer stalking, amongst other forms of sporting shooting.

Key Findings from the ADMG deer management questionnaire

The majority (90%) of respondents who manage deer do so in order to ensure the deer population does not exceed the resources of their habitat (.). Indeed, for the most part, deer management is carried out in order to protect either the deer or their environment. Two thirds of respondents highlighted the potential damage to habitats if deer management were to cease on the site. Culling for the primary purpose of selling the meat is less common. Venison production is generally a by-product of deer management, although it produces a significant income stream.

On average, a fifth (19%) of deer on a given site are culled each year (.).

All deer managers use shooting in order to manage deer populations, suggesting that, without the ability to shoot, there is no feasible alternative method of control. Two thirds of respondents also used fencing, and a third made use of supplementary feeding to control deer populations. Just 3% cited Muirburn as a method of managing their deer (.).

82% of respondents accessed through the ADMG manage deer as part of sporting shooting provided on site, illustrating the way in which deer control sits alongside deer stalking for sport (.).

60% of respondents would continue to cull if sporting shooting were no longer possible for any reason. A quarter would continue to cull but to a lesser extent. 9% would not cull their deer if deer stalking did not take place (.).

An average (mean) of 1.8 stalkers (or 0.9 Full Time Equivalents) are required per shoot site (where the average size of shoot site was 7,984 ha) in order to carry out the necessary deer management (.).

The average (mean) operational expenditure per site across 43 respondents was £54,468 per annum, of which £25,726 (47%) was spent on staff (including sub-contractors) (.).

The typical (median) operational expenditure (including wages) relating to deer management (not for sport) per site was £27,430 per annum, with £26,184 staying in Scotland (.).

The typical (median) capital expenditure relating to deer management (not for sport) per site is £2,240 per annum, with £948 staying in Scotland. On average, each year £520 is spent per site on fencing alone (.).

The average (mean) income per site for the sale of deer carcasses, processed venison and other deer products is £6,372 (.). In addition, respondents estimated that an average (mean) of £4,537 was saved per site on the prevention of damage to crops, horticulture woodlands and the natural environment as a result of deer management (.).

Source: PACEC Deer Management Survey 2005

⁵ A copy of the questionnaire can be found in Appendix A.

Survey Results

4 For what purpose(s) is deer managed on the site?

	Percentage of all respondents
To protect agricultural crops	31
To protect horticultural crops/gardens	5
To protect woodland/the natural environment	56
To ensure that the deer population does not exceed habitat	90
To reduce the risk of traffic-related accidents	11
To sell venison/other associated products	52
Other	23
<i>Number of respondents</i>	<i>61</i>

Source: PACEC Survey (Q2A)

5 What proportion of deer, on average, are culled per annum on the site (%)?

	Statistics of all respondents
Median	18
Mean	19
Min	10
Max	50
<i>Responses</i>	<i>53</i>

Source: PACEC Survey (Q3)

6 What method(s) is/are used to manage deer on the site?

	Percentage of all respondents
Deer are shot	100
Fencing	67
Supplementary Feeding	30
Muirburn	3
<i>Number of respondents</i>	<i>60</i>

Source: PACEC Survey (Q4A)

7 Do you manage deer as part of sporting shooting activities offered on the site?

	Percentage of all respondents
Yes	82
No	18
<i>Number of respondents</i>	<i>61</i>

Source: PACEC Survey (Q5)

8 If sporting shooting activities were no longer to be offered on the site, would you continue to carry out deer management?

	Percentage of all respondents
--	-------------------------------

Yes, and to the same extent, for the reasons outlined above	60
Yes but to a lesser extent	23
No, there would be no need	9
Yes, and to a greater extent	8
<i>Number of respondents</i>	53
Source: PACEC Survey (Q6A)	

9 People necessary to carry out deer management (not shot for sporting purposes) on the site (Mean)

	Statistics of all respondents
Landowner/Farmer	0.72
Factor/Manager	0.28
Stalker/Keeper	1.78
Forest Ranger	0.13
Contractor	0.04
Other	0.47
Total	3.41
Source: PACEC Survey (Q8-2)	

10 Paid people necessary to carry out deer management (not shot for sporting purposes) on the site (Mean)

	Statistics of all respondents
Landowner/Farmer	0.04
Factor/Manager	0.28
Stalker/Keeper	1.71
Forest Ranger	0.13
Contractor	0.04
Other	0.09
Total	2.29
Source: PACEC Survey (Q8-4)	

11 FTE work necessary to carry out deer management (not shot for sporting purposes) on the site (Mean)

	Statistics of all respondents
Landowner/Farmer	0.03
Factor/Manager	0.08
Stalker/Keeper	0.89
Forest Ranger	0.02
Contractor	0.00
Other	0.03
Total	1.05
Source: PACEC Survey (Q8-6)	

12 Paid FTE necessary to carry out deer management (not shot for sporting purposes) on the site (Mean)

	Statistics of all respondents
Landowner/Farmer	0.00
Factor/Manager	0.08
Stalker/Keeper	0.88
Forest Ranger	0.02
Contractor	0.00
Other	0.02
Total	1.01

Source: PACEC Survey (Q8-8)

13 Operational expenditure⁶ (£)

	Statistics of all respondents
Median	27,430
Mean	54,468
Min	150
Max	426,500
Responses	43

Source: PACEC Survey (Q9-1)

14 Operational expenditure breakdown (£ Mean)

	Statistics of all respondents
Staff costs	24,112
Casual wages e.g. gillies employed for the stalking season	1,598
Pest control subcontractors	16
Ammunition	463
Vehicular running costs	2,725
Vehicle servicing/repairs	1,771
Equipment repairs	446
Stalking Pony Costs	1,588
Clothing	599
Licences, Membership subscriptions	511
Property costs	3,573
Utilities & communications	1,495
Other Goods purchased	2,552
Other Services purchased	2,126
Other (please specify below)	10,892
Total operational expenditure	54,468

Source: PACEC Survey (Q9-2)

⁶ The proportion of operational expenditure remaining in Scotland is shown in Appendix B

15 Capital expenditure⁷ (£)

	Statistics of all respondents
Median	2,240
Mean	8,620
Min	3
Max	62,367
<i>Responses</i>	43
Source: PACEC Survey (Q10-1)	

16 Capital expenditure breakdown (£ Mean)

	Statistics of all respondents
Deer management equipment (sacks, high seats)	197
Fencing (posts, wire)	520
Air rifles, rifles, optics	210
Buildings: accommodation, stores, stables, kennels	1,000
Roads, tracks	1,073
Vehicles: lorry, van, pick up, tractor, trailer	4,116
Stalking Ponies	173
Dogs kept for the purposes of deer management	39
Venison storage (chillers, larders)	949
Any Venison processing equipment	167
Communication equipment(e.g. walky talky)	120
Computers	56
Total capital expenditure	8,620
Source: PACEC Survey (Q10-2)	

17 Income (£)

	Statistics of all respondents
Median	1,815
Mean	6,372
Min	0
Max	80,000
<i>Responses</i>	43
Source: PACEC Survey (q11-1)	

18 Income breakdown (£ Mean)

	Statistics of all respondents
Sale of deer carcasses for processing elsewhere	5,706
Sale of processed venison direct to wholesaler/retailer	365

⁷ The proportion of capital expenditure remaining in Scotland is shown in Appendix B

Sale of other deer products (e.g. horn)	107
Other (describe below)	195
Total income from deer management	6,372
Source: PACEC Survey (q11-2)	

19 Income loss prevented as a result of deer management breakdown (£ Mean)

	Statistics of all respondents
Prevention of damage to agricultural crops	674
Prevention of damage to horticultural crops	116
Prevention of damage to woodland/the natural environment	3,741
Other (describe below)	6
Total income loss saved	4,537
Source: PACEC Survey (q12-2)	

Deer Management Questionnaire

Deer Management in Scotland

This is an extension to the main questionnaire, designed for the Association of Deer Management Groups to allow estimates to be made of the costs of deer management in Scotland, the environmental impact and the number of jobs supported, both directly and through the supply chain.

Members of the Association of Deer Management Groups are being asked to complete both questionnaires, beginning with the main questionnaire, titled ‘Contribution of Sporting Shooting to the UK’. The responses from this questionnaire will be used in conjunction with those from the main questionnaire, in order to cover both the sporting and non-sporting aspects of deer management.

All questions on this questionnaire relate to the site named in Q22 of the main questionnaire. Again, to avoid duplication please speak to the other key people involved in deer management (landowner, manager, stalker(s)) on the site either before or while you fill in this questionnaire.

Deer Management – Your Involvement

Q1 Who is responsible for deer management on the site? *(Please tick as many as apply)*

	The Landowner	<input type="checkbox"/>
	The Factor/Manager	<input type="checkbox"/>
	A professional stalker employed on the site	<input type="checkbox"/>
	A team of professional stalkers employed on the site	<input type="checkbox"/>
	Deer management is subcontracted to a stalking/pest control service	<input type="checkbox"/>
	Deer management is carried out by an external stalker/stalkers under an informal arrangement	<input type="checkbox"/>
	The Sporting Tenant	<input type="checkbox"/>
	The Tenant Farmer/Crofter/Forester	<input type="checkbox"/>
	Other – please specify	<input type="checkbox"/>
_____ No deer management takes place on the site (Please return this questionnaire to PACEC)		

Q2 For what purpose(s) is deer managed on the site? *(Please place two ticks by the primary purpose and a tick by any other purposes that apply)*

	To protect agricultural crops	<input type="checkbox"/>
	To protect horticultural crops/gardens	<input type="checkbox"/>
	To protect woodland/the natural environment	<input type="checkbox"/>
	To ensure that the deer population does not reach a level beyond the carrying capacity of their habitat (i.e. for the benefit of the deer)	<input type="checkbox"/>
	To reduce the risk of traffic-related accidents	<input type="checkbox"/>
	To sell venison/other associated products	<input type="checkbox"/>
	Other – please specify	<input type="checkbox"/>
_____ _____		

Q3 What proportion of deer, on average, is culled per annum on the site?

 %

Q4 What method(s) is/are used to manage deer on the site? *(Please tick as many as apply)*

Deer are shot	<input type="checkbox"/>	Supplementary Feeding	<input type="checkbox"/>
Fencing	<input type="checkbox"/>	Other – please specify	<input type="checkbox"/>

Q5 Do you manage deer as part of sporting shooting activities offered on the site? *(Please tick one)*

Yes ¹ No (**Go to next section**) ²

Q6 If sporting shooting activities were no longer to be offered on the site, would you continue to carry out deer management? *(Please tick one)*

Yes and to the same extent, for the reasons outlined above	<input type="checkbox"/> ¹
Yes but to a lesser extent – please give details	<input type="checkbox"/> ²
<hr/>	
Yes, and to a greater extent – please give details	<input type="checkbox"/> ³
<hr/>	
No, there would be no need	<input type="checkbox"/> ⁴

Q7 If sporting shooting activities were no longer to be offered on the site, would there be any change to the type/method of deer management? (e.g. more/less fencing would be used) *(Please give details)*

Please note that the following sections apply to deer management which is NOT undertaken for sport.

Deer Management Employment, Costs and Incomes

Q8 Please detail below the total employment necessary to carry out deer management (**not shot for sporting purposes**) on the site (e.g. for forestry/farm/garden/road protection). *(Please tick one)*

Job description <i>(change names as required)</i>	Persons	Hours per week per person	Weeks per year per person	Paid	Un-paid
Landowner/Farmer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ¹	<input type="checkbox"/> ²
Factor/Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ¹	<input type="checkbox"/> ²
Stalker/Keeper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ¹	<input type="checkbox"/> ²
Forest Ranger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ¹	<input type="checkbox"/> ²
Contractor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ¹	<input type="checkbox"/> ²
Other (e.g. Sporting Tenant/Amateur Stalker)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ¹	<input type="checkbox"/> ²

Q9 Please detail below the expenditure associated with deer management (**not shot for sporting purposes**) on the site. What were the major items of **operational expenditure** in 2004*? (*Expenditure required for deer shot for sporting purposes will be captured in the main questionnaire*). For each item (adding to the list as necessary) please specify the cost, the location of the supplier and, in the case of manufactured goods, the location of the manufacturer. Please give expenditures EXCLUDING VAT.

Item of shoot related expenditure (Write in items not listed)	Cost	Location of supplier			Location of manufacturer		
		Scotland	Rest of UK	Outside UK	Scotland	Rest of UK	Outside UK
Staff costs (including Nat Ins and pension)	£						
Casual wages e.g. gillies employed for the stalking season	£						
Pest control subcontractors	£	1	2	3			
Ammunition	£	1	2	3	1	2	3
Vehicular running costs (fuel, oil)	£	1	2	3	1	2	3
Vehicle servicing/repairs	£	1	2	3			
Equipment repairs (e.g. to rifles, radios, binoculars)	£	1	2	3			
Stalking Pony Costs (e.g. saddlery, horseshoes)	£	1	2	3			
Clothing	£	1	2	3	1	2	3
Licences, Membership subscriptions	£	1	2	3			
Property costs (rent, rates, maintenance)	£	1	2	3			
Utilities & communications (e.g. gas, electricity, water, phone)	£	1	2	3			
Other Goods purchased (e.g. manufactured goods, consumables)	£	1	2	3	1	2	3
Other Services purchased (e.g. insurance, accountancy, legal, banking, HP and leasing)	£	1	2	3			
Other (please specify below)	£	1	2	3	1	2	3

Q10 Looking back over the past 5 to 10 years as a guide, what **capital expenditure** is necessary to undertake the level of deer management (**not shot for sporting purposes**) currently undertaken on the site? (*Items used for deer shot for sporting purposes will be captured in the main questionnaire*). For each item (adding to the list as necessary) please specify the cost*; the life time of the equipment / capital item (you may require a new building every 5 years, or a computer every 3 years or a vehicle every 2 years) and the location of the supplier and the manufacturer.

Item of expenditure (Write in items not listed)	Cost	# Years	Location of supplier			Location of manufacturer		
			Scotland	Rest of UK	Outside UK	Scotland	Rest of UK	Outside UK
Deer management equipment (sacks, high seats, weighing scales, knives, etc)	£		1	2	3	1	2	3
Fencing (posts, wire)	£		1	2	3	1	2	3

Air rifles, rifles, optics	£			1	2	3	1	2	3
Buildings: accommodation, stores, stables, kennels	£			1	2	3	1	2	3
Roads, tracks	£			1	2	3	1	2	3
Vehicles: lorry, van, pick up, tractor, trailer	£			1	2	3	1	2	3
Stalking Ponies	£			1	2	3	1	2	3
Dogs kept for the purposes of deer management	£			1	2	3	1	2	3
Venison storage (chillers, larders)	£			1	2	3	1	2	3
Any Venison processing equipment	£			1	2	3	1	2	3
Communication equipment(eg walky talky)	£			1	2	3	1	2	3
Computers	£			1	2	3	1	2	3
Other (please specify below)	£			1	2	3	1	2	3

Q11 Please detail below any incomes which is received as a result of deer management (**not shot for sporting purposes**) on the site (please round figure as necessary).

2004* Income (incl. VAT)

Sale of deer carcasses for processing elsewhere	£
Sale of processed venison direct to wholesaler/retailer/catering industry	£
Sale of other deer products (e.g. horn)	£
Other (describe below)	£

Q12 Please estimate below any income loss which has been prevented as a result of deer management (**not shot for sporting purposes**) on your land, i.e. the income saved.

2004* Income

Prevention of damage to agricultural crops	£
Prevention of damage to horticultural crops	£
Prevention of damage to woodland/the natural environment	£
Other (describe below)	£

Deer Management – Implications for Land Management

Q13 If deer management were to cease on the site, what would be the **economic** and **environmental** implications? e.g. additional fencing costs, greater loss of crops, increased woodland damage (Please detail below)

Deer Contacts

Q14 As part of this study we are also interviewing suppliers and we would be grateful if you could list below the names and telephone number of any suppliers or buyers which are directly associated with the deer industry.

END. THANK YOU FOR YOUR HELP –The information you have supplied is extremely valuable to this study and we appreciate the considerable time you have put in to complete this questionnaire.

**Please return both questionnaires to PACEC in the envelope provided
(49-53 Regent Street, Cambridge, CB2 1AB)**

Survey Results – Scotland

Operational expenditure (£ Scotland)

	Statistics of all respondents
Median	26,184
Mean	44,543
Min	150
Max	283,194
<i>Responses</i>	43
Source: PACEC Survey (Q9-3)	

Operational expenditure breakdown (£ Mean Scotland)

	Statistics of all respondents
Staff costs	24,112
Casual wages e.g. gillies employed for the stalking season	1,598
Pest control subcontractors	16
Ammunition	106
Vehicular running costs	1,324
Vehicle servicing/repairs	1,712
Equipment repairs	441
Stalking Pony Costs	1,588
Clothing	274
Licences, Membership subscriptions	365
Property costs	3,573
Utilities & communications	1,428
Other Goods purchased	1,884
Other Services purchased	2,097
Other (please specify below)	4,024
Total operational expenditure	44,543
Source: PACEC Survey (Q9-4)	

Capital expenditure (£ Scotland)

	Statistics of all respondents
Median	948
Mean	4,304
Min	1
Max	47,699
<i>Responses</i>	43
Source: PACEC Survey (Q10-3)	

Capital expenditure breakdown (£ Mean Scotland)

	Statistics of all respondents
Deer management equipment (sacks, high	110

seats	
Fencing (posts, wire)	307
Air rifles, rifles, optics	63
Buildings: accommodation, stores, stables, kennels	448
Roads, tracks	1,073
Vehicles: lorry, van, pick up, tractor, trailer	1,330
Stalking Ponies	26
Dogs kept for the purposes of deer management	31
Venison storage (chillers, larders)	757
Any Venison processing equipment	118
Communication equipment(e.g. walky talky)	33
Computers	8
Total capital expenditure	4,304
Source: PACEC Survey (Q10-4)	