3.2.14 Origins of stock

Question 13 on the questionnaire concerned the origins of the stock used and was an open question (although two examples (moor bred, rye/clover ley farmland) were given). In total 32 sources were suggested by respondents but to ease interpretation some have been grouped. Thus Box 6, which shows the origins of sheep used for conservation grazing, has 18 categories with, for example, unimproved grassland, lowland meadow and rough grassland grouped together as a single 'origin'. It is possible that other categories overlap, e.g. improved grassland and ley farm or pasture. There are also differences in interpretation of origin between the habitat from which the sheep originated and the status (e.g. Local or National Nature Reserve) of the site from which they came.

Box 6: Origins of stock used in conservation grazing schemes

1.	Moor bred	10.	Sand dunes
2.	Hill / Upland	11.	Home bred
3.	Lowland	12.	Farm/Local farm/smallholding
4.	Ley farm / Organic Ley	13.	Local Nature Reserve
5.	Improved grassland	14.	National Nature Reserve
6.	Pasture/permanent pasture	15.	Market
7.	Unimproved grassland / Lowland meadow/Rough grassland	16.	Conservation organisations/ reserve/National Park
8.	Chalk grassland/calcareous grassland	17.	Local school
9.	Marsh	18.	Various

Despite these difficulties some indication of the sources of sheep used in conservation grazing schemes can be derived (Table 17). In total the origin of the sheep used was given for 39 breeds or crosses to give 88 site/breed/origin combinations. The most frequently stated origin was 'moor bred', recorded for sheep at 18 sites. Other frequent origins were 'ley farm / organic ley' and 'home bred' (14 sites each) and 'hill / upland' (12 sites). In contrast lowland was only cited once although some of the other habitats cited are lowland (e.g. sand dunes, chalk / calcareous grasslands) and should perhaps be added to give another three citations. Farms and smallholdings were the source of sheep for 10% of the sites but markets were rarely used - just one citation which was equal to 'local school' as a source!

There were insufficient records to allow clear distinctions to be made between sheep breeds; not surprisingly, the hill breeds were most frequently obtained from moors or hill / uplands; Hebrideans too were most commonly sourced from 'moor bred' stock, but this could include lowland as well as upland moors.

Cattle were obtained from similar sources although lowland, chalk / calcareous grassland, sand dunes, National Nature Reserves and local school were not mentioned by any respondent. In total there were 92 identified sources of 44 breeds and crosses (Table 18). Unlike sheep a single source was clearly predominant - 41% of responses indicated that the cattle had been obtained from ley / organic ley farms. If the similar sources of improved grassland, pasture / permanent pasture, unimproved grassland / lowland meadow / rough grassland and farms / smallholdings are amalgamated almost two-thirds (65%) of the cattle were obtained from

these sources. The only other origin that reached 10% was home bred stock. Markets were used a little more than for sheep, but still only for three sites; rather surprisingly, cattle obtained from markets included British White crosses which are not common.

There were only four records of goat origins but these were from diverse sources (Table 19), once again including a local school. For ponies, over a quarter of the 21 records indicated that the animals were moor bred with most of the Exmoors and all the Dartmoors from this source (Table 19). A National Park (presumably Exmoor) was also given as the source of the Exmoors on one site. The two records for Welsh Section A ponies indicated that they too originated in an upland area. A surprising 10% of ponies were obtained from markets; it is not clear whether these were specialist horse sales or general livestock marts. The Berkshire pigs were obtained from a farm / smallholding and the Gloucester Old Spot pigs were home bred.

There is some evidence of a difference in the source between the agriculturally important species (cattle, sheep, pigs) and the non-agricultural equines and goats with the former more likely to have been obtained directly from farms. However there are also breed differences, with traditional and/or rare breeds of cattle and sheep more often obtained from non-farm sources.

Table 17. Origins of sheep used for grazing by breed (values indicate number of sites); headings in first row are abbreviations of the origins listed in Box 6 and values in last two rows show the number and percentage of sites recording that origin

Breed or Cross	Moor	Hill	Lowland	Ley	Impr. Grass	Perm. Past.	Meadow	Chalk Grass	Marsh	Sand Dunes	Home Bred	Farm	LNR	NNR	Mart	Cons/ NatP	Schl.	Various
Beulah Speckled Face	3	2					1							1		1		
Beulah Speckled Face x				1														
Beulah Speckled Face x Welsh Mule	1	1*										1*						
Black Welsh Mountain		1																
Bleu du Maine x Cheviot											1							
Bleu du Maine x Lleyn											1							
Bleu du Maine x Mule											1							
Dorset											1							
Exmoor Horn		1																
Hampshire Down											1							
Hebridean	6*			1	1		1	2*				4						
Hebridean x Berrichon du Cher	1											1						
Herdwick	1	2*									1*							
Jacob				1								1				1		
Kent									1									
Lleyn		1																
Manx Loghtan	1										1							
Masham																		1
Mule	1			1														
Northumberland Blackface	1																	
Portland							1											
Rough Fell	1																	
Scottish Blackface	1*	1*							1*		1*							
Scottish Blackface x				1														
Scottish Halfbred						1*							1*					
Scottish Halfbred x Suffolk											1							
Shetland											1							

Breed or Cross	Moor	Hill	Lowland	Ley	Impr. Grass	Perm. Past.	Meadow	Chalk Grass	Marsh	Sand Dunes	Home Bred	Farm	LNR	NNR	Mart	Cons/ NatP	Schl.	Various
Soay		1	1							1			1					1
Southdown				2														
Southdown x Jacob											1							
Suffolk				1							1				1			
Suffolk x												1						
Swaledale	1										1							
Teeswater											1							
Texel				1	1													
Texel x				1														
Welsh Mountain		2		1								1						
Welsh Mountain x				1														
Wiltshire Horn				2														
Unidentified																	1	
Number of Sites	18	12	1	14	2	1	3	2	2	1	14	9	2	1	1	2	1	2
Percentage of Total	20	14	1	16	2	1	3	2	2	1	16	10	2	1	1	2	1	2

* Within a breed asterisked flocks were described as originating from two categories e.g. one Beulah Speckled Face x Welsh Mule flock was obtained from "Farm and Hill" , one Hebridean flock from "Moor Bred and Chalk Grassland" and one Scottish Blackface flock from "Marsh and Hill"

Table 18. Origins of cattle used for grazing by breed (values indicate number of sites); headings in first row are abbreviations of the origins listed in Box 6 and values in last two rows show the number and percentage of sites recording that origin

Breed or Cross	Moor	Hill	Ley	Imp. Grass	Perm. Past.	Meadow	Marsh	Home Bred	Farm	LNR	Mart	Cons N.P.	Various
Aberdeen Angus				1*			1*	1					
Aberdeen Angus x Friesian			1										
Beef Shorthorn		1											
Beef Shorthorn x			2*		2*			1		1*			
Beef Shorthorn x Hereford						1							
Beef Shorthorn x Jersey x Longhorn						1							
Beef Shorthorn x British White x Friesian x Hereford						1							
Beef Shorthorn x British White x Friesian								1					
Belgian Blue x			1										
Blonde d'Aquitaine x			1										
British White				2		1							
British White x Friesian									1*		1*		
British White x Friesian x Hereford									1*		1*		
Charolais			1										
Charolais x													1
Charolais x Friesian			1										
Charolais x Simmental					1								
Devon				1									
Dexter												1	
Friesian			4									1	
Friesian x			1										
Friesian x Hereford			2								1		
Friesian x Holstein			1										
Friesian x Limousin			1										
Friesian x Simmental			1										
Galloway x						1						1	
Hereford			1										

Breed or Cross	Moor	Hill	Ley	Imp. Grass	Perm. Past.	Meadow	Marsh	Home Bred	Farm	LNR	Mart	Cons N.P.	Various
Hereford x		1	3						1				
Highland	3*		2			1*	2*	2*	2*			1	
Holstein			2										1
Jersey			1										
Limousin			2										
Limousin x			2				1*		1*				1
Longhorn								3				1	
Murray Grey			1										
Red Poll			1	1									
Saler									1				
Saler x			1										
Simmental x			1					1					
South Devon			1										
'Store cattle'									1				
Sussex			2										
Welsh Black		1											
White Park			1									1	
Number of Sites	3	3	38	5	3	6	4	9	8	1	3	6	3
Percentage of Total	3	3	41	5	3	7	4	10	9	1	3	7	3

* Within a breed asterisked herds were described as originating from two categories e.g. one British White x Friesian herd originated from "Local Farms and Markets" and one Highland herd from "Moor and Home Bred".

Table 19. Origins of goats and ponies used for grazing by breed (values indicate number of sites); headings in first row are abbreviations of origins listed in Box 6. The number and percentage of sites recording that origin for each species is also shown

Breed or Cross	Moor	Hill	Ley	Imp. Grass	Meadow	Marsh	Home Bred	Farm	Market	Conser. Nat.Pk.	School
Bagot							1				
Cashmere	1										
Golden Guernsey											1
Saanen x			1								
Number of sites for goats	1		1				1				1
Percentage of Total	25		25				25				25
Dartmoor	2										
Exmoor	4		1							2	
Fell							1*		1*		
Highland				1*		1*					
Konik										1	
New Forest									1		
Shetland							1	1			
Welsh Section A		2			1					1	
Number of sites for ponies	6	2	1	1	1	1	2	1	2	4	
Percentage of Total	29	10	5	5	5	5	10	5	10	19	

* Within a breed asterisked herds were described as originating from two categories e.g. one Exmoor herd originated from "Marsh and Improved Grassland"

3.2.15 Number of Generations completed by grazing livestock on conservation sites

Respondents were also asked to indicate the number of generations their grazing animals had been on site where this was known. There was only one record for goats in which Bagots had been on a site for five generations; there were no records for pigs. Results for sheep, cattle and ponies are shown in Tables 20, 21 and 22 respectively. A generation of sheep may be just one year if gimmers (female sheep in their first year) are put to the ram; more often gimmers are left to grow on and mated for the first time in their second year. Thus the 12 generations that Beulah Speckled Face have been on a site represents between 12 and 24 years (assuming adult sheep were brought on to the site initially); on two other sites the same breed had been present for 10 generations. If nothing else, this suggests that these sheep were achieving the objectives of grazing. Jacob and Wiltshire Horn had managed seven generations on different sites, and Hebrideans had been present for five generations at three sites. For 62% of sites, however, sheep had been used for 1 - 3 generations suggesting that the grazing projects were fairly recent or that a change of species or breed had occurred.

Cattle generations are longer than sheep and in normal commercial farming a heifer would calve for the first time at 3 years of age, although this may be longer with the relatively poor diets that might be expected on some conservation sites. Applying this to the data on cattle generations (Table 21) the three generations of Highland cattle (on two sites) and of Friesian (on one site) represents at least nine years. At half the sites for which records were supplied cattle had been present for two generations and almost a third of sites just one generation had been completed.

Pony generations are also generally three years; three generations were recorded for three breeds on separate sites (Table 22). The data are limited, however, and perhaps the only conclusion that can be drawn is that pony grazing is a recent introduction to most of the sites for which responses were forthcoming.

Table 20. Number of generations of sheep used for grazing by breed; values indicate number of sites

Breed or Cross	Number of generations											
	1	2	3	4	5	6	7	8	9	10	11	12
Beulah Speckled Face	1	2								2		1
Black Welsh Mountain			1									
Bleu du Maine x Cheviot		1										
Bleu du Maine x Lleyn	1											
Bleu du Maine x Mule		1										
Hebridean			3		3							
Hebridean x Berrichon du Cher					1							
Herdwick		1	1									
Jacob							1					
Manx Loghtan					1							
Soay		1										
Southdown		1										
Swaledale		1										
Welsh Mountain			1									
Wiltshire Horn							1					
Number of Sites	2	8	6	0	5	0	2	0	0	2	0	1
Percentage of Total	8	31	23	0	19	0	8	0	0	8	0	4

Table 21. Number of generations of cattle used for grazing by breed; values indicate number of sites

Breed or Cross	Number of generations		
	1	2	3
Beef Shorthorn x	1		
British White	1		
Devon		1	
Friesian	1		1
Hereford x		1	
Highland			2
Limousin		1	
Limousin x		1	
Murray Grey		1	
Red Poll		1	
Saler	1		
Sussex		1	
Welsh Black	1		
White Park		1	
Number of Sites	5	8	3
Percentage of Total	31	50	19

Table 22. Number of generations of ponies used for grazing by breed; values indicate number of sites

Breed	Number of generations		
	1	2	3
Exmoor	1		
Konik			1
Shetland			1
Welsh Section A	3		1
Number of Sites	4	0	3
Percentage of Total	57	0	43

3.2.16 Tameness of livestock used for conservation grazing

The tameness (or wildness) of livestock may be related to many factors including origins, number of generations spent on a site, frequency of handling / feeding, number of visitors, individual 'personality' (which may be a product of the other factors) and, not least, breed. To try to determine how tame or wild livestock used for conservation grazing were respondents were asked to assign each breed to one of five categories:

- totally wild
- catchable to trailer/lorry/pen
- catchable by hand/bucket (of feed)
- halter trained
- trained to a working dog.

However, perhaps as a result of different origins and the other factors mentioned above, few respondents were willing to assign all their animals to a single category; instead various combinations were returned and consequently the task of analysis is made more complex. Box 7 shows the 15 combinations identified by respondents and Tables 23, 24, 25 and 26 the analysis by breeds of sheep, cattle, ponies and goats respectively. The Berkshire pigs were described as catchable by hand/bucket and the Gloucester Old Spots as catchable to trailer/lorry/pen.

Only two breeds of sheep were described as totally wild: Soay and Manx Loghtan, but then at just one site each; elsewhere Manx Loghtan were catchable to trailer/lorry/pen with either a working dog or by hand/bucket and Soay were totally wild + catchable to trailer/lorry/pen and, at two sites, catchable to trailer/lorry/pen + by hand/bucket. At the other extreme no sheep were described as halter trained.

Most breeds were described as catchable to trailer/lorry/pen + by a working dog. If the other combinations in which a working dog features (i.e. combination numbers 5, 9 and 11-15 in Box 7) are included, 52 of the 90 records (58%) indicate that a working dog is required to round up at least the most recalcitrant individuals. Where a dog was not required the

attractions of a feed bucket was sufficient inducement in most instances where additional information was given (i.e. excluding category 2 - catchable to a trailer/lorry/pen).

There was far less diversity amongst cattle and eight of the fifteen categories were not utilised, including totally wild. Of the 104 records 75 (72%) were for catchable to a trailer lorry/pen; cattle at a further ten and seven sites were as tractable in the presence of a feed bucket or working dog respectively. There was one record of halter trained Sussex cattle but even these either needed additional inducements or were in a herd in which other individuals were not halter trained. There were no strong differences between breeds, but it is notable that eight of the ten records for Highland indicated that they were catchable to a trailer/lorry/pen, and the other two records did not undermine the impression of tractability.

In Table 25 "White" goats are recorded as totally wild, the Bagots at one site were totally wild + catchable by hand/bucket + by a working dog and the Feral English were totally wild + catchable to a trailer lorry/pen. Cashmere, Golden Guernsey and Saanen x appeared tamer but there was a paucity of records for all breeds.

Box 7: Categories of tameness recorded for livestock used for grazing

1. Totally wild
2. Catchable to trailer/lorry/pen
3. Catchable by hand/bucket
4. Halter trained
5. By a working dog
6. Totally wild + catchable to trailer/lorry/pen
7. Totally wild + catchable by hand/bucket
8. Catchable to trailer/lorry/pen + by hand/bucket
9. Catchable to trailer/lorry/pen + by a working dog
10. Catchable by hand/bucket + halter trained
11. Catchable by hand/bucket + by a working dog
12. Totally wild + catchable by hand/bucket + by a working dog
13. Catchable to trailer/lorry/pen + by hand/bucket + by a working dog
14. Catchable to trailer/lorry/pen + halter + by a working dog
15. Catchable to trailer/lorry/pen + by hand/bucket + halter + by a working dog

Table 23. Tameness of sheep by breed. Tameness categories refer to the list in Box 7; values in table indicate number of records

Breed or Cross	Categories of tameness														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Berrichon du Cher x		2													
Beulah Speckled Face		3	1						5		1		1		
Beulah Speckled Face x Suffolk			1												
Beulah Speckled Face x Welsh Mule									1						
Black Welsh Mountain									1		1				
Bleu du Maine x Cheviot		1													
Bleu du Maine x Lleyn		1													
Bleu du Maine x Mule		1													
Cheviot									1						
Derbyshire Gritstone					1				1						
Dorset			1										1		
Exmoor Horn		1													
Hampshire Down			1												
Hebridean		8			1			1	4				3		
Hebridean x Berrichon du Cher		1													
Herdwick		2											1		

Breed or Cross	Categories of tameness														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Jacob		1	1		1									1	
Kent									1						
Lleyn		1											1		
Manx Loghtan	1							1	1						
Masham													1		
Mule									3						
Northumberland Blackface					1										
Rough Fell		1													
Scottish Blackface									2						
Scottish Blackface x									1						
Scottish Halfbred									2						
Shetland			1												
Soay	1					1		2							
Southdown									1					1	1
Southdown x Jacob									1						
Suffolk			1						2						
Suffolk x								1		1					
Swaledale		2							1						
Teeswater			1					1	1						
Texel													1		
Texel x								1	1						
Welsh Mountain		2							3						
Welsh Mountain x		1													
Wiltshire Horn		1											1		
TOTALS	2	29	8	0	4	1	0	7	33	1	2	0	10	2	1

Table 24. Tameness of cattle by breed. Tameness categories refer to the list in Box 7; values in table indicate number of records

Breed or Cross	Categories of tameness															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Aberdeen Angus		1	1													
Aberdeen Angus x Friesian		1														
Aubrac x Galloway								1								
Beef Shorthorn		1														
Beef Shorthorn x		4											1			
Beef Shorthorn x Hereford		1														
Beef Shorthorn x Jersey x Longhorn		1														
Beef Shorthorn x British White x Friesian x Hereford		1														
Beef Shorthorn x British White x Friesian		1														
Belgian Blue		1														
Belgian Blue x		1														
"Black" Hereford		1														
Blonde d'Aquitaine		1														
Blonde d'Aquitaine x		1														
British White		2							1				1			
British White x Friesian		1														
British White x Friesian x Hereford								1								
Charolais		2														
Charolais x									1							
Charolais x Friesian		1														
Charolais x Simmental		1														
"Continental" x		2														
Devon		1							1							
Devon x		1														
Dexter		1														
Friesian		9														
Friesian x		2														

Breed or Cross	Categories of tameness														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Friesian x Hereford		3													
Friesian x Holstein		1													
Friesian x Limousin		1													
Friesian x Simmental		1													
Galloway x		3													
Hereford		2						1							
Hereford x		3	1					1							
Highland		8	1					1					1		
Holstein		2							1						
Jersey								1							
Limousin		1						1							
Limousin x		3						1	1						
Longhorn		2											2		
Murray Grey								1							
Red Poll			1						1						
Saler		1													
Saler x		1													
Shetland		1													
Simmental x		1													
South Devon					1										
"Store" cattle									1						
Sussex			1											1	
Welsh Black		1													
White Park		1						1							
TOTALS	0	75	5	0	1	0	0	10	7	0	0	0	5	0	1

Table 25. Tameness of goats by breed. Tameness categories refer to the list in Box 7; values in table indicate number of records.

Breed or Cross	Categories of tameness														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Bagot												1			
Cashmere								1							
Feral English						1									
Golden Guernsey										1					
Saanen x		1						1							
"White"	1														
TOTALS	1	1	0	0	0	1	0	2	0	1	0	1	0	0	0

Table 26. Tameness of ponies by breed. Tameness categories refer to the list in Box 7; values in table indicate number of records

Breed	Categories of Tameness														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Dartmoor		1					1	1							
Exmoor		4								2					
Fell													1		
Highland		1													
Konik		1													
New Forest		2	1					1							
Shetland		2						1							
Welsh Section A		5													
TOTALS	0	21	1	0	0	0	1	3	0	2	0	0	1	0	0

No pony breeds were described as totally wild at any site but one herd of Dartmoor was described as totally wild + catchable by hand/bucket. A large majority (72% or 83% with the aid of a bucket) of records for all breeds indicated that the ponies used could be caught in a trailer/lorry/pen. Two Exmoor herds were described as catchable by hand/bucket and halter trained but the Fell pony herd were catchable to a trailer/lorry/pen only by hand/bucket + working dog.

3.2.17 Constraints on the Number of Animals Used

Question 15 asked what determined the number of animals grazed; eight suggestions (including 'other') were made in the questionnaire (see Table 27). Respondents could answer 'yes' or 'no' to each suggestion and more than one choice was possible; thus the percentage answering yes to the various suggestions exceeds 100%. Conversely, the percentages answering yes or no total <100% as the remainder did not respond to that suggestion.

The most frequently cited reason for a limit on numbers of grazing animals was a specific conservation objective which applied to 85% of sites; on only five sites (4%) was this reason clearly stated not to apply. Productivity of the pasture was a limitation on half the sites but not on 15% of sites. 'Trial and error' was the third most commonly cited reason (39% of sites), closely followed by availability of suitable animals (37%). Price of stock and a market outlet for stock were not important limiting factors.

Respondents were asked to describe the method(s) by which they sought to overcome the issues identified as limiting numbers; the methods given varied from site to site and at some sites several were used. The full list of 54 methods is shown in Box 8; Table 27 shows the methods used to overcome each constraint. In many instances it is not clear how the methods described achieved the resolution of the issue e.g. the only method given for the issue of the price of stock was "to meet ESA parameters" (unless it is meant that the ESA payments supplemented the inadequate income from stock sales). However, useful suggestions were made for some issues e.g. 'market outlet for stock' was addressed by "for own/others consumption" and "future potential organic outlets" as well as "farmer's decision".

Box 8: Methods used to resolve issues concerning limitations on animal numbers listed by respondents

1. Past history
2. Tradition
3. Carrying capacity
4. Finance
5. To qualify for a subsidy
6. Grant money
7. Set quota limitations
8. Incentives
9. Commons register
10. Licence specifications
11. To meet SSSI parameters
12. Stewardship agreement limits
13. To meet ESA parameters
14. Transport
15. Moving animals around
16. Time
17. Season
18. Weather
19. Limit on area grazed
20. Condition of animals
21. Livestock's characteristics
22. Discussion
23. Negotiations with commoner
24. Landowner's decision
25. Farmer's decision
26. Tenant's decision
27. Grazier's decision
28. Farmer's needs v. conservation needs
29. Tenant's commitments
30. Experience
31. Visual assessment
32. Ecological surveys
33. Advisors
34. Literature
35. Management plan objective
36. Graze until insufficient food/amount of pasture
37. Land condition/maintenance of sward height/condition
38. Control grazing/experimental grazing patterns/trial
39. Scrub clearance v. heather damage
40. Eating of heather
41. Ranking of needs
42. Needs of plant / animal species
43. Breeding birds' success
44. Management for re-introduction of Large Blue
45. Supply and demand
46. Number of lambs, cattle etc.
47. BSE crisis / stock availability limited by BSE
48. When choice is anything/nothing take anything
49. For own / others' consumption
50. Future potential organic outlets
51. Adequate number to preserve flock
52. Poaching of paths
53. Visitor pressure
54. Human complaint

Table 27. Reasons determining the number of animals grazed and methods by which issues determined

Reason	Yes	Percentage of Sites	No	Percentage of Sites	Methods by which issues determined[1]
Owner's limit on numbers	21	17	49	40	Past history, Carrying capacity, Finance, Qualify for subsidy, Incentives, Commons register, Transport, Limit on grazed area, Discussion, Landowners decision, Breeding birds' success, BSE crisis/limitation
Specific conservation objective	104	85	5	4	Past history, Tradition, Carrying capacity, Licence specification, SSSI parameters, Time, Season, Landowners' decision, Experience, Visual assessment, Ecological survey, Advisors, Management plan objective, Amount of grazing, Sward height, Control grazing, Scrub v. heather, Needs of plants/animals, Breeding birds' success, Management for Large Blue
Price of stock	7	6	49	40	Meet ESA parameters
Productivity of pasture	61	50	18	15	Moving animals, Season, Weather, Animals' condition, Tenants' decision, Graziers' decision, Farmers' needs, Experience, Literature, Amount of grazing, Sward height
Market outlet for stock	7	6	49	40	Farmers' decision, Own/others consumption, Future organic outlets
Trial and error	48	39	21	17	Season, Weather, Discussion, Experience, Visual assessment
Availability of suitable animals	45	37	23	19	Season, Livestock's characteristics, Tenants' commitments, Sward height, Ranking of needs, Supply and demand, Number of lambs/cattle, BSE crisis/limitation, Take anything
Other	15	12	15	12	Grant, Quota, Stewardship agreement, Season, Weather, Negotiations with commoner, Control grazing, Eating heather, Number of lambs/cattle, Adequate number, Poaching of paths, Visitor pressure, Human complaint

[1] Methods used to resolve issues concerning limitations on animal numbers abbreviated from Box 8.

Methods addressing the 'trial and error' limit on stock numbers suggested that, far from being based on guesswork, careful evaluation of the factors determining grazing pressure were employed: season, weather, discussion, experience and visual assessment were all mentioned. Similar methods were used to determine the issue of pasture productivity but also included moving stock around, condition of the animals and grazing until there was insufficient food or the required sward height or condition had been achieved. However other methods suggested were possibly indicative of compromise in achieving the aims of conservation grazing e.g. tenant's or grazier's decision and, most tellingly, "farmer's needs v. conservation needs".

Similar compromises may be used to resolve the issue of availability of suitable animals, summed up in the response "when choice is anything/nothing take anything". This was one of two issues, the other being owner's limitation on numbers, for which specific mention of the impact of BSE was cited as a contributing factor. Amongst 'other' methods suggested for determining numbers were poaching of paths, visitor pressure and human complaint indicating that public access can be influential at some sites.

Methods for achieving specific conservation objectives were diverse but can be summarised as:

- past history/tradition,
- carrying capacity or vegetation condition,
- ecological survey and assessment,
- legal, grant or licence agreements,
- success of specific species or assemblages.

There was again some evidence of conflict in achieving the objectives e.g. scrub clearance v. heather damage (eating of heather was also given as an 'other' reason).

3.3 Objectives and Effectiveness of Grazing

Although some indication of the aims of grazing are apparent from the responses to previous questions the questionnaire asked respondents to identify the main grazing objective for their site(s) and, where nature conservation was the main objective, to assess the effectiveness of the animals in achieving specific aims.

3.3.1 Main Grazing Objectives

The questionnaire listed eight objectives for the grazing of conservation sites (numbers 1-8 in Box 9) and gave respondents the opportunity to suggest others. Most of the objectives listed in the questionnaire related to agricultural management of stock whereas those suggested by respondents were indicative of a wider remit for grazing animals including recreation, education and public appeal. A somewhat enigmatic suggestion was 'to keep fit'. In Box 9 options 11 (aesthetics / public appreciation / public relations) and 12 (income / financial / work) represent composites of several related suggestions.

Box 9: Main grazing objectives suggested in the questionnaire (numbers 1-8) or by respondents (9-17)

1. 'Store' animals
2. Fattening/finishing
3. Flushing
4. Tupping/bulling
5. Overwintering/holding site
6. Breeding
7. As a conservation tool
8. For fun!
9. Recreation
10. Education
11. Aesthetics/public appreciation/public relations
12. Income/financial/work
13. Local farming
14. Tradition
15. Land restoration
16. To preserve flock
17. To keep fit

With the exception of 'as a conservation tool', which was stated as the sole main conservation objective for 60% of projects, respondents were loath to commit to a single objective; the only other option selected from the list on the questionnaire was 'breeding' which applied to just two sites (Figure 9). Public appreciation and income were identified as main objectives on one site each, but all other sites had a combination of 'main' objectives. None was very frequently cited, but 'as a conservation tool' combined with either 'aesthetics/public appreciation/public relations' or with 'income/financial/work' were recorded on five occasions each.

Only 6% of sites did not include 'as a conservation tool' amongst the main objectives and in all it was included as one of the main objectives at 109 sites; no other objective approached this frequency with 'breeding', the next most frequent objective, registering only 13 citations. Only two respondents included 'for fun!' in their list of main objectives.

Box 10: Main aims of conservation grazing suggested in the questionnaire (numbers 1-10) or by respondents (11-17)

1. Elimination of trees/shrubs
2. Control trees/shrubs invasion by taking seedlings
3. Maintain vegetation structure
4. Improve vegetation structure
5. Develop vegetation mosaic
6. Increase amount of bare ground
7. Control of invasive grass
8. Control of bracken
9. Reduce fire risk
10. Single species management
11. Deforestation management
12. Dog proof
13. Aesthetic
14. Dragonfly conservation
15. Butterfly conservation
16. Insect conservation
17. Bird conservation