

EAST SUTHERLAND DEER MANAGEMENT GROUP

DECEMBER 2016 DRAFT

**DEER MANAGEMENT
PLAN
2016 – 2025
WORKING PLAN**

PREFACE

This Deer Management Plan has been developed for the East Sutherland Deer Management Group (ESDMG). The Plan is funded both by the deer group and by Scottish Natural Heritage. It runs from 2016 until 2025 and has been formally endorsed by all the Members of the Group. It has been designed to be readily updated as needs arise and will be reviewed on a six-monthly basis or as required, with a systematic review taking place at the end of the first five year period in 2020.

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OPERATION OF THE GROUP

1. Area & Boundaries

Action Points

- 1.1 Clarify location of the northern boundary in NW corner of Group so that properties there are aware of which group to report to
- 1.2 Adopt the proposed new sub-group structure at 2016 meeting
- 1.3 Ensure that a fully functioning East Sub- Group is in place by spring 2018.
- 1.4 Monitor the situation to the south and co-operate as required. During the production of this plan, an open meeting was held to establish the relationship of the ground to the south with the main ESDMG area.

2. Membership

Action Points

- 2.1 During 2016, recruit non-participating estates as Reporting Members of ESDMG
- 2.2 During 2016, encourage the above mentioned forestry properties to become Reporting Members of ESDMG
- 2.2 Collate 2015-16 cull data for these properties and distribute to ESDMG members.

3. Meetings

Action Points

- 3.1 Continue to hold annual meetings and look to encourage wider community participation, including invitations to community councils to attend meetings from this year onwards. All external parties to be given the opportunity to contribute to the agenda of meetings
- 3.2 Group to consider how to make the proposed new East Sub-group work, including securing necessary personnel to run this sub-group
- 3.3 Create a steering group to take the Management Plan forward and deliver action points.

4. Constitution & Finances

Action Points

- 4.1 A constitution to be adopted at next 2016 Group meeting
- 4.2 Introduce a budgeting system prior to autumn 2016 AGM for the following financial year.

5. Deer Management Plan

Action Points

- 5.1 Endorse DMP at 2016 meeting following consultation on the draft plan
- 5.2 Ensure a system of communications is in place whereby local interests have access to the Plan, and can input to its future development. To achieve this, the Plan will be published on a dedicated DMG website. The ethos behind this plan is that it will be regularly updated, at least once a year, and therefore it is impracticable to circulate hard copies of the plan.

6. Code of Practice on Deer Management

Action Points

- 6.1 Ensure adherence to code at all times, both by the Group, and by individual members
- 6.2 At all subsequent meetings, Group members will have the opportunity to raise any issues relating to deer welfare or other problems that they are aware of within the Group. In all cases, members are encouraged to bring the issue up with those responsible in the first instance, or to seek the advice of the Group Chairman.

9. Data & Evidence gathering- Deer Counts

Action Points

- 9.1 Appoint a count co-ordinator in each sub-group to be responsible for ensuring all personnel are briefed on count date and that the necessary capacity is available for a thorough collaborative count of the entire sub-group, in accordance with Best Practice. Seek additional man-power where required
- 9.2 Group to extend counting practice to cover all members by spring 2017
- 9.3 Undertake a helicopter count within the period of this plan and thereafter at regular intervals as required, relying on population modelling in between to set cull targets on an annual basis. Such counts may involve a degree of private or SRDP funding
- 9.4 Group members need to carry out thorough and consistent recruitment counts on an annual basis to inform the population model. Such counts should take place in the final week of April/ first week of May, and the recruitment % is the no. of calves expressed as a proportion of the no. of hinds, two years or older.

10. Data & Evidence Gathering- Culls

Action Points

- 10.1 Update the population models and target culls on an annual basis, using recruitment and mortality data collected, as well as actual culls from the previous year
- 10.2 Sex and age class of culled animals to be recorded correctly, including any stags shot during the hind season
- 10.3 All cull data to be collated promptly at end of season
- 10.4 Cull data to include roe and sika deer, and to include data from new reporting members
- 10.5 Cull summary to reflect new sub-group structure and reporting units.

10.6 Each property within the DMG will be responsible for meeting its annual cull targets outlined in Appendix 5.

11. Data & Evidence Gathering- Habitat Monitoring

Action Points

11.1 A schedule of habitat and designated site monitoring will be provided in the Working Plan

11.2 The Group will investigate taking forwards an ECAF/ SRDP application to fund part of this, and to co-ordinate the interpretation of the data collected. A proposal will be assessed in full at the autumn meeting of ESDMG

11.3 Updated sheep information will be attained from group members for 2020 and 2025, in line with the data gathered since 1995. This will help to quantify changes in overall numbers and distribution, and help determine the relative pressure on vegetation between sheep and deer and how that might be changing.

12. Competence

Action Point

12.1 DMG members will seek to ensure that DSC Level 1 and Trained Hunter status are delivered as the now accepted industry standard within the area, and encouragement will be given to professional stalkers to achieve DSC level 2

12.2 Training or support in higher level qualifications will be encouraged where that is appropriate.

13. Training

Action Points

13.1 Group to promote and facilitate the uptake of appropriate deer management qualifications by all Group members and monitor Continuous Professional Development

13.2 Be aware of the ongoing development of Best Practice Guidance and any new techniques or standards that arise from that

13.3 Review training needs on an annual basis.

14. Venison Marketing

Action Points

14.1 The DMG will work with ADMG to better understand why SQWV scheme uptake here is so poor and thereafter promote uptake within the area

14.2 In the medium term, beyond the settling in period for this Plan, the DMG will explore options to market venison from the area in a more collaborative manner.

15. Communications

Action Point

- 15.1 Implement the communications strategy as agreed, and ensure a mechanism is in place for dealing with business and issues between meetings*
- 15.2 Encourage all Members to receive information electronically and, where this is not possible, ensure mechanisms are in place so that all Members receive the same information.*

PUBLIC INTEREST ACTIONS

PI 1. Develop mechanisms to manage deer

Action points

PI 1.1 Endorse and publish the new East Sutherland Deer Management Plan in 2016

PI 1.2 Re-assess the Group against both the Benchmark and the Public Interest criteria once DMP has been endorsed, and then annually thereafter for the Benchmark, and every three years for Public Interest.

PI 1.3 Review the Working Plan on an annual basis and minute progress and changes. The DMP will be reviewed at autumn meetings.

PI 2. Delivering designated features into favourable condition

Action points

PI 2.1 Implement collaborative deer control across marches of neighbouring estates with shared responsibility for Ben Klibreck and Skinsdale Peatlands designated sites. External help should be sought as required to increase capacity and / or provide co-ordination. Funding is available through SRDP to support this if required. The population models associated with this plan will reflect and guide this process going forwards. There are accompanying property specific culls, targeted to key areas

PI 2.2 Ben Klibreck SSSI is currently grazed by sheep and cattle, in addition to deer. The total herbivore stocking density is currently inappropriately high, requiring a significant reduction in deer numbers and / or domestic stock in accordance with SNH recommendations. The DMG will reduce deer populations on and adjacent to Ben Klibreck SSSI to reach and maintain an appropriate deer density within the SSSI. Populations models will reflect this approach. Grazing stock numbers will also be included within site assessments.

PI 2.3 Report deer counts and culls on Loch Choire Estate separately for the north and south beat, to enable better monitoring of the management targeted on ground within Ben Klibreck SSSI, and also on Mallart SSSI.

PI 2.4 Reduce deer population on and adjacent to Skinsdale Peatlands SSSI to reach and maintain an overall density of 7-8 deer / km² within the SSSI, as recommended by SNH. Population models will reflect this approach

PI 2.5 Within Loch Fleet native pinewoods, consider measures to allow more effective deer control such as creating open areas of ground attractive to deer and installing high seats. Roe deer numbers will be maintained at less than 6 per 100 ha to reduce any threat to saplings. Saplings will be monitored on a regular basis to inform deer density, proposed stalking effort and future culls.

PI 3. Manage deer to retain existing native woodland cover and improve woodland condition in the medium to long term.

Action points

*PI 3.1. Ground truth and provide additional analysis for the above 3 X key woodland sites on **14. ESDMG Key Woodland Herbivore Impact Map.***

PI 4. Demonstrate DMG contribution to woodland expansion target

Action points

PI 4.1 DMG members to take forwards up to 210 ha of new planting with in the period of this plan

PI 4.4 All to ensure that recently planted woodland areas become properly established.

PI 5. Monitor and manage deer impacts in the wider countryside

Action point

PI 5.1 An agreed monitoring programme for these habitats will be devised, to be endorsed and included in the Working Plan during 2016.

PI 6. Improve Scotland's ability to store carbon

Action points

PI 6.1 Put in place a habitat monitoring scheme to determine the current status of blanket bogs within the area, and take action necessary to lower impacts on these as required

PI 6.2 Implement the woodland creation schemes outlined above

PI 6.3 Discourage any burning that might impact on peatland sites

PI 6.4 Contribute to River Basin Management Planning as appropriate when requests to do so are forthcoming

PI 6.5 Consider taking any priority peatland sites forwards under the Peatlands Action programme, if applicable.

PI 7. Reduce or mitigate the risk of invasive, non-native deer species

Action points

PI 7.1 Cull dispersing sika deer in order to contain the current population in the forest blocks already occupied by sika and reduce the risk of further spread.

PI 7.2 Monitor woodland habitats occupied by sika to establish whether there is any evidence for sika numbers increasing to unsustainable levels. This to be achieved by Group members, with advice from SNH as required. In practice, it is likely that an increasing population will export individuals which will be culled on adjacent properties.

PI 7. Members to report any sightings of suspected muntjac deer to SNH.

PI 8. Protection of historic and cultural features

Action points

PI 8.1 DMG to maintain communication with the local community and look to address any issues that are identified with regards to sites of cultural interest and herbivore grazing

PI 8.2 As required by Forestry Commission, all potential woodland creation projects, including natural regeneration schemes, will be assessed by the applicants for any

negative impacts on cultural or archaeological sites.

PI 9. Delivering higher standards of competence in deer management

Action points

PI 9.1 Collate and continue to monitor qualifications held by estate staff, and promote a culture of continuous professional development (CPD) more widely

PI 9.2 Ensure all Group members understand the definitions of “trained hunter” status and Fit & Competent register.

PI 10. Contribute to public health and well-being

Action points

PI 10.1 Liaise with local Community Councils regarding DVCs, monitor effectiveness of new fencing north of Brora and consider whether further mitigation measures may be helpful in reducing local risk. Information on road accidents should be sent to www.deercollisions.co.uk. The DMG will look to increase culls around particular hotspots where deer are known to cross public roads, such as at Loth (A9) and Mound Rock/ Kirkton, Golspie (A9), and the Mound/ Rogart junction (A839).

PI 10.2 Ensure all DMG members are aware that Chronic Wasting Disease (CWD) has now been reported in Norway, meaning that safety precautions must be taken by anyone who has had recent contact with deer or deer habitats in Norway as well as in North America. Re- circulate ADMG and BDS guidance on CWD to the Group before the 2016 stalking season and remind members of the dangers of CWD on an annual basis.

PI 10.3 DMG to highlight the risks of ticks and Lyme’s Disease to their guests and the public more generally through all appropriate channels.

PI 10.4 Group members and DMG to promote a positive and welcoming message to all those visiting the area throughout the year.

PI 10.5 Signage warning hillwalkers of stalking activity should be erected on access routes where not already present.

PI 11. Maximize Economic benefits associated with deer

Action points

PI 11.1 Increase awareness of the value of deer in and around areas of population, to emphasize the point that deer in these areas provide positive outcomes as well as some negative ones

PI 11.2 Investigate the possibility for a local means of advertising sporting opportunities within the area during the first 2-3 years of this plan, initially through the new dedicated website for East Sutherland DMG.

Larder/ infra- structure sharing

Action point

PI 11.3 Maintain larder standards across the DMG area, and work with ADMG, SQWV and others to have larders within the area accredited.

PI 12. Minimize the economic costs of deer managementAction points

PI 12.1 DMG to assess the current PACEC survey¹ into the value/ costs of deer management and extract information from ESDMG in order to inform more fully the above narrative. Complete and adapt text as necessary by spring 2017

PI 12.2 Engage with Grazing Committees to collate deer culls on lower ground, and determine what management actions, including collaborative culling, can be employed to mitigate against unnecessary expense to crofters, and loss of deer to the deer management group as a whole. Set up communication and reporting structures by spring 2017.

PI 13. Ensure effective communication in deer management issuesAction Point

PI 13.1 Take forwards those actions outlined in the Communications Policy/ Working Plan by spring 2017

PI 13.2 Add contact details of grazing committees, local community councils and other interested parties to circulation lists for annual open meetings.

PI 14. Ensure deer welfare at individual and population levelAction points

PI 14.1 Focus on bringing natural habitats in to good condition

PI 14.2 Liaise locally on significant woodland management operations where these affect shelter for deer, investigate opportunities for opening up woodlands for shelter and implement compensatory culls where significant losses in wintering ground occur

PI 14.3 Collect deer information, including larder data, within the Group as per agreed recommendations. This will provide animal-specific data which can be monitored and compared to identify potential welfare issues within the area

PI 14.4 Continue diversionary feeding above train line during winter and consider whether further mitigation measures such as opening up woodland shelter may be helpful in reducing local risk. Monitor and collect evidence of train mortality over the coming years to ascertain the true extent of the problem.

PI 14.5 ESDMG personnel are well organized in dealing with any deer that need to be culled or put down for welfare reasons.

¹ <http://www.deer-management.co.uk/wp-content/uploads/2016/02/Final-25FEB.pdf>

Population Modelling/ Five Year Cull Plan

The following model is the agreed deer management model to be followed by the group during the period of this plan. The main objective of this management regime is to *actively maintain and improve the habitats, forage and shelter required to sustain a healthy, resilient and productive deer herd*, capable of supporting a sporting stag cull, and also be in keeping with the main natural heritage and woodland & crop protection objectives within the area. An agreed apportionment by Deer Management Unit of the cull for 2016-17 is also provided for each of the three sub-groups within ESDMG.

An Excel spreadsheet version of these models is provided as [Appendix 7, ESDMG Five Year Population model](#).

At this point, models have only been produced for the NorthWest and SouthEast sub- areas of the Group, with not enough information yet available to inform a model for the new East Sub- Group. The DMG will look to achieve this by spring 2017 when new helicopter count information will be available for the whole group.

A careful analysis was made of the count data from 2008 through to 2015, and compared with a projected count from the helicopter count of December 2008. Various attempts were made to try and align the two. The analysis was difficult, and conflicting in places, but nevertheless, the following points are made:

- 1 The 2015 count data was projected through to 2016 to give a starting point for the population models. We have a strong feeling that this population is an under-estimate.
- 2 There is a strong suggestion within the data that male: female recruitment is not 50:50, but 45:55 or even 40:60. For the purposes of the model, the 45:55 split is used, which is different to the 50:50 norm which is used in other population models.
- 3 The stag mortality has been increased to 5%, to try and cover for the numbers of animals that might be culled on crofting ground or other farmland within the area.
- 4 The spring counts suggest a recruitment rate of 38% across both sub- group areas, but in many years, mortality after March is likely. For the purposes of the models, a reduced recruitment rate of 33% is given. The likelihood is that this is an under-estimate, and this underlines the importance of doing good recruitment rates every year and updating the models with the most up to date information.
- 5 Taken together, the likelihood is that these models under-estimate the current population, and the projected population going forwards. Updating the models and the individual property cull targets linked with those models with new information on an annual basis will therefore be paramount if modelling is to enjoy confidence within the group going forwards.
- 6 The planned helicopter count for spring 2017 comes at exactly the right time for this group, and that should help ESDMG to significantly improve these population models, and give members confidence in using them.

For both sub- areas, there is a model for the first 5 year period, and then a subsequent 5 year period, through to 2026.

East Sutherland DMG

Working Plan

Assumptions	Recruitment	0.33
	stag mort	0.05
	hind mort	0.02
	calf mort	0.06
	M calf ratio	0.45

NW Sub-group	area (km2)	381
	target density / km2	8
	target pop	3048

	Stags	Hinds	Calves	Total	Density
2016 Spring Population	1276	1890	593	3759	9.9
2016 Summer Population	1543	2216	731	4490	11.8
2016/17 Proposed Cull	197	390	129	716	
2017 Mortality	77	44	44		
2017 Spring Population	1269	1782	559	3609	9.5
2017 Summer Population	1520	2089	689	4299	11.3
2017/18 Proposed Cull	197	390	129	716	
2018 Mortality	76	42	41		
2018 Spring Population	1247	1657	519	3424	9.0
2018 Summer Population	1481	1943	641	4065	10.7
2018/19 Proposed Cull	197	390	129	716	
2019 Mortality	74	39	38		
2019 Spring Population	1210	1514	474	3198	8.4
2019 Summer Population	1423	1775	586	3784	9.9
2019/20 Proposed Cull	197	390	129	716	
2020 Mortality	71	35	35		
2020 Spring Population	1155	1349	422	2926	7.7
2020 Summer Population	1345	1581	522	3448	9.0
2020/21 Proposed Cull	197	390	129	716	
2021 Mortality	67	32	31		
2021 Spring Population	1081	1160	362	2602	6.8
2021 Summer Population	1243	1359	448	3051	8.0

Because of the high proportion of designated habitats in the NW sub- area, an attempt has been made to bring the population down to 7-8 per sq km within the first five year period. This can be done by maintaining the current stag cull in each of the five years, but by

increasing the hind cull to 390 animals. This increased hind cull would be something that the group has never been able to deliver before, being an increase of just less than 10% on their previous high cull. However, the main issue is that with a much smaller population, the numbers of stags and hinds then would need to be cut back significantly in the next 5-year period, see below.

NW Group from 2021	area (km ²)	381
	target density / km ²	8
	target pop	3048

	<i>Stags</i>	<i>Hinds</i>	<i>Calves</i>	<i>Total</i>	<i>Density</i>
2021 Spring Population	1081	1160	362	2603	6.8
2021 Summer Population	1244	1359	449	3052	8.0
2021/22 Proposed Cull	135	170	56	361	
2022 Mortality	62	27	27		
2022 Spring Population	1047	1162	365	2574	6.8
2022 Summer Population	1211	1363	450	3024	7.9
2022/23 Proposed Cull	135	170	56	361	
2023 Mortality	61	27	27		
2023 Spring Population	1016	1166	367	2548	6.7
2023 Summer Population	1181	1367	451	2999	7.9
2023/24 Proposed Cull	135	170	56	361	
2024 Mortality	59	27	27		
2024 Spring Population	987	1170	368	2525	6.6
2024 Summer Population	1152	1372	453	2978	7.8
2024/25 Proposed Cull	135	170	56	361	
2025 Mortality	58	27	27		
2025 Spring Population	960	1175	370	2504	6.6
2025 Summer Population	1126	1378	455	2959	7.8
2025/26 Proposed Cull	135	170	56	361	
2026 Mortality	56	28	27		
2026 Spring Population	935	1181	371	2487	6.5
2026 Summer Population	1102	1385	457	2944	7.7

Cutting back the population to 7-8 deer per sq km would reduce the ongoing hind cull necessary to approx 170 animals, and the likely stag cull that could be sustained by this would be c 150, a fall of c 47 animals from the situation at present. The management cull of 15 animals could probably be eliminated from the Dalchork open ground area, but the remainder would need to be absorbed by the other properties in the area. In reality, it is

likely that a reduced population would reduce in increased calving, which has not been figured in to above calculation. But to get a deer population which is roughly in keeping with the designated sites in this area, the above culls, and implications, are the kind of thing which would need to be considered. A suggested individual property allocation is given.

SE Sub-group	area (km ²)	538
	target density / km ²	11
	target pop	5918

	Stags	Hinds	Calves	Total	Density
2016 Spring Population	2819	2882	951	6652	12.4
2016 Summer Population	3247	3405	1124	7776	14.5
2016/17 Proposed Cull	305	522	172	999	
2017 Mortality	162	68	67		
2017 Spring Population	2780	2815	884	6479	12.0
2017 Summer Population	3177	3301	1089	7568	14.1
2017/18 Proposed Cull	305	522	172	999	
2018 Mortality	159	66	65		
2018 Spring Population	2714	2713	852	6278	11.7
2018 Summer Population	3097	3182	1050	7328	13.6
2018/19 Proposed Cull	305	522	172	999	
2019 Mortality	155	64	63		
2019 Spring Population	2637	2596	815	6048	11.2
2019 Summer Population	3004	3044	1005	7052	13.1
2019/20 Proposed Cull	305	522	172	999	
2020 Mortality	150	61	60		
2020 Spring Population	2548	2461	772	5782	10.7
2020 Summer Population	2896	2886	952	6734	12.5
2020/21 Proposed Cull	305	522	172	999	
2021 Mortality	145	58	57		
2021 Spring Population	2446	2306	723	5475	10.2
2021 Summer Population	2771	2704	892	6367	11.8

Modelling for the SE Group shows that maintaining the current culls for 5 years brings the overall population density for the SE group down to c 11 per sq km, which is likely to be sympathetic to the broad habitat requirements of the area, although some re-allocation of the hind culls should take place to weight them towards Borrobol, Balnacoil and Kildonan. As with the NW group, a reduced population would then require a smaller maintenance cull in the second five year period, although the difference is more modest, and any loss in sporting

animals is relatively small. The above model shows that stag numbers look fairly healthy, being around 9 X the annual recorded stag off-take.

SE Group from 2021	area (km2)	538
	target density / km2	11
	target pop	5918

	Stags	Hinds	Calves	Total	Density
2021 Spring Population	2446	2306	723	5475	10.2
2021 Summer Population	2771	2704	892	6367	11.8
2021/22 Proposed Cull	290	350	116	756	
2022 Mortality	139	54	54		
2022 Spring Population	2343	2300	723	5366	10.0
2022 Summer Population	2668	2697	890	6256	11.6
2022/23 Proposed Cull	290	350	116	756	
2023 Mortality	133	54	53		
2023 Spring Population	2245	2293	721	5259	9.8
2023 Summer Population	2569	2690	888	6147	11.4
2023/24 Proposed Cull	290	350	116	756	
2024 Mortality	128	54	53		
2024 Spring Population	2151	2286	719	5156	9.6
2024 Summer Population	2474	2682	885	6041	11.2
2024/25 Proposed Cull	290	350	116	756	
2025 Mortality	124	54	53		
2025 Spring Population	2061	2278	716	5055	9.4
2025 Summer Population	2383	2672	882	5937	11.0
2025/26 Proposed Cull	290	350	116	756	
2026 Mortality	119	53	53		
2026 Spring Population	1974	2269	713	4956	9.2
2026 Summer Population	2295	2661	878	5834	10.8

The model above suggests that the hind cull would need to be dropped to c 350 in the second five year period, and that a slightly reduced stag cull of c 290 could be sustained.

As with the NW model, it is likely that a reduced population will increase recruitment, and this is not factored in to the calculations above.

Individual property allocations are also suggested, as above, and can be found at **Appendix 5: ESDMG Individual Property Culls**, which is confidential to Group members only.

Habitat Monitoring

A key part of this plan will be to agree, fund and implement a comprehensive programme of habitat monitoring across the DMG, both on designated sites and in the wider countryside.

Such a programme will consist of a combination of private habitat impact assessments (HIA) and statutory Site Condition Monitoring (SCM) by SNH, a proportion of the former which may be carried out by contractor, or where training may be required to bring estate staff up to the necessary level of ability to do this themselves. A key part of any programme will be agency support in identifying sample plots, and storage and upkeep of information. Habitat monitoring will be carried out in line with current best Practice Guidance.

Fixed point photography and/ or small fenced monitoring enclosures may also be used where personnel are unable to carry out habitat monitoring.

It is suggested that such a programme of monitoring is established by the Group in conjunction with SNH by June 2016, with sufficient information being available to allow an SRDP application to be submitted on behalf of the Group. It is suggested that between the Collaboration Fund, the Agro Environment Scheme, individual estate input and support from SNH, that it will be possible to cover the cost of development of such a habitat monitoring programme, which is expected to include provision for training as well as the potential use of contractors.

Recommended Habitat Monitoring programme

It is suggested that, in addition to the monitoring work on designated sites, that the Group monitor two habitats, blanket bog and dwarf shrub heath, to give an indication of impacts in the wider countryside.

SNH have recommended that for each habitat type, 30 sample points be developed within each property, with the same plots being monitored on an annual basis. Within the Group, there are a large number of relatively small properties, and some others who have never participated in the Group in the past. It is important not to over-burden these properties at the outset. It is suggested therefore that 30 plots per habitat will be monitored for the bigger properties within the Group, with ten of these being monitored each year on a rolling basis. A small number of properties have less than 30 plots because insufficient habitat of that type is available, and on some properties, there is no habitat of one of the two types present. The properties which are being newly recruited will not be monitored in the first five years of this plan, but this situation will then be reviewed in 2021, with all active members being included at that point. These plots have been marked on the map [19. ESDMG Habitat Monitoring Map](#).

The above suggested schedule gives 416 blanket bog points and 400 dwarf shrub heath points, or 816 in total. On a 3 year rolling programme, this would require 272 plots to be monitored annually across the DMG. This is a very considerable level of coverage, but it is appropriate given the relatively poor information currently available, the extent of blanket bog within the Group.

It is suggested that 2 X people could measure 12 X plots in a day, with perhaps 5 days required to plan for and collate information across the Group when complete.

It is recommended that the Group take on an external contractor to lead on and co-ordinate the work in the first year, tutoring group members to do the work in subsequent years, but with a reduced co-ordination input required. The Group could then apply to SRDP to cover the external costs, allowing that this would be 50% of the total.

The external cost of doing this is likely to be £6-8000 in the first year, perhaps reducing to half this in a subsequent year, to maybe £1000 a year once group members are proficient in carrying out their own monitoring, only then requiring some limited external co-ordination and data collation and interpretation.