BREADALBANE DEER MANAGEMENT GROUP

DEER MANAGEMENT PLAN

2016 – 2021

Habitat Monitoring targets

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BREADALBANE CLUSTER- HABITAT TARGETS *Graham Sullivan (SNH)*

Although this report was written at the start of the previous Section 7 agreement in 2010, the targets are still relevant to habitat monitoring within the period of this current plan.

Background and rationale

Following unfavourable Site Condition Monitoring (SCM) assessments of a number of upland notified features on designated sites in the Breadalbanes in 2006, a Herbivore Impact Assessment (HIA) was carried out on five habitat types in 2007 in order to obtain more detailed information on the nature and distribution of current herbivore impacts (Dayton 2007). The habitats assessed were Smooth Grassland, Wind-clipped summit communities, Flushes, Tall Herb communities and Montane willow scrub. These habitat types are considered to represent the range of features and sensitivities present, and thus to provide a good guide to the appropriateness of levels of impact on the site. The HIA showed that while there was variation in severity of impacts both between and within designated sites, there were higher than desirable herbivore impacts on four of the habitats surveyed, while for the fifth, smooth grasslands, alongside localised high impacts there was a tendency towards rank growth.

Assessment of impacts is more sensitive in detecting the effects of changes in management than is Site Condition Monitoring. Thus while the eventual aim is to achieve Favourable condition, as measured by SCM, of the features on the site, HIA, and changes in the results of HIA over time, indicate whether levels of impact are likely to be compatible with Favourable condition. Hence it is appropriate to use repeat HIA in order to assess whether changes in management intended to ensure that herbivore impacts are at a level compatible with Favourable condition of notified features have achieved that aim.

Targets which represent the level of impact considered compatible with, and likely to lead towards, Favourable condition are required in order to assess progress. These targets should represent the desirable range of impact for the particular habitat type, while allowing for some variability in results for individual indicators. The targets are based on the prognoses for different habitat types under particular levels of impact given in MacDonald *et al*. (1998). In addition to targets related to overall impact levels, targets related to quantitative indicators also given. These generally also reflect a relevant SCM target for the habitat type, providing a link to SCM.

Smooth Grassland

M grazing impacts give the highest diversity of characteristic flora and invertebrates, and are likely to maintain the habitat, while H and L impacts both favour some components over others, and can lead to deterioration if uniformly present. A range of impacts is desirable at a small scale.

1) Modal and median1 grazing impact class should be within the range LM to MH.

1 The modal impact class is that class which occurs most commonly in the assessment; the median impact class is that which applies to the middle score when impacts are ordered from L to H. Thus for example the results for grazing impacts for squares sampled on Ben Lawers were:

2) Impacts should not be entirely within the range L to M or M to H.
3) At least 50% of sward height measurements should be in the range 3-6 cm.

Wind-clipped summit communities

H impacts will lead to significant deterioration, while at L impact levels the habitat is stable with a high diversity of characteristic species.

1) No sample square should have an average impact score higher than LM.
2) No more than 10% of sample squares should have LM impacts.
3) No more than 10% of the leaves of fine-leaved grasses should show signs of grazing at any sample point.

Flushes

H impacts lead to significant deterioration in this habitat, while at M impacts there can be both degradation and some recovery, although loss of any tall-herb element is likely. L impacts at low altitude (below approximately 300m in the north, below approximately 700m in the south) may allow some development of undesirable rank growth and scrub colonisation, while at higher altitude L impacts result in a stable situation with diversity maintained. Given the range of altitude of flushes on this site targets should be

1) No sample square should have an average impact higher than M.
2) No more than 25% of sample squares should show M impacts.
3) No more than 25% of bare ground should be poached at any sample point.

Tall Herb communities

H impacts lead to significant deterioration, M impacts lead to some decline although some fluctuation in grazing pressure can help maintain diversity. Habitat likely to be stable at higher altitudes, tree and scrub colonisation can occur in some circumstances at lower altitudes. Targets for these sites should therefore be

1) No sample squares should have an average impact higher than M.
2) No more than 10% of sample squares should have average M impacts.
3) Mean vegetation height should be at least 20cm at each sample point.

Montane willow scrub

H impacts lead to significant deterioration of this habitat while under M impacts it is possibly unstable and vulnerable to change. Under L impacts the greatest diversity of characteristic species is likely to be present and opportunities for flowering and seed production are maximised. This is illustrated by the frequent confinement of willow scrub to inaccessible situations except where grazing impact is low.

Impact class	L	LM	M	MH	H
Number of squares	1	7	6	1	0

The modal impact score is LM (7 scores) and the median score (the 8th value of 15) is also LM. Both fall in the acceptable range of LM to MH. 8 scores fall outwith the range M to H, easily meeting the target that not all scores should be within this range, while one score falls outwith the range L to M, just meeting the target.

1) No sample squares should have an average impact higher than LM.
2) No more than 10% of sample squares should have average LM impacts.
3) Less than 33% of shoots should be browsed at any sample point.

Targets – implementation and timescales

A wide range of habitats are present on these sites, and there is a need to balance their different herbivore impact tolerances and requirements. Given the number of features where reductions in herbivore impacts are required, and in some cases (most notably for wind-clipped communities) the degree of reduction required, it is likely that achieving the targets set for smooth grassland, which requires a higher level of grazing impact than the other features present, may be difficult. Therefore it is suggested that targets 2) and 3) for this habitat should not be mandatory at present, but should be monitored.

It should be noted that HIA is very responsive to changes in impacts and will rapidly detect change. However, for practical reasons achieving the reduced levels of impact required to meet most of these targets may take some time, and the timing of repeat HIA should be related to when the required changes are expected to take place. It is recommended that some simplified form of interim monitoring, which could be carried out by land managers (either using Best Practice Guidance or simplified quantitative HIA targets), should be carried out in order to indicate progress towards meeting targets.

For some habitats on some sites there are only small numbers of samples or sample squares. Due account will need to be taken of this when determining whether targets are met.

References

Dayton, N. (2008) ***An assessment and evaluation of herbivore impacts on designated habitats in the Breadalbane hills.*** **SNH Commissioned Report No. (ROAME No. R07AC208) (Objref B228720)**

MacDonald, A., Stevens, P., Armstrong H., Immirzi, P. & Reynolds P. (1998). *A Guide to Upland Habitats, Surveying Land Management Impacts.* Part 1 and 2. Scottish Natural Heritage, Battleby.

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