

HABITAT IMPACT ASSESSMENT

PRINCIPLES IN PRACTICE

*best*PRACTICE
GUIDANCE



Aim

This guide outlines how to plan Habitat Impact Assessments (HIAs). The guide *Habitat Impact Assessment: Principles** is an essential introduction to this subject. Printable forms for recording habitat data can be found in the related workbooks. **

Planning

Good planning and preparation will help to keep assessing deer impacts simple, and reduce time and cost. The following items should ensure that the assessment programme is adequately prepared.

Identifying Management Units

3 Usually, a HIA survey will cover a management unit; an area managed in the same way for the same objectives, often a single estate. If parts of an estate are managed differently, (e.g. where deer/ livestock densities or habitats differ across beats), it may be best to assess them separately. If neighbouring estates are small and managed in a similar way, they could be assessed as a single management unit.

Identifying habitats

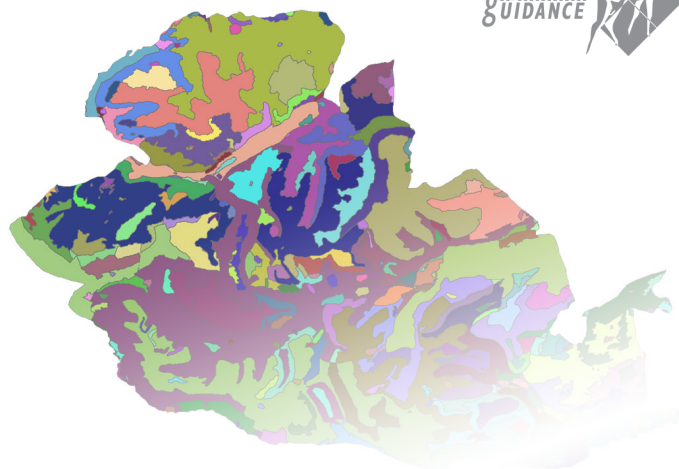
3 Most management units contain different habitats but HIAs may need to be limited to the most important i.e. habitats used by deer, or that cover the largest area in the management unit, or where impacts are suspected to be high, or those of most importance to the manager. Individual habitats are briefly described in the habitat specific guides. Further information habitat types is available (e.g. from NatureScot).

Sample plots

3 HIA involves assessing impacts at a series of plots in the habitat. Heaths, bogs, and grasslands may cover large areas (extensive habitats). Flushes, tall herbs and willow scrub are localised and not widespread (fragmentary habitats). The method of selecting sample plots differs between the them.

Number of plots required

3 Regardless of the management unit area, it is recommended to assess 30 plots for each habitat. This may not be possible for fragmented habitats. 30 plots provide confidence that the range of impacts represents the management unit. Additional plots may help with more localised management.



Extensive habitats - generating random plots

To minimise human bias, generate random plots for each habitat type before going out to the field. Use GIS software or download a list of plots pre-generated by NatureScot and available from a Deer Management Group or NatureScot. Upload the coordinates onto a GPS and keep a list as back up.

3 The maps used for generating random points are not completely accurate, some plots may not fall on the intended habitat type. On the first site visit, move such plots to the nearest patch of the correct habitat within 50m of the original point, and record the new location by GPS. If the desired vegetation type is not present within 50m, the plot should be abandoned and a new plot generated for the next monitoring occasion. If a plot falls in the right habitat but into an untypical area (e.g. an ATV route or a feeding site) you can move the plot to the nearest unaffected area within 50m.

Fragmentary habitats - opportunistic plots

For these habitats, it is often not possible to randomly select plots in advance due to lack of

detailed of vegetation mapping. These plots have to be opportunistically selected using existing knowledge of suitable locations, or identified by site visits.

When to monitor?

3 Herbivore Impact Assessments should be done at the time of year indicated in the table below. Outwith this period plants are less easy to identify and impacts less easy to measure.

Bear in mind that some allowance may need to be made for geographical and seasonal variation. Note that it is important to carry out repeat surveys at the same time of year as the original survey.

Impact Assessments - Time of year

Habitat	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dwarf shrub heath	N	Y	YY	YY	YY	Y	Y	N	N	N	N	N
Blanket bog	N	N	Y	Y	YY	YY	YY	YY	YY	Y	N	N
Flushes & springs	N	N	Y	Y	Y	YY	YY	YY	Y	Y	N	N
Willow scrub	N	N	N	N	N	YY	YY	N	N	N	N	N
Tall herbs	N	N	N	N	Y	YY	YY	Y	Y	N	N	N
Smooth grassland	N	N	N	Y	YY	YY	YY	YY	YY	Y	N	N
Tussock grassland	N	N	N	Y	YY	YY	YY	YY	YY	Y	N	N

YY recommended **Y** acceptable **N** not recommended

Equipment & Resources

3 Equipment and resources must be available before starting fieldwork. Training may be required.

- ◆ List of random point coordinates and map.
- ◆ GPS with random point coordinates uploaded and spare batteries.
- ◆ Compass.
- ◆ Portable Quadrat (2m x 2m with 16 x 0.5m squares), e.g. a quadrat made from light-weight, non-stretch rope can be laid out and secured using tent pegs. Proprietary quadrats are available.
- ◆ Wooden posts (approximately 5 x 5 x 30cm). Full set when establishing plots, may need a few replacements on repeat visits.
- ◆ Recording equipment (paper data sheets & pencils or tablet/phone with Analysis Workbooks**).
- ◆ Measuring tape or (rigid ruler).

- ◆ Two sets of large laminated numbers (0-9) for identifying plots in photos.
- ◆ Camera (waterproof ideally).
- ◆ Pole marked at 50cm to measure peat-depth for blanket bog.
- ◆ Time for data collection in the field. Depends on terrain, accessibility, and distance between plots.

Frequency of repeat assessments

3 For open ground habitats, repeat assessments are carried out every three years, or more frequently if a change in management has occurred.

Identifying plants and impacts

The HIA guides illustrate the key plant species and impacts. It is recommended that additional plant field guides are used to help in species identification. If you want to find out more about impact assessments the NatureScot field guide¹ provides detailed background.

* BPG Habitat Impact Assessment: Upland Habitats Principles

** BPG Analysis Workbooks

¹ Guide to Upland Habitats, Surveying Land Management Impacts. (1998) Angus Macdonald, Penny Stevens, Helen Armstrong, Philip Immirzi and P Reynolds. Scottish Natural Heritage. <https://www.nature.scot/guide-upland-habitats-surveying-land-management-impacts-volumes-1-and-2>