



BLANKET BOG ANALYSIS

4A



Aim

This guide describes analysis of Blanket Bog HIA data. The BPGs Habitat Impact Assessment: Principles* and Habitat Impact Assessment: Principles in Practice**, and Blanket Bog*** are essential introductions to this subject.

Why analyse data?

- ◆ Impacts can be summarised and presented clearly.
- ◆ Impacts can be compared with site objectives.
- ◆ Repeat surveys can be compared.

How to analyse data

There are two steps; analysing the data from each plot, then summarising and presenting the management unit results. Entering the data into the Blanket Bog Analysis Workbook± on a phone or tablet in the field does both steps automatically and is the preferred method. Written data could be transferred into a device later but risks transcription errors.

Individual Plots and Management Unit data is summarised as in the tables below.

Analysis of Individual Plot Data

Impact	Plot summary
Height of dwarf-shrubs	Calculate the average (mean) of the five quadrat height measurements
Browsing of heather or blaeberry shoots	Arrange the five assessments in order. Take the median (middle value) of the five (e.g. HMLLL = L, whereas HMMLL = M). This is the plot overall browsing impact .
Browsing of cross-leaved heath (particularly if heather and blaeberry absent)	Browsing of cross-leaved heath in any quadrat the plot means the entire plot is scored HIGH for browsing impact
Presence of bare peat	Count the number of quadrats with bare peat. If there are any, then bare peat is PRESENT
Hoof prints in bare peat (Trampling Indicator I)	Count the number of quadrats with hoof prints in bare peat. <ul style="list-style-type: none"> • LOW: hoof prints visible in 2 or fewer quadrats • MODERATE: hoof prints in 3 or 4 quadrats • HIGH: hoof prints in 5 or more quadrats.
Presence of <i>Sphagnum</i>	Count the number of quadrats with <i>Sphagnum</i> . If there are any, then <i>Sphagnum</i> is PRESENT.

Trampling damage to <i>Sphagnum</i> (Trampling indicator 2)	Count the number of quadrats with trampled or pulled up <i>Sphagnum</i> . LOW: damage in 2 or fewer quadrats. MEDIUM: damage in 3 or 4 quadrats HIGH: damage in 5 or more quadrats
Overall trampling impact	This combines trampling indicators in bare peat and <i>Sphagnum</i> . Take the median (middle value) from the two indicators For example: Bare peat = L, <i>Sphagnum</i> = L, Median = L Or Bare peat = H, <i>Sphagnum</i> = M, Median = HM

Analysis of Individual Plot Data

Impact	Site Summary
Overall browsing impact	Summarise browsing impacts by percentage, for example: 30% (9/30) of plots had LOW browsing impacts 50% (15/30) of plots had MEDIUM impacts 20% (6/30) of plots had HIGH impacts.
Presence of bare peat	Calculate the percentage of quadrats with bare peat, e.g. 63 quadrats in 30 plots (30 x 16 quadrats) = 63/480 quadrats, or 13%. Therefore bare peat PRESENT. In repeat assessments, count also the quadrat changes across the management unit
Presence of bog moss (<i>Sphagnum</i>)	Calculate the percentage of quadrats with <i>Sphagnum</i> , e.g. 312 quadrats in 30 plots (30 x 16 quadrats) = 312/480 quadrats, or 65%. Therefore <i>Sphagnum</i> PRESENT. In repeat assessments, count also the quadrat changes across the management unit
Overall trampling impact	Summarise trampling impact by percentage, for example: 70% (21/30) of plots had LOW trampling impacts 20% (6/30) of plots had MEDIUM trampling impacts 10% (3/30) of plots had HIGH trampling impacts
Presence of herbivores	Summarise the evidence of herbivore presence by counting the number of plots where evidence of different herbivores was seen (for example, deer 21/30 plots, hares 5/30 plots, sheep 15/30 plots, no evidence of cattle).
Presence of burning	Summarise the evidence of burning by counting the number of plots where evidence was seen (for example, old burning 5/30 plots, no evidence of recent burning).

* BPG Habitat Impact Assessment: Principles
 **BPG Habitat Impact Assessment: Principles in Practice
 ***BPG Blanket Bog
 ± Blanket Bog Analysis Workbook

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