EAST LOCH SHIEL DMG HABITAT AND IMPACTS ASSESSMENT LOG

Appendix 13.

Summary information

ELS Appendix 13 HIA Log Issue 8 2025

Issue 8: - June 2025.

This issue of the 'Habitat and Impacts Assessment Log' is Appendix 13 to the ELSDMG DMP and supersedes previous issues.

Deer Management Priority Area

At the 2024 ADMG AGM, a slide identified the ELSDMG area as one of several Deer Management Priority areas. Despite no prior notification or further details being received at the time or since, B. McKeown the NatureScot WMO explained at our April 2024 meeting that this designation recognizes the significant positive work already being done in habitat preservation and restoration within the ELSDMG area, which forms part of an Atlantic Rainforest cluster, and this acknowledgement can be seen as a positive endorsement of our ongoing efforts.

PART 1: -

HABITATS AND IMPACTS

Designated Sites: -

Designated Sites are assessed under the NatureScot (SNH) – SCM programme and/or the NatureScot 'Site Check'. The Designated Sites are reported on in more detail in the ELS DMP – Background Information Document, and by NatureScot [1].

With a decades-long history of delivering landscape-scale habitat and environmental benefits by way of domestic livestock reductions, livestock and deer exclosures, woodland planting, &etc. within our area, further woodland protection, creation and regeneration projects are underway and progressing to secure yet more areas on designated features. These continue with the use of rotational fencing to provide a mosaic of landscape management, as opposed to a mono-culture.

This method, pioneered on Conaglen, and innovative at conception, pre-dates by many decades, and provides a model for that more recently identified in the 'SNH report Peterken, G.F. and Worrell, R. (2005). Conservation management of the Sunart Oak Woodland Special Area of Conservation (SAC) and the potential for supporting rural development. Scottish Natural Heritage Commissioned Report No. 091 (ROAME No. F00LD21)' which recommends enclosures for ''15 years in every 100 years to allow a pulse of regeneration,'' and considers the whole lifecycle of a woodland.

Below is a summary of some of the ongoing woodland management and habitat enhancement work completed in the East Loch Shiel DMG area in the past 10 years.

Within the **Doire Donn SSSI**, **Conaglen Estate** has completed installation and planting in March 2023 of a new woodland creation scheme. Consent was granted in 2021 for establishment of 3 new woodland creation blocks for native woodland planting and native regeneration to provide expansion options and to enhance Oak recruitment and for the reopening of a regeneration block which had been secure for the past 20+ years. The new enclosures extend to 64.43ha of fenced SSSI, which equated to 52% of the 122.80ha Forest Area. The old regeneration block which has now been opened extended to 21.39ha, which equated to 17% of the 122.80ha Forest Area. As such 69% of the designated area has or is now in active woodland creation/protection blocks, it should be noted that at least a further 20% of the designated area is unsuitable due to ground conditions to ever carry trees.

The new 2022/23 enclosures include 10ha of low-density broadleaves planting and a further 33.18ha is expected to naturally regenerate new woodland. The three blocks were identified and designed to incorporate as much of the land as possible where it was deemed there was a strong feasibility for natural regeneration to occur. The overall woodland area will now be managed and results observed going forward for perhaps the next 20 years.

Within the **Ardgour Pinewoods SAC/SSSI**, **Conaglen Estate** has installed 3 new woodland creation enclosures during 2022 & 2023, at which planting was again completed in March 2023. Consent was granted in 2021 for establishment of 3 new woodland creation blocks for native woodland planting and native regeneration to provide expansion options. These enclosures extend to about 101ha of fenced land, 57.41ha has been planted, comprised of an area of 20.00ha planted with low-density broadleaves and 27.41ha planted with broadleaves. Of the remaining area enclosed area, a further 37.90ha is suitable land and is expected to naturally regenerate new woodland. On-going observation, control of deer numbers and the continuation of the rolling program of woodland fence enclosures will be maintained.

In another positive move from an SSSI position for the DMG, **FLS** advised of two new woodland enclosures at **Callop** being created during 2023. The larger block is inside the designated Ardgour Pinewoods SSSI area, and the new fence will close a clear-felled previously commercial area. Initially, they hope to get good natural native tree regen away in both but will review after a couple of years and consider some possible enrichment planting of native species if required.

With NatureScot acknowledging the significant positive work already underway in ELS on habitat restoration it is anticipated that the next round of NS SCM or Site Check will recognise the cumulative effects of the Designated Woodland Management Plans and actions that continue to contribute further to the significant net ecological and environmental gains already achieved in ELS and report the status of those features where currently shown as unfavourable as recovering due to management.

Non-Designated areas: -

The NWSS, Best Practice Dwarf Shrub Heath (DSH), and Best Practice Blanket Bog (BB) are the HIA methods promoted by NatureScot for non-designated areas. Other methods may be used by landholdings with the onus where this is the case is for these landholdings to confirm whether their deer impacts are within the DMG target. The group's herbivore grazing and trampling impact target as agreed with SNH for the Non-Designated habitats is to be at least 50% light or moderate.

Open Range: -

BPG Blanket Bog and Dwarf Shrub Heath (BB and DSH) are the HIA methods promoted by SNH/NatureScot for the ELSDMG Open Range in the wider countryside with training in these methods given by them to members[2] [3].

However, a significant proportion of our open range area is grassland for which there is no BP Guide. Grassland monitoring is extremely technical requiring extensive botanical knowledge which will be outside of the skill set of most deer managers although it is accepted that grassland benefits from higher levels of grazing [4]. Just over 3% of the ELSDMG area is identified as Blanket Bog/Peatland (BB) the majority of which is contained in the FLS Longrigg and NS Claish Moss.

Consequently, our open range monitoring is on moorland habitats in areas selected where heather is present which often may be better described as grassland with some heather present. There is concern that in an area with a lot of grassland, such as East Loch Shiel, impacts measured just on areas selected with heather present are not representative of the overall habitat or impacts.

Notwithstanding the above, BPG Habitat Impact Assessment plots over the Open Range using the BP BB and DSH guides with a plot density exceeding that agreed with SNH, have been established. Analysis of our BPG – BB & DSH HIA shows these herbivore impacts as being within our targets with re-measures and/or deer manager's observations indicating increases in vegetation heights and ground cover and with, in many cases peat haggs re-vegetating. Often heavier herbivore impacts recorded are concentrated in areas where remaining domestic livestock continues to be grazed.

Native Woodlands: -

Native Woodlands are assessed under the NWSS programme. The group Native Woodland's target is to retain existing native woodland cover and improve the woodland condition in the medium to long term. The NWSS programme shows herbivore impacts to be within the DMG target. More detail is provided in the ELSDMG DMP– Background Information. It should be noted that, in enclosed woodlands vegetation has often become tall, rank, and at risk of severe wildfire.

Forest Research has identified a new Aphid and Fungal infestation of Scots Pine trees with some present in our area. They are still evaluating the implications for the Scots Pine trees.

FLS Woodland and Open Range: -

FLS have extensive woodland HIA data and results. Their view is that as their woodland condition impacts are satisfactory then their adjacent open range, by default, is also satisfactory and within the DMG target. FLS recently published Drimnatorran and Glenhurich Land Management Plans (LMPs), which contain more detail on their HIA. https://forestryandland.gov.scot/what-we-do/planning/active . FLS are invited to summarise their HIA data for inclusion into our DMP.

OTHER FACTORS

Soils: -

The ELS area soils are predominantly peaty podzols, peat and peaty gleys as associated with moist boreal and Atlantic Heather moor, blanket and upland bog. The soils tend to be wet and acidic.

The higher ground tends to be montane soils or bare rock outcrops and screes. There are pockets of brown forest soils nearer the shorelines within the crofting landscape and alluvium along the glen bottoms (See the soil map on this link). https://map.environment.gov.scot/Soil_maps/?layer=1&extent=165442,757301,222368,785049

It is now recognised that the organic soils covering much of the ELSDMG area—even when shallow—are significant carbon stores, holding more carbon than even mature commercial forestry. When trees establish in these areas, whether through regeneration or planting, soil respiration can dry out the soils, releasing stored carbon at a rate that exceeds the absorption capacity of the growing trees. This effect is further exacerbated by any ground preparation prior to planting.

Therefore, additional consideration should be given before planting or encouraging tree regeneration on organically rich soils, to ensure the wider benefits are substantial enough to justify the resulting carbon release.

Livestock Numbers and Large Herbivores: -

Domestic livestock including cattle, sheep, goats, pigs, and horses have been kept in the area. Livestock numbers would have peaked in the area during the 19th century, with sheep numbers particularly having risen from about 40 sheep per kM²in the late 1700s to an average of 80 sheep per kM² with some even taking their flocks up to as many as 140 to 150 sheep per kM² by the 1860s. This along with other historic farming practices, will have altered the habitat, probably irreversibly, and have led to the dominance of Purple Moor Grass *Molinia Caerulea*. The sheep stocking density will have gradually reduced to around 50 per kM² by the 1960/70's and no goats, either domestic or feral remain.

More recent documented changes in management practices over the past 40 years or so has resulted in the overall large herbivore pressure/ impact being significantly further reduced with >13170 sheep + followers and >350 cows + followers having been removed from the ELS open range during this time. This alone is equivalent to a further >75% reduction by number of large herbivore presence leading to, without any other

interventions, a reduction in herbivore impacts being observed with corresponding increases in vegetation heights and ground cover. With large areas now having no domestic livestock present, overall grazing pressures are lower now than for many decades, even centuries, with any current higher impacts still mostly concentrated where the remaining domestic livestock continues to be grazed.

In places however, with reduced herbivore presence, vegetation has become tall and rank with a less diverse structure, now posing a severe wildfire risk and reducing bio-diversity. Current deer densities have been stable for a long time with the deer density of ≈10/kM².

With no goats, hares, beavers and very few rabbits in ELS, large herbivore impacts are lower than many other areas which have similar or greater deer densities as well as greater domestic livestock, and/or goats, and/or hare, and/or rabbit and/or beaver densities.

Heather: -

Where deer are the only large herbivores, grazing impacts are predominantly in the low to medium ranges although there will inevitably be some localized heavier impacts irrespective of deer density and this helps maintain bio-diversity. Where there are few or no large herbivores the heather over time becomes, or is now, tall and rank, reducing bio-diversity, offering little in the way of fodder, has a high wildfire risk and is vulnerable to heather beetle impacts allowing further encroachment of more dominant plants. Heather is showing mainly low to moderate large herbivore impacts and can flower and set seed with the higher impacts still mostly concentrated where domestic livestock continues to be grazed.

Heather Beetle Impacts: -

Heather beetle impacts are observed year on year with members reporting much higher than normal heather beetle impacts during 2019 and 2020[5]. The *''Heather Trust believes that the heather beetle* Lochmaea suturalis *has been instrumental in driving the change from heather to grass dominated moorland. This is a particularly significant cause of moorland decline in the wetter areas, generally on the west side of the country where there is often greater competition from grasses. Purple moor-grass* Molinia caerulea *is often the chief competitor.''* heather beetle (heathertrust.co.uk)

Heather beetle impacts are more prevalent in longer, rank heather. The lack of browsing/ grazing may lead to more heather becoming long and rank with consequently more heather beetle impacts, in turn resulting in further losses of heather and reduced bio-diversity. Heather Beetle impacts over time have and will probably continue to lead to an ongoing deterioration of Heather. Heather Beetle impacts, which include reduction in average heights and loss of heather, occur gradually. With no recording of Heather Beetle impacts in the BPG Data Sheets or the SNH-issued analysis spreadsheets there is a likelihood of these impacts being misinterpreted as by other causes, perhaps as deer impacts. [5] It is suggested that further reductions of deer numbers are, rather than making improvements, likely to make matters worse regarding heather beetle impacts. Other methods to reduce heather beetle impacts will be needed.

Heather presence: -

Heather presence is increasing across much of our area. Despite the impacts of the Heather Beetle noted above and the current level of non-domestic herbivore activity, this growth appears to support an alternative perspective: that Heather Beetle effects, along with low to moderate herbivore impacts, are not inherently detrimental in the long term. Instead, they may serve a natural, albeit unpredictable, function in removing older, rank heather, thereby promoting overall rejuvenation and biodiversity.

Grassland: -

Grassland is extensive covering much of the area. It is recognised that grassland benefits from higher grazing impacts. Grassland monitoring, we are told, is extremely technical and requires extensive botanical knowledge which will be outside of the skill set of most deer managers. Whilst there is a heading for Grassland included in the Habitat Impacts section of the BPG there is no BPG HIA published method for grassland or grass-dominated habitats. There is a note which continues to say *'(simply holding page for now)'.* (Current 10/6/2025.)

Molinia Caerulea: -

Historic farming practices, including frequent burning and maintaining high densities of domestic livestock year-round, will have altered the habitat, probably irreversibly, and have led to the dominance of *Molinia Caerulea* also known as purple moor grass in many places. Purple moor grass covers large areas in East Loch Shiel. With its strong root systems, it can dominate other DSH and BB species and reduces bio-diversity. It can lead to faster runoff of rainfall, its capacity to sequester carbon is less than other DSH and BB species and is also a high risk for wildfire. Molinia management webinar | Moors for the Future

It is suggested that further reductions of deer numbers are, rather than making improvements, likely to make matters worse in Molinia-dominated habitats for DSH and BB plant communities. Other methods to reduce purple moor grass dominance in favour of preferred DSH and BB plant communities will be needed.

Bracken: -

Bracken is present in many areas and is prolific, out-competing most other plants. Bracken, with its ability to inhibit herbage and seedling growth, dominates other vegetation. Being fire-adapted it seems further invigorated in any areas burnt and leaves large volumes of dry dead matter adding fuel to any wildfire risk and impacts. With the reduction and removal of domestic livestock, along with the low deer numbers the bracken, which is intolerant of trampling, can expand its coverage year on year. This can lead to reduced bio-diversity, faster runoff of rainfall, restriction of tree regeneration, and its capacity to sequester carbon is less than other DSH and BB species.

The Heather Trust warns: -

Bracken contains carcinogens and the fronds contain a number of toxins which are poisonous to animals such as cattle, sheep, pigs and horses when ingested. However, most species and breeds of livestock will usually avoid the plant altogether unless nothing else is available.

The majority of bracken encroachment each year is as a result of expanding underground root systems known as "rhizomes"

Left unmanaged, bracken quickly shades out all other competing plants. In many cases, bracken creates a sterile monoculture which is hostile to all other plant species.

In competition with heather, bracken usually emerges dominant.

A landscape which has been overcome by bracken lacks the biodiversity of well managed moorland. By comparison to heather moorland, extensive stands of bracken are like a desert, of little value to livestock or wildlife.

Bracken beds are a great place for ticks to proliferate. Young mammals and ground nesting birds can be overwhelmed by ticks, and ticks spread diseases that can affect humans and livestock. See the Members' Briefing on Sheep Ticks for more information.

https://www.heathertrust.co.uk/_files/ugd/fdc287_15a9f1b4957a4d6299442b4f77d04fd7.pdf

It is suggested that further reductions of deer numbers are, rather than making improvements, likely to make matters worse in bracken dominated habitats for DSH plant communities. Other methods to reduce bracken dominance in favour of preferred DSH plant communities will be needed.

Ticks and Lyme Disease: -

As noted above; *Young mammals and ground nesting birds can be overwhelmed by ticks, and ticks spread diseases that can affect humans and livestock.*

For years deer have been considered the villain of the piece taking the blame as carriers and vectors for the spread of Lyme Disease.

Research has established that the opposite is true. The main carriers it seems, are small birds and mammals with blackbirds, thrushes and robins amongst the worst. By contrast, if an infected tick feeds on a deer, that deer produces antibodies which have an active role in cleansing any ticks that subsequently feed on the deer of the bacteria that causes Lyme Disease thereby reducing the risk of future transmission of Lyme Disease to people and wildlife.

The British Deer Society have produced an information sheet that goes into more detail which can be found on the following link. Lyme Disease & Ticks

Further reductions in deer numbers are, rather than making improvements, likely to make matters worse regarding the incidence of Lyme Disease. Other methods to reduce the incidence of Lyme Disease transmission to humans and livestock will be required.

Wildfire: -

The reduction of grazing/ browsing and controlled burning has in many areas led to increases in vegetation cover, height, and particularly the amount of dead matter that quickly dries and can provide large volumes of fuel should a wildfire start.

Wildfires can cause serious damage and can burn right down to the soil and even into the peat emitting massive amounts of CO^2 to the atmosphere, with people, livestock, wildlife, seedlings, saplings, trees, fences, property, etc. also at risk. Wildfires can burn very hot and the only plants that seem to benefit are the Purple Moor Grass and Bracken.

Historic and Cultural Features: -

With the reductions of domestic livestock and in some cases, the exclusion of livestock and deer many historical features are suffering from a lack of grazing and are, or are in danger of, being swamped by vegetation with many sites being invaded by bracken, willow herb, brambles, tree re-gen and/or etc. Generally, historical features benefit from vegetation control by grazing animals, and when a stone gets displaced, it's likely to have been caused by cattle or people.

DEER DENSITY

Deer Density Target: -

The officers of the DMG conclude that regarding deer impacts the East Loch Shiel DMG area target Spring deer density can remain at up to 10.5 per km^2. Refer to the population model **(**Appendix 15 Population Models and Targets) which considers all population criteria, indicators, the collective objectives of the DMG members and the public interest to set the overall population and cull targets.

ONGOING ACTIONS

Woodland protection, creation and re-generation projects are progressing to address designated site issues.

With the non-designated area's herbivore impacts being within the DMG targets, the issue is often one of maintenance and addressing any localised areas of unacceptable high deer impacts on an Estate-by-Estate basis.

Emphasis is placed on deer managers to maintain the DMG planned cull through the 2025/26 season.

HIA data etc. to be considered with the Population Model updates along with all population criteria, indicators, the collective objectives of the DMG members and the public interest to set the overall population and cull targets.

Review this HIA document periodically incorporating updated and new information.

NOTES

Scottish Natural Heritage (SNH), incorporating the former Deer Commission for Scotland (DCS) has been re-named as NatureScot (NS) and is the Government agency responsible for the implementation of deer policy matters. Any of these names or initials may be used in the ELSDMG HIA reports and other documentation.

Since May 2018 Best Practice has no longer disseminated new guides, updates or news either by post or email. It is now for the user to find out any changes.

The following is from: - ADMG ANALYSIS AND REPORT ON THE 2019 DEER MANAGEMENT GROUP ASSESSMENT PROCESS

ADMG reports: '*as noted elsewhere, a useable standard methodology for setting habitat condition targets, other than on designated land, has yet to be finalised with SNH. Many designated sites in particular are complex and suitable monitoring protocols are not in place for many key habitats, and for some of these monitoring requires specialist knowledge beyond the level of expertise available within most DMGs.'* [2]

ADMG Reports: *There is no easy relationship between deer density and habitat response, particularly when other herbivores are also present. This is a new skill area for deer managers and understanding and delivery will undoubtedly improve subject to further detailed guidance from SNH.*

ADMG Reports: *This task is not easy to address in a general way and guidance is at an early stage.*

And: - As noted by SNH at the 2019 Assessment ''*Group has requested wider HIA guidance from SNH but this has not been delivered.''* To which ADMG observes *''If with all the resources available to them, SNH/NS proves unable to give appropriate guidance, what hope is there for our deer managers?''*

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[1] There is concern among the DMG membership regarding the downgrading of the condition status of some designated features which is not based on any deteriorating condition on the ground but rather on changes to the assessment method, simply the goalposts have been moved. The downgrading of the condition status has been applied to whole designated sites, even though there has been ongoing extensive, expansion, protection and improvement works over many decades, which continues to be carried out, and ignores the net ecological and environmental gains already attained. By focusing on the feature failures which cause failure of the site there is a danger of overlooking feature successes in close proximity.

[2] There is concern among the DMG membership regarding the inconsistencies of the HIA training received, the differences between the training, issued documents, BPG, &etc.

[3] There is concern among the DMG membership that; We were told in July 2017 the BPG HIA Guides are under review and will change. This was confirmed in the last BPG Newsletter of May 2018 and often repeated by our SNH/NS WMO's, with the following announcement on the BPG Home page.

2024 News!

We are currently in the process of reviewing and re-publishing the full suite of guidance on the website and aim to have the whole collection updated by early 2025.

However, the full suite of original DCS 2008 – SNH 07/02/2018 Impacts guides are still online on 10/06/2025.

Will any changes to the BPG HIA Guides merely shift the goalposts, resulting in a downgrading of assessed impact classifications? Could such changes compromise the statistical robustness of ongoing results? And will the data collected to date remain compatible with the revised or new BPG? As yet, no detailed information or publication timeline has been provided beyond the announcement noted above, creating uncertainty and delaying our forward planning.

[4] There is concern among the DMG membership that in an area with e.g., a lot of grassland, such as East Loch Shiel, impacts measured on other habitats may not be representative of the overall habitat/ impacts.

[5] Heather Beetle impacts are not recorded on either the BPG Data Sheets or the SNH-issued analysis spreadsheets. There is concern among the DMG membership that Heather Beetle impacts over time have and will continue to lead to ongoing deterioration of heather, with these impacts, particularly reduction in average heights or loss of heather, occurring gradually, being misinterpreted as by other causes, perhaps as deer impacts.

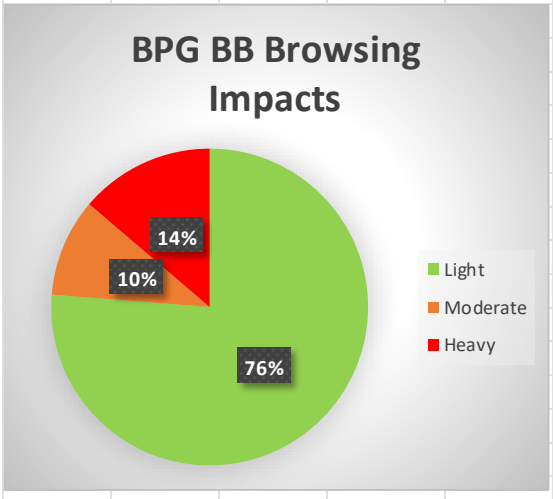
PART 2

Browsing and Trampling Impacts

Browsing impacts **Jun-25**

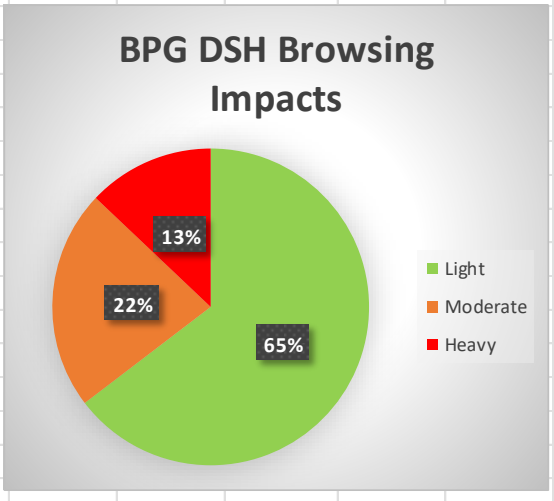
Method used: BPG Blanket Bog
Analysis used: SNH Spreadsheet

Estate	# plots	Light	Moderate	Heavy
Ardgour/C	7	2	3	2
Carnoch N	21	18	1	2
SNH Claish	12	11	1	
Conaglen	10	6	1	3
FLS				
Inversanda				
Resipole				
Sunart	30	24	2	4
# Results	80	61	8	11
		Light	Moderate	Heavy
		76%	10%	14%



Method used: BPG Dwarf Shrub Heath
Analysis used: SNH Spreadsheet

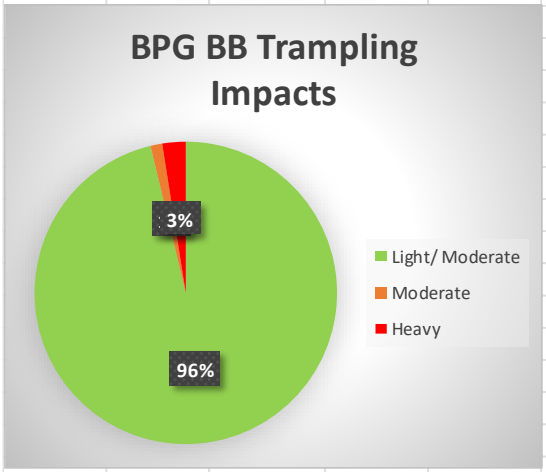
Estate	# plots	Light	Moderate	Heavy
Ardgour/C	5	1	4	
Carnoch N	35	28	5	2
SNH Claish	9	5	3	1
Conaglen	48	29	10	9
FLS				
Inversand	10	5	5	
Resipole	10	10		
Sunart	30	17	6	7
# Results	147	95	33	19
		Light	Moderate	Heavy
		65%	22%	13%



Trampling Impacts **Jun-25**

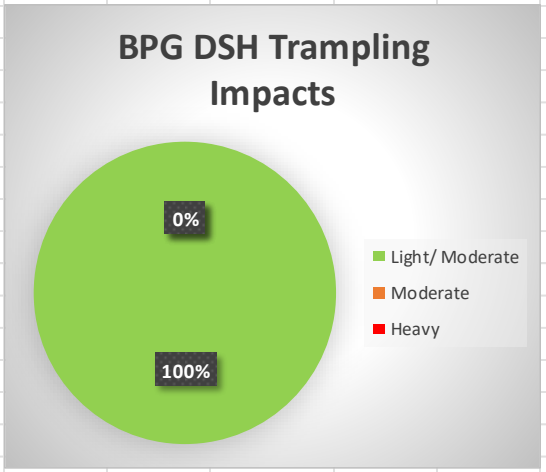
Method used: BPG Blanket Bog
Analysis used: SNH Spreadsheet
Measured as ''Bare ground with hoof - prints present''

Estate	# plots	Light/ Moderate	Moderate	Heavy
Ardgour/C	7	7		
Carnoch N	21	21		
SNH Claish	12	12		
Conaglen	10	10		
FLS				
Inversanda				
Resipole				
Sunart	30	27	1	2
# Results	80	77	1	2
		Light/ Moderate	Moderate	Heavy
		96%	1%	3%



Method used: BPG Dwarf Shrub Heath
Analysis used: SNH Spreadsheet
Measured as ''Heather Stem Breakage''

Estate	# plots	Light/ Moderate	Moderate	Heavy
Ardgour/C	5	5		
Carnoch N	35	35		
SNH Claish	9	9		
Conaglen	48	48		
FLS				
Inversand	10	10		
Resipole	10	10		
Sunart	30	30		
# Results	147	147	0	0
		Light/ Moderate	Moderate	Heavy
		100%	0%	0%



NOTE: BPG Data Sheets only have two classifications, ‘Light/Moderate’ or ‘Heavy’ for Heather Stem Breakage. The moderate column has been included as this was on the Sunart Estate report.