

# EAST LOCH SHIEL DMG HABITAT IMPACT ASSESSMENT LOG

## Appendix 13.

### Summary information

ELS Appendix 13 HIA Log Issue 6 2023

**Issue 6: - April 2023.**

**Introduction: -**

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

### PART 1: -

#### HABITATS AND IMPACTS

**Designated Sites: -**

Designated Sites are assessed under the NatureScot (SNH) – SCM programme. The Designated Sites are reported on in more detail in the ELS DMP 9th Edition – Sept 2018 – Background Information Document at Section 10, and by NatureScot <sup>1</sup>.

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 exclosures for "15 years in every 100 years to allow a pulse of regeneration," and considers the whole lifecycle of a woodland.

Conaglen created and presented their latest Long-Term Designated Woodland Management Plan, supported by Victor Clements of Native Woodland Advice and approved by Scottish Forestry. Conaglen has progressed the first actions of this latest woodland management plan with the installation of six new woodland exclosures in their designated sites, which amount to a further 200ha+ of enclosed designated woodland area established by Spring 2023. This Long-Term Woodland Plan remains the focus of the designated woodlands on Conaglen.

In another positive move from a SSSI position for the DMG, FLS advise 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.

It is anticipated that next round of SCM 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 URDTM.

**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 with training in these methods given by them to members<sup>2 3</sup>.

Other methods of assessment 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 or not.

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. Much of our area is grassland, which often benefits from higher levels of grazing<sup>4</sup>. Consequently, the majority of our monitoring is on DSH/moorland habitats in areas selected where heather is present.

Members baseline BPG Habitat Impact Assessments over the Open Range have been established with re-measures and deer managers observations indicating the trend. The group's herbivore impact target as agreed with SNH for the Non-Designated Open Range is to be at least 50% light or moderate. Analysis of BPG – BB & DSH HIA shows the overall herbivore impacts as within our targets. Heavy herbivore impacts recorded are often concentrated in areas where remaining domestic livestock continues to be grazed. Group wide, overall, our Non-Designated Open Range deer impacts are within the DMG target with re-measures and deer managers observations indicating increases of vegetation heights and ground cover.

**Native Woodlands: -**

Native Woodlands are assessed under the NWSS programme. SNH advised in 2017 that a Woodland Monitoring method and training suitable for use by deer managers is under development. Some progress is reported in this regard by NatureScot and FLS with field trials of WHIALite in 2022 and 2023. This is still to be finalised, rolled out and training given.

The group Native Woodland target is to retain existing native woodland cover and improve the woodland condition in the medium to long term. This is measured as being greater than 50% low or medium deer impacts. The NWSS programme shows herbivore impacts to be within the DMG target. More detail is provided in the ELSDMG DMP 9<sup>th</sup> Edition – Sept 2018

– Background Information – Section 9 and Appendices 5 & 7. It should be noted that, in enclosed woodlands vegetation has often become tall and rank and at risk of severe wildfire.

**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. FLS recently published draft FLS Drimnatorran and Glenhurich Land Management Plans (LMPs), which contain more detail on their HIA. Once approved FLS will be invited to summarise their HIA data for inclusion into our DMP.

**Large Herbivores: -**

Domestic livestock numbers would have peaked in the area during the 19<sup>th</sup> century, reducing thereafter, and along with historic farming practices, will have altered the habitat, probably irreversibly and have led to the dominance of Purple Moor Grass *Molinia Caerulea*. More recent documented changes in management practices over the past 30 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, reduction in herbivore impacts being observed with corresponding increases of vegetation heights and ground cover. Overall, grazing pressures are lower now than for many decades, even centuries, with current higher impacts still mostly concentrated where domestic livestock continues to be grazed.

In places however, with reduced herbivore presence, vegetation has become tall and rank, 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  $\approx 10/\text{KM}^2$ . With no hares and very few rabbits in ELS, large herbivore impacts are lower than many other areas in Scotland which have similar or greater deer densities as well as greater livestock, and/or hare and/or rabbit densities.

**Heather: -**

Where deer are the only large herbivore grazing impacts are predominantly in the low to medium ranges although there will inevitably be some heavier impacts irrespective of deer density. Where there are 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 is able to flower and set seed with the higher impacts still mostly concentrated where domestic livestock continues to be grazed.

### **Heather Beetle Impacts: -**

Heather beetle impacts have been observed year on year with members reporting much higher than normal heather beetle impacts during 2019 and 2020<sup>5</sup>. 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 \(heathertrust.co.uk\)](https://www.heathertrust.co.uk)

Heather beetle impacts are most noticeable 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 presence.

### **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 run off of rainfall, it's 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 intolerant of trampling, is able to expand its coverage year on year. This can lead to reduced bio-diversity, faster run off 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](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: -**

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

#### **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 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 the vegetation control by grazing animals. Occasionally, if a stone gets knocked off it's likely to have been caused by cattle or people.

**Wildfire: -**

The reduction of grazing/ browsing 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<sup>2</sup> to the atmosphere, with people, livestock, wildlife, seedlings, saplings, trees, fences, property, and etc. also at risk. Wildfires can burn very hot and the only plants that seem to benefit are the Purple Moor Grass and Bracken.

**DEER DENSITY**

**Deer Density Target: -**

The officers of the DMG conclude that with regard to deer impacts the East Loch Shiel DMG area target Spring deer density can remain at up to 10.5 per km<sup>2</sup>. 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 sites issues.

With the Non-Designated areas herbivore impacts within the DMG targets, the issue is often one of maintenance and of 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 2022/23 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 implementation of deer policy matters. Any of these names or initials may be used in the ELSDMG HIA reports and other documentation.

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.’<sup>2</sup>*

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.” If with all the resources available to them, SNH/NS proves unable to give appropriate guidance, what hope is there for our deer managers?

---

<sup>1</sup> 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, despite the fact in some areas extensive, expansion, protection and improvement works have been carried out over many decades 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.

<sup>2</sup> There is concern among the DMG membership regarding the inconsistencies of the HIA training received, the differences between the training, issued documents, BPG, &etc.

<sup>3</sup> There is concern among the DMG membership that; We were told in July 2017 the BPG HIA Guides are under review and will change. Will any change simply move the goalposts and lead to a downgrading of assessed impacts classification? Will any change lead to a lack of statistical robustness to any ongoing results? Will the current data collected even be compatible with the new/reviewed BPG? No information has been given yet as to any detail nor even a date indicated by which the changes may be published leading to delay with our forward planning.

<sup>4</sup> 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.

<sup>5</sup> 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 has and will continue to lead to an 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: -**

**Landholding HIA Log**

East Loch Shiel Deer Management Group. HIA Log

Sheet No.1	Landholding: - Ardgour	Date created	17/04/2019
Responsible	EM	Date updated	April 2023

Year	Area/Location	Number/Measure	Habitat	Method	O/A Impacts
2018	Glengour	Ecologist survey			See note below *
2019	Glengour	7 Baseline	BB	BPG-BB	Light/Moderate
2019	Glengour	5 Baseline	Moor	BPG-DSH	Light/Moderate
	Glengour	7, 1 <sup>st</sup> re-measure	BB	BPG-BB	
	Glengour	5, 1 <sup>st</sup> re-measure	Moor	BPG-DSH	

Information provided by: - EM

\*The funding for the ecologist survey noted above was withdrawn. It is now very unlikely that any results or analysis will be available.



East Loch Shiel Deer Management Group. HIA Log

Sheet No. 2	Landholding: - Carnoch/Druim Laith	Date created	17/04/2019
Responsible	SF	Date updated	April 2023

Year	Area/Location	Number/Measure	Habitat	Method	O/A Impacts
2014	Carnoch SW	10 Baseline	Moor	BPG-DSH	Light/moderate
2015	Druim Laith NE	10 Baseline	Moor	BPG-DSH	Light/moderate
2016	Druim Laith NW	10 Baseline	Moor	BPG-DSH	Light/moderate
2017	Carnoch SW	9 1 <sup>st</sup> re-measure	Moor	BPG-DSH	Light Moderate
2017	Carnoch GC	5 Baseline	Moor	BPG-DSH	Light/moderate
2018	Druim Laith NE	10, 1 <sup>st</sup> re-measure	Moor	BPG-DSH	Light/moderate
2020	Carnoch South	NE Sub-Group	Moor	CM - DSH	Light/moderate
2021	Carnoch South	NE Sub-Group	Moor	CM - BB	Light/moderate
2021	Druim Laith NW	10, 1 <sup>st</sup> re-measure	Moor	BPG-DSH	Light/moderate
2021	Carnoch GC	5 1 <sup>st</sup> re measure	Moor	BPG-DSH	Light/moderate
	Druim Laith NE	10 2 <sup>nd</sup> re-measure	Moor	BPG-DSH	
	Carnoch SW	10 2 re measure	Moor	BPG-DSH	
	Druim Laith NW	10 2 <sup>nd</sup> re-measure	Moor	BPG-DSH	
	Carnoch GC	10 2 re measure	Moor	BPG-DSH	

Information provided by: - SF

Carnoch Estate straddles the East Loch Shiel DMG area boundary with the Morvern DMG area. With effect from 2020 HIA on Morvern DMG has been contracted out. The results of the MDMG Carnoch monitoring will also be used to inform the overall Carnoch/Druim Laith Estate HIA.

East Loch Shiel Deer Management Group. HIA Log

Sheet No.3	Landholding: - SNH/ NatureScot Claish Moss.	Date created	17/04/2019
Responsible		Date updated	April 2023

Year	Area/Location	Number/Measure	Habitat	Method	O/A Impacts
2013	Claish Moss			SCM	
2021	Claish Moss	12 Baseline	BB	BPG	Light/Moderate
2021	Claish Moss	9 Baseline	DSH	BPG	Light/Moderate

Information provided by: - GT – LS – SC
---

Email GT 12/09/2018. Just to let you know that we will be monitoring Claish in 2019 using Wild Deer Best Practice. The site has also been subject to multiple rounds of SNH site condition monitoring between 2000-2013 so effectively the 2019 HIA is a continuation. We could also do woodland plots in 2019 whilst doing our open range if that helps the group progress, however woodland is very limited on the site so I would expect we could manage only one or two plots

Action Plan response LS 14/01/2020. 'The SNH Nature Reserves team confirmed on 30/10/19 that HIA was not carried out in 2019 therefore no historical detail can be provided'. 'HIA on Claish Moss is to be carried out in 2020 and results will be circulated.'

East Loch Shiel Deer Management Group. HIA Log

Sheet No.4	Landholding: - Conaglen	Date created	17/04/2019
Responsible	DM	Date updated	April 2023

Year	Area/Location	Number/Measure	Habitat	Method	O/A Impacts
2018	Conaglen	10 Baseline	BB	BPG-BB	Light/moderate
2019	Conaglen	48 Baseline	Moor	BPG-DSH	Light/moderate
	Conaglen	10, 1 <sup>st</sup> re-measure	BB	BPG-BB	
	Conaglen	48 re-measure	Moor	BPG-DSH	

Information provided by: - DM
-------------------------------

East Loch Shiel Deer Management Group. HIA Log

Sheet No.5	Landholding: - FLS	Date created	17/04/2019
Responsible	JJ	Date updated	April 2023

Year	Area/Location	Number/Measure	Habitat	Method	O/A Impacts

Information provided by: -

FLS recently published draft FLS Drimnatorran (2022) and Glenhurich (2023) Land Management Plans (LMPs), which contain more detail on their HIA. Once approved FLS will be invited to summarise their HIA data for inclusion into our DMP.

### East Loch Shiel Deer Management Group. HIA Log

Sheet No.6	Landholding: - Inversanda North/South	Date created	17/04/2019
Responsible	HP	Date updated	April 2023

Year	Area/Location	Number/Measure	Habitat	Method	O/A Impacts
2020	Inversanda South	NE Sub-Group	Moor	CM - DSH	Light/moderate
2021	Inversanda South	NE Sub-Group	Moor	CM - BB	Light/moderate
2021	Inversanda	10 Baseline	Moor	BPG-DSH	Light/moderate
	Inversanda	1 <sup>st</sup> re-measure	Moor	BPG-DSH	

Information provided by: - HP

Inversanda Estate straddles the East Loch Shiel DMG area boundary with the Morvern DMG area. With effect from 2020 HIA on Morvern DMG has been contracted out. The results of the MDMG monitoring will also be used to inform the overall Inversanda Estate HIA.

East Loch Shiel Deer Management Group. HIA Log

Sheet No.7	Landholding: - Resipole	Date created	17/04/2019
Responsible	PS/RS	Date updated	April 2023

Year	Area/Location	Number/Measure	Habitat	Method	O/A Impacts
2019	Resipole Farm	10 Baseline	Moor	BPG-DSH	Light
	Resipole Farm	10 1 <sup>st</sup> re-measure	Moor	BPG-DSH	

Information provided by: - RS

Resipole also advise they carry out ‘Woodland Grazing Toolbox’ Impact Assessments on an annual basis which commenced 2014 following on from other woodland HIA.

East Loch Shiel Deer Management Group. HIA Log

Sheet No.8	Landholding: - SGRIPD	Date created	17/04/2019
Responsible	RD	Date updated	April 2023

Year	Area/Location	Number/Measure	Habitat	Method	O/A Impacts
2019	Sunart Estate	30 Baseline	BB	BPG	Light/Moderate
2019	Sunart Estate	30 Baseline	DSH	BPG	Light/Moderate
	Sunart Estate	30 1 <sup>st</sup> re-measure	BB	BPG	
	Sunart Estate	30 1 <sup>st</sup> re-measure	DSH	BPG	

Information provided by: - RD.

Sunart Estate arranged for Mountain Environment Services to carry out baseline HIA on BB and DSH to BPG during July and August 2019. A comprehensive report was issued and copied to the DMG.

## PART 3

### Browsing and Trampling Impacts

<b>East Loch Shiel DMG HIA Open Range Summary.</b>					<b>Baseline Data</b>		ELS HIA Summary - Excel		
<b>Browsing impacts</b>					<b>Apr-23</b>				
Method used: BPG Blanket Bog					Method used: BPG Dwarf Shrub Heath				
Analysis used: SNH Spreadsheet					Analysis used: SNH Spreadsheet				
<b>Estate</b>	<b># plots</b>	<b>Light</b>	<b>Moderate</b>	<b>Heavy</b>	<b>Estate</b>	<b># plots</b>	<b>Light</b>	<b>Moderate</b>	<b>Heavy</b>
Ardgour/C	7	2	3	2	Ardgour/C	5	1	4	
Carnoch N	21	18	1	2	Carnoch N	35	28	5	2
SNH Clais	12	11	1		SNH Clais	9	5	3	1
Conaglen	10	6	1	3	Conaglen	48	29	10	9
FLS					FLS				
Inversanda					Inversand	10	5	5	
Resipole					Resipole	10	10		
Sunart	30	24	2	4	Sunart	30	17	6	7
<b># Results</b>	<b>80</b>	<b>61</b>	<b>8</b>	<b>11</b>	<b># Results</b>	<b>147</b>	<b>95</b>	<b>33</b>	<b>19</b>
		<b>Light</b>	<b>Moderate</b>	<b>Heavy</b>			<b>Light</b>	<b>Moderate</b>	<b>Heavy</b>
		76%	10%	14%			65%	22%	13%

**BPG BB Browsing Impacts**

Impact Level	Percentage
Light	76%
Moderate	10%
Heavy	14%

**BPG DSH Browsing Impacts**

Impact Level	Percentage
Light	65%
Moderate	22%
Heavy	13%



**East Loch Shiel DMG HIA Open Range Summary.** **Baseline Data** ELS HIA Summary - Excel

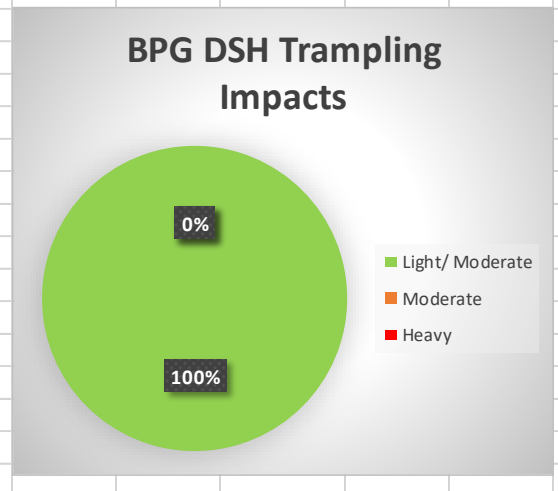
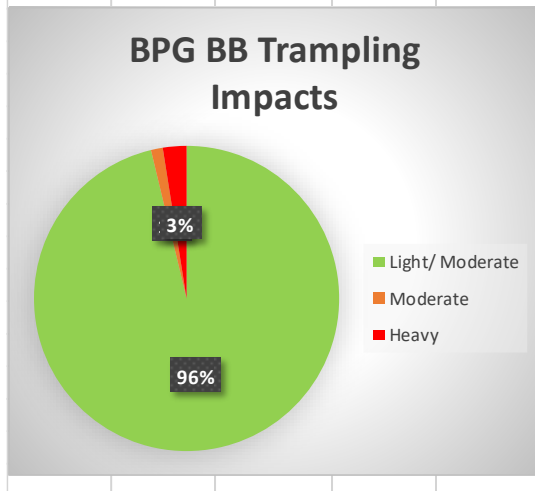
**Trampling Impacts** **Apr-23**

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

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

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

Estate	# plots	Light/ Moderate	Moderate	Heavy
Ardgour/C	5	5		
Carnoch N	35	35		
SNH Clais	9	9		
Conaglen	48	48		
FLS				
Inversand	10	10		
Resipole	10	10		
Sunart	30	30		
<b># Results</b>	<b>147</b>	<b>147</b>	<b>0</b>	<b>0</b>
		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.