

ELSDMG EASTERN WORKING GROUP – HABITAT AND IMPACTS ASSESSMENT LOG – Appendix 13

Summary information

Issue June 2026

This issue of the Habitat and Impacts Assessment Log is Appendix 13 to the ELSDMG Eastern Working Group DMP and supersedes previous versions.

Executive Summary

This Habitat and Impacts Assessment Log records the Eastern Working Group's current assessment of habitat, habitat condition, herbivore impacts and related management issues across the East Loch Shiel DMG area. It supports the DMP and should be read alongside the Background Information and Population Models and Targets appendices.

The log concludes that designated and non-designated habitats continue to show the effects of long-term reductions in domestic livestock, woodland protection and creation, and ongoing habitat management. Across the wider open range, available HIA evidence indicates that herbivore impacts are currently within the DMG target, with heavier impacts generally localised and more often associated with areas where domestic livestock remain present.

The document also notes a number of wider habitat pressures and management considerations, including rank vegetation, heather beetle, purple moor grass, bracken, heath-star moss, wildfire risk, vegetation succession, ticks and impacts on historic features. In several of these areas, the assessment is that further reductions in deer numbers would be unlikely to deliver improvement and could even make matters worse. Other management measures will be required.

On the basis of the evidence summarised here, the officers of the DMG consider that the East Loch Shiel Eastern Working Group area target spring deer density can remain at up to 10.5 deer per km² in relation to habitat impacts. The principal ongoing actions are therefore to maintain the planned cull, continue woodland and habitat restoration work, address any localised areas of higher impact on a landholding basis, and keep the log under review as further monitoring information becomes available.

Deer Management Priority Area

At the 2024 ADMG AGM, a slide identified the ELSDMG area as one of several Deer Management Priority Areas. Although no prior notification or further detail was provided at the time or since, NatureScot WMOs explained at our April 2024 meeting, and again later that day at a neighbouring DMG meeting, that this designation recognised the significant positive work already underway in habitat preservation and restoration across areas forming part of an Atlantic Rainforest cluster and is a positive endorsement of ongoing efforts within ELS.

Habitats and Impacts

Designated Sites

Designated sites are assessed through NatureScot's Site Condition Monitoring (SCM) programme and/or Site Checks. They are covered in more detail in the ELS DMP Background Information document and in NatureScot reporting.¹

The area has a long record of delivering landscape-scale habitat and environmental benefits through reductions in domestic livestock, the use of livestock and deer exclosures, and woodland planting. Further woodland protection, creation and regeneration projects are now underway on designated features. These continue to use rotational fencing to support a mosaic of landscape management rather than a single management type.

This approach, pioneered on Conaglen, pre-dates by many decades the model more recently identified in the SNH report by Peterken and Worrell (2005), which recommends enclosures for "15 years in every 100 years to allow a pulse of regeneration" and considers the full woodland lifecycle.

Below is a brief summary of woodland management and habitat enhancement work completed in the East Loch Shiel DMG area over 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 also 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

For non-designated areas, the HIA methods promoted by NatureScot are NWSS, Best Practice Dwarf Shrub Heath (DSH), and Best Practice Blanket Bog (BB). Where landholdings use other methods, they are responsible for confirming whether deer impacts remain within the DMG target. The group's agreed herbivore grazing and trampling target for non-designated habitats is at least 50% light or moderate impact.

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}.

While the current Best Practice HIA guides can help indicate overall habitat condition and change over time, the method remains too subjective and imprecise to provide definitive statistical analysis across a DMG-scale deer range, especially when applied by different personnel with varying levels of training and guidance. The current guides, recently updated with changes and still incomplete (current as of May 2026) further reduce consistency in monitoring and reporting. We are now advised that the guides and method is under review and will change again.

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 grazing⁴.

There are some isolated pockets of Blanket Bog identified in the EWG area (Whilst just over 3% of the ELSDMG area is identified as Blanket Bog/Peatland (BB) the majority of this is contained in the SCC Longrigg and NS Claish Moss, both in the WWG area.)

Monitoring therefore focuses on moorland habitats in selected areas where heather is present. In a landscape with extensive grassland, such as the EWG area of East Loch Shiel, there is concern that impacts measured only in heather-bearing areas may not fully represent overall habitat condition or impacts.

Notwithstanding the above, BPG Habitat Impact Assessment plots have been established across the EWG open range using the BB and DSH guides at a density exceeding that agreed with SNH. Analysis indicates that herbivore impacts are within target, with re-measures and deer managers' observations showing increased vegetation height and ground cover and, in many cases, re-vegetation of peat hags. Heavier impacts are often concentrated in areas where domestic livestock is still 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.

Ash dieback is present in our area. Ash dieback causes progressive leaf loss resulting, over time, in only sparse areas of foliage remaining in the tree crown. Ash dieback has killed ash trees across Europe. It is usually fatal in younger trees. Older trees more often die from the combined impact of ash dieback and other root pathogens such as the honey fungus (*Armillaria mellea*). [Ash dieback | Scottish Forestry](#)

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

Phytophthora ramorum is present in our area affecting larch trees resulting in the need for any infected trees being removed as well as from an isolation zone around the infection.

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 are invited to summarise their HIA data for inclusion into our DMP.

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).

[Scotland's Soils - soil maps](#)

It is now recognised the organic soils that exist over much of the ELSDMG area, even when shallow, are a massive carbon store holding more carbon than even mature commercial forestry can. If trees grow in these areas, either re-gen or planted, the soils are dried out by respiration and release the trapped carbon at a far greater rate than the growing trees can absorb. This will be exacerbated by any ground preparation before planting. There is an explanatory article by V. Clements that was published in the Scottish Gamekeepers Association magazine that can be viewed on this link.

<https://www.scottishgamekeepers.co.uk/latest-news/2023/2023-09-14-in-the-atmosphere-in-the-trees-or-in-the-ground.php>

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 km² in 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.

Over roughly the past 40 years, documented changes in management practice have significantly reduced overall large-herbivore pressure. More than 13,170 sheep plus followers and more than 350 cows plus followers have been removed from the ELS open range during this period. By number alone, this represents a reduction of more than 75% in large-herbivore presence and has been accompanied by reduced impacts and corresponding increases in vegetation height and ground cover. With large areas now free of domestic livestock, overall grazing pressure is lower than at any point for many decades, and likely centuries, with remaining higher impacts largely concentrated where livestock continue to graze.

In some places, however, reduced herbivore presence has allowed vegetation to become tall and rank, with a less diverse structure, increased wildfire risk, and lower biodiversity value. Deer densities have remained stable for a long period at about 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 generally in the low to medium range, though some localised heavier impacts will occur irrespective of deer density and can help maintain biodiversity. High quality heaths are generally structurally diverse, containing stands of vegetation with heather at different stages of growth. Where there are few or no large herbivores, heather tends over time to become tall and rank, reducing biodiversity, offering limited fodder, increasing wildfire risk, and becoming more vulnerable to heather beetle. Long-term moorland studies also associate unmanaged rank heather on organic soils with drier surface conditions and reduced carbon-storage potential. It is suggested that further reductions in deer numbers would be more likely to worsen this situation than improve it.

Heather in the area is showing mainly low to moderate herbivore impacts and remains able to flower and set seed, with higher impacts still concentrated where domestic livestock continues to graze.

Heather Beetle Impacts

Heather beetle impacts have been observed year on year with members reporting much higher than normal heather beetle impacts in some years⁵. 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 \(heathertrust.co.uk\)](http://heatherbeetle.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, which include reduction in average heights and loss of heather, occur gradually. With no recording of Heather Beetle impacts in the BPG 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.

Grassland

Grassland is extensive covering much of the area. It is recognised that grassland often 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 was a heading for Grassland included in the

Habitat Impacts section of the BPG there was no BPG HIA published method for grassland or grass-dominated habitats. There was a note ‘*simply holding page for now*’ (Current 10/6/2025) for grassland monitoring. However this is not included in the later updated guides (current 18/05/2026) where there is now no mention of impacts on grassland.⁴

Molinia caerulea

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 purple moor grass-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

Bracken spread is already a challenge in many areas and can increase when grazing and browsing pressure is reduced. Dominant bracken can create conditions where few other plant species can survive, leading to very low plant diversity.

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.

Heath-Star Moss

Heath-star moss, an invasive spreading non-native species, is present in the area and can displace native mosses and other DSH plants, reducing biodiversity. Where it displaces native sphagnum mosses, which are peat-forming, it may also reduce the moorland's capacity to sequester and store carbon. It is suggested that further reductions in deer numbers are unlikely to have any benefit in relation to heath-star moss spread. Other methods to reduce its spread will be needed.

Vegetation Succession

Long-term Welsh moorland research highlights that when moorland is left unmanaged, vegetation succession towards rank heather, scrub and bracken can threaten specialist species and reduce habitat quality.

A Natural Resources Wales report identifies vegetation succession as a threat to 455 species.

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 in regard to the incidence of Lyme Disease. Other methods to reduce the incidence of Lyme Disease transmission to humans and livestock will be required.

Wildfire

Reduced grazing, browsing and controlled burning have, in many places, increased vegetation cover, height and, in particular, the amount of dry dead matter available as fuel if wildfire starts. Further restrictions on controlled burning under Muirburn legislation are likely to increase this risk.

Wildfires can cause severe damage, burning down to the soil and even into peat, releasing large amounts of CO² to the atmosphere. People, livestock, wildlife, seedlings, saplings, trees, fences and property may all be at risk. Wildfires can burn intensely, and the plants that appear most able to benefit are purple moor grass and bracken.

Further reductions in deer numbers are, rather than making improvements, likely to make matters worse in regard to both the risk of wildfires and the severity of damage should a wildfire occur.

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.

Further reductions in deer numbers are, rather than making improvements, likely to make matters worse in regard to the risk to historic and cultural features.

Deer Density

Deer Density Target

The officers of the DMG conclude that, in relation to deer impacts, the East Loch Shiel DMG target spring deer density can remain at up to 10.5 per km². Reference should be made to Appendix 15 (Population Models and Targets), which considers wider population criteria, indicators, the collective objectives of DMG members, and the public interest in setting overall population and cull targets.

Ongoing Actions

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

With herbivore impacts in non-designated areas currently within DMG targets, the main requirement is ongoing maintenance and the management of any localised areas of unacceptably high deer impact on a landholding-by-landholding basis.

Emphasis remains on deer managers maintaining the DMG's planned cull through the 2026/27 season.

H&IA data will continue to be considered alongside Population Model updates and wider population criteria, indicators, the collective objectives of DMG members and the public interest when setting overall population and cull targets.

This H&IA document should be reviewed periodically to incorporate updated and new information.

Notes

Scottish Natural Heritage (SNH), which incorporated the former Deer Commission for Scotland (DCS), has been renamed NatureScot (NS) and is the Government agency responsible for implementing deer policy. Any of these names or initials may therefore appear in ELSDMG HIA reports and related 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?’’

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 within, 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 suite of original DCS 2008 guides were still online on 10/06/2025. An incomplete set of reviewed/updated guides had been published by May 2026. We are now told that these are under review and will change yet again.

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.

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 may have and continue to lead to affect the 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.

