

Appendix B

Site descriptions

Syltneset (overgrown heathland):

Parts of the surrounding area of this site was afforested in the 1950s, 70s, and 80s, and trees from nearby plantation have spread to this study site. The burning of heather here subsided during the 1960s, and since then the area started to become overgrown (Ekelund, 2014). Most of the heaths were dominated by old *Calluna* and several species typical for heathlands in the degenerate phase. These species include juniper (*Juniperus communis*), birch (*Betula pubescens*), rowan (*Sorbus aucuparia*), Sitka spruce (*Picea sitchensis*), and pine (*Pinus sylvestris*). The cover of tall shrubs and bog bilberry (*Vaccinium uliginosum*) was also high.



Figure X: Overview of vegetation at Syltneset taken in June 2022.

Lerøysundet (overgrown heathland):

The vegetation in this area was also clearly impacted by the absence of burning and grazing. The *Calluna* was old and species like *Juniperus communis*, *Salix repens*, and *Vaccinium uliginosum* were common. Tall shrubs and trees were also prominent. According to the map tool Kilden from NIBIO, the forest was mostly coniferous with elements of spruce.



Figure X: Overview of vegetation at Lerøysundet taken in June 2022.

Utkilen (overgrown heathland):

The forest around this site was also coniferous (Kilden, NIBIO). Here, the cover of shrubs like *Juniperus* was smaller compared to the other overgrown sites, and the cover of moss and *Erica tetralix* was higher. The *Calluna* was old, and tree cover in the surrounding area was quite high.



Figure X: Overview of vegetation at Utkilen taken in June 2022.

Krossøy, Austrheim (open heathland):

The *Calluna* in this location was estimated to be in the building phase (Kaland and Kvamme, 2013). Here, grazing pressure from sheep was high and burning had happened within the last decade. The landscape in this area was dominated by coastal heather with a mosaic of bog in flat parts (Eikelund, 2014). The tree cover was almost zero and the cover of shrubs was low. This site had a high presence of *Sphagnum* moss. Krossøy was quite homogenous, and bare rock was clearly visible. It faced west and was exposed to strong weather. Wind speed was generally stronger here compared to all other sites. This site was also the only one with presence of *Erica cinerea*. *Pedicularis sylvatica* was also observed with visitations by *Bombus* during June. Krossøy was a relatively big continuous area not much affected by modern agriculture or technical intervention (Moe, 2003). This heathland was the biggest and most intact of the heathlands in Austrheim. According to Kilden, the heather here was categorized as medium wet heathland (H3) (Kaland and Kvamme, 2013).



Figure X: Overview of vegetation at Krossøy taken in June 2022.

Øksnes (open heathland):

The *Calluna* in this location was estimated to be in the mature phase (Kaland and Kvamme, 2013). Here, grazing pressure was very low, likely only grazed by deer. Burning or clearing had not been maintained, so this location had a somewhat higher tree cover than the other open sites. It was also flatter and more graminoid dominated. Øksnes was a wet heath habitat, with mosaics of rocks and bog. Sphagnum moss dominated the moss cover. *Erica tetralix* and *Arthecium ossifragum* were some of the prevalent species in this site. Nitrogen levels in the soil might have been affected by air pollution from the Mongstad oil refinery (Førland, 1981).



Figure X: Overview of vegetation at Øksnes taken in June 2022.

Byngja (open heathland):

The *Calluna* in Byngja was in the mature phase (Kaland and Kvamme, 2013). Here, the vegetation was partially managed by grazing goats and manual clearing of spruce seedlings and saplings. No sign of burning was detected. The site was south facing and had a high vegetation cover. Less sphagnum was observed compared to the other open sites. This location had the highest presence of *Succisa pratensis*. Byngja was the most fragmented of the open heathlands, with large areas of Sitka spruce 50 meters from the site.



Figure X: Overview of vegetation at Byngja taken in June 2022.

References:

Førland (1981) 'Nedbørens kjemiske sammensetning i Nordhordland 1973 - 1976'. 33. Bergen: Norges allmennvitenskapelige forskningsråd.

Ekelund, K. 2014. Kystlynghei i Austrheim, Lindås, Radøy, Meland, Øygarden, Fjell og Sund. Registreringer i 2013 i forbindelse med Handlingsplan for kystlynghei. – Fylkesmannen i Hordaland, MVA-rapport 1/2014. 31 s

Kaland and Kvamme (2013) 'Kystlyngheiene i Norge – kunnskapsstatus og beskrivelse av 23 referanseområder'. Miljødirektoratet, p. 104.