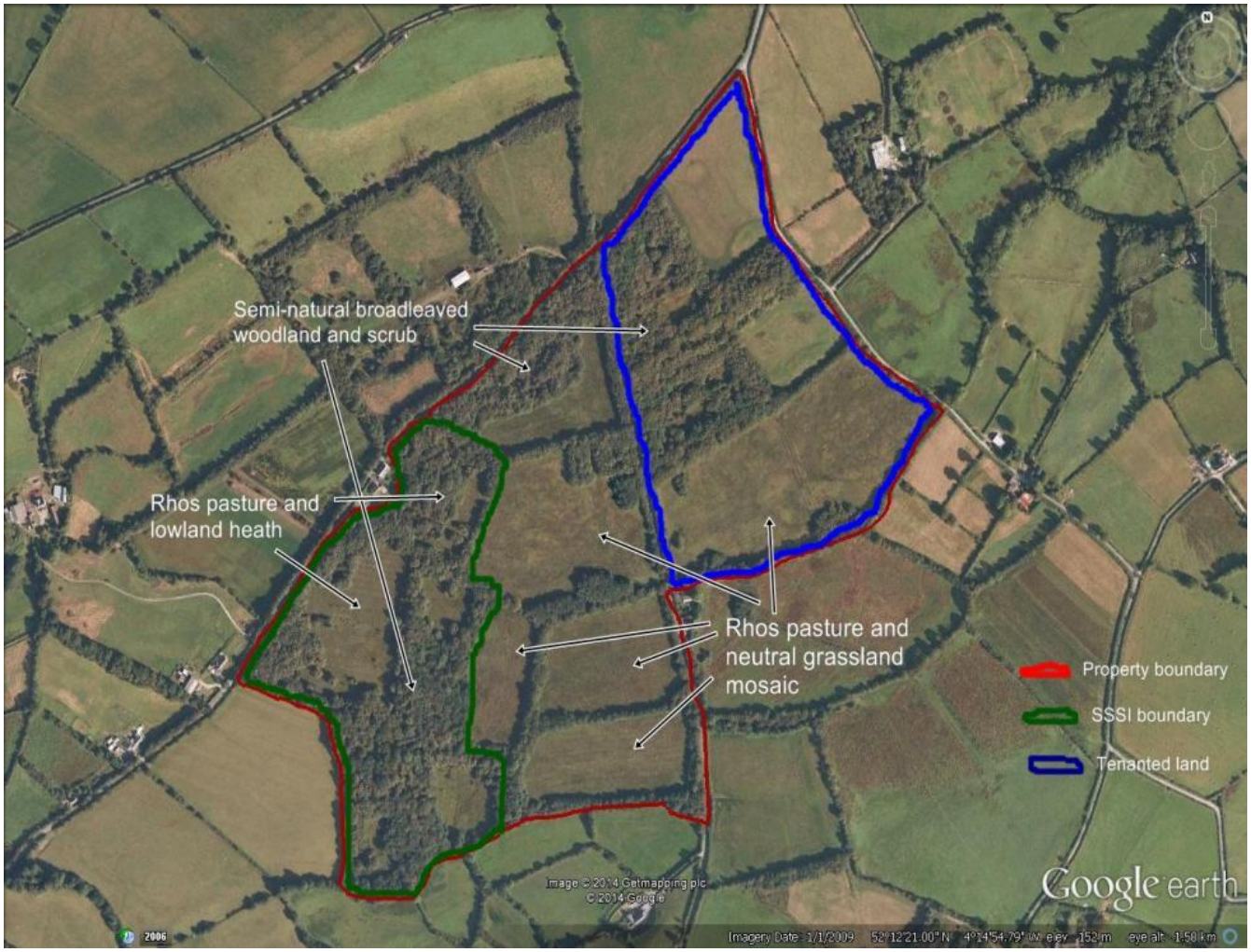
Scrub Clearance and Grazing Management on Rhôs Pasture and Marshy Grassland at Rhôs Cwmsaeson

Rhos Cwmsaeson is a 40 hectare holding of which 25 hectares is woodland and 15 hectares of purple moor grass and rush pasture (known in Wales as rhôs pasture), drier neutral grassland and lowland heath. The site is split into nine interconnected enclosures – all with a slightly different habitat mosaic.

This diversity of habitat supports a varied mosaic of lowland wet heath including heather, cross-leaved heath and purple moor-grass with some western gorse.The marshy grassland is characterised by stands of rushes and species such as small sedges, cross-leaved heath, marsh violet and heath spotted-orchid. Of special interest is the occurrence of whorled caraway, pale dog-violet and lesser butterfly-orchid. Devil's-bit scabious occurs in localised patches and, being the larval food plant of the rare marsh fritillary butterfly, is a key feature of the site. Rhôs Cwmsaeson is approximately 6 km away from the nearest marsh fritillary population. With management, the habitat should become more suitable for this species and Rhôs



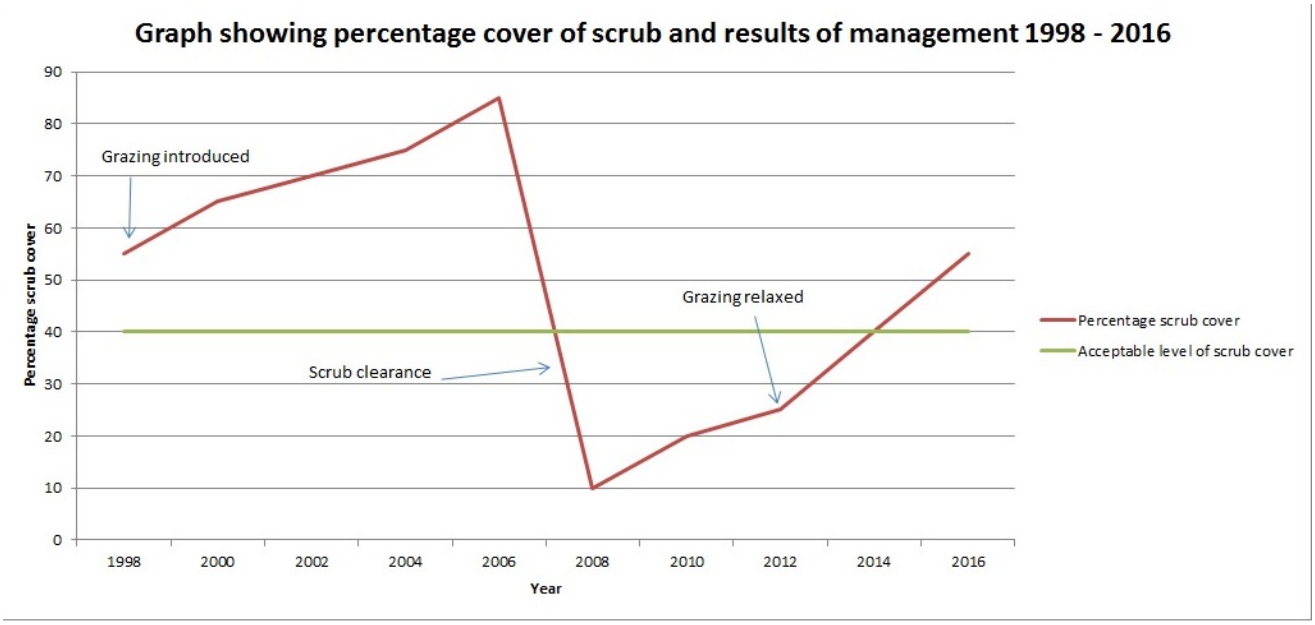
Aerial photograph of Rhôs Cwmseason.Image taken in 2009. Google Earth © 2014 Getmapping plc and © 2014 Google

Cwmsaeson could be considered as a reintroduction site. The drier areas of species-rich neutral grassland are characterised by yellow rattle, common knapweed, common birds-foot trefoil and grasses such as sweet vernal grass, red fescue and crested dog's-tail. In 1987, 10 hectares of Rhôs Cwmsaeson was designated a Site of Special Scientific Interest (SSSI) due to the presence of the marsh fritillary butterfly, whorled caraway and pale dog violet, and in 1989 the land came to the National Trust as part of the wider Llanerchaeron estate.

During the first period of ownership by the Trust, the pasture was left unmanaged. Woodland borders around all the enclosures started to encroach from the margins into the grassland. The Trust, on realising the scale of the loss of open habitat, started to graze the land with 16 welsh black cattle in 1998, while also entering into an agri-environment scheme to clear around a hectare of scrub per year. Scrub control was undertaken in a different field each year on a rotation basis to make sure that some of this habitat was retained. Due to low staffing and volunteer levels, grazing was the preferred management option as the cattle were managed extensively year round.

After nine years, the Trust recognised that this management method was not producing the desired results, and scrub was slowly increasing across the site (see the graph on the following page showing levels of scrub across the site). Clearing only a hectare a year was not keeping up with fresh growth, and the low intensity grazing by cattle in the summer/autumn was not high enough to control regrowth. The Trust had a closed herd system and was not in a position to buy more livestock to increase the herd size.

In 2008, the Trust decided that major clearance work needed to be implemented immediately to rehabilitate the grassland and start to restore some of the lost rhôs pasture. Large areas of gorse and scrub were cleared to reveal the fields once more using clearing saws, a small wood chipper and a low pressure timber harvester to remove all cuttings from the site to prevent nutrient enrichment. The cost of clearing 10 hectares of scrub came to around £11,000.



The diversity of the grassland recovered quickly after this work, with a variety of species regenerating from the soil seed bank including whorled caraway, heather, heath milkwort, cotton grass and devil's-bit scabious. These species were directly beneath the gorse and scrub thickets and had been covered by the encroaching shrubs.

The ongoing grazing management did not vary before and after the scrub control in 2008. The site was grazed from June to October with between 10 – 20 cattle rotating round the fields. Over the last 10 years since the clearance work, the extensive cattle grazing has drastically enhanced the site. The first five years saw a wider variety of wild flowers and grasses, such as common lousewort, devil's-bit scabious and marsh bedstraw re-establishing throughout the fields, especially in the SSSI portion of the site. The frequency of key plant species remained constant from 2009 to 2012 suggesting that the grazing levels were just about managing to control the scrub regrowth. However, since 2012 cattle numbers have been limited to 10 and there has been a visible increase in scrub and tree saplings encroaching into the fields. The frequency of the positive indicator species including devil's-bit scabious, whorled caraway and ragged robin have also decreased over this period of time.

The National Trust's vision over the next five years, from 2017, is to reverse this recent decline in desirable species by reinstating a mechanical scrub clearance programme of works, and increasing the number of grazing animals. Either the cattle herd size will be increased, or a small Welsh mountain pony herd will be introducing alongside the cattle. A sequence of photos has been included to show the visible effect of mechanical scrub control on the site.

Photo sequence showing the change in scrub at Rhos Cwmsaeson prior to control in 2005, during works in 2008, regeneration of the vegetation in 2009 and 2010 and recent encroachment of scrub in 2017.

2005: European gorse and scrub encroachment.

i)

ii)

2008: i) rows of cut scrub following scrub removal, and ii) collecting the scrub arisings in large bags for removal from the site.

i)

ii)

2009: i) and ii) recovery of the underlying flora, particularly devil's-bit scabious, the summer following scrub control.

2010: sward regeneration two years after scrub control.

i) ii)

2017: i) and ii) level of scrub in January 2017 showing the regrowth from the reduced management.