

BALMUIRFIELD HOUSE – HOGWEED MANAGEMENT PLAN

Context:

Giant Hogweed is an invasive species introduced to Britain in 1893. It escaped cultivation and has spread rapidly, especially along areas of wasteland, streams and river banks which all help aid the spread. The plant can grow up to 5M high and has large umbels of white flowers which run to seed (up to 50,000 per plant). The sap from the plants is a serious threat to human health, containing furanocoumarins which can increase sensitive reaction to light if it comes into contact with human skin, resulting in severe blistering and burns. The ecological impact of this species can include soil erosion, especially by rivers, and the formation of large monocultures which suppresses native plants, including grasses, which then has a direct impact of fauna and other habitats.

Balmuirfield House sits on approximately five acres of land. The house was part of a large jute industry and also sits before a derelict series of glass-houses that was one of Scotland's largest producers of tomatoes. The site and surrounding acreage is one of the biggest seed bowls for giant hogweed in Dundee and Angus and no management plan has been put in place or implemented until the new owners, Sally and Richard Mayers, took ownership of the property in July 2022.

This giant hogweed management plan outlines measures that have been put in place and lays out a pathway for the eradication of the species from the property and surrounding land. The management plan also addresses the owners' attempt to work in line with key legislation relating to the Wildlife and Countryside Act 1981, the Wildlife and Environment (Scotland) Act 2011; the Invasive Alien Species Regulation 2014 (EU) Species of Concern; Anti-Social Behaviour, Crime and Policing Act 2014 and Community Protection Notices; Environmental Protection Act 1990; Town and Country Planning Act 1990 and Town and Country Planning Act (Scotland) 1992; and Common Law.

Initial Steps

There has been no funding or additional support available to the land owners, despite enquiries made to Dundee and Angus council via email, phone, and through local MSPs (GD1747) and neighbouring land owners. Much of the following measures have been implemented individually and at the cost of the owners to address a wider community issue.

July 2022: The owners hired a 1.5 tonne digger to manually plough and dig out many of the tap roots across much of the land. This included the former dam which has since been converted into an agricultural field. Areas surrounding the property (not owned by Sally and Richard Mayers) have also been cleared to create a buffer zone and prevent re-infection of the land. Seeds were gathered and incinerated on site. Some seeds may remain dormant in the soil but this is addressed by grazing method as outlined later.



Pathways and obstacles were cleared so that all areas of the property could be accessed for the assessment and diagnosis of the problem. Many of the taproots were either damaged extensively or manually cut/destroyed to make high impact initial progress before seed dispersal.

24/00224/FULL & 24/00225/Full – Invasive Species Management Plan

This process of pulling, taproot cutting and removal of seed heads was initiated until early October when the growing season significantly reduced.

October 2022: Large sections of the land (where accessible) were ploughed using a rotavator to encourage the growth of native wildlife. A nitrogen-fixing herbal lays mix was sown across an area of approximately two acres to support the land. Dead willow and other trees afflicted by giant hogweed have been cut and removed to aid the growth of grass and other species which encourage wildlife to the area.

At the end of October, several goats were introduced into a confined, managed area to keep hogweed down in the woodland area. This was the first of several areas where grazing has seen positive benefits versus a more destructive herbicide use which is not part of the management plan for Balmuirfield House.

February 2023: The construction of agricultural fencing across a two-acre site and transference of livestock to aid with grazing. This led to significant reduction in giant hogweed across this site. This also led to discovery of other invasive species adjacent to our land (Himalayan Balsam and Ragwort).



May 2023: The arrival of pigs (black Berkshire breed) was introduced to train the animals to eat giant hogweed leaves and then root out taproot in hard to access areas.



This was primarily used alongside the river and throughout the lade areas. Using electrified fence to effectively strip graze, the land was later ploughed or sown with soil fixing grass seeds, essential to avoid erosion of bare soil from the elements and potential floodwaters of the Dighty Burn.

The process of grazing, rotation, ploughing and re-seeding of grasses was implemented in the following months up to March 2024. The process has led to defined paths and a significant reduction in weed growth. There has been poaching caused by nettles growing in areas where giant hogweed was once prevalent. This is now factored into the hand-pulling and grazing cycle.

During this time, representatives from Dundee Council, Angus Council and surrounding land-owners were contacted regarding extra support to create wider buffer zones and push back the species away from the watercourses. No additional help or support was offered by any, but appreciation was shown for efforts made to reduce infection and re-seeding of giant hogweed.

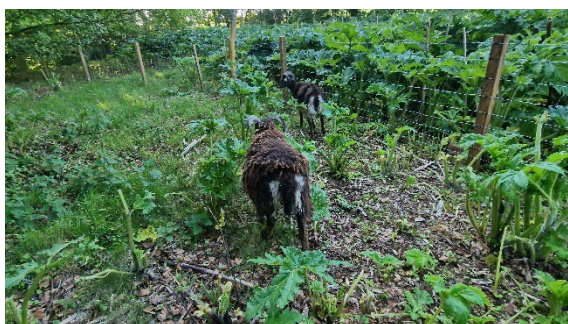
March 2024: More erection of fencing and strip grazing allowed livestock to begin grazing the emergence of saplings and young hogweed across areas to the rear of the property. Permission was given by Baldovan and Pitempton owners for the erection of fence (at cost of Balmuirfield House) for the purposes of biosecurity and invasive species control.

24/00224/FULL & 24/00225/Full – Invasive Species Management Plan



This was also in preparation for planning application 24/00225/Full ahead of submission in May 2024. Further boundaries were put up on and around land belonging to the estate of John Fraser to enable additional biosecurity measures, but with no financial support or offer of labour to deal with a problem which is primarily their responsibility.

August 2024: The majority of fencing was in place during the peak growing season of giant hogweed. Areas addressed in 2022 and 2023 saw significant reductions in giant hogweed numbers and will continue to be monitored for a period of 3-5 years to account for seed regeneration.



Methods for ongoing control:

The owners have found the combination of pigs and goats and sheep, working on a rotation, to be the most effective method of control.

During autumn and winter, the pigs (two Berkshire gilts and a Tamworth boar) will work across the most heavily infected areas to remove the roots and trample existing plants. In the spring and summer, sheep and goats will graze these areas to prevent plants running to seed.

On areas identified for eco-tourism and short-term rentals, owners will maintain vigilance and employ a combination of hand-pulling and ploughing of areas and then reseed with hardy combinations of grasses to increase biodiversity and strengthen soil banks. If an area is identified as being hazardous, strip grazing will be enforced and animals will be allowed to graze infected areas. Signage will be used to warn guests and supervision/education will be given to guests staying on the site.

2024 onwards:

24/00224/FULL & 24/00225/Full – Invasive Species Management Plan

The methods of grazing and rotation are the most effective in dealing with the pervasive nature of giant hogweed. Ethically, owners are opposed to using any type of herbicide for fear of long-term impacts on wildlife and human health, and the risk of leaching into the watercourses and having a wider ecological impact on native species. Stakeholders from SEPA have also been on site and are supportive of our work and efforts to remove giant hogweed and will be coordinating a response to improve the conditions of riverbanks, in conjunction with local councils.

The owners agree to maintain the management of their land and, by necessity, ensure neighbouring land does not allow the species to repopulate cleared areas. To do this, health risks to the owners are considered and appropriate PPE must be used avoid injury. Outdoor taps and cleaning stations have been created.

Further details can be found on the website <https://www.balmuirfieldhouse.co.uk/man-versus-giant-hogweed-removal-using-animals>

