



Tullochgorum Farm. Photo: Duncan Miller

Mob grazing for diversity: End of project report

Clem Sandison
Pasture for Life



Cairngorms
National Park
Pàirc Nàiseanta a'
Mhonaidh Ruaidh

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1. Background

The Mob Grazing for Diversity project was developed in response to stakeholder concerns about the risks associated with loss of species rich grassland in the national park. As an application to the Green Recovery Fund, the project was designed to deliver ecosystem outcomes by working with farmers across the Cairngorms National Park. The aim was to achieve sustainable grassland management through adaptive grazing management, or mob grazing, to promote ecosystem restoration and high agricultural productivity. The project was designed to align with existing work to build support and engagement in enhancing these habitats and protecting the species within them as set out in the Cairngorms Nature Action Plan.

The project aimed to utilise mob grazing methods to manage grasslands better, increase sward species diversity, and create biodiverse pastures. Working with five farms across the national park, each farm would need to produce a grazing management plan, implement adaptive grazing management, optimise sward productivity through rotational grazing systems and maintain permanent habitats in good biodiversity condition.

Working in partnership, a project was developed that would support each farm to work with a farming mentor to learn how to implement mob grazing, use of equipment and practicalities of implementing their grazing management plan. Plantlife Scotland delivered training on species identification and recording through the Rare Plants and Wild Connections project and provided information on meadow creation and management through the Plantlife meadows hub resource and staff. Plantlife Scotland also utilised their extensive community engagement capacity by engaging citizen scientists to undertake monitoring and surveying.

Habitat assessment methods

The plant species monitoring used a modified rapid habitat assessment for Scottish grasslands. This assessment method was developed in 2020 by botanist Ben Averis for Plantlife in response to an increased interest to do more work for grasslands in the national park. A definition for species rich grasslands in Scotland was also developed for NatureScot at this time. The team of citizen scientists were trained by Ben Averis to carry out these assessments.



Partners

- Nature Friendly Farming Network (NFFN) Year one only due to staffing change
- Pasture for Life (PfL)
- Cairngorms National Park Authority (the Park Authority)
- Plantlife Scotland
- Cairngorms Trust supported year one by providing Green Recovery Funding
- Additional support from RSPB Scotland and NatureScot



2. Aims of the project

Year one aims (April 2021 - March 2022):

1. Five farms located within the Cairngorms National Park agree to participate in the project in order to implement nature-based solutions to address climate change and biodiversity loss.
2. Initial grazing planning meeting and training, undertaken on a co-created basis to share knowledge of putting a mob grazing approach into place.
3. Training of project farmers to support plant identification and surveying skills to develop capacity in measuring and monitoring change.
4. Financial support provided for the purchase of required equipment to enable mob grazing, for example electric fencing, energiser, mobile water solutions.
5. Allocation of a mob grazing mentor to each participating farm to ensure they are supported adequately by an experienced mob grazing farmer to implement this new adaptive grazing approach.
6. Citizen scientists trained by Plantlife to carry out plant baseline surveys of the mob grazing sites.
7. Project coordinator to seek funding for 2022-2023 to support farms to progress their mob grazing trials in the following grazing season.

Year two aims (April 2022 - March 2023):

8. Participating farms undertake mob grazing trials and monitor changes to the sward.
9. Facilitated meetings and farm visits organised to share practice, discuss challenges and learnings, as well as to aid species diversity monitoring.
10. Digital content about mob grazing made available on the Plantlife Meadows Hub meadows.plantlife.org.uk
11. Evaluation of the project impact using farmer testimony and relevant baseline data (inc waders, plants) which can be used for future monitoring.

3. Overview of farms

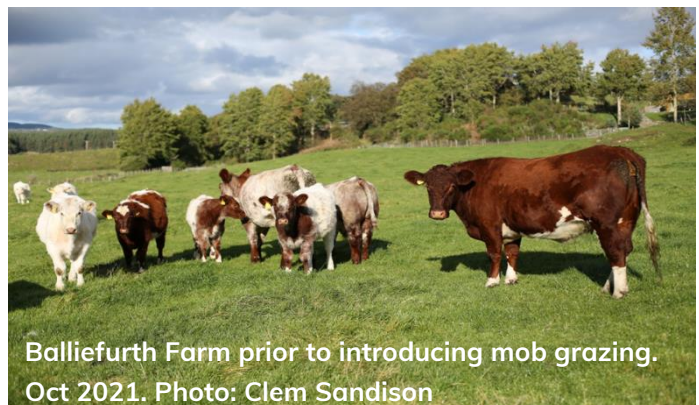


Tullochgorum Farm mob grazing set up. Photo: Duncan Miller

Farmer recruitment

Farmers were initially contacted by the Cairngorms National Park Authority. These were limited to those who had provided permission for a grassland survey in the Livet and Avon area of the national park in 2020 and also farmers who were already connected with conservation initiatives, mainly in Badenoch and Strathspey. It's possible that farmers did not fully understand what mob grazing involved at this stage, as the Park Authority staff were new to the concept and Pasture for Life were not involved in participant recruitment.

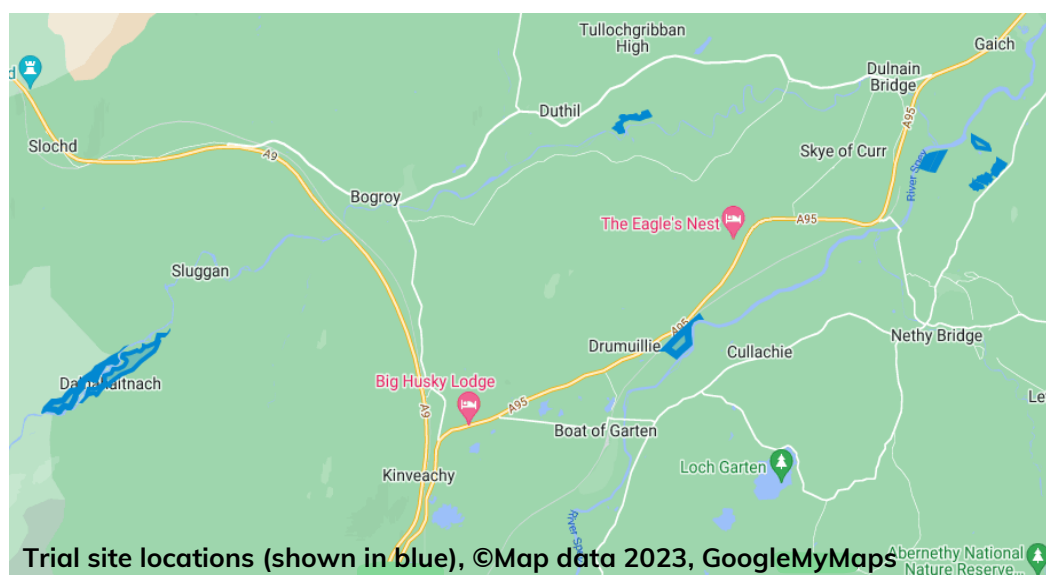
Two of the farmers originally recruited to take part, dropped out of the project in year one due to limited capacity and concerns about their ability to implement mob grazing, mainly due to constraints getting water to cattle. A new farmer was invited to join the group in Dec 2021 as a result of attending one of the public events, and the project continued into year two with four participating farms.



Balliefurth Farm prior to introducing mob grazing. Oct 2021. Photo: Clem Sandison

Trial locations

The mob grazing trial sites can be seen outlined in blue on the map below or viewed in detail [here](#).



All the sites were within or in the vicinity of European protected sites, and because the trial was funded as a project, a habitat regulations appraisal by the Park Authority and NatureScot was necessary. The process concluded there would be no impact on the integrity of any of the protected sites.

Grazing management prior to trial

Location	Grazing management prior to trial
Ballinlaggan (River Dulnain)	Five cows set-socked on permanent pasture, one whole field (approx two ha) at a time, for about a month, then moved on to the next field.
Balliefurth (River Spey)	All fields are grazed, using a mixture of set stocking and rotational grazing (three to five day moves) for both cattle and sheep. Some fields get used for silage before being grazed, fields in use May – Oct.
Tullochgorum (River Spey)	Grazed mid May – Dec with 120 suckler cows. 100 calving in the spring, 20 calving in the autumn. Spring cows all outwintered on deferred grazing and / or mainly forage crops. Trialled rotational grazing the year before the mob grazing project with one group, but most cows were mainly set stocked / rotated around a couple of fields.
Glebe of Deishar (River Dulnain)	Set stocked June – November with 47 cattle. Some grazing in May with sheep.

4. Outputs delivered

Training and events delivered in year one

August 2021: The first event took place bringing five farmers and 10 plant species monitoring volunteers together for their initial training session. The project seeks to help farmers increase pasture plant species diversity on their farms through adaptive grazing management.

1 October 2021: First online group meeting between mentors and mentees. This gave both mentors and mentees an opportunity to meet.

5 October 2021: In-person mob grazing training day took place at Balliefurth Farm, one of the participant farms. This was attended by representatives from four of the participating farms, delivered by Nikki Yoxall and Charley Walker (Barnside Farm, Farmers Weekly Grassland Manager of the Year 2019). This was a very well received event, with participants positive about learnings from the day.

1 November 2021: Visit to Robert Brewster in Angus to see mob grazing in action on a large scale. Three of the five participant farmers attended, and were positive about the condition of cattle and amount of grass available for the time of year, showing the additional benefits of adaptive grazing management beyond species biodiversity.

6 December 2021: Evening talk by holistic management and mob grazing expert Rob Havard from Phepson Angus in Grantown on Spey, attended by 37 people. An ecologist by training, Rob was able to highlight the environmental gains associated with adapting grazing and breeding management to maximise the potential of grasslands to meet production goals.

7 December 2021: Farm visit to Bobby Mackenzie, Glebe of Deishar accompanied by Rob Havard, Nikki and James Yoxall and Clem Sandison to review plans for implementing mob grazing along the River Dulnain and discussed importing species rich hay for bale grazing to improve the species mix.

January and February 2022: Farmers researching and sourcing their equipment to enable mob grazing.

24 March 2022: Farm walk at Tullochgorum Farm with mentees and project partners. Duncan Miller (mentee) introduced his plans for mob grazing this season, and we discussed infrastructure, water, areas of plant diversity. Followed by lunch for a wider discussion around grazing planning and next steps for the project. Evaluation forms completed.



Year one - Equipment purchased by farmers to support trials

Farm	Equipment
Ballinluggan	<ul style="list-style-type: none"> ● Kiwitech electric fencing system ● Voss solar powered energiser ● Water trough and MDPE pipework
Balliefurth	<ul style="list-style-type: none"> ● Solar water pump ● Yet to be installed, it will be very useful once installed, it will give us great scope to increase rotational and mob grazing
Tullochgorum	<ul style="list-style-type: none"> ● Solar water pump
Glebe of Deishar	<ul style="list-style-type: none"> ● Solar water pump

Training and events delivered in year two

April - June 2022: Setup and support phase. Regular check-ins and support from mentors (as required) while farmers got their mob grazing underway

15 - 16 July 2022: Pasture for Life Scotland Study Tour, Perthshire. Some members of the group attended a two day knowledge exchange event starting with a visit to Rotmell Farm in Perthshire. Alex Brewster led a farm tour visiting the hill ground and discussing:

- Holistic Management approaches to optimise the sward.
- Cattle selection in response to the change in system from winter housed TMR to year round outdoors, reducing frame size, reducing intervention and managing for health whilst meeting butcher requirements for weight.
- Bracken management in upland areas, the challenges of fencing that meets the needs of managing sheep and cattle.
- Epigenetics of pasture plants.

This was followed by an evening BBQ and social event. The next morning there was a farm walk to see the flerd and hear about the importance of dung beetles in an agroecosystem with a talk by Claire Whittle. Then attendees drove to the second farm - Mains of Fincastle - for lunch and a tour with Andrew Barbour to explore the agroforestry system and the benefits trees offer to livestock within their farming system.

30 August 2022: Glebe of Deishar farm tour with Bobby Mackenzie, Carrbridge. A group of 36 local farmers and other key stakeholders joined a farm walk to see how the Mob Grazing for Diversity trial was going at Glebe of Deishar. Bobby talked about his first year transitioning to regenerative grazing practices, moving his mob of cows and calves every three days on taller covers and using a solar powered pump for water. He also talked about his shift from continentals to more native breeds to improve outwintering capabilities and reduce costs. He demonstrated his infrastructure setup including electric fencing and solar water pump.



Nikki Yoxall (Pasture for Life) talking about dung beetles and Bobby Mackenzie demonstrating the solar water pump. Glebe of Deishar, August 2022. Photos: Clem Sandison

10 November 2022: Introduction to Mob Grazing with Nikki Yoxall, Carrbridge. 12 local farmers attended. In the morning Nikki provided an introduction to regenerative grazing, including understanding your own farm context, grazing planning and monitoring results. After lunch, the group visited Ballinlaggan farm who are taking part in the mob grazing trials and Mark showed everyone the grazing set up. Topics discussed included:

- Holistic Management
- Grazing planning and monitoring
- Grazing infrastructure - fencing and water
- Breed selection
- Reducing inputs
- Silvopasture (integration of trees and grazing)



Celebration meal. Feb 2023.
Photo: Nikki Yoxall

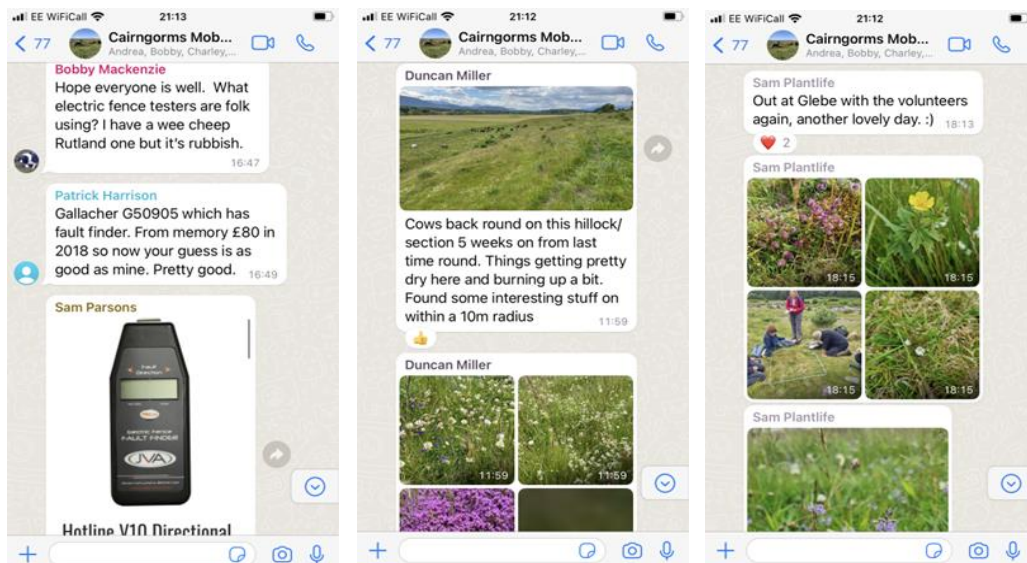
23 February 2023: Celebration and Evaluation

Pasture for Life, Plantlife and the Park Authority staff met with the participating farmers for a meal to celebrate the completion of the project, reflect on successes and challenges, and talk about next steps.

Whatsapp as a communication tool

Throughout the project, the group members (farmers, mentors and partners) participated in an active Whatsapp group

which was useful for feedback, technical questions, sharing grazing updates, event announcements, and info about plant species monitoring. We had positive feedback that this tool was a valuable way to share info.



5. Baseline data collected

Choice of datasets

Datasets were chosen based on:

- the interests and capacity of project partners
- data availability
- repeatability of assessments with a group of citizen scientists

Plant species diversity (monitoring total number of interesting plant species at each mob grazing location) was determined to be a good indicator of other conservation outcomes including invertebrate populations and soil health. If there was more time and funding a stronger focus on invertebrates and soils could have been considered. Farmers have been encouraged to use Soil Mentor to assess their own soils.

In the long term, positive conservation outcomes are expected for plants, invertebrates and soil as a result of ongoing mob grazing. We also want to monitor how changes to grazing management may impact wader populations.

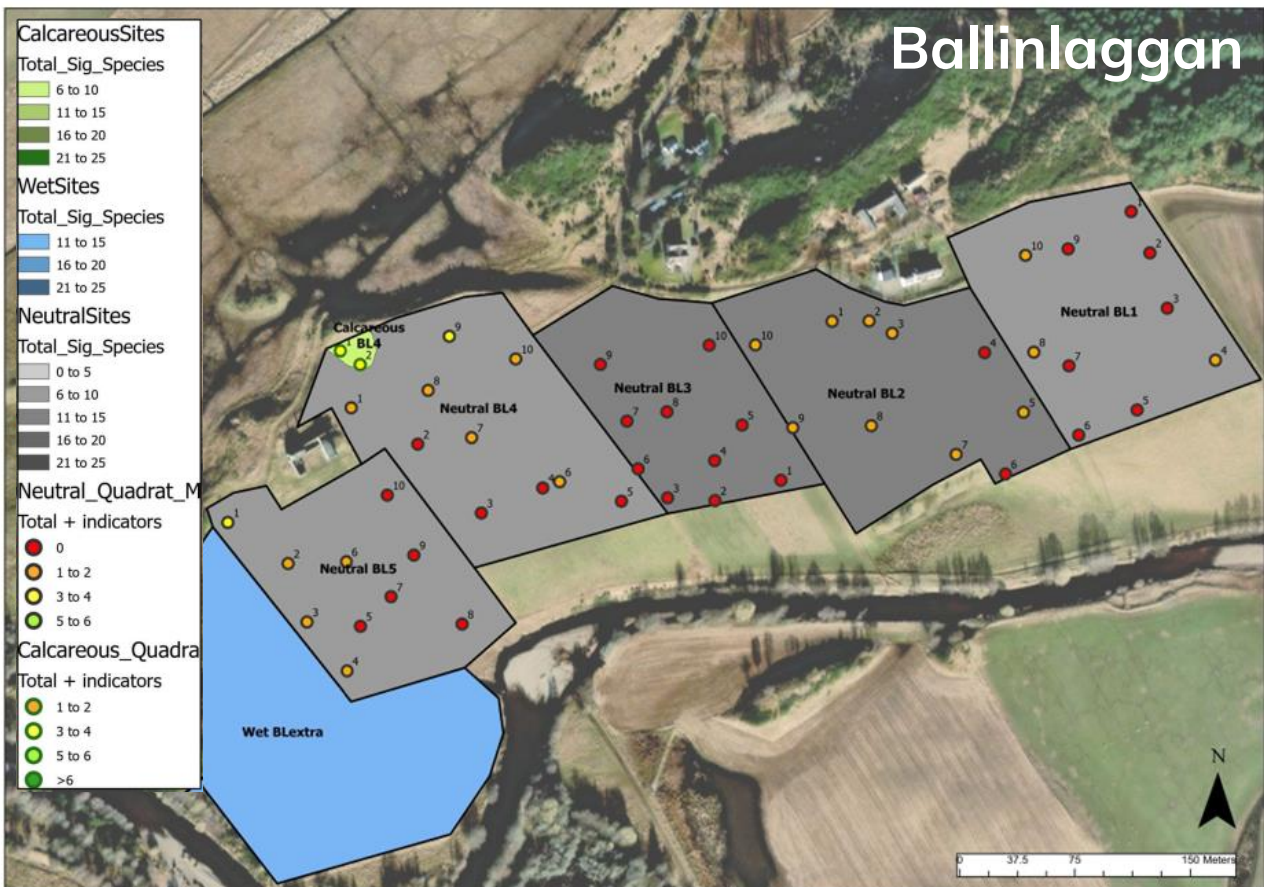
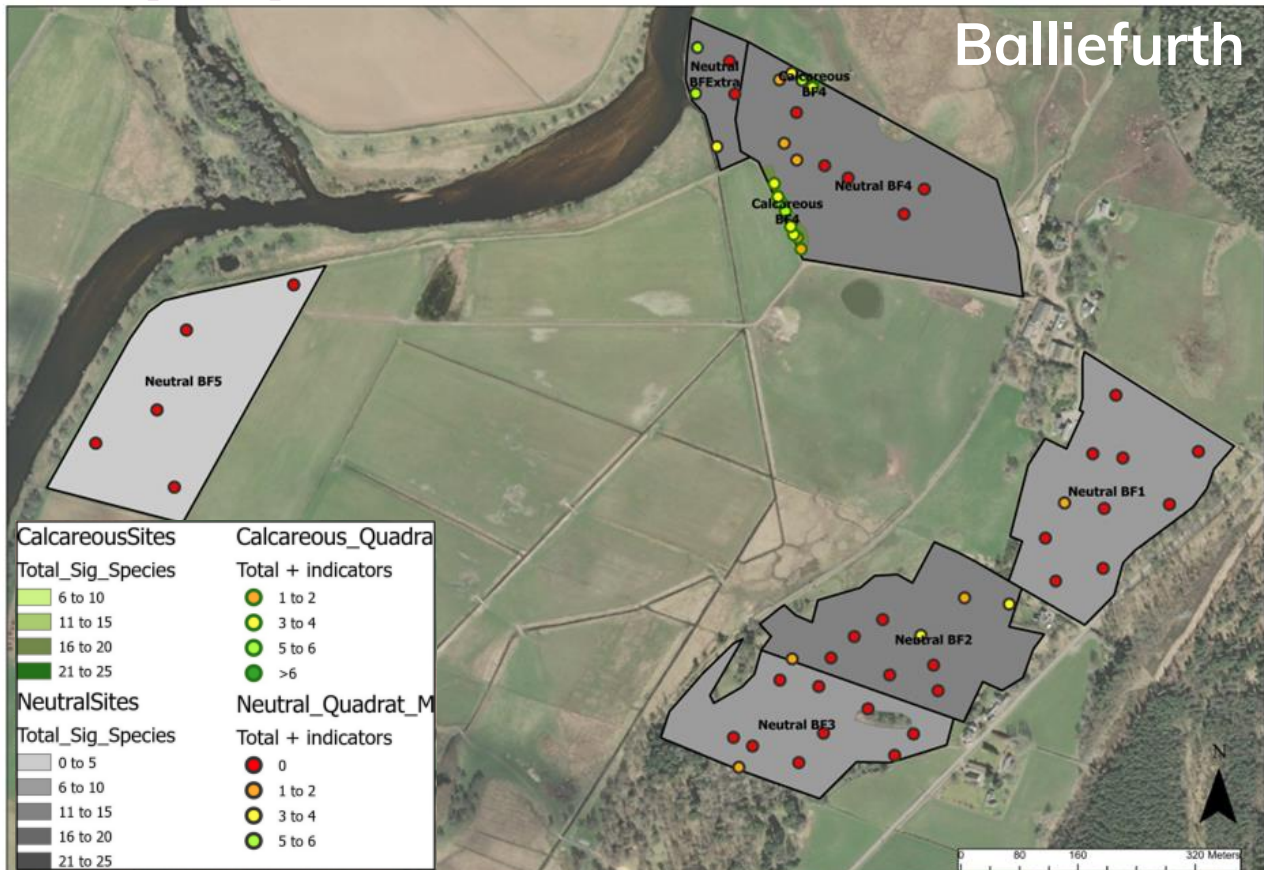
Plant species diversity surveys

Plantlife prepared a rapid habitat assessment specific to this region and trained a group of volunteers to use it to monitor participating farms. Volunteers were trained and had a chance to practise habitat and species ID, and were then partnered with farms to organise their own time and surveying work. In 2022 baseline data was collected, informing the starting conditions and species richness of each farm, with hope that in time we will record positive changes in response to these mob grazing trials. This monitoring will continue to be supported in coming years by Plantlife / the Park Authority. One of the mentors also took part in surveys, furthering their botanical knowledge.

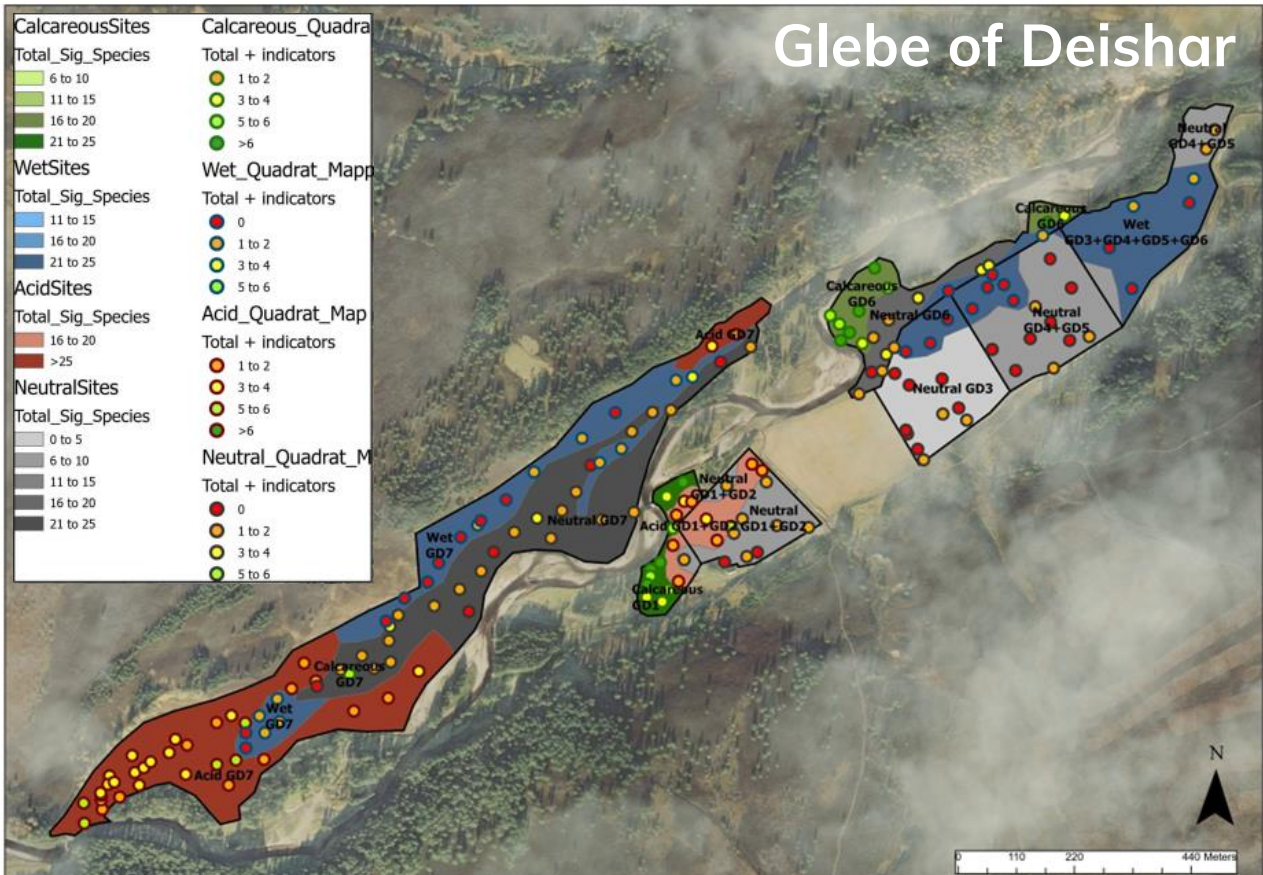
Farm	No. quadrats	Volunteer hours
Balliefurth	60	57
Ballinlagaan	52	58
Glebe of Deishar	169	87
Tullochgorum	45	48
	326	250



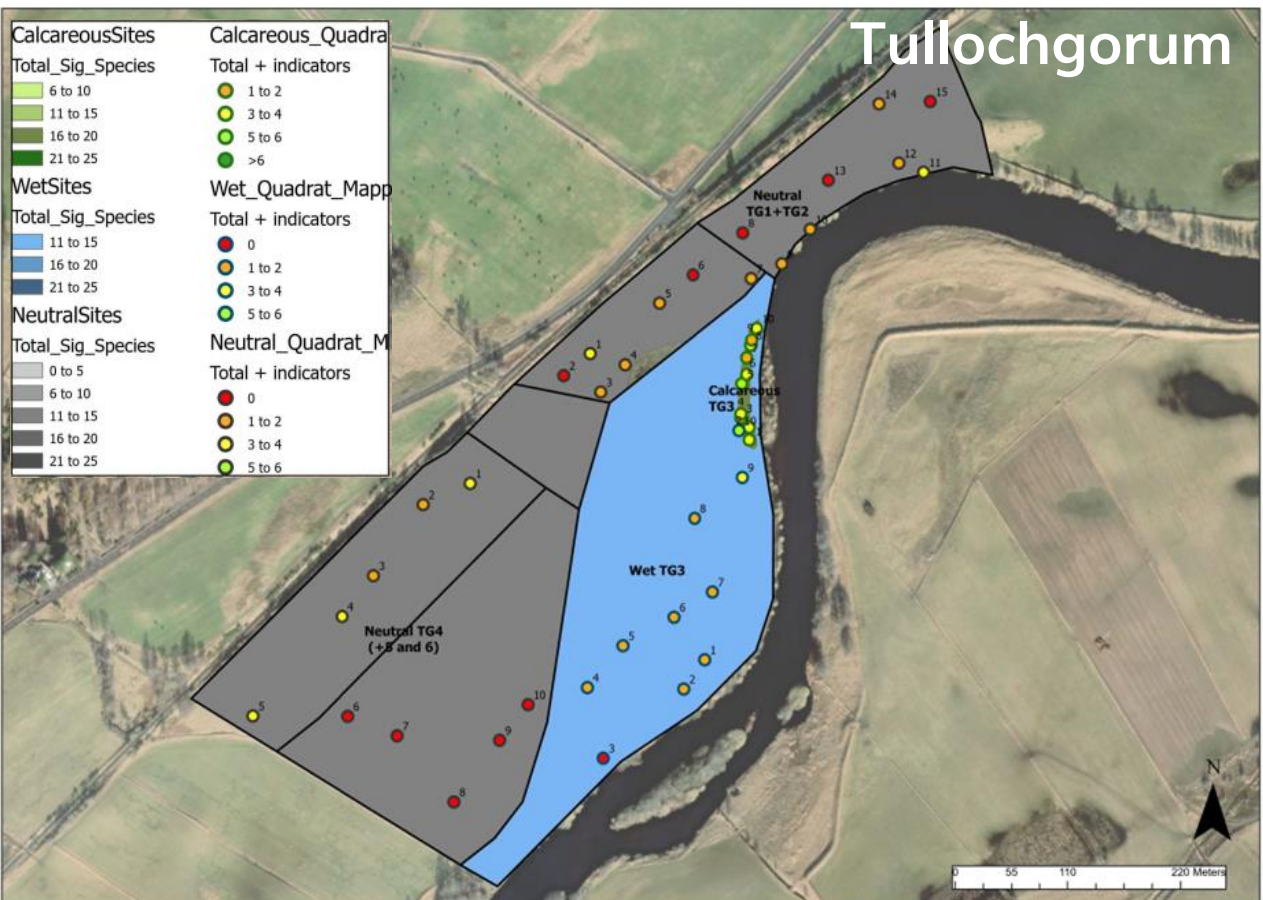
Farm plant species baseline data



Glebe of Deishar



Tullochgorum



Species recorded - total interesting species

Note: The following very typical species were not monitored: ryegrass and other common grasses, clover, daisy, common mouse ear, creeping buttercup, pineapple weed, knot grass, cow parsley, shepherd's purse, hogweed, plantain.

Balliefurth:	Ballinlaggan:	Glebe of Deishar:	Tullochgorum:
Bitter vetch	Chamomile	Bush vetch	Angelica
Chickweed	Common bird's foot trefoil	Chickweed	Bladder campion
Common bird's foot trefoil	Common cat's-ear	Common bird's foot trefoil	Bush vetch
Common cat's-ear	Common fumitory	Common cat's-ear	Common bird's foot trefoil
Common dog-violet	Common hemp nettle	Common dog-violet	Common cat's-ear
Common sorrel	Common sorrel	Common sorrel	Common dog-violet
Crested dog's tail	Corn marigold	Cowberry	Common sorrel
Dovesfoot cranesbill	Corncockle	Crested dog's tail	Devils bit scabious
Fragrant orchid	Cornflower	Cuckooflower	Germander speedwell
Germander speedwell	Crested dog's tail	Devils bit scabious	Goldenrod sp.
Harebell	Eyebright	Dwarf willow	Harebell
Heath bedstraw	Forget-me-not	Eyebright	Heath speedwell
Lady's bedstraw	Germander speedwell	Fairyflax	Kidney vetch
Lesser stichwort	Harebell	Forget-me-not	Knapweed
Meadow buttercup	Hawksbeard sp.	Foxglove	Lady's bedstraw
Meadow vetchling	Heath spotted orchid	Germander speedwell	Lesser stichwort
Meadowsweet	Kidney vetch	Harebell	Lupin
Milkwort sp.	Lady's bedstraw	Hawksbeard sp.	Marsh marigold
Mouse-ear hawkweed	Lesser spearwort	Hawksbit sp.	Marsh violet
Pignut	Lesser stichwort	Heath bedstraw	Marsh / fen bedstraw
Sheep's sorrel	Meadow buttercup	Heath speedwell	Meadow buttercup
Sheep's / red fescue	Meadow vetchling	Heather	Meadow vetchling
Sweet vernal grass	Melancholy thistle	Juniper	Meadowsweet
Thyme-leaved	Monkeyflower	Kidney vetch	Melancholy thistle

speedwell			
Tormentil	Mouse ear hawkweed	Lady's bedstraw	Mouse-ear hawkweed
Wild thyme	Oxeye daisy	Lesser spearwort	Pignut
Yarrow	Pignut	Lesser stichwort	Selfheal
Yellow rattle	Poppy	Marsh cinquefoil	Sheep sorrel
	Ragged robin	Marsh lousewort	Sheep's / red fescue
	Sheep's sorrel	Marsh marigold	Sneezewort
	Sheep's / red fescue	Marsh thistle	Sweet vernal grass
	Sneezewort	Marsh violet	Tormentil
	Sweet vernal grass	Marsh / fen bedstraw	Water mint
	Tufted vetch	Meadow buttercup	Wavy hair grass
	Valerian	Meadow vetchling	Wild thyme
	Vetch sp.	Milkwort Sp.	Yarrow
	White campion	Mouse-ear hawkweed	
	White dead nettle	Oval sedge	
	Wild radish	Ragged robin	
	Yarrow	Red dead nettle	
	Yellow rattle	Sedge sp.	
		Selfheal	
		Sheep's sorrel	
		Sheep's / red fescue	
		Sneezewort	
		Sweet vernal grass	
		Tormentil	
		Tufted vetch	
		White dead nettle	
		Wild raspberry	
		Wild thyme	
		Wood rush	
		Yarrow	
		Yellow rattle	
28	41	54	36



Surveying meadow flowers, Summer 2022. Photos: Sam Jones

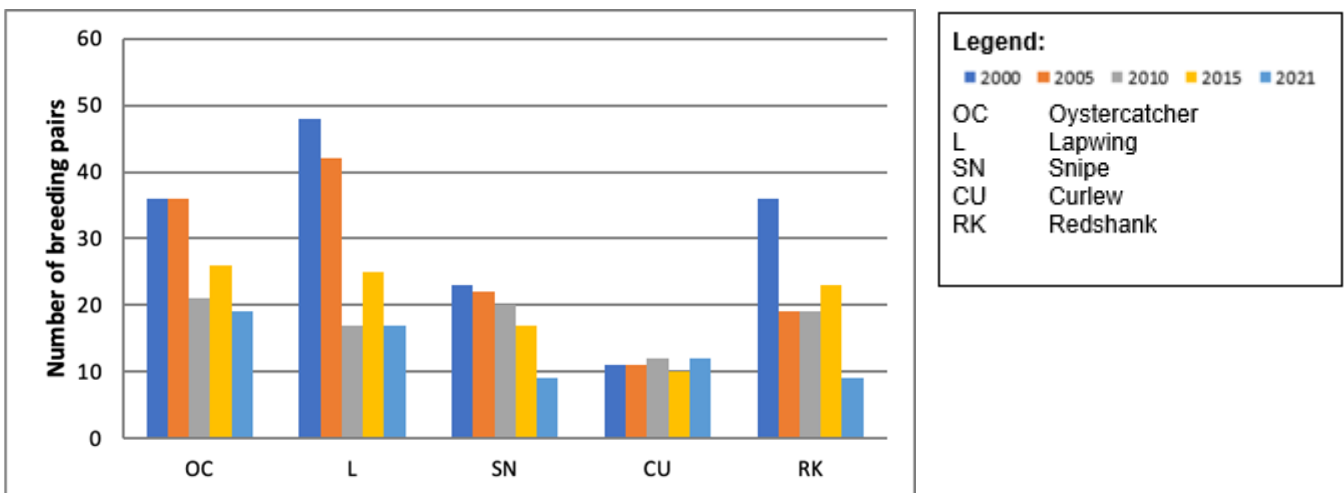
Strathspey wader survey 2021

Breeding wader surveys were carried out at each of the four mob grazing project sites in 2021 by RSPB. A surveyor made three visits to these sites at either dawn or dusk and recorded the numbers and locations of any waders present. These results have been mapped and are included here along with a graph showing overall trends in Strathspey for each of the five wader species surveyed.

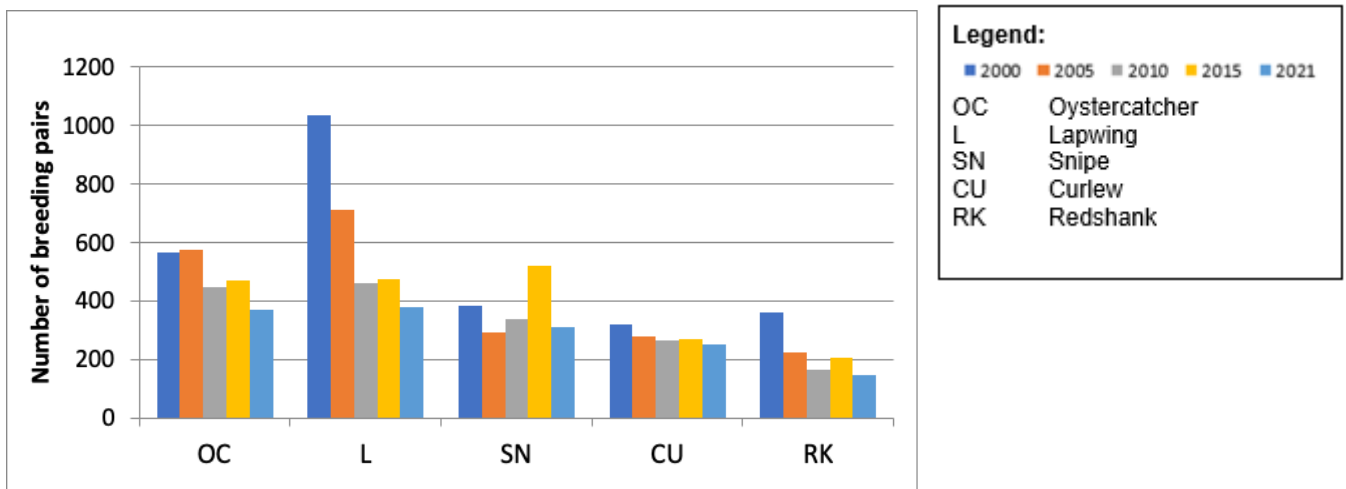
The maps show the spatial distribution of waders on the four mob grazing farms in 2021. Each dot represents one of the five key farmland wader species. Records from all three visits are included on the maps to capture bird usage of the fields. Therefore, these maps exaggerate the number of birds on site. The RSPB hope to resurvey these farms in 2023 to determine the effects of this change in grazing on wader usage of these areas.

Breeding wader trends for mob grazing sites 2000 to 2021

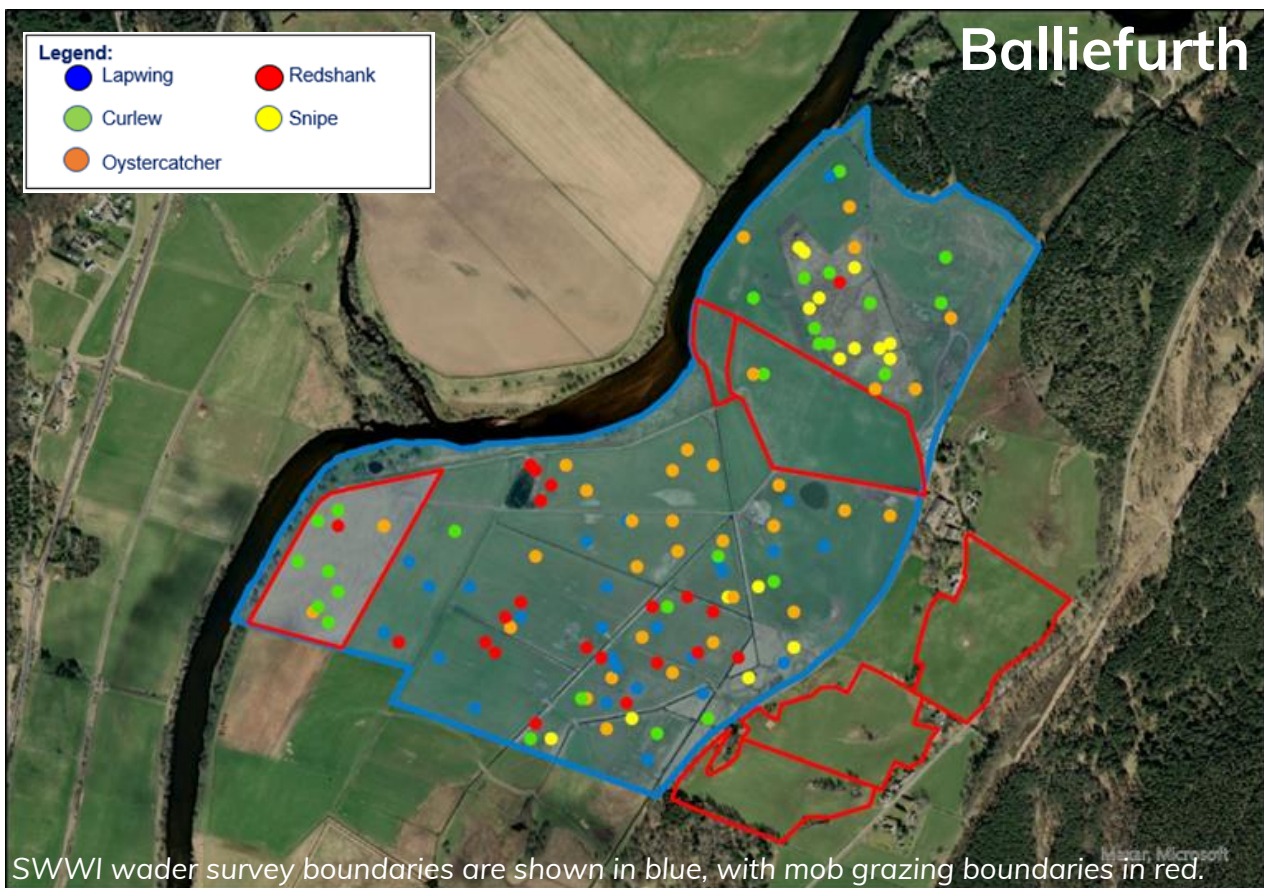
Please note that this graph includes all mob grazing sites across the years, but only two sites were surveyed in all five years.

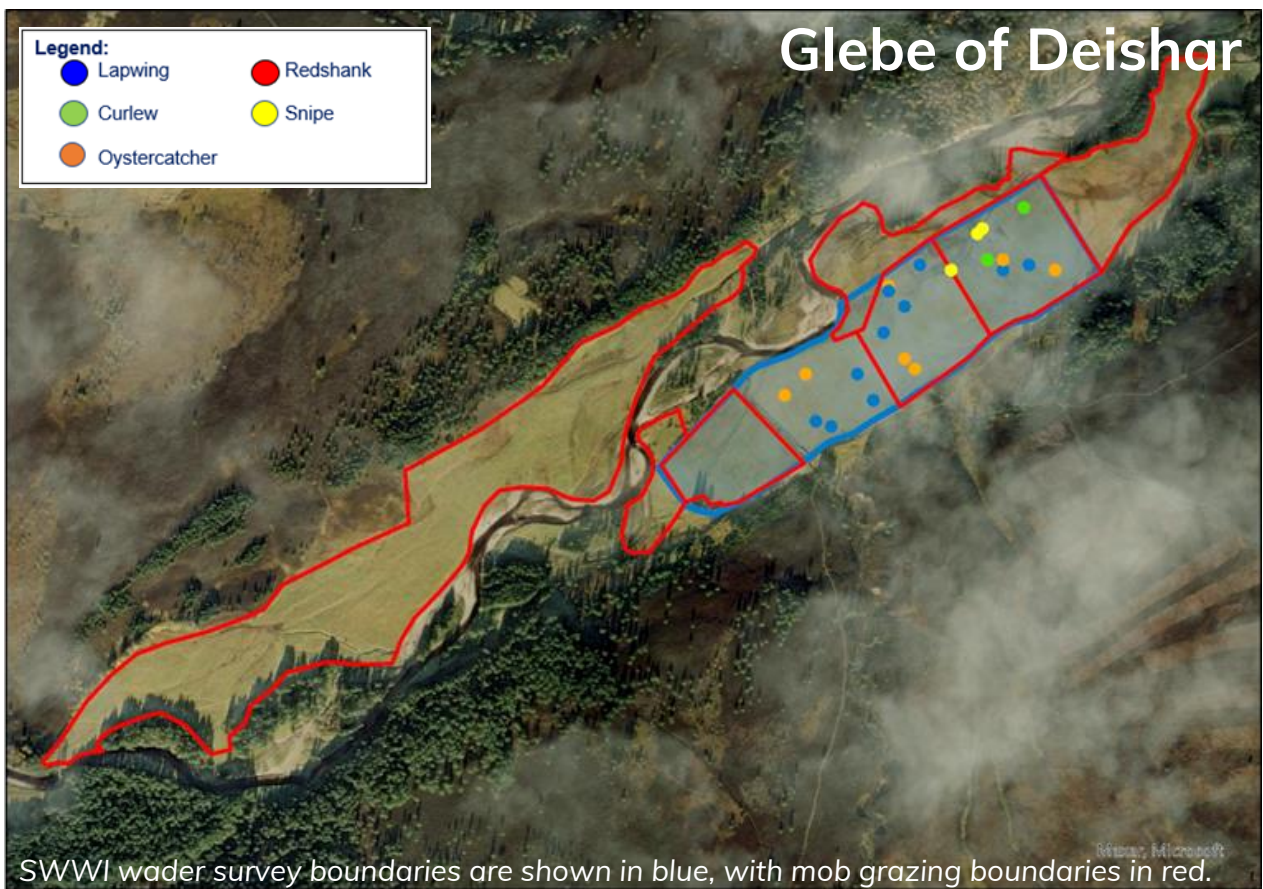
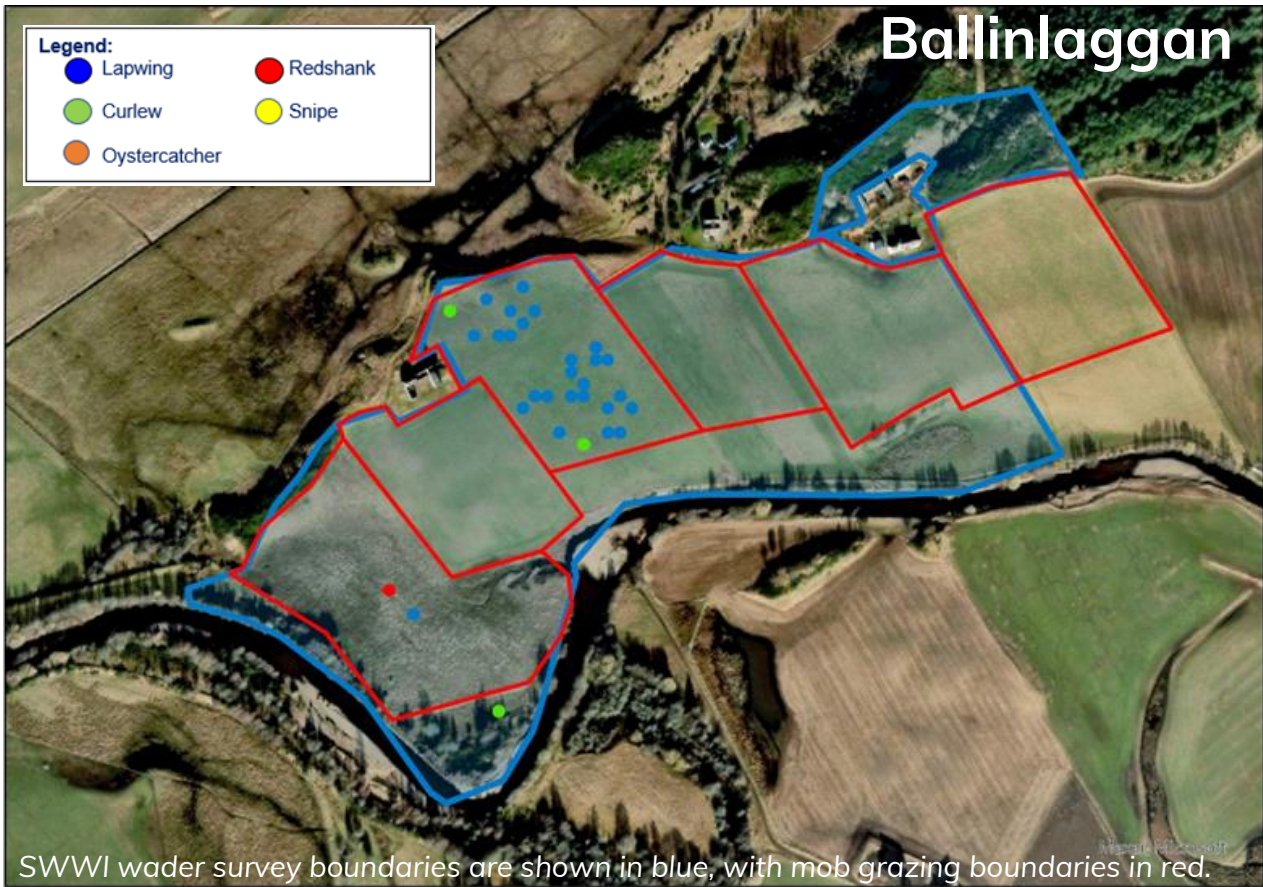


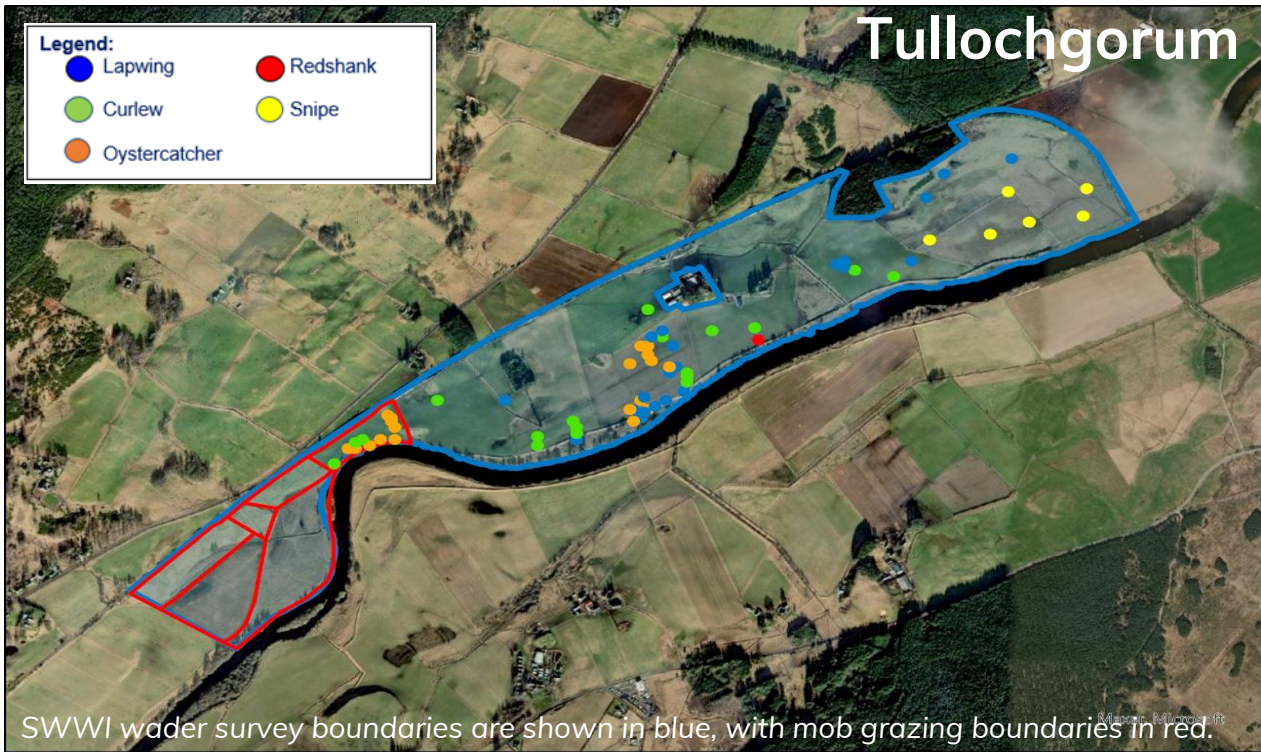
Breeding wader trends for the whole of Strathspey 2000 to 2021



Farm wader baseline data







Acknowledgements

The 2021 survey was part-funded by Cairngorms National Park Authority, Working for Waders and RSPB Scotland and would not have been possible without the help of the team of volunteers that collected the data. We would also like to acknowledge all of the landowners and land managers for granting access to undertake the survey.

If you would like more information about the survey, or to arrange an advisory visit please contact Sarah West, RSPB Conservation Advisor on 07796 686462 or Alison Phillip, RSPB Conservation Officer on 07548 156025

6. Impact and reflections

Summary

The project has allowed the development of a highly successful partnership between the Park Authority, Pasture for Life, Plantlife and RSPB. The four participating farms showed commitment to the project and implemented significant changes to their grazing management with support from Pfl staff and mentors.



James Yoxall, Farm Mentor and Volunteer Surveyor, March 2023. Photo: Clem Sandison

‘The Cairngorm Mob Grazing for Diversity project has been so valuable. Farmers, environmental NGOs and public volunteers have worked together to promote in-field uplifts in biodiversity without expense to the farming business. Increasing the number of people truly integrating farming and nature rather than just leaving it to the “hedges and edges”.’

James Yoxall, Farm Mentor and Volunteer Surveyor.

Volunteer surveyors also gained huge benefit from the plant ID training and practical experience surveying farms with the support of Plantlife. Farmers have also been able to learn from volunteer surveyors and observe the plant species on their farms, which leads to a sense of pride and motivation to continue improving conditions for biodiversity.

Peer-to-peer learning, facilitated on-farm meetups, practical training and providing kit budgets were all key aspects in the success of the project. We believe two years is the minimum time required for farmers to make a transition to mob grazing because it can involve a significant mindset shift and the ability to look holistically at your farming system taking into account economic, environmental and social factors. It’s not just about tweaking grazing practices.

Participating farmers being supported to host public events has also been a very valuable aspect of the project, as it helped to build confidence and share learning with a wider peer group within the Cairngorms National Park. The kit budget was a strong incentive to take part in the project, and farmers in the group said they might have tried mob grazing without this support but it really helped to get started. Since then one of the farmers has bought an additional solar pump because they can see how well it works and can also run an energiser off it.

‘The talk was excellent, really engaging and thought provoking.’

‘I’m going to try giving grass more chance to recover after grazing.’

Farmer feedback after Rob Havard’s talk, Dec 2021

‘For students like me and my friends, it offers us the opportunity to gain experience in surveying and identifying. Very happy to be part of this project. Hopefully it will motivate farmers to adopt more sustainable practices.’

Volunteer Surveyor, June 2022

‘This project work has helped us make more connections and improved our relationships with local farmers. Pasture for Life have done a great job understanding their interests and have successfully supported farmers to try something different. We have learned a great deal and now in a stronger position to support landholders with nature friendly farming initiatives going forward.’
Rebecca Watts, Cairngorms National Park Authority, March 2023

Farmers recognised that they need to think in longer management terms (10 to 15 years) to see the real impact of management changes and to build diversity and abundance through a mosaic approach to habitats and grazing patterns. At the final evaluation session, farmers commented on the complexity of the system; they understand now that it's not just about a formula of regular moves, or smaller paddock sizes. They also commented that despite the additional labour that's sometimes required, moving livestock is one of the aspects they enjoy the most as it brings them into close contact with their animals and the land.

'A great success from our point of view and very happy to have been part of the project. We are totally sold on mob grazing and look forward to seeing the benefits to biodiversity on the farm in the coming years. Thank you for inviting us to participate.'

Mark Hamblin, Ballinlaggan Farm, Feb 2023

Reflections on mentoring

Pasture for Life facilitator Clem Sandison matched mentors with mentees based on scale / similarity of farming enterprise where possible. For example, Mark and Gale at Ballinlaggan Farm were matched with Lynn and Sandra at Lynbreck Croft who are both working with small herds of native breed cattle. Patrick at Balliefurth Farm was matched with Charley and Andrea at Barnside Farm due to their experience of running leader-follower mob grazing systems with their cattle and sheep.

'Being a mentor on the project was a fantastic opportunity to share my knowledge and experience. Spending time going through practices and decisions both technical and social with my mentee created opportunity for reflection about my own approach. I learnt a lot from being his mentor. Mentorship has been great as it was very flexible, exchanges with my mentee were decided by us to suit us. We have become good friends and often bounce ideas off one another. It is great to have another like minded person to talk to.'

James Yoxall, Mentor, March 2023

As mob grazing is still a fairly new concept in the farming world, not all the mentors were as local as we would have liked, which impacted on the success of building relationships (particularly with one of the matches). Those mentees who had the most ongoing contact with their mentors got the most out of mentorship. Many reported that visiting their mentor's farm was the most useful aspect, so they could see a full mob grazing system in action. In three out of four of the mentee matches, there were visits both ways, plus a series of conversations by phone or whatsapp. In one case, there were only a few phone calls due to capacity and distance.




Patrick Harrison and Charley Walker at Balliefurth. Oct 2021.
Photo: Clem Sandison

Rating the value of mentoring

- Two farmers rated it 10 / 10 (extremely valuable)
- One farmer rated it 8 / 10 (very valuable)
- One farmer rated it 4 / 10 (not that valuable) which correlated with a lack of face to face visits between mentor and mentee.

Management changes

Farm	Changes made to grazing / farming system
Ballinlaggan	<p>Two ha fields subdivided into smaller paddocks using electric fencing and grazed for two to three days (summer), four to six days (winter). Rests of 60 to 100 days between grazings. The kit has been invaluable for mob grazing and has been used year round.</p> <p>I've been reflecting on whether you can get too much rest. We haven't grazed some areas all summer and have been mostly using this deferred grass for the winter. I think the invertebrates will love the taller covers.</p>
Balliefurth	<ol style="list-style-type: none"> 1. Reduced both cattle and sheep numbers. The project made us look at our grazing and silage production requirements to provide good carcass weights efficiently that prompted us to: 2. Buy in silage which allowed us to graze fields which would previously have been shut off for second cut silage. This resulted in us selling lambs earlier than what we would have done previously and our stirks had better daily liveweight gains. 3. Reduced paddock size. 4. Move stock more frequently, previously we were on a three to five day shift now more like two or three day shift but leaving longer residuals. 5. Group different ages of stirks. 6. Co graze sheep and cattle. 7. Run sheep in front of cattle in the rotation, so for example run sheep in paddock for one to two days and then cows for a day. Always ensuring a good residual.

<p>Tullochgorum</p>	 <p>Duncan used the Field Margin app to develop his grazing plan.</p> <p>All groups of animals are now in a mob grazing rotation to incorporate greater periods of rest into the system, with 60 days rest in July / August.</p> <p>With the ryegrass / clover mix in a sandy field we are asking a lot of it when grazed for three days. We need more resilience through plant diversity and deeper rooting species.</p> <p>I think in our first year of mob grazing we've been guilty of using the same number of animals in the same area all summer, and in future we need to vary the frequency of moves based on grass growth rates.</p>
<p>Glebe of Deishar</p>	<p>Mob grazing one group of cows and calves on three to five day moves with long rest periods of 60 days or more. We weren't in a rush to get back, so we grazed it pretty hard, which might not have been the right approach. The maximum any paddock has been grazed is twice in a year, some paddocks only once. Mobile solar water pump enables me to move cows more regularly.</p>

Year one feedback – successes and challenges

Farmer feedback - March 2022
<p>1. What have you found the most useful about taking part in the project?</p> <ul style="list-style-type: none">● Learning more specifics of mob grazing and having a mentor to bounce some ideas off● Learning from others about their systems● Speaking to like-minded people● Sharing knowledge, advice and mentoring from experienced graziers
<p>2. Have you made any changes to how you manage or plan your grazing as a result of the project?</p> <ul style="list-style-type: none">● Shorter grazings, longer rest, and more paddocks● Yes - increase group size. Possibly use follower-leader system● Yes - hoping to move cattle twice a week● Yes previously whole farm grazing [set stocking], now mob grazing on a year round basis
<p>3. What have you found most challenging about trying or planning a new grazing system?</p> <ul style="list-style-type: none">● Finding a solution to water● Time pressure● Changing from the norm● Arriving at an appropriate area to graze with a smaller number of animals. Learning how much grass to leave before next move
<p>4. What mentorship support did you receive and how useful was it?</p> <ul style="list-style-type: none">● Support with paddock sizes and water solutions, and sound advice that my ideas are not totally out there● Charley has been very helpful. Maybe I have not used him enough● I spoke to my mentor several times on the phone [hoping to visit later in the year]● As much as required - very useful / invaluable
<p>5. Did you find it helpful to be part of a peer-network of farmers?</p> <ul style="list-style-type: none">● Yes● Absolutely● Yes● Yes - a key part of the project is sharing knowledge / experiences

6. Is there anything that could have been improved about the project?

- No
- Can't think of anything
- No
- No - still ongoing with support available which is very beneficial

7. What support / training would be useful to you going forward?

- Seeing how others are doing it
- Guidance once we have got going
- Speaking / listening to other mob grazing farmers
- Plant ID

Year two feedback – successes and challenges

Farmer feedback - February 2023

What the farmers found most valuable about the project:

- Excellent support and encouragement throughout to adopt a mob grazing system. Mentoring was very helpful as well as farm visits to others adopting similar practices
- Charley was a great mentor, I should have used him more but 2022 was a whirlwind
- Having a network of people to bounce ideas around is the most useful one as there are many variables so it is good to get other peoples opinions on things
- Hosting events and our Whatsapp group

What the farmers found challenging about the project:

- Moving water around has been a slight challenge but not overly so. Overall very happy with the way the project has been conducted and supported
- Lack of time
- The most challenging thing would be matching the cow area to the amount of cows. More focus on the mathematical side to that as every part of the year is different and every field might be different so learning to be adaptable is key. For example I started off thinking a certain area would do a certain amount of cows but you have to match areas to grass growth and throughout the year the animals' intakes change so you have to adapt with them
- Members of the public turned energisers off, which resulted in cattle escaping multiple times. Also I was focusing on grass utilisation more than cattle condition, which has meant calves in the mob grazing trial are 38 kilos behind the other

calves (as of the end of January 2023). They may catch up but if I'm using cattle as a grazing tool, I might need to consider selling them as soon as grass growth and quality drops in August

Changes observed by farmers

Impact on:	Farmer observations (feedback gathered February 2023)
Livestock health or performance	<ul style="list-style-type: none"> ● We have five heifers (now in calf - due May 2023). All in very good condition with no health issues. They seem happy and are always quick to move onto new paddock ● Not much changed so far ● Difficult to tell without having figures to compare but I think the young calves have performed better in the mob grazing system, ie better weights. They have good coats and better frame ● The cows look far more content but unfortunately the calves did not perform as well as set stocked
Grass productivity or length of grazing season	<ul style="list-style-type: none"> ● We were able to graze all year, with grass growth from late April until mid-October. Overall sward length is long, resulting in protection for new grass coming through. It was a very dry summer with little or no rainfall for three months but we had continual green grass throughout with a late growth spell in September. Cattle are out-wintered on deferred grazing and so far have required just one bale of hay ● To be honest not measured in 2022 but would say we got two to three weeks more grazing at the back end, but that could just have been the year. I do reckon that after two to three years of running this system (as it will take time for the grass to adapt) we will get a longer grazing season and better grass production ● 2022 was a dry summer for us so was difficult at times but incorporating rest really allowed the fields all the time to recover when the rain did finally come. Definitely extends grazing and allows you to shut up fields in peak grass growth for either hay making or deferred grazing ● We definitely lengthened the grazing season
Reduction in inputs	<ul style="list-style-type: none"> ● No inputs other than a single bale of hay (large round) ● We have reduced our fertiliser by 30% since 2021, but to be honest more driven by cost, but we were most probably over fertilising with chemical fertilisers. We had already reduced our fertiliser input by 25% since 2014 ● We would normally go back over with some fertiliser mid grazing

	<p>but didn't have to. We won't apply fertiliser to some of the grazing ground at all this coming summer</p> <ul style="list-style-type: none"> ● We have stopped worming / fluke cows annually and now use egg counts. More labour was required for fencing
Plant diversity / wildlife / soil health	<ul style="list-style-type: none"> ● Perhaps too early to make an accurate assessment but signs are good with several flowering plants present in summer 2022 that were previously unrecorded eg spotted orchid. Longer sward provides perfect habitat for a large population of field voles which supports hunting kestrel and owl species. Soil health has not been officially checked. However, cattle do not receive any worming medication and dung pats break down quickly. Trampled grass also contributes to organic matter going directly back into the soil. Healthy population of earthworms observed ● We already had good plant diversity / wildlife and soil health but with this project and other efforts on the farm this will improve steadily over the years ● Due to shutting of paddocks I've seen a lot more wildlife within these areas. voles, mice etc and more birds of prey. Haven't yet seen an increase in plant diversity but I'm sure that it will start to show in years to come as we keep with this grazing system ● We have definitely seen more plants flowering with our new grazing techniques. Not sure on soil health
Quality of life / time / enjoyment of your work	<ul style="list-style-type: none"> ● Regular moves allows for a closer connection with our cattle which is enjoyable in itself and makes moving them around the farm generally much easier. Any health problems would also be quickly observed due to closer contact with stock ● This project gave me a positive focus in 2022 because in other aspects of the farm and shop it was a very challenging year ● I definitely enjoyed it and enjoyed being able to get a good check of the cattle and see them tuck into some fresh grass. Definitely requires more time which can have an effect on quality of life so will be trying to put in more infrastructure so save on some of the time consuming bits like water troughs in the right areas ● It required more time but I strangely enjoyed it
Any other results	<ul style="list-style-type: none"> ● Cattle eating a broad range of species including creeping thistle flower and seed heads, seed heads of grass species, nettle and dock ● Now when I look at farm decisions I look at things more holistically and rather than the drivers being mainly production and financial, I now put environmental and work / life balance considerations as equal. We've always considered the environmental and wildlife projects (i.e. wading birds) but maybe in isolation rather than

holistically. If that makes sense. (Inspired by Nikki's Pasture Pod podcast). It has been great getting to know new people and others better via the project

- Calves were 48 kg on average lighter at weaning compared to set stock calves. They are now 38 kg behind set stocked calves (start of Feb)

Wider impact of the project

Reach of the two-year programme:

- 58 farmers / land managers attended events (data not available on how many of these were located within the National Park, but it was observed to be a high proportion)
- 16 members of staff from NGOs or other key stakeholders attended events
- 20 volunteers received training to survey plant species, 10 volunteers carried out surveys (a total of 250 volunteer hours)



Farm walk at Glebe of Deishar, Aug 2022. Photo: Clem Sandison

Feedback from Glebe of Deishar Farm Walk - August 2022

On a scale of 1 to 5 how useful was farm walk?

Average score 4.4

What did you find most useful?

- Discussions, meeting people
- Seeing everything first hand
- The diversity of views on how to manage pasture
- Networking with other like-minded individuals
- Opportunity to see things on the ground and the networking

Are you considering implementing anything you saw?

- Yes, holistic planned grazing of upland pastures
- Mob grazing
- I am considering different ways to manage and reseed my pasture
- Implementing mob grazing with cattle, but that was planned prior to this walk
- Don't have a farm but there were very useful learning points about the approach that our organisation could learn from

What could we have done to improve the event?

- Not a lot!
- As it was a first time for me I found it interesting and informative
- All perfectly organised, the visits, discussion, food and directions all worked very well

Social media and video resources

Recording of talk by farmer and ecologist Rob Havard on 'Cattle Selection and Mob Grazing for Profitability' in Grantown-on-Spey: youtu.be/93pWcsuS6TI (810 views)

One of the farmers, Duncan Miller, featured in a video (#MoreThanGrass) as part of Nature Friendly Farming Week: youtu.be/ZIOM4-wfPxY (305 views)

This led to Duncan being invited to host a farm walk by the Farm Advisory Service, supported by Nikki on 21 September 2022. This was followed by a film featuring Duncan and Nikki t.co/K1u16DdPma (660 views)

Digital content about mob grazing made available on the Plantlife Meadows Hub meadows.plantlife.org.uk

7. Next steps

Due to the success of this project, the Park Authority will be funding further mob grazing project work facilitated by Pasture for Life in Deeside. The Park Authority are keen to maintain the partnership with the RSPB and Plantlife to continue monitoring the participating farms so we can see the longer term impacts to waders and plants.

What farmers plan to do this season

Farm	Plans for 2023
Ballinluggan	Our farm is small so our options are limited so we will continue to mob graze in a similar way but will try strip grazing within a small paddock in some areas. Perhaps try shorter moves one to two days. Planning to try strip grazing with a back fence. We will aim to take a cut of hay from one or two fields so we can hopefully be self-sufficient in winter food
Balliefurth	More and better. Get that solar pump running!
Tullochgorum	Continue with the mob grazing. Use less fertiliser and try to manage my time a bit better. Planning to give bigger areas and not hammer the grass so much. We're considering more frequent moves (more often than every three days). During the growing season, three days seems too long
Glebe of Deishar	We are hoping to carry on with our first mob and start a second mob of young cattle as well. Strathspey Valley has issues with drought and soil doesn't hold onto moisture so we need to leave long residuals and allow cattle to graze more selectively

Plant diversity and wader surveys

Plantlife intends to run the rapid habitat assessment training again this summer with some refinements, such as trialling a new digital data collection method and adding a few quadrats where some were missing, as part of the Cairngorms RPWC project. The project is due to end in spring 2024, but Plantlife will continue to support these surveys in future in partnership with the Park Authority.

RSPB hope to resurvey these farms in 2023 to determine the effects of this change in grazing on wader usage of these areas.



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