

THE DFG AND BFG RESTORING **BIG** NATURE

Galbraith

MORAY ESTATES



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Extending across 1,200 hectares of Moray in northeast Scotland, the Moray Forest Grazing project will restore nature on an ambitious, complex, three-dimensional scale.

The secret weapon? Big hairy cows.



THE PROJECT

The project will introduce herds of Highland Cattle in the historic forests of Moray. These ancient habitat managers will trample rank vegetation, improve soil, develop wetland, and nourish invertebrate populations to benefit a wide range of wildlife. Carefully controlled by radio collars, they will be otherwise free to roam naturally in a landscape without fences, enjoying and enhancing the rich environment of the forest.

The project has two parts.

Darnaway Forest Grazing (the DFG) is a 'land sharing' project, in which timber production and conservation take place side by side. Fifteen cows and two calves, with up to three in calf have already been introduced to mature woodland. They will support a wide range of wildlife including the small population of Capercaillie.

Braemoray Forest Grazing (the BFG) is a 'land sparing' project, where former grouse moor is being restored to wild Caledonian pinewood. A herd of 25 cattle will restore ecological processes and create habitat for the rare Black Grouse. It will also create a suitable area for Capercaillie recovery and reintroduction, and a habitat link between isolated populations in Darnaway and the Cairngorms.

Nature has been shrinking in the face of human activity for millennia. Big trees and big animals were the first to go, and now even insect populations are collapsing. The DFG will bring back big nature to Moray.

We need your help to make it happen.



THE PEOPLE

The project will support one new full-time job in cattle husbandry and habitat monitoring. By enhancing the ecological resilience of the forest, the project is also investing in a sustainable future for the careers which depend on this habitat: the forestry team, local forestry contractors, sawmillers, housebuilders, joiners and more.

The woodlands are open for public access and enjoyed by walkers and cyclists. The collars will ensure that cattle do not wander over paths and disturb visitors, but there will be no fences to restrict people's access. An important part of the project will be to install signage to tell visitors about the cattle and ensure they do not disturb them, for example with uncontrolled dogs.

Darnaway has been a family business for centuries, providing continuity and stable employment, adapting progressively to the times, and demonstrating excellence in sustainable ecological management and production.



Moray Forest Grazing

Initially a five-year project

1,200 hectares

15-20 Highland cattle to start

SPA for breeding Capercaillie

The cattle will help to raise the condition score from 6 to 9 out of 10



Conifer woodland well-thinned with an open structure, supporting similar varied ground flora to the native Pine

Forest Stewardship Council Certified

Low impact silviculture

Sustainable timber

1 new full-time job in cattle husbandry and habitat monitoring



forestry contractors



dung beetle



sawmillers



housebuilders

Low carbon economy



Native mixed broadleaved woodland

Current condition unfavourable

Rush pasture

grasses

woodcock

mixed age



Increase bilberry and cowberry



Grazing areas have been thinned two or three times, ensuring enough light for ground vegetation to grow

Darnaway - Land sharing

Braemoray - Land sparing



heather

crested tit



Reduce rank heather through trampling



Maintain ponds and bogs for water and insects

Aeration of soil and roots by pulling

Create pathways for Capercaillie chicks to run along

Grazed in each area about a week at a time

Monitor for overgrazing

Continuous learning and improvement



Natural colonisation of Caledonian Pine

Increase availability of invertebrates for chicks through dung

Black grouse

Deer prevent tree regeneration

Full public access



Cycling

Walking



Recreation

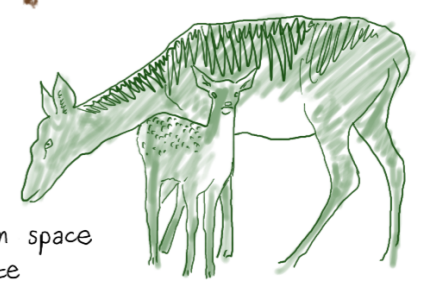
Move cattle out of known lekking areas March to June

onto grazing blocks outside Capercaillie areas

Young stands of trees are not grazed until they are forty years old



Create open space to facilitate deer control



Sustainable wild venison

THE OPPORTUNITY

Oven-ready

The project is ready to deliver, with cows ready to introduce into woodland. Moray Estates is seeking a funding partner to make this high-impact project happen. We are seeking a contract initially for five years, with potential for continuation, development and expansion in future as the nature economy evolves.

Springwatch presenter

The project has been developed in collaboration with local resident Roy Dennis MBE, RSPB Senior Officer in Northern Scotland from 1970-1990, Springwatch/Autumnwatch presenter, and winner of the RSPB Golden Eagle Award winner for the person who had done most for nature conservation in Scotland in the last 100 years. Roy is eager to provide active support for the project going forward, for example through PR.



Key benefits

The project will raise the condition of the habitat in a number of demonstrable ways:

- Trampling rank heather to make space for more delicate plants and flowers like bilberry.
- Aerating soil and increasing water permeability through pulling plants.
- Creating and maintaining ponds and boggy areas for freshwater life and insects.
- Increasing availability of insects for capercaillie chicks and other wildlife through provision of dung.
- Creating paths enabling capercaillie and other wildlife to move through the forest.
- Creating open 'lawns' facilitating control of deer which at high density damage the forest.

Outcomes will include a measurable raised condition score for the designated habitat, and, it is hoped, increasing populations of capercaillie.

Monitoring and reporting

Improvement will be measured through an appropriate bundle of metrics, to suit the buyer's requirements, and reported through regular updates:

- Independent FSC/PEFC certification of forest management.
- SPA condition score
- Passive audio monitoring of bird with AI data analysis
- Changes in botanical communities such as expansion of bilberry
- Carbon capture and storage by the forest and timber can also be monitored and reported through independently audited FSC/PEFC.
- Report on cattle movement from collar data, showing patterns in behaviour.
- Potential for future research using data series, for example PhDs.
- Partners will also be able to enjoy engaging with the project in a range of ways including:
 - Visiting the project with Roy Dennis MBE, meeting the forest and cattle managers, and enjoying a round of golf with a sea view at the beautiful Castle Stuart Links
 - Tracking cows in real time via their collars
 - Naming the cows
 - Learning more about the supply chains of timber from the forest
 - Working with Moray Estate to expand the scheme or develop further natural capital projects in future.

BIG TREES

Darnaway contains some mighty ancient trees. Yet most were planted since 1760 on land cleared many centuries before; and grow a little bigger every year, and supporting rare and enchanting wildlife.

Each year the foresters harvest their share (always less than what grew) to pay for ongoing management. This harvest is used to enhance the forest's structure through careful silviculture, creating more open areas and bigger trees of diverse age. Trees use solar power to capture atmospheric carbon, producing material which supplies housing, furnishing, fencing, pallets, packaging, and other essentials, replacing steel, plastic or concrete.

BIG BIRDS

Capercaillie, our biggest grouse, can weigh over 7 kilograms. They are famous for their courtship display, called a 'lek' after an old Norse word for 'play'. Males stretch their necks, fan their tails, click, pop, and fight – sometimes to the death.

Capercaillie went extinct in Scotland around 1780. Reintroduced in 1837, expanded forest protection from hunting let them thrive, but their numbers have again dwindled to critical levels. Unsuitable woodland habitat structure is one important cause. In the Darnaway and Lethan Special Protection Area, the cows will enhance capercaillie conditions, in ways that benefit a wide range of wildlife.



BIG COWS

Giant wild cattle known as Auroch once roamed Scotland's forests, until hunted to extinction 3,000 years ago. Our domestic cattle are descended from Auroch and perform the same ecosystem functions.

Whereas Auroch were controlled by large carnivores, which ensured they moved around and avoided certain areas, the DFG cows will be managed by humans and technology. High-tech collars track their movements within a virtual 'fence'. The collars emit an increasingly high-pitched sound as the fence is approached, and administer a mild shock, like an electric fence, if the cattle try to cross it. Cows quickly learn to stay in the boundary. The forester can move cows around the forest simply by adjusting the 'fence' on a smartphone.

The hardy Highland breed makes the most of the wild environment and harsh conditions, turning vegetation into high-quality food, with a fraction of beef's average carbon emissions. Whether the weather is hot or cold, cattle thrive better in the shade and shelter of a forest than on an exposed hill or indoor barn.



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