

**Rob Yorke** reports on a long-running moorland project that is trying to resolve the conflict between birds of prey and driven grouse shooting

## Striking a balance

**B**irds of prey (raptors) have haunted the uplands for generations but the conflict with driven grouse shooting has resulted in continued persecution of some raptors since it was made illegal to kill them 50 years ago. The question is how to manage land for a range of outcomes including an economic return from driven grouse shooting, delivery of public benefits and enhancing the health of upland wildlife.

In 1997, the *Joint Raptor Study* by the Institute of Terrestrial Ecology and Game and Wildlife Conservation Trust (GWCT), sponsored by the Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservation Committee, confirmed that raptors do have a negative impact on red grouse populations at low densities.

This led to a partnership being set up in 2007, comprising GWCT, RSPB, Natural England, Scottish Natural Heritage and the landowner Buccleugh Estates to run the Langholm Moor Demonstration Project (LMDP). The core aims of the monitored project over 10 years are to re-establish Langholm Moor as a driven grouse moor and meet specific objectives enshrined within the moor's Special Protection Area (SPA) and Site of Special Scientific Interest nature conservation designations.

Over the 12,140ha project area, the LMDP set out to deliver four specific elements:

- maintaining the hen harrier population as a viable component of the SPA
- extending and improving the heather moorland habitat beyond its state in 2002
- harvesting a sufficient number of grouse to ensure the moor reaches a financially viable state
- strive to demonstrate how to resolve conflicts between moorland management for raptors and red grouse.

Reviews are essential within such complex long-term projects and for the current seven year review, a traffic light system was applied to a list of criteria aimed at delivery of the four elements.



● Langholm headkeeper Simon Lester (right) and GWCT director Adam Smith

● Langholm buzzard fledgling



### Green light for habitat, raptors and stakeholder engagement:

Great advances have been made in heather management on areas badly affected by disease, heather beetle and over grazing. New re-seeding techniques involving selective use of herbicides have paid dividends and new stock fencing, funded by Rural Development Programme payments, have enabled a reduction and reallocation of sheep numbers with the result that heather has recovered well.

A sharp increase in hen harriers, alongside other raptors including merlin, peregrines, short eared owls and buzzards was reported across the project area. A number of landowners and managers and stakeholders have visited the LMDP, and an acknowledgment that raptors are now part of a functioning driven grouse moor is equally important as sharing new practices on upland habitat management.

### Amber light for waders, passerines and compatible management for red grouse and raptors:

This reflects the fickle nature of the project. Weather conditions have a direct impact on how wildlife thrives or otherwise and the presence of certain species reflects the general health of a moorland. As such, meadow pipits, along with voles – two main prey species of hen harriers – are doing well, unlike the population of upland waders.

Compatible management for red grouse and raptors involved targeted predator control by a team of gamekeepers resulting in benefits for both. Smelly, untidy nests of hen harriers often attract foxes (<http://bit.ly/1dWOBfIP>) and their control, along with carrion crows and stoats, has most likely assisted red grouse breeding productivity. However, such beneficence is seldom shown in nature and 78% of adult red grouse found dead had been predated by raptors – although it was impossible to identify the actual species responsible (<http://bit.ly/1CepAFu>). This appears to limit the recovery of red grouse populations and explains why illegal persecution of raptors continues on some grouse moors.

The provision of supplementary food, consisting of defrosted chicks and rats at nest sites where harriers are most likely to

target grouse chicks, has worked well. This diversionary feeding has been viewed by some as the silver bullet in mitigating the impact of raptors on grouse. However, although it was cost effective over the first six years covering up to three hen harrier nests, the workload became economically unviable when numbers increased to 12 nests in 2014.

The Scottish government recognises that heather moorland, as an internationally recognised iconic landscape, must be maintained. LMPD is surrounded by improved grassland for sheep and dark conifer forestry plantations, and has abundant fauna and flora and wildlife including short eared owls, oystercatchers, moths, and orchids on the newly heather seeded slopes. This contrasts to other relatively wildlife-free moorland, such as the Black Mountains in South Wales (which lost its grouse management years ago), and probably reflects some of the 'return' for the £2.5m poured into the LMDP to date.

### Red light for low number of red grouse for driven shooting:

The LMDP partnership's agreed 2,000 bird (1,000 brace) annual target was set as a minimum level to recoup the high level of investment in restoring the moorland habitat and funding the gamekeeper team.

The day that 'guns' are prepared to pay the same value for a brace of walked up grouse as a brace of driven grouse (currently £125-£175) has yet to materialise. At the moment, driven grouse shooting is one of the few strong incentives for sustainably financing the environmental management of moorland.

To use some of the modern environmental jargon, shooting is recognised as a cultural ecosystem service, harvesting a sustainable wild food (provisioning ecosystem service) that can enhance habitat and biodiversity. Increasingly, these services must demonstrably support other environmental benefits – supplying clean water and moderating water catchment run-off (regulating ecosystem service), enhancing carbon and blanket bog management (supporting ecosystem service) and providing landscape enjoyment (subjective) and a 'sense of space wellbeing'. All of these elements are increasingly important within the current social and climatic conditions of upland areas, which have to fight to receive any funding, public or private.

This inability to recoup any of LMDP's £225,000 annual expenditure on maintaining habitat for biodiversity, preventing wild fires, providing 'downstream' benefits at no cost to taxpayers, is troubling for future upland management. The raptor/grouse conservation conflict is not, as is commonly perceived, a human-wildlife one but human-human, between those who hold raptors dear and those with an interest in driven grouse shooting. Even with all the best practice in the world, there are risks that value judgments could frustrate this challenging and fascinating project seeking brighter futures for grouse moor managers, wildlife and delivery of public benefits.

While the successful work to date from LMPD is being shared with others, there remains a requirement to be bolder in exploring new adaptive management practices that can help to find a green light solution for the compatible management of red grouse and raptors.

There is room to improve poor land management practices in upland areas. Heather burning of blanket bog, inappropriately located farm tracks and poorly undertaken predator control will continue to seep into the public spotlight, who will, in turn, seek more costly regulation across driven grouse moors. For unless, as GWCT's Scottish Director Adam Smith warns, grouse moorland owners get used to the "inconvenience of living alongside raptors", the unintended consequences of licensing, increased regulation on grouse economics, raptors populations, upland wildlife and moorland management could be dramatic and unwelcome for all. ●

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