

SPECIAL ISSUE

# Wild Land News

Magazine of the Scottish Wild Land Group

## Wind farms gone wild

Is the environmental damage justified?

# Wind energy Special Issue

## WILD LAND NEWS

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Scottish Wild Land Group

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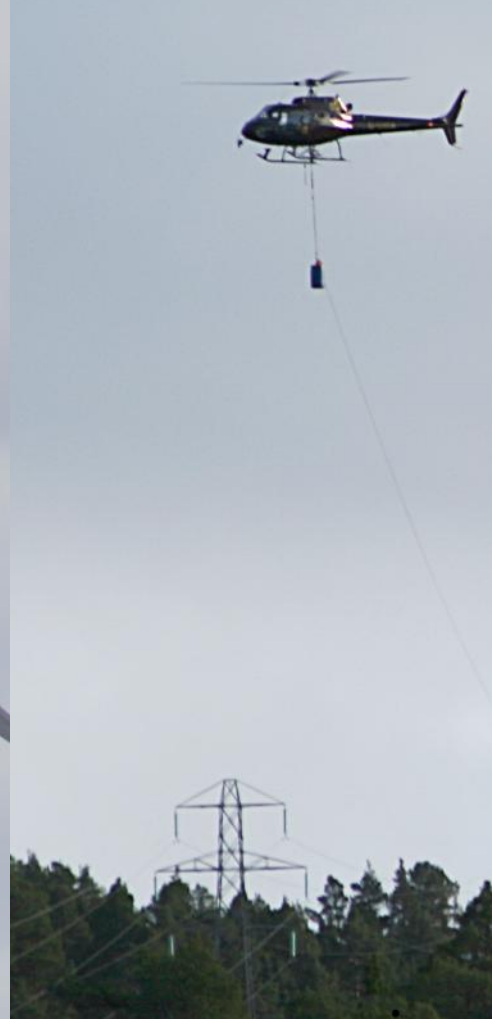
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clearly am, you'll have to forgive me if I don't find that acceptable. You want more electricity in Glasgow or London? Then build your mega-windfarms in and around Glasgow or London.

Can't do it, you say? Well then, learn to use less electricity. Turn the damn lights off. I don't much care how it's achieved; if the price of our current excessive level of electricity consumption is the permanent non-renewable loss of the pitifully little that is still wild and natural in this country, then it's too high a price to pay.

Mega-windfarms, you see, aren't ever for local benefit. Yes, as well as a NIMBY I'm an avowed *bioregionalist*. What I believe, and strongly, is

### *The Moor*

*It was like a church to me.  
I entered it on soft foot,  
Breath held like a cap in the hand.  
It was quiet.  
What God was there made himself felt,  
Not listened to, in clean colours  
That brought a moistening of the eye,  
In a movement of the wind over grass.  
  
There were no prayers said. But stillness  
Of the heart's passions – that was praise  
Enough; and the mind's cession  
Of its kingdom. I walked on,  
Simple and poor, while the air crumbled  
And broke on me generously as bread.*

RS Thomas

that communities should provide for themselves, according to what their own region can support. If we're talking about two or three wind turbines in carefully sited locations that will serve local communities while preserving their places, then I'm all for it. But appropriating someone else's land, wiping out unique landscapes and ecosystems in order that faraway consumers can be even more profligate with their power usage, is simply another form of colonisation. And there's nothing much just or beautiful about that.

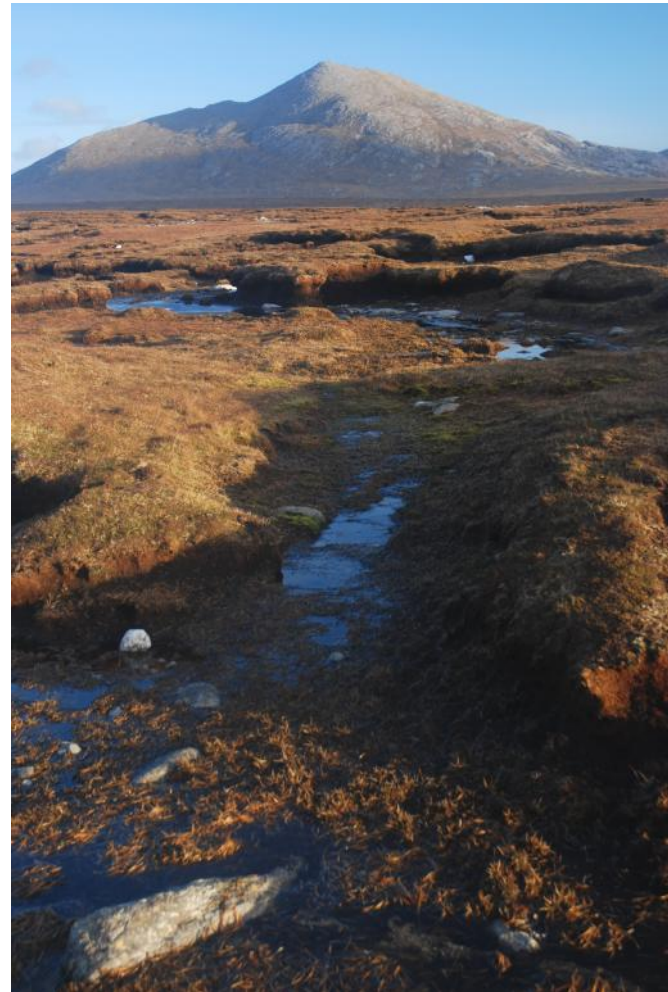


Photo:  
Mealasbhal  
S Blackie

Clive Hambler

## Where eagles dare – the wind farms gamble

Scotland has the best wild terrestrial habitats in the British Isles, and many of the most important ones for global conservation. I'd argue the Flow Country is the most important habitat in Britain, followed by the Severn Estuary. Yet both these sites are threatened by renewable energy schemes! Whilst wildlife organisations have helped protect the Severn, they are still promoting wind power in the vicinity of the Flow Country - a region that should be considered as a World Heritage Site. To glimpse the scale of the gamble we are taking with our wildlife, take a look at the maps on the Caithness Windfarm Information Forum website. As a teacher, it's disappointing - to say the least - that wild land can be so threatened, even in a country with a good education system.

I used to take regular holidays in Scotland, but dread to think what's been built there now - and what's coming. Not only is the vital - and healthy - feeling of wilderness being eroded, but the potential of Scotland to be even more important globally is dwindling. Despite visionary efforts at habitat and species restoration, existing and former habitats of many species are being splattered with wind turbines, tracks and cables.

A storm of interesting online comments followed my provocative article in *The Spectator* this January, which have highlighted the scale of

environmental misunderstanding about wind farms. I shall try to clarify some of the arguments here.

'Put the numbers of animal deaths in context', cry some: 'buildings and cats kill far more birds than turbines'. If many people believe this risible argument, it's no wonder so many species are declining! I suspect no amount of 'context' will convince those who can't appreciate the differences between an eagle and a sparrow, but here's a try: of course some things kill more birds than turbines - so what, why kill more? And which species of eagle, bustard or crane are these cats and buildings killing...? This pro-wind argument reveals a basic failure to appreciate what can be called 'species quality'. This is not to say any species is intrinsically more important. But some species are more at risk of being driven extinct by people, and some have big ecological effects - and it is those species we must prioritise in conservation. To educate the public of Central America about the value of birds of prey, conservationists have used the slogan 'Protect Predators - They Balance Nature'.

Moreover, we should never be complacent about common species: the passenger pigeon was once amongst the commonest birds on the planet. 'Tipping-points' may be reached, and species spiral to extinction. Many conservationists

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In California, wind farms are now the leading cause of death of radio-tracked golden eagles, and the population may go extinct as more are attracted in to the killing-fields of the turbines.

campaign against buildings and cats in sensitive locations - but in regions like Europe the numbers of these threats is not anticipated to grow so fast as wind turbines. Moreover, dead individuals are habitat for other important species - so the places birds die are relevant, as well as the numbers that die. Similarly, adding wind farms to the threats from poisoning and shooting will hardly improve the prognosis for raptors.

Another variant of the 'context' argument is that other power sources kill more birds than turbines, per unit energy per year. I've seen it claimed that fossil fuels kill more *individuals* per gigawatt-hour than wind power. One such publication (by B. K Sovacool, 2012) profoundly misunderstands a controversial paper on climate change: he makes the common mistake of confusing species being theoretically 'committed to extinction' at some unknown date (possibly thousands of years from now) with them becoming extinct in the next 38 years! Nor does this argument consider species quality - or likely beneficiaries of a warmer world, or the possibility of rescue before extinction.

Another 'context' argument is that climate change will wipe out these species anyway - so we may as well build a wind farm or a barrage to try to save them. Well, I advise you to wade through the red lists of threatened species, for Britain or globally, to see what really threatens most species. Many hundreds of species are known to be threatened with extinction from Britain this century, and most are at risk from the tried and tested processes of habitat loss and pollution. Under the Convention of Biological Diversity we are legally committed to save known threatened species. The natural extinction rate

Drawing:  
K Brown



"The Environmental Impact Assessment DID say 0.5 of an eagle a year..."

was low, so 'rewilding' will be required to save many species, through restoring more naturalness in big, old forests and wetlands. Most British species have survived climates notably warmer than the present (and arguably climate change will help many of them). Some people seem to think huge swathes of Britain will go under water, but you can explore this (using the maps on geology.com), and consider the chance that some species will benefit from 'managed retreat'. Losses due to climate change are vastly more speculative than those due to observable current mortality and habitat loss. Raptors in many areas have been recovering (despite conventional power stations and transmission lines) and like many top predators they have wide global distributions and climatic tolerances. I hope that's enough context for now...

Some proponents of wind farms appear not to understand that numerous small projects have cumulative effects. But even single sites can do regional damage. In California, despite years of debate and attempts to reduce the toll, wind farms are now the leading cause of death of radio-tracked golden eagles, and the population may go extinct as more are attracted in to the killing-fields of the turbines. In Norway, one wind farm killed 9 white-tailed eagles in 10 months, decimating the population and probably slowing recovery of others. In Germany, more than 30 white-tailed eagles have been killed this way. The number of disastrous wind farms on the Role of Shame can be expected to rise: we can reasonably expect news of raptor mortality from South Uist, where white-tailed eagles, golden eagles, hen-harriers, red-throated divers and others have been forced into proximity with a wind farm. At Glenmorie, golden eagle casualties are confidently being predicted and accepted by the RSPB. Already, re-introduction efforts for white-tailed eagle in Ireland have suffered deaths related to wind farms. This subsidised slaughter can be assessed against a total population of about 60 pairs of white-tailed eagle, and 450 pairs of golden eagle, and 180 pairs of osprey in Britain.

What about the legality of killing 'protected' species? National and international legislation seem ineffective. It is argued that killing birds in a wind farm is unpredictable, an unfortunate accidental consequence of a lawful operation. I'd say its effects are becoming about as predictable as firing a shotgun off at random in a city. Take a look at the video in the website below to see how predictable you think the impacts are, bearing in mind that wind farms are often sited in the windy sites where eagles and vultures soar. Some dodgy models and data used by wind farm developers explicitly predict eagle deaths, but, amazingly, some conservation groups and government agencies seem comfortable with that - as with the Glenmorie wind farm proposal.

The ecologically dangerous and often misleading concept of 'mitigation' has been warmly embraced by governments and wind developers, despite evidence that protected habitats and species cannot just be moved to more convenient locations as if they were chess pieces. Displaced individuals are often killed by predators, or starve, and presumably suffer in other ways. For 'mitigation' read 'loophole'.

I'm not the only one who finds it disturbing that it took about eight months for the RSPB to issue a press release about a Scottish hen harrier death at the Griffin / Calliachar wind farm, a note which did not even mention the date of a second death. What does this say about prediction of impacts, monitoring, 'mitigation', communication, or transparency? Why did neither the RSPB, nor Scottish Natural Heritage, formally oppose this wind farm? Consider this quote from December 2006 in *Comment* (the news magazine of highland Perthshire), regarding the proposed wind turbines at Griffin / Calliachar: "The objectors' expert ornithologist witness at the Public Inquiry made it abundantly clear to the Reporter that, if these protected birds are in any way harmed by the development, the Scottish Ministers will be legally responsible and could face prosecution." I expect - and hope - that debates are building within generally worthy conservation organisations, and the core mission - to protect wildlife - will prevail. In Spain, SEO/Birdlife (the equivalent organisation to RSPB) appears to have changed its tune after a change in staff.

I am surprised that the typically powerful animal welfare and rights lobbies have not taken more interest in wind turbines. The second hen harrier reportedly took two days to die after its encounter with the Griffin / Calliachar wind development. Did it suffer? Whilst the sudden deaths are well documented, what about the near misses, the injuries? You can see footage of an injured vulture on the video below - if you can bear to watch it. What about suffering and survival after release of rescued birds? The death of the red kite (named 'Tweety Pie') at the Fairburn wind project reportedly saddened the children of Aviemore, who were tracking it. How many bats suffer with damaged lungs?

The ecological impacts of turbines are not confined to the blades themselves. Densities of Scotland's upland bird species can be suppressed half a kilometre from a wind farm. Reducing the notorious variation in energy supply from wind, using huge pumped water schemes, brings problems similar to hydro-power. Indeed, in Wales it appears that the famous pumped-water storage scheme, so often lauded by greens, wiped out a unique type of fish - the local race of the arctic charr! Destruction of peat bogs, ludicrous also from the perspective of carbon balance, is sacrilege against wildlife. Cables, access roads, bunds, erosion and ditches add to the damage - and reduce alleged carbon benefits. Cables are slashing great bustard populations in Spain, and threaten birds with a large turning circle, including geese and whooper swans.

Despite videos, photographs and ample other evidence from around the world, there are still many who deny turbines, cables or other infrastructure are a serious issue for birds. How often does one hear words to the effect that 'birds are not that stupid, and anyway they'll learn or evolve to avoid turbines'. I suspect mortality per turbine will indeed often fall through the life of a wind farm - as the population declines towards zero. Optimists think that animal population sizes won't be affected, believing the dead will rapidly be replaced by competing individuals, leaving the population the same size. This is the same old

folly of believing there are 'surplus yields' in a fish population - surplus individuals will die, so we may as well eat them! Consider what that attitude has done to fisheries, not to mention the other wildlife that used to eat what humans arrogantly dub 'surplus'. If there are so many animals out there, waiting in the wings to occupy a vacant space we create, why do so many species crash or go extinct?

I find even more people deny that populations might be driven to extinction by renewable energy, let alone whole species. Yet look at the perilous status of whooping crane in America, or orange-bellied parrot in Australia - and the frankly wicked threats from biofuels and dams. The global extinctions are coming - and we could have stopped them.

Will the impacts of climate change be so bad that we should sacrifice so much in the short term through these familiar techniques of habitat destruction and direct mortality? If we go on this way we'll never know: we are not monitoring properly and we are destroying habitats fast. As a precaution I argue we should assume both climate change and wind farms are highly problematic, and most dams and bioenergy are disastrous. You can draw your own conclusions about what energy sources are alternatives, and all are problematic - but I'm confident there are more effective and less damaging ways to tackle climate change than unsustainable 'renewables' deployed in the wrong places. I hope wind farms are stopped in their tracks, but I also dearly hope that dams, big and small, barrages, and wood fuel do not replace them - since these sources are at least as bad locally and globally. Concerns about climate change, and about wildlife, need not be in opposition. I argue that to benefit both wildlife and people we should first and foremost conserve energy; we also need nuclear power (with cooling towers), waste-to-energy digesters, and fossil fuels (with carbon-capture).

There is hope. Scotland has some of the most visionary, pro-active conservationists in the world. Witness Glen Affric and the Trees for Life campaign, and the Alladale Wilderness Reserve. These are globally noteworthy successes, opportunities and experiments in rewilding - which should be rolled-out widely. But it's no good rewilding an area only to dissect it with roads and cables, and it's no good rewilding an area on the ground only to chop up one's predators and insectivores in the sky above it. Instead, I'd say 'dewilding' is what's happening to large areas of Scotland - but an informed democracy can prevent that. We should treasure the joys of our existing wild lands, and can extend them by restoring nature in large areas - having kept the turbines out.

For videos, photos and data on bird and bat mortality, see:  
<http://www.epaw.org/multimedia.php?lang=es&article=b6>  
<http://www.epaw.org/multimedia.php?lang=en&article=b2>  
<http://savetheeaglesinternational.org/>  
<http://www.nrel.gov/wind/pdfs/26092.pdf>  
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[http://www.abcbirds.org/abcprograms/policy/collisions/pdf/wind\\_rulemaking\\_petition.pdf](http://www.abcbirds.org/abcprograms/policy/collisions/pdf/wind_rulemaking_petition.pdf)

Destruction of peat bogs, ludicrous also from the perspective of carbon balance, is sacrilege against wildlife. Cables, access roads, bunds, erosion and ditches add to the damage—and reduce alleged carbon benefits.