Making real space for nature: a continuum approach to UK conservation

Traditional conservation concerns over wildlife loss, cherished habitats and landscape heritage are holding back more adventurous thinking on rewilding, species reintroductions and landscape-scale natural processes. A bolder vision for the UK countryside, with a range of ambitions for wildlife and landscape conservation could allow nature to flourish to its full potential.

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My friend Mark Fisher[1] enjoys a constructive argument with me, usually over a pie and a pint. After musing on the quality of the beer, our discussions tend to focus on wilderness and the poor state of nature conservation in the UK. Our shared experience of wilder landscapes elsewhere in the world has shown what a mess we're in here. Initially, having both seen the scope and potential of wilderness and untrammelled nature in the vast open spaces of North America we may have been forgiven for thinking that kind of natural freedom was not possible here on this 'small and crowded island'. Subsequent explorations of mainland Europe, and the concurrent rise in interest in the wilderness condition there have led us to question this logic. Other countries, even ones as small as our own, have started to think outside of the box when it comes to species reintroductions, wilderness and natural processes.

The wolf returns

In other parts of Europe people co-exist with bear, wolf and lynx. Occasional conflicts inevitably arise, but people are in the main accepting of their presence and have often welcomed these top level predators. Here we seem to struggle with butterflies, boar and beavers. In the case of the wolf, this shy, adaptable and oft-vilified animal has started to recolonise western Europe from strongholds in the east and north, appearing in France and Germany and even in the Netherlands and Denmark.[2] The EU requires as part of the Habitats Directive that we consider the feasibility of the reintroduction of native species and, where they do show up under their own accord, that we afford them full protection.[3] It is for this reason that both the Netherlands and Denmark have undertaken extensive studies and consultation on wolves and developed their own wolf management plans.[4] If it wasn't for the English Channel, perhaps wolves would show up here given time. If they do make an appearance, by whatever means, I can only imagine that they will be treated the same as the illegal immigrants; rounded up, arrested and imprisoned ...or worse.... and all without a fair trial or hearing - just look at the reaction to the five wolves which escaped from Colchester Zoo last year.[5] There will be no wolf studies here,

no consultations, no policy and no action plan, at least not outside of academia for the foreseeable future, or until a pack or two do manage to make it ashore when all hell will break loose. Why can't we see the bigger picture when it comes to nature in this country?

Wilder ...by design?

The title of this article stems from a conversation with another good friend, Alison Parfitt, who drew my attention to Ian Rotherham's workshops at Sheffield Hallam University. I offered a contribution to the May 2014 event based on my work with Scottish Natural Heritage in mapping wildness to inform the Scottish Planning Policy (SPP2) and National Planning Framework (NPF3) published on 22 June 2014.[6] Here, the work focuses on the use of Geographical Information Systems (GIS) mapping to identify where landscapes sit within a spatial continuum from least to most wild as measured according to attributes pertaining to remoteness (from settlement and transportation) and naturalness (lack of human infrastructure and unmodified vegetation). Scotland has been largely at the forefront of addressing the points raised by the European Parliament Resolution on Wilderness.[7] First, Mark and I were contracted by the Scottish Government to undertake a review of the status and conservation of wild land in Europe as a means of informing further development of policy on Scottish wild land.[8] This has in turn been widely cited in developing EU policy documents on wilderness. Second, Scotland has moved beyond its earlier definition of wild land formalised by SNH in 2002[9], to developing the aforementioned wild land map as a means of identifying exactly which landscapes we are talking about (see Figure 1).[10]

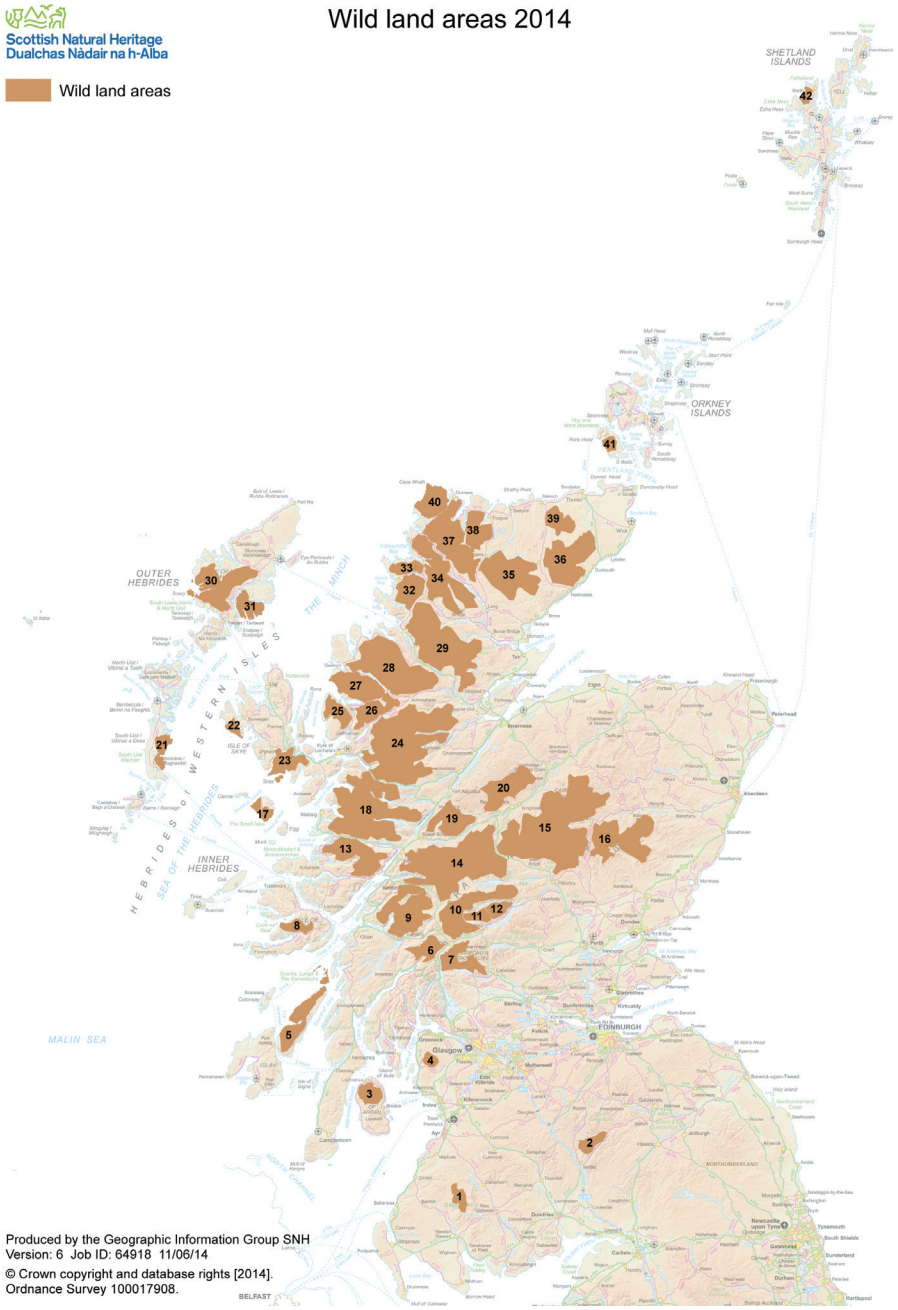
While the map and the areas identified therein are not statutory designations, they are a statement of Scottish Government policy on wild land character and how plans should "identify and safeguard the character of areas of wild land as identified on the 2014 SNH map of wild land areas." As a landscape description, the Scottish wild land map has little by way of legal purchase but it offers limited protection for wild land character through an obligation to consider this important aspect of the wider landscape in the planning process.[11]

Mapping the continuum

In preparing my presentation for *Wilder By Design* I began to reassess the wilderness continuum concept from both a geographical and a policy perspective. Looking at a global scale we see a broad range of landscapes arranged along this continuum of human modification from the highly urbanised to the extreme wild end of the spectrum as represented by landscapes and ecosystems found in the remote and unpopulated regions. In these locations we can still find examples of 'true' wilderness, of largely untouched landscapes with intact ecosystems unmodified by human land use.

As we zoom in to smaller and more populated regions of the globe, to Europe and then to the UK for example, we see similar patterns from least wild to most wild repeated, but increasingly constrained and held back at the wilderness end of the spectrum. At the global scale Europe hardly figures at all in the 'Last of the Wild'

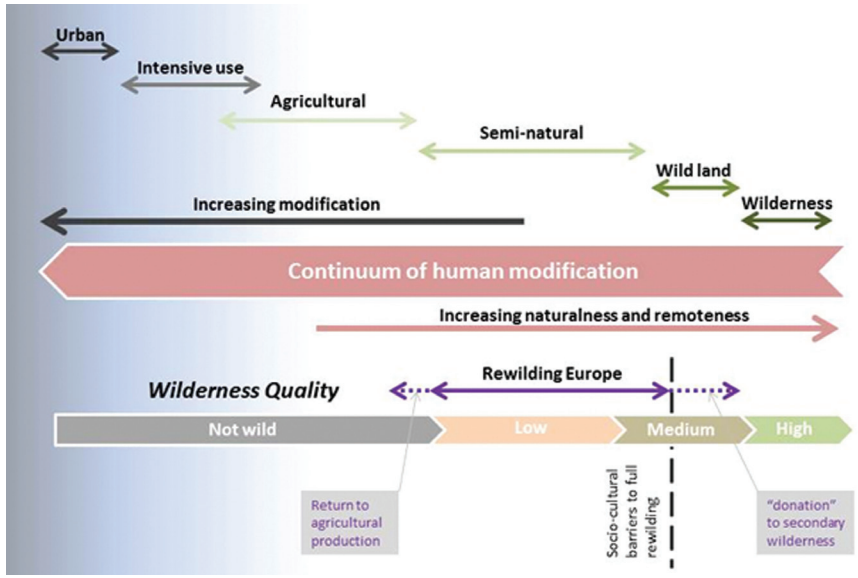
Figure 1. **Scotland's wild lands (after SNH, 2014)**



maps drawn by Eric Sanderson and his team at CIESIN[12], yet when redrawn for just Europe, it is possible to see the 'least to most wild' pattern re-emerge. Such a map has recently been developed for Europe along with a register of all European wilderness areas by a team that includes Mark Fisher and myself working for the EU and European Environment Agency.

The wilderness continuum that underpins this work is perhaps best visualised adapting a diagram from the late Rob Lesslie (see Figure 2).[13] This shows how increasing human modification of landscapes and ecosystems results in decreasing naturalness and remoteness with a corresponding reduction in overall wildness. Using this approach it is possible to not only categorise landscapes into 'wildness classes' from urban and intensive use to wild land and wilderness, but it is also possible to define wilderness quality, from 'not wild' to low, medium and high quality wilderness, and map this as a spatial index at multiple spatial scales. I have spent the best part of my academic career developing methods to do this in a rigorous manner and using these maps to help inform decisions about wilderness and its protection.[14]

Figure 2. **The Wilderness Continuum concept (after Lesslie, 2013)**



Stuck in the middle with you

Much of the current thinking and policy in mainstream UK nature conservation circles seems to be stuck somewhere in the middle of the continuum. That 'somewhere' never allows us to move beyond active management of semi-natural environments, which in most cases means hands-on management for the benefit of a select few species and habitats that are deemed worthy of our attention. As in common with much of the rest of Europe outside of the wilder landscapes shown in the wildness

maps, many of these habitats are, in fact, the result of many years of traditional land management i.e. agriculture or forestry. Far from being ecologically natural they are cultural landscapes, valued more for their heritage and aesthetics than for nature.[15]

Indeed, much of the Natura2000 network is focused on protecting the biodiversity associated with human modified landscapes to such an extent that allowing natural processes to determine rates and direction of successional change that moves away from these assemblages is somehow seen as a bad thing to be avoided at all costs. Such changes are deemed to be contrary to maintaining sites in what is euphemistically called Favourable Conservation Status (FCS) or the condition for which they were originally designated.

As a geographer interested in landscape, nature and wildness I find this particularly bizarre since succession and the associated changes in ecosystem complexes is, and ought to be, the default state of natural, self-willed ecosystems. Change happens. Get over it!

A lack of foresight or just a biased view?

Bound by EU dictat and the strictures of the Habitat and Birds Directives, the CAP and other laws governing the environment, our nature agencies and NGOs often don't seem to have the foresight (or maybe it's the will and wherewithal) to think beyond rear-guard actions to preserve the biotic elements of some bygone era that they would like us to believe represent a cherished idyll. When I question such a view I am constantly told by those who should know better that if we don't actively intervene then nature and biodiversity will suffer and that we'll lose valued habitats and species. Valued by whom? And for what? I am sure that in certain specific cases these people are correct. We may lose a particular habitat and with it a particularly interesting plant or butterfly species in a particular location if we allow nature to determine its own destination via natural succession (for example by rewilding), but when those habitats were created by us in the first instance I'm not sure I get the point. This is especially true as regards the time and effort put into conservation projects aimed at protecting locally rare, yet globally common species and habitats, and particularly when they hinge on continued intervention using traditional land management practices that are themselves far from being natural. This is further implicated when the management in question is patently wrong for the intended objective or at best biased to one particular world view.

Two different wilds

At Ingleborough in the Yorkshire Dales National Park there are two almost identical and adjacent limestone pavement areas; both roughly the same size, both at the same elevation and aspect, but one (Southerscales Nature Reserve) is managed by the Yorkshire Wildlife Trust by conservation grazing with sheep and cattle under a HLS agreement, ostensibly for the "restoration of grassland for target species", while the other (Scar Close) is 'managed' by Natural England using non-intervention and exclusion of grazing by domestic stock.

It doesn't take an expert to see that Scar Close is by far the more biologically diverse site, with around three times as many plant species observed here than

on neighbouring Southerscales. Scar Close also supports a far greater biomass and a rich and more interesting vertical structure than does Southerscales where vegetation on the pavement is limited to the limestone grykes where it hides away out of reach from sheep and cattle. Where shrubs have managed to grow higher than their protective geology on Southerscales they exhibit a marked browse line and the topiaried forms typical of overgrazed landscapes. What is more is that Scar Close is alive with bird song and insect noise, whereas Southerscales is eerily silent. I don't know of any comparative faunistic data for the two sites, but anyone who tells me that conservation grazing is essential on Southerscales for anything other than attracting a HLS payment or as a political sop to local farming interests is either naive or somehow being economical with the truth.

Figure 3a **Scar Close**

Constrained thinking

Whilst this is just one example, I see the process repeated over and over - on moorland, on heaths, in woodland - where local managers address the symptoms of wildlife loss using evidence from yesterday's landscapes as some kind of immutable truth. This is of course, the well-known "shifting base-line syndrome".[16] What drives the thinking that a fettered and constrained nature is the best we in the UK can hope to aspire too? Two things actually come to mind. One is a distinctively human pathological socio-cultural need to be in control, as if nature isn't capable of survival without our benevolent guiding hand (i.e. nature gardening[17]). The other is that of the 'wilderness deconstructionists' or 'green modernism' wherein wilderness is seen as just another human construct that has no place in the modern world where we can eco-engineer the planet's future without this thing we call wild and self-willed nature. Both conspire to further limit our aspirations towards truly wild nature in the UK to the semi-natural and traditional culture-scapes.[18] The fact that many conservation practitioners may be 'wildernistas' at heart is cause for some optimism, but I despair on hearing how the wilderness and wildland ethic is perhaps "best applied to other countries" because lazy thinking and a lack of vision says we're too small and too densely populated for it to have any meaning here. We need to break out of this mould that limits our thinking on nature conservation.

Making space for nature with rewilding-max

The *Making Space for Nature* report chaired by Sir John Lawton that I parody in the title of this article made encouraging noises towards the notion of rewilding in its call for landscape-scale Ecological Restoration Zones - large areas of the UK which could see the health and connectivity of their ecosystems restored over time. The reality of the scheme which saw the light of day in the subsequent Natural Environment White Paper saw the ERZs reduced to so called Nature Improvement Areas with a paltry £7.5 million spread between 12 projects which, in the clamour for successful bids, focused on managing existing sites which amounts to the same old same old.

The one bright spot on the list of intended outcomes is improving connectivity between nature sites and developing wildlife corridors. However, with money allocated on a competition basis there is less influence on how this will be coordinated across the landscape. Geographically informed thinking, such as the Scottish mapping of wildness and Forest Habitat Networks, could have better informed the English agencies and NGOs about wildness and opportunities for restoration, species reintroductions and greater connectivity at a true landscape scale or what I've begun to call "re(al) wilding" or rewilding-max.

Rewilding-lite

Other forms of rewilding exist for which I've coined the term rewilding-lite. These, it turned out, with one or two notable exceptions also reported in this issue, to be the focus of much of the *Wilder By Design* event. They always seem to be at pains to point out how giving nature a free hand will destroy the heritage landscapes of which they seem so enamoured; of veteran trees in wood-pasture landscapes, of ancient peat cuttings on sheep-wrecked moors, of coppiced woodlands or

Figure 3b **Southerscales**

lowland heath - all of them man-made landscapes. I concede that there is a place for this where rewilding-max is perhaps too much for the socio-cultural-political and economic landscape to bear, but I do see it as somehow missing the point.

There is, of course, the other rewilding that we have seen develop in mainland Europe which seems to value safari style wildlife tourist parks over substance and true ecological vision. Here the emphasis is on identifying the economic opportunities in abandoned farmland that rewilding with large numbers of grazing herbivores could represent by way of replacing traditional farming incomes with Euros from well-off tourists who would (it is assumed) come to gawp at the spectacle and pay to do so. By way of justification, the Vera Hypothesis is often cited alongside the as yet unsubstantiated claim that 50% of Europe's wildlife is dependent on open and semi-open landscapes.[19] If true, this figure has only come about because of deforestation and agriculture, rather than any natural potential distribution of flora and fauna.[20]

Reconnecting ...but with what nature?

The last edition of *ECOS* 35(2) carried several articles on how we reconnect an increasingly technologically-focused population with nature in the run up to the publishing of the "Nature and Well-being Act" Green Paper by the RSPB and Wildlife Trusts.[21] Reconnection with nature is a laudable aim, but with what nature? A nature that is unthreatening and conveniently constrained within the pastoral bliss of a well-ordered countryside where natural capital is regarded as highly as profit? Sounds attractive doesn't it? And just that little bit… er... dull? We need more than this. We need some truly wild places, with truly wild and self-willed nature and, yes, with predators where we can feel a little unsafe and *very alive*!

No one is suggesting rewilding-max as the answer for all our nature areas, but we do need somewhere where we are not in charge and where nature rules the roost; a representative set of landscape-scale ecosystems that serve as cores within a connected network of rewilding-lite. Going back to the mapping work, this is helpful in informing decisions about protecting the wild that is left, but it also has the potential to tell us where we could best focus our attention for rewilding and connectivity with some truly big scale and top-down thinking.[22]

The six rules of Re(al)wilding

Of course, this is what I really wanted to talk about at Sheffield in particular how to move the rewilding debate forward and overcome the obstacles thrown up by the nature conservation establishment and nature-culture lovers intent on using the England of Gilbert White[23] as a reference point. Thus I had really only used the "Scottish-play" as we like to call it as a kind of smoke screen or Trojan horse for what might be considered by some as the more radical views I have described here. To help summarise the thought process, I came up with 'The six rules of re(al) wilding' which I repeat here by way of conclusion:

Don't confuse biodiversity and culturally mediated landscapes with wildness and naturalness. They are not necessarily the same thing, even though

they are clearly linked. The biodiversity of pre-war Britain was an essentially artificial one which, nostalgia aside, we should consign to the past and move on to what could be.

Nature can exist and thrive without our constant intervention. Traditional farming and forestry practices only support those species that have adapted to those particular landscapes and conditions, and should not, in these patterns or distributions, be considered a natural or wild biodiversity. Forcing nature to comply within these landscapes (e.g. using conservation grazing to comply with HLS agreements) only keeps wild nature in check. Allow all nature to be self-willed wherever possible.

Natural succession should be the Favourable Conservation Status for rewilding projects. Nature isn't natural when held in stasis by continual human intervention and interference. Only natural processes and associated trophic cascades create natural patterns and distributions of species. We need only give nature the functional space free from human interference to allow it to take care of itself in wilder land and seascapes. The outcomes might not be what we expect, but they will be wild[24].

Work towards a continuum of approaches. Recognise that one-size doesn't fit all and there is value in diversity from urban wilds (e.g. RSPB's 'Build it and they will come' campaign) and HNV farming and nature gardening through to rewilding-lite (e.g. Making Space for Nature) and ultimately true rewilding with a full range of native species including top carnivores where wilderness is the intended outcome (i.e. rewilding-max). Geography can be used to inform which approach works best where and promote joined up thinking through a spatially coherent approach.

Work towards a continuum of landscapes. We cannot rewild everywhere and everything. We need a continuum and mosaic of land uses and types from urban

(places to live and work), through intensive farming (to put food on the table) and traditional farmed landscapes to managed nature reserves (where we can garden and play at nature). But we also need core non-intervention wild(er)ness where we can step back entirely and let nature be natural and self-willed. Geography can be used to inform what fits best where and how they can be spatially connected to create coherent and resilient landscapes.

Think big and think bold. Climate change, population growth, the global financial crisis, poverty, disease, war and famine are all seemingly big and immovable issues, but without wilderness and wildness we are nothing. Nature is a wild animal not a political one, so treat it with respect and give it space to grow.

Heightened sense

James MacKinnon in his book *The Once and Future World,* talks a lot about landscapes of loss; the wildlife and the wilderness we have lost around the world as a result of human endeavour, growth and progress. In the final part he begins to talk of rewilding and the world as it could be. Concluding in his own epilogue he talks about how the grizzly bear is a grassland species though we normally associate it these days with mountains and forest because that's where it has retreated as the American prairie fell under the plough and hoof. He recalls an experience spookily close to one of my own wherein we have both visited the Lamar Valley in Yellowstone National Park to watch wolves and grizzly bears in their natural habitat. Whereas James was lucky enough to see a bear with its own kill, I saw the bear trying to steal one made by wolves. It was a huge male Griz but he knew he was out-numbered by the twelve strong Druid pack so retreated to the woods on the far side of the valley to look for easier pickings. The next morning I saw him again closer to my vantage point and watched him shadow a herd of bison for an hour or so. Later that day I walked out across the valley towards Amethyst Mountain. Like MacKinnon, I was acutely aware that here I was no longer at the top of the food chain and that that big Griz was here also, somewhere, possibly close. I wasn't afraid exactly, rather in a heightened state of awareness where every little movement, sight, sound, touch, smell was multiplied tenfold, my nerves alive to every bit of nature and every sign of bear, ready with my fight-or-flight reaction. I was hoping to climb the mountain but my flight mode got the better of me and so I retreated to the road to just sit and watch the bison and the pronghorn graze in the afternoon sun.

A year or so later, I was in Glenfeshie in the Cairngorm National Park and was struck by how similar it was to the Lamar Valley, with one crucial exception: here there were no wolves and no bears. And I wasn't afraid, or at least I wasn't in that heightened awareness of my surroundings. I miss that in our country. We've killed and extirpated all our top predators and that to me is a wrong that we need to right. Ours is a landscape of loss. A loss far greater than any pursuance of a rewilding-max policy would entail for the cultural heritage in the target areas. The ecological and ethical arguments outweigh those of the naysayers. Hopefully before I'm pushing up the daisies, top predators will be back in parts of the UK countryside. In MacKinnon's words: "It isn't fear that drives us to extinguish fearsome beasts, but once they are gone, it's fear that keeps us from bringing them back." (p.255)

Come on then, hold my hand and we'll walk forward bravely together into the landscapes of tomorrow.

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24. Some intervention might, of course, be necessary to guide or determine specific outcomes, and avoid unwanted effects from non-native invasive species for example.

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