



**“FINDING OPPORTUNITIES TO THRIVE ALONGSIDE NATURE”**  
**An investigation of Scotland’s discourses of rewilding and re-peopling**

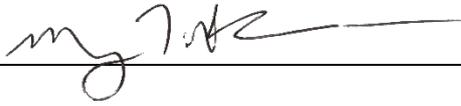
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Submitted in partial fulfilment for the  
Degree of Master of Science  
in Climate Justice  
August 2021

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*This dissertation is my own original work and has not been submitted elsewhere in fulfilment of the requirements of this or any other award.*

A handwritten signature in black ink, appearing to read 'Meg Taintor', is positioned above a horizontal line.

Meg Taintor, 8 August 2021

## 1. Abstract

This study addresses two important issues: the challenge of ensuring social and economic sustainability in remote rural communities of Scotland and the need to regenerate sustainable ecosystems to combat biodiversity loss. Through a mixture of desk-based research and semi-structured qualitative interviews, I examined the intersection between two alternative land use practices, rewilding (restoring degraded ecosystems) and re-peopling (restoring human populations). Often positioned in opposition to each other, these practices represent different visions for the use of Scotland's remote rural places.

To gain perspectives on potential points of common ground in this often contentious debate, I conducted series of 11 semi-structured qualitative interviews during June and July 2021 with research participants representing a cross-section of stakeholders in the discourse around land use in Scotland.

Participants endorsed a place-based approach, in which local communities have power in the design and implementation of biodiversity projects, and receive the benefits that emerge from them. Embedded within this approach is a critique of current concentrated patterns of land ownership in Scotland, and a desire to de-centralised both land ownership (through the breaking up of large estates and the generation of more land-owners, both community and individuals) and decision-making (through the empowerment of this new cohort of landowners).

In these proposed community rewilding initiatives, human communities exist alongside and within healthy ecosystems, entangled in both space and function. Seen through the lens of a multi-species landscape justice, this model offers a path forward that requires land use decisions to made with recognition of the health of both human and non-human systems.

## 2. Acknowledgments

There are a number of people whose support and guidance were invaluable in making this work possible, and I take this opportunity to thank them for their contributions to my research.

I owe a great debt to my supervisors, Dr Paul Teedon and Dr Karin Helwig, for their detailed and nuanced feedback and for pushing me to consider new perspectives. I am so fortunate to have had supervisors who were willing to meet me where I am, and help me grow through this research.

I am beyond grateful to the eleven research participants who generously gave me their time and insight. I could have written four dissertations with the richness of content they provided.

Two friends went above and beyond in supporting me in the writing of this research, helping me thrash ideas out of my head and onto the page. Endless gratitude to Natalya Baldyga and Frances Snee for everything.

During the strange locked-down year of this programme, I have been held and supported by my amazing housemates, Iain Craig and Lewis Hetherington. How did I get so lucky?

I am forever and eternally grateful to Perry, for putting up with a shortage of quality walks this summer, and for reminding me that my best thinking is done on my feet, preferably up a hill, with the best houndrel in the world.

And most importantly, love and gratitude to my amazing wonderful parents. Always. And of course.

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## 4. Introduction

This study addresses two important issues: the challenge of ensuring social and economic sustainability in remote rural communities of Scotland and the need to regenerate sustainable ecosystems to combat biodiversity loss. Through a mixture of desk-based research and semi-structured qualitative interviews, I examine the intersection between two alternative land use practices, rewilding (restoring degraded ecosystems) and re-peopling (restoring human populations). Often positioned in opposition to each other, these practices represent different visions for the use of Scotland's remote rural places. I locate this research at the intersection of social and ecological justice, seeking to understand how land management priorities in Scotland balance questions of land access and land use by both human and non-human agents. By examining the discourses of stakeholders working in the contested space of their intersection, I aim to identify places of common ground.

### **Biodiversity in the Anthropocene**

In the Anthropocene, human-caused changes to global systems have outpaced geologic, biologic, and atmospheric factors. One of the most marked characteristics of the era is what is known as the "Holocene extinction" or "the sixth extinction": a global trend in accelerated loss of biodiversity. Analysis has shown that current rates of extinction are unprecedented in human history and are linked to anthropogenic causes, namely climate change, habitat loss, and over-exploitation (Ceballos *et al.*, 2015). In addition to the concern over the individual loss of species, however, is the fact that this wave of extinctions is a driver of global environment change, as individual species extinctions will have a cascade of effects through ecosystems, disrupting ecosystem functions that support both human and non-human life (Dirzo *et al.*, 2014; Oliver *et al.*, 2015).

The crisis of declining biodiversity in Scotland is well documented: according to The State of Nature Scotland 2019 report, 11% of the 6,413 species found in Scotland are threatened with extinction from Great Britain (Walton *et al.*, 2019). The IPBES (the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) and NatureScot have identified the drivers of biodiversity loss which need to be countered for the loss to be stemmed (IPBES, 2019; NatureScot, 2020), and the Scottish Government has laid out a "route map" for biodiversity, with six key steps to be undertaken, including ecosystem restoration, conserving wildlife, and sustainable management of both land and freshwater systems, as well as marine and coastal ecosystems (Scottish Government, 2015).

## **Rewilding for biodiversity**

Rewilding is a conservation process that is gaining steam as a way of combatting the marked loss of biodiversity. Through the restoration of natural ecosystems either by managed plantings, re-introduction of keystone species, or even simply human non-intervention, proponents of rewilding see it as a way to stem this devastating loss of biodiversity. New research suggests that three in four Scots support rewilding (Amos, 2021). This public support, coming as it does at the start of the UN's Decade on Ecosystem Restoration, seems to suggest that rewilding in Scotland is an idea whose time has come.

There are dozens of examples of major rewilding initiatives throughout Scotland, on parcels of land ranging from 50 to 157,000 acres. The overwhelming majority of these projects, however, take place on large estates where thousands (or tens of thousands) of acres of land can be dedicated to the project. This pattern, of rewilding projects funded and managed by landowners who own a disproportionate amount of Scotland's land, has led to accusations from community rights advocates of the emergence of a new class of "green lairds", who overlook the needs of local communities in favour of establishing green credits (MacLeod, 2021; Ross, 2021).

## **Land ownership and the ongoing depopulation of the Highlands**

Land ownership in Scotland is a fraught issue, with an estimated 1,125 owners owning over 70% of Scotland (Glenn *et al.*, 2019). In Highland sparsely populated areas, this system of land ownership has resulted in a lack of affordable land and housing, which in turn has resulted in an exodus of the younger generations (Riddoch, 2019). Indeed, while Scotland's population has steadily grown since 2000 – and is projected to continue growing through 2043 – the growth in population has for some time been due solely to in-migration, as the death rate has (and will continue to) exceeded the birth rate (National Records of Scotland, 2019; Scottish Government, 2018). However, this population growth is not shared equally across the country: new research from the James Hutton Institute reveals that populations in Scotland's Sparsely Populated Areas (SPAs) are projected to decline by nearly 20% from 2018 to 2043, while the working age population of those same places will decline by 25% (Hopkins and Piras, 2020).

## **Rewilding or re-peopling?**

In the context of the ongoing depopulation of the Highlands alongside "green lairds" of private landowners and conservation NGOs, conflict has emerged between advocates of community rights and land reform, and proponents of Scotland's rewilding movement. And yet, are these two positions in opposition to each other? This research project explores perceptions of opposition between stakeholders and seeks to find a space for consensus and common ground.

## 5. Theoretical Framework

This study addresses two important issues: the ongoing loss of biodiversity, and the challenge of ensuring social and economic sustainability in rural communities. By exploring the interaction of these issues in remote rural parts of Scotland, I locate this research at the intersection of social and ecological justice, seeking to understand how land management priorities in Scotland balance questions of land access and land use by both human and non-human agents.

These questions are multi-layered and deeply entangled with issues of justice and ethics. Perhaps it could be no other way: the Anthropocene, after all, is a time of entanglements. As environmental philosopher Val Plumwood (2009) has observed in her influential essay “Nature in the Active Voice”, the old binaries of our cultural narratives (nature/culture, mind/body, human/non-human) are not sufficient to address the ecological crises (climate change and loss of biodiversity and ecosystem health) that we face: instead, we must “re-imagine the world”, re-visioning how intertwined our lives are with the needs and lives of other species. These entanglements of human and non-human life lead me to position this research in the framework of a multi-species landscape justice. *Entanglement*, then, serves as both an area of study and a means by which to consider these questions of rewilding and re-peopling.

This chapter introduces the research’s two theoretical frames, *entanglements of the Anthropocene* and *landscape justice*, and seeks to explore the framework of a multi-species ecological landscape justice. Following this is a contextual chapter which explores definitions and taxonomies of rewilding as a tactic of ecological restoration, and explores the current state of discourse around rewilding in Scotland.

### Entanglements of the Anthropocene

The term “Anthropocene” was introduced by biologist Eugene Stoermer and atmospheric chemist Paul Crutzen (Crutzen and Stoermer, 2000) as a way of defining humanity’s impact in shaping the current geologic epoch: the pair asserted that, starting with James Watt’s invention of the steam engine in 1784, the impact of human activities on earth and atmospheric systems have revealed humanity to be “a major geologic force for many millennia, maybe millions of years, to come” (2000, p. 18).

However, since the term was first introduced in 2000, it has expanded beyond its original definition as a geological epoch, and taken on a broader significance as a cultural concept that reframes the narrative of nature-culture dichotomy. Lorimer has argued that as “Anthropocene” has moved away from a purely scientific term and entered the intellectual zeitgeist, it has become a plastic term that encompasses “anxiety about the state and future of Earth after the ‘end of Nature’”

(2017, p. 121). This very plasticity has allowed Trischler, drawing on the work of Latour, Chakrabarty and Heise, to posit that the Anthropocene highlights the blurring of the boundaries between culture and nature and problematizes the “supposed uniqueness” of humanity (Trischler, 2016).

There is an irony that an age which draws its very name from humanity (“Anthropos” from the Ancient Greek “ἄνθρωπος” meaning “human”) is defined in part by this critique of human exceptionalism. Houston *et al* (2018) highlight a growing academic consensus that humans are not the central species, but rather one species in a vast and interrelated ecosystem. And yet, for only one species among many, humanity’s ecological footprint is vast: there is no landscape that has not been impacted by humanity, either through direct land management techniques, or indirectly through alterations to the biotic communities that inhabit them.

This state of entanglement between human and “natural” world is one of the key characteristics of the Anthropocene (Hamilton, 2017). In the past thirty years, a growing number of scholars (from cultural geographers to post-humanists to anthropologists) have argued that nature is not something that exists separate from humanity – either because human impact on the world has grown so great that there is now no longer any wilderness left that does not bear our imprint (McKibben, 1990), or because such a distinction never existed in the first place but was rather a human invention (Morton, 2007; ‘Handle with care’, 2008; Latour, 2017; Casetta, 2020).

Entanglements between the human and natural world have also been explored by post-humanist scholarship, which problematizes the idea that there could be a physical separation between human life, non-human life and technological worlds (Celermajer *et al.*, 2021). Donna Haraway uses *sym-poiesis* (“making-with”) to explore ideas of “collaborative entanglements” between life-forms that live enmeshed within each other, not filling the roles of parasite/host, but rather collaborative partners: bacterial and animals life-form have always co-existed, entangled, each supporting the other in symbiotic assemblages (Haraway, 2017).

The Anthropocene also creates temporal entanglements as events occur at different time-scales simultaneously (Johnson, 2015). Climate change, for example, occurs both in the immediate moment, in the two centuries since the dawn of Industrialization, and in the future – all simultaneously. Houston challenge researchers working in the Anthropocene “to critically rethink temporal and spatial scales of eco-social responsibility – without collapsing all of humanity into an amorphous ‘us’ or by ignoring the lively multispecies assemblies gathered in the margins” (2018, p. 193). From this recognition of the shifting scales of responsibility comes a need to rethink concepts of justice: as Caney asserts, the normative structure for justice comes from specifying “who should take responsibility” (2016, p. 24).

## **Landscape Justice**

Landscape justice is a concept that brings together elements of social and environmental justice into a place-based examination of land. Briefly speaking, social justice addresses unequal access to goods and resources, and environmental justice addresses unequal exposure to environmental pollutions, degradations and hazards (Jorgensen, 2016). Landscape justice draws on elements of both, but is concerned mainly with questions of access to and participation in decision-making around land.

Dalglis (2017) notes that landscape justice is governed by four primary concepts which set out not only the outcomes, but also the process by which those outcomes are achieved:

- Distribution: who is impacted by harms and benefits relating to landscape;
- Procedure: how decisions are made about landscape;
- Recognition: how diversity of perspective is legitimized throughout the process; and
- Capabilities: how people are able to achieve their goals in respect to the land.

These four concepts highlight how complex an issue landscape justice is. It sits at the intersection of distributive justice, procedural justice and restorative justice – as such, activists and researchers involved in landscape justice must look at causes that are “multiple, intertwined, complex and rapidly changing” (Jorgensen, 2016, p. 4) – causes which, additionally, operate at multiple geographic and temporal scales.

As with considerations of justice in many forms, Dalglis et al (2018) have argued that questions of landscape justice need to be understood alongside issues of historical justice, as modern injustices are frequently “the legacies of injustices perpetuated in the past” which continue into the present day. Landscape is, quite literally, a contested ground built from political actions of the past, where empire and ownership determined the shape that land would take. In order to fully understand this complexity, it is necessary to go back to the roots of the idea of “landscape”.

### Shaping Landscapes

The term “landscape” originated in Europe in the 13<sup>th</sup> century as a way of making the distinction between rural and urban lands: the most commonly accepted etymology combines the Dutch words for “land” and “shape” (Antrop and Van Eetvelde, 2019). A landscape, then, is not a natural concept: it describes the way that communities shape the land on which they live and work. Indeed, Anne Whiston Spirn (2005) defines landscape as “the mutual shaping of people and place”.

The ways in which these shapings occur, the processes that communities engage in to shape the world, take place at different scales of time and geography: as Whiston Spirn (2005) notes, such shapings are done not just through physical change (with hands and tools), but also through investment, public policy and legal structures. The term, then, is more than just a description of a

location; instead, it encompasses both the physical territory and the body politic of the community who inhabits that space (Olwig, 1996).

There exists some debate about the etymology of “landscape”, however: Olwig (2016) asserts that the suffix *-scape* is a variant of *-ship* (as in *friendship, fellowship*) which denotes meanings of shared character and qualities. The concept of “landscape” might be expanded on then with the idea that those who share physical territory are bound together by the shared qualities of that space. Indeed, Dalglish (2017) argues that landscapes are not something that happen at a distance from us, “out there”, but rather are a community comprised of both human and non-human actors.

### Entangled Landscapes and Expanding Landscape Justice to Non-Human Actors

Tsing *et al* propose a way of looking at landscapes that sees human and nonhuman living spaces, “haunted” by both past and missing generations, and by imagined futures (Tsing *et al.*, 2017). These physical and temporal entanglements serve as reminder that actions taken now will resonate through future generations, impacting humans and non-humans alike. By being alert to these hauntings, they argue, humanity can try to avoid what ecologists call “shifting baseline syndrome”, where “the newly shaped and ruined landscapes become the new reality” (2017, p. G6).

This recognition of the temporal and spatial entanglements of the human and nonhuman world has its roots in Aldo Leopold’s concept of “the land ethic”. In “The Land Ethic”, Leopold follows the trajectory of the development of humanity’s ethical code, and observes that such codes have evolved upon the premise that “the individual is a member of a community of interdependent parts” and that co-operation within that community is the right behavior (Leopold, 2020, p. 156). From this starting point, he proposed a new ethic, the land ethic, that would expand “the boundaries of community to include soils, waters, plants and animals” (2020, p. 157), which changed the position of humanity from that of ruler of the Earth, to a member of the biotic community dwelling on it. This expansion changes the role of humanity from that of “conqueror of the land community to plain member and citizen of it” (*ibid.*). Leopold, an American conservationist, forester and writer, was instrumental in the development of modern environmentalism, and his work has a direct line to the lineage of rewilding (Dalglish, 2017; Jamieson, 2020).

Ethics, however, are not the same as justice: whereas ethics are a set of moral principles by which people make judgements about courses of action, justice has more to do with fairness and equitable treatment. The land ethic is declaration that our moral community – those to whom we owe ethical behavior – include the fellow inhabitants of our ecosystem, but it does not automatically lead to justice, to a declaration that we must share equitably in the resources of that ecosystem. Wienhues (2017) has argued that the inclusion of nonhuman beings in our community of justice

reveals that community to be “a community of fate” as all terrestrial beings are reliant on existence of a healthy ecosystem to survive. The outcome from this argument is ecological justice (justice to nature) must be biocentric. And yet, while the concept of landscape contains within itself recognition of that expansive community of human and non-human life, the academic literature surrounding landscape justice (of which there has been a marked increase over the last 15 years) has remained resolutely anthropocentric in its attention (Jorgensen, 2016; Dalglish *et al.*, 2018).

With this research, seated as it is at the juncture of crises of both human and non-human life, I seek to expand landscape justice to include a more ecocentric worldview, offering a non-anthropocentric vision of justice which reframes this debate as, first and foremost, a land use question: how should the land be used? Should it be given over to rewilding projects which centre the benefits on biodiversity and champion human exclusion from the land (rewilding) or should decisions be made on the question of how human settlements (and human cultural history of those settlements) can be centred? This is a false dichotomy, but looking at it, at least to start, from this vantage point will allow for a real examination of the debate.

## 6. Literature Review

This literature review is comprised of two parts. Firstly, definitions and taxonomies of rewilding in a global context will be summarised and analysed with respect to their evolutions, difference and instances of cohesion. Secondly, rewilding will be analysed in the context of the ongoing land-management discourse in Scotland, with particular attention to intersections between the rewilding and “re-peopling” discourses.

### **Rewilding: Origins and meanings**

The term “rewilding” was first defined by Michael Soulé and Reed Noss (1998) in connection with the Wildlands Project (now the Wildlands Network), founded in 1991, which aims to create continent-wide conservation through the interconnection of core habitats and migration corridors across North America (Wildlands Network, 2021). The pair placed *rewilding* in the context of three other “currents” in North American conservation methodologies: *monumentalism*, the preservation of places of extraordinary beauty, led by champions such as John Muir and Aldo Leopold; *biological conservation*, the preservation of ecosystems with particular emphasis on protecting large areas of wilderness landscapes to shelter a diversity of ecosystems and to harbour populations of large carnivores; and *island biogeography*, recognition of the value of isolated ecosystems as a source of rich biodiversity.

Soulé and Noss detailed three characteristics that were intrinsic to the rewilding ethos: keystone species, large protected habitat reserves, connection between these reserves for those keystone species to move. A keystone species is any organism whose influence on a specific ecosystem is disproportionately higher than mere population can account for, and whose absence will cause a trophic cascade through the system. In the context of the Wildland Project’s work, however, the term almost always applies to apex predators, as “it is most often the large carnivores that are missing or severely depleted” (Soulé and Noss, 1998, p. 22). Indeed, in this original definition of rewilding, the regulatory role of top predators is considered to be crucial: apex predators manifest in top-down interactions, trophic cascades that create self-regulating ecosystems (Svenning *et al.*, 2016). Thus, these three characteristics have become known as the “Three C’s” of rewilding: Cores, Corridors, and Carnivores.

While American rewilding movements were originally centred around the Three C’s, European rewilding has been deeply influenced by Franz Vera’s work. Vera argued that the accepted theory that European woodlands, left to their natural state, would have been dense, closed-canopied forests was in fact wrong, and that such forests would have been shaped by the large ungulates (wild horses and cattle) who would have roamed them (Vera, 2002) into a blend of

woodland pastures. This theory was tested in the Oostvaardersplassen, a 56 km rewilding experiment that ran from the mid-1990s to 2018, where large ungulates were given free roam of the park, and reshaped the landscape to a rich biodiverse ecosystem (Vera, 2002; Tree, 2018).

Lorimer *et al* note (2015) that Vera's influence on the European model has led to a greater importance being accorded to naturalistic grazing techniques which has resulted in a focus on large herbivores (cattle, wild boar, bison, horses and beavers) – a contrast to the American rewilding model which is concerned with apex predators. This difference has led Deary and Warren (2019) to observe that while American rewilding tends towards interventionist practices, its European counterparts adopt a more passive management, relying on grazing and ecological succession.

### Benchmarks in rewilding

Several of variations (both American and European) in rewilding rely in part on the selection of an ecological benchmark which represents a vision of what ecosystems would have looked like without human intervention. For these variations, rewilding models suggest restoring biotic communities to those in place at the end of the specific ecological benchmark using surrogate surviving species to replace extinct mega-fauna. These variations include Pleistocene rewilding (creating a baseline of conditions present at the end of the Pleistocene era, 11,700 years ago), Holocene rewilding (creating a baseline of the mid-Holocene/pre-Neolithic period, approximately 6,000 years ago) and Novel ecosystems (creating baselines for systems created specifically by the human intervention of the Anthropocene) (Hodder *et al.*, 2009; Lorimer *et al.*, 2015; Strouts, 2016).

While these rewilding practices establish benchmarks of certain ecological periods, their goal is not to exactly recreate the species present at that time, but rather to move towards, as Lorimer *et al* term it, a “new future-natural state” (Lorimer *et al.*, 2015, p. 49), in which the ecosystem functions as it did before, but within the new constraints brought about by evolution, climate change, and shifting geophysical realities.

### A “plastic” word: different actions, common goals

In the thirty years since the Wildlands Project began their work in North America, as the term “rewilding” has been adopted into ecological scientific discourse, academic literature, and environmental activism; Jørgensen (2015) has argued that the term has become a “plastic” term, with diverse definitions and multiple interpretations possible even within similar stakeholders. From the original “Three C's”, the term has expanded to embrace a variety of methodologies and taxonomies, from mega-fauna replacement and taxon replacement, to species re-introduction, to productive land abandonment and spontaneous rewilding, to releasing captive-bred animals into the wild (Jørgensen, 2015; Lorimer *et al.*, 2015; Deary and Warren, 2019; Carver *et al.*, 2021).

This lack of a single coherent definition for *rewilding* has led to the charge that the term itself should be abandoned in favour of the overarching *restoration*, which encompasses the taxonomies of rewilding practice (Hayward *et al.*, 2019). This position has been refuted by Anderson *et al.*: *rewilding*, they assert, is a subcategory of *restoration*, and one whose value is that it can make an “important intervention into restoration theory that seeks to interrogate and move beyond dualistic and past-oriented approaches” (Anderson *et al.*, 2019, p. 3692).

While the various taxonomies of rewilding have different strategies and tactics, most share a common aim, namely the restoration of natural processes within functioning ecosystems with the aim of creating self-sufficient systems that exist without human control or domestication (Carver *et al.*, 2021). Indeed, even as Hayward *et al.* critique the term for its lack of specificity, they acknowledge that all rewilding practices are bound together not so much by tactics or ecology, but rather by the underlying social values: one consistent facet of all rewilding projects is the aim to “exclude ongoing human intervention from the resulting state” (Hayward *et al.*, 2019, p. 233).

While the goal of rewilding is to restore ecosystems to a level whereat they can function without human intervention, there is consensus that human management is necessary in the early stages. Indeed, Navarro and Pereira point out that while rewilding is the “passive management of ecological succession” which aims to exclude human intervention from the ensuing systems, “intervention may be required in the early restoration stages” (2012, p. 904). This observation, that rewilding is in fact a land management approach (albeit a passive one) is one that is seldom considered in the academic literature (Navarro and Pereira, 2012).

## **Rewilding in Scotland**

### Contexts: Wild, wildness and wilderness in Scotland

In 2014, Scottish Natural Heritage (SNH – now NatureScot) developed a Wild Land Areas Map, in which wildness was defined by four characteristics: perceived naturalness of terrain, ruggedness of terrain, remoteness from transportation, and lack of visible evidence of modern human life (pylons, buildings, roads, etc.) (*Landscape policy: wild land*, 2020). While the Wild Land Areas Map does not have statutory implications, it does inform the Scottish Government National Planning Framework 3 (NPF3) which in turn impacts Scottish Planning Policy. As the NPF3 recognizes Scotland “wildest landscapes” as nationally important assets worthy of protection, there is an implicit declaration made by the Wild Land Areas Map that these areas of wildness are to be conserved against development.

The Wild Land Areas Map has been contested as obscuring centuries of human habitation and impact on these lands (Ritchie, 2016; Dolton-Thornton, 2021a). Hunter points out that the Map reflects an absence of the history: “What’s being preserved in wild land areas, then, is very often

something that – in fifty centuries – has existed for just two” (2021, p. 4). Indeed, the extant landscape of the Highlands is the result of extensive anthropogenic land use changes which have taken place over millennia.

These changes began in the Neolithic period (6,500-5000 bpy) as the advent of agriculture led to the start of deforestation, which gathered speed during the Bronze Age (2,500 bpy) all the way through the 18<sup>th</sup> century, by which point only 4% of Scotland had extant forests (down from 80% in the Neolithic period). The 18<sup>th</sup> century also saw a drastic shift in land use: in the mid-century, large-scale sheep farming was introduced to huge swathes of the Highlands, replacing the traditional Scottish shieling system of transhumance, a low-impact form of nomadic livestock farming involving the rotation of herds between summer and winter pastures. The 19<sup>th</sup> century saw the proliferation of sporting estates which shaped the landscape to be ideal habitat for grouse and deer. Most recently, in the 20<sup>th</sup> century, the management of Scotland’s woodlands following the First World War led to the planting of more than 200,000 hectares of mainly non-native species (Brown, McMorran and Price, 2011).

This long history of human intervention has resulted in a landscape which evokes “a sense of wildness today” and yet is the product of land management practices stretching back centuries (Deary and Warren, 2017, p. 212). Moreover, the land practices that shaped this “wild” land also shaped human populations in the Highlands, as the shift from transhumance to large-scale sheep farming occurred during the Highland Clearances, when tenant farmers were forcibly (and often violently) evicted from their land to make way for the sheep, and migrated south or emigrated abroad (Sellar, 2006; Holl and Smith, 2007). Carver, Evans and Fritz (2002) assert that these forcible evictions erased a thriving economy and replaced it with “the secondary wilderness” that remains. Today, these unpeopled places may meet the SNH’s four criteria of wildness, with few visible signs of human artefacts, and yet they are the product of ongoing human intervention.

#### Contexts: Land ownership and land use in Scotland

It is within this context of human displacement from the “wild” places of Scotland that any discourse about rewilding necessarily takes place. The Clearances, after all, are only part of a long continuum of consolidation of Scotland’s lands into one of the most concentrated landownership patterns in the world: it is estimated that just over 400 private owners own 50% of the privately owned land in Scotland (Wightman, 2015; Glass, McMorran and Thomson, 2019). Decisions over land use are based in land ownership, and thus this concentrated land ownership pattern plays out vividly in the Highlands, where predominantly privately-owned estates make up the majority of upland areas (with other estates owned by NGOS, public agencies and local communities).

Private ownership remains the dominant form of land ownership and privately-owned upland estates traditionally have focused on sporting activities, forestry and agriculture (although in more recent years nature conservation and eco-tourism have been on the rise) (Glass, Scott and Price, 2013; Deary and Warren, 2019). Valluri-Nitsch *et al* note that Scotland is a country with significant conflicts over rural land use visions, including: landscape impacts from sporting estates (raptor persecution, peatland burning, deer management), ecosystem impacts from renewable energy developments, and “clashes between established or ‘traditional’ land uses (e.g. hill farming) and emergent approaches (e.g. species reintroductions and nature-based tourism)” (Valluri-Nitsch *et al.*, 2018, p. 804).

Warren and Glass (2020) see the state of land management conflicts in the uplands as a rapidly evolving situation, one that has been impacted by multiple factors: initially by Brexit (beginning in 2015), then the 2019 Scottish Government’s declaration of a climate emergency and most recently with the paradigm shifting realities of the global coronavirus pandemic. It is in this contested field that discourses on rewilding in Scotland (one of those “emergent approaches”) take place.

#### Context: Population decline in rural Scotland

An ongoing and accelerating depopulation of the Scottish Highlands is the legacy of those 19<sup>th</sup> century forced removals, the effect of which impacts the debate over the use of “wild lands”. In 2020, the James Hutton Institute published new research showing that the population of the sparsely populated areas (SPAs) of Scotland is projected to decline by 18.6% by 2043, while the working age population is expected to fall by 25.5% in the same time. Scotland’s SPAs make up 41% of the country by area but the decrease in population will not hit all areas equally: the Shetland Island will experience only a 10-15% drop, while the Isle of Arran is projected to lose 32-35% (Hopkins and Piras, 2020).

This population decrease is not shared across the entirety of Scotland: in the same period of time, the National Records of Scotland (NRS) have projected an overall increase in Scotland’s population by 2.5% (National Records of Scotland, 2019). This increase is projected to come exclusively from in-migration (the death-rate will outpace the birth-rate for the entire time frame), and such in-migration will impact major population centres, rather than remote rural areas.

#### Current discourses of rewilding in Scotland

The growing public profile of rewilding, combined with the range and diversity of rewilding initiatives in Scotland, has led to a recent flurry of academic activity. Perhaps not unsurprisingly given the above discussion of “wild”, “wildness” and “wilderness”, much of this discourse centres around competing ideas of what “wild” signifies in Scotland, and how rewilding initiatives should

engage with that concept. “Wild land” has dimensions ranging from the aesthetic (a perceived absence of human artefacts) to the situational (degree of remoteness from settlements and roads) to the ecological, and different rewilding practitioners consequently employ different management tactics, depending on to which definition they adhere (Mc Morran, Price and Warren, 2008).

Deary and Warren (2017), in a series of qualitative interview with rewilding practitioners, identified four perspectives which inform rewilding initiatives (Table 1) which exist on a continuum of aesthetic, ecological and cultural values. These proposed perspectives are “distinct but interlinked” (p. 220), and offer an overview of the complexity of the discourse, even within a specific geographic context.

Table 1: Four Perspectives of Rewilding in Scotland (Deary and Warren, 2017)

Perspective	Goals	Management Techniques	Human Intervention
“Wild nature”	Biodiversity gains/ecological resilience	Species management, habitat creation	Present
“Wilderness”	Restoring self-willed land	Land abandonment	Minimal to none
“Wild experience”	Experiential/aesthetic sense of wilderness	Removal/modification of artefacts that detract from aesthetic	Present
“Wild place”	Historical and cultural connectedness to wild heritage	Premised on “nature with people”, community involvement highlighted	Present/on-going

A further study by Warren and Deary developed a taxonomy of wildland management that revealed three distinct subsets within “rewilding estates”: wilderness enhancement (restoring wild nature), semi-natural restoration (restoring native woodlands and ecosystems), and sustainable land management (maintaining cultural heritage alongside natural regeneration) (Deary and Warren, 2019). While each perspective is differentiated by key points of distinction, there was a broad consensus among all three group on three key points: (1) retaining and enhancing biodiversity is a desirable goal, (2) reviving land is not retrospective (i.e. there is not a historical benchmark which the rewilding would aim to restore), and (3) picturesque or aesthetic qualities of the landscape should not be prioritized. This research suggests, in dialogue with McMorran *et al* (2008), that “the particular vision of ‘wildland’ that is adopted has a strong influence on the management approaches and practices which are deemed appropriate” (Deary and Warren, 2019, p. 11).

In addition to the discourses of rewilding proponents, significant research has been done on perceptions of and reactions to rewilding from other rural stakeholders. Opposition to rewilding is often framed around species reintroduction (specifically large predators) and the impacts on farming and crofting communities (MacMillan, 2020; Dolton-Thornton, 2021b), or opposition to the term’s

perceived connection to “wilderness” which has pejorative connotations in the Scottish context (Deary and Warren, 2017).

### Rewilding or re-peopling?

In 2018, Community Land Scotland, Scotland’s community-landowner organisation, submitted a policy paper to the Planning (Scotland) Bill asserting that large areas in Scotland (primarily in the Highlands and Island) were “unpeopled as a result of the (often forcible) removal of people from the land in past centuries” and calling for Scottish Planning Policy to set out the desirability of the repopulation of rural Scotland and the resettling of land once populated but today largely or wholly unpopulated (Community Land Scotland, 2018). One of the mechanisms requested in the draft was that the Government be required to undertake the creation of a map of “no-longer-existing communities” that would be referenced in the creation of policy.

This as-yet-not created map sits alongside the afore-mentioned Wild Land Areas Map in representing the two sides of the “rewilding versus re-peopling” debate, or rather two sites along the rewilding/re-peopling continuum, as very little of the academic literature proposes one at the exclusion of the other. Instead, there is an increased energy in research that explores this question of land use: should the focus for the Highlands be the restoration of human settlements and the increase of human populations, or should the land be given over to conservation and rewilding initiatives to aid in combatting biodiversity loss, mitigating against climate change and meeting carbon targets (Valluri-Nitsch *et al.*, 2018; Warren and Glass, 2020; Dolton-Thornton, 2021b; Hunter, 2021)?

This project centres precisely on this question: how can our obligations to both human and non-human populations be met by land use decisions in the Highlands? As Warren and Glass ask: “Can it be both/and, or is it either/or?” (Warren and Glass, 2020, p. 3).

## 7. Methodology

This research interrogates the intersection of discourses informing the “rewilding” and “re-peopling” debates in Scotland. The literature review reveals multiple discourses on both issues, often in conflict with each other, however research has frequently neglected to address the point at which the two meet. This intersectional space can identify where those working in these sometimes conflicting fields can locate points of common ground.

To gain a deeper understanding of the perspectives of those stakeholders working in the intersection, I have chosen a methodology of semi-structured qualitative interviews and conducted a series of 11 such interviews during June and July 2021. Research participants represented a cross-section of stakeholders in the discourse around land use in Scotland, from crofters to land reform advocates to rewilding proponents.

In addition to the interviews, during the research period, I also attended several Scottish webinars on both rewilding and land use reform, and followed public debate on social media to gain a perspective on the wider national context beyond that of the participants in the study. As the Scottish Rewilding Alliance has launched a campaign for Scotland to be declared a “Rewilding Nation”, there has been increased debate about these issues, both informally and through online events organized by a cross-section of stakeholders.

### **Research participant selection and interview structure**

The interview process was iterative in structure: the initial set of stakeholders were invited to participate based on their high profile presence (either personally or as representatives of an organisation) within the existing discourse. These participants were asked for recommendations of other voices to include in the research. Effort was made to gather a diversity of perspectives and opinion (some of which could be predicted from earlier desk-based research), and as a result, research participants ultimately represented several key stakeholder groups.

When research participants were invited to be interviewed, they were informed of the scope of the research, and given detail about how their data would be protected. Additionally, they were informed that this research was being conducted in partial fulfillment of an MSc in Climate Justice. At this time, they were also provided with consent forms (Appendix A), that gave further information: full anonymity would be given to all research participants, interviews would be recorded and transcribed for data analysis only, following which these recordings would be discarded, and research participants would be able to withdraw from the research at any time.

Due to restrictions placed on in-person meeting, most interviews were conducted via video conferencing (either Zoom or Microsoft Teams). In one instance, the research participant was unable

to participate in an interview, and submitted their responses to the Topic Guide questions in writing. The length of the interviews varied between 45-75 minutes.

### **Interview design**

I developed a 20-question Topic Guide (Appendix B) informed by my research for the literature review. The major themes covered in these interviews were:

- Rewilding as a strategy to enhance biodiversity
- Ensuring the social and economic sustainability of remote rural parts of Scotland
- Intersections of biodiversity projects and the sustainability of rural communities

This research project is designed to explore points of contention and common ground between stakeholders working on different sides of the land use question. Consequently, the goal of the interviews within this project was to uncover personal beliefs, motivations and biases of those individuals. As a result, the Topic Guide started with broad questions that established baseline definitions of key terms, and allowed participants to align themselves with positions in the established debate. After this initial grounding stage, however, research participants were asked to consider how these issues might be linked, and to imagine ways in which solutions might be similarly connected.

In practice, this Topic Guide was loosely followed, and served as an anchor around which a more natural conversation could flow. As research participants brought different levels of expertise and interest to the various topics covered by the guide, the conversations were often quite different from each other in structure.

### **Interview analysis**

Once interviews were completed, they were immediately transcribed and an initial round of coding conducted. This first round of coding revealed significant themes of the early interviews, which helped shape the second round of interviews, as questions could be added. For example, an early participant responded to a question about the need to reverse the trend of population decline in the remote rural areas of Scotland with a challenge and provocation: that challenge was then folded into future interviews.

The first part of the analysis examined the research participants' understanding of rewilding practices in Scotland, as well as attitudes towards the downward population trends in Scotland's sparsely populated areas. The second round of the analysis examined research participants' beliefs as to whether the two issues are inherently linked, and if solutions might be as well.

## 8. Results

I conducted a total of 11 interviews – 10 via video-conference and 1 written – during June and July of 2021. Each research participant was assigned a code of RP (for Research Participant) and a number, denoting the sequence in which they were interviewed. The interview sample was made up of representatives from member-led organisations, charities, researchers and private individuals.

The structure of the interviews asked participants to speak from their own experience, as well as from their professional capacities, and it became apparent that participants entered into this research often from multiple angles. The table below summarizes the main stakeholder categories:

*Table 2: Research Participants' Stakeholder Categories*

Rewilding	RP3, RP5, RP9
Land reform	RP1, RP4, RP6, RP11
Community development	RP1, RP4, RP6, RP8, RP11
Crofting	RP2, RP6, RP10
Estate management	RP5, RP7, RP10
Research	RP1, RP4, RP11

The data from the interviews will be divided into three main sections: **Perspectives**, which establishes the points from which research participants entered into the discourses; **Intersections**, which examines how participants saw the interplay between the discourses; and **Pathways**, which presents how research participants envisioned future interactions.

### Perspectives

#### Rewilding perspectives

In examining the baseline of the research participants' experiences of rewilding, it was clear that multiple simultaneous discourses were in play. At the most basic level, participants adhered to very different definitions of rewilding, which led some to express discomfort with the term itself. Additionally, research participants differentiated between what they saw as the goals of rewilding projects (about which they largely agreed) and the methods by which rewilding projects were undertaken (which were more contested).

Three broad categories of perspectives on rewilding emerged from the analysis. The first category included those who were proponents of rewilding, the second category included respondents who agreed broadly with the goals of rewilding but were opposed to some of its methods and forms, and the third category is for the respondent who was opposed to rewilding.

Table 3: Research Participants perspectives on rewilding

Positive on rewilding	RP1, RP3, RP4, RP5, RP9, RP11
Positive on goals, opposed to some methods	RP2, RP6, RP8, RP10
Opposed	RP7

### *Positive on rewilding*

The first category was broadly in support of the aims and methods of rewilding. Participants in this category worked in land management with conservation and rewilding NGOs, and as researchers. These participants expressed consensus about the goals of rewilding: all saw it as a trajectory towards “*richer, more biodiverse landscapes*” (RP1) and “*the restoration (and maintenance) of functioning native ecosystems*” (RP5).

Respondents in this group also saw rewilding as “*an optimistic and forward-looking concept*” (RP9). Recognizing (and in some cases anticipating) the critique levelled against rewilding that the “re-” component of the word signifies a drive back to some arbitrary era in history, research participants spoke of the need “*to reframe the context around the word with less of a focus in looking backwards and more forward – looking at how we revitalize*” (RP5).

Participants in this category embraced a variety of methods of rewilding, including nature recovery through land abandonment, reforesting native woodland through herbivore control (culling and fences), natural grazing techniques, and restoration of missing species, including top predators. While participants in this category did see the eventual re-introduction of top predators as something that would be a positive, they also all expressed a recognition that such a development would be deeply controversial and not supported by current policy frameworks in Scotland. These respondents all expressed a belief that the introduction of top predators was desirable, but something for the future: “*that is a question which I think we all largely are pushing or waiting or ignoring – it probably is actually quite a fair way away*” (RP1).

All but one of the respondents in this group felt strongly that in order for rewilding to succeed, local communities need to be engaged in decision-making and implementation around the work: “*When you involve local people, when you involve communities that's when conservation succeeds*” (RP9). Another respondent framed this same idea slightly differently, emphasizing the need for rewilding project to “*focus on the general health of the ecosystems tied with the general health of the humans who are in a community in the area*” (RP4).

*Positive on rewilding's goals, but opposed to some methods*

The second category endorsed the goal of rewilding (the restoration of biodiversity) but opposed some of the methods employed. This group was mainly comprised of people who had connections to crofting, land reform, or sustainable development.

Respondents in this group expressed wariness of the term “rewilding”, seeing it as unspecific (RP6, RP10) and contentious (RP6, RP10). Respondents also expressed that, even as they undertook ecological restoration projects that might be considered to be rewilding, they would not be comfortable using that term for the work as it felt like it was a term for other people to use (RP2, RP10) and carried unsavory connotations of being “outsiders wanting to do something with the land” (RP2). Most specifically, two respondents felt the term was tied to large-scale landowners (“a lot of the Scandinavian rewilding landowners” (RP10)) who dominate the public image of rewilding in Highlands.

Three respondents in the group expressed skepticism about the claim from rewilding proponents that rewilding could provide an economic boost to surrounding communities, voicing concerns about the kind of jobs that large scale rewilding would provide. One respondent expressed concern at the focus on eco-tourism jobs (and jobs to provide other services to tourists): “[eco-tourism]’s got its part to play, but I think we need a range of opportunities in rural areas for people. We need career opportunities for people rather than just job opportunities” (RP8). This sentiment was echoed by RP6, who added a warning about the long-term sustainability of communities which are dependent on eco-tourism:

*“I think it's very sad when communities go from being vibrant resilient communities into communities where the only people who are left living there are people who are paid to enable visitors to come. These are not vibrant communities. They're not resilient communities.”*

All of the respondents in this group raised concerns about the reintroduction of predators in rewilding. In contrast to the participants in the first category who saw predator re-introduction as a concern for the distant future, respondents in this group with ties to the crofting community (RP2, RP6, RP10) cited the reintroduction of sea eagles as an issue that was already impacting their lives and livelihoods: sea eagles, successfully re-introduced to Scotland in the 1970s and 80s, prey on lambs (and sometimes even adult sheep). Respondents cautioned that discussions about adding further predators into the equation (wolves and lynx) fed into a dynamic where “those who are working towards wildlife focused projects and the crofting community have become quite pitted against each other” (RP6).

### *Opposed to rewilding*

The final category contained one research participant who worked in game management on sporting estates. While this research participant aligned with the goal of biodiversity conservation, they expressed scepticism that rewilding (which they defined “*as taking your hand off and having zero management*” (RP7)) was a tactic that could be successful and instead argued for the value of traditional estate management that would create space for sporting game, farming, and edge effect.

This research participant noted that they did not believe that “*people who are interested in wildlife are very far away from those estates that are actually striving to have wildlife, but the wildlife is utilized in a completely different way*”, with environmentalists focused on a nostalgic sense of what ecosystems had been like previously and sporting estates focusing on managing wildlife in order to have a harvestable surplus. Despite this sense of common goals, RP7 expressed a sense that opposition to their field of work was based on lack of recognition of the value of traditional land management techniques: “*There’s a lot of people don’t like field sports, but they don’t look further than their hatred of those that they perceive to be involved in that, as opposed to ... looking at the wider picture rather than just the perception of ‘I don’t like what you do’.*”

In discussing the role of predators in the ecosystem, RP7 expressed similar concerns to those raised by the crofting community above in that they saw the reintroduction of top predators such as the lynx and the wolf as controversial. Most specifically, they saw the reintroduction of these predators as unnecessary (as human could more effectively control herbivores and meso-predators) and unwelcome, as it signified a dismissal of past land managers’ knowledge.

### *Definitions of rewilding*

The literature review had highlighted the multiple definitions and interpretations of rewilding, and that was borne out in the interview process: research participants gave a wide range of definitions when asked what “rewilding” meant. For some respondents, the term meant the restoration of natural ecosystems and habitats either through landscape management (RP5, RP9) or through the removal of human intervention (RP3, RP7, RP8, RP10). Some respondents believed that the term meant the re-introduction of missing species into degraded ecosystems (RP1, RP11). Other respondents expressed concern that it entailed the removal of people entirely from the location of rewilding projects (RP2, RP4).

For the respondents in the first category (Positive on rewilding) there was a recognition that the term itself was not ideal because it has become contested and controversial but that attempts to change it would be counterproductive. For one respondent, there was a sense of fatalism around this (“*We could spend a huge amount of time arguing about the word and trying to change the word but you’re up against a global movement, here, for example. Let’s just accept the term*” (RP1)), while

another expressed frustration with the time spent debating the term (*"I just feel it's part of that fixating about definitions and dancing on the head of a pin and I just think we need to get beyond that. It doesn't matter what you call it or what you do, as long as it's moving in the right direction"* (RP9)).

For several respondents (RP4, RP6), the lack of a single agreed-upon definition for rewilding was problematic: *"I, personally, have a lot of problems with the term "rewilding", because it just means everything and nothing, and it's become very contentious"* (RP6). As discussed above, research participants in the second category expressed a deliberate avoidance of the term based on the fact that it bore connotations of top-down action, imposed on communities by large estate owners or by incomers (*"crofters tend to see it as a term that is used by outsiders who want to interfere with their life"* (RP2)).

This strong variance in participants' responses to the term "rewilding", from deeply-rooted antipathy to reluctant acceptance to endorsement, aligns with the global discourse on the term, in particular to the debate between Hayward *et al* (2019) and Anderson *et al* (2019). However, there is a particular nuance to this particular set of responses: acceptance (grudging or enthusiastic) of the term was closely aligned with research participants who were also positive towards rewilding as a whole, while research participants who had reservations about certain aspects of the practices of rewilding (reintroduction of predators, for example) did not use the term for their own activities and did not see it as applying to their work.

This nuance is important, as it suggests one of the barriers to wider acceptance of rewilding is in the plasticity of term itself. Participants aligned their opinion of rewilding to its methods, not its goals, and as such a lack of shared methods apparently led stakeholders to a refutation of rewilding. For this cohort of research participants, those disconnects were found in relation to scale (large privately-owned estate vs. smallholding and crofts) and species re-introduction, however it is likely adding additional stakeholders will manifest other gaps.

"A CONVERSATION EVERYONE CAN GET AROUND"

*I think the language is important. I think often it's the language that trips us up, and it's the language that leads to there being more heat than light in a conversation, let's say. I mean increasingly I hear people talking about "well, maybe rewilding is a term that we should put to one side because it's now carrying a lot of baggage for people in terms of these different interpretations".*

*There are many other terms. It could be "ecological restoration" or, yeah, just "nature thriving" or some plain language ways of saying it which, you know, it makes it easier to have a conversation that everyone can get around, I guess. (RP4)*

## Perspectives on depopulation

All of the research participants were aware of the trend of depopulation in remote rural areas of Scotland, and offered many reasons for the declining populations, including lack of availability to housing (RP1, RP4, RP5, RP6, RP8, RP10, RP11), lack of employment opportunities (RP1, RP3, RP4, RP5, RP6, RP7, RP8, RP10, RP11), and lack of services and infrastructure (RP1, RP3, RP4, RP5, RP6, RP8, RP10, RP11). Additionally, respondents identified shifting demographics of remote rural areas leading to declines in local culture (RP1, RP2, RP6, RP10, RP11). For some participants, the history of the region (including the waves of depopulation during the Clearances) was important to understanding existing challenges to the sustainability of remote rural communities (RP1, RP2, RP4, RP11).

There was one research participant who held an outlying view with respect to the benefit of repopulating remote rural places. While other respondents referred to the declining trend in population in the SPAs as *“a sad situation to see”* (RP7), *“a really serious problem”* (RP6), *“very worrying”* (RP2), and *“a huge issue”* (RP10), this participant responded to my question about the benefit of repopulating the remote rural areas with a challenge:

So coming to the other bigger question about the areas that are being depopulated: most people think that's terrible, you know, shocking. It's really a crime and it's sad that people can't live there anymore. And I question that. I challenge that. Why do people need to live everywhere? Up in Glen Affric, there's ruined crofts: people used to live there (...). Nobody could live there today: it's desolate, there's nothing they could do to support themselves. And I think that's fine: let's leave it be. We don't need to live everywhere, you know. But again the thrust of our culture: we have this arrogance of humanism that says we have a right to live everywhere on the planet and the planet owes us that living. (RP3)

This perspective proved to be an outlier, but I folded this challenge into ensuing interviews, and asked participants to respond to the questions RP3 raised. One respondent commented on the *“ahistorical”* (RP6) nature of these questions, noting that it obscured centuries of human history in the region (*“These are not landscapes which are created by non-intervention: this is what you do when you intervene in a landscape for hundreds of years”*) with another observing *“The historian in me says that you repeat the mistakes from the past. Scotland has been scarred by the Clearances. Let's not go down that route again”* (RP9).

Several respondents argued that such a viewpoint denied the human rights of members of these communities *“to be able to just live as they want to live, as any other community, any other village across Scotland, the rest of the world”* (RP6), with another research participant noting:

“In the International Human Rights Framework, people have a right to cultural life (...). If you're a native Gaelic speaker who was raised in a community in the Western Islands, or West Highlands, for example, your language is bound up with your

attachment, your feelings about place, and to be removed from that – it really has an impact on your cultural life as well.” (RP4)

Several participants (RP4, RP1, RP8) challenged this viewpoint for more practical reasons, noting that urban centres need the services provided by rural areas, and that to encourage the depopulation of these areas would have knock-on effects for the supplies of food, water and energy to urban spaces. Ultimately there was a strong consensus that repopulating the Highlands was both morally and practically the right course of action.

Upon analysis, there are three main thematic trends that participants identified as necessary to understanding (and potentially stemming) depopulation: the legacy of the land ownership patterns; the need for vibrant, sustainable communities; and the need for government intervention to support the renewal of these communities.

#### *Legacy of land ownership patterns*

Four respondents commented on the importance of considering the legacy of historical land ownership and land use patterns in considering current depopulation trends. One respondent pointed out that population in the Highlands had peaked in the early 19<sup>th</sup> Century, and then rapidly declined as a result of landowner policies (including the Clearances) and government policies. This initial population decline had led to *“a spiral”* as *“government are less inclined to locate public services where there’s very few people”* and *“people need jobs, they need housing, they need services”* (RP4).

RP1 also saw direct links between the heavily concentrated patterns of land ownership, which allowed for large swaths of the Highlands to be depopulated during the Clearances, and the continuing decline in rural populations: they referred to a *“shifting baseline syndrome”* where unpeopled landscapes are considered to be the baseline, rather than seeing the baseline for the land to be that peak population that existed pre-mid-19<sup>th</sup> century.

#### *The Virtuous Circle: seeking vibrant, sustainable communities*

Respondents overwhelmingly cited the tripartite problems of lack of well-paying employment opportunities, lack of access to affordable housing, and poor physical (public transportation) and digital (broadband) infrastructure as barriers to reversing the depopulation of the Highlands. However, these problems are inter-linked: as one participant said, *“you definitely need somewhere to live, and you definitely need something to do”* (RP10). One respondent described a community which had been able to buck the regional trends as existing in a *“virtuous circle”*, in which a series of local employers *“have really focused on providing jobs, you know, jobs outside of simply the service sector. And once you get into that virtuous circle, you have all these other businesses that have developed in and around”* (RP6).

There were two respondents who challenged the idea that communities could develop employment opportunities that would attract people. RP3 spoke of the abandoned crofts in Glen Afric and argued that repopulating this region would not be feasible: *“Nobody could live there today: it's desolate, there's nothing they could do to support themselves, you know.”* RP7 echoed this concern, wondering if people who moved into the Highlands would be willing to *“scratch out”* a living farming: *“there's an illusion that you could actually make a comfortable living from some of these remote areas, and I think it's almost Cloud Cuckoo Land”*.

This point of view was countered by a third participant who pointed out that one of the keys to repopulation would be diversifying the employment options, so that rather than only the subsistence farming envisioned by these participants:

*“We would see more diverse industry. So for example, we might have a really nicely rewilded landscape, we could have wind turbines in there, we could have factories. The Highlands are hugely energy rich: there's no reason that we can't have energy-intensive industries here. That also diversifies away the need for people to rely on the land for their means of income.”*

RP8 mentioned the opportunities presented by increased digital infrastructure in overcoming some of the challenge of employment: *“I think the pandemic has shown us that work is not a place: it's an activity, it's a set of outcomes you're trying to produce (...). It's pretty geography-neutral for most work. I think that's a huge opportunity for communities as long as we've got decent connectivity”*.

Two participants spoke of the challenges facing younger people trying to move to (or back to) remote rural areas: *“we need to be able to make sure that there's the employment there: skilled, professional jobs, effectively, for them to come back to. There needs to be schools in place. There needs to be good health care. There needs to be all the services in place for them”* (RP1). RP10 also spoke of the need for young people to access *“peer-to-peer networks and support”* in relocating to remote rural spaces, especially given that the demographics of these communities are skewing older, with an increased amount of second homes whose inhabitants are present only seasonally.

Several participants emphasized the need for employment opportunities that extended beyond tourism-based work: *“We need career opportunities for people rather than just job opportunities, or we're not going to retain the breadth of the talent and experience in our communities”* (RP8). RP6 also distinguished between communities that were based mainly around tourism industries and communities with more diverse employment opportunities.

#### *Need for government intervention*

Another theme that emerged from several research participants was the need for government intervention to aid in sustaining remote rural communities.

RP2 highlighted the need for government intervention in regulating the housing market, highlighting policies used by the Channel Islands and the Lake District that *“protects the housing stock and has very strict policies about where building can happen, who can buy what, you know. They're not scared of intervention in the market, and why we don't do it – I have no idea!”* This respondent also referred to the regulated crofting system that has largely managed to resist the trend of holiday and second home purchases that has overtaken the region as a model that could be expanded upon.

RP1, RP4 and RP11 spoke of the need to break up the concentrated patterns of land ownership in the Highlands. With the potential for green investment and renewable energy technology offering possible paths for employment and sustainability for the region, these respondents spoke to a need for government to intercede and ensure that principles of a just transition are adhered to:

“I think it's widely accepted in government and across civil society and so on: this needs to be done in a way which is just. With biodiversity loss, we can think about “what is the just way to achieve rewilding”, if I can put it that way. It's probably an objective that a lot of people can get behind, you know, allowing nature to thrive, but what's the just way to do that?” (RP4)

RP6 spoke of the need for there to be a *“mainstreaming or breaking down of silos within the kind of policy landscape and the public body is responsible that can help to ensure that the community's views are being integrated into whatever framework is in place.”*

## **Intersections**

The second half of the interviews examined how research participants saw the interplay between rewilding and re-peopling. Analysis revealed two thematic threads: (1) the relationship between humans and nature and (2) connections between loss of biodiversity and loss of human cultural diversity.

### Thriving alongside: Humans in Nature

An early theme that emerged from the interviews explored questions about human relationships with nature. For one research participant, it was crucial for nature to have a space that was apart from humans. Citing the UNESCO's Biosphere project and the Nature Needs Half movement, they advocated for the creation of *“a core wild area which is just there for nature and for other species”* which would be surrounded by concentric circles with increasing human influence until *“outside the buffer zone you have your intensive use zones, which is where human activities are concentrated, you know, where towns and cities are, where intensive agriculture takes place, commercial forestry, all that sort of thing”* (RP3).

This perspective was an outlier. Two research participants argued against this kind of conservation-by-exclusion: *“Traditional fortress conservation, where we draw a boundary around it and we say that “we’re protecting this” and “we can go live on this” – it’s not working: why are we trying to keep going with this?”* (RP1). Another participant argued that *“around the world the concept of “fortress conservation” has largely failed and has been demonstrated to have failed. (...) When you involve local people, when you involve communities that’s when conservation succeeds”* (RP9).

These perspectives tie into debate that is happening on a global level about the role of “fortress conservation”, the establishment of areas for “wild nature” from which human settlements are excluded. Fortress conservation has faced both moral and practical challenges, with critics observing that such models of conservation contain elements of colonialism as conservation efforts have led to the impoverishment of communities across the global South and “accompanied the displacement of indigenous peasants, hunters, and pastoralists (...) from newly protected areas” (Siurua, 2006, p. 74). Practically, the efficacy of this model has been increasingly challenged as long-term research has revealed linkages between social and ecological processes, finding that exclusionary conservation techniques are often detrimental to ecosystems (Rai *et al.*, 2021).

New research has found that indigenous populations and local communities “effectively conserve forests, ecosystems, and biodiversity through collective ownership, governance strategies, and traditional ecological knowledge” and prevent detrimental land use changes, including deforestation, “better than protected areas managed exclusively by public or private entities” (Rights and Resources Initiative, 2020, p. 5). One research participant expressed frustration that this research did not appear to be impacting Scottish conservation practices, referring specifically to the Alladale Wilderness Reserve, a 23,000-acre rewilding project in Sutherland:

*“I’m not quite clear why there seems to be a bit of a reluctance to learn from what’s happening internationally, but I think that’s – for me – that’s one the key things on this issue: that the way in which rewilding is being implemented, in some cases, as a sort of exclusion, seems to pay no recognition to the failure of the fortress conservation model internationally to actually deliver the kind of objectives they’re trying to achieve.”* (RP6)

One participant saw rewilding as a way of overcoming this fortress conservation model, offering a way for communities to work alongside other land management practices, and *“providing communities with opportunities to diversify and create nature-based economies; it’s about finding opportunities for livelihoods that thrive alongside and enrich, nature”* (RP5). Another echoed *“I think the thing to focus on is the general health of the ecosystems tied with the general health of the humans who are in a community in the area”* (RP4).

Indeed, for several participants the question of the health of ecosystems versus the health of human communities is inherently flawed, as it pre-supposes a division they do not believe to be true, referring to the two issues as *“two sides of the same coin (...) you can't really achieve one without the other”* (RP6).

#### Connections between loss of biodiversity and loss of human cultural diversity

A second thread that emerged from the interviews explored the interrelated nature of declines in biodiversity and declines in human populations and cultural diversity in Scotland's SPAs.

A majority of research participants (RP1, RP2, RP4, RP6, RP8, RP9, RP11) traced the historical connection between these declines, observing that changes in land use patterns have had negative impacts on both human and non-human life.

RP6 observed that *“the poor state of the biodiversity in much of Scotland is a result of the way in which that landscape is managed, and the way in which that landscape is managed has similarly poor outcomes for local population”*. RP1 traced a line over 200 years of shifting land use, starting with the Clearances when transhumance was replaced with more intensive sheep farming, to the emergence of sporting estates with their focus on grouse and deer management in the late 19<sup>th</sup> century, through the 20<sup>th</sup> century's intensive drainage of the peat bogs:

*“What I see is that as the people were removed to undertake these seriously bad practices, bad land use practices, or in some cases where the people had already been removed they were capitalizing on these empty landscapes to undertake these landscapes-scale bad practices and so for me there's a real inherent link in removing people and these bad practices taken taking place.”* (RP1)

RP4 explored links not only between the decline of human populations linked to biodiversity loss, but also how those populations that remain are declining in cultural diversity as well. They observed that as these remote rural areas decline in population, there is *“a loss of kind of cultural knowledge about local places, about local environments, (...) but also a decline in different practices, different ways of farming, different ways of using the land”* which would ultimately lead to *“a sort of monolithic or mono-cultural approaches to an area of land”*. This concern about the loss of cultural knowledge was echoed by RP10, who worried about the loss of place-based knowledge: *“I don't like using the phrase “indigenous knowledge” but we don't really have an equivalent to it here that pays respect to that connection to a place”*.

#### *Land ownership*

Embedded within the discussion of linkages between biodiversity loss and human population decline is a debate about land ownership and land use patterns in Scotland. Building from concerns that available housing stock is being bought up for second homes, RP6 argued that *“the ownership*

*question is not simply a neutral mechanism”* and that absentee landlords were responsible biodiversity decline on their properties.

Several participants expressed concern about the emergence of the “Green laird”, wealthy landowners purchasing large estates for green investment or rewilding projects. One respondent critiqued the practices of WildLand, the conservation project of Anne and Anders Polvsen, which owns over 220,000 acres of Highland estates (Wildlands Network, 2021). RP10 likened the large-scale land purchases of the organisation to *“a kind of enforced removal of the property market for anybody who might want to live up there”*, adding:

*“I’m uncomfortable with rewilding in the Highlands in that it seems to be very much dominated by a few big players, and at this point I don’t see how they’re any different to any other landowner. And landlord one might shoot grouse, one might rewild: they both employ people and if you argue you’re out in your ear. At that point I don’t really see how they’re different.”* (RP10)

RP9 noted that this critique of rewilding *“based on the fact that it’s a continuation of Victorian landlordism”* is something that some of the Scottish rewilding charities are actively trying to combat: *“In my view, rewilding needs to be grassroots based from the bottom up and linked with communities. And I think that’s where, I think, the future of rewilding lies.”*

### **Pathways forward**

In the final stage of the interviews, research participants were invited to “dream big” and to propose linked solutions to the concurrent crises of biodiversity decline and depopulation. Eight of the eleven participants responded to this question, and despite representing different stakeholder groups and holding different opinions about both rewilding as a strategy and the specifics of repopulation, there was a remarkable commonality in their responses.

#### Enabling communities through enhanced power in decision making

Overwhelmingly research participants spoke of the opportunities provided for enhancing biodiversity by empowering communities in the decision making around and implementation of rewilding projects. RP8 framed this discussion about power as a need for place-based decision making, citing *“the energy from within that place to take control of their own destiny”* and challenging agencies and authorities to *“see themselves as enablers of that, not the leaders of that”*. RP1 added a provocation to land-owning conservation NGOS to see themselves the same way:

*“We should be moving to a system where the community can look after that land ecologically to the same level [as conservation NGOs] are, if not better, with these more holistic aims around social and economic aspiration too. There’s no reason the end goal should be [them] owning that land in perpetuity.”*

Several participants (RP1, RP4, RP6, RP11) discussed the long-standing and deep-seated structural issues that have led to community-disempowerment (and depopulation) and highlighted the need for project planning to actively work against those issues:

*“One thing would be to make sure that communities are more involved in the design and implementation of biodiversity-focused projects so that there is a sense of ownership, and a sense of involvement from the community with a biodiversity project which is delivered in a particular area, because that will mean that that project is done in a way where tackling depopulation and working with the community is inherently written in to what that project is trying to do.” (RP6)*

RP10 observed that communities are not monolithic entities, but comprised of individuals with different motivations and needs, and consequently empowerment was needed at the individual level as well as the community level: *“there's got to be that recognition of equity and fairness in the process. If you are just being used as cheap or free labour, or if you are in a job where you don't comment on anything because you're fearing that you're going to get kicked out your house ... neither is a good position, right, regardless of who's doing it.”*

Several respondents (RP1, RP2, RP4, RP6, RP11) made direct links between this call for community agency and control with the need to address Scotland's deeply concentrated pattern of land ownership where *“control of land vested in a small minority not in a majority”* and government policies *“don't necessarily seek to include people in decisions about the way the area develops and the way the land is used”* (RP4). Respondents advocated increased community ownership (RP1, RP4, RP6, RP10, RP11) of estates, and increased land reform to *“see the land broken up, lots of new owners – whether that's community, more private individuals – just reducing land use scale”* (RP1).

In addition to increased land ownership and power in decision making about land, respondents (RP6, RP8, RP11) also cited the need for *“illuminating the opportunities for people still living in these communities which have got significant natural capital assets, and how they can get involved in helping to manage and nurture that natural capital”* (RP8). This economic empowerment, which would allow more community-ownership of renewable energy sources (such as the community-owned UistWind wind farm on North Uist (Craw, 2020)) allowing income generated by these schemes to stay within the communities.

## 9. Conclusion

The discourses surrounding rewilding and re-peopling in the remote rural places of Scotland are rapidly evolving: as rewilding gains prominence as a tactic to combat biodiversity loss, different stakeholders in Scotland's land use debates emerge and add their voices to the conversation. Research participants who took part in interviews for this research spoke about how their opinions and viewpoints shifted over time. This research, then, illuminates one cross-section of stakeholder opinions at one very specific moment in time. This illumination reveals a surprisingly unified (given the often contentious nature of the public debate) common ground of ideas for a just and sustainable path forward that combats both biodiversity loss and depopulation.

Participants endorsed a place-based approach, in which local communities have power in the design and implementation of biodiversity projects, and receive the benefits that emerge from them. Embedded within this approach is a critique of current concentrated patterns of land ownership in Scotland, and a desire to de-centralised both land ownership (through the breaking up of large estates and the generation of more land-owners, both community and individuals) and decision-making (through the empowerment of this new cohort of landowners).

In these proposed community rewilding initiatives, human communities exist alongside and within healthy ecosystems, entangled in both space and function. Seen through the lens of a multi-species landscape justice, this model offers a path forward that requires land use decisions to be made with recognition of the health of both human and non-human systems.

This proposed model runs counter to the most well-known rewilding initiatives in Scotland, in which large estates (between 1,000-70,000 acres) are managed by private owners, NatureScot, or conservation NGOs. However, the global recognition that fortress conservation has failed, and the growing consensus that local communities and indigenous populations more effectively conserve ecosystems than do large conservation bodies should offer guidance for the rewilding movement in Scotland. Place-based rewilding initiatives, designed and implemented by communities for the sustainability of human communities in harmony with ecosystems, offer a model that by prioritising neither human nor non-human, offers the potential to serve both.

## Appendix A

### MSc Dissertation Research Project CONSENT FORM

#### Project description:

This research project addresses two important issues: the ongoing loss of biodiversity, and the challenge of ensuring social and economic sustainability in rural communities. This project aims to examine these two issues together, and explore how the goals of reversing declines in biodiversity and ensuring the sustainability of rural communities interact with each other.

The specific question areas will relate to:

- Rewilding as a strategy to enhance biodiversity
- Ensuring the social and economic sustainability of remote rural parts of Scotland
- Intersections of biodiversity projects and the sustainability of rural communities

#### Format

This interview will be conducted by video conference and will last between 60-90 minutes.

#### Privacy and anonymity

The interview will be recorded for data analysis only. The recording will be discarded once it is transcribed. In both the transcript and the resulting dissertation, your participation will be fully anonymised. The transcript will only be available to Meg Taintor (researcher) and to Dr Paul Teedon and Dr Karin Helwig (dissertation supervisors).

If you are happy to participate please complete and sign the consent form below.

**Please initial box**

1.	I confirm that I have been adequately informed about this project and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.	
2.	I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason and without detriment to any treatment/service.	
3.	I understand that the interview will be audio-recorded.	
4.	I agree to the use of anonymous quotes.	
5.	I am willing to be contacted within the next 30 days in case of any follow-up questions.	

I agree to take part in the above project.

_____	_____	_____
Name of participant	Date	Signature
_____	_____	_____
Name of researcher	Date	Signature

## Appendix B

### Introduction:

This research project is exploring the intersection between regenerating sustainable ecosystems to combat biodiversity loss, and ensuring the social and economic sustainability of remote rural parts of Scotland.

Scotland is currently facing two concurrent changes or challenges: a marked and well documented loss of biodiversity, as well as challenges to the sustainability of remote rural communities, documented through a sharp downward trends in the populations of Scotland's sparsely populated areas. These two issues are often found in dialogue with each other as part of the ongoing debate over land management in rural locations.

Over the next hour, I would like to speak with you about a variety of issues that touch on various elements of this discourse to capture your sense of what is happening. The specific question areas will relate to:

- Rewilding as a strategy to enhance biodiversity
- Ensuring the social and economic sustainability of remote rural parts of Scotland
- Intersections of biodiversity projects and the sustainability of rural communities

We will look at these each in turn, but I also do want to leave this free for us to have a little bit more freewheeling conversation, so we might jump to other topics if they come up in conversation. We might also find that your expertise might not line up with all the questions I have – that's absolutely fine. If this occurs, we can easily move on to other topics.

Finally, I want to remind you that, as was highlighted on the consent form you completed, you are free to withdraw from this research at any point during the interview process.

Any questions?

Okay great. Thanks. Let's get started! I'll just get the recording going now.

<<PRESS RECORD>>

## Introductory questions

Can you start by introducing yourself? What is your background and what is the work you do now?

As I mentioned before, my research is looking at both ensuring economic sustainability of remote rural parts of Scotland and rewilding to promote biodiversity. Do you see any connections between your work to either or both of those fields?

## Biodiversity and Rewilding

*Scotland (like the rest of the world) is currently facing a well-documented decline of biodiversity. A number of land management approaches have been proposed as ways to combat this decline and enhance biodiversity. In recent years, rewilding has increasingly gained prominence as one way forward: right now in Scotland there are a number of rewilding initiatives, on parcels of land ranging in size from the very small to large estates. However, as there are many different definitions as to what rewilding is, and what its end goals are, rewilding in Scotland does not appear to be a single approach.*

How much does the decline in biodiversity in Scotland impact on your work?

What is your day-to-day work with rewilding? Are you a practitioner? Do you work with research or policy or some other related area?

Rewilding is a land management strategy that encompasses a broad range of practices and approaches. From your perspective, what does rewilding mean?

What are the required characteristics of a rewilding approach? Put another way, is there any specific element that would need to be in place for you to consider a specific conservation project “rewilding”?

What do you understand the goal of rewilding to be? (*What does a successful rewilding project look like? And over what time-scales might we make such judgements?*)

Is rewilding a term that you embrace (comfortably) for your work? / Is rewilding the best term?

To the extent you have put this into practice have you experienced it as controversial idea and / or seen it warmly embraced by other stakeholders?

Establish expertise, knowledge of both sides of research question.

Begin to establish common language between interviewer and participant with regard to core concepts.

Overall definition  
Required practices  
Ecosystem restoration?  
Top predators/species reintroduction?

What is “wild”?

Benchmarks vs. future orientation

## Sustainability of remote rural Scotland

*Scotland is also facing challenges over the sustainability of rural communities. Recent research has found that while the overall population of the Highlands is in fact increasing, there is a sharp downward trend in the populations of many of Scotland's sparsely populated areas or remote rural areas. A study by the Scottish Land Commission in 2019 identified that land ownership and management patterns have left rural communities vulnerable to shortfalls in housing.*

Have you noticed any changes in population in the place where you live?

What do you think have been the main factors of those changes?

How do you feel about these changes? *(Should we take steps to stop the changes? Is it problematic or beneficial?)*

How important is it to encourage repopulation of communities where the population is going down?

What would need to change in order for this trend to be halted or reversed, or indeed encouraged?

### Intersections

What do you see as the relationship between communities (population change / size; socio-economic make-up needs etc) and rewilding projects?

Have you experienced situations where communities have fully embraced initiatives, or alternatively have you seen mistrust or antagonism?

### Next Steps

Do you think that declining populations in communities and declining biodiversity are at all problematic – as some seem to argue?

Do you think that they are connected? In what ways?

*(if yes)*

I'd like to invite you to take a moment and dream big with me. If the two issues are connected, can you imagine a way in which the solutions might be as well? In other words, what might good practice look like for stemming the loss of populations and biodiversity from remote rural Scotland?

Assess reaction to population change  
Why is it happening?  
Should it be stemmed or encouraged?  
If so, how?

Is there anything else you'd like to say relating to the topics we've talked about? Have we missed anything substantial from the overall debate as you see it?

I'm interested in speaking to a broad cross section of stakeholders for this research: having engaged in the research, is there anyone that you would recommend I include?

### **Conclusion**

Thanks so much for your participation in this research project. As I am still in the initial stages of the interview process, I may want to reach out with additional questions over the next month (I would try to do this by email) – would that be okay with you?

Do you have any questions for me at this time?

My dissertation project will be submitted in mid-August. Following that submission, I'll be producing a summary of the key highlights from my findings, and would be happy to send this to you, once my marks have been confirmed by exam board. Would you be interested in receiving that?

Thanks so much for your participation.

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