A portfolio of original compositions exploring relationships between humans and the natural environment

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- A portfolio of 18 original composition works
- A commentary of approximately 15,000 words

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I received funding from an organisation or institution and have acknowledged the funders in the full text of my thesis.

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Abstract

This submission comprises a portfolio of 18 original compositions exploring relationships between humans and the natural environment. This musical examination, coming from a personal perspective, is mainly rooted in the natural environment with which I have the deepest relationship: the West Highlands of Scotland.

A commentary outlines my musical language, where human sounds, including traditional music influences, interact with representations of natural sounds. It discusses how these interactions in the pieces illustrate and explore different human/ natural environment relationships. It details influences from my personal background and influential composers, including Hans Abrahamsen, Bent Sørensen and Igor Stravinsky, then explores each of the portfolio's pieces in turn whilst examining each of eight sub-topics.

Bheanna for flute, clarinet, viola, violoncello and piano and *Sanderling* for string ensemble, consider the first sub-topic, appreciation of my local landscapes. *the light through forest leaves* for solo violoncello, *Seabird Cities* for chamber orchestra, *Birds of Migration* for SSA vocal ensemble and *of a liminal nature* for chamber orchestra explore emotions/ spirituality prompted by nature. *leum fèidh* for symphony orchestra and *Can we not hear the birds that sing?* for solo violin, examine humans damaging the environment. *Deglaciation* for violin and violoncello, *The Arctic Rose* for two pianos, *flightless birds.* for flute, oboe, clarinet and trombone and *to tell it like it is.* for SSAATTBB choir refer to climate change. *Machair* for string quartet, *the inimitable brightness of the air* for flute, viola and violoncello explore environmental threats to my local landscapes. *Lichen* for string quartet and *Heartwood* for solo clarinet examine environmental guilt. *Right to Roam* for clarinet, violoncello and piano looks at land ownership and *The Wet Desert: a Collection of Highland Perspectives* for flute, clarinet, percussion, piano, violin and violoncello considers the cultural significance of land, concluding the exploration of human/ natural environment relationships.

Contents of portfolio

- *Bheanna* (2017) - for flute, clarinet, viola, violoncello and piano (Recorded in a workshop by the Royal Conservatoire of Scotland Conductors' Ensemble on 30th October 2017 at the Royal Conservatoire of Scotland)
- *Sanderling* (2017) - for string ensemble
- *the light through forest leaves* (2020) - for solo violoncello (Recorded by Jennifer Langridge (Psappha Ensemble) on 7th May 2020 at Hallé St Peter's, Manchester)
- *Seabird Cities* (2017) - for chamber orchestra (Performed by Czech Philharmonic Orchestra on 30th September 2018 at Rudolfinum, Prague)
- *Birds of Migration* (2018) - for SSA vocal ensemble (Recorded in a workshop by Juice Vocal Ensemble on 13th November 2018 at the Scottish Music Centre)
- *of a liminal nature* (2019) – for chamber orchestra
- *leum fèidh* (2018) - for symphony orchestra (Performed by Karlovy Vary Symphony Orchestra on 4th October 2018 in Karlovy Vary)
- *Can we not hear the birds that sing?* (2019) - for solo violin (Recorded by Lisa Robertson on 26th November 2019 at the Royal Conservatoire of Scotland)
- *Deglaciation* (2018) - for violin and violoncello
- *The Arctic Rose* (2017) - for two pianos (Performed by Fanqiao Meng and Meng Yang on 11th May 2017 at the Royal Conservatoire of Scotland)
- *flightless birds.* (2019) - for flute, oboe, clarinet and trombone (Performed by Glasgow Improvisers Orchestra on 13th November 2019 at The StAge, St Andrews)
- *to tell it like it is*. (2020) - for unaccompanied choir (SSAATTBB) (Recorded by the National Youth Choirs of Great Britain Fellowship on 17th October 2020 at Love Electric Studios, London)
- *Machair* (2018) - for string quartet (Recorded by Ligeti Quartet on 9th November 2018 at Firth Hall, University of Sheffield)
- *the inimitable brightness of the air* (2018) - for flute, viola and violoncello (Performed by Red Note Ensemble on 27th October 2018 at St Andrew's Cathedral, Aberdeen)
- *Lichen* (2017) - for string quartet (Recorded by the Brodick Quartet on 8th May 2018 at the Royal Conservatoire of Scotland)
- *Heartwood* (2020) - for solo clarinet in B flat (Performed by Heather Roche on 21st November 2020 at Huddersfield Contemporary Music Festival, BBC Radio 3)
- *Right to Roam* (2019) – for clarinet, violoncello and piano (Performed by Tritium Trio on 23rd August 2019 at Dartington Hall)
- *The Wet Desert: a Collection of Highland Perspectives* (2019) - for flute, clarinet, percussion, piano, violin and violoncello (Performed by Red Note Ensemble on 3rd May 2019 at the Royal Conservatoire of Scotland)

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"Who owns this landscape?
Has owning anything to do with love?
For it and I have a love-affair, so nearly human
we even have quarrels. –
When I intrude too confidently
it rebuffs me …

I can't pretend
it gets sick for me in my absence,
though I get
sick for it. Yet I love it
with special gratitude…"

(MacCaig, 1968/2018 'A Man in Assynt' pp.69-78)

Introduction

Outline

In this submission, I use my music as a means of examining different kinds of relationships existing between humans and the natural environment. This commentary follows a narrative through this exploration and although the different kinds of relationships presented interconnect, and many of my pieces relate to more than one category, for the purpose of discussion, this commentary is divided into sections covering the following topics:

1. appreciation of my local landscapes
2. emotions/ spirituality prompted by nature
3. humans damaging the environment
4. climate change
5. environmental threats to my local landscapes
6. environmental guilt
7. land ownership
8. the cultural significance of land

I will begin by discussing my musical language, firstly clarifying my approach to musical material and then detailing the five main recurring elements which make up a conceptual part of my musical language. This will be followed by the main sections exploring each of the eight human/ natural environment topics and discussing individual pieces in turn.

My Musical Language

Much of my material derives from transcribing Scottish traditional music, natural sounds (mainly birdsong) or human speech. This provides initial rhythmic and pitch material as well as timbral and dynamic ideas. Where I do not transcribe from a source, I create an initial mode or pitch sequence, selected for its potential to convey the expressive character and intent of the piece. Other pitches are sometimes added as a structural device or intuitively, based on instinctive small-scale musical decisions made during the composition process. However, as a general principle, I use a limited number of pitches, partly to reflect the sparseness of the Highland landscape but also to draw attention to the development of other musical parameters and to satisfy my personal aesthetic preference. I use a constant, overt, pulse in

most pieces to highlight and clarify the irregularity of the complex transcribed rhythms and to adhere to music cognition principles, later discussed. Any other non-transcribed rhythm is created intuitively.

There are five recurring conceptual elements in my music, which are manipulated and weighted differently in each piece, depending on its intention. These are:

i. personal experience and reflection (which is sometimes political)
ii. external Modernist, and largely Nordic, influences
iii. the natural environment
iv. Scottish traditional music (particularly Gaelic song)
v. techniques inspired by human music cognition principles

i. Personal experience and reflection

I examine human/natural environment relationships from a personal perspective. Thus, most pieces are prompted by personal experience and reflection. Whilst further discussion will show that this manifests differently in each piece, it is important to begin by explaining my background, recognising the influence of my early surroundings and experiences, which engendered the ethos with which I approach nature in my music.

I grew up in the West Highlands of Scotland near a small, remote coastal village, Lochaline, the name of which means 'beautiful loch'. This lifestyle instilled in me a sense of interconnectedness with, reliance on and respect for nature and I now appreciate how rare this upbringing was in modern life. I was privileged to have such a world on the doorstep; spectacular mountains, flora and fauna, lochs and the sea. Often outdoors, my family grew accustomed to noticing small details and daily changes in our natural surroundings. Natural sounds were a constant presence in my early soundscape with wind and rain beating against the windows along with the sounds of seabirds, farm animals, garden birds, rustling, creaking trees, the roaring of stags and the ocean. We developed the resilience which comes from remoteness and from being partly at the mercy of nature, being frequently 'battered by the elements'. In my village, nature intervenes regularly in daily life. Weather conditions can cancel ferries. Flooding, heavy snow or a flock of sheep can block the only road in or out. A storm, or even on one occasion a rogue cow, might break communication lines and electricity, phone or internet connections can be lost for days. The potential physical danger of nature demands respect and the lifestyle requires adaptation to nature's challenges.

Consequently, I believe that we, as humans, are an interconnected part of 'nature' and not a separate entity. However, as this submission seeks to examine these interconnected relationships from different angles, throughout this commentary, I will define 'nature' as the physical world, which although having been subject to human interference for millennia, does not involve humans or directly human creations.

ii. External Influences

I grew up playing fiddle, then classical violin, and started composing during my undergraduate music degree at Royal Holloway, University of London. One early compositional influence was Stravinsky's *The Rite of Spring* (1913). I was fascinated by its stubborn brutality and rawness and, on reflection, realise how what might be called Stravinsky's 'bird-inspired syntax' may have influenced my techniques. As Mâche (1983, p.121-2) noted, Stravinsky's use of repetition was "very likely borrowed from the syntax of birdsong". It was "…an essential tool for invention. The more the elements are limited in number, the less they vary from one recurrence to another, and the more irregular juggling assumes unpredictability which alone confers a musical interest on such a non-too-flexible sound material." I was also consciously influenced by his use of Russian folk music-style material and the apparent evocation of the 'dawn chorus', like nature is coming to life, during *The Rite of Spring's* opening. This influence can be seen in some of my pieces, such as *leum fèidh* or *of a liminal nature*, though the idea is exhibited very differently, for instance, using extended techniques.

Other musical interests during my early compositional development were minimalists such as David Lang. I was interested in 'simple' music and repetition which I felt allows one to grasp musical ideas and appreciate parameters like subtle colour changes more acutely.

An important moment in my development was hearing the music of Danish composer Hans Abrahamsen, specifically his piece, *Schnee* (2008). As with Stravinsky, I was attracted to his fragile yet ferociously stubborn repetition, as seen in the opening in the strings' repetition of a single pitch for a long duration, in his variation on restricted material and in his incredible control of innovative colours, like the extremely high pitched, sul ponticello violin harmonics in the opening, marked 'eisig', icy. Communicating much with little material, he aims to paint vivid pictures of a snow-covered landscape with harsh bareness as well as beauty. While Abrahamsen was consumed with the musical snow-scape, I felt driven to capture the landscape of the West Highlands and Islands, with its shimmering mistiness, expansive topography, stirring, violent atmospheric gloominess and dreich beauty. As outlined in Section iii, my interest in nature also drew me towards further Nordic influences.

iii. Natural Environment

As my music explores relationships between humans and the natural environment, there are parallels with the field of ecomusicology, which focuses on musical issues relating to ecology and the natural environment. This term covers a diverse range of approaches to viewing human music and composition including "studies of influence, mimesis, and/or reference of the natural environment using textual, sound, and/or extra-musical means" (Allen, 2013). My work takes similarly diverse approaches to the natural environment. As in the case of personal experience and reflection, the kind of influence from the natural environment differs between pieces, encompassing diverse localities and ecosystems and a range of perspectives from whole landscapes down to specific organisms. The character of the influence also varies, for example, by providing extra-musical inspiration, providing actual sonic material or providing both. However, all pieces are rooted in the mentality instilled by my upbringing which I further developed throughout my education. A Royal Holloway course entitled *Sibelius and the Music of the North,* with Tina K. Ramnarine (2013) was very influential, especially regarding the evocation of expansive landscapes in both Sibelius's music and traditional music such as the *joik*, the chant-like song of the indigenous Sámi people. I was captivated by the concept of a *joik* not being simply 'about' its subject, often the landscape, but truly embodying it. Sámi understanding of their interconnected place in the environment, which should not be damaged or plundered but responsibly cared for during their lifetimes as they 'borrow' the land from the Earth, is demonstrated whenever a *joik* evokes a person, as it then automatically also encompasses their natural surroundings, which are a cumulative part of that person. Perhaps this worldview influenced Finnish composers, such as, Einojuhani Rautavaara whose *Cantus Arcticus* (1972), a concerto for birds and orchestra, features his human music, in a neo-romantic style which often imitates bird sounds, particularly in the woodwind, alongside a tape recording of arctic bird sounds. This birdsong imitation is reminiscent of the approach taken by Olivier Messiaen who famously translated birdsongs into the language of Western music. However, whereas Messiaen often drew on birdsong recordings from diverse locations, Rautavaara's birdsong references are more firmly rooted in place, as is the case in most of my own work. Sámi musician, Nils-Aslak Valkeapaä's work, *Goase dušše* (*Bird Symphony)* (1993), consists of the natural soundscape of the cultural region of Sápmi, in four sections documenting the changes from spring to autumn, over which Valkeapaä, himself, *joiks*. Although I decided that including pre-recorded tape would not form part of my methods, I

found this idea of contextualising human music-making in its natural surroundings deeply inspiring and so I decided to find other ways of doing this.

iv. Scottish Traditional Music

Similarly, in capturing the West Highland landscape itself, I decided it was important to acknowledge a human presence within this environmental context.

Humans have been present in Scotland since after the last Ice Age when our current environment began to develop. I believe that human-free land does not exist in Scotland and that "true wilderness is long gone" (Warren, 2009, p.253). MacAskill (1999/2004, p.43) goes so far as to say that "wilderness is not the natural state in the Highlands and Islands". The land has always been home to people who have partly shaped its present state both physically and perceptually. According to Scottish Natural Heritage (2003, p.9), "landscape is about the relationship between people and place" and Warren (2009, p.214) tells us that "attitudes to the so-called 'natural world' are far from fixed. Landscapes are cultural constructions, the product of millennia of interaction between people and nature … and perceptions have evolved in step with social change". Therefore, as in Sámi joik, I strived to embed human music within its natural surrounding soundscape. Alongside certain natural sounds, Gaelic song was important in my early sonic environment, and I would still consider it the most affecting music for me. Like Sámi culture, according to Hunter (1995, p.38), *Gaelic culture has "historically placed an extraordinarily high value on the natural environment". In fact, according to Celtic scholar, Kuno Meyer (1913, cited in Hunter, 1995/2014, p.48), "to seek out and watch and love nature, in its tiniest phenomenon as in its grandest was given to no people so early and so fully as to the Celts".*

The term Celtic relates to the Celts and to their languages, which includes Scottish Gaelic. This reassured me in my belief that including Gaelic song, and referencing historical Gaelic cultural ideas in my music, was appropriately acknowledging an eco-conscious human presence in the environment.

However, I was still concerned about using traditional music more overtly in my music, having heard several classical pieces, mostly of the Romantic era, where I felt traditional music was placed rather coarsely into this classical music context, feeling almost 'kitsch' and doing a disservice to such beautiful material. Studying composition initially in London, I was mostly exposed to international composers and did not encounter other Scottish composers who use traditional music until much later.

A turning point for me was hearing Danish composer, Bent Sørensen's music and specifically, *L'Isola della Cittá* (2015). I find he takes a pre-existing 'style' of music, quite traditional, tonal chordal material, but embeds it into his unique voice with great originality, textural complexity and detail. The tonal material is blended and distorted, emerging from the distance and decaying organically. For instance, he makes use of glissandi and carefully controls dynamics with sounds often emerging from and decaying to 'PPP poss.'. It seems simultaneously familiar and completely new and intriguing. I feel that one could never call Sørensen's use of what might be called a 'pre-existing style' misplaced, disrespectful or 'kitsch'. This encouraged me to feel that if done convincingly, embedding Gaelic song within the context of my existing language might not be distasteful but could contribute to something organic, personal and original.

To do this, I first identified the features which most attract me to Gaelic song and are closest to my other aesthetic interests. Along with frequent use of bare, modal harmony, suggesting a melancholy and yearning feeling, I wanted to transfer the raw and visceral character of some archive recording renditions into my music. I looked to, perhaps my most useful source, the website www.tobarandualchais.co.uk which contains an archive of sound recordings including those from the School of Scottish Studies at the University of Edinburgh, the National Trust for Scotland and BBC Scotland. It includes recordings of Gaelic and Scots songs, stories, poetry and music, dating back to the 1930s. Many of these performances exemplify the features of Gaelic song which I most admire.

It should be noted that although I grew up playing and singing Scottish traditional music at school and in social settings, and also often heard local Gaelic singers who could be called authentic bearers of the tradition, passed through generations, my instrumental studies eventually steered me towards specialising in classical music. Therefore, I feel I have something of an insider/outsider perspective on traditional music, which I would define as having some access to knowledge from within the tradition but also, in some respects, viewing it objectively, without that prior knowledge. Although I feel that it is an important part of me and my musical personality, I am by no means a proficient performer of traditional music, and therefore lack the detailed knowledge which might have arisen from experience in traditional techniques. In this, I would situate myself as being different from some Scottish classical composers, such as, Eddie McGuire or Ailie Robertson who use elements of traditional music but are themselves also traditional performers. But, I would also note my difference from some composers who are looking at traditional music from the outside with no lived experience of the tradition. I should also note my relationship with Gaelic language. I learned some Gaelic at school and through

singing Gaelic songs, but not enough to be able to speak. However, in the latter half of my PhD studies, I began studying the language intensively and now have much greater proficiency at it as well as an evolving perspective on it.

The features which I find most appealing in the archive recordings are those nuances that differ from classical parameters and I particularly favour the recordings in which this is most extreme. From my insider/outsider perspective, I surmise that some of these nuances are an intentional and essential part of the style and technique. Others, which occur particularly in my favourite field recording renditions, seem to arise from the performer prioritising aspects other than 'technical perfection'. In some songs, the main singer's 'audience' join in singing some sections, suggesting the priority is the shared sociable experience. In other recordings, I believe the singer prioritises conveying emotion or dramatic storytelling over 'technical perfection'. The fact that they are field recordings, where the singer is asked to recall the song on the spot, at home and often towards the end of their lives also contributes to the effect, alongside the grainy, distorted texture and quality of the older recordings.

Examples of these nuances include the fact that there are often great deviations in general tempo, it sometimes becoming hard to define a pulse, and extensive micro-level rhythmic fluctuation is also incredibly common. There is a changeability and lack of purity to the vocal timbre. Grace notes are added liberally and breaths are taken frequently and, sometimes apparently at random. There are great pitch deviations with 'incorrect' notes which lie outside the melodic line, 'imprecise' intonation on individual notes and also a drifting of the general pitch.

I believe that these features contribute greatly to the performances. Some, of course, are actually an integral part of traditional technique, and others seem to enhance the effect of the individual performers' priorities. It is particularly those arising, I believe, from prioritising emotion that I find most compelling. I should note that professional classical performers do also instinctively allow musical expression to alter the notated music, for example, using *rubato*, altering tone colour or using expressive intonation. However, these changes still occur within the ingrained restrictions of the classical training system. The deviations in my favourite Gaelic song field recordings, occurring within a different system, are often much more extreme and, I feel, take musical expression to a more heightened level.

One particular recording was very important for me in exploring this idea: Lewis resident Catherine Margaret Morrison's 1958 performance of *O Cò Thogas Dhìom an Fhadachd,* which I find heartachingly expressive. An important feature is the significantly flattened top note, a

minor ninth above the root of the melody. It is a perfect example of more extreme expressive intonation than might be heard in a professional classical performance, and I think that the result is much more yearning and emotional. Also of note is that, throughout the song, the general pitch gradually lowers by a complete semitone. I will return to this particular song when discussing my piece, *Machair*.

I speculated that notating such recordings as accurately as possible, or rather, as accurately as I felt practical for performers in a given context, could generate intricate material which could then be expanded by altering or replacing some pitches or other aspects so the resulting music might retain some of the 'expressive deviations' whilst presenting something new. I hoped that even placing the pure transcriptions themselves in a different context, within my new compositions, could create an interesting and original soundworld. As will be seen, variations of this technique have been central to many of my pieces. In each piece where I refer to an existing song, I often choose a song that has a text relating to the piece's subject matter. It matters to me that the piece has this deeper integrity. However, I do not expect that the listener must necessarily know the text and make the link and ultimately, I still prioritise the suitability of the melody's expressive character when selecting it for a piece.

v. Techniques Inspired by Human Music Cognition Principles

As explained, if viewing my music as a dialogue between 'human sounds' and 'natural environment sounds', the 'human sounds' include traditional music influences. However, I also refer to principles of human music cognition, regarding how we process music and what we find particularly appealing about it. Several of these principles inspired musical features which I use, and sometimes exaggerate, when I wish to represent humans in my music. I also manipulate these, aiming to control how appealing or unappealing certain moments might, hypothetically, be to human listeners. Although some of these principles may also be somewhat relevant to some animals, I aim to tailor them to specifically human parameters. For instance, research from music cognition specialist, David Huron (2007) showed me the importance of using repetition carefully, to build a sense of expectation and reward, which is satisfying to humans, without overstepping into unsatisfying over-predictability. Huron also prompted my use of an overt constant pulse, based on the human heartbeat and the concept of rhythmic entrainment, which also contributes to a degree of comforting predictability. Neurobiologist Dale Purves's (2016) writing on consonance and dissonance, and particularly his ranking of intervals based on their level of dissonance, informed some of my harmonic choices. In addition, I base some musical material on human speech patterns (Huron, 2007) and imitate

human breath cycles in, for example, regularly paced swells in dynamic or intensity. Breath cycles are additionally relevant to my research as they match the phenomenon in the natural environment of wave cycles (Murray Schafer, 1977).

Section 1: Appreciation of my local landscapes

Many works stemmed from my appreciation of, and drive to sonically capture, the landscapes of the West Highlands and Islands. This topic is also relevant to pieces falling into later sections, but in this section, I will discuss two early pieces which set me on this path.

Bheanna

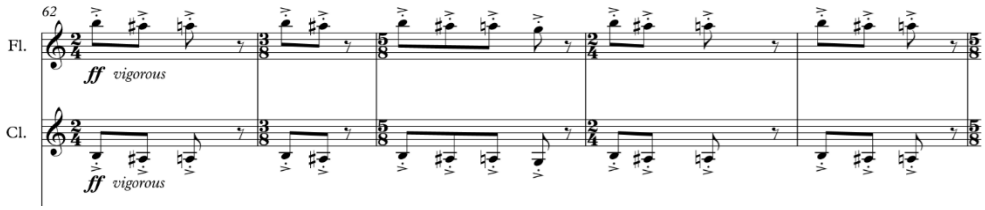
Bheanna, was inspired by the lyrics of the Gaelic song, Chì mi na mòrbheanna, known in English as The Mist-Covered Mountains of Home. It is about Glencoe, an important place for me, forming part of my journey home from the south and epitomising the Highland landscape of vast mountains and ominous gloominess. Passing through Glencoe, it always appears slightly different to me, being most spectacular in dark, wet, misty conditions. These 'mist-covered mountains of home' encapsulate the landscape on which my musical language was founded.

Lyrics:	*English Translation:*
Sèist:	*Chorus (after each verse):*
O chì, chì mi na mórbheanna	*Oh I see, I see the great mountains*
O chì, chì mi na córrbheanna	*Oh I see, I see the lofty mountains*
O chì, chì mi na coireachan	*Oh I see, I see the corries*
Chì mi na sgoran fo chèo	*I see the peaks under the mist*
Chì mi gun dàil an t-àite 's an d'rugadh mi	*I see right away the place of my birth*
Cuirear orm fàilt' 's a' chànain a thuigeas mi	*I will be welcomed in a language which I understand*
Gheibh mi ann aoidh agus gràdh 'n uair ruigeam	*I will receive hospitality and love when I reach there*
Nach reicinn air thunnaichean òir	*That I would not trade for tons of gold*
Chì mi ann coilltean, chì mi ann doireachan	*I see woods there, I see thickets*
Chì mi ann maghan bàna is toraiche	*I see fair, fertile lands there*
Chì mi na féidh air làr nan coireachan	*I see the deer on the ground of the corries*
Falaicht' an trusgan de chèo	*Shrouded in a garment of mist*
Beanntaichean àrda is àillidh leacainnean	*High mountains with lovely slopes*
Sluagh ann an còmhnuidh is còire cleachdainnean	*Folk abiding there who are customarily kind*
'S aotrom mo cheum a' leum g'am faicinn	*Light is my step when I go bounding to see them*
Is fanaidh mi tacan le deòin	*And I will remain there a while willingly*

The lyrics of *Chì mi na mòrbheanna (The Mist-Covered Mountains of Home)* (Celtic Lyrics Corner, 2008) which inspired *Bheanna*

Exploring ways of portraying the landscape's 'mistiness', I used extended techniques such as whispering, *sul tasto, tremolo, col legno tratto,* rubbing the piano strings, scraping the piano keys with fingernails and wind air notes

Acknowledging the human presence in this landscape, I include some musical features for which I was inspired by music cognition principles, including imitating breath cycles when dynamic and rhythmic speed both rise and then fall in wave-like gestures, for example, in bars 23-24. Repeating this gesture also constructs a sense of expectation, allowing me to make alterations and introduce more complex rhythmic variation without losing the sense of coherence. The main melodic material imitates the speech patterns when I spoke some of the lyrics of *Chì mi na mòrbheanna.* I chose speech patterns, intending the material to be lilting and amiable, reflecting the warmth and comfort of home. *Bheanna* also shows traits of several of my aforementioned musical influences including a Stravinskian violent persistence as the material develops and extensive quasi-minimalistic repetition of simple motivic material. I experimented with a technique that fascinates me: the 'deterioration' of material. For me, this creates a sense of development and increasing complexity, first simply stating material and then proceeding to 'destroy' it by removing some pitches, displacing material, creating more complex, disjointed rhythms, destroying the sense of pulse, creating disjunct registral movement and adopting abrupt dynamic or timbral changes. The original material becomes almost impossible to distinguish. In *Bheanna*, the seemingly simple material falls out of line, almost falling apart, suggesting the threat and the danger of nature.



Bheanna – bars 62-66 (flute and clarinet) showing the quasi-minimalistic repetition of simple motivic material

Sanderling

Before I introduce my next piece, Sanderling, I must first introduce Calum and Annie Johnston. Included in www.tobarandualchais.co.uk are many songs, stories and pipe tunes performed or recalled by them. Calum Johnston (1891-1972) and his sister Annie (1886-1963), who were born and raised on a croft on the Isle of Barra, were well-known as bearers of the Gaelic tradition.

They contributed numerous recordings to the School of Scottish Studies, also assisting Marjorie Kennedy-Fraser, a collector and arranger of Gaelic songs, by contributing to her famous publication, Songs of the Hebrides (1909-1921). When my father was very young, his family often went to Barra and visited Calum and Annie and so I felt a particular inclination towards their recordings, which aside from the family connection, are wonderfully musically rich.

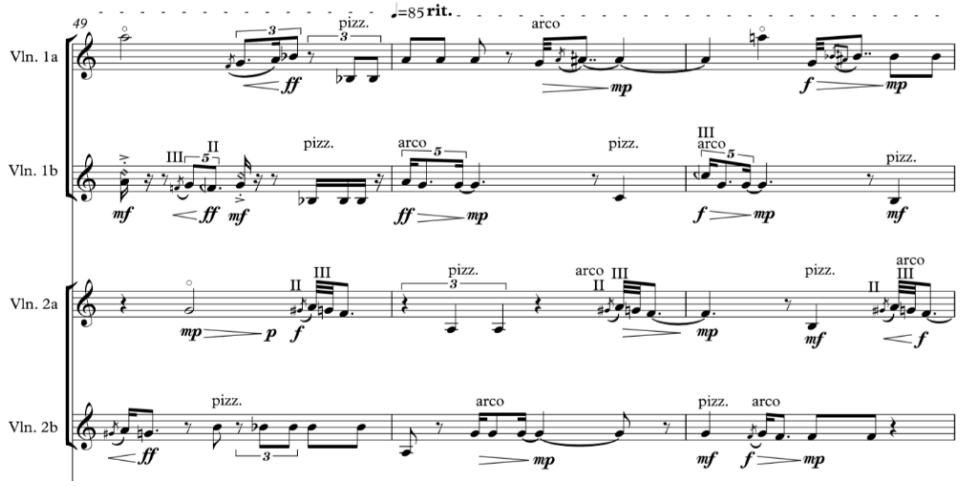
In 1967, to Danish musicologist, Thorkild Knudsen, Calum spoke of his Gaelic song interpretation, highlighting my thoughts on 'expressive deviations' including embellishment: "What I would call putting a blas on it, putting a taste on it, you know, it was just like eating something that has no taste and then you put something on it to put a taste on it…some would sing an air straight through…the bare notes as you might say and the others would put in little grace-notes and that would make all the difference…that gave a taste of that air instead of having it bare they clothed them in beautiful garments as you might say."
This reminded me of birdsong and how some birds embellish simple material through variation. I have already mentioned Mâche's theory that Stravinsky also does this with The Rite of Spring's 'bird syntax' where a bare 'bird call motif' is repeated many times but with small variations and many embellishments. As Purser (1992, p.23) states in The Music of Scotland, birdsong and Scottish traditional music are inextricably linked in history and even in etymology. "Ceòl is the Gaelic word for music, but it does not mean the same thing, as it has nothing whatever to do with the Greek muses. Ceòl means a sound like the sounds that birds make."

In *Sanderling*, I considered the notion of 'putting a *blas* on it', regarding both Gaelic song material and birdsong. I transcribed the waulking song, *An robh thu sa Bheinn?,* as sung by Calum in 1953. I selected waulking song, a rhythmic form of Gaelic working song, sung communally whilst waulking (fulling) tweed, because its repetitive style was particularly suitable for experimenting with adding a '*blas*'. Although Calum sings the same short phrases, of a few notes each, many times repeatedly, there are intricate variations between each rendition. I also included fragments of a bagpipe tune called the *Battle of the Birds*, in homage to Calum who was a great piper. However, interspersed with these fragments is material transcribed from the call of a sanderling (Matusiak, 2015), a small wading bird that winters in Scotland's coasts. As with the archive Gaelic song recordings, I transcribed recordings of sanderling calls pragmatically with as much accuracy as I felt would still be achievable for performers to play within this context. Like the approach taken by Olivier Messiaen's in his pieces based on birdsong, such as *Catalogue d'Oiseaux*, the process of transcription is more like the translation of birdsongs into the language of Western music, accepting the change of

timbral characteristics, altering intervals to fit into the system of fixed pitches and somewhat simplifying the rhythms.

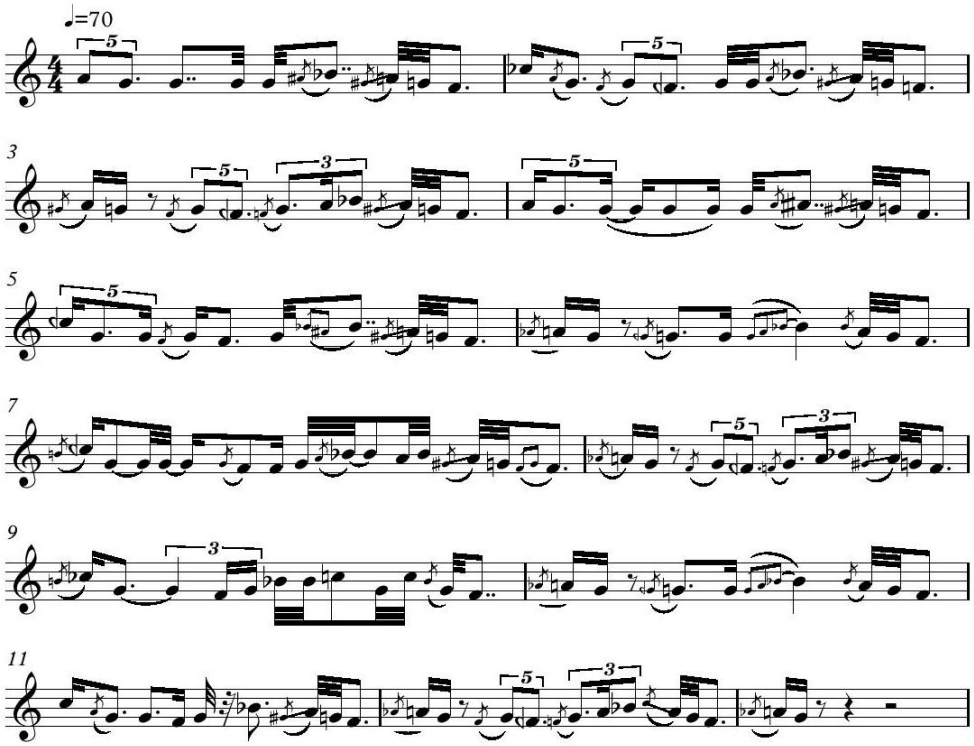
These two main strains of this piece, Calum's music and the birdsong have a personal connection as Sanderling was the name of the house on Barra which my father visited as a small child, where he met Calum and Annie Johnston. Aside from this personal link, I intended the sanderling call to contribute to the musical picture of Barra. Like the Sámi concept of interconnectedness with nature and like Rautavaara or Valkeapaä, I aimed to contextualise Calum's music in its natural surroundings. Or, perhaps, it is more the case that Calum's music, and indeed all the island's music, are a part of the natural soundscape too. I wanted to evoke Barra's atmospheric mistiness, along with the ebb and flow of the sea. In this, I was particularly inspired by Georg Friedrich Haas's *String Quartet No.1* (1997) with its shimmery, veiled and unfocused timbre created by a homogeneous texture of tremolo strings with microtonal tunings. I strived for a similarly shimmery sound, although achieving it in alternative ways and with different intentions, using it pictorially to imitate dreich Hebridean mistiness. I chose the instrumentation of a string ensemble of nine parts, allowing homogeneity of sound and the potential for complex textures. I begin the piece with very high tremolo strings, following cyclic wave patterns which rise and fall over every few bars.

Although I wanted to create a rich musical texture with intricate rhythms, I did not want it to be unduly challenging for the performers to play and aimed to maintain performance practicality. In Haas's quartet, I admired the effect of perfectly tuned microtones. However, I felt that the technical difficulty of precise tuning would adversely affect other performance aspects on which I was not willing to compromise and, previously, had only used approximately tuned microtonal inflections for this reason. I decided to create exact quarter-tones using *scordatura* strings, tuned to particular quarter-tones. A range of exact pitches could then be found on each string using open strings and natural harmonic nodes. Both the waulking song and birdsong transcriptions contain intricate subtle nuances and variations. I divided the material tactically with each rhythmically complex motif version being assigned to only one player. Thus, each player need only learn a few motifs, creating a large pool of material to alternate and repeat. In doing this, I also ensured that not every player requires *scordatura* strings.

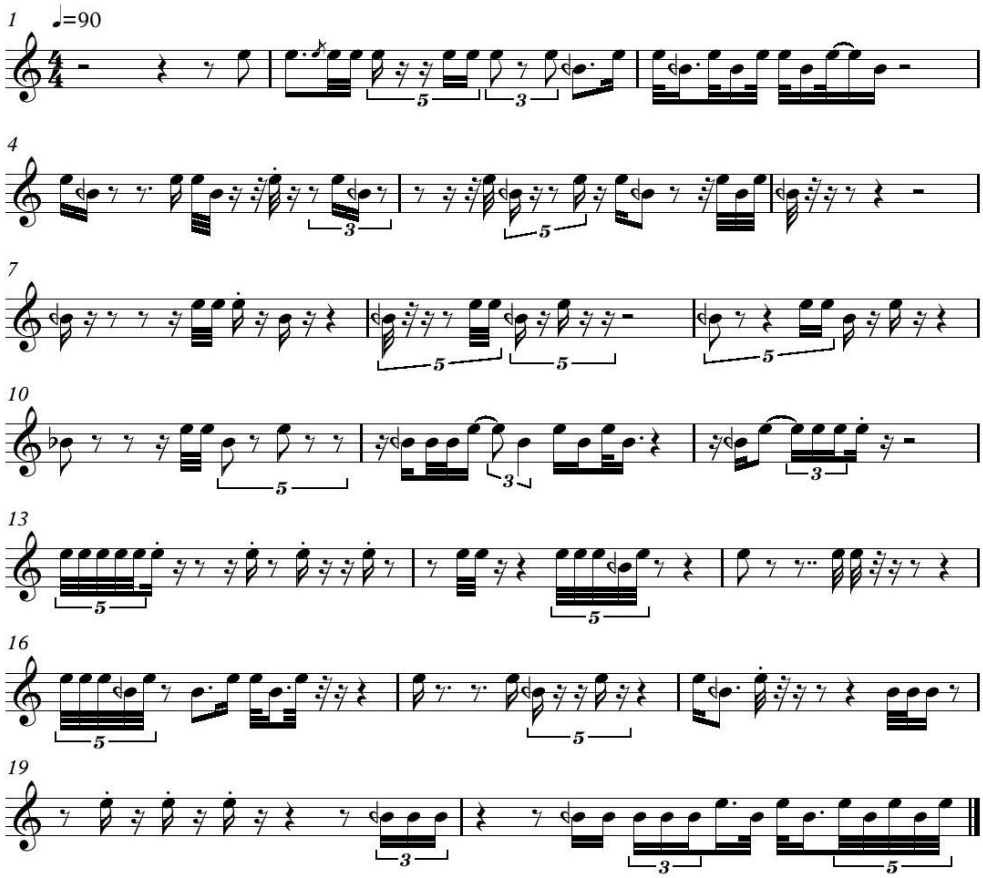


Sanderling – bars 49-51 (violin 1a, 1b, 2a, 2b) showing different motif versions, making use of *scordatura* strings

Further referencing the human presence on Barra, I use musical techniques inspired by human music cognition principles. I initially establish the rhythmic stability of an overt constant pulse. I also include 'breath/ wave cycles' of tension and dynamics which I then further enhance by including tempo fluctuations. However, these fluctuations being smooth and steady, the sense of predictability and expectation remains (Huron, 2007). Activity, dynamic and textural density increases until rehearsal figure B when fragments of *The Battle of the Birds* pass around the ensemble. As in *Bheanna*, I use whispering and air notes to imitate wind and the sea.



My transcription of *An robh thu sa Bheinn?*



My transcription of the sanderling call

Section 2: Emotions/ spirituality prompted by nature

In many of the following pieces, I go beyond simply evoking natural soundscapes, by also examining nature's numerous effects on the human condition and emotions.

the light through forest leaves

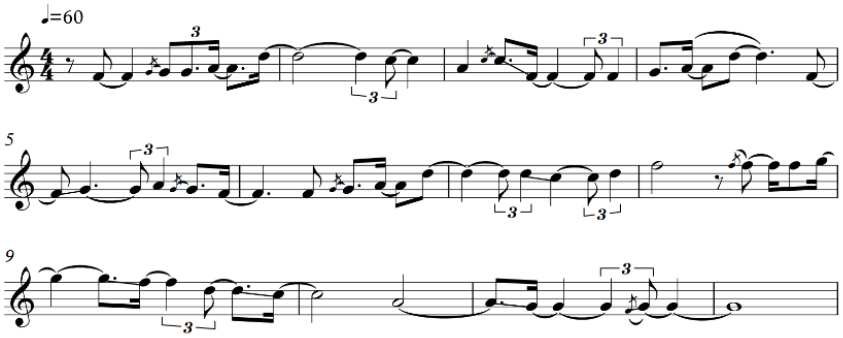
the light through forest leaves, for solo cello, addresses human perception and appreciation of a natural phenomenon, prompting emotions or transcendent feelings in the viewer.

It stemmed from my fascination with the quality of light in a forest which is mysterious, dappled, flickering and mesmerising. The Japanese word, komorebi, describes this phenomenon precisely but there is no satisfactory English equivalent. This untranslatable word is a combination of three characters meaning trees, escape and sunlight, so the literal meaning is, the sunshine filtering through the leaves of trees. I find that the fact it is undefinable to me, enhances its mystery and even perhaps its status as a liminal, transcendental facet of the natural world, like those I will detail further, in the discussion of my piece of a liminal nature.

I structured the piece to reflect the flickering quality of the light. It offers glimpses rather than the whole picture, reality being veiled from human eyes and the light, playing tricks on the

viewer, suggests that secrets are hidden in the air. Thus, the piece frantically scurries between different ideas with a blurry timbre and the material is never fully perceived. In preparation for writing the piece, I created a multi-layered structure with around fourteen different voices containing different kinds of material. Examples of these types of material include pizzicato harmonics with triplet rhythms, dotted semiquaver and demisemiquaver triplet figures, pizzicato semiquaver pairs, transcribed song material at double speed with more varied rhythms including tremolo, harmonic glissandi and col legno written with feathered beams. In the final piece, I jump between these layers in a kaleidoscopic fashion. I had several different aims when creating the material itself. I wanted to base it on a section of my transcription of Alexander MacRae's 1952 rendition of the lament *Tog orm mo phiob* but to conceal this effectively from the perception of the listener, in the fashion of the flickering light. Having been intrigued by several atmospheric solo spectral works around that time, such as Tristan Murail's *C'est Un Jardin Secret* (1978), Gérard Grisey's *Prologue* (1976), and Horațiu Rădulescu's *Das Andere* (1984), I felt that using tunings of the natural harmonic series to achieve a quasi-spectral soundworld in this piece would be mysterious and evocative. The piece shifts through different harmonic series, following the contour of the main melodic line of *Tog orm mo phiob:* the harmonic series of F, G, A, D, C in turn. In each section, I restricted material to the notes which appear in its allocated harmonic series, thus using different fragments of the melodic line in each section, and also filled out the texture with additional notes of the series which do not appear in the melody. As in *Sanderling*, to achieve some of the natural tunings of the harmonic series which deviate from those of equal temperament, without requiring the player to tune these deviations accurately by ear, I use *scordatura*. The G string of the cello is tuned to F sharp +48 cents and the D string to C +31 cents. Thus, it is possible, using the harmonic nodes at the 4^{th}, the 5^{th} and the octave, to achieve C +31 cents, G +31 cents, F sharp +48 cents and C sharp +48 cents in specific octaves, widening the palette of available notes from the allocated harmonic series of each section. Within these parameters regarding pitch, I created the preparatory multi-layered structure, using particular rhythms from my transcription in each layer and manipulating various other aspects so that each layer was contrasting, for example, in timbre, technique and musical character. I imposed a general structure where the *tessitura* is gradually raised throughout the piece. I then began to construct the piece taking no more than a few beats at a time from each layer, intuitively, creating a kaleidoscopic effect. Different characters emerged in each section which I highlighted with articulations and expression markings. I shaped the piece to reach a rhythmic,

climactic moment which fades into a final section where we hear the transcribed fragment of *Tog orm mo phiob* in full, but still with a very blurry and mysterious tone.



My transcription of *Tog orm mo phiob*

<u>Seabird Cities</u>

Seabird Cities, reflects a more specific personal experience, contemplating my discomfort living in a city, missing home landscapes yet gradually becoming accustomed to life with little access to nature. A bittersweet, shocking moment can arise when some small contact with nature acts as a reminder of home. Regarding Seabird Cities, such an emotional response was triggered when, walking in the urban heart of Glasgow, I heard the cry of a seagull. It was an awakening moment and a glimpse of the life that exists in the wild coasts of home.

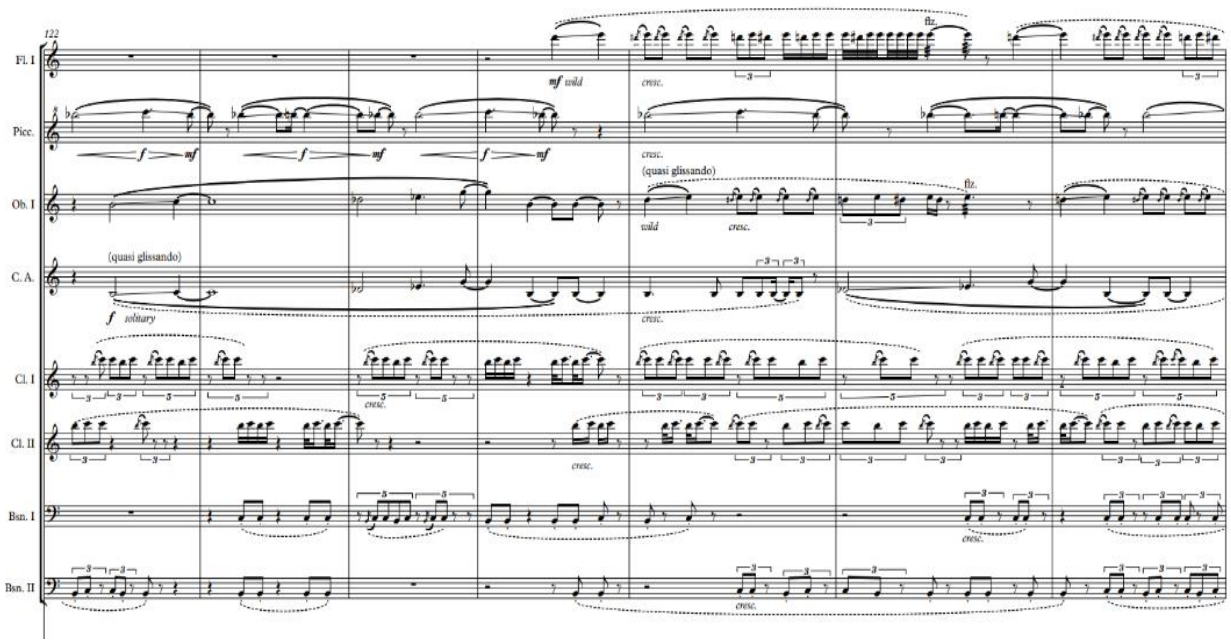
The phrase 'seabird cities' describes the spectacular, bustling seabird colonies found in, for example, cliffs in the Outer Hebrides, where thousands of birds nest. Growing up, I spent much time sailing around the Outer Hebrides, which I feel greatly influenced my future musical journey. The coastal soundscape being central to my language, exploring it by sea was an even more visceral and captivating experience. The sounds of the seabird cities which I heard in, most notably, the archipelago of St Kilda, are forever imprinted in my imagination. St Kilda has another interesting personal connection because the last inhabitants who were evacuated in the 1930s were relocated to my mainland village, Lochaline. Although coming to an easier life and leaving behind the near certainty of starvation and demise, some of the older generation in Lochaline remember the St Kildans' inability to settle so far from the cliffs of their home islands. Perhaps the pain of having to leave the landscape of home is actually embedded more generally in Gaelic culture, due to agricultural struggles, the draw of city affluence and, of course, the Highland Clearances, notable in the sheer quantity of Gaelic leaving songs –

Farewell to Fiunary, Leaving Berneray, Leaving Lismore etc. Having had to leave the Highlands myself, to study and work in cities, this resonates with me.

Seabird Cities is a manifestation of these feelings of nostalgia for home, the overwhelming experience of a new alienating place but also the small comfort that can be found in an awakening moment on finding a reminder of the landscape of home. Before writing the piece, I solidified these thoughts by writing a short poetic text which forms part of the programme notes. In this and many following pieces, I consider my programme notes an important additional artistic facet of the work, though the music must always be able to stand alone as well.

Structural ideas in *Seabird Cities* were again inspired by human music cognition principles including constant pulse and Purves's (2016) ranking of intervals based on their level of dissonance. The structure comprises a number of sections, each travelling harmonically from consonance towards dissonance. I began with the most consonant intervals, gradually adding more pitches and increasingly dissonant intervals. Each section begins with one pitch and 'resolves' from the peak of its dissonance to a higher pitch. This reflects the increasing tension and pain of leaving home, eased by startling moments of hope.

I imitate a coastal soundscape, by transcribing, (whilst favouring orchestral practicality over total accuracy), the calls of some bird species populating Hebridean cliffs, from recordings on the RSPB (2017) website. According to soundscape ecologist, Bernie Krause, (2012, p.7) in seabird soundscapes, the birds are "creating a din that seems to make each vocalist indistinguishable from another. But it's a curious deception: these are the sounds of survival, reproduction, and communication, and each species has evolved so that it is heard distinctly among the others— and so that it projects over the thunderous, turbulent sounds of the ocean waves". Accordingly, to give each motif a distinctive timbral character, I assigned different species' calls to different instruments based on compatibility of timbre. For example, the flute mimics the curlew and the greater black-backed gull, perhaps the piece's central motif. The clarinet mimics the white-tailed eagle, the oboe the yellow-legged gull and the cor anglais the lesser black-backed gull. My coastal soundscape also includes colours evoking, for instance, wind, waves and rattling sounds of birds moving on the shore. Other melodic movement emerges from the harmonic structure, as pitches are introduced. Rehearsal figure I contains 'mechanical' rhythms, constructed to represent a city. At bar 169, the glockenspiel represents the hopeful awakening. I selected traditional music-inspired dotted rhythms and syncopation towards the end, placing a reference to the Gaelic history of emigration in a 'hopeful' context.



Seabird Cities – bars 122-128 (Flute I, Piccolo, Oboe I, Cor Anglais, Clarinet I and II and Bassoon I and II) showing various bird call motifs distributed between different instruments.

Birds of Migration

In *Birds of Migration*, the initial stimulus was similar to that in *Seabird Cities*. Hearing a seagull cry in Glasgow had reminded me of the West Highlands, but, in 2018, whilst abroad, the gentle, familiar call of a pigeon reminded me of the streets of Glasgow. Transcribing this sound, live, provided material for the piece's second section. The first section emerged on finding a YouTube video (Cavallin, 2009) of geese calling and taking flight, the sound of which I found incredibly expressive, almost painful and certainly musical, like an outcry of some deep emotion, relatable to humans. To balance the piece, I actively sought more positive material for the third section and considered the incredible feats of migratory birds like swallows, travelling for survival. The swallow's chirpy call, transcribed from the RSPB (2018) website, was certainly more positive, in a faster tempo and higher pitch.

It was interesting to transfer my methods of transcribing and imitating bird sounds from instrumental settings to vocal. I explored extended techniques involving manipulation of the breath, techniques like 'growling' and careful consideration of the text. I selected vocables with the closest sonic resemblance to the three different bird calls.

of a liminal nature

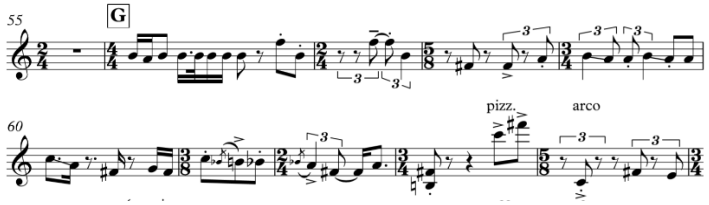
In *of a liminal nature,* an orchestral piece in three sections, I firstly return to exploring human appreciation of nature before again looking at the effects of nature on human emotions/ spirituality, and finally progressing to the commentary's next topic, the destruction of nature by humans.

The piece's three sections are connected by the idea of liminality, meaning the transition, boundary or threshold between two states, prompted by several personal experiences. Reflecting the Celtic notion of attention to natural detail, further examined later in this commentary, and perhaps instilled by my rural upbringing, I have often been totally engrossed in, for example, the minute details of a leaf, the patterns of tree bark or a patch of dewy moss to the extent that other concerns were forgotten, as if I were seeing beyond it, towards a sense of transcendence or spirituality. I felt an affinity with writers, including John Muir, who spoke of such experiences: "Between every two pines is a doorway to a new world" (n.d. cited in Berg, 1978, p.55) and also to other composers, including Libby Larsen (2008, cited in Von Glahn, 2013) who said "I could be at peace with the mystical. I could be part of the mysticism by being part of the silence in that tree. No words are necessary"

Another facet of personal 'nature spirituality' involves memory, such as seeing the hollow of a familiar old local oak tree, touching its bark and feeling consumed by waves of memories from that place. Something about the intricacy, dependability, the visceral and tactile experience of nature seemed to enhance the effect of these memories. This idea of such 'magic', 'special' places in nature reminded me of something I had read in Music and the Celtic Otherworld about "liminal places – ordinary places which, because of inherent characteristic of limit or boundary, are natural symbols of transcendence. E.g. cave, hillside hollow entrance, … ford in a river, crossroad intersection" (Ralls-MacLeod, 2000, p.124) and for Celtic people "liminality, then, usually implies the possibility of some kind of interaction with the supernatural" (p.136).

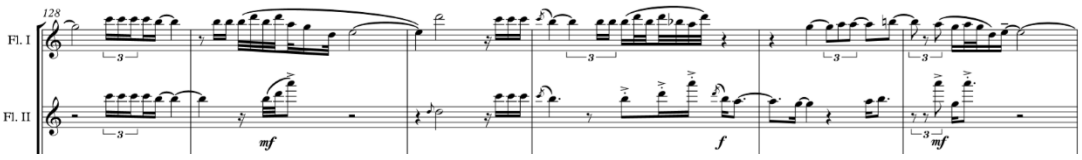
I, therefore, based the piece's central section on these liminal places in nature which facilitate transcendence. However, the first section explores another liminal, grey area: where humans stand in relation to 'nature'. Are we included within or outside that term, a part of nature or an outsider, an onlooker? Perhaps we lie somewhere in-between the two perspectives. The third section considers the state of the natural world today, having endured so much human-inflicted damage but not yet totally destroyed, in the liminal zone between perfection and destruction.

To reflect the topic - where humans stand in relation to 'nature', in the initial musical material, I found Gaelic song recordings imitating different birds, of which Purser (1992, p.23) says, "the dividing lines between bird-song, music and speech are impossible to determine" as well as noting that "the lilting musicality of Gaelic is particularly effective in this context". Since writing the piece I discovered the work *Away with the birds* (2015) for vocal ensemble, in which Hanna Tuulikki mimics seabird soundscapes by incorporating fragments of such Gaelic bird imitation songs. It is interesting, in retrospect, to observe how Tuulikki worked with similar ideas and the same body of source material, creating a graphic score for a group of vocalists who combine to mimic the bird calls, using extended vocal techniques and including field recordings of bird sounds. It is also interesting to note that such a wealth of songs, showing a love, respect and understanding of natural creatures, existed in Gaelic culture. I transcribed several songs, including Annie Johnston's 1950 rendition of *Cànan nan Eun* (The Language of the Birds). As well as presenting them whole, for example, at the end of the first section, I broke them up into fragments designed to sound like birdsong motifs, as if handing the material back to nature having added this interfering human layer. Using these motifs, I built a 'dawn chorus-like' texture. The section ends with a unison rendition of the whole tune imitating a thrush, (*Òran a' Smeòraich* from *Cànan nan Eun),* as if humans, having observed and admired the natural world awaking, find that they are actually in the midst of it, and are a part of it.



of a liminal nature – bars 55-64 (Violin I) showing my transcription of *Òran a' Smeòraich* from *Cànan nan Eun*

The second section begins with a shocking stillness, reflecting the shock of heightened awareness and potential transcendence that can occur alone in nature. It contains my transcription of *Pilliù Pillililileòghain,* as sung by Calum Johnston in 1965, chosen for its reflective, deeply expressive qualities.



of a liminal nature – bars 128-133 (Flutes I and II) showing my transcription of *Pilliù Pillililileòghain*

It is a *caoine* (keen in English), deemed one of the oldest known Gaelic songs and probably derived from pre-Christian laments. The melancholy sound is similar to and perhaps even

based on the call of a redshank, known in Islay as the *caoineteach*, or bird of lament (Purser, 1992). The shocking stillness of the second section is enhanced by the introduction of vocalisation, humming throughout the orchestra. The texture intensifies, leading into the third section, a reprise of the opening, as humans observe the natural world. However, roles are exchanged, with brass now playing the 'birdsong-Gaelic song transcription-birdsong motifs' material and it sounds heavy, threatening and unnatural. I also drew again on the technique of deterioration. Material imitating natural sounds is now familiar to the listener so, by breaking it down and audibly attacking it, the listener may perceive the destruction of nature and also feel threatened. The piece does not come to a conclusion but ends hovering amid the drama, highlighting the liminal state of the current process of destruction, with the hope, of course, that it can be halted.

Section 3: Humans damaging the environment

With many of my pieces exploring how nature reflects and impacts on human situations, I was naturally driven to also consider humans' impact on nature. Unfortunately, it is an inescapable truth that the impact is frequently negative, as *of a liminal nature*, the following two pieces and many works falling into later sections display.

leum fèidh

leum fèidh was written for Karlovy Vary Symphony Orchestra. While visiting the Czech spa town, Karlovy Vary, I heard the traditional folk story of its founding, in which King Charles IV was pursuing a deer in the forest. To escape, the deer jumped from a cliff into a pool. The deer was not wounded, but healed, revealing the hot spring's curative properties, and King Charles established the town there. leum fèidh, is my personal Gaelic reference to the Jeleni skok (deer's jump) statue, which is situated at the story's alleged location. Struck by the story's destructive portrayal of humans in comparison to the nurturing, miraculous representation of nature, I wanted to imitate an unspoilt forest soundscape before introducing a sonic threat, representing human interference.

In *Seabird Cities*, I had examined bird calls in isolation before combining them intuitively for musical, aesthetic reasons. In *leum fèidh,* I examined the forest soundscape as a complete entity, imitating it as faithfully as possible. I discovered the website, https://mynoise.net, a collection of recordings of different environments' soundscapes. I selected a recording from Poland's Bieszczady National Park, near the Slovakian border, which was geographically closest

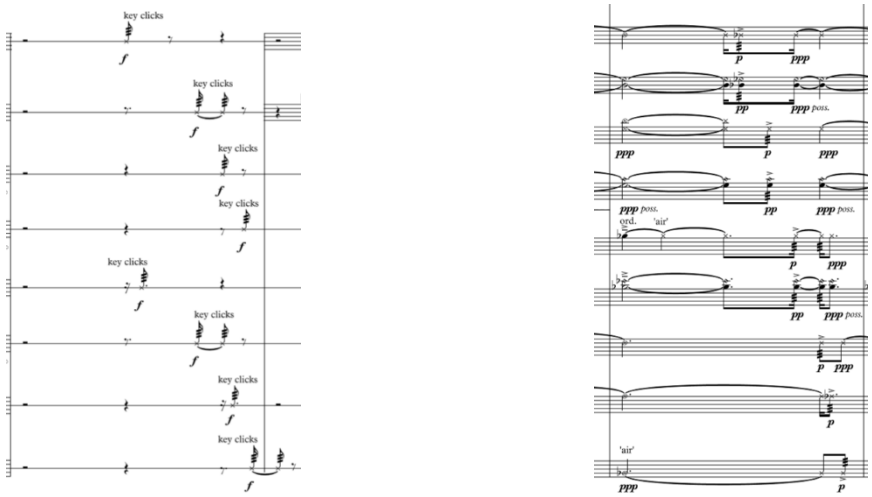
to Karlovy Vary and, as one of Europe's last primeval forests, I hoped was a good representation of undisturbed nature. Aiming to imitate the eco-acoustical properties of the forest, I looked again to Bernie Krause and to David Monacchi (2011, pp.227–250) who states that "the principal goals of the eco-acoustic method could be identified as: Research on the ecological order and equilibrium of specific sound environments… composing with […] [what Bernie Krause calls] 'eco-acoustical niches' (temporal, frequency and typological niches)". He suggests that, in order to be heard, a species must find their unique space in the overall sonic environment, for instance, by using a unique pitch register and/or timbre, at a time when there is a gap in the sound. I identified the layers in the recording which I felt were acting as discrete units and when compiling my transcribed units into the piece, made sure to allocate each sound into its temporal, frequential and typological niche. Such sonic units included creaking trees, animal footsteps, a hissing tone, a low whistle, warbling melodic whistling of a nightingale, a tawny owl hoot, a low rumbling sound, a soft sighing breeze sound, tapping rain sounds, bird flapping wings and a woodpecker knocking.

To successfully imitate these sounds, I explored ways of expanding the timbral spectrum of the orchestra using extended techniques and objects. Having recently seen a staged radio play with live foley (Robertson, 2017), I wondered if any of the foley artists' live, realistic sound effects would work in orchestral performance. However, although many sounds were effective, sounding authentic, they were designed for recording or amplification which would not be possible in the orchestra. Some would also be impractical, being too messy or difficult to set up. However, following further research into foley effects for natural sounds I decided to use bubble wrap, which, rubbed together, mimics the sound of rustling wind and leather gloves which, shaken, sound like flapping birds' wings (Filskov, 2017). Extended techniques I used to imitate natural sounds include air notes, whispering, key clicks and rubbing the bass drum with the palm of the hand. There is a 'raindrop' effect, for example, in bar 71 with the combination of woodblock, crotales, trumpets and some of the strings playing short, sharp notes.

I also explored interactions between natural sound units within the soundscape. One instance of this is that when I imitate a bird taking flight (with shaken leather gloves), for example, at rehearsal figure A, a domino-effect ripple passes through the orchestra with tremolo in the string air notes and wind key clicks. This happens spatially, in each case, either from right to left or left to right across the orchestra, reflecting how an abrupt disturbance, such as a bird taking flight, would affect other sound units. For instance, branches of the tree the bird was

resting in would be moved with a rustling, then wind sounds, flowing through the branches, would be diverted.

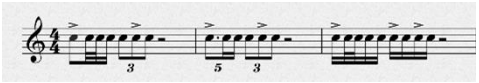
a) b)



leum fèidh – bar 68 – a) (Piccolo, Flute, Oboes I and II, Clarinets I and II, Bassoons I and II) and b) (Violins IIb and IIb solo, Violas I, I solo, II and II solo, Violoncello I and II, and Double Bass) showing the domino-effect ripple passing through the orchestra.

Following the piece's narrative, I introduced a human presence into the soundscape which then becomes a threat. Imagining a 14th century hunting scene, I immediately considered the sound of a hunting horn but was somewhat afraid of the implied cliché of its use in an already inherently pastoral soundscape. However, although not playing musical material typical of a 'hunting call', I decided to embrace the hunting connotation of brass and use it to symbolise a human threat. The feeling of threat is strengthened by the powerful brass's potential to dominate the texture, especially as they build in intensity.

Simultaneously, the bird calls become increasingly active, in reaction to the threat. I also introduce a rhythmic element in the strings, driving the music in a rhythmic crescendo towards the escarpment at rehearsal figure G, representing the deer jumping from the cliff. This rhythmic drive enhances the percussionists' parts which mimic the deer's movement and horses' steps. I surmised this could be represented with dotted rhythms, always with small rhythmic variations. According to Mâche (1983), a horse's gallop is often represented in music, for example, as a dotted rhythm, a quaver and two semi-quavers or two semi-quavers then a quaver. He gives an example of Uzbek horse galloping rhythms precisely notated thus:



Examples of Uzbek horse galloping rhythms

From around rehearsal figures D until G, the three percussionists play independent versions of this rhythm and other dotted rhythms mimicking horse steps, increasing in speed, giving the impression of the hunt, with horses chasing the deer to its peril.

Can we not hear the birds that sing?

Can we not hear the birds that sing? for solo violin examines the position of humans within 'nature', comparing destructive relationships with more positive, eco-conscious relationships. It was written during an artist residency at RSPB's Baron's Haugh nature reserve, an interesting location being on the outskirts of Motherwell in close, audible, proximity to the M74. I focused on the reserve's sounds, aiming to represent the natural soundscape of the woods and wetland as it changes throughout the year, and the closely present human sounds. The piece begins by representing ambient sounds of the woods, created using a pile of leaves which the performer rustles, sandpaper attached to the foot and scraped against paper on the floor, a shell ankle-bracelet which rattles when shaken or when the foot is stamped and leather gloves, shaken to sound like flapping birds' wings. Against this ambient sound backdrop, I researched the species which populate the reserve throughout the year, transcribed their calls within the parameters of practicality, referring again to the RSPB website, and arranged these according to season. As Messiaen did in *Catalogue d'Oiseaux,* I include the names of each bird in the score. I then characterised each season, making them distinct, with spring being active and manic with frequent shifts in register, fast changes between short, interrupting fragments and a loud general dynamic for the birdsong motifs. I characterised summer with a happy, lazy mood, a steady mid-range tessitura which is luscious and expressive, slower and more sustained motifs, longer motivic fragments and time being taken between fragments. In autumn, the soundscape's birds become less active but harsher sounds also enter, the season's climate becoming more challenging. The birdsong imitation is quieter and violin techniques, such as *sul ponticello* and bow over-pressure, bring a dark and dangerous mood. In winter, these sounds intensify, the season becoming even harsher. However, in the winter soundscape, bird sounds are less frequent, so I placed the birdsong motifs in a sparser arrangement, with silence interspersed.

I introduced a 'human element', presenting the listener with a negative image: the damage frequently caused by humans' interference in natural environments. However, I also included another 'human element' which has a more harmonious relationship with the natural sounds. This contrast suggests that including humans in nature does not automatically villainise them. Humans can co-exist with nature peacefully. However, to maintain a natural balance, all living things must fit into their appropriate space. The 'negative human element' represents humans stepping outside their balanced space, attempting to dominate the soundscape with noise pollution. This is represented by loud, dissonant clashes while the violinist uses bow over-pressure. To distinguish these from the harsher birdsong fragments, which contain a lot of activity and variation, they have contrastingly slow, mechanical rhythms and are largely sustained. The 'positive human element' comprises fragments derived from my transcription of Jeannie Robertson's 1953 recording of *Clyde's Water*. I chose this song because, as well as the obvious connection between the Clyde and Baron's Haugh, its text tells of a man who, becoming over-powered by the river's strength, risks drowning, reinforcing the fact that humans must respect the natural elements if to maintain a harmonious relationship.

Section 4: Climate Change

From pieces representing human threats to the natural environment, firstly in a more metaphorical sense and then in a very specific context, I move to a series of pieces conveying the largest consequence of human environmental damage, and conversely the natural world's largest threat to humankind – climate change. This, perhaps, angles my work, from exploration to something more akin to advocacy or activism. Regarding Sámi culture again, I feel that for music embedded in the context of nature, as I intend mine to be too, moving towards activism during environmentally challenging times is a logical step. A figure such as Swedish Sámi artist, Sofia Jannock (2012), uses her ecologically-minded music to speak to audiences about climate change's consequences, some already affecting the Sámi people, as well as about indigenous rights. Eco-anxiety is a term used to describe extreme worry about human activities and climate change harming the environment and the future consequences of this. As part of a generation instilled with eco-anxiety, it is impossible for me to ignore climate change, especially whilst investigating human/natural environment relationships. It underpins the integral foundations of any such relationships today and certainly will increase to do so in future.

Deglaciation

Deglaciation, for violin and violoncello, considers the melting of glacial ice. It begins by painting an 'icy' soundscape with string harmonics and vocal whispering. I also use a technique inspired by Hans Abrahamsen who, in his song cycle, *Let Me Tell You* (2013, p.i), depicts the footsteps of the singer's character, Ophelia, in the snow by directing the percussionist to move "a piece of paper in a circular movement on the skin of a Bass Drum" to sound "like walking in the snow". My technique differs, instructing the players to rub a piece of paper against the floor with their foot, whilst playing, evoking a similar sound. A section of 'trickling' material follows, like drops of melting ice. I created a pitch sequence initially and then, aside from including a constant pulse, composed rhythms intuitively. As in *Bheanna*, I use the technique of 'deterioration' of material and expression markings, such as, 'decaying', 'with increasing desperation' and 'imploring', representing climate change's effects on the environment itself.

The Arctic Rose

In *The Arctic Rose,* for piano duo, the message is similar but also considers climate change's effects on humans, again utilising musical 'deterioration'. I use some musical features inspired by human music cognition principles aiming to provide comforting dependability: speech rhythms, 'heartbeat-like' constant pulse and a similarly constant pitch series, selected to convey the expressive character of the piece. Throughout the piece, this dependability is destroyed as material deteriorates in the following ways. Percussive sounds replace some of the steady piano beats, contributing to a sense of distortion and timbral deterioration. The registers used become more extreme and the melodic line is fragmented, jumping between registers. The general dynamic also increases. The constant repetition of the musical cells portrays the continuing and increasing threats of climate change. The elements of increasing musical 'disorder' imply growing chaos, portraying the decline of arctic ice. By establishing such elements deemed comforting to humans, and then destroying them, I attempt a sonic attack on human listeners, who, lulled into a comfortable state, are then subject to its destruction. Thus, the piece reflects the deterioration of arctic ice and the consequences for mankind of ocean levels rising. The title suggests not only melting arctic ice raising sea levels, but also the sinking of the famous vessel the Arctic Rose, another example of the ocean posing a danger to human life.

flightless birds.

flightless birds. represents effects of human-made climate change on the oceans, specifically the decline of the penguin population, and was written following discussions with a St Andrews University biologist researching threats to penguins, Camille Le Guen. It imitates recorded sounds of a king penguin colony (Wildlife Echo, 2019), firstly with icy ambient sounds then with transcribed penguin calls from which most of the piece's pitch material derives. Eventually, a dark, menacing bass line overshadows the colony sounds, representing human interference, harming penguin populations by activities such as overfishing. According to Le Guen, ocean temperatures rising would force fish to swim deeper seeking lower temperatures, out of the penguins' reach, removing their food source. This is represented by an aggressive trombone and bass clarinet gesture which, whilst becoming faster and louder, sinks in register, dragging the flute and oboe with it. I highlight the threat of plastic pollution using plastic objects: bubble wrap, a plastic bottle shaker and a plastic bottle trombone mute which, used throughout the piece, interact with the instruments, influencing various sonic parameters.

to tell it like it is.

Given the opportunity, in 2020, to write a piece for the National Youth Choir of Great Britain Fellowship, I immediately saw young voices' potential to create a powerful environmental statement, especially during the rise of the Fridays for Future movement. In *to tell it like it is.,* I compiled a list of facts and figures about the climate crisis which form the text. I state these facts straight, with a natural, speech-like quality, deriving material from my own improvisatory speak-singing of the text. I intend this to feel both humanistic and direct. Another humanistic element is the heartbeat gesture of chest thumps. In the hocketed upper voices, I include the transcribed call of the Hawaiian bird, the Kauai 'O' o, extinct since 1989 due to human activity, as evidence of historic human destruction of the natural world. By the end, both this and the humanistic elements share the same demise. The facts and figures accumulate, collide and intensify in increasing chaos. I chose to largely maintain harmonic stasis throughout, to create a feeling of inescapable threat. Throughout the piece, the constant pulse of tongue clicks, giving a 'tick tock' gesture, implies momentum and that the time to address the facts is running out.

Section 5: Environmental threats to my local landscapes

Considering my intention of portraying my local landscapes musically, I was naturally drawn to examine the human-inflicted environmental issues specifically affecting them.

Machair

I first addressed the threats of climate change, for instance, rising sea levels affecting Scotland's coastal land.

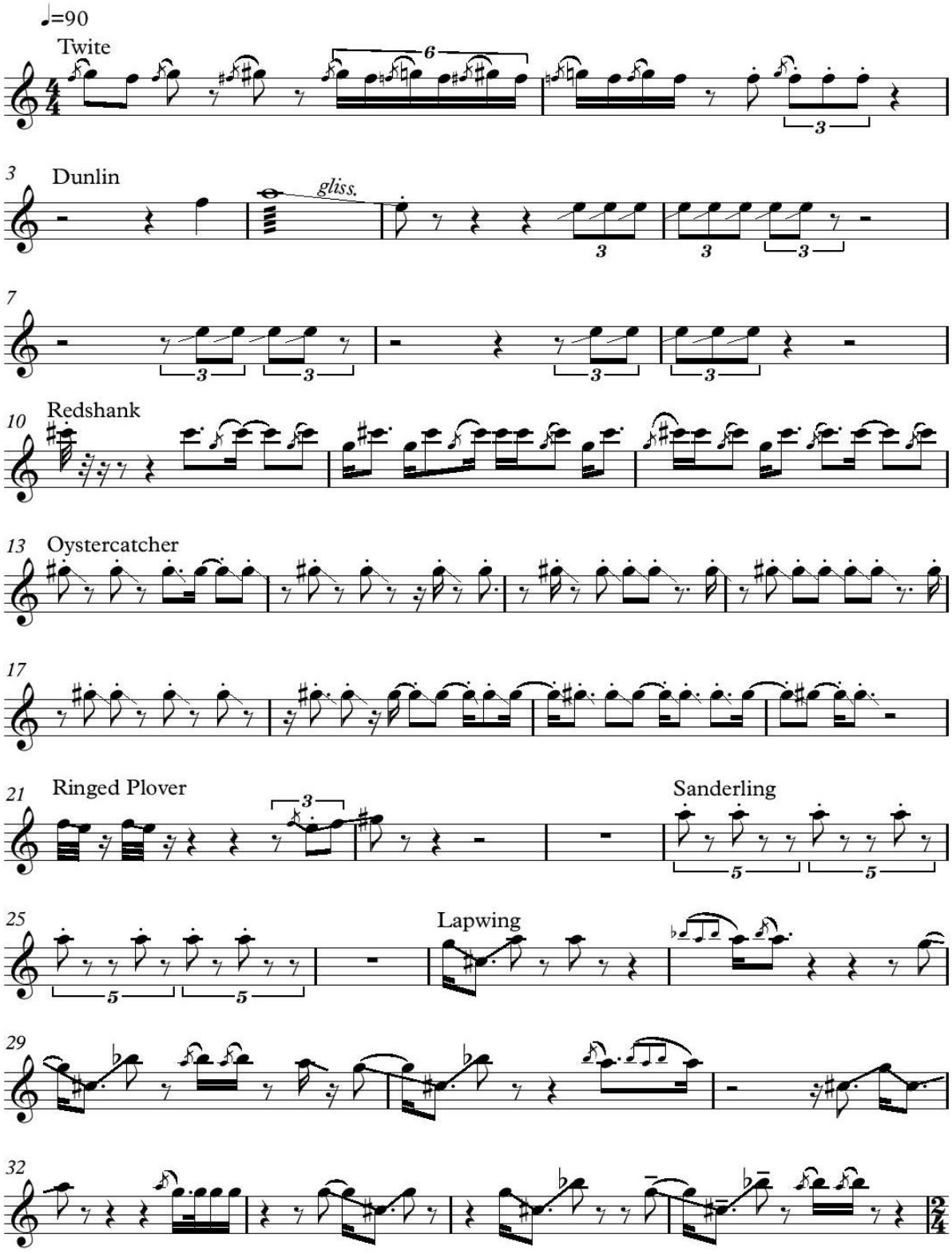
Machair is a habitat of low-lying pastureland which, unlike much of the ecologically damaged Highlands, is very fertile, with abundant wildflowers and birds. Unique to the North West of Scotland and Ireland, notable examples exist on the Isles of Uist, Lewis and Harris. Machair is interesting, having evolved partly by natural means through erosion of shells into sand and in particular conditions of rain and strong winds. However, its development and management is also "dependent on traditional grazing and cultivation practices" (Warren, 2009, p.390). I believe that machair's development and maintenance is a good example of a successful, caring relationship between people and the land. However, this low-lying habitat is now certainly vulnerable to the rising sea levels of climate change (Scottish Natural Heritage, 2018).

Machair, for string quartet, combines sounds representing ecologically-minded human inhabitants with those representing natural sounds, namely birds. The texture also includes expressive, yearning gestures and dynamic swells, imitating the rise and fall of the sea and gradually growing in its sense of threat. I include fragments of my transcription of the previously mentioned song, *O Cò Thogas Dhìom an Fhadachd* (Oh Who Will Take This Yearning from Me). As I have stated, I find Lewis resident, Catherine Margaret Morrison's 1958 rendition of this song incredibly expressive and beautiful due, in part, to her deviations from the 'official' melody. It is a desperate, yearning song about a girl's unrequited love for Aonghas Buachaille who has emigrated to Canada. She wishes to be with him and despairs of those who wrong her, who she feels would not be happy even if she were taken 'down the machair' i.e. to the graveyard. The painful and helpless nature of the song seems appropriate to the feelings of many in the age of eco-anxiety. The high points of the song's melody, containing a feature of a falling semitone, which in this recording has a greatly flattened upper note, have a sigh-like, yearning quality, which I used in isolation in this and, in fact, in many other pieces, as an expressive device.

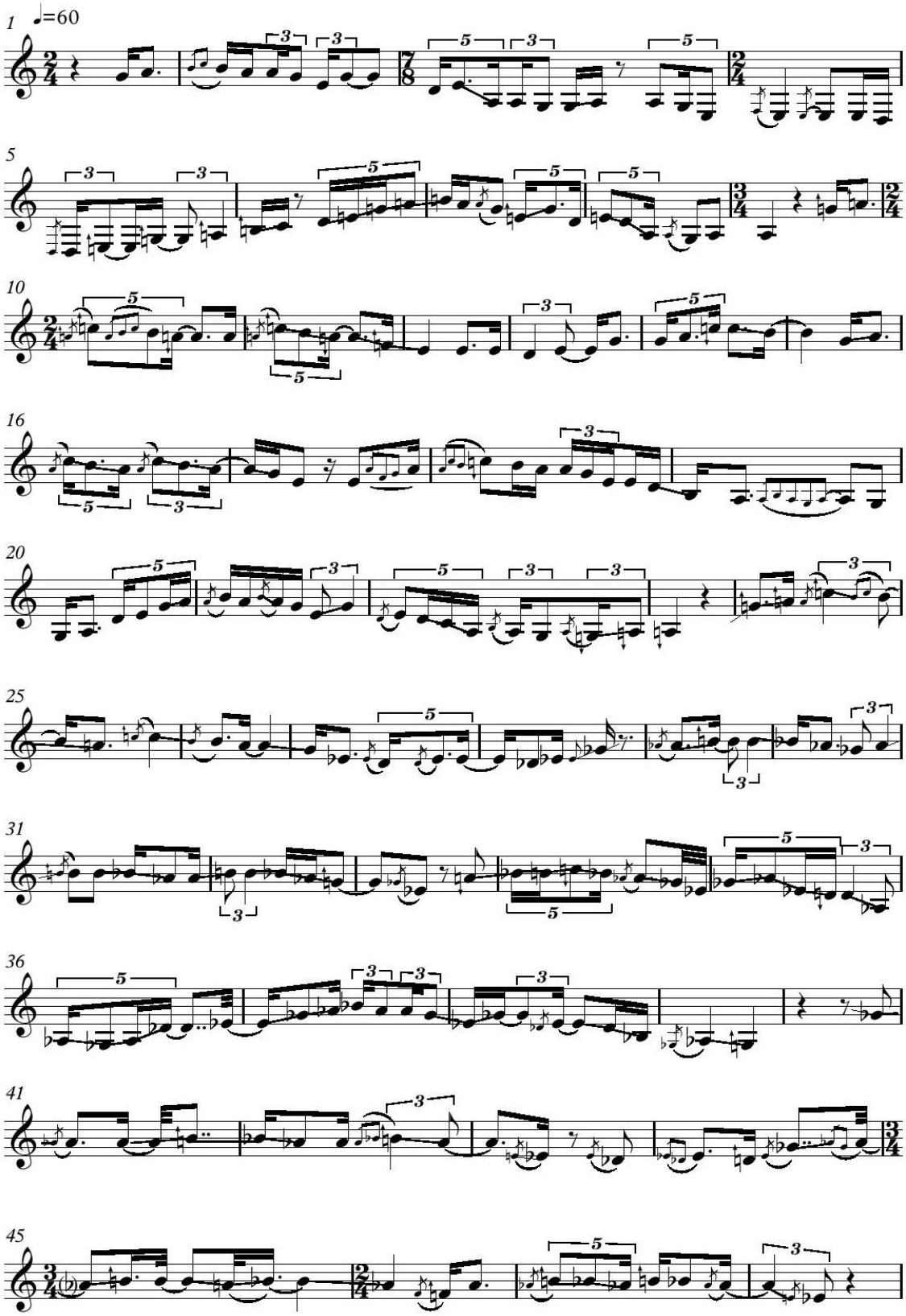
From the RSPB website (2018) I transcribed the calls of bird species from the machair habitat including twite, dunlin, redshank, oystercatcher, ringed plover, lapwing and sanderling. I

considered two ways of arranging the birdsong motifs, one overlapping and more chaotic, giving the impression of a dense soundscape and the other, 'musically arranged', allowing motifs to be heard individually. Following Krause's (2012) previously discussed theory of eco-acoustic niches, I decided to use the latter option. I felt this particular piece, with complex birdsong motifs, would have a greater musical effect and more logical narrative if most bird motif entries occurred on the beat, also providing an inherent constant pulse.

I introduce a sonic threat, representing climate change's looming rising oceans, the looming dread of the girl in *O Cò Thogas Dhìom an Fhadachd* and similar dark feelings of eco-anxiety. The sonic threat comprises a dark, sustained, dissonant dyad in the cello part which crescendos and transitions towards the direction 'noise'. There are also vocalisations as players shadow some of the pitches by humming. I aimed to evoke the Hebridean tradition of psalm singing, a 'call and response' form of congregational music where individual singers may interpret and embellish the melodic line in a form of free heterophony. I also felt that the voice, representing innately human sounds, might form a 'more human' relationship with the natural sounds than abstract instrumental sounds could.



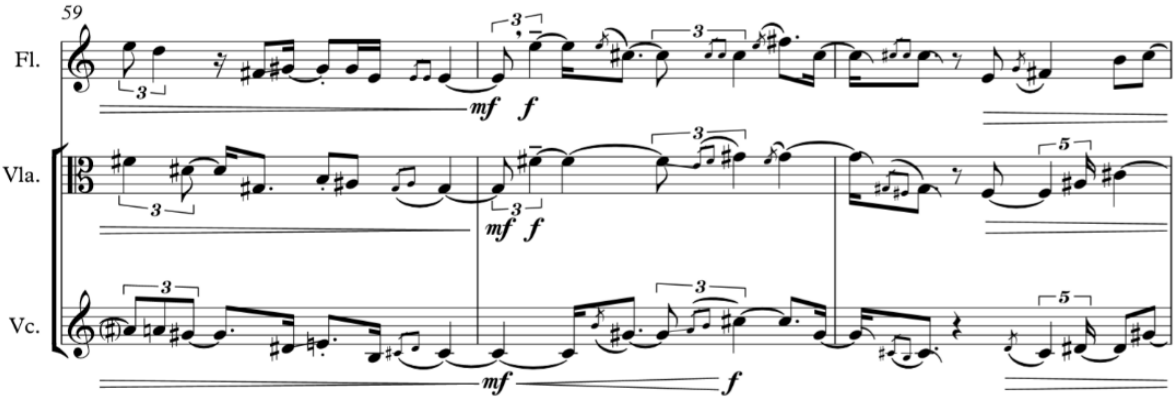
My transcriptions of bird calls used in *Machair*



An extract from my transcription of *O Cò Thogas Dhìom an Fhadachd*

the inimitable brightness of the air

Prompted by my interest in psalm singing, I often use heterophonic textures. In *the inimitable brightness of the air*, I use a variation of this idea. Instead of each instrument playing all of the notes of the melodic line in different rhythms, they play matching rhythms but only move on two out of every three notes, as well as being in different transpositions. In *Machair*, the presence of the Gaelic song melodic material was relatively obvious but I wanted, in future pieces, to find ways to embed it into my language more organically. I felt that such a texture succeeded in further embedding the melody. I also wanted to expand my use of extended techniques and interesting timbres.



the inimitable brightness of the air – bars 59-61, showing my variation on heterophonic textures

The piece was inspired by an R.L. Stevenson (1887/1895, p.128) quotation containing his impressions of what he felt was total wilderness on the island of Erraid. He describes the extraordinary 'seascape' with endless Atlantic skies, wind and the sea hitting all of the senses and strikingly bright air, free from pollution. He says "I steeped myself in open air and in past ages". This reminded me of many occasions of standing on west coast shores, including Erraid, particularly after being long in a city and looking out to the Atlantic, breathing in fresh sea air and feeling somehow exhilarated and renewed. He finds the landscape timeless, saying, "it was found so by incoming Celts, and seafaring Norsemen, and Columba's priests" which in a way is still true of Erraid. In such an environment it is almost possible, for a short moment, to forget the pollution and damage occurring elsewhere and the environmental threats which loom, even over the island.

In this piece, I contrast the feeling of the bright air of Erraid and the increasing pollution elsewhere. I turn the feeling of being hit with a rush of fresh sea air and breathing in deeply into a musical feature, creating a breath/wave cycle structure, comprising dynamic and textural swells, like the build-up and release of tension, on an inhale and exhale. I transcribed fragments from 'Mrs Buchanan' of Barra's 1938 recording of *Tha Mo Chridhe mar Chuantan*,

which I found particularly expressive. Referencing Erraid's soundscape, I also incorporated bird-like motifs derived from the song transcription, and the harmonic 'seagull' cello effect. Fragments of the song and bird-like material mostly appear at the high point of each cyclic swell, spilling forth at the height of tension. As the piece progresses, particularly from rehearsal figure E until the end, the length of the 'breaths' in each cycle decreases, like a person increasingly struggling to take in air until they are, eventually, gasping for breath. During this process, the tone quality also becomes weaker and more 'air-like'.

The piece contrasts bright and dark tone colours, signifying the bright and dark qualities of the pure and polluted air. Bright colours include harmonics, open strings, Bartók pizzicato, *sul ponticello*, non-vibrato, jet whistle and tongue pizzicato. Dark colours include *sul tasto*, playing in high positions on lower strings, scratch tones, molto vibrato, trills, air notes, singing whilst playing the flute and fluttertongue.

Section 6: Environmental guilt

The next two pieces relate to the previous section and also to section 2, displaying personal emotion having been prompted by nature, but in the following section, the specific feeling is environmental guilt.

Lichen

Lichen, for string quartet, also explores air pollution. Lichen is a very sensitive indicator of air pollution, only thriving in pure air, which is useful and important considering the current environmental situation. However, I feel it is often overlooked and we rarely closely examine the complex and intricate beauty of its construction. I live close to the Ariundle woods, one of the few remaining ancient Scottish oak woodlands and a true Celtic rainforest, with abundant lichen. Here, as on Erraid, environmental destruction appears a distant concept. This feeling reflects in Gavin Maxwell's (1968, p.67) sentiments about hermit life in wild nature, "one might be able to live at peace again, to recover a true vision long lost by now in the lives of other humans and in the strifes of far countries; here one might set back the clock and re-enter Eden". However, Nicolson (2017, p.25) finds in such escapism, in the nearby Arienas oakwoods, an "uncomfortable mismatch" where "the scale of what you see and feel around you is so different from what you might know of those crises, that any sense of urgency or even significance tends to melt away". In such ancient woodland with its beautiful lichen abundance "we know there is a crisis but we do not feel it on slow…afternoons in the Scottish Highlands.".

This piece also partly relates to personal guilt, regarding the moral position of retreating into escapist nature, for the purpose of healing and reconnecting, whilst momentarily overlooking the damage being inflicted elsewhere in the world, for which we are all collectively responsible. This personal guilt is perhaps partly why, in pieces such as Machair and the inimitable brightness of the air, portraying such escapist landscapes, I included an inescapable sense of threat.

As previously mentioned, I believe that much early Gaelic poetry and song show detailed understanding of, and respect for the environment, while, in much of the rest of Western civilization, nature or wilderness was actually feared and despised, until around the 19th century. This displeasure is evident in diverse sources from the Bible to Beowulf (Hunter, 1995/2014) including Roman poets like Lucretius, speaking of the Earth of which, "a greedy portion mountains occupy and forests of wild beasts" (n.d., cited in Nicolson, 1959, p.39). My thoughts on lichen reminded me of the detailed, yet un-romanticised, appreciative observation found in much Gaelic nature poetry, for example, in Duncan Ban MacIntyre's (1724-1812) Moladh Beinn Dobhrain (in praise of Ben Dorain) of which Hunter (1995/2014, p.2) says "no hill has been so meticulously, so scrupulously, so lovingly described" and of which Smout (1993, p.7) claims it was, "from roots like these that an indigenous Scottish and Highland green consciousness could be traced". In focusing attention on the often-overlooked lichen and its importance, I aim to continue this tradition of eco-conscious Gaelic culture. As Calum Johnston (1967) talked of how putting grace note embellishments on the notes would "clothe them in beautiful garments", perhaps one might think of lichen like an embellishing garment, as local 18th century poet, Alasdair Mac Mhaighstir Alasdair ('Òran an t-Samhraidh' 1751, cited in Thomson (ed. and trans.), 1993, pp.22-25), described in Ariundle:

"Each grove, close and secret,
Has its mantle of green,"

This is something I have brought to the piece, with many embellishments of grace notes.

Referencing eco-conscious Gaelic culture, I based the piece on different forms of Scottish traditional music. The four movements make very different use of a shared pitch series. *Moladh Beinn Dobhrain* is a poetic manifestation of *piobaireachd* structure, a traditional, highly formalised 'theme and variations' structure which reveals musical detail in a stark and un-romanticised way. *I. Lament for the Air*, inspired by *piobaireachd* introduces the pitch series as the *ùrlar* (theme) before material is gradually distorted and choked in the variations. *II.*

Symbiosis considers the composite structure of lichen, two organisms supporting and mutually benefitting each other. The four voices work together in a form of heterophony, sharing their pitch contour but adhering to their own rhythmic values, as the two organisms work independently, yet, in tandem. Waulking song was a form developed for communal work, where "songs were sung both to maintain rhythm and to lighten the load of what was in fact very hard work indeed" (Gillies, 2005, p.xxiv). This is evident in the heavily accented down beats, representing lichen's threats and giving solidity to a fragile texture imitating its intricate and delicate qualities. *III. Celtic Rainforest* considers the precious beauty of lichen-abundant forests. It comprises a psalm singing-like heterophonic texture including vocalisation, referencing human appreciation of such places. The final movement, recognising lichen's benefits to humans, draws on high-energy dance forms like the reel, whilst echoing material from previous sections and obsessing over delicate detail before reaching a catastrophically energetic ending, a reminder of the environmental truth lying beyond the woodlands' "mantle of green".

Heartwood

Heartwood also stemmed from experiencing guilt whilst escaping in nature. On one occasion, returning home from a city, I eagerly went running in nearby Fiunary Forest, to joyfully breathe in the restorative natural surroundings. Specifically, I breathed in the distinctive scent of coniferous trees, experiencing its nostalgic association with happy forest memories, giving a peaceful feeling of being grounded and 'at one' with nature. According to Tuan "Taste, smell, skin sensitivity... In combination with the "spatializing" faculties of sight and touch… greatly enrich our apprehension of the world's spatial and geometrical character."(Tuan, 1977, p.14) Perhaps this added sense enhanced my perception and the impact of the moment. However, I swiftly discovered the reason behind the scent's strength: a stack of felled timber. It was shocking to catch myself feeling a joyful bliss only to be stopped in my tracks, filled with personal guilt, seeing its price. This lead to further reflection on the 'nature' I joyfully 'get back to'. As in much of Scotland, where only 2% of countryside is native woodland, compared to 17% total woodland coverage (Warren, 2009), it is a mono-culture commercial forest of non-native Sitka spruce, arranged geometrically. Many patches of the forest have been felled, leaving a scarred landscape of tree stumps and debris. Despite the presence of wildflowers, butterflies and all manner of birds up to buzzards and even eagles, despite the need for timber to support

human life and despite the many benefits of locking carbon in a fast-growing species, this is not a natural forest and I remain conflicted.

The piece's first section relates to this confusing experience, beginning by happily reflecting the peaceful forest, largely by alluding to birdsong and also my own joyful exclamations with upward scooping gestures. Fragments then emerge of my transcription of *Craobh nan Ubhal* (The Apple Tree), as sung by Donald Joseph Mackinnon, from Barra in 1953. The bird-like material is also derived from an accelerated version of this transcription. I selected *Craobh nan Ubhal* because I found this recording deeply expressive, the singer passionately reaching ever higher for the melody's top note and thus gradually modulating the song upwards, by the span of a major third throughout the song. It also has an interesting human/ nature connection, the bard using the praise of his apple tree as a metaphor for praising his son. I include details from the recording, such as, loud, inhaling breaths before the start of some phrases and also highlight that the singer's listeners join him in singing some response lines, by doubling the clarinet with the voice. The use of Gaelic song, and acknowledging breathing, represents a peaceful human presence in the forest, along with, occurring throughout the piece, the gesture of a 'heartbeat' rhythm, manifest here as a staccato quaver followed immediately by another longer note, for example, in bar 82. The first section proceeds to break this peaceful image, introducing timbral decay with the 'growl' technique, fusing the melodic line with the birdsong material and distorting them both with glissandi, pitch alteration and stuttering rhythms. Abrupt gestures, anticipating pitch material from the second section, are introduced from bar 56 onwards. Thus, I represent the forest being destroyed and the truth of the 'natural' forest being revealed, leaving the human observer pained with guilt.

The second section alludes to ideas hypothesized by Peter Wohlleben (2017). He describes how trees communicate via scent, transmitting chemical signals into the air, alerting their neighbours to dangers or conditions preventing them from thriving, as well as transmitting chemical defences. As Wohlleben explains, many geometrically planted, non-native species are constantly threatened by alien, less than ideal surroundings, so they fail to thrive naturally and may frantically transmit chemical distress signals. Based on studies of human physical reactions to forest surroundings, with raised blood pressure occurring in, largely artificially planted, coniferous forests, he hypothesizes that we may be detecting these 'alarm' chemical signals. I represent these signals with slow, gently pulsing material, moving as if 'at the pace of a tree'. This pulsing accelerates and the tone becomes firmer, representing the signals spreading and humans' stress levels rising. Consequently, the 'heartbeat' gesture, present as a

triplet quaver followed by a triplet crotchet, increases in speed, becoming a semiquaver and dotted quaver and remaining thus until the end of the piece. The colour is inflected with the trees' painful cries: multiphonics on sustained notes. Panicked outbursts build into a nostalgic, pained melodic moment which, after an agonising highpoint, stutters and falls into the third section. This further acknowledges environmental guilt, considering that the instrument playing is made from the precious central heartwood of a tree, the African Blackwood, which has endangered species status. I replace the clarinet's normal tone with mechanical sounds like key clicks, and aggressive sounds like squeaks and 'growling'. *Craobh nan Ubhal* returns, this time gradually lowering in pitch instead of rising, reflecting the tree's decline. Mounting destruction ensues, until the end, with irregular metres and an increasing presence of squeaks and 'growling' in an overwhelming crescendo.

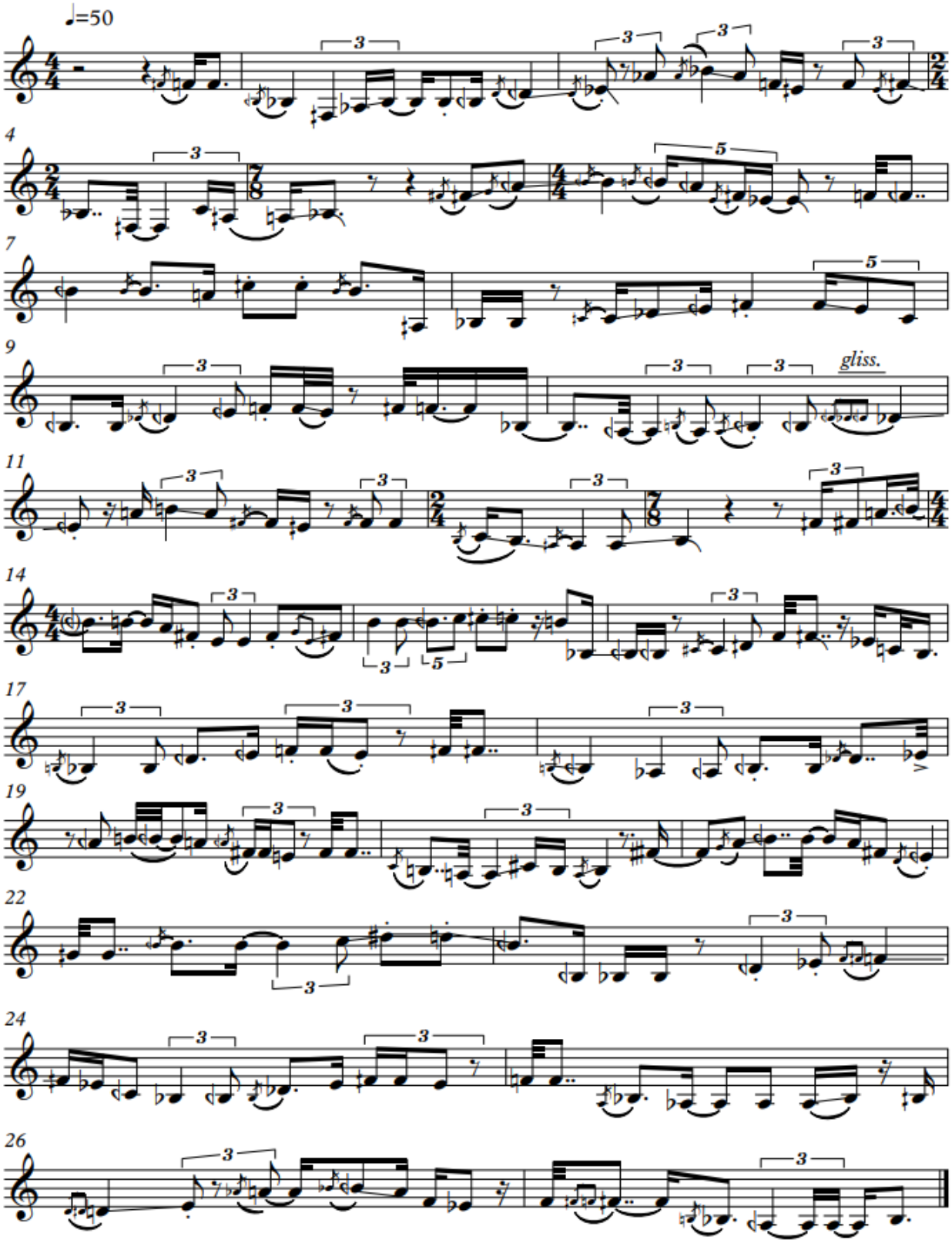
Section 7: Land Ownership

I inevitably wondered, with such destruction to both specific environments and the planet as a whole, how we can correct mistakes and halt further damage. If environmental guilt induces feelings of duty and responsibility, to whom does this responsibility belong? It seems the issue of ownership must largely determine who has agency over land usage and management. However, ownership is highly contentious in Scotland where half of the whole country is owned by 608 owners, 18 owners hold 10% of the country and 0.025% of the population owns 67% of the land (Warren, 2009). Such extreme land inequality must surely impact the relationships which the other 99.975% of us have with the land around us. However, despite blatant injustices, like the Highland Clearances, stemming from misaligned ownership percentages, I wonder if the inheritance of the aforementioned Gaelic cultural trait of eco-consciousness may override legal ownership in terms of feeling responsible for the land. This somewhat echoes the Sámi *understanding of 'borrowing' the land from the Earth. In rural Scotland, many stakeholders exist who are not technically the owners of the land. A line from Norman MacCaig's A Man in Assynt (1968/2018, pp.69-78) asks "who possesses this land, the millionaire who bought it or I who am possessed by it?". This idea is reflected in the fact that Gaelic has no word for 'ownership'. The nearest one can get to such a meaning is to say that the land is 'at me'. Perhaps, culturally, the notion of land ownership goes beyond the technicality of money and documents.*

I also considered the importance of the Access Rights of the Land Reform (Scotland) Act of 2003, known as Right to Roam, a legislation allowing public access to land which relies largely on co-operation, civic responsibility, mutual respect between landowners and land users and collective respect for the land. One could argue that it might be a risky strategy, certainly providing issues for owners in potential damage to property and curtailed freedom of control. However, in providing freedom for the aforementioned 99.975% to form connections and a respectful relationship with the land, it is surely a worthwhile compromise.

Right to Roam

Right to Roam, for clarinet, violoncello and piano, explores ideas regarding freedom in unity. The players are inherently 'together' but are also free to wander apart. Beginning in unison on a middle C, they gradually make attempts to diverge away from it, and from each other, in terms of pitch and timbre, but always return to 'check in' with each other. They explore fragments of a transcribed song, *Eilidh Chuain 's i Bha Luath,* as sung by Mull resident, John Robertson in 1953, which praises the adventures of a ship, selected to reflect the sense of freedom and adventure enabled on land by Right to Roam. Regarding musical freedom, I recalled the flexibility of plainchant. From rehearsal figure A, I considered notation which, like plainchant, consisted of straight notes, to be interpreted 'with freedom'. However, I felt that such openness and lack of clarity may actually be restricting to certain players, including those I was writing for. Instead, I selected a very rhythmically complex notation but stated 'with freedom' to indicate that the rhythm is a guideline, to be interpreted with a degree of flexibility, thus creating rhythmic complexity whilst retaining a sense of freedom and ease. From rehearsal figure B, the players are given rhythmic independence whilst all adhering to the same pitch material and articulation, another instance of freedom in unity. The texture at rehearsal figure D is like the quasi-heterophonic texture in *the inimitable brightness of the air.* Eventually, the voices unite, in a reverse of the opening material, reflecting the harmonious unity of civic co-operation.



My transcription of *Eilidh Chuain 's i Bha Luath*

Section 8: The cultural significance of land

The Wet Desert: a Collection of Highland Perspectives

Thus far, my research has demonstrated the multifaceted nature of attitudes towards landscapes, the priorities of different stakeholders, the heavily weighted inheritance of past attitudes and experience and the vital urgency of matters looking into the not too distant and all too foreboding environmental future. Although my examination of human/natural environment relationships has occasionally left the West Highlands, it has remained mainly rooted there, as, indeed, I have myself, so I draw my research together in a work touching on many of the previous sections' topics and focused on multifaceted attitudes towards Highland landscapes. My thought process in writing The Wet Desert: a Collection of Highland Perspectives began when reading Hunter's (1995/2014) On the Other Side of Sorrow which revealed to me the full extent of the unnatural, damaged and very much non-wilderness status of my precious home landscape, which Frank Fraser Darling even called, 'a wet desert', a land which, following centuries of human damage through bad management, deforestation and over-grazing, has become barren and unproductive, and is certainly not 'natural' or 'wild'.

At around this time, I was driving home and passing The Black Mount, near Rannoch Moor and the entrance to Glencoe, where I always notice the mass of tourists who congregate to take photographs and the opportunistic locals capitalising on this including a bagpiper and food stall ready, in situ. On this occasion, with thoughts in my mind of the broken, barren landscape which I would shortly encounter, just around the corner as I crossed the Highland border, I heard through the window a snippet of the bagpiper's 'tourist-friendly' tune which, warped by the doppler effect and embedded in the noise of engines, seemed broken and tainted, just like the surrounding landscape: a tourist-friendly landscape being photographed and admired as 'untouched wilderness'. I also felt personal environmental guilt, observing the scene from a car. The incongruity bordering on hypocrisy of the moment made me question the land, my understanding of it, its cultural significance and indeed, myself.

Following this encounter, I considered how different people react to the highly emotive landscape of the Highlands. Hunter (1995/2014, p.20) writes that "The way people feel about our Highland landscape, about our natural environment, depends very largely on the mental baggage, so to speak, that they haul around with them" and I imagined writing a piece addressing some of these different viewpoints, ways of seeing the same landscape through the different lenses of cultural experience, priorities and expectations. Regarding the first,

stereotypically 'tourist-friendly', 'Highland perspective', I tend to agree with Hunter who suggests that the romanticised image of the Highlands, which in a sense consequently became the cultural identity of Scotland as a whole, was shaped not by Highland inhabitants, nor indeed by the landscape itself, but, in fact, by the visiting 'Romantics'. Romanticism in Scotland occurred in the late eighteenth and the early nineteenth centuries as part of the wider European Romantic movement, in artistic, literary and intellectual spheres in which emotional, individual expression were adopted, rejecting the restraints of the Age of Enlightenment. Much of the art and literature of this movement portrayed the Highlands as a dramatic and wild landscape. One could argue that Scott, Wordsworth and Macpherson, among others, even instigated Scotland's tourist industry, creating a gloomy, brooding wonder from the bare hills they revered as 'wilderness'. Prior to this, another 'Highland perspective' had been shaped by pre-19th century Western civilisation's aforementioned fear of wilderness, perhaps epitomised in Samuel Johnson's (1755, p.1,129) dictionary definition of wilderness as "a desert; a tract of solitude and savageness".

However, at the same time, some perceived in this 'wild' landscape only its potential as a capital investment, evident in the most damaging and influential movement, culturally and environmentally, in Highland history of the last several centuries: the Highland Clearances. This perspective of dominance over the land and its people, often by 'outsider' absentee landlords, left emotional and environmental scars which cannot be erased from cultural memory. I grew up playing in derelict, cleared villages on a peninsula whose population, peaking at 2,137 in 1831, now totals c.320 and where the historical injustice remains in plain sight on the face of land as well as in local songs and stories.

Dominance from the outside over large swathes of land and inhabitants, may still exist today, not only through unbalanced ownership, but also regarding environmental policy, a tumultuously complex issue in the Highlands. Perhaps, considering the cultural memory of the Clearances, distrust from local inhabitants of policies imposed from the outside is almost inevitable. Between tackling climate change, conservation efforts, notions of rewilding, developing renewable energy and sustainable community development, among many other issues, there are innumerable possible outcomes and arguments which I cannot pretend to fully address in this piece. I merely hint that, perhaps, the Highlands should not be used as an empty dispensable tract of land for outsider experimentation regarding environmental conflict, but that the inhabitants themselves, who I believe are imbued with a love and deep knowledge of their local landscape, should be entrusted to care for it in a sensitive, effective and outward looking manner. McIntosh (2001/ 2005, p.170) says, "if humankind is to have any hope of

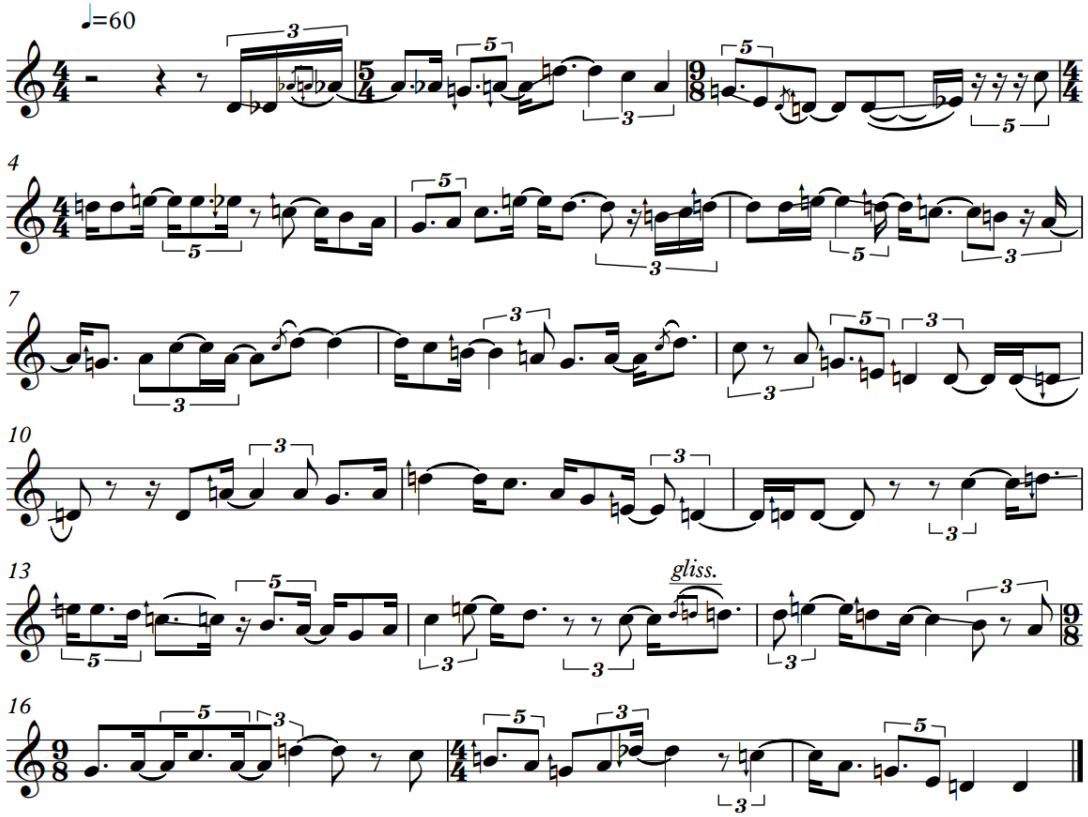
finding environmentally sustainable ways of life, we must rebuild community… giving responsibility for their own place, planning and enterprise back to the people who actually live in the area". I should also note that my speaking of 'inhabitants' does not demand indigeneity. I strongly agree with McIntosh that 'outsiders' can certainly become 'insiders': "restored natural ecology is to be complemented with restored social justice" including "incomers and refugees who have chosen to stay and who seriously wish to belong to a place".

I have mentioned how many of those forced to leave during the Clearances spoke of the draw of 'home' and deeply emotional connections with the land, evident in numerous emigrant songs, and also how I feel this draw deeply myself. I now questioned whether the Romantics'-imposed cultural definition of the Highlands had influenced my love of this landscape. However, I reflected that growing up fairly unaware of how extraordinarily unique the local landscape was, its romantic beauty was simply commonplace and did not define my love of it. However, I did know that it defined me: it was home. Perhaps it all amounts to just this, the draw of home, the sense of place and all the natural details of that landscape which, to me, is beautiful whether it is a wild wonder or not.

Wanting these complex and diverse ideas to be clearly understood by the listener, I felt the full 'meaning' of the music should be explained using text. I decided to include quotations, each one encapsulating a mode of thinking about the Highland landscape. Options regarding how to do this included projecting the quotations on a screen above the stage or including them in the programme note. However, I felt that reading these might distract the listener from the music. I then considered asking the musicians themselves to read out the quotations, and indeed the score retains this option as a performance alternative. However, my ideal scenario was to have the quotations pre-recorded and triggered during the performance, allowing full control of timing and balance. For the May 2019 premiere, I worked with an actor, who recorded the clips, so had some control over the timing, intonation and accent, which I felt was important, shaping the text's effect on the tone of the piece.

The initial material stemmed from my experience with the doppler-affected bagpiper. I transcribed Calum Currie's 1970 rendition of Mary MacPherson's *Eilean a' Cheò*, a song where the bardess wishes to return home, to Skye, and speaks of the suffering of the Clearances. These topics being so important to Highland culture, this transcription acts as a binding feature for the whole piece. The doppler-bagpipe motif, occurring between sections, consists of a fragment of this transcription, transposed gradually downwards in a glissando-like gesture. *Fàilte don Ghàidhealtachd* (Welcome to the Highlands), using a quotation from Robert Burns's

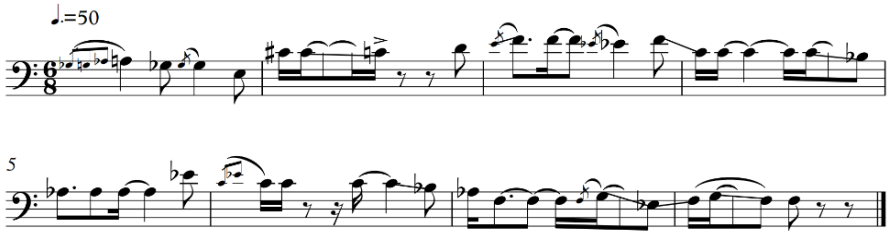
(1789/1993, p.156-7) famous *My Heart's in the Highlands,* portrays a positive, loving relationship with the landscape and includes fragments of *Eilean a' Cheò* and a raindrop-like, constant crotchet pulse in the piano following the melody's pitches. Then follows a more negative perspective of the same landscape, quoting Samuel Johnson (1775, cited in Hunter, 1995/2014, p.122). Here, *Eilean a' Cheò* acts as a blueprint and this same material is manifest mainly as extended techniques, along with remnants of the raindrop-like material. This texture represents viewing the landscape as a barren 'desert', being without firm tone or pitch.



My transcription of *Eilean a' Cheò*

II. The Highland Clearances: The Flitting depicts the fanciful perspective of landowners prior to the Clearances, quoting Elizabeth, Countess of Sutherland (n.d., cited in Prebble 1963/69, p.62). The similarly fanciful music includes the flute and violin following the pitch material of *Eilean a' Cheò* and scalic material in the piano. The clarinet mimics the call of the iconic osprey while the cello 'appropriates' a typical Scottish musical gesture, the scotch snap and exaggerates it grotesquely, a nod to the cultural appropriation of 'the Romantics'. The cello then plays my transcription of Sandy Cameron from Drimnin's 1967 rendition of '*S e Fàth Mo Dhuilichinn a Bhith a' Sealltainn Air Do Mhullaichean*, a heart-breaking song about the Clearances and landlords in my home peninsula, Morvern. From rehearsal figure E, viewing the Clearances from the evictee perspective, I share a quotation from Mary Cameron (n.d., cited in

Macleod, 1887, p.394) from Aoineadh Mòr, a settlement in Morvern, cleared in 1824, punctuated with a bass drum 'heartbeat', vocalisations, and eventually the cello rendition of the '*S e Fàth Mo Dhuilichinn a Bhith a' Sealltainn Air Do Mhullaichean* transcription. As the music becomes wilder and more desperate, the bass drum's 'heartbeat' becomes more irregular, reflecting the evictees' pained desperation.



My transcription of '*S e Fàth Mo Dhuilichinn a Bhith a' Sealltainn Air Do Mhullaichean*

III. Wilderness? considers whether the land is truly wild or unnaturally damaged and barren, viewing it firstly from the perspective of the Romantic, Walter Scott (1810, p.10), returning to fanciful material, similar to that of rehearsal figure D. Eventually the timbre disintegrates, leading into a section of 'desert music' similar to rehearsal figure B, reflecting the view of the land as a barren desert, quoting Stevenson (1886/1989, p.141), but this time with greater pitch variation, reflecting on the birds, animals and humans still living in this desert, as the quotation goes on to mention.

IV. Rewilding <> Repeopling considers controversial conservation projects in the Highlands, such as, rewilding and the reintroduction of certain apex predators. Consequently, I drew the material from a recording of wolves (Heart of the Wilderness, 2013) in which I found a human-like sorrow or mournfulness, signifying that, as creatures like wolves were driven from the area, people were also. Some advocate re-introducing humans alongside potential rewilding, growing Highland communities in order to regain natural balance, with people caring for the environment at a local level. Hunter (1995/2014, p.207) says "there is one species which environmentalists seem curiously reluctant to have re-established in the numerous Highland localities from which the species was expelled in the course of the nineteenth century. The species in question is man". I return to material from '*S e Fàth Mo Dhuilichinn a Bhith a' Sealltainn Air Do Mhullaichean* to highlight inhabitants' fears of once again being cleared from the land, this time by 'outsider' environmental policies. The piece ends, returning to the opening material and to the idea of home, with positive-sounding fragments of *Eilean a' Cheò* and raindrop-like piano notes, evoking a loving and caring relationship with the land. This

fades into psalm-singing inspired heterophonic vocalisation, selected to portray people with differing interpretations of the same landscape existing peacefully together and with it.

Conclusion

We humans, during our borrowed time in whichever particular landscape we find ourselves placed in, form numerous different kinds of subjective relationships with it. Many such relationships are almost impossible to define. As music is the best means by which I can process ideas and think creatively, I have used it as a way of addressing these issues for myself and of trying to better understand how I, and others, perceive them. Regarding the Highlands, I have come to believe that, amid contemporary discussions about combating the environmental crisis by remodelling our society on various global indigenous cultures' eco-conscious worldviews and lifestyles, (such as the Sámi people's), we should, perhaps, first consider the benefits of reclaiming our own indigenous culture, the eco-conscious Gaelic culture. Perhaps learning how people lived sustainably and symbiotically with our own land and place in the past could help us to shape a healthier relationship with it going forwards.

I now view much of my work as a manifestation of the Gaelic term *dùthchas*, an expanded, place-based way of knowing "offering an insight into Gaelic cultural identity; this is an instinctive trait denoting the individual's sense of belonging to a home place… embracing landscape, a sense of geography, a sense of history and a formal order of experience in which all these are merged" (Cheape, 2021, p.68). The importance, in times of environmental crisis, of focusing on the local environment in relation to humans, past and present, has been, perhaps, the greatest realisation of my journey. I can now feel the significance of addressing global environmental issues through a local lens. By examining the specific, local environment in great detail I believe it can act as a case study for these wider issues. Moving forward I would like to address the place of humans in my local environment today, considering community empowerment and agency over the local environment as a key method of restoring social justice in tandem with environmental justice. My greater understanding of Gaelic language, of specific environmental topics and of traditional music, partly developed though practice of working with the material for this submission, are aspects which will greatly shape my future work and development.

My concluding thoughts return to the knowledge that was instilled in me by my upbringing in this very place; the need to love and also respect the land which shapes us, nurtures us and

has ultimate control over our lives. While some may wish to interfere, to seek dominance or to claim ownership of it for a time, to close I return to MacCaig (1968/2018 'A Man in Assynt' pp.69-78):

False question, for
this landscape is
masterless
and intractable in any terms
that are human.

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Eilidh Chuain 's i Bha Luath - performed by John Robertson in 1953
O Cò Thogas Dhìom an Fhadachd – performed by Catherine Margaret Morrison in 1958
Pilliù Pilliliililleòghain - performed by Calum Johnston in 1965
'S e Fàth Mo Dhuilichinn a Bhith a' Sealltainn Air Do Mhullaichean – Performed by Sandy Cameron in 1967
Tha Mo Chridhe mar Chuantan – performed by 'Mrs Buchanan' in 1938
Tog orm mo phiob - performed by Alexander MacRae in 1952