

A PORTFOLIO OF ELECTROACOUSTIC COMPOSITIONS:
BLURRING THE LINES BETWEEN FIELD RECORDING, SOUNDSCAPE
COMPOSITION AND ACOUSMATIC MUSIC

by

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ABSTRACT

A portfolio of electroacoustic compositions that draw on environmental field recordings from around the world composed for stereophonic and multichannel formats. This includes nine concert works and four installation works, three of which are collaborative projects.

Particular focus is given to the relationship between field recordings and the genres of pure field recording composition, soundscape composition and acousmatic composition.

The accompanying commentary discusses the compositional processes and workflow behind the works and the fundamental aesthetic concerns that each composition addresses. It is informed by current research in the field as acquired through interviews with seven artists working in the field: Leah Barclay, Jonty Harrison, Francisco López, Brona Martin, Claude Schryer, Chris Watson and Hildegard Westerkamp.

This practice-led research project investigates the use of field recordings in my practice and reflects upon how this relates to practitioners and research in the field.

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3 Limpopo	Limpopo_8ch.wav	Limpopo_2ch.wav Limpopo_binaural.wav
4 Mmabolela	Mmabolela_16ch.wav	Mmabolela_2ch.wav Mmabolela_binaural.wav
5 Orford Ness	Orford_Ness_8ch.wav	Orford_Ness_2ch.wav Orford_Ness_binaural.wav
6 Orford Ness II	Orford_Ness_ii_16ch.wav	Orford_Ness_ii_2ch.wav Orford_Ness_ii_binaural.wav
7 Further Afield	Further_Afield_8ch.wav	Further_Afield_2ch.wav Further_Afield_binaural.wav
8 Mother and Child	Mother_and_Child_2ch.wav	
9 Ancestor I	1_Torso_2ch.wav 2_Legs_2ch.wav	
10 Bird Calls of Sub-Saharan Africa	Bird_Calls_2ch.wav	
11 Aulus Les Bains	1_Aulus_stereo_loudspeakers.mp4 2_Aulus_surface_transducer.mp4	
12 Soundings Surfaces Holders Wood	Sounding_Surfaces_Holders_Wood_2ch_excerpt.wav	
13 Sounding Surfaces Stirchley	Sounding_Surfaces_Stirchley_2ch.wav	
14 Audio Appendix - DLR Lexicon Recording	DLR_Lexicon_Cox_Sheth.wav	
14 Audio Appendix - Video Documentation	Aulus_Les_Bains.mp4 Sounding_Surfaces_Holders_Wood.mp4 Sounding_Surfaces_Stirchley.mp4	

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This doctoral research project consists of a portfolio of electroacoustic compositions and a supporting written commentary. The portfolio of compositions includes nine multichannel concert works and four installation works, three of which are collaborative projects. The accompanying commentary discusses fundamental aesthetic concerns and workflow methodologies behind the works and proceeds thematically. It is informed by current research in the field and a series of interviews taken with practitioners working in the field.

This practice-led research project explores the use of field recordings within electroacoustic composition, with particular focus given to the areas of field recording, soundscape composition and acousmatic music. The area of acoustic ecology is also briefly discussed but has not been explored in depth due to it only partially aligning with my practice and due to the brevity of this written commentary.

There has been a recent rise in interest of environmental sound: soundscapes, soundwalking, sound maps and the practice of listening are becoming more mainstream. Articles on soundwalking and sound maps have been published in *The Guardian* (Parkes, 2020 and Morss, 2020) and *The Independent* (Welsh, 2020) and '*A DIY Guide for Digital Sound Walking*' was published on the website Walk Listen Create

(Vermeire, 2021). Soundscape listening sessions are being featured on BBC Radio, for example ‘*Soundscapes with Stephen McCauley*’ (BBC Radio Ulster, 2015), ‘*Between the Ears*’ (BBC Radio 3, 2008) and ‘*Soundscapes for Wellbeing*’ (BBC, 2021). Sound is being used widely in many practices, blurring the conventional boundaries between practices and genre. With my work lying between boundaries, it is important to actively consider these boundaries during the creative process.

The research aims at the core of this project are:

- to investigate the role of field recordings within genres of field recording, soundscape composition and acousmatic music through practice-led research
- to evaluate how artists working in the field use field recordings in their own work
- to identify where my practice lies within the wider field

As a part of this research project, I conducted interviews with seven artists working in the field: Leah Barclay (sound artist, composer and acoustic ecologist), Jonty Harrison (electroacoustic composer), Francisco López (experimental musician and sound artist), Brona Martin (soundscape composer and sound artist), Claude Schryer (sound artist), Chris Watson (composer and sound recordist) and Hildegard Westerkamp (composer and sound ecologist). Findings are evaluated throughout the main body of text and full interview transcripts can be found in Appendix 1.

The terminology used in this portfolio of works derives from a range of texts in the fields of field recording, acoustic ecology, soundscape composition and acousmatic music. Key texts to inform this work include: texts on field recording and sound art by Frederick Bianchi & V.J. Manzo (2016), Cathy Lane & Angus Carlyle (2011), Francisco López (1998, 2004) and Salomé Voegelin (2014); texts on sound and ecology by Bernie Krause (1993, 2013); texts on soundscape composition by Barry Truax (1994, 1996, 2001, 2006, 2008, 2012, 2019) and Hildegard Westerkamp (1999, 2002, 2005); and texts on acousmatic music by James Andean (2014, 2016), Francis Dhomont (1995), Jonty Harrison (1999, 2016), Pierre Schaeffer (2017) and Denis Smalley (1997).

1.2 Definitions

1.2.1 Field Recording

The term field recording can refer to both the act of field recording, i.e., ‘any sound recording created away from the studio in a specific space or sonic environment’ (EARS, 2007) or as a practice in its own right. It is integral to soundscape composition, analysis and design and has become an increasingly wide-spread practice that forms the foundation for much environmental sound art (Gilmurray, 2016).

Within the context of electroacoustic composition, field recording or phonography (as it is sometimes known) is on a basic level ‘pure [or] straight natural sound environments [that] have not been modified or subjected to any process of further mixing or additions’ (López, 1998).

The World Soundscape Project (WSP) offers a similar description, with field recording or “found compositions” (Truax, 1996) being ‘the simple exercise of “framing” environmental sound by taking it out of context... and directing the listener's attention to it in a publication or public presentation... the compositional technique involved was minimal, involving only selection, transparent editing, and unobtrusive cross-fading’ (Truax, 1996). This definition stems from the work of the WSP in the late 1960s with the purpose of the documentation and archival of soundscapes through the art of field recording being to ‘promote an increased awareness of environmental sound through listening and critical thinking’ (Truax, 1996).

Today, field recording is employed in a huge range of practices, due in part to the increased affordability and availability of recording equipment. A range of practitioners regard themselves as field recordists no matter the outcome.

1.2.2 Soundscape Composition

'All sounds can become part of a soundscape composition. Can a piece be called a soundscape composition just because it uses environmental sounds as its source material?'

(Westerkamp, 1999)

Historically, the term soundscape composition evolved from the work of the WSP in the late 1960s and early 1970s. Members of the WSP, such as Hildegard Westerkamp, began to transform sounds using electroacoustic techniques and environmental sound moved away from the documentation and archival of soundscapes into the world of soundscape composition. The key features of a soundscape composition are the use of environmental sounds and contexts combined with degrees of transformations, meaning that often sounds are abstract, and that the original soundscape can be re-composed. Westerkamp highlights 'the essence of soundscape composition [as] the artistic, sonic transmission of meanings about place, time, environments and listening perception' (Westerkamp, 1999).

The foundational definition of soundscape composition, given by Barry Truax, is ‘a form of electroacoustic music... characterized by the presence of recognizable environmental sounds and contexts, the purpose being to invoke the listener's associations, memories, and imagination related to the soundscape... the intent is always to reveal a deeper level of signification inherent within the sound and to invoke the listener's semantic associations without obliterating the sound's recognizability’ (Truax, 2006).

Truax’s principles of soundscape composition are as follows:

- ‘Listener recognizability of the source material is maintained
- Listener's knowledge of the environmental and psychological context is invoked
- Composer's knowledge of the environmental and psychological context influences the shape of the composition at every level
- The work enhances our understanding of the world and its influence carries over into everyday perceptual habits’

(Truax, 1994)

It is important to note that the soundscape composition can result in musical compositions ‘that range from those whose sounds are transparently manipulated to those that are much more transformed’ (Truax, 2008). In other words, there is no set level of abstraction for a soundscape composition. Whatever the proportion is between unprocessed and processed sounds, ‘the essence of soundscape composition lies in the relationship between the two and how this relationship inside the composition informs

both composer and listener about place, time and situation. A piece cannot be called a soundscape composition if it uses environmental sound as material for abstract sound explorations only, without any reference to the sonic environment' (Westerkamp 1999).

1.2.3 Acousmatic Music

'Acousmatic' is a term coined by François Bayle in the 1970s derived from *Musique Concrète* and the work of Pierre Schaeffer. It is a sub-genre of electroacoustic composition and refers to the act of hearing without seeing, allowing us to concentrate on the music itself with no visual distractions (Dhomont, 1995) and the creation of sounds that are freed from their sources and causes (Andean, 2014). Dhomont explains that sounds are selected without prejudice and that all sounds are treated of equal value regardless of their origin (Dhomont, 1995).

The definition of acousmatic in the Larousse dictionary is 'a noise that is heard without the causes from which it comes being seen' (Schaeffer, 2017).

Further to this definition, Jonty Harrison provides readers with characteristics or

'conditions for acousmatic music':

- 'heard over loudspeakers
- displays an acousmatic intent (not merely a substitute for another listening mode)
- composed on and exists on a fixed medium

- the physical source (if any) of the sounds is not actually present at the time of listening
- the source, nature or cause of the sound may be unknown or unknowable
- the compositional criteria *extend beyond* what is normally considered “musical”; these criteria may be spectromorphological, referential/anecdotal, or both’

(Harrison, 1999)

1.3 A New Continuum of Sound

In Barry Truax’s 2008 article in *Organised Sound*, he suggests a continuum of soundscape composition with two sides. The first being the “found soundscape” or phonography, ‘recorded soundscapes with minimal or no alteration that can be listened to as if they were music, in the sense of an organised sound structure with differing levels of meaning’ (Truax, 2008). The other side describes the abstracted soundscape ‘which incorporates sonic elements that have been abstracted to varying extents from their original source’ (Truax, 2008). In 2012, he develops this idea and suggests a continuum for soundscape composition that stretches from sonification, to phonography and virtual soundscapes (Truax, 2012).

For the purpose of my research, I refer to the following continuum based upon the treatment of field recordings in music with the arrow figures representing increasing degrees of abstraction of sounds:



Figure 1: *A New Continuum of Sound*

1.4 Artist Approaches to the use of Field Recordings within Composition

1.4.1 Interviews Introduction

A series of interviews taken with practitioners in the field informs this commentary. This includes discussions on aesthetic concerns, workflow, terminology, genre and specific compositional works. These interviews provide critical discussion and reflection on varying approaches to the use of field recordings within composition and will help in the attempt to place my own work.

Interviews took place with Leah Barclay (sound artist, composer and acoustic ecologist), Jonty Harrison (electroacoustic composer), Francisco López (experimental musician and sound artist), Brona Martin (soundscape composer and sound artist), Claude Schryer (sound artist), Chris Watson (composer and sound recordist) and Hildegard Westerkamp (composer and sound ecologist).

Full transcripts of interviews can be found in Appendix 1.

1.4.2 Interview Groupings

In order to evaluate where each practitioner lies in the wider field, I have grouped the interviews according to my initial continuum of sound (Figure 1). Having interviewed acoustic ecologist and sound artist Leah Barclay, this has been expanded to include the genre of acoustic ecology; the study of the inter-relationship between sound, nature and society. It is important to note that many of these artists push the boundaries between

genres or change how they define their work according to their audience. But for the purposes of my research, I have simplified this and based this on the compositional works discussed and on my continuum of sound.



Figure 2: Interview Groupings

CHAPTER 2: AESTHETICS AND DISCUSSION

2.1 Introduction

This chapter discusses the fundamental aesthetic concerns for the works included in this portfolio (Section 2.2) and a discussion on the divide between soundscape composition and acousmatic music using the piece *Going / Places* by Jonty Harrison as a case study (Section 2.3).

2.2 Aesthetics

2.2.1 Site-specificity

Integral to this research project is the idea of site-specificity. ‘Referring to a work of art designed specifically for a particular location [or] that has an interrelationship with the location’ (Tate, 2017b).

For the purpose of this portfolio, this can be defined further by:

- 1) the recording location (the intervention and inter-relationship between the artist and location and acknowledgement of the recording location)
- 2) the performance space (with works being designed for a specific performance space or location in mind).

It is also important to note the following five relations that can be made between a site-specific artwork and the space, as suggested by Maes and Leman:

- 1) 'The work has no connections with the location.
- 2) The work is based on historic, functional or social characteristics of a place.
- 3) The work is based on architectural characteristics of a place.
- 4) The work is based on environmental characteristics of a place.
- 5) The work is based on the existing sound environment.'

(Maes and Leman, 2016)

All the works acknowledge the recording location and are rooted in location. There is a restricted use of recordings (meaning that recordings from different locations would not be combined) in all works apart from those that use recordings from Mmabolela Estates.

Interestingly, Brona Martin also restricts herself to using recordings from one place in a piece. There are three main reasons Martin treats her recordings in this way:

- 1) 'All of her soundscape compositions are site or place specific,
- 2) She is trying to explore this place as much as possible, analysing recordings, looking at the hidden sounds and for things that may have been missed when listening in person,
- 3) She feels a responsibility and emotional attachment towards these sounds.'

(Martin, 2018)

In contrast, Harrison's use of field recordings in his practice allows for recordings taken in different locations to be combined, as seen in the piece *Going / Places*. His aim was to create an artificial scene of a place and arrange the field recording in terms of their characteristics (see Section 2.2.7). This approach of combining recordings can also be seen in my pieces *Paddabolela*, *Limpopo*, *Mmabolela* and *Bird Calls of Sub-Saharan Africa*. In these works, recordings from different areas of the 6500-hectare game reserve have been combined with each area having different sound environments and existing in their own right. These works are examples of pieces based on the existing sound environment and environmental characteristics of a place (site-specific relationships suggested by Maes and Leman).

The concert works included in this portfolio have been composed to be performed on multichannel loudspeakers layouts, so the performance space is an important consideration. The stereo works are easily transportable, but the multichannel works are more problematic having been composed for either 8 or 16 channels and thus requiring these forces for performance (see Chapter 3). The performance space also contributes to the way the work is experienced. The works are not only dependent on multichannel loudspeaker arrays but will be experienced differently dependent on the qualities of the performance space. For example, the size of the performance space and distribution of sound (architectural characteristics), the context of the performance and performance space ambiances such as the rain or other audible features. The listener's personal life experience also contributes to the way works are perceived and this is discussed further in Section 2.2.11.

Additionally, the two concert works that have been composed in response to an artwork both make most sense when listened to alongside an image of the work. *Mother and Child* is a soundscape based on the scene depicted in the painting through the use of source-bonded sounds, ‘the *natural* tendency to relate sounds to supposed sources and causes, and to relate sounds to each other because they appear to have shared or associated origins’ (Smalley, 1997). *Ancestor I* responds to the installation space on site, uses on location recordings and is based on the physical characteristics and history of the sculpture. This project is site-specific (made specifically for a site) and site-responsive (made in response and to encounter with a site).

When considering the installation works, it is evident that all the works respond to either the recording location, the performance space, or both. *Bird Calls of Sub-Saharan Africa* responds to the images in the Cassiano dal Pozzo exhibition but has also been composed for a specific event in a gallery setting. *Aulus-Les-Bains* is a site-specific installation created in response to the location. It re-contextualises physical elements of the landscape into a gallery setting and uses live elements such as hydrophones and the sound of the rain on the window to enhance the experience. The visual element of the installation links to the site further and the installation would be experienced very differently if it were to be installed in a different location. Lastly, the two iterations of the *Sounding Surfaces* installation respond with sounds recorded on location that have been re-contextualised in a gallery and art trail setting to draw attention to hidden or inaudible sounds of the immediate surrounding environment. These installation works respond to Maes and Leman’s idea of work being based on social and architectural

characteristics of a place and have considered the existing sound environment of a place in their composition (Maes and Leman, 2016).

2.2.2 The Microphone as a Listening Device

Watson identifies ‘the most important part of [his] compositional practice [being] where [he] put[s] the microphone before start[ing] recording’ (Watson, 2018). This point is emphasised by Hildegard Westerkamp, ‘the actual recorded materials are of course important, but the listening experiences while recording and while going about one's life are just as important and do always figure into the compositional process in some way’ (Westerkamp, 2002). López agrees, stating that ‘the compositional outcome or aim of a work will often be determined from a first-hand experience of listening’ (López, 2017). This concept that listening in the field is often the first step of the composition process is one that is relevant to all pieces included in this portfolio of works (although less so for works that stem from sculpture or painting).

Not only can the process of listening inform the direction of work, but when listening via a microphone a new sound world is exposed. This is due to the amplification of sounds, the act of dedicated listening or the use of microphones that capture sounds that are normally inaudible. As Westerkamp states, ‘the microphone alters listening... It creates an occasion and new significance of a place. Sometimes the microphone can also mean new access to the environment’ (Westerkamp 2002). The use of microphones such as hydrophones, contact microphones, VHF (very high frequency) microphones

and bat monitors all allow the listener to hear sounds that are outside of the normal hearing range.

Salomé Voegelin suggests that inaudible sounds can be used to add to the repertoire of listening and enhance our understanding of where and how we live (Voegelin, 2014). The inaudible changes the way we see and hear, expanding the soundscape and possibilities of sound beyond the imagination of what was previously inaccessible. This opens up a world of ‘new sound universes that were previously undetectable’ (Polli, 2016) with the use of new recording technologies. ‘It is the artists’ job to open the possibility of the impossible’ (Voegelin, 2014). This is a view shared by López, who explained in his interview that the act of sound recording is ‘a tool, that along with listening, provides a particularly special and unique access to a sonic substance... I think recording helps to dig into sonic reality in a way that is not possible only with listening’ (López, 2017).

Both works created using recordings from Orford Ness explore the hidden or inaudible sounds of the environment through the use of a microphone.

The first set of recordings was taken on a three-day field recording trip to Orford Ness Nature Reserve in July 2016. The experience of hearing through hydrophones and contact microphones for the first time during this trip opened my ears to a hidden world of possibilities and this inspired me to create a piece using recordings that explore these hidden sounds. The experience of listening in the field alongside Chris Watson and Jez

Riley French was just as important as the recordings themselves as it allowed me to gain an insight into the composers' recording techniques and methodologies in the field.



Figure 3: Recording using Hydrophones, Orford Ness

The first work, *Orford Ness*, uses sound materials that have been completely abstracted and lose any recognisability to the source recording. Through the transformation of sounds, natural pitch and rhythm were discovered hidden in the recordings. This is most evident in the second section of the piece, from 01:50 to 04:00 where there is a clear separation in space and frequency between high-pitched ethereal sounds and a low-pitched repeating motif.

When composing this work, I aimed to create something that was interesting and engaging and that used a combination of natural field recordings and processed sounds in an organic way. The sounds in this piece slowly transform into more abstract places, following the natural structure and evolution of the sound materials. This reflects the compositional process as I allowed ideas to come naturally and intuitively and took my time processing and abstracting the sounds in order to explore the hidden intrinsic qualities of the sounds that are usually inaudible to the human ear.

In 2019, I visited Orford Ness again to record sound environments for the piece *Orford Ness II*. Although sounds of the inaudible are again used in this piece, for example a contact microphone recording on coiled wire fencing (heard from 05:30 onwards), the use of open-air recordings highlights the fact that nature is slowly taking over and engulfing the man-made elements on site.

2.2.3 Pure Approaches to Working with Field Recordings

Within this portfolio of compositions, there are three works that use a “pure” (see definition in Section 1.2.1) approach to working with field recordings: *Saudade*, *Aulus-Les-Bains* and *Bird Calls of Sub-Saharan Africa*. The techniques used to compose these works do not extend further than those suggested by the WSP in the initial definition for the term ‘field recording’ listed in Section 1.2.1.

All three works create a picture of a place, using a set of minimally transformed field recordings, creating a “pure” soundscape. The choice to use these field recordings

unaltered was in part to explore to what extent sounds can be pushed before they become processed sounds, but also to use found sound to represent the real-world context in which they were recorded and to create a clear sense of place.

Whilst the recordings have not been subjected to any transformation processes other than transparent editing, filtering, reverb and cross-fading of sounds, I have created my own version of reality through my intervention as a composer when editing, shaping and sculpting the sounds. López highlights this in his 2004 article, stating ‘even if we don’t subtract or add anything to the recording, we cannot avoid imposing on it our version of what we consider to be reality... The carefully recorded, selected, and edited sound environments that we are able to comfortably enjoy in our favourite armchairs offer an enhanced listening experience. One that we would not have if we were hearing those sounds in the “real” world’ (López, 2004). The reproduction of these natural sounds, even when unedited, recontextualises the sounds through the recording process and composer’s intervention.

When evaluating the use of pure field recordings in my work, I feel that a clear image of a place has been created for all three of the works discussed. Aesthetically, I feel that the use of pure field recordings was more successful in the installation works *Bird Calls of Sub-Saharan Africa* (Section 3.4.1) and *Aulus-Les-Bains* (Section 3.4.2) which were contextualised further by visual elements.

I feel that the use of pure field recordings in *Saudade* was less successful and convincing. As a composer, my instinct is to sculpt and structure the sound materials in an abstract way in order to create a deeper level of engagement with the sound materials and with the piece, rather than adhering to the limitations on the transformation processes suggested by López and Truax for pure field recording. The sounds maintain their context and recognisability, create a clear sense of place (clarified by the Portuguese title of the piece, '*Saudade*'), but as a composer, my interest lies in the exploration of the intrinsic qualities of a sound, rather than a phonographic approach of sound documentation and representation.

The composition of a work that adheres to this definition was valuable in understanding my own aesthetic and having composed this piece towards the start of my research project, it pushed me towards working more creatively with sound, even if the sounds remain unprocessed. If I were to re-visit the work, I feel that I would now have the tools and knowledge to make a much more convincing structure and narrative. The reason for not amending the piece was so that I could reflect upon the original work and consider my development over the research project.

2.2.4 Hyper-reality

This idea of creating an alternative sonic reality through creation of the pseudo-real (ambiguity between the real and the unreal) or a hyper-reality is suggested by both López and Harrison in their interviews (López, 2017 and Harrison, 2018).

López suggests that the first transformational step of composition is the process of field recording and the use of microphones (Section 2.2.2). ‘Different microphones “hear” so differently that they can be considered as a first transformational step with more dramatic consequences than, for example, a further re-equalization of the recordings in the studio’ (López 1998). Through these recording techniques, he proposes that a “reality” could have never actually been reproduced; ‘rather, a hyper-reality is being constructed... it is not a version but a different entity with its own inherent value’ (López, 2004), suggesting that a hyper-reality is an illusion of a place or a constructed virtual world.

The idea of the pseudo-real is developed further when López discusses the aesthetic choices behind his pieces *Untitled #343* and *Untitled #350*, ‘sometimes I play with the pseudo-real, things that to the ears of somebody that doesn't know the creature, or the environment will sound natural, but it's not... [creating an] illusion of the things you think you recognise’ (López 2017). Both of these sound works by López were composed using recordings taken during the Sonic Mmabolela residency and as a result of these discussions surrounding the ideas of the pseudo-real and hyper-reality, I was influenced to take a similar approach to my pieces *Paddabolela* and *Limpopo*.

Paddabolela explores alternative sonic realities of the recordings taken during the residency in the form of a composed soundscape. Aligning with López's idea of the pseudo-real, natural sonic qualities of the recordings were abstracted to create ambiguity between the real and the unreal and take the listener on a journey through a composed soundscape. There is an interplay between the realistic soundscape and something more dark, mysterious and unknown, reflecting my own experience of being in this new, unknown and sometimes dangerous place.

An example of this interplay between the real and unreal in *Paddabolela* can be heard at the very start of the piece with a recording of frogs in the plunge pool at Weederdooper House. The recording has been processed with a low pass filter, eliminating all frequencies above 4600 Hz (Figure 4). From 00:00 to 01:01 the highest dynamic/output gain point of the filter moves from 700 Hz to 4200 Hz (Figure 5), drawing out the mid frequency range and creating a filter sweep. At 01:01 the filter changes from a low pass filter to a high pass filter at 4600 Hz cutting off all the low and mid-range sounds (Figure 6). This creates the illusion of two different listening spaces, when in fact this material all came from the same recording. As the filter sweep progresses, the sound moves from the front of the image to encompassing the space using all eight speakers to increase the intensity of sound.

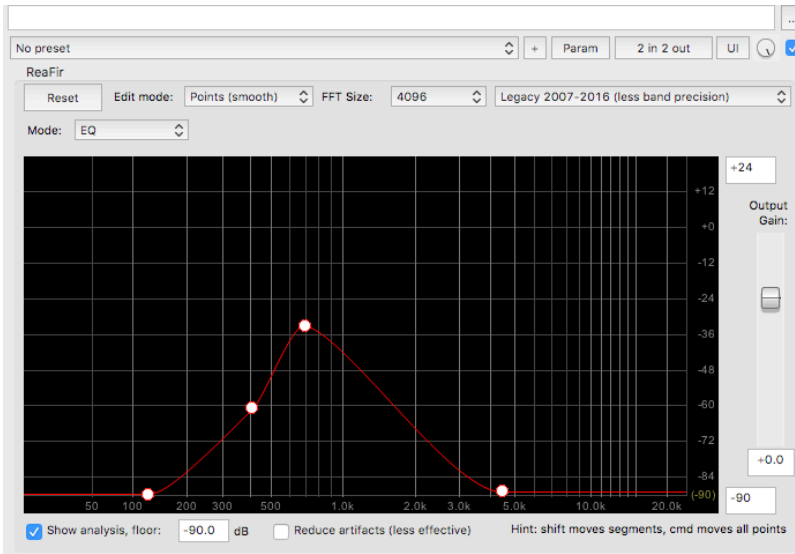


Figure 4: Paddabolela Filter Position at 00:00

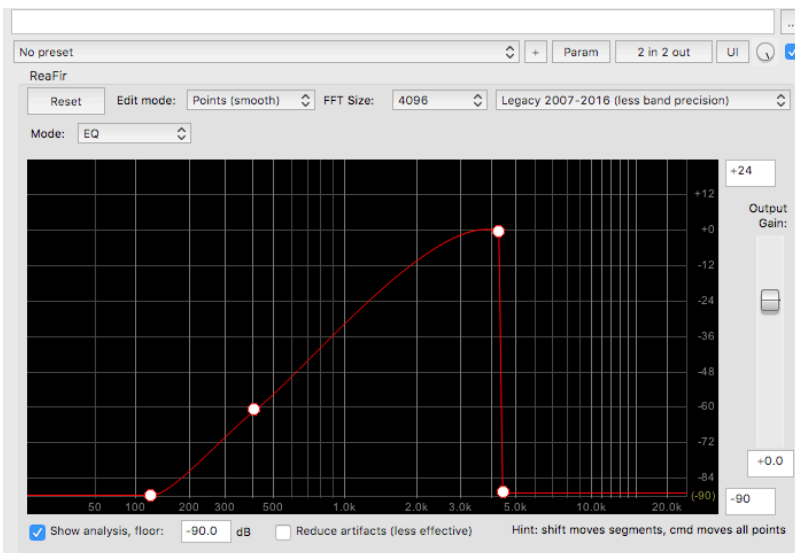


Figure 5: Paddabolela Filter Position at End of Filter Sweep at 01:01

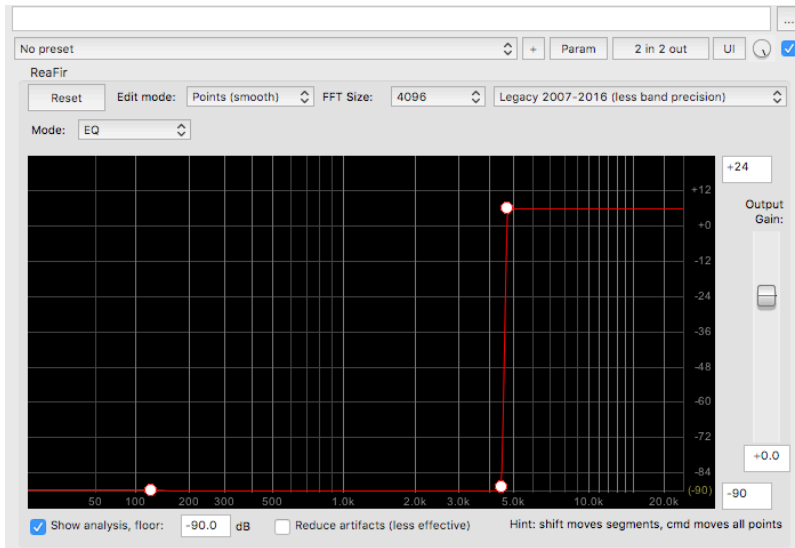


Figure 6: Paddabolela High Pass Filter Position, 4600Hz at 01:01

This approach aligns with Francisco López’s approach for his piece *Untitled #350* from the *2015 – 16* album. When listening to this piece, there are very clear and striking cuts between sounds as opposed to fades or the use of filter sweeps to transition between sounds. López enjoys working with sudden changes and surprises in a listening experience (López, 2017). This piece is a prime example of ‘a new mode of listening where sounds portray something real and then you have a cut that suddenly brings out the fiction or artificiality of the construction of the sounds’ (López, 2017).

Limpopo uses filtering techniques to explore the natural rhythms and spectral spaces found in the recordings and various acoustic signatures of the living organisms in the habitat. In order to create a fully immersive soundscape I layered recordings of different calls to construct imaginary sound worlds (see more in Section 2.2.5). Although all of these sounds exist in the real world, the constructed soundscape does not. It is a hyper-reality.

The approach of creating hyper-realities based on place is one shared by Harrison in his piece *Going / Places*. Harrison's compositional approach for this piece was reflective of a traditional acousmatic approach to composition: 'reconstructing scenes; messing with sounds using studio techniques; organising sounds according to their spectral or rhythmical content and, developing and re-developing sounds to create a new hyper-location or -reality' (Harrison 2018). The composition goes 'beyond the mere representation and representation of the places' (Harrison 2018) through the abstraction of sounds, with the sound material being tied very strongly to place.

This is a similar approach to the composition of *Mmabolela*, where recordings were grouped together depending on characteristics such as spectral range, soundmarks (a sound associated with a specific place or community), location, recording time or ambience, scenes were reconstructed and then mixed spatially. Each of the scenes presented has been constructed using a combination of recordings from locations on the reserve and cannot be heard in the same way anywhere else. These soundscapes only exist through my intervention as a composer and can only be heard in this way through the playback of this piece on a loudspeaker system.

2.2.5 Biophonies

All of the sound works use field recordings that contain biophonies; ‘collective voices of the natural world’ (Krause, 2013). This is particularly prevalent in *Limpopo*.

When listening back to the recordings from South Africa, what was most evident was the biodiversity and soundscape of the biophony. Many of the sounds contained natural rhythms and similar to the work of Krause, I found that when looking at spectrograms of my recordings, species were making sounds in different spectral bands (see Krause’s ‘niche hypothesis’, 1993). Therefore, this composition draws out these natural rhythmic biophonies to create a composed soundscape through the extended use of filtering.

The compositional methodology behind this piece was to isolate specific frequency ranges that contained rhythmic voices of the natural world, filter and sometimes abstract these sounds. Then almost reconstruct the soundscape to create an immersive listening experience with different sets of biophonies and rhythms happening in different frequency bands. Both natural and abstracted sounds were combined to create a sense of a hyper-reality and artificial sense of construction to the piece, whilst the shape and structure of the five-minute piece maintains a fairly organic and natural flow.

The following examples show how, through the layering and superimposing of filtered materials in different spectral bands, an immersive soundscape was created using a very specific set of recordings and biophonies.

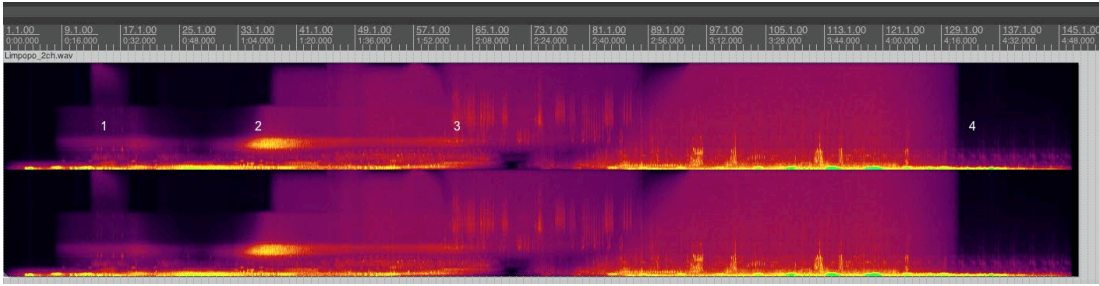


Figure 7: Limpopo Spectrogram

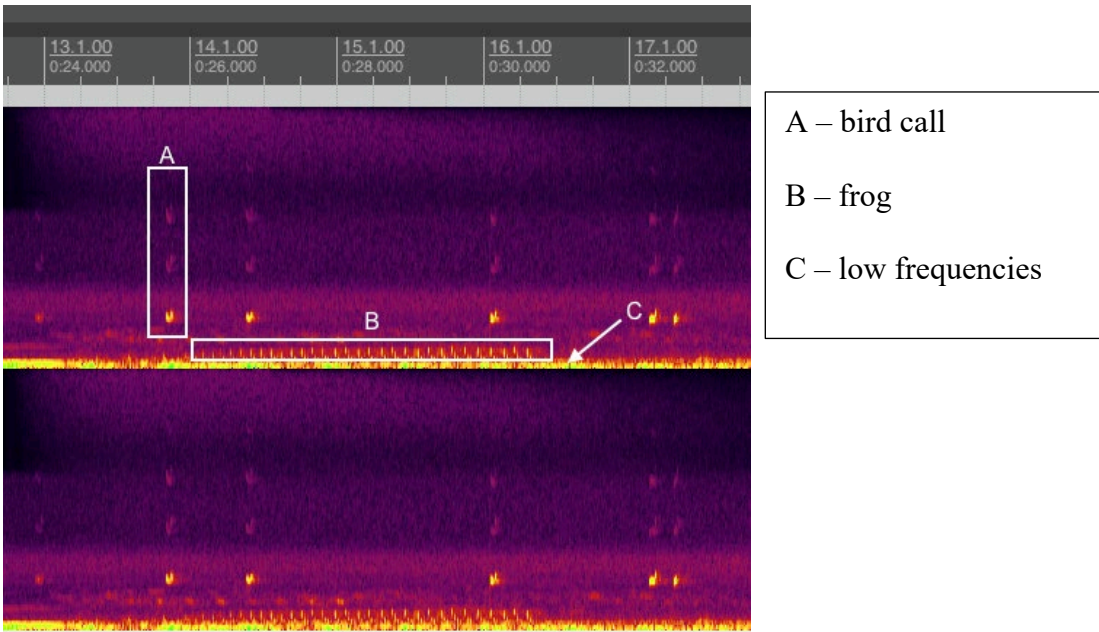


Figure 8: Limpopo Spectrogram of Biophonies 1

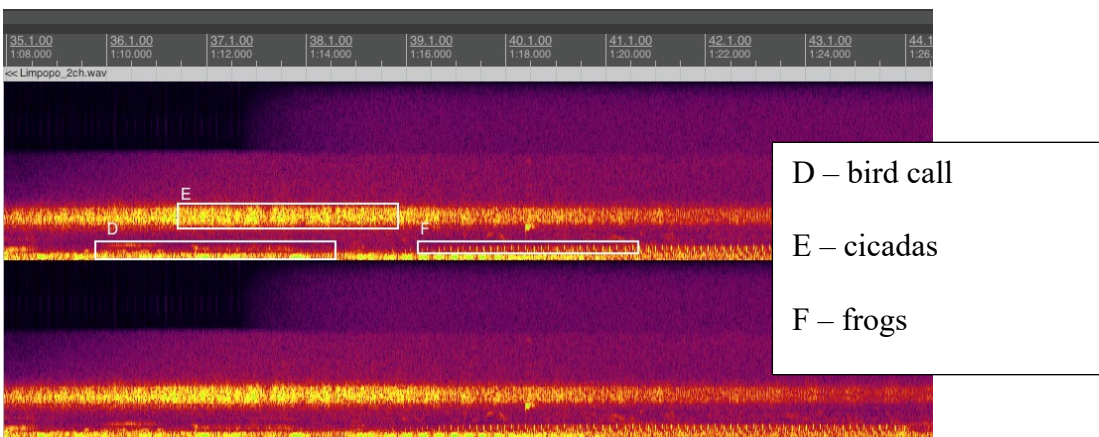


Figure 9: Limpopo Spectrogram of Biophonies 2

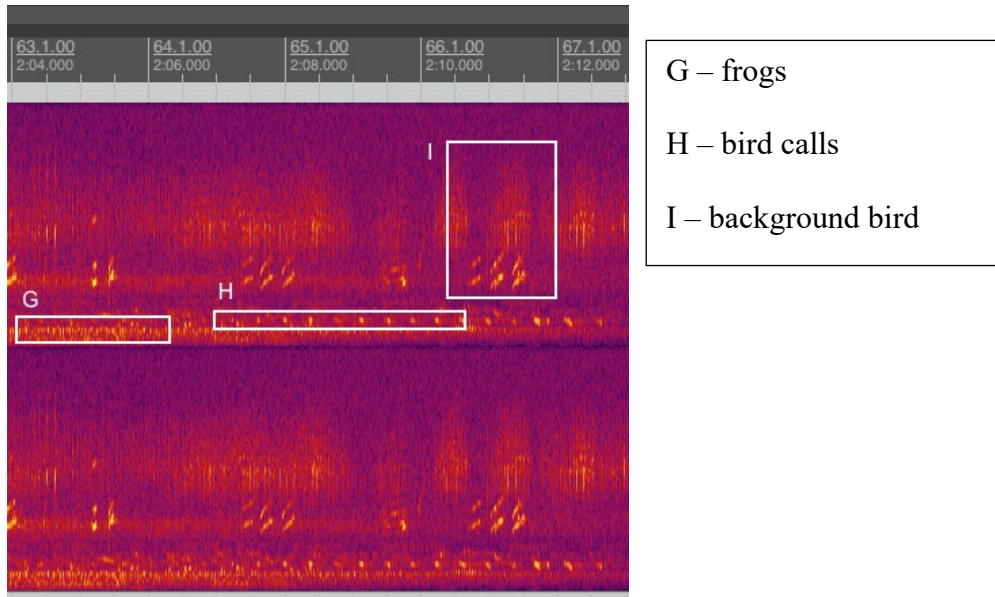


Figure 10: Limpopo Spectrogram of Biophonies 3

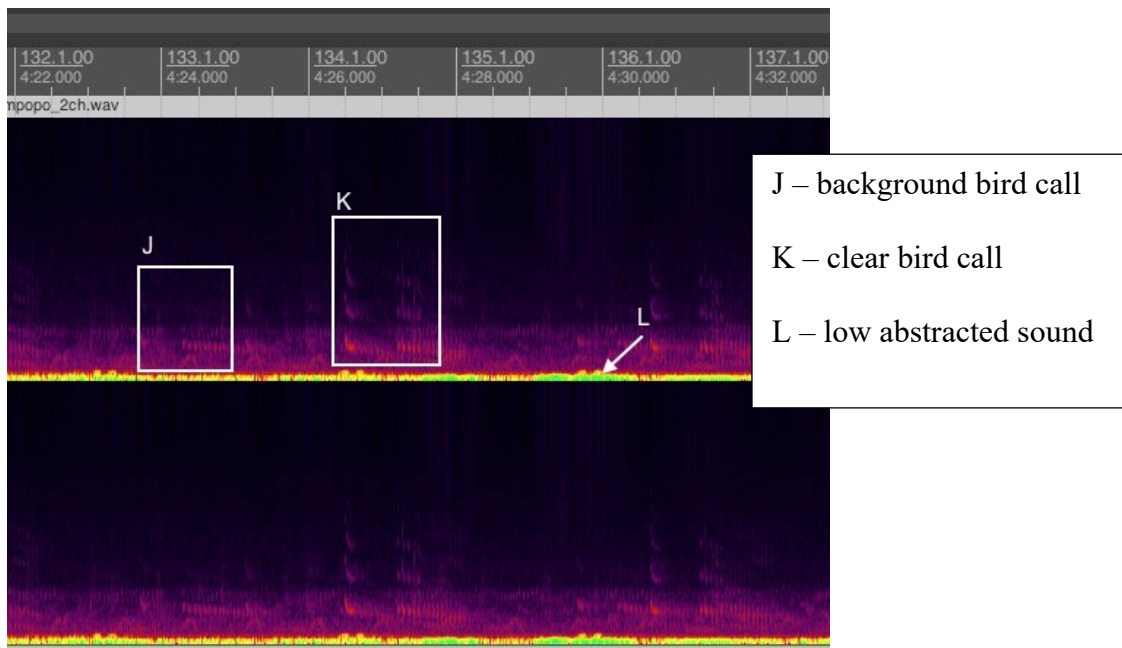


Figure 11: Limpopo Spectrogram of Biophonies 4

2.2.6 Traditional Musical Characteristics

Further to the idea of biophonies in *Limpopo* was the use of pitch and rhythm in the piece. The piece was commissioned to be played in a collaborative performance with sound artist Craig Cox. It was performed in conjunction with a set of audio-visual pieces composed by Cox inspired by incidental rhythms, percussive sounds and cinematography of his travels. Because of this, the piece draws upon rhythm and pitch in order to create transitional material that was developed live during rehearsals to link the two sets of pieces (see Audio Appendix).

This piece draws upon more traditional concepts of musical composition such as pitch, rhythm and duration partly due to the fact it was being performed alongside live musicians but also because of the nature and intrinsic qualities of the recordings selected. This approach is parallel to the work of Francisco López and the way he implements traditional compositional methodologies to his work, for example sudden changes, working with crescendos and sometimes working with structures akin to that of classical music (López 2017). This musical approach towards working with field recordings is also shared by Jonty Harrison as his compositions are all heavily influenced by his musical background and sensibility; ‘I am only satisfied when my musical sensibility is satisfied’ (Harrison 2018).

The piece progresses beyond simple editing of sounds, ‘employing a range of processing techniques to transform the environmental sounds used, often drawing out harmonic or rhythmic elements to emphasize their natural musicality’ (Gilmurray,

2016) which as Gilmurray suggests is a development in the genre of soundscape composition that moves the genre towards the aesthetic of Musique Concrète and acousmatic music, but maintains its identity as soundscape composition due to the environmental context (Gilmurray, 2016).

Traditional musical characteristics such as pitch and rhythm are present in all of the pieces included in this portfolio, but are most evident and actively considered *in Limpopo, Mmabolela, Orford Ness and Further Afield*.

When composing *Mmabolela*, one of my considerations was whether to create narrative dependent on the musical and aesthetic content of the recordings, or to focus on semantic content and where this sits between phonography and electroacoustic approaches to composing with field recordings.

In his 2014 article, Andean describes two main ways of composing within electroacoustic music, reflective of the acousmatic tradition; ‘the purely musical world on the one hand, where the sounds are composed and appreciated for their musical or sonic properties and on the other hand, the stream of sources and imagined gestures that these sounds evoke’ (Andean, 2014). The recordings in this piece have been assembled to create an artifice and use musical elements such as dramatic contouring and shaping, ordering and repetition to create a presentation of various scenes which are appreciated aesthetically and musically. Recordings were chosen due to similar characteristics,

many of which are considered to be traditional musical characteristics such as pitch, duration and rhythm.

The aim of *Orford Ness* was to draw out, enhance and abstract the hidden traditional musical qualities of the recorded sounds such as pitch, rhythm and texture (see more on hidden sounds in Section 2.2.2). This approach can also be seen in the work of Chris Watson. When discussing the use of musicality in his album *El Tren Fantasma*, he discusses the ‘hypnotic, musical rhythm’ (Watson 2018) in a lot of the recordings taken. He also states that pitch and texture play a vital part in his music and that ‘there are common elements in music, pattern recognition, textures, rhythm and dynamics that can apply to anything, from field recordings to Japanese noise music to Sibelius or Mendelssohn. Those terms apply across all different genres’ (Watson 2018). This musical approach is akin to the composition of *Orford Ness*, where there is a clear sense of musicality, pitch, rhythm and progression from the natural to abstract.

The use of pitch is very prominent in the piece *Further Afield*. For example, a phrase in the lower frequency range is repeated three times during the piece as a structural marker at 00:56, 04:20 and 08:14. A second example would be the high-pitched material at 03:40 that leads into the sound of birdsong of a similar spectral range. This abstracted material originated from the birdsong recording and is used to link these sections together, pre-empting the change in sound world. The field recordings often interact with abstracted materials, for example from 07:00 until the end of the piece. The

recordings of wind interact with abstracted pitched materials with each having their own space in the soundscape but sharing a similar frequency band.

2.2.7 Snapshots of a Place

The term ‘snapshots’ as I am referring to it here, has been derived from discussions with Jonty Harrison surrounding his piece *Going / Places* (see Appendix 1). It refers to the creation of individual scenes or sound-worlds based upon place.

Harrison explains ‘*Going / Places* comprises 23 ‘scenes’, each based on a real place (or multiple locations) but, as you might expect, what appears to be real is almost certainly not!’ (Harrison, 2016) The process of reconstructing each of these individual scenes according to spectral or rhythmical content resulting in a new hyper-location (Harrison, 2018) is one shared with the piece *Mmabolela*.

Mmabolela takes the listener on a journey through composed soundscapes of this specific South African terrain via snapshots of the different sound worlds visited. The main purpose of this piece was to investigate ideas of perspective and space to create a narrative and to create a set of scenes that successfully transition between constructed images of a place. I aimed to enhance the listeners understanding and imagination of the beauty of this place and the rich and diverse sound world that may never be heard in the same way again.

Recordings from different locations and times were combined to create scenes, dependent on characteristics such as spectral range, soundmarks, location, recording time and ambience. This allowed me to overcome the idea that recordings from different locations should be kept separate which is a barrier to working with field recordings I was previously dealing with in my practice.

These began as individual ideas for sound worlds but after considering form and progression, each sound world began to merge with one another with sounds crossing over from one sound world to another, creating an overall structure to the piece. The contouring, shape and sense of drama created in the piece helped to create narrative and move the listener on from one image of a place to the next. Although there are clearly different listening spaces, the piece still maintains one overarching structure. Many of the recordings have long trajectories through the space, helping to transition between spaces and create narrative. This was not merely a set of individually structured sound worlds; this was a journey through the different spaces.

Structural table for Mmabolela

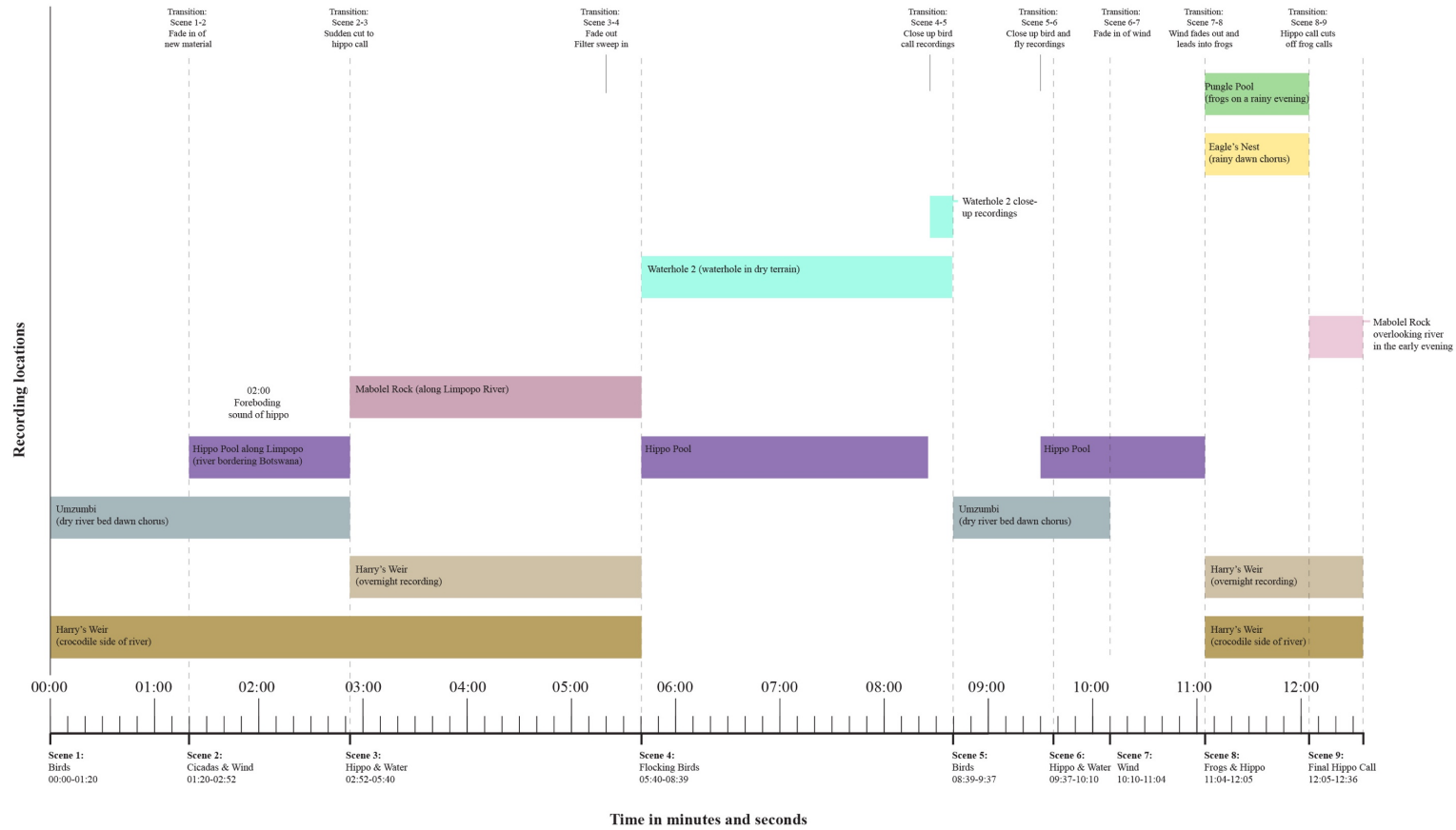


Figure 12: Structural Diagram for Mmabolela

Key to the composition of this piece was the creation of transitional material. Many of these transitions are climactic points in the piece, following the natural shaping of a recording or are moments that create dramatic changes in the soundscape. Although the piece is episodic, these transitions and the use of extended recordings that overlap into each scene create a flow and natural trajectory for the sounds.

The creation of this constructed or synthetic soundscape immerses the listener deeper into the sounds, reflecting the emotion, intent and composer's will or choices to draw upon certain meaningful sounds. Truax suggests that the abstraction of sounds and creation of a 'virtual synthetic soundscape' (Truax 2012) takes the listener from the surface level of an environment (which has been created purely using a phonographic approach) to 'the mental world of psychological and cultural associations, memories and symbolism provoked by those sounds, and then to the unbounded world of the imagination' (Truax, 2012). This statement truly reflects the nature of this composition.

2.2.8 Man Made vs Natural Sound Worlds

In 2019, when recording at Orford Ness Nature Reserve for the second time, there were many visible changes to the landscape since my last visit. These included water levels being much higher (resulting in much of the site being closed off to the public), much more foliage and wildlife and the biggest change being that the buildings on site had been taken over and destroyed by nature and wildlife. The natural environment in this protected national nature reserve has thrived. This can be seen in the photos below of the AWRE Laboratory 1 which was accessible in 2016 but is now closed to visitors.



Figure 13: Inside the AWRE Laboratory 1 Building, 2016



Figure 14: Outside the AWRE Laboratory 1 Building 2019

When observing the site and the abandoned buildings that have lost their structural integrity and are crumbling away, there was a sense of beauty and alienation. Watching hares chasing each other on one of the now inaccessible AWRE buildings and looking at the sparse landscape with abandoned bombs hidden underground and rusted metal sitting on the shingle inspired a piece about change. A piece about the relationship between the natural and man-made and of a place where both are fighting for our attention and survival.

Therefore, the aesthetic concern for *Orford Ness II* was about the destructive nature of the site. This included the relationship between the natural and man-made world, the history of site as a nature reserve and an AWRE and the beauty of nature fighting back, reclaiming the site and deconstructing these man-made structures that have a history as something very dark and destructive.

The piece is focused on the interplay between natural and abstracted sound materials. It can be divided into four sections. In each of these sections, the natural and abstracted sounds are presented together before one of the sounds is drawn to the foreground, diminishing the other. For example, at the start of the piece the sounds of the ship bells are drawn upon and processed to create longer trajectories of abstract pitched material. The natural recording morphs into the abstracted materials, just as the man-made world has impacted the natural environment on site or as nature has slowly reclaimed the man-made structures (both interpretations work).

The idea of drawing out these sounds and processing them heavily is similar to the approach Chris Watson used for some of the works in his album *El Tren Fantasma*. ‘Some of it is heavily processed... some things I left alone, and others required me to tease out of it what I felt was lurking there somewhere in the original recordings’ (Watson, 2018). This involved a metamorphosis of unedited and abstracted sounds of environmental recordings, mechanical recordings and contact microphone recordings. The sound object gradually morphs from one sound to another, going from the natural to un-natural, or environmental to mechanical and vice versa. As Watson explains about his own work, ‘I am interested in the sounds of places, the natural world but also in the contrast and musicality of the man-made world. Environmental sounds, mechanical as well as natural’ (Watson 2018).

John Young comments on Trevor Wishart’s *Red Bird* as having a similar construction, ‘one of the most important technical and musical aspects of *Red Bird* is the particular way in which electroacoustic sound transformations are used. This involves the apparent metamorphosis of one recognisable sound-object into another so that it gradually takes on the morphological and spectral characteristics of a new identity. The result is an apparent "transfiguration" or "morphing" from one identity into another’ (Young, 1996). Therefore, *Orford Ness II* has been placed in the genre of acousmatic music.

2.2.9 Sense of Belonging / Home & Framing Acousmatic Sounds

Having recorded sounds from my life and home, *Further Afield* is a personal response to these sounds connected with home. These include field recordings of the wind in the trees, the dawn chorus and the cracking of a layer of ice in the garden and studio recordings of various items found in the home. In the same manner as Westerkamp in her composition *Für Dich*, the composition explores a sense of place, belonging, home and of connectedness (Westerkamp 2005, 2018).

‘Whatever we do, our choices are always influenced by our cultural, social and political background and experiences, by age and gender, musical taste, past experiences with various soundscapes, as well as the present life situation... This extended knowledge is bound to influence the piece in some way, as well as intensify the relationship between composer and place, between composer and composition.’

(Westerkamp, 2002)

The piece explores the use of field recordings in acousmatic music alongside studio recordings, with the field recordings being used to frame acousmatic material. The sounds are carefully placed and sculpted to create this very controlled sound environment. Both the field and studio recordings have been abstracted and explore extensive processing, development of material and studio treatment.

The biggest concern regarding this piece was the narrative between the two types of sound materials: field recordings and acousmatic sounds. Field recordings were used as

transitional material throughout the piece as a device to maintain a strong sense of place. Examples are the geophonic sound of wind at 00:00 and the biophonic sound of birds at 04:20.

The use of real-world sound sources in this piece of acousmatic music embodies Andean's material narrative mode, which is closely related to the idea of source-bonding and the use of materials that evoke real-world sources. 'Real-world sound sources, though not a 'must' in acousmatic composition, are nevertheless commonly used and often present, carrying with them a strong degree of narrativity due to their associations with the sources, actions and surroundings that gave them form' (Andean, 2016). Although this piece uses environmental sound, the premise of these sounds is to enhance the narrative surrounding place alongside the transformed materials, rather than invoking an image of place through the field recordings alone.

2.2.10 Narrative

When composing works that fit into the categories of pure field recording and soundscape composition, the narrative methodology was dependent on an exploration of the sound material on an organic and intuitive level. The narrative used in these types of pieces was reflective of a place with the aim of opening up sound worlds and creating windows into spaces we wouldn't normally have access to. For example, *Orford Ness* aims to create an awareness of sounds that are inaudible without the use of a microphone, *Paddabolela* takes the listener on a journey through a listening space of a remote location and *Saudade* creates an image of a place in an organic way. These

narratives reflect the natural sounds found in a place and were constructed alongside the composition of the sound materials, rather than at the start of the composition process.

As sound materials became more abstract and pieces moved towards the acousmatic realm, narrative became a more active consideration at the start of the compositional process. This applies specifically to the pieces *Mmabolela*, *Orford Ness II*, *Further Afield* and *Ancestor I*. The construction of narrative in the pieces *Mmabolela* and *Further Afield* has been discussed previously in Sections 2.2.7 and 2.2.9 and therefore will not be discussed further here. For the final two acousmatic works, narrative has been discussed in reference to Andean's article, '*Narrative Modes in Acousmatic Music*' (Andean, 2016).

The narrative of *Orford Ness II* is based upon the interaction between two types of sounds reflecting the contrast of the natural and man-made worlds. This was considered at the very start of the compositional process, when recording the sounds and observing the site, through the experience of being on location. The use of real-world sounds suggests Andean's material narrative mode (Andean, 2016), although this becomes less applicable as sounds move towards the abstract.

Similarly, the narrative of the *Ancestor I* was decided upon before starting the compositional process or visiting the site to record. The narrative was based upon the physical characteristics of the sculpture 'Ancestor I' by Barbara Hepworth. The movement *Torso* was based upon the dense and solid structure of this section of the

sculpture and the final movement, *Legs*, was based upon the cyclical form of this section. This final movement conforms to Andean's formal and parametric narrative modes of acousmatic music (Andean, 2016). The structure of this movement is based on a minimalist form (formal narrative) that makes use of phasing as the main musical parameter that changes throughout the piece (parametric narrative).

In acousmatic music, narrative often makes sense of the abstract and therefore, I felt that these pieces needed a clear narrative in order for the listener to engage with the works and make sense of the sounds. Of course, the extra musical narrative such as title and programme notes are important and apply to all of the pieces included in this portfolio of works, but you cannot rely on the audience to have access to or read these before listening to a work.

2.2.11 Composer's Intent & Listener's Perception

In all of the pieces included in this portfolio, the experiences whilst listening, recording and composing these site-specific works has influenced the final outcome. Each of the recorded sounds has a set of memories and associations to them, as well as a level of emotional attachment. Each of the works is rooted in location and the experiences while spending time in this place create an attachment between the composer, the place and the sounds.

When considering the works included in this portfolio, I found that I have a stronger relationship with the sounds that were recorded over a longer duration of time, or as part of a residency, due to the fact that I have spent longer exploring, listening and being present in these new spaces.

‘The fact is that the recordist/composer’s knowledge of a place extends beyond the recorded soundscape to the smells, the air, the temperature, the time of day, the atmosphere, the feel of a place, the season, the social situation... This extended knowledge is bound to influence the piece in some way, as well as intensify the relationship between composer and place, between composer and composition’ (Westerkamp, 2002). These experiences ‘do always figure into the compositional process in some way’ (Westerkamp, 2002) and this is the essence of a soundscape composition; ‘it is the listening experience, crafts and skills the composer possesses, the cultural, social, political and spiritual perspective of the composer that combined, create the soundscape composition’ (Westerkamp, 2002).

Whether or not the composer’s intentions are clear within a piece, each composition will be perceived and experienced differently by the audience depending on their own personal life experiences, memories and associations. The aim of the composition is ‘social and political, as well as artistic’ (Truax, 2001). Therefore, in order for a complete consideration of a work, the composer’s narrative and the listener’s experience of narrative of a piece must be taken into account within the compositional strategy. As Claude Schryer states, ‘there are many forms and styles of this work, many

nuances of intentions but in the end it's a product, not unlike other music/sound art forms, where the listeners' perception is what makes the work' (Schryer, 2018).

When considering again the idea of site-specificity (Section 2.2.1) and audience perception, it is important to note that environmental sounds are recontextualised and experienced as a new place depending on the listening location. Each soundscape composition 'has its very own life wherever and whenever it is created and reproduced... In the end, of course, no matter where the sound sources come from, the composition created from environmental sounds will be experienced as an entirely new place and situation within an entirely new context, depending on where it is heard' (Westerkamp 2002).

2.3 Soundscape Composition or Acousmatic Music – Where Is The Divide?

2.3.1 Soundscape Composition as Electroacoustic Music

Soundscape composition is often grouped together with acousmatic music or seen as a subgenre of electroacoustic composition due to commonalities in how work is produced, its reliance on digital technologies and aesthetics that derive from the acousmatic music tradition.

‘Despite roots in acoustic ecology and soundscape studies, today the practice and study of soundscape composition is often grouped with, or has grown out of acousmatic music schools. This can be clearly observed in the positioning of soundscape compositions juxtaposed with acousmatic music compositions in concert programmes, CD compilations and university syllabuses. Not only does this positioning inform how soundscape composition is listened to, but also how it is produced, sonically and philosophically. In such work we can observe a common aesthetic – attention to pitch and rhythmic relationships, cause-and-effect structuring, approach to form, reliance on digital technologies – that derives from the acousmatic music tradition.’

(Drever, 2002)

It is important to note that many artists working with field recordings, including myself, have come into this field from an electroacoustic background or been heavily influenced by techniques and skills learnt in this area. This is also true for many of the interviewees such as Brona Martin and Leah Barclay. For example, Barclay states that her

multichannel compositions and approaches to sound have been heavily influenced by her background as an electroacoustic composer. ‘Without that skill set, I wouldn’t know how to approach sounds in the way that I do’ (Barclay, 2018). Martin describes herself as a soundscape composer. ‘My compositions are soundscape compositions within the electroacoustic tradition’ (Martin, 2018). Therefore, it is understandable how soundscape composition could be seen as a subgenre of electroacoustic composition, especially by artists who have come from the electroacoustic tradition.

In more recent literature, Gilmurray explains further, ‘other environmental sound artists subject field recordings to various degrees of electronic manipulation, using them as material for *electroacoustic* compositions, an umbrella term for works composed from electronically edited, processed, or transformed sounds. Within this field exist several subgenres, two of which represent approaches commonly utilized by environmental sound artists: *musique concrète* [or *acousmatic music as it is more recently known*] and *soundscape composition*’ (Gilmurray, 2016).

Both Barry Truax and Hildegard Westerkamp, members of the WSP and founders of the term ‘soundscape composition’ refuse the idea that soundscape composition should be treated as a subgenre of electroacoustic music;

‘It risks being treated by future commentators, analysts and historians as merely another style or subgenre of electroacoustic music, rather than an organising principle, a set of

listening strategies and therefore a reference point for all electroacoustic music with real-world references.'

(Truax, 2008)

2.3.2 Soundscape Composition vs Acousmatic Music

'Although acousmatic music and soundscape composition both put the emphasis on listening and perform their works over multichannel loudspeaker systems to create a multi- dimensional sound space, there remains a profound difference for listeners in terms of their recognition of environmental sound sources and the contextual knowledge they are encouraged to bring to the listening experience' (Truax, 2019). 'The essential differences between electroacoustic composition and soundscape composition are that the sound used within the electroacoustic composition loses all or most of its environmental context' (Truax, 2001).

Truax suggests that to distinguish soundscape composition from acousmatic music 'the original sounds must stay recognisable and the listener's contextual and symbolic associations should be invoked for a piece to be a soundscape composition' (Truax, 2008). The '*environmental context* is preserved, enhanced, and exploited by the composer' (Truax, 2001) and 'part of the composer's intent may also be to enhance the listener's awareness of environmental sound' (Truax, 2001).

Due to its emergence out of the work of the WSP (primarily soundscape studies and acoustic ecology), 'soundscape composition is a juxtaposition of ethnography and

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electroacoustic music' (Drever, 2002), therefore has a place in all three areas seen in my continuum (Figure 1).

40 years on from the founding work of the WSP, soundscape composition is no longer seen as a sub-genre of electroacoustic music. The field has expanded enough to become a genre of its own, but essential to this is the re-definition of the term soundscape composition and separation between these three fields of study. What does it mean to be a soundscape composer in the twenty-first century?

2.3.3 Case Study – Jonty Harrison's *Going / Places*

In an interview with John Palmer in 2008, Harrison identifies his earlier work as being in a 'classic Schaefferian *musique concrete*' (Palmer, 2008) style, being mainly concerned with 'exploring the qualities of real sounds... and – possibly above all – the sense of 'truth' they possess in their unfolding in time and in the physicality of their gestural shaping' (Harrison, 2016). Whilst in his earlier works, 'the majority of sound materials were indeed 'real' (i.e. physically existing sound sources, captured with microphones and stored on magnetic tape), the works in which they are used make little or no reference to their 'real world' context or signification' (Harrison, 2016).

In his 2018 interview, he explains a recent change in his compositional attitude in attempt to involve 'issues of memory, recognition and evocation of a place, through the use of sounds that indicate their environment and have a very specific set of fingerprints' (Harrison, 2018). In other words, Harrison is now actively looking and

willing to use recognisable environmental sound, with the use of ‘reference and recognition [become] an active part of [his] thinking’ (Palmer, 2008).

This discussion was instigated following Harrison’s performance of *Going / Places* in *HCMF*, Huddersfield 2015 and at *BEAST FEaST*, Birmingham 2016. The interview was largely centred on this work and specifically whether it can be classified as a soundscape composition or acousmatic music. Following the performances, various thoughts were expressed on the genre of the piece which divided opinion.

“A particularly fascinating aspect of *Going / Places* is its nature: it certainly isn’t ‘electronic’, and one even hesitates to call it ‘acousmatic’, as the extent to which Harrison has processed the sounds—or, at least, *obviously* processed them—felt decidedly minimal. The transparency of Harrison’s methods of collage and juxtaposition makes the piece more akin to those found in Chris Watson’s body of work, drawing on elements of documentary and reportage but working towards the means and ends of sonic art.”

(5:4 Blog, 2015)

“Oh, Jonty, I always knew you would come over to the soundscape thing.”

Barry Truax quoted by Jonty Harrison (Harrison, 2018).

“Someone who was at the performance said it was a collection of field recordings.”

(Harrison, 2018)

The concept of *Going / Places* was that ‘one would feel that a lot of material was more abstract, even though it was tied very strongly to a place; you didn’t necessarily need to know what that place was’ (Harrison, 2018). This is reflective of a traditional acousmatic approach to the compositional methodology: ‘reconstructing scenes; messing with sounds using studio techniques; organising sounds according to their spectral or rhythmical content and, developing and re-developing sounds to create a new hyper-location or –reality’ (Harrison, 2018). Reflecting on the comments above, to many listeners, the piece remains within the traditions of soundscape composition or field recording. The listener’s knowledge of the environmental context was invoked and there was clear recognisability of the source material (as listed in Truax’s principles of soundscape composition), but as Westerkamp questions, should this piece be called a soundscape composition just because it uses environmental sound? (Westerkamp, 2018)

Harrison rejects this premise, clearly stating that it is acousmatic music because the composition goes ‘beyond the mere re-presentation and representation of the places’ (Harrison, 2018) and as the sound is played through loudspeakers with ‘the source of the sound not being physically present at the moment of hearing them’ (Harrison, 2018) which are both listed in his criteria of acousmatic music as stated in my initial definitions.

Whilst I agree the piece goes beyond the phonography of sound, I question whether it can be classed as acousmatic music due to the minimal processing of the field recordings, that invoke the listeners memories and associations. When considering the

use of field recordings in some of Harrison’s earlier works, such as *Internal Combustion* and *Streams*, the sources of many of the sounds are clearly unknown (one of Harrison’s suggested criteria for acousmatic music) and the sounds have been selected and are treated according to their acousmatic and spectromorphological qualities, but in *Going / Places*, many of the field recordings maintain their contextual information.

I have created an analysis table for the piece *Going / Places* in order to try and categorise the piece according to my initial criteria for soundscape composition and acousmatic music. The criteria considered is based on the characteristics provided in Chapter 1 by Truax, Westerkamp and Harrison.

Principles of Soundscape composition		Characteristics of Acousmatic Music	
An artistic, sonic transmission of meanings about place, time, environments and listening perception	X	Heard over loudspeakers	X
Listener recognisability of the source material is maintained	X	Displays an acousmatic intent (not merely a substitute for another listening mode)	X
Listener's knowledge of the environmental and psychological context is invoked	X	Composed on and exists on a fixed medium	X
Composer's knowledge of the environmental and psychological context influences the shape of the composition at every level	X	The physical source (if any) of the sounds is not actually present at the time of listening	X
The work enhances our understanding of the world and its influence carries over into everyday perceptual habits	X	The source, nature or cause of the sound may be unknown or unknowable	X
		The compositional criteria <i>extend beyond</i> what is normally considered “musical”; these criteria may be spectromorphological, referential/anecdotal, or both	X

Table 1: Principles of Soundscape Composition and Acousmatic Music

When evaluating the principles of soundscape composition, it is clear that the piece has a very strong sense of place, whether this has been created artificially or not. The listener's knowledge of the context is invoked and shapes the composition. The piece will be perceived differently by each listener, according to their own personal experiences, memories and associations to the sounds. Purely in terms of categorisation, the piece adheres to all of the suggested principles of soundscape composition.

When looking at the criteria of acousmatic music, the piece observes all of Harrison's suggested characteristics of acousmatic music. Although, 'the source, nature or cause of the sound may be unknown' is a characteristic that I would question. For many of the sounds and scenes, there is a clear environmental context, even when sounds have been manipulated, reconstructed or organised due to musical, spectral or rhythmical content. This context has been clarified by the fact that the places are easily identifiable with them having been listed and readily available in the programme notes for the piece. Harrison himself states that memory, recognition and evocation of a specific place have become a major part of his compositional thinking (Harrison, 2018) and although the piece has a strong sense of ambiguity and confusion as to whether the realities we are hearing are real or fake (i.e. constructed), the source of the sound remains mostly, known to the listener.

Whilst having a difference of opinion to Harrison, what we could agree on was, firstly, the fact that *Going / Places* is a piece of music that has been composed with heavy intervention through superimposing events from different locations together, the

shaping of material, drawing upon specific moments and creating transitions, all heavily influenced by Harrison's musical background and sensibility (Harrison, 2018). And secondly, that the piece goes beyond simple soundscape phonography and the initial work of the WSP.

This case study shows the difficulty of defining compositional works. This particular work adheres to both the principles of soundscape composition and acousmatic music. It shows how the boundaries between practices are being blurred through composer's expanding and evolving in the way they think about and work with sound. In this case, it comes down to the composer's intentions and choice as to how the work is defined.

Harrison brings up a key question in the interview, one which is pertinent to the core investigation of my thesis:

'My point is that if soundscape is that kind of [straightforward] documentation [and presentation of pure field recording], then what is a soundscape *composition*? One that uses some of those things? Well then, the question is, how straight would the usage have to be? How true to the original recording would you need to stay?'

(Harrison, 2018)

CHAPTER 3: OVERVIEW OF WORKS

3.1 Introduction

This chapter contains an overview of all works included as a part of this composition portfolio. Section 3.2 contains extended programme notes and key research questions for seven of the concert works. Works have been organised in increasing degrees of abstraction according to my continuum of sound (Figure 1). Section 3.3 discusses the final two concert works that respond to an artwork and includes performance information as these concert works were presented outside of the concert hall. Section 3.4 contains information on the four installation works in more detail. A categorised table of works can be found in Section 3.5 as a summary and Section 3.6 discusses workflow. A full list of performances can be found in Appendix 2.

3.2 Concert Works

3.2.1 Saudade (2017)

3.2.1.1 Extended Programme Notes

[noun]

(especially with reference to songs or poetry) a feeling of longing, melancholy, or nostalgia that is supposedly characteristic of the Portuguese or Brazilian temperament.

A set of field recordings taken in Lisbon, Porto and the island of Sao Miguel in April 2017.

Elements of the natural recordings are shaped using volume curves and filtering techniques and used to articulate gestures that transport the listener from one scene to the next. Many of the sounds utilise and draw upon human intervention, such as the sound of boat engines starting and stopping. These have been used as a narrative tool and create a sense of ambiguity in the transitions that move from one recording to the next, blurring sounds and images of places.

3.2.1.2 Key aims and research questions:

- To create a portrait of a place
- To use “pure” field recordings with minimal transformations in a compositional work

3.2.2 Paddabolela (2018)

3.2.2.1 Extended Programme Notes

Paddabolela is composed using field recordings from a residency at Mmabolela Estates Game Reserve, South Africa in 2017. Using advanced recording technologies to capture sound, the piece looks to preserve sounds of the natural environment and engage the audience with an immersive listening experience through the use of multichannel and ambisonic techniques. The piece takes the listener on a journey through different sound worlds of the South African terrain using a combination of natural sounds and sounds that have been abstracted to bring out an alternative sonic reality, creating an all-encompassing listening experience of the soundscape.

The piece title *Paddabolela* directly translates in Afrikaans to ‘frog - speak to me’. This was a reference to the name of the reserve, the poem *Mabalel* by Eugène Marais (Mmabolela, n.d.) and due to most of the source recordings being of frogs.

3.2.2.2 Key aims and research questions:

- The development of a creative project that is a direct result of the residency
- To explore alternative sonic realities of the recordings through abstracting the sound and create ambiguity between the real and unreal
- To take the listener on a journey through the composed soundscape

3.2.3 Limpopo (2018)

3.2.3.1 Extended Programme Notes

Limpopo is the second piece in a series of concert works composed using recordings from the Sonic Mmabolela Residency 2017. The field recordings used for this piece all contain natural rhythms that have been filtered, layered and sculpted into a five-minute immersive soundscape composition. Heavily influenced by the work of Francisco López and the discussions on the residency itself, the piece attempts to create a hyper-reality of the natural soundscapes heard during the time spent at the Mmabolela Estates.

This piece was commissioned by Sound Artist Craig Cox as part of his Musicians-in-Residence 2018 residency at dlrLexicon, a scheme jointly funded by Dún Laoghaire-Rathdown County Council and the Arts Council, managed by Music Network.

3.2.3.2 Key aims and research questions:

- To explore the natural rhythms found in the recordings
- The use of filtering techniques to explore spectral spaces
- To create an immersive listening experience
- To explore Francisco López's idea of the hyper-real

3.2.4 Mmabolela (2019)

3.2.4.1 Extended Programme Notes

From the palm-strewn banks of the Limpopo River to the dark depths of the Hippo Pool, *Mmabolela* transports the listener through the soundscapes of this remote location in South Africa. A series of interweaving “snapshots” and constructed realities based upon the many recording locations visited during the 2017 Sonic Mmabolela residency transport the listener to this hyper-real time and place. This work has been composed using ambisonic recordings and is the final piece in a series of three concert works resulting from the residency.

3.2.4.2 Key aims and research questions:

- To combine field recordings from different locations on the reserve that have similar characteristics
- To create constructed “snapshots” of different sound worlds
- To use first order ambisonics to create an immersive sound world

3.2.5 Orford Ness (2016)

3.2.5.1 Extended Programme Notes

Orford Ness is composed using recordings from a three-day field recording trip to Orford Ness Nature Reserve in July 2016 led by Chris Watson and Jez Riley French. The site is of Special Scientific Interest with limited public access due to its history as an Atomic Weapons Research Establishment (AWRE). The piece has been created using four recordings taken during the time exploring the hidden sounds on the Ness. Sounds have been minimally transformed in the studio to create a multichannel immersive sound experience that sculpts sound through space whilst capturing the sonic identity of the place.

3.2.5.2 Key aims and research questions:

- To explore the hidden qualities in natural sound recordings
- To capture the sonic identify of the place

3.2.6 Orford Ness 2 (2020)

3.2.6.1 Extended Programme Notes

A poetic electroacoustic representation of the relationship between the man-made elements and dark history of the Orford Ness site and the natural environment.

Historically, with the site being used as an AWRE, the natural wildlife on the site was destroyed by man-made forces. The site is now listed as a protected national nature reserve. In recent years nature has fought back and is now engulfing and destroying the man-made structures on site. This piece comments on the beauty and destruction of the natural environment and the relationship between the natural and man-made worlds.

3.2.6.2 Key aims and research questions:

- To represent two opposing worlds which are merging and the destructive nature of both worlds through natural and abstracted sounds
- To represent the juxtaposition of the history of the site as an AWRE and the current state of the site as a nature reserve and what this has resulted in visually and experientially

3.2.7 Further Afield (2017)

3.2.7.1 Extended Programme Notes

Further Afield is an acousmatic piece that explores the use of field recording within the genre. All sounds are site-specific, having been recorded at the composer's home and the piece explores a personal response to the location. The piece explores two different sound worlds, taking the listener on a sonic journey that weaves through natural field recordings that the listener can create a connection to and more abstract sound material that has been transformed in the studio.

3.2.7.2 Key aims and research questions:

- To explore the use of field recordings in an acousmatic context
- To explore the relationship between the field recordings and studio recordings and how to combine these within the structure and context of the piece

3.3 Responsive Concert Works

3.3.1 Mother and Child by the Sea (2018)

3.3.1.1 Extended Programme Notes

The piece is an electroacoustic interpretation of the sounds envisioned when looking at Johan Christian Dahl's painting 'Mother and Child by the Sea'.



Figure 15: *A Mother and Child by the Sea*, Johan Christian Dahl, Image credit: © The Henry Barber Trust, The Barber Institute of Fine Arts, University of Birmingham

'A mother and child welcome home a fishing boat, presumably containing the child's father. The combination of the magical light effect and the fact that so much remains hidden encourages different interpretations.'

(The Barber Institute of Fine Arts, 2013)

Sounds evolve from the gentle lapping of the ocean, the reimagined sound of ship bells and the unsettling sound of the ocean becoming increasingly granular and abstracted, reflecting the ambiguity surrounding the story and whether the father will arrive back home safely. The high-pitched ethereal sounds draw upon the light and imagery of the sky in the painting and create another layer and depth to the story.

3.3.1.2 Key aims and research questions:

- To use source-bonded sounds to create a soundscape based on a visual scene
- To create a musical composition that responds to the painting

3.3.1.3 Performances

This piece was premiered at the *Crosscurrents: New Music Ensemble 2018 Festival*, being played alongside other fixed media and instrumental works based on artworks in the Barber collection. When performed an image of the artwork was projected for the audience to see, creating a link between sound and image. It was also used in the *Crosscurrents: BEAST Sonic Paintings* workshop run by Emma Margetson that I was assistant for. The workshop asked participants in two age groups (4 – 8 years and 8 – 12 years) to draw visual representations of the pieces they were listening to. Children correctly identified sounds of ‘ship bells/bells’, ‘the sea’, ‘waves’ and ‘water’ showing the use of source-bonded sounds (the natural tendency to relate sounds to supposed sources and causes) in the piece.

3.3.2 Ancestor I (2019)

3.3.2.1 Extended Programme Notes

A commission for the *Green Heart Festival 2019* at The University of Birmingham (UoB) for an extended soundscape for Barbara Hepworth's Ancestor I sculpture.



Figure 16: *Ancestor I*, Barbara Hepworth, Image Credit: Barbara Hepworth © Bowness, Research and Cultural Collections, University of Birmingham

This project was in collaboration with Emma Margetson as part of the larger Sound Sculptures project, the Arts and Science Festival, the Cultural and Collections team at UoB and SOUNDkitchen's SOUNDwalker app.

Inspired by the physical properties of the sculpture such as its form, construction and surface textures, *Ancestor I* combines field recordings and abstracted sounds to create a distinctive soundscape based upon the physical properties of the sculpture. The composition of the Ancestor I sculpture strongly reflects the influence of the Cornish Coast on Hepworth's work with its colour and textures that evoke imagery of rock pools and hidden caves which is also reflected in the composition of the sound work.

The four different sections of the sculpture, which is based on the human figure, can be interpreted as a head, torso, hips and legs. The four movements of this composition reflect these forms, creating sonic environments based on four words: cavernous, dense, water and cyclical. Each artist composed two movements each independently for the *Ancestor I* commission, with my movements being the second and fourth: torso and legs.

Torso

'Though concerned with form and abstraction, Hepworth's art was primarily about relationships: not merely between two forms presented side-by-side, but between the human figure and the landscape, colour and texture, and most importantly between people at an individual and social level.'

(Tate, 2017c)

This movement highlights form, abstraction and texture as well as the relationship between the natural and unnatural sounds. The form of the sculpture suggests something dense, slightly smaller and darker in colour than the other three sections of the figure. Therefore, the key word associated with this shortest movement is dense. The natural and organic sounding material used in this movement has been filtered to occupy different frequency ranges. Through the layering of these materials, the piece slowly increases in density and fills the spectral space. The sculpture's etchings or 'textured calligraphy' are much more evident on this section of the figure and are represented by the use of granular sounds and gestural material in the second section of this movement and the darker colour is reflected by the use of low-pitched sound material.

Legs

The physical form of the fourth section of the bronze sculpture suggests something that repeats continuously in a loop or circle. Drawing upon Hepworth's concern with relationships, this movement explores the relationship between field recordings taken on location and metallic studio recordings (inspired by bronze which was the material used to create the sculpture).

The piece is cyclical in nature and is based upon a minimalist approach to composition. Each sound has their own individual pulse and timing. The main features of the piece are phase shifting, slow modulations of rhythms and the additive process that creates increasingly complex rhythms. At regular intervals a different loop is highlighted or brought to the foreground of the soundscape. In order to investigate the relationship

between these metallic studio recordings and the field recordings taken, field recordings begin to add to and replace rhythms previously owned by the metallic recordings. These fragments get increasingly abstract and noisy over time, naturally leading to a noise-based section. The piece ends with underwater sounds, allowing for the repetition of the entire piece for installation purposes.

3.3.2.2 Key aims and research questions:

- To investigate the relationship between sound and sculpture through the composition of a site-specific and site-responsive sound installation that is a direct response to the physical properties and characteristics of the Ancestor I sculpture
- To increase public engagement with the Sound Sculptures project and the University of Birmingham Sculpture Trail

3.3.2.3 Performances

The stereophonic composition was presented as a sound installation installed on site from the 8th to 10th June 2019 through speakers mounted on the benches next to the sculpture (see Section 3.3.2.4 for setup). It was also presented as part of the Sound Sculptures soundwalk via the SOUNDwalker app and the Sound Sculptures Soundcloud page that follows the University of Birmingham's Sculpture Trail.



Figure 17: University of Birmingham Sculpture Trail Map

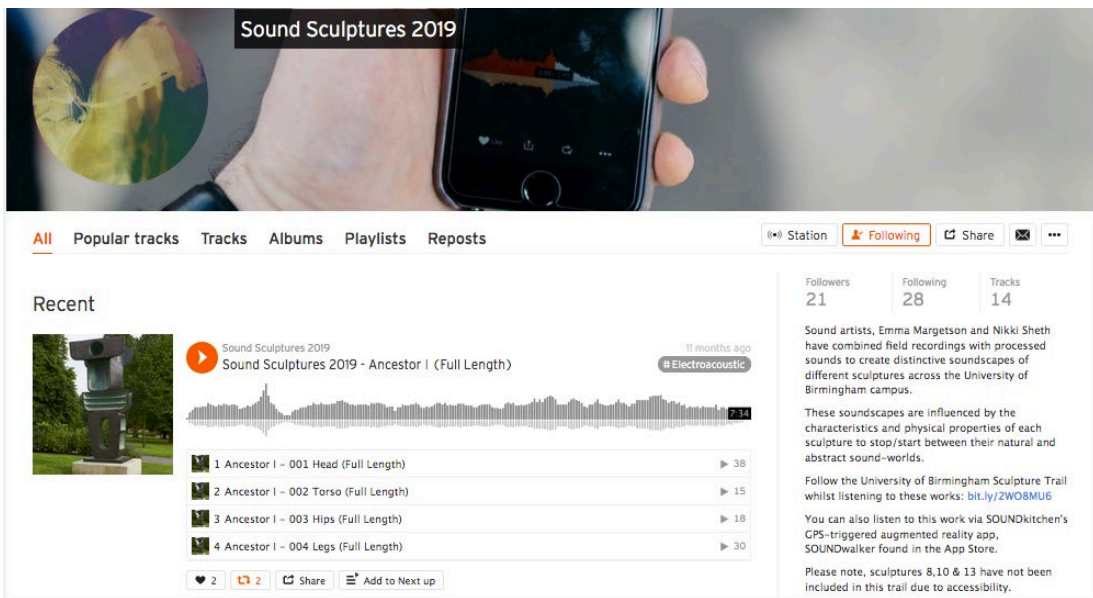


Figure 18: Sound Sculptures Soundcloud Page

3.3.2.4 Installation Setup

For this sound installation of this piece, two bundles of Minirig speakers (each bundle being two speakers and one subwoofer) were used as each of the channels, left and right. These were Bluetooth controlled and allowed for flexibility when the speakers were installed in the custom-made speaker enclosures on location.



Figure 19: *Ancestor I Sound Installation 1, Image Credit: Emma Margetson*



Figure 20: Ancestor I Sound Installation 2, Image Credit: Emma Margetson

3.4 Installation Works

‘The term installation art is used to describe large-scale, mixed-media constructions, often designed for a specific place or for a temporary period of time’ (Tate, 2017a).

3.4.1 Bird Calls of Sub-Saharan Africa (2019)

3.4.1.1 Extended Programme Notes

This piece was commissioned for a *Barber Late* event celebrating the opening of the Cassiano dal Pozzo Paper Museum exhibition. It was presented in the Red Gallery of The Barber Institute of Fine Arts.

The initial inspiration for this soundscape came from seeing the image of the African Civet from the Cassiano dal Pozzo Paper Museum exhibition. Having recently been on a recording trip to the native home of the animal, sub-Saharan Africa, I thought it would be fitting to use these site-specific environmental recordings. Having looked at the images in the exhibition, further inspiration came from the various bird images, including the Bird Mosaic. Almost all the recordings from my trip predominantly feature the sound of bird calls, especially those taken during the dawn and dusk choruses. Therefore, this soundscape is almost a mosaic of natural bird calls recorded at different locations and types of terrains in Limpopo, South Africa.

The soundscape has been created through editing, shaping and sculpting various bird calls from the different terrains of the South African landscape together. The sounds remain unprocessed, meaning that this is a further example of a piece derived from pure field recording. There are five short sections to the piece as I was aware that as a gallery installation people would be moving in and out of the space. The aim was to captivate the listener and create an immersive and atmospheric listening experience that moves to different listening spaces relatively quickly.

3.4.1.2 Key aims and research questions:

- To create a soundscape installation that responds to the Cassiano dal Pozzo exhibition at the Barber Institute of Fine Arts (in specific the Bird Mosaic and African Civet images)
- To create a subtle soundscape installation that is suitable for a gallery setting and enhances the visitor's experience of the space

3.4.1.3 Installation Setup

This stereo installation was set up in an alcove at the start of the Red Gallery of The Barber Institute of Fine Arts.



Figure 21: Bird Calls of Sub-Saharan Africa Installation, Barber Institute of Fine Arts, Photo Credit: Image courtesy of the Barber Institute of Fine Arts

3.4.2 Aulus-Les-Bains (2018)

3.4.2.1 Extended Programme Notes

A site-specific multichannel installation that combines field recordings, video and live hydrophone listening based upon a recording session at the Garbet River in Aulus-Les-Bains.

For video footage of this installation please refer to the Audio Appendix.



Figure 22: Recording Location along the Garbet River, Aulus-Les-Bains



Figure 23: Aulus-Les-Bains Installation 1

This installation was created as part of a residency with Eli Kezslar at CAMP where participants were working directly with physical spaces and the remarkable location of Aulus-Les-Bains in the Pyrenees. The focus was on nature and the environment and the way these interact with culture and technology. My creative output for this residency was a multichannel installation that explores ideas of site-specificity, interaction and communicating place.

3.4.2.2 Key aims and research questions:

- To create a site-responsive and site-specific multi-media installation in response to the residency
- To represent a place in a gallery context and to enhance the understanding of this place through implementation of visual and physical elements
- To experiment with speaker layouts in non-traditional ways
- To create a “live” experience or element of the installation

3.4.2.3 Installation Setup



Figure 24: Aulus-Les-Bains Installation 2

There are two pieces of audio for this installation that create an inverse sonic reality of that found on the original site:

- a) a stereo composition using hydrophones recordings of the Garbet River,

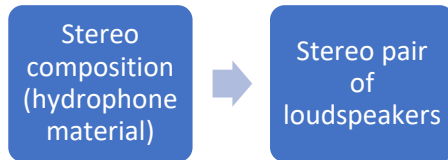


Figure 25: *Aulus-Les-Bains Audio Stream 1*

- b) a recording of the Garbet River taken above water that is played via surface transducer into a vessel of water and monitored via a hydrophone and a mono speaker. (See Figure 27 for full technical diagram).

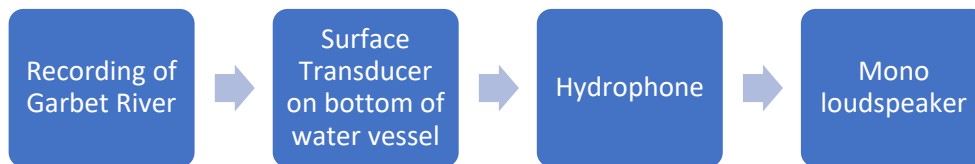


Figure 26: *Aulus-Les-Bains Audio Stream 2*

The use of the hydrophone and surface transducer in the installation creates a live element where the audience can move the hydrophone around the water vessel to pick up the different vibrations, amplitudes and frequencies travelling through the water. These vibrations could be heard through the hydrophone feed and speaker and through putting your ear close to the actual physical object.

The reproduction of these natural sounds taken from the river near the residency building in a gallery setting was already one way of recontextualising the sounds. To extend this further I decided to bring in physical elements of the outside world into this installation space by using water from the river for the water vessel and using the sound of the rain hitting the window of the gallery space as part of the installation (see more about site-specificity in Section 2.2.1). To link to the original site further, two videos of the recording locations were played on loop creating a further visual element to the installation.

The layout of the installation created a path through the space, reflecting the flow of the river and leading the audience around the space. The vessel of water and hydrophone was placed in the centre of the space, acting as a focal point where the closer you got to the vessel, the louder the vibrations became.

The speaker layout for the installation included a stereo pair (left and right) raised just above the floor and a mono speaker in the centre approximately one metre from the ground facing the live hydrophone. This reflected the height difference between the under and overwater recordings taken on site. The surface transducer was acting like a fourth speaker, turning the water vessel into a sounding object. This experimental use of loudspeakers was one of my research aims for the installation and allowed for more freedom and experimentation.

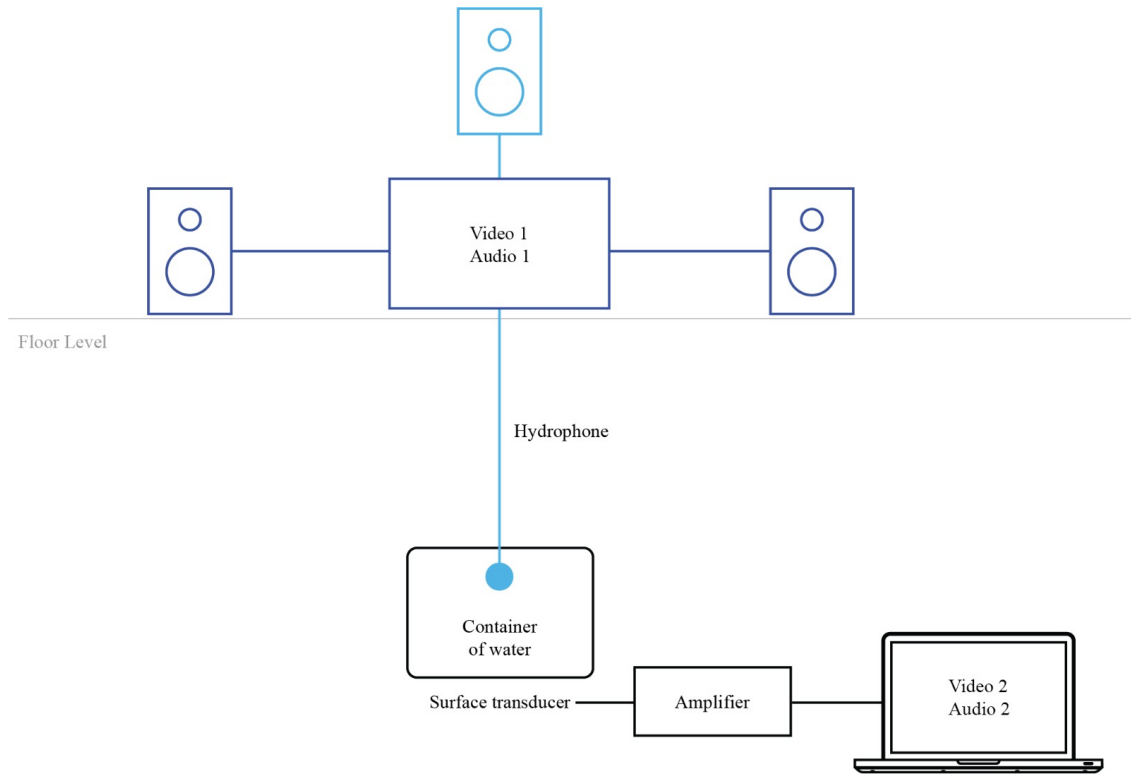


Figure 27: Technical Diagram for Aulus-Les-Bains Installation

3.4.3 Sounding Surfaces (2019)

Both iterations of the *Sounding Surfaces* installation were created in collaboration with Creative Technologist John Lucy. For video footage of these installation works, please refer to the Audio Appendix.

3.4.3.1 Holders Wood

3.4.3.1.1 Extended Programme Notes

A site-responsive sound installation that highlights the natural sonic frequencies found in the woods during dusk chorus on a summer's eve. The field recordings used for this installation were taken at dusk at the exact location where the exhibition was held approximately 5 weeks before the festival. The installation uses surface transducers that are vibrating a thin sheet of aluminium, creating a subtle, unobtrusive "instrument" that allows listeners to tune into the frequencies of the natural world. Decorative panels have been produced using scans of flora found in the local area. The panels are intended to become weather worn over time and blend in with the natural world.



Figure 28: Sounding Surfaces Holders Wood Installation 1



Figure 29: Sounding Surfaces Holders Wood Installation 2



Figure 30: Sounding Surfaces Holders Wood Installation 3

3.4.3.2 Stirchley

3.4.3.2.1 Extended Programme Notes

A site-responsive sound installation created for the *Artefact Winter Open Call 2019*.

The custom-made aluminium sounding panels use surface transducers to vibrate the surface and create a unique set of speakers.



Figure 31: *Sounding Surfaces, Stirchley Installation*

The sound used for this iteration of the *Sounding Surfaces* installation is a stereo composition based on sounds recorded during the *Hipkiss and Graney Electromagnetic Field Recording Workshop* led by Michael Lightborne held at and around Artefact in June 2019. Coil microphones were used to hear normally inaudible electromagnetic sounds. Both the recordings and scans of flora used for the decorative panels were taken in local areas of Birmingham (Stirchley and Holder's Wood) and are recontextualised in a gallery setting, bringing in visual and auditory aspects that normally go unnoticed and unheard in the local community.

3.4.3.2.2 Key aims and research questions for both installations:

- To create a new installation using surface transducers that is portable and can be battery powered
- To respond to the sound of an exhibition space
- To highlight sounds that normally may not be heard in an environment

3.4.3.2.3 Installation Setup

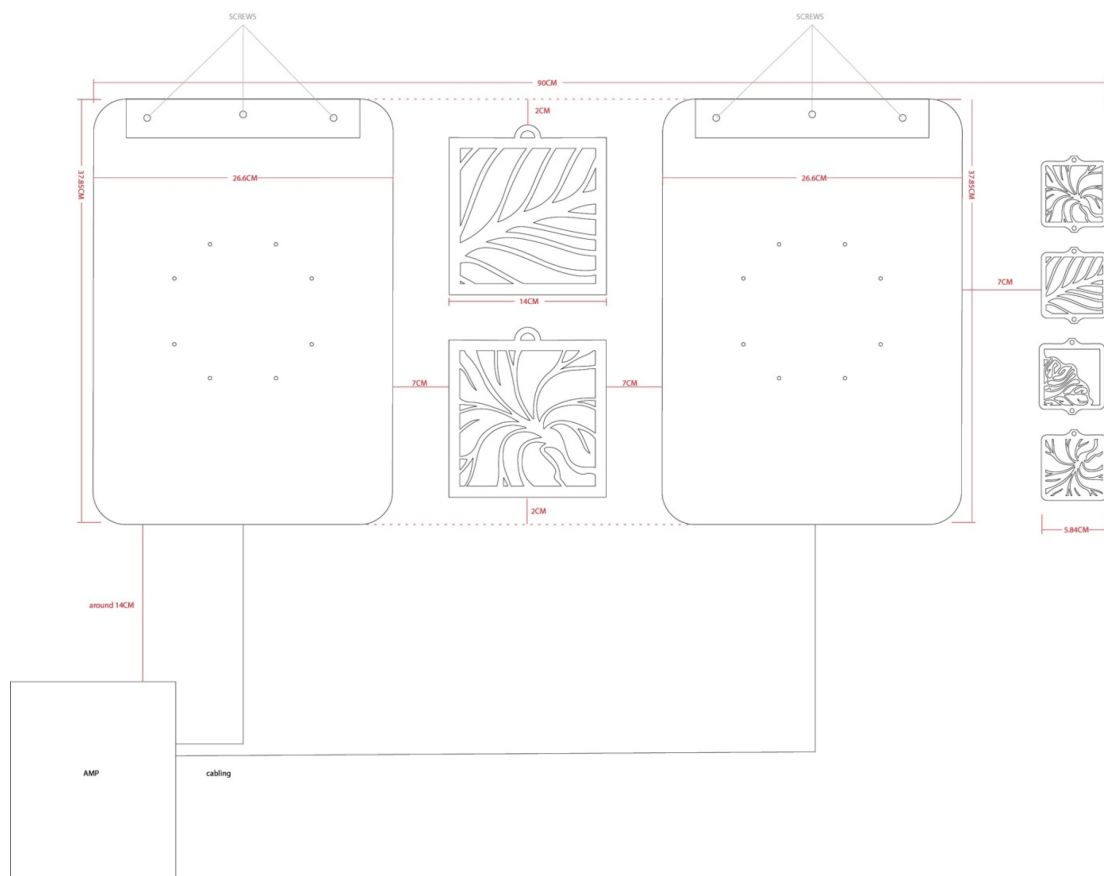


Figure 32: Technical Diagram for Sounding Surfaces Stirchley Installation

3.5 Categorisation of Works

Piece	Type of work
<i>Saudade</i> (2017)	Pure Field Recording
<i>Paddabolela</i> (2018)	Soundscape Composition
<i>Limpopo</i> (2018)	Soundscape Composition
<i>Mmabolela</i> (2019)	Soundscape Composition
<i>Orford Ness</i> (2016)	Soundscape Composition/Acousmatic Music
<i>Orford Ness II</i> (2020)	Acousmatic Music
<i>Further Afield</i> (2017)	Acousmatic Music
<i>Mother and Child by the Sea</i> (2018)	Responsive/Soundscape
<i>Ancestor I – Torso, Legs</i> (2019)	Responsive/Acousmatic
<i>Bird Calls of Sub-Saharan Africa</i> (2019)	Installation/Pure Field Recording
<i>Aulus-Les-Bains</i> (2018)	Multimedia Installation/ Pure Field Recording
<i>Sounding Surfaces Holders Wood</i> (2019)	Installation/Soundscape
<i>Sounding Surfaces Stirchley</i> (2019)	Installation/Acousmatic

Table 2: *Categorisation of Works*

3.6 Workflow

3.6.1 Recording

All of the works in this portfolio have been composed with original studio and field recordings taken by the composer. The studio recordings were made at the Electroacoustic Music Studios, University of Birmingham using a mid-side array. The field recording equipment used for this portfolio of works included DPA 4060s, DPA 4061s, Sennheiser Ambeo VR Mic, JrF hydrophones, JrF contact microphones, JrF coil microphone, Sennhieser MS array, LOM Preizor, Sound Devices 744T, Zoom F8 and Tascam 44wl.



Figure 33: Hydrophone Recording at Ponta Delgada Marina, Portugal

In addition to capturing sounds of the inaudible and hidden sounds (see Section 2.2.2), I experimented with creative approaches to recording. For example, when recording with the LOM Preizor, the microphone was attached to the top of a 1 metre tree branch in order to monitor sounds at a higher level (Figure 34) or trying contact microphone on unconventional surfaces such as palm tree leaves (Figure 35).



Figure 34: Hipkiss and Graney Electromagnetic Field Recording Workshop with Michael Lightbourne



Figure 35: Recording Palm Tree Leaves with Contact Microphones

When recording with the DPAs, the general approach was to position the microphones 40cm away from each other in AB stereo recording position (DPA Microphones, 2019) in order to get an accurate spatial image (also referred to as a spaced pair). The advantage of the DPA microphones is the flexibility of them when working in the field. When a spaced pair is not possible or I wanted to explore a smaller space, I was able to work with them more creatively. For example, when monitoring the sound of the wind through an old pipe in an AWRE laboratory at Orford Ness, the microphones were positioned very close together in order to fit into a small space and reduce any possible phase issues of the sound of an unknown creature scurrying towards the microphones (as heard in *Orford Ness*).

Although the AB stereo set up has less distinctive directional information than the other suggested DPA set ups, such as XY or near coincident, much of the time it was being used in this position in order to capture a wide sound field with spatial information to be spatialised further for multichannel loudspeaker arrays.

‘The AB setup provides a pleasant reproduction of the reverberant sound field and provides useful spatial information... The directional information, however, is slightly less distinctive compared to other setups.’

(DPA Microphones, 2019)

At times, it was necessary to position microphones discreetly or hide microphones within the natural environment, for example when leaving DPAs out overnight at a location where hippos and crocodiles were known to be, or when wanting to record the natural ambience of a place, including sounds of the anthrophony (sounds produced by humans). This was the case with the field recording for the *Sound Sculptures* and *Holders Wood Sounding Surfaces* installations primarily so that the microphones did not disturb the natural environment or affect the normal behaviour of species in this environment.

When recording in the field, there were two approaches taken. The first, was to monitor the field recordings and take short recordings in multiple different spaces of a location. This was due to time constraints (for example when recording on Orford Ness there

were ticketed and timed ferry journeys to the location to adhere to) and possible interference or safety issues with keeping equipment in busy locations.

The second approach was to take durational field recordings, such as overnight recordings, in remote locations where it was possible to leave equipment undisturbed. This approach was used when recording at Mmabolela Estates (Figure 36) for the pieces *Paddabolela*, *Limpopo*, *Mmabolela* and *Bird Calls of Sub-saharan Africa*. I found this approach much more exciting and satisfying, as environments were left undisturbed and therefore, the natural soundscapes heard were almost pristine. It was also very exciting to know that I had overnight recordings of hippos to listen back to. The negatives of this approach included the risk of leaving equipment overnight or alone, battery life limitations and not knowing whether the recording had been successful. It also allowed for less exploration of a sound environment in creative and unique ways, as microphones were left in the same position over this period of time, although when using the Sennheiser Ambeo VR mic this did not make a large difference as this microphone captures the three-dimensional sound environment.



Figure 36: Setting up the Sennheiser Ambeo VR Microphone, Umzumbi, South Africa

3.6.2 Ambisonics

3.6.2.1 Introduction

Ambisonics is the recording, manipulation and composition of naturally and artificially constructed three-dimensional sound-fields (Malham and Myatt, 1995). This recording technology allows high definition recording of entire spherical information of soundscapes (Monnachi, 2016). Ambisonic encoding in B-format contains four channels, W, X, Y, Z which capture a 360-degree spherical image of the soundfield. This spatial information can then be decoded over loudspeaker arrays that fits into a dome making the piece portable over a range of speaker layouts. ‘The higher the order of representation (high order ambisonics, or HOA), the greater the spatial resolution over a larger listening area’ (Barrett, 2010).

The power of ambisonics is the creation of a fully immersive sound experience which has the potential to result in higher emotional impact. As Barrett states, ‘A 3D acousmatic experience allows the listener to immediately enter the sound world as a tangible and real entity’ (Barrett, 2010).

3.6.2.2 Recording in Ambisonics using Sennheiser Ambeo

When recording in Ambisonics, I was using the Sennheiser Ambeo (a first order ambisonic microphone), recording in A-format. The Sennheiser Ambeo has 4 cardioid microphones in the following A-format arrangement; 1: front-left-up [FLU], 2: front-right-down [FRD], 3: back-left-down [BLD], 4: back-right-up [BRU] (Sennheiser,

2020). Recordings were converted to B-format in the studio and decoded into first order ambisonics for 8 or 16 channels. The use of an 8 or 16 channel space allows me to maintain spatial definition and accuracy when working in first order ambisonics.

Ambisonics recordings are used for the pieces *Paddabolela*, *Limpopo*, *Mmabolela* and *Orford Ness II*. For these works, recordings were taken in stereo and ambisonic formats, meaning the compositional approach for most of these pieces took a hybrid approach. As I became more familiar with ambisonics, more complex workflows were implemented.



Figure 37: Recording in A Format with the Sennheiser Ambeo VR Microphone, Harry's Weir, South Africa

3.6.2.3 Ambisonic Workflows

3.6.2.3.1 Paddabolela – Ambisonic Workflow for 8 Channels

Paddabolela illustrates the way that ambisonics can be used even when the use of a multichannel studio is not possible. Whilst on the residency, I composed the piece in stereo (Figure 38). When bringing this into the studio I was able to simply decode the ambisonic recordings into 8 channels as the spatial information was all there (Figure 39) and use GRM Spaces to spatialise the stereo recordings. When listening for amendments I was pleasantly surprised to find there was no need for any major changes as the compositional structure of the piece had been composed and spatially it worked.

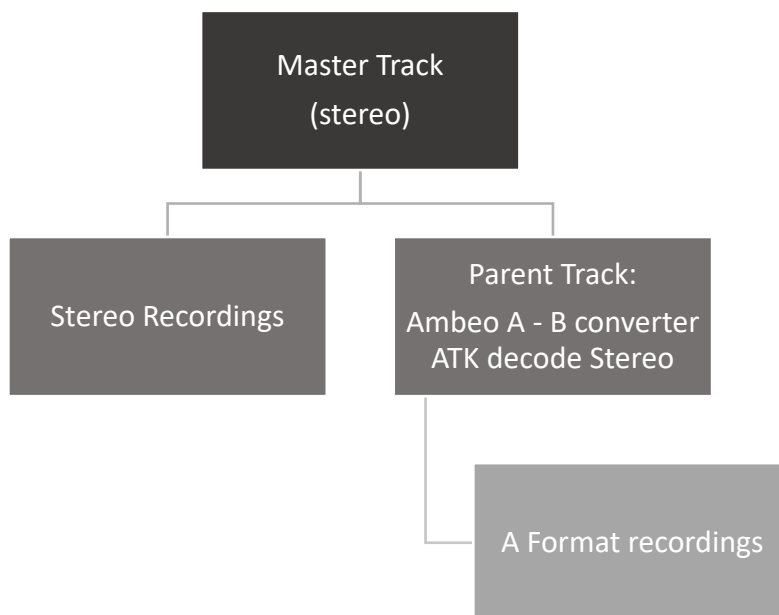


Figure 38: *Ambisonic Workflow for Paddabolela Stereo Version*

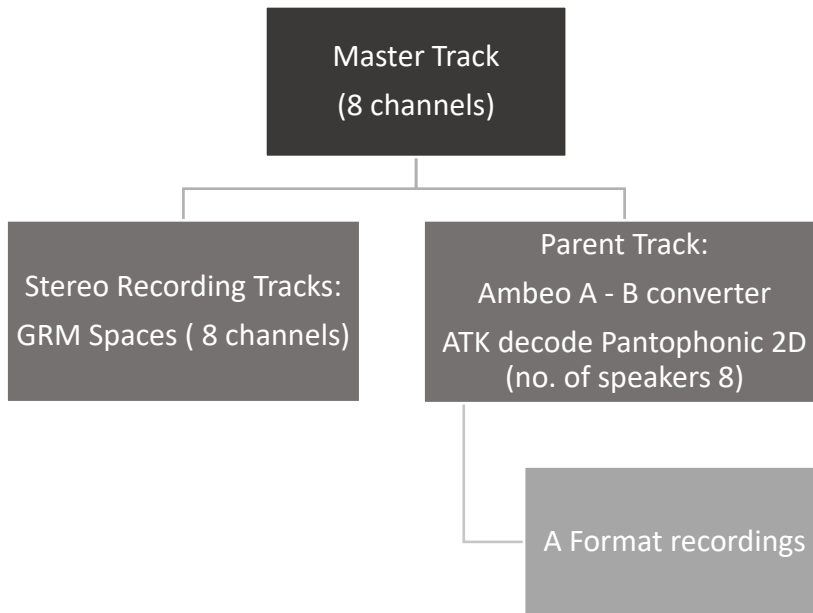


Figure 39: Ambisonic Workflow for Paddabolela 8 Channel Version

3.6.2.3.2 Limpopo – Ambisonic Workflow for 8 Channels

This piece was composed with all A format ambisonic recordings.

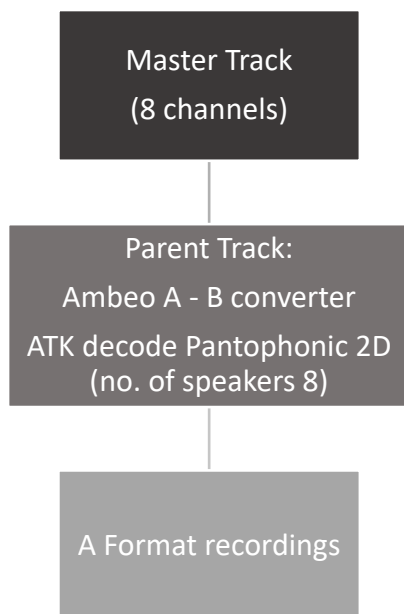


Figure 40: Ambisonic Workflow for Limpopo 8 Channels

3.6.2.3.3 Mmabolela – Ambisonic Workflow for 16 Channels

The IEM Energy Visualiser was an essential tool in composing and fully visualising the 3D space when composing this piece. Therefore, stereo and ambisonic recordings were converted from Fuma to SN3D format in order to use the Energy Visualiser and IEM plug-ins. The decoder was created using the specifications for BEAST studio 1 and the AllRA Decoder plug-in which allows the creation of customised speaker layouts (Figure 42). This can then be imported into the IEM Simple Decoder which decodes the sound into the 3D space created.

The final version is a 16 channel piece.

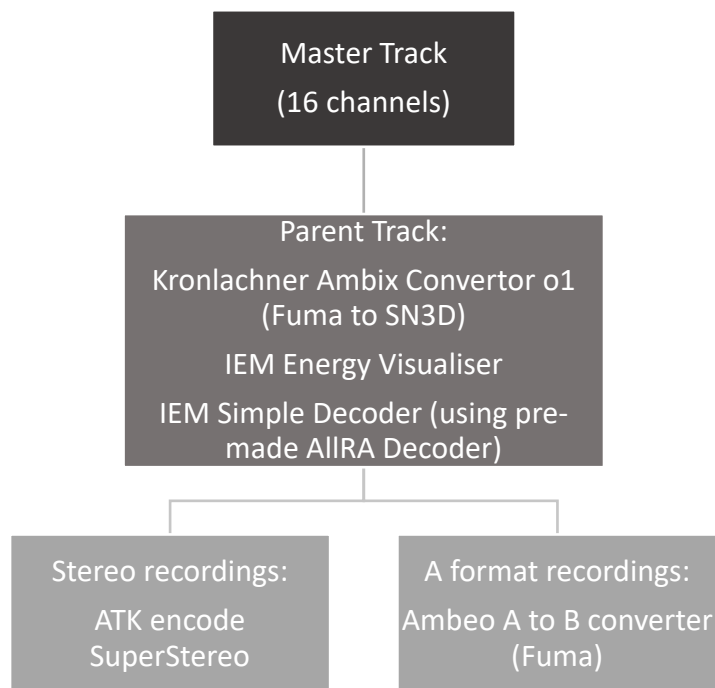


Figure 41: Ambisonic Workflow for Mmabolela 16 Channels

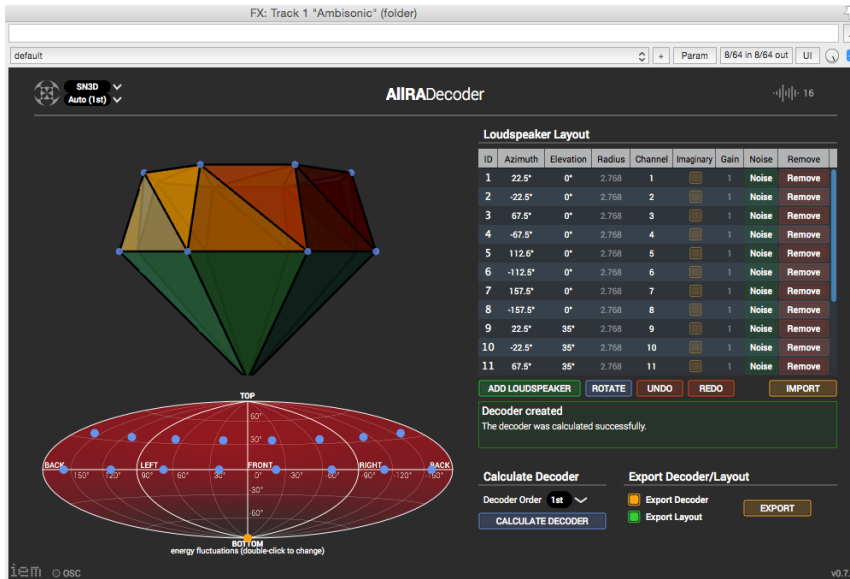


Figure 42: AllRA Decoder for First Order Ambisonics in 16 Channels for BEAST Studio 1

3.6.2.3.4 Orford Ness II – Ambisonic Workflow for 16 Channels

A hybrid approach to working with ambisonic and stereo field recordings in 16 channels.

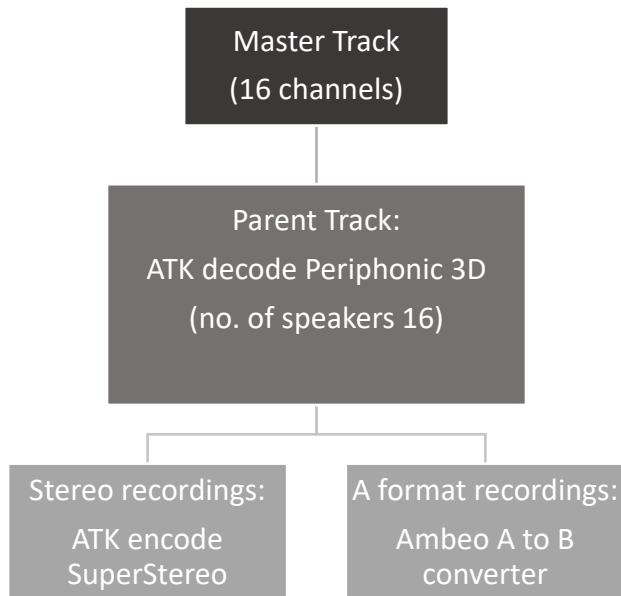


Figure 43: Ambisonic Workflow for Orford Ness II 16 Channels

3.6.2.4 Summary

Working in ambisonics was challenging due to the move from working with defined positioning of physical loudspeakers to working in an artificially constructed virtual space where spatialisation is happening in three-dimensions. I found the shift in workflow and the way of thinking to be a big change. I feel it was very rewarding and that this series of pieces was the most successful in the portfolio, partly due to the rich and diverse sound material recorded and partly due to the composition of these materials in ambisonics to create an immersive spatial listening experience.

The use of ambisonics allowed the natural space to be recreated through an 8 or 16 channel system, with 16 channels allowing for more height information to be presented. It was interesting to note that soundmarks which, when recording, were perceived to be in front of me did not appear so when decoding the recordings in the BEAST studios. For example, sounds of hippos in the Limpopo River were recorded standing on the riverbank with hippos in front of me. Once decoded, this locality of sound was not as evident as the hippo calls were reflecting off different surfaces and being heard with less directionality. When recording with ambisonics there is no front or back listening space, just the three-dimensional space.

Therefore, in order to compose with more directional material and have more control over the spatialisation of sounds, I found that the hybrid approach of using a mix of ambisonics and stereo recordings was most successful. This allowed me to place sounds carefully within the space. I used the Sennhesier Ambeo to capture ambient recordings

of large spaces and took close up recordings that offer more focus and clarity on specific sounds with other microphones. For example, in *Mmabolela* from 08:20 to 09:40, an ambisonic recording has been used as the background layer and close up DPA recordings of birds and bees have been superimposed to create a foreground layer of sounds that move across the space vibrantly and clearly. This approach demonstrates how I am bringing in different techniques from my field recording practice into the spatialisation and composition of pieces and the importance of space in the original recordings. Decisions made during the recording stages, such as microphone choice and arrangement have a fundamental impact on the rest of the compositional process.

3.6.3 Multichannel Loudspeaker Layouts

3.6.3.1 Stereo

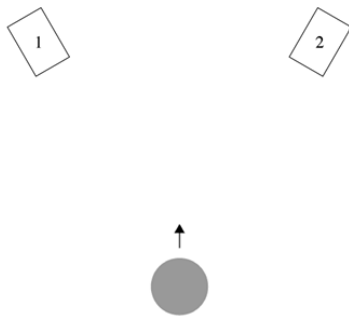


Figure 44: *Stereo Loudspeaker Layout*

Azimuth: -30° left, $+30^\circ$ right

Used for pieces: *Saudade, Mother and Child*

3.6.3.2 8 Channels

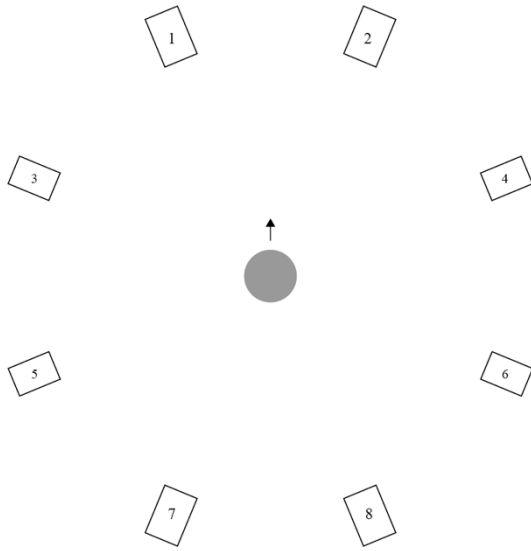


Figure 45: 8 Channel Loudspeaker Layout

Speaker	Azimuth	Elevation
1	-22.5°	0
2	22.5°	0
3	-67.5°	0
4	67.5°	0
5	-112.5°	0
6	112.5°	0
7	-157.5°	0
8	157.5°	0

Table 3: 8 Channel Loudspeaker Positions

Used for pieces: *Paddabolela, Limpopo, Orford Ness, Further Afield*

3.6.3.3 16 Channels

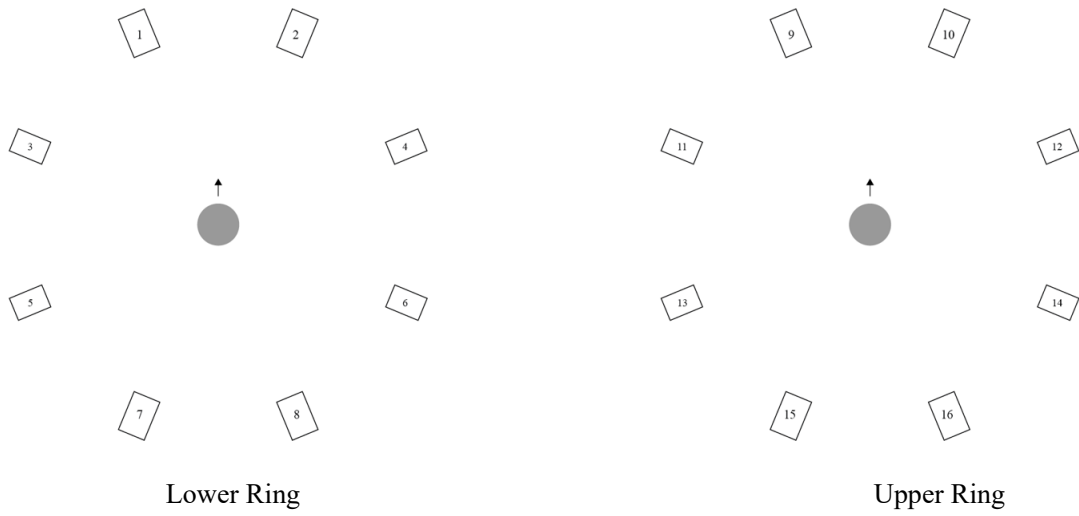


Figure 46: 16 Channel Loudspeaker Layout

Speaker	Azimuth	Elevation
1	-22.5°	0°
2	22.5°	0°
3	-67.5°	0°
4	67.5°	0°
5	-112.5°	0°
6	112.5°	0°
7	-157.5°	0°
8	157.5°	0°
9	-22.5°	35°
10	22.5°	35°
11	-67.5°	35°
12	67.5°	35°
13	-112.5°	35°
14	112.5°	35°
15	-157.5°	35°
16	157.5°	35°

Table 4: 16 Channel Loudspeaker Positions

Used for pieces: *Mmabolela*, *Orford Ness II*

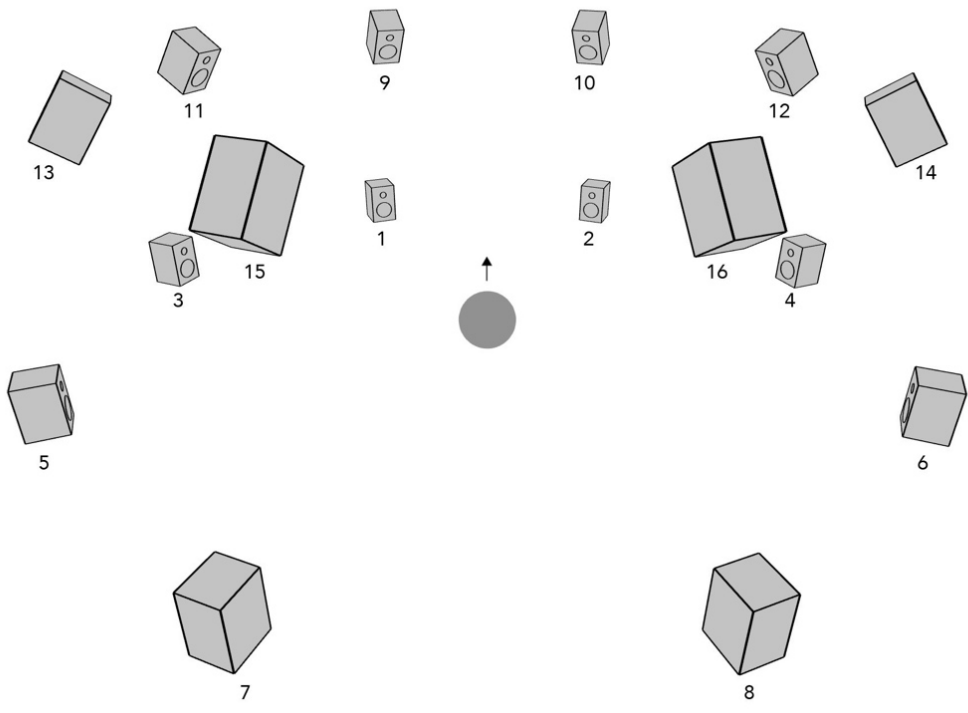


Figure 47: 3D Visualisation of 16 Channel Loudspeaker Layout

CHAPTER 4: CONCLUSION

This research project set out to explore the use of field recordings within the areas of pure field recording composition, soundscape composition and acousmatic music through my own practice. I explored these terms and definitions through the portfolio of works that was informed by a series of interviews taken with practitioners working in the field. I explored the boundaries of people's identification and used this as a tool to reflect upon my own work.

Each of the works included in this portfolio contributes to the findings and allows for discussion of the overarching themes and aims of the research. By proceeding thematically, I was able to consider the relationship between the works and to reflect on my practice as a whole. I was inspired by the myriad of possibilities of sound and to experiment with the use of field recordings in a variety of ways.

I found that the use of pure field recordings in my practice was more successful in the installation works than in the concert works. The simplicity of presenting pure field recordings for these installation works was enough and with the audio being presented alongside image or video, the works were contextualised clearly. The soundscape works derived from recordings at Mmabolela Estates were most enjoyable for me as a composer, due to my love for working with environmental sound. The most rewarding aspect of composing these works was seeing how recordings from one recording trip could result in so many endless possibilities of composition, and, of course, working

with such rich and beautiful materials. Many of the soundscape works lie between genres, such as *Orford Ness*, *Mother and Child* and *Sounding Surfaces Holders Wood*. The use of field recordings within these pieces leans towards the acousmatic tradition as many of the sounds have been processed heavily, but they still maintain recognisability of source material and knowledge of environmental and psychological context. On the other hand, works such as *Orford Ness II*, *Further Afield*, *Ancestor I* and *Sounding Surfaces Stirchley* become more abstract resulting in a loss of recognisability in the source material and conforming to my definition of acousmatic music. Composing acousmatic music was rewarding as it allowed me to manipulate and abstract the sounds, experimenting heavily with processing techniques.

When starting this research project, I expected to find conclusive findings as to how to define my work, but this was not the case. On reflection, I found that having an awareness of genre and classification of the use of field recordings informed my composition process but also allowed me to explore areas that I would not have worked in otherwise. Whilst works have been clearly categorised in Section 3.5, it is interesting to note the diversity of works included in this portfolio and how many works lie between boundaries.

Through my work, I have observed the cross-over and diversity of what has been produced. By not confining myself to one genre I had more flexibility to respond in different forms of compositional outputs and it also meant I could engage with a greater number of people on a wider level. For example, I have used field recordings to create

concert works for loudspeaker arrays, but also used recordings to create soundwalks, binaural listening sessions and installation works. The materials can be used for many different outputs and each type of work reaches a different audience, which is expanding now that there is a greater engagement with listening practices in the mainstream.

I now have a better understanding why so many of the artists I interviewed did not conform to one genre or want to narrowly define themselves. Leah Barclay, for example, states in her interview that whilst there is a lot of value in terminology and context, she often varies the term she uses to describe her work depending on the audience she is working with. 'I just use the appropriate terms for the appropriate people at that point in time, the way I think they are going to respond to the work and contextualise it in a way that feels right for that context' (Barclay, 2018). It all comes down to the presentation of the work. The same piece of music could be labelled as an acousmatic piece for an acousmatic audience but a soundscape piece for a different audience. The labelling of a work is a way of enabling people to engage with the work with a level of understanding.

Rather than limiting ourselves and trying to push things further into categories of work, it may be more helpful to work freely between boundaries. In my case, I was able to creatively experiment with field recordings, expanding and developing my practice to access new audiences. My work has been presented at academic conferences and festivals internationally, on radio shows and online and in community-based events

such as *Ten Acres of Sound*, *Return to Nature Festival* and the *Artefact Winter Open*. This journey from working exclusively with multichannel composition to presenting works to a wider audience is something I wish to pursue in the future and has been extremely valuable to my practice.

My research has given me the impetus to reach wider audiences with my work in all sorts of forms and I am now working with a wide range of communities of artists. My work fits into the acousmatic, soundscape and field recording communities. I have learned that I do not want to push to define myself or limit where I can go in the future by giving myself a new title, which was something I was considering at the start of this research. Once realising this, there was a shift in my work from focusing on the creative outputs and where these lie to a focus on an awareness of the environment.

Reflecting on my portfolio of works there is a clear research trajectory and development of my personal aesthetic and sound.

There were two major turning points in my research. The first was the investigation of Jonty Harrison's work *Going / Places* which is a work that fits equally into my definitions of the acousmatic and soundscape traditions. My own work can also be categorised in this way due to the dualities of soundscape and acousmatic traditions that is apparent in the work.

The second key shift in my artistic journey was the composition of *Mmabolela*.

Through a balance between soundscape representation and musical abstraction a hyper-reality is created which conveys a 'spirit of place' (Watson, 2020). It was at the end of composing this work that I felt satisfied that I had found my voice as a composer and my original aesthetic, thus my unique contribution to the field.

By the end of my research project a strongly original aesthetic approach that does not follow a mould is evident. It has its own salient features and characteristics, and areas of exploration and themes that are reflected upon below.

There is a prevalent narrative arc and structure to all the pieces across this portfolio which is the relationship and ambiguity between natural and abstract sounds. For many of the works, the structure moves from natural to abstract to natural sound worlds. The ambiguity between the real and unreal is maintained throughout the portfolio of works.

The exploration of different perspectives of one site as a compositional methodology is investigated in depth across the portfolio. For example, the use of contact microphones to record the internal (hidden) sounds of objects of environments, and at the other extreme the use of ambisonic recording techniques to capture a wide panorama of a soundscape. In addition, there is also the subtle layering of different perspectives. These show the contrast between micro and macro worlds, internal and external sound worlds, and the use of ambient and close-up spaces. The juxtaposition of these perspectives highlights the importance of microphone techniques within the compositional process.

There is a sense of musicality that is inherent in all the works. My own unique musical training and sensibilities have shaped my approach to the soundscape materials and the investigation of place. In particular, the use of large swells and striking cuts between perspectives, frequency ranges or sounds is an exciting feature in many of the works.

The leading theme across all the works is a sense of place. I have created biomes around the sounds of a place to share my experience of these places whilst speaking to the listener and drawing them in. Within the installation works particularly, there is a translocative aspect to the work, where several spaces (live and prefabricated) are combined and explored at once, bringing the sounds of one environment into another.

These aesthetic and narrative choices are reflected in my own sound and compositional process that has evolved out of established practice to shape my own personal approach and develop my unique voice. Through my awareness and understanding of the traditions within the field I have chartered a path for my practice which lies just outside of, or across these definitions and boundaries enabling me to create the works in this portfolio and providing a route for continued explorations in future research.

Since completing my portfolio of works, I have had a commission with *The Land Lines Project* at The University of Leeds. This piece is themed on ‘Visualising the Nocturnal’ and documents nocturnal wildlife in the UK, commenting on extinction, the effects of the man-made world on a natural environment and brings a wider awareness of environmental sound. I developed the Stirchley Soundwalk for *Ten Acres of Sound*

Festival. This involved the creation of a sound map of listening points in the local area that becomes more abstracted as the walk progresses – moving from a natural to abstracted sound world. I also released my first album ‘*Sounds of Mmabolela*’ which was reviewed in *The Wire Magazine* and released *Binaural Soundscapes*, a series of listening sessions with *We’re All Bats*.

I am now at a place where I feel happy and confident in my practice and finally feel that I have found my voice. There is so much beauty and knowledge to be found in environmental sound and this is something I want to share with others through my work. My aims for my future work do not concern themselves with genre or definition, but with the importance of listening as a way of bringing a voice to the environment and the changing world around us and communicating this to a wider audience.

APPENDIX 1: FULL INTERVIEW TRANSCRIPTS

See separate document.

APPENDIX 2: PERFORMANCE INFORMATION

Saudade

Postgraduate Concert, Birmingham, 2017

Paddabolela

Minibeast, Birmingham, 2018

BEAST FEaST, Birmingham, 2018

Ecoacoustics Congress Conference, Brisbane, 2018

Dlr Lexicon, Dublin, 2018

The Global Composition, Darmstadt, 2018

Spektra Festival, Columbia 2018

City University: Annie Mahtani, London, 2019

MANTIS: Annie Mahtani, Manchester, 2019

NOODS radio, WEŁ∞KER mix, 2020

Ten Acres Radio Hour on Brum Radio, curated by Nikki Sheth, 2020

Limpopo

Dlr Lexicon, Dublin, 2018

Greenwich Loudspeaker Orchestra Series: Annie Mahtani, Greenwich, 2019

Minibeast, Birmingham, 2019

Ten Acres Radio Hour on Brum Radio, curated by Nikki Sheth, 2020

Mmabolela

BEAST FEaST, Birmingham, 2019

CrossCurrents/BEAST: Beneath the Dome, Birmingham, 2020

Resonance FM, Framework Radio Edition 704, curated by Jilliene Sellner for
International Women's Day Takeover, 2020

Waffle Podcast, ep. 43 with Andrew Knight-Hill, 2020

Ten Acres Radio Hour on Brum Radio, curated by James McIlwrath, 2020

Orford Ness

Audiograft Jukebox, Oxford, 2017

BEAST FEaST, Birmingham, 2017

Sound Thought, Glasgow, 2017

Sound + Environment, Hull, 2017

Balance Unbalance, Plymouth, 2017

Perspectives on Listening, Brisbane, 2017

Dlr Lexicon, Dublin, 2018

Loudspeaker Orchestra at Bournemouth University, Bournemouth, 2018

Further Afield

Sound Thought, Glasgow, 2017

BEASTdome: Footsteps, Birmingham, 2017

Mother and Child

Crosscurrents NME Concert, Birmingham, 2018

Crosscurrents: BEAST Sonic Paintings children's workshop, Birmingham, 2018

Ancestor I

Green Heart Opening Festival, Birmingham, 2019

Ten Acres Radio Hour, curated by Nikki Sheth, 2020

Bird Calls of Sub-Saharan Africa

Barber Late, Birmingham, 2019

Aulus-Les-Bains

CAMP, Aulus-Les-Bains, 2018

Sounding Surfaces Holders Wood

Return to Nature Festival, Birmingham, 2019

Sounding Surfaces Stirchley

Artefact Winter Open, Birmingham, 2019

APPENDIX 3: RECORDING AT MMABOLELA ESTATES



Figure 48: Waterhole 2, 17th November 2017



Figure 49: Makopapan, 18th November 2017



Figure 50: Jackasfontein, 17th November 2017



Figure 51: Hippo Pool, 19th November 2017



Figure 52: Harry's Weir, 21st November 2017



Figure 53: Harry's Weir Overnight Location, 21st November 2017



Figure 54: Hippos at Mabolet Rock, 26th November 2017



Figure 55: Mabolet Rock, 26th November 2017



Figure 56: Plunge Pool at Weederdooper House (where frogs were often recorded)

AUDIO APPENDIX

See 'Audio Appendix' in media folder.

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Interviewee: Leah Barclay

Interviewer: Nikki Sheth

Date: 04/10/18

Location: Skype

N: Can you explain your practice as whole, including the different types of work you do, for instance the projects you focus on, your outreach work and your composition work? It seems like you have a lot going on!

L: Yeah sure. I work primarily as a sound artist and composer and I would define everything I do as falling under the umbrella of acoustic ecology. I guess I spend an equal amount of time practicing as an artist as I do engaging with education, whether that's teaching music technology and composition in an academic context or running workshops in the field.

I work with very specific environments and a lot of my work is focused around biosphere reserves and a lot of it is focused around aquatic ecosystems (rivers, reefs and more recently wetlands).

Again, I view my practice in acoustic ecology as an equal balance between engaging with sound from the perspective of scientific research, biodiversity monitoring, sound as a tool to engage communities in their environment and to inspire them to engage with conservation efforts and sound as a way for me, as a composer, to engage broader communities in understanding what is happening in these ecosystems as well.

N: You have a background in electroacoustic composition? How did you come about doing sound ecology work?

L: I was classically trained and I wasn't really exposed to technology and electroacoustic music to a greater degree until about half way through my undergraduate degree, more towards the end of my degree. When I first started working in electroacoustic music I just fell in love with it. With the infinite possibilities of technology and I thought there was nothing else I would want to be doing really. I was still writing a lot of instrumental music and a little bit of orchestral music, but I basically just fell straight into electroacoustic music and in parallel to that, I was very engaged in the conservation scene, particularly in Australia, but in different parts of the world as well. I was doing quite a lot of conservation work in India at the time and in Cambodia through some of the UNESCO work I was doing, so it just seemed like a natural combination. The more I was doing field recording as material in my compositions, the more I realised that there was so much information in those recordings that was not just an amazing sonic resource in terms of my own compositions, but was also revealing all of this information about the health of the environment and this was such a wonderful tool in being able to engage communities in having a deeper understanding of those ecosystems.

N: And when you were doing your undergraduate course, studying electroacoustic composition, did this cover field recording? Was this part of the module or syllabus?

L: There wasn't any field recording component to my undergraduate studies and there wasn't any mention of acoustic ecology in that context. I mean I was actually really lucky as I was in quite a conservative program in terms of approaches to music and technology, for that matter. The main course tutor was away for that semester and we had a visiting composer which was John Coulter from New Zealand and he was quite engaged with the New Zealand and British electroacoustic music scenes. He took that course in a completely different way and that was my exposure to electroacoustic music and my entry point into field recording as well. But field recording was not taught as part of that course and at that point in time, it wasn't taught at all as part of the program.

N: And then how did you get experience with microphone and recording techniques? Are you self-taught?

L: I think initially, largely self-taught and then I did a few sound art and field recording workshops. One in Montreal and one IRCAM workshop which had some field recording components to it. I also got some funding to do professional development with a couple of people in Australia, for example Ros Bandt. I worked with her quite a bit initially in her "wild" approaches to field recording and she was my

entry point to hydrophones as well. So, I would say initially self-taught but a lot of mentoring and guidance from people along the way.

N: **Alongside your ecology work, you also create multichannel compositions.**

Do you see this as a separate strand of your work to your acoustic ecology work?

No. I think it's interesting, the more I am engaging with science and climate change, the more I am realising that those immersive electroacoustic music compositions and augmented reality and virtual reality works are serving a very specific purpose in those contexts and the target audience isn't necessarily the target audience I am talking about in the context of a lot of those broader interdisciplinary projects.

It is sort of interesting to think of when I started working with multichannel electroacoustic composition and where I was pitching this in terms of the audience and thinking of how people would experience it to where it is sitting now in the context of some of these climate change events as a tool to engage people that may know nothing about the Great Barrier Reef or the canopy of the Amazon rainforest.

I definitely don't see this as separate. I see it as interconnected to that broader intention.

N: **Are your compositions a direct outcome of the ecology work you are doing?**

L: Definitely, yes. I would say everything. Unless it is a very specific commission then maybe not in those circumstances, but I think everything I have been doing for the

last few years is a direct outcome from the large-scale interdisciplinary ecology projects.

N: And picking up from what you said before, about the audience and how this has changed over time. I would imagine that when you first started your practice the audience was very much academic, perhaps a narrower field of people that were interested in the work. Could you expand or comment more on this?

L: I mean, I guess I had a bit of a realisation through my PhD and I think this contradiction is still in my practice today, but this very inherent contradiction that I was talking about – the importance of engaging with the environment and listening, all the key principles of acoustic ecology and then suggesting that it is essential to have a 16 channel surround sound system and there had to be Genelecs and wanting to ensure the best listening context for these pieces. But then, it is not really realistic to have this sort of approach outside of an academic context necessarily, or in a context of working with remote and regional communities.

When I was pitching a lot of these projects around the focus of regional engagement, but then not really being able to tour that kind of work, I guess there is some contradiction there in terms of the audience. I think it is interesting looking at some of the work around the Great Barrier Reef that I have been doing in the last few years. It's for the communities there, I am working with indigenous communities in remote and regional areas along the reef. I feel like the project is designed to bring attention and awareness to what is happening there, but then they are engaged in the environment and

listening to these sounds every day, so the outcome of an immersive composition is not really for them. They don't need to listen to it as a tool for interconnection to get a deeper understanding of the environment. They are already engaged; they are already on the ground protecting these environments.

It is kind of interesting to think, when we talk about that five percent of climate deniers or the problems with the Anthropocene, that sort of inherent way that humanity has gone wrong and all of the reasons we are in this climate crisis and the idea of using sound as a tool to reconnect people to the environment. It is almost, in a way, that I am composing pieces for the people that I am writing these terrible things about in these papers in terms of politicians and all that. There is an interesting contradiction there as well, but also, I think, a really important conversation around what actually happens if you have a bunch of politicians in a 16 channel concert. Can it actually connect them to the environment in a different way? I one hundred percent think it can and I have seen it happen. I think it is a very different experience for someone to be a politician or some kind of decision maker to be in a room talking about these environments or to be immersed in this new experience that we know can kind of transform how people think.

The point I am trying to make is that yes, the audience, in terms of how I am thinking about the way these works are disseminated, has changed pretty dramatically over time.

N: How do you use field recordings within your work?

L: A whole different series of ways. I use a lot of raw recordings. I use a lot of processed recordings. I work with a lot of infrasonic and ultrasonic material that I have to transpose and filter for it to be audible for humans.

N: Is your work normally site-specific?

L: As in, when it is performed or presented or as it is related to?

N: This is a question I have been asking myself. When asking this question to composers, some of them have been answering in terms of recording location and others have been answering in regard to the presentation of the work and location of performance. So, I think there is a question to ask about the term site-specific. I have always viewed it as site-specific in terms of recording location. So perhaps both answers, please?

L: Ok, sure. I will answer to both then.

I would say, in terms of site-specific from a field recording perspective – yes, absolutely.

I have done work very early on where I didn't necessarily acknowledge the location of the recordings or think it was necessarily that relevant to some of my earlier pieces. But the last ten years I think every single electroacoustic piece I have done has been very site-specific. For me, it has been very important to acknowledge the recording locations

and get permission to record there. Because I have done work with indigenous communities as well, acknowledging the site has been critical to that process. It is important for me that it is site-specific because I am often talking about some conservation focus of that environment. To not have it site-specific would be problematic in my overall approach to what I am doing.

In terms of the dissemination of the work, I definitely try and make sure all the works are responsive to where they are being presented and for a lot of the outdoor works that I do, I am often mixing in live streams from the ocean or a nearby river or creek. That is always an important way for me to have a site-specific element in those performance contexts.

N: What term would you use to describe your composition practice?

L: Look, to be honest, at this point I sort of vary the term based on the audience that I am working with. Not audience in the context of who is listening, but because I am trying to present this work and use this work as a tool for climate action and conservation, I am working with a lot of policy makers and a lot of scientists. Therefore, it varies from electroacoustic music composer, to sound artist, to sound designer, to acoustic ecologist and ecological sound artist and ecoacoustic whatever.

I was, at one point, quite specific with the terms that I was using. I think it matters and I think the work that people like Jono Gilmurray have been doing around ecological sound art is all really important. And I think I got really caught up, for a good few years,

in all of the terminology around electroacoustic music and soundscape and acoustic ecology and ecoacoustics. I was battling the ecoacoustics crew around not acknowledging terms and not acknowledging acoustic ecology. I think there is a lot of value in terminology and context, but for me it has just been about sound and listening. Whether we are calling it electroacoustic composition or sound art or acoustic ecology, it doesn't necessarily matter in a lot of contexts. Obviously it matters if we are publishing in a book, but I guess I just use the appropriate terms for the appropriate people at that point in time, the way I think they are going to respond to the work and contextualise it in a way that feels right for that context.

That was probably the vaguest answer you have got.

N: No, actually it sounds so familiar to the way that I feel now. Previously I felt that I knew my work was specifically one term and earlier this year I went on a residency to France and I realised that the terminology means so many different things to different people. What I am calling it could be something completely different in someone else's eyes. Does it really matter actually? Outside of an academic environment, for example when I say something to my dad, he has no clue.

L: It is really fascinating how the terminology shifts and how it shifts across cultures. Looking at how terms are shifting and how artists are starting to engage with scientists from more of a scientific perspective. These little pools of research are happening in different parts of the world completely disconnected and oblivious that

this work has been happening since the seventies. It is really fascinating how you look at some of the terms that people use or have coined more recently and how similar they are to dictionary definitions of other terms.

N: And now bringing it back to the work of the World Soundscape Project and the term ‘soundscape composer’. Would you say you identified with this term at all?

L: I don’t actively use that term, but I definitely identify with the term. I don’t correct anyone if they call me a soundscape composer. You know, a lot of my students use the term soundscape composer because they like it and they have been reading the more historic research. I mean I don’t actively call myself a soundscape composer, but I definitely would accept that term as something within the umbrella of all the things we do.

N: And do you feel that the term has evolved since the term was coined?

L: The term soundscape or the term soundscape composer?

N: Soundscape composer, but it would be interesting to hear your opinion on both.

L: The term soundscape composer has definitely evolved in terms of what the scope of that actually is. But I guess you could say that a soundscape composer, an

ecological sound artist, an ecoacoustic composer – I mean, what is the difference between any of those things?

Yes, it has definitely evolved but there is a lot of layers to that.

And the term soundscape itself has definitely evolved as well and we have got a lot of people out there at the moment that are really advocating for that as a sort of critical word in both the sciences and the arts and then a lot of people who are saying it is a horrible word and we should stop using it.

I think it is a really important word in these field and it works across a lot of contexts. It is quite easy to use that term across the sciences and across the arts.

I find both terms really accessible for young people, in workshops for five to six years olds, I think it is a really valuable term in that context. All the way to working with UNESCO, that term and the history and body of work that is associated with it is really critical as well, whether you are going down a Schafer line of thought or Bernie Krause's work which the reality is, he has been such a strong influence in the media, people are more likely to know his work. Even in the context of using soundscape in those scenarios I think it is a really important word as well.

N: Do you feel as though there is a cross over in your work between fields? E.g. soundscape composition, acousmatic music, field recording etc.

L: Yeah definitely. I guess it comes down to the terminology again.

I would think most broadly my practice crosses arts and science. That is very much what I am advocating – interdisciplinary work around art and science.

If you want to break down the definitions of things like electroacoustic music composition, acoustic ecology, ecoacoustics, I would sort of say that I am crossing through what we traditionally define as those different fields. But I am still advocating for acoustic ecology as the umbrella field that is connecting from indigenous knowledge systems and deep listening to the more sophisticated scientific approaches in ecoacoustics. There is enough work happening in ecoacoustics now that is it important to use that term to capture all the emerging sides but the artistic layers as well.

N: Do you have an aim behind each of the pieces you compose?

L: Yes. Definitely. Did you want me to elaborate more on this?

N: Well, I am, under the impression that the aim behind your compositions is a direct outcome from the acoustic ecology work you are doing.

L: Yeah definitely. I mean I still look at those multi-platform outcomes as well. I often adapt pieces for different scenarios, but there is always a clear intention to all the works.

N: How do you begin the composition process?

L: It is very intuitive. I don't think my composition process has changed dramatically over the course of doing all this work. What has changed is how it is embedded and how I am treating the material in a way that is responsive to the site that is embedded in that as well. In terms of my approach to composition, that has been the biggest change.

In terms of the actual process, very intuitive. Taking all the field recordings, clean them and edit them initially and then working with them pretty intuitively in the studio.

Maybe I would have a structure of the work sketched out as a graphic score or maybe I would develop that structure through the composition process. I would certainly have a general idea of how the work is structured but it is all very intuitive.

The only big change is my level of engagement with the site and I think this is most prevalent through the aquatic works, the Great Barrier Reef work and the river work, in that I work directly with scientists with the process of analysing the recordings.

For me, I might be more attracted to sounds that I think are really sonically interesting, but I have been really conscious, more recently, when I am putting a stronger

prioritisation on sounds, particularly aquatic sounds that are an indication of environment degradation as opposed to environmental health. That is a really interesting dynamic to be making when they are abstract sounds that we are not associating with pollution or a healthy ecosystem. The audience doesn't know that I am making conscious decisions around these sounds, and maybe that doesn't matter. But I have this hope that we will be just as engaged with the soundscapes beneath the water as we are with terrestrial soundscapes in the future.

N: I have chosen two of your pieces to discuss - *Intrinsic Connections* and *Migration Patterns, Saltwater* as I have heard those both as multichannel installations.

Starting with *Intrinsic Connections*, what was the aim behind this piece?

L: That piece was really all based on recordings from the Great Barrier Reef and the coastline of Queensland. It was really about immersing listeners in this ecosystem that we don't traditionally think about as a sonic environment. Journeying through this seascape in a way that gives the experience of being immersed, being there and listening from different perspectives.

I went through the process of analysing all of those recordings from the Great Barrier Reef which were done for both scientific research and for the purpose of this work. They were done over the course of a couple of years and I was quite interested in this idea of listening from different perspectives as well. How cetaceans experience the

sound of a ship going past, snapping shrimp and how fish are basically using sound to navigate and find the Reef. There is the kind of clichéd element of the anthropogenic noise that underpins some of that piece, but it was much more about connecting people to the Great Barrier Reef in a way that we don't traditionally think about.

We have seen all these images in the media of the Great Barrier Reef, it is always very visual, the healthy reef and the dead reef, this is what it looked like, but there is never a conversation on what it sounds like. Sound is actually one of the most powerful indicators of dying coral. Snapping shrimps are these incredible loud soundscapes in the environment of a healthy reef so it is just so obvious that they can be used to monitor the health of the reef.

There was a scientific intention in that work of wanting to draw wider attention to the awareness of ecoacoustics as a tool to be able to monitor the health of the reef and then that broader connection with immersing someone in listening from the perspective of listening from different species on the reef.

N: How much processing of the sounds did you do in this piece?

L: Quite a lot. I had terabytes and terabytes of recording from parts of the reef that had very little activity, just distant boats and occasional fish or dolphins. I processed some of this material quite densely to reflect that sparse nature of the environment. I also had some ultrasonic recordings of electric fish and things like that, dolphin echo location, that I processed quite a lot as well. A lot of it was just sort of intuitively processed to bring out different qualities in those recordings.

N: Typically, what sorts of transformation processes will you use in your work?

L: Software wise I used a lot of Max and PD patches, Kyma, GRM tools for different filters. I use Pro Tools as my DAW in most situations unless it is being mixed live for which I would use Max. I don't have a strict process in terms of what is my go-to software or processing tools are, it depends on the piece.

For this particular work I used quite a few different Max patches, lots of EQ with the snapping shrimp recordings to process them in a way that made them sound quite engaging.

N: Do you find that your background as an electroacoustic composer influences your work a lot?

L: Absolutely. Without that skill set I wouldn't know how to approach sound in the way that I do.

N: Do you find that it pushes you to a more abstract, manipulated approach to sound?

L: I would say yes. I think my composition background more broadly probably does that too and my background in music as a performer too.

N: How did you decide upon the sounds you were going to work with for this piece after having recordings taken over the space of years?

L: Initially, I was quite interested in taking select sounds from different times of the day across days and months, so the piece captured the seasonal changes. It was quite a calculated approach to the sound material.

When I designed this process, the reality of a lot those recordings was that it was just twenty four hours of nothing or ten hours of a few fish knocking against the microphone and then other times where there were all these incredible sounds happening.

Therefore, I ditched that calculated approach very early on and went with a much more intuitive listening approach and opening a 24-hour waveform, scanning through it and visually selecting material and listening to it, editing it, exporting it and taking that to a filtering and processing environment.

N: Am I right in considering this piece to be in three sections?

L: Yes, it is.

N: When you have a multichannel piece, do you normally just reduce this down to stereo or would you re-version the piece?

L: Totally depends. I don't put a lot of my surround work online for obvious reasons, but it depends. I am obviously creating a lot of these works in a very adaptive

way. I have mixed that piece, *Intrinsic Connections*, live as a 16 channel piece and as quad piece. That is often taking the stems from the 8 channel piece and mixing those live, or in some circumstances I have mixed it down to a stereo piece and then diffused the stereo piece over quad or 6 channel.

N: How do you go about writing longform pieces?

L: As I was saying before, in this piece for example, I had that calculated piece, a graphic score of the way I wanted to approach it and I worked on various sections of it.

Usually, I would approach a piece in movements and work with materials I have processed and sculpted through various methods and bring all of those files into different patches or start experimenting with them in movements of a piece and then gradually start sculpting those together. That is my usual approach with some kind of graphic score and method to sketch out an overall structure of the way I am approaching the different movements of a piece.

N: Can you tell me about your most recent piece, *Migration Patterns*, *Saltwater*?

L: *Migration Patterns* was commissioned for Arts House in Melbourne, last year for their '*In Extremis*' exhibition. It is a one hour installation which I have been performing live as well, where I mix the work live, usually 8 channel.

It is all based around recordings from the coastline of Queensland. So, it connects quite well to *Intrinsic Connections* and there is actually some quite similar sound material between the two pieces as well. Some of the snapping shrimp and humpback whale recordings cross over.

Basically, *Migration Patterns* is very focused on humpback whale migrations and research that I have been doing around Fraser Island which is a key breeding spot for humpback whales and this idea that you can actually map temperature changes in the ocean to humpback whale song.

There was this notion a couple of years ago that the male humpbacks were changing their song based on warming waters and they were coming later at that point in time. The last two years they have come earlier, last year they came three weeks earlier and this year it is whale season now and they came four weeks earlier.

The whole idea of the *Migration Patterns* installation, in a similar way to some of these other works, was definitely about bringing a wider attention to the scientific research and the value of ecoacoustics as a tool to deeper understand the environment and to immerse someone in this aquatic ecosystem. The idea that someone being able to experience sound in the ocean in a completely different way, I think is quite fascinating. Just thinking of this incredible complex sound world that particularly these whales live in and there is that undertone of anthropogenic noise in this work as well. The overarching intention is about connecting people to the soundscapes of aquatic ecosystems.

Interviewee: Jonty Harrison

Interviewer: Nikki Sheth

Date: 24/08/18

Location: Face – to – face, Birmingham, UK

The interview started with an informal discussion on the piece *Going/Places* after I brought up a recent review of the piece that compared his work to the work of Chris Watson. (Sagainst4, 2015)

J: Someone who was at the performance said it was a collection of field recordings. Well, yes and no. It is not simply a collage; it is something else. It is not documentary; it is not a bunch of unprocessed field recordings. You kind of worry that somebody who had just given you a really good review but thinks that it is pretty much unprocessed field recordings... well you wonder how good this person's ears are. To my ears, it certainly isn't field recording and it isn't unprocessed, but then I know what I did.

...

N: Can you briefly explain your composition practice? (Including the use of 'real sound sources' in your work.)

J: Briefly, probably not.

Pretty much all my work since the mid-eighties uses real sounds, sometimes recorded in the studio but more recently, recordings I made out and about, wherever I have been on my travels.

I usually carry a couple of recorders like that (pointing to my Tascam 44 WL), and I have a Sound Devices and a couple of microphones. Depending on how energetic I am feeling, I will set up one or the other. I have an Olympus which is really handy because you can whip it out of your pocket and you are ready to go, it is like a sort of snapshot camera rather than setting up a fancy DSLR and changing all of the settings and all of that. Sometimes, if you hear a sound that is interesting you just want to get it. You don't want to miss it and so sometimes you lose out on the quality of the recording – but at least you get the sound. So often the sound will last a little while and then it will stop; you want to get it before it goes. Therefore, I find the hand-held very useful from that point of view.

In terms of my compositional practice, what I would tend to do then is to spend a lot of time with those sounds back in the studio, developing them or exploring them in some way. First of all, I would make a rough selection through editing, or saying that sounds rubbish or that distorts. I tend to chop things up into moderately short sections which I then tend to export as sound files rather than keep them as regions within a Digital Audio Workstation because they are less portable. If it is a real sound file, then you can load it in any application. A lot of what I do uses BEASTtools which is Max based. So, you want to be able to throw a few files into a setup and then see what sort of things you could do to it or get out of it.

Very often, when I collect sounds, I have no particular thought as to why I am collecting this sound. I don't very often go out to capture a certain sound. I mean I have done on occasion, for example when I was composing *Internal Combustion*, I knew I wanted to get various engine sounds with contact microphones, so I would specifically set these things up. And of course, that is a little more akin to using studio made recordings of source material where the objects in question have to be brought into the studio to record them. I haven't done that so much recently but plenty of other pieces of mine are based very much on having a controlled environment.

More recently, I have got more into recording and using sounds that somehow indicate their environment as well. That I think, is part of a change in my compositional attitude to try to somehow involve issues like recognition and memory. The sounds, when you record in the studio, that you are after in a classic *Musique Concrète* style, is the sound and the sound only. You don't want anything else; you want as pure of a recording as you can get. When you go out into the field the chance of getting anything as remotely pure as this is virtually zero, as you know yourself. You can't really localize or focus on the sounds, you can either take the whole context or you can't use the sound.

The point is that this is a very specific set of fingerprints for a recording that say this is where it is and sometimes you can tease out particular aspects more than others and sometimes you don't - you leave it as it is. But, if what you are trying to do is deal with things like memory, recognition and evocation of a specific place or even generic places, those sort of elements and levels of understanding become part of my compositional strategies.

Recently, in 2014, we did a gig just after I left the University of Birmingham, at the Ikon Gallery and I said this location would be really interesting because we were in three interlinked galleries and there was also a stairwell and an education room. So, I had five potential acoustic spaces to play with. I designed a system using twenty loudspeakers in different places and I made a piece (*Hidden Vistas*) which used straight recordings gathered from all over the world played concurrently in different spaces.

You could be in one space and there would be two speakers on the ground and two speakers on the ceiling that would be playing two different environments and then in the next gallery there would be two more environments. What I was trying to play with was the idea that as the audience walked around, you could effectively be in one environment but in another room, the sounds from a distance would be of another sonic environment, playing with the fact that the simultaneity of location was possible within acousmatic music, whereas it is geographically impossible – you can't actually be in Marrakech and in Borneo at the same time, but you can sonically. I re-worked all the material for each version of this and even did a 30 channel concert version and a 14 channel version for another gallery in town.

This led on to the development of the idea for *Going/Places*. But I reverted, if you like, to the idea of hoping that it would be more acousmatic, that one would feel that a lot of material was more abstract, even though it was tied very strongly to a place; you didn't necessarily need to know what the place was. Although in the end I decided to make this information available in the programme notes, but that was only a starting point for creating a sense of place which was very largely artificially done. For example, the

Quayside Sydney harbour scene was recorded at that place, but they didn't all happen there at the same time, during that one recording. It was a composite which I then reconstructed and messed with and changed in order to create a new hyper-location or -reality. So latterly, that is the kind of thing that I have been doing with field recordings.

N: Is your work normally site-specific?

No, not in the sense that most site-specific works are, i.e. they are designed to be played in a particular location.

I mean, in a sense you could argue that *Hidden Vistas* was site-specific because, without the three gallery rooms interconnecting and the “special effects” areas (stairwell and education room), I wouldn't have the specific solution that I did. To that extent it is site-specific, but it is not exclusively only for the Ikon Gallery. I could adapt it to different venues, provided it had a similar sort of set up.

One other observation to make with this is that the BEAST system has strongly influenced the way I think of things and the way I think that sound could be handled in presentation. When we first got hold of the Bramall, we had a week when we could get into the Elgar Concert Hall and we were really anxious to see what things sounded like. We ended up with a situation where, I felt, we had something that sounded really good in the space, but we had eight speakers in a circle, the main system, and eight diffuse speakers... and the minute you think of that, you think, actually I could have different sounds on these different sets of speakers. And then, of course, if you have a close array

of little speakers at ear height, some on the trusses and then the keystones and the tweeters, again you could have specific materials for specific loudspeaker arrays and parts of the system. And because these are ATCs, APGs and Genelecs they sound different anyway, and so I started thinking of the idea of a composite environment of loudspeakers, where I could put different types of materials on to different loudspeakers to different effect. If I wanted to have something that in the real world one would think would come from high up, I could put this on the high speakers and not on anything else, and so it went on.

That system-specific way of thinking is also transferable to different systems.

The piece *Going/Places* was composed for the HISS system and I knew what the speakers were, and we tried things in the given positions, and I knew roughly what I wanted. In a funny kind of way this has gone away from what I had always done with BEAST, which was diffusion. If you have a stereo source, then you deploy it in a way that makes some kind of sense with a piece. Diffusion is about making the material articulate itself – sometimes you move it and sometimes you leave it to play for a while.

That's a kind of slight variation on the notion of site-specific.

N: Do you identify with the term 'soundscape'?

J: In my own practice, no.

After the performance of *Going/Places* at BEAST FEAST 2016, Barry Truax came over and said to me “Oh, Jonty, I always knew you would come over to the soundscape thing”. And I said, “hmm, not really”.

Because it isn't. It's ambiguous I suppose, and a lot of things in that piece suggest that it is [soundscape] – but the soundscape is phony. It is one I have made out of elements of soundscape, but it is not soundscape. But then, Barry Truax would call his own music soundscape, even when it is granulated to hell and back. Have you ever heard *Pacific Rim*? It is basically four long movements and each one is a just a mass of granulation in a short sequence. I am fairly sure that is what it is. I think it is fantastic, the sound is huge because of the way he does his granulation. It is very vibrant. But he would still class that as soundscape even though it is really quite difficult. The events take on a completely different meaning as they are stretched over time, so you would not suddenly get a clang of a bell of something; it has a completely different impact. If he can call that soundscape, then I guess he can call *Going/Places* soundscape.

N: I mean, I could call *Going/Places* soundscape. What is your personal definition of soundscape?

J: Well, as I understand it (well, I may be wrong, though I have read a bit of R. Murray Schafer), it started out as a documentation of what he perceived to be soundscapes that were disappearing or in danger of disappearing, or in danger of being taken over by the drone of cars etc. With all of which I have great sympathy, but it is not what I do.

When I get my hands on sound, I want to take it somewhere else, create something beyond that straightforward documentation. So, although I do all the things that field recordists do, I don't then present my field recordings as [pure recordings]. Twenty seconds maybe, but then I would be wanting to take it somewhere else, I can't just not fiddle with it – that is my problem.

N: So your definition of soundscape is very much what the WSP were doing and Truax's definition of the term, but do you feel that the term has evolved over time?

J: Well evidently, it must have done because there are people who are doing what they call soundscape. But I think my point is that if soundscape is that kind of documentation, then what is a soundscape *composition*? One that simply uses some of those things? Well then, the question is, how straight would the usage have to be? How true to the original recording would you need to stay?

N: This is exactly my PhD we are discussing right now.

J: Good. I think it is a hugely difficult question because I think there are purists that would say what I do isn't soundscape composition because I mess with the sounds too much, but as I say, well listen to *Pacific Rim* and then tell me. If Barry thinks that is soundscape, well he has messed with the sounds there too.

It is a tricky one – soundscape.

I would say that soundscape recordings or field recordings are very frequently my trigger point or starting point for a composition. But I don't regard the presentation of documentary recordings as a composition. I would regard them as the presentation of documentary recordings. I just think composition goes beyond the mere re-presentation. But of course, re-presentation and representation of those places and those sonic images as part of a composition or as part of a piece of music – that might be exactly what I am about. But I still probably messed with them. They are hardly ever straight, even if you think it is a straight recording, it probably isn't, in my case. I probably tweaked something, or added something in that wasn't originally there, or that might have been there but later.

The Sydney Harbour section of *Going/Places* is a good example because all the boat horns didn't happen at the same time, in fact one isn't from Sydney Harbour, it's from Cairns up in Queensland, so really it is a completely different location, but I put it in because it has the reversing signal which is three blasts, and I just needed a different sound. But I mean anybody would think that all of those boats were leaving their moorings at the same time more or less. Of course, they weren't. It was recorded over some time. And also, the other thing is that the things going on around that (people shuffling around, boats getting tied up, clinking of chains and Chinese tourists having a conversation) were recorded at separate times and I placed things in a different part of the image and on different parts of the speaker array in order to achieve the effect of being in the middle of all these things happening. It's fake.

N: And so how would you categorise your work?

J: Acousmatic music.

N: Even the piece *Going/Places*?

J: Yes, it is sound which I have played with, intervened with. I have organised it. Remember Varèse, *Organised Sound*? It works for me. Why would you be surprised at calling it music?

N: No, it's not the term music. It's acousmatic.

J: But it is acousmatic. It couldn't possibly exist without the use of loudspeakers or as a live version.

N: I know, but I think the issue I have is from my own expectation of acousmatic music. What I think when I hear the word acousmatic. To me, it is sound that has been recorded in the studio and processed.

J: Yeah, but surely the main thing about acousmatic music is that the sources of the sound are not physically present at the moment of hearing them. They are played over loudspeakers. So, what you are talking about is true, but what I am talking about is also true, because all these things rely on loudspeakers for their presentation. The

difference is surely only in the nature of the sonic source or perhaps, actually, the recording conditions.

The one problem, as I said earlier, with using field recordings is that you might get the next-door neighbour's dog barking at the same time as getting this wonderful nightingale. You are not interested in the dog; you want the bird though.

N: I think I just don't relate field recording to acousmatic music.

J: So, how would you describe *Going/Places*?

N: I would describe that as soundscape composition. In my own practice I only use field recordings, but I abstract them, sometimes into completely unrecognisable sounds, that you can tell have been produced through the use of the computer. But I would still call this soundscape composition.

J: Hmm. Because of the sources?

N: Yeah.

J: Well, to be absolutely honest, it is what it is. It doesn't matter what it is called. I know that in academia you can't really say things like that. I take your point but my justification for calling it music would be that as a composer, I have made decisions about how things articulate themselves and when they happen and how they happen and

how they are shaped. Where things climax, where new material is introduced and where things cadence. You could say that is stretching credibility a little far, but you know, I am serious.

I mean my definition of composition is that I work with this material and we both have a hand in the final shape. I am not imposing my will on it. It's a partnership. I can't do what I want to do without the agreement of the material. It has its own character and goes in its own direction. It is almost impossible to push material into areas that it really doesn't want to go and to come out with a successful piece in the end. From that point of view, it's a co-production and my job is to be sensitive to what the material is and what it offers.

My basic point here is that there is so much in *Going/Places* that could only have been done by my very heavy intervention. It could not have really happened like that. For instance, the train in the first scene... I deliberately used those drones and musical things, but they are actually a result of superimposing events from different locations. The second scene, which is the cicadas, is a superimposition of several different takes in at least two locations and the helicopter was somewhere else. It's not one location, it's a fake. In some respects, I exaggerate and push the sounds in order to get an effect, an impact or to suggest something strongly enough.

I suppose I am working at various intersection points, but I just think I am doing what I do.

If you want to call it music that's fine by me, I call it music because I am a musician. I have come to do what I do through a musical route of musical training and very often, this is very clear in my music, that I am a musician by background. The way things finish, the way they emerge. Transition is very important to me and I will spend hours moving things around by milliseconds to get it exactly where I want. I am only satisfied when my musical sensibility is satisfied.

I tend to open a Reaper session and put a whole lot of sounds into the session. Then it's a question of finding the right one with the right shape to go with this other material. I try different ones and think: better, this one needs to be deeper and things like that. Then other times I do lots using BEASTtools and so on, where I just import a few sounds and process, process, process. I record the results and then maybe have to edit down a lot of 8-channel files that have been produced. As I say, very profligate and, because I won't throw any material away, I have everything here.

N: And is that how you organise your sounds? In folders with just one type of sound? No matter when or where you recorded them? (Referring to a folder of floor recordings)

J: Well, I know when and where they were recorded because of the folder names listing locations and dates within the floor recordings folder.

N: I see, so you separate it within that folder.

J: Yeah, well this is for a particular project that I am thinking about and I also have some doors and some gates.

But my initial way of organising my sounds is to have a source sound recording folder with the recorder name, separated by date and location and those are just the pre-edited sounds. But I have kept all of those.

Then after editing I would separate things, so for example the folders for *Going/Places* are divided into scenes. I used piccolo players and Mexican bagpipe players in a scene folder called Pipes and Drums because that was the common thread. The sound of a butcher at a market in Sydney is used with a recording of a guy singing on a gondola in Venice and I also used a call to prayer from Marrakesh. It is for a vocal section of the piece, they are merged together, but where is the place? And is that soundscape?

N: I would say it is an alternative sonic reality.

J: [Plays pipes and drums section]

This is the stereo version of the pipes and drums. Oboe like instruments from Marrakesh; those are the bagpipes and there are also coins from a temple in Bangkok.

[Plays vocal section]

And then the vocal section... that's the guy in Marrakesh, that's the tenor on the gondola and that's the butcher, but of course they have all been granulated and meshed together. If you had told me that I was going to write a six-minute choral piece in the middle of this piece before I did it, I would have said you were crazy. But's that's what happened and came out of the material.

But you see, I don't see how somebody could say that it is field recordings, or it is just a collage. It is not a collage, I messed with it.

N: Yeah. But perhaps for someone who is unfamiliar to this sort of music they wouldn't be able to tell.

J: That is probably the most extreme example in the piece, there are some bits where you may think that it is straight recording – how did he get all that? But of course, I didn't. I got it at different times and moulded it together later.

N: Do you have an aim to each of your pieces before you compose them?

J: No, not before. It emerges during the process of the composition.

N: From the recording process, listening back...?

J: From the recordings usually.

Like I say, I tend to record interesting things without knowing how I am going to use them. Sometimes, I find I can't use them. I never manage to work out how to incorporate them into anything or I am not good enough to tease out what it is they are offering. That's why I don't throw things away, you see. I sometimes sit here, and I think of a recording that would fit a piece I am working on and then attempt to find it. Of course, that in itself is a problem with the amount of stuff I have collected.

Very often I hear things and I will record them.

When my parents were still alive, they had some wine glasses which rang quite strongly when you got them out of the cupboard. Then I discovered that I could scrape the rough surfaces against each other and create all kinds of nice sounds. That was the thing that triggered ...*et ainsi de suite*... and then other sounds were brought in – piano sounds and other things. But the trigger sound was the wine glasses and the whole piece sort of grew from that. Similar to the way that the trigger sound for *Klang* was Denis Smalley's casserole dish I found in his kitchen.

I normally start with a trigger sound and then I find related sounds. When I go out and record environmental sounds, I may have a more specific idea, or I may not. Sometimes I think I will do a piece that uses X and I will go and get some recordings of it.

I did a piece of public art in Lyon which had to do with water. I didn't want to record the sound of the sea, so I filled a bath tub up at home and I was playing gestures with

the hydrophone through the water, just below the surface. Then you get lots of shapes and that gave rise to this piece, *Undertow*.

So, I deliberately recorded that material to make a piece using water sounds and it was framed by sea sounds because there were these waves breaking link involved between all of the pieces, of which mine was one. In that instance, and in many instances, I would seek out a sound.

Very often, when I was composing *Going/Places*, I was using loads of sounds that I had recorded years before, that I hadn't used before or didn't think about how I would use when I made the recordings. Although, I did go to Australia specifically to try and capture some different sounds. I didn't know what they were, but a lot of the material in the piece is Australian actually. Again, it was kind of potluck really. I tried to go to places that would hopefully yield different sounds. There is then the problem of how you use them and how you integrate them when you get back into the studio.

N: And then what is your compositional process? Do you then start processing the sounds?

J: Well, of course that can go off in all kinds of weird directions. Sometimes, you go completely into a dead end, there is no point pursuing it, but I would never throw it away. It is just a painful process of developing, eliminating, selecting, re-developing, trying things, putting things with other things and so on.

So, I don't usually have an idea of what the piece will be.

N: How did you come up with the idea behind the piece *Going/Places*?

J: Well, that was triggered by the fact that I had already got a lot of recordings from around the world. When I did the piece in the Ikon gallery, *Hidden Vistas*, I used a lot of the recordings I had already.

By that time, I had recordings from all over the US, Europe (particularly Italy), Borneo, North Africa and Istanbul as well. Those were all used in that piece, but I knew I had some gaping holes and I knew I didn't have anything from Australasia, which I wanted to try and get. If we were being completely methodical, one could ask where the sounds from Asia and Antarctica were.

N: Was the aim to collect sounds from all over the world?

J: Yeah, I think so. My aim was, theoretically, to have a representation of sounds from all over the world.

The way I would have couched the idea as a research question would have been along the lines of: 'The sense of otherness, familiarity and unfamiliarity, strangeness or dislocation in the business of travelling itself'.

That's why in the piece itself there are bits to do with the travelling itself. There is a bit where there is a load of announcements. Loads of Greek announcements, boat announcements, safety announcements, something about a shuttle train service at Dubai airport, calls at airports and the bit I am thinking of in particular, [listening to the section] which is by Parmegiani created for Paris Charles de Gaulle airport, that preceded all of the announcements. They don't use it anymore, but it is used it at Montpellier airport. I wanted it as homage, as he died a couple of years ago and he is one of my people. But you would have to be in the know, to know.

[Listens to section of *Going/Places* further]

See here, he actually addresses me by name. It is a steward as I got on a Qantas flight from Brisbane to Los Angeles. I had to get that in, because he addresses me by name, it is such a common thing when you get on the plane.

Whether I have actually realised the initial intention of the confusion of travel, I am not sure. And whether any of that original abstract notion comes across when you listen to it, I am at all sure. I am not entirely sure if it worries me if it does or doesn't. Somehow the piece seems to make some kind of sense and has some kind of form, even though it is in A B C D E F G H I J K L N M form. Well, there is that little re-cap of the station where it starts. There are some little cross-references, but they are fairly few and far between. It is very episodic. Yet, it has a flow and seems to work and generally gets a very positive response.

It doesn't matter, in a way, what I think it is or if what others think it is differs from what I think it is. In the end, the piece is recreated for every listener at the point that it is played and received. I can't control that. How it is perceived and received by a listener is a whole different thing and if they bring a whole different set of life experiences to it, then it is going to be interpreted differently and that is fine. I don't think that is an issue.

It is not that I have a message that I am submitting that is easily received. The receiver interprets which means that the thing itself depends on both parties and the thing itself to create meaning. And so, it will be different to every listener.

N: In the notes for *Going/Places*, you said that you organised sounds according to spectral, rhythmic and spatial relationships. Can you expand more on this?

J: Well, if you are using recognisable source material, like this is, then clearly you could take a purely realistic approach. To some extent, I have done that in some scenes more than others. There is a sort of plausibility, or believability if you like. Even if it is a fake, it is a recreation of a possible environment, based on that environment, but bigger. But sometimes I put things in purely because they match through what you might call more musical content, their spectral content, rhythmical content etc. It is more like Smalley's spectromorphology approach.

N: How much processing of the sounds did you do in this piece?

J: In this piece, it very much depended on the material. As I say, in the singing section there was quite a lot of granulation because I was able, through granulation, to create ways in which the different sources would blend and cross into each other and create confusion and ambiguity. That's another thing I am very interested in, ambiguity and playing with realities or perceptions by creating slight senses of ambiguity. All of that is part of my compositional thinking. Sound itself is suggestive of images. All of those things are things I try to deal with – for example, the different levels of meaning and different levels of recollection. I can't possibly legislate for how much a given sound is going to evoke for a listener. I only know what it will evoke for me.

N: Did you find it very difficult to cut down materials for the different scenes?

J: Yes, just a bit. I had hours of recordings.

For this piece, the original multichannel version has different materials coming from different speakers. You are constantly getting slightly different spatial perspectives on things and it is a much more immersive experience. That means that the tempo of this piece is generally a lot slower than most of my pieces. I had been asked for a piece that lasted for an hour for the original commission and that was a conscious decision, to slow the tempo down.

As to the scenes, I couldn't get my head round the span of an hour. So, all I could do was make little scenes and try and link them together somehow. It was composed in those scenes, very sectionally. But sometimes I found, as I ended one scene, I had a

sound that had to go to a particular other sound which was part of another scene, so in a way the sounds demanded a sequence between the scenes – I didn't have much choice.

N: On the album, each of the scenes are different tracks but at BEAST 2016 you played it as a whole. Is that so people find it more accessible?

J: Yeah, it's a shame, that. I didn't really want it like that, but it is a better way of getting airplay. It's true actually. I have had several bits of the piece played on web radio, but they wouldn't play an hour of one piece.

N: And in BEAST 2016, did you play a different version?

J: I played the same version that had been done in Huddersfield, with the only change being the nature of the loudspeaker arrays, although I asked for the HISS set up to be like that. I simply designed a system using their gear which replicated, to some extent, things that I knew to work in BEAST. We have got 8 main, a reference pair, 8 diffuse, 2 at the desk, 4 low, 4 high and 4 soloists. It used my experience with BEAST, but then also thinking about what they had to offer. I knew what the speakers were and how they sounded before I made the piece. I had this set-up in my mind.

The piece has, surprisingly, been done quite a lot considering it is a one hour, 32-channel piece that doesn't sound very portable. It has done reasonably well.

The way we did the album, I told Joe Anderson, an expert in ambisonics, what the speakers were, and he would try a render of a section and I would give feedback. I told him where everything was spatially and what the quality was meant to be, as it were.

Interviewee: Francisco López

Interviewer: Nikki Sheth

Date: 27/11/2017

Location: Mmabolela Reserve, Limpopo, South Africa

N: How do you use field recordings in your work?

F: The first thing is, I don't relate to the term field recordings. Not technically speaking, you know field recording, recording in the field, obviously we do that, I do that. But more in aesthetic terms because over the years, the term field recording has come to have strong aesthetic connotations, as in any other practice.

As it happens with so many other things, there are aesthetic connotations in the practice and in the term field recordings, in the sense of a fundamental understanding of what it is to record sound and what it is to record sound in the context of art or music creation. My fundamental understanding and my personal take on this is not really related to what I think is the main conception behind field recording. I don't really relate to the term or to the practice as such.

My interest in recording sound has to do with an exploration of sonic reality, which as I expressed many times before is not representational, and I think recording helps to dig into sonic reality in a way that is not possible only with listening and I think this is a different mode. It is a tool that along with or in co-operation with listening provides a particularly special and unique access to a sonic substance and that is not in my case

something I am interested in representing or reproducing or simulating reality. So my interest in recording has to do with this, with a different tool that is different from this.

N: How do you start the compositional process? Do you have specific aims in mind when composing?

F: It's difficult to tell really because I think I suppose the composition process in a way starts when you are in the field and you are listening and in mixes and many different things. Meaning that sometimes the compositional ideas or creative ideas will come from an experience of listening that then mutates into something else when you confront or listen to the recordings. So I don't necessarily start the composition from the recordings themselves, it depends and the route to follow in a composition is very unknown. I like the fact that that it is unknown. I don't have specific goals of expression or specific goals of making comments about things with the composition or relating to specific clear intentions in the composition, structurally for example.

Perhaps, what is clearly more interesting or relevant for me in the compositional process is to bring out the composition from a sonic substance. That means that I very, very rarely have any structural ideas before I start hearing the sounds, listening to the sounds in the recordings and if I do, if I evolve those sounds, if I transform those sounds in any way from the recordings, those transformations will typically suggest structure. And so, the structure is not only placing sounds in a frame, or in a pre-existing structure but it's more that the sounds themselves define structure, pace, evolution, the tempo - musical parameters that describe structural aspects of a composition for me will derive from the

sonic substance itself. To me, that is a process that is typically unknown and to me that is the beauty of the composition.

N: Thinking about the recordings from Mmabolela, when listening back do you have ideas of what you would want to create from them?

F: This is probably the place in the world I have done most hours of recordings and I still haven't gotten to the body of accumulated materials to even think about what it is I would like to do, which different things I could do. This is also typical for me. Normally I will do recordings somewhere and it will take me years to go back to the materials. I find the separation in time is useful as it detaches me from direct memory connection and for me that is useful. I like to dig into that internal world of the sound itself and this time separation helps with me the process.

In the previous years I composed a piece for each of the years at Mmabolela.

N: What was your idea behind your piece titled Untitled #343 from the 2015 – 16 album?

F: I had these different materials that I liked. For this one there is a section at the beginning with little bees that come from a binaural recording. The bees were actually near my ears and then you hear them jumping from the microphone and hitting the microphones and I thought the foreground of those sounds compared to the background of the environment that you hear (familiar sounds in the background of birds and other

things) was a very good natural contrast in the recording. These two planes of separation. Very, very close and very small (small because you know those are insects) and then the very distant. So that natural recording I thought was very nice.

N: Was this just one recording for the entire piece?

No, because if I remember correctly, after that there are other recordings of birds in the river that I slightly transform into something that sounds like it is real but it is not. So unless you are very, very familiar with this species of bird and geese, you wouldn't have recognised what that was and it would sound natural to you. I like this idea, sometimes I play with the pseudo-real. Things that to the ears of somebody that doesn't know the creature or the environment will sound natural, but it's not and that is a little bit of that.

N: What was the concept behind the structure of Untitled #350 from the same album? (With the strong cut in/outs)

F: Well, I dislike the systematic use of fade in and fades out with mechanical ways of doing this. Compositions that use different fragments (clearly a collection or sequence of fragments) following each other with a cross fade, a cross fade that typically lasts a few seconds, I think I've heard that too much and I'm tired of it.

It also has to do with a musical understanding of the composition. Musical in ways that are free from those standard transitions in this case. In the same way that in music you have many ways of doing sudden changes and surprises for example. Changes of pace

and rhythm etc. I like to work with those strategies and in a lot of my work I like sudden changes and surprises. I like surprise in the listening experience so it is very common for me to use those transitions. Also, they reveal a little bit of the illusion of the things you think you recognise. For example, a new mode of listening where sounds portray something real and then you have a cut that suddenly brings out the fiction or artificiality of the construction of the sounds. I like to play with editing in a number of ways that I find more appealing and for me that includes editing that would be for more traditional musical material and I apply it to this kind of material. For example, I work with crescendos in a way that would be closer to an orchestra in my understanding of the material, so many times some of the structures will be very akin to some of the structures in classical music.

Same thing for a performance, I like the scale of dynamics and the scale of spatial timbral complexity in a space that you would have with an orchestra but with materials that are non-instrumental. I like to have that kind of timbral complexity and scale instead of having sonic properties that will relate more to the original material. I like to have original material transformed, not in terms of processing, but transformed in a space that will be many times equivalent to an orchestral scale.

N: Typically, what sort of transformations would you use?

F: All the normal DSPs. Standard. In fact I use very old software, it's called Peak. They don't do it anymore but its similar to any standard editing software that will have a typical battery of DSP.

Normal things – pitch shifting, reverb, delays and other transformations but typically I combine these works with several generations of transformations of the materials in a sequence. So I do a process of evolution of the material and duplication, not only in the different steps of transformation, in the generations but I branch out and do different mutations in each of these generations that creates an infinite number of new things and those new things are born. But the process itself, going through all those steps, is done with standard DSP. Then I work with Pro Tools for mixing and mastering and that's basically it.

N: Would you class your work in a genre?

F: Not really. But I think I feel comfortable with being classified in different genres, like I've been classified actually more in noise and experimental music than in field recordings. There are so many genres now, hundreds probably. If you look at the catalogue of experimental music you might find descriptions that relate to hundreds of genres. Its not that I deny certain aspects of genre in my music, I would say 'yes I think this is noise, noise in the aesthetic sense', but I think most artists today feel like they do different things and that they move between genres really.

N: I think that's how I feel. I've always thought of myself as a soundscape composer but I think every piece of work I do there's something slightly different that could classify it in a different genre.

F: In that sense, if somebody works with so-called 'soundscapes' (which is also a very tricky term) or recordings of sound environments, I don't think that means automatically that what you do is soundscape composition.

Soundscape composition is a term that is attached to a specific generation of people who practiced that way, who came from working in a team with Murray Schafer and they of course feel comfortable relating to the term because it relates to their personal connection, to the personal history with the development of the term soundscape and the evolution of the materials and working with those materials. But I think there is a vast number of people who work with recording sounds and environments who definitely wouldn't fit that. I think today that has more of an aesthetic sense, an aesthetic meaning of soundscape composition, so I think that is more important to keep in mind. You might feel akin to that and then you are totally comfortable with that, but I think it's important to keep in mind that those terms and genres in general tend to have much narrower aesthetic meanings than what they were originally intended for and that is important to decide whether or not you feel comfortable with that or you identify with that.

This is the way I see it. Unless you feel that you are connected clearly and exclusively with a specific type of aesthetic understanding of what is it to work with sounds, environmental sounds recorded, which will be akin to the soundscape composition school or group of people and feel that this is exactly what you want to do, I think I would reconsider the definition or the way you think of what you want to do. I think the field of people who work with recorded sound is much wider, bigger and more

importantly, in aesthetic terms, because you are interested in composition I think it is important that you have a perspective that is a very wide perspective and the use of recordings for composition and for music is certainly way, way bigger than that particular field, before, during and after, so that history is much bigger and much wider.

Interviewee: Brona Martin

Interviewer: Nikki Sheth

Date: 12/06/18

Location: Skype

N: How would you define your compositional style?

B: I suppose I define myself as a soundscape composer. My compositions are soundscape compositions within the electroacoustic tradition. So, you are weaving between what is real and what is not real. I suppose the biggest importance to me is that the context of the recordings is always obvious within the work, which is what defines soundscape composition according to Truax. But also, from the electroacoustic perspective, we have all this technology and it's not just about listening to the recordings gathered and getting really intimate with a soundscape environment, it's also about playing with these recordings and seeing what you can get out of them and what is hidden. There are so many different layers.

I feel that all of my soundscape compositions are site-specific, as in, they are all about a very specific place. That's all about travelling. I love travelling. Everywhere I go I gather recordings and listen to that environment and get to know that environment. So often it's all about listening. You're listening while you're recording, then you listen back to the recordings, then you're listening to them while you're editing. I spend a lot of time analysing a soundscape recording to see what is hidden, what did I miss? - the hidden sounds. Taking stuff that's not the normal focus of listening that one may miss

and then playing with the real and the abstract and trying to create a listening space or piece that allows the listener to immerse themselves in a new place and take them on a journey.

N: Have you based all of your pieces on recordings taken in a specific location? Have you ever mixed recordings or would you just use one set of recordings from a place for a piece?

B: I restrict myself to using recordings from a place. If I need a particular sound I would never take it from another library of recordings (e.g. my Corfu library or Australian library) because I am trying to explore that place as much as possible and also, if I start looking into other sound libraries nothing will get done, I will lose focus. Particularly with the last piece I did, *NightEscape*, that whole piece was based on one whole field recording.

I feel a certain responsibility that because I am travelling and exploring new places, I become quite emotionally attached to these places, and that opportunity makes me really want to explore the place.

N: Do you feel as though there is a cross over in your work with other genres or similar fields? E.g. field recording and electroacoustic composition

B: Yes. Some of the work with the spoken word. This was really inspired and influenced by Cathy Lane's work. *The Thing about Listening is* and *A Bit Closer to*

Home utilise field recordings and spoken word within an electroacoustic composition. Perhaps it could be said that in these works there is a cross over between field recording, storytelling narrative and EA composition.

Again, there is a cross over between the techniques that are being used. If I really delved into it, one of the pieces *Beyond the Lakes* I did up in Cumbria – that was an installation. I had two versions, one was performed in an outdoor loudspeaker system and the other has been performed in concerts as a stereo electroacoustic piece. With this work I was exploring different types of performances spaces:

1) Outdoors in the middle of a town centre on a busy Saturday where everyone is shopping and not really paying attention to the piece. However, it is interesting to see how the compositional sound world mixes with the original soundscape where the sounds came from.

2) In a controlled concert environment where the audience are there to listen to the piece. Again, the space and the performance (usually stereo diffusion) enhance the space and sound trajectories within the work while making it more immersive.

Are you talking about sound art and installation work and that kind of thing? More interdisciplinary stuff?

N: Recently, I have been thinking about the term sound artist. To me, sound artist would be an umbrella term and the terms field recordist, soundscape composer, electroacoustic composer would all come under this branch. That's the way I am currently thinking about it. It would be interesting to see what you think,

if you look at this in the same way, or if you see the term sound artist as on the same “level” as these terms.

B: I suppose it depends what the final output is. But we can all use the same methodologies. The paper I did for Organised Sound was looking at other artists who use soundscape methodologies such as field recording, listening exercises and soundwalks but in a different context. The final output is not an electroacoustic composition, it's all about empowering the community to document their home that is about to be changed as they were being forcibly moved out of cities. It's also about sound and memory – what sounds do you remember from your home? Instead of going through a photo album you talk about sound. I think the terms can definitely run parallel to one and other.

The sound artist may have the same methodology but for me, the sound art, the final work, could be performed anywhere – as an installation, in a gallery or as a live performance.

I think in soundscape composition it's not just about the final product. It's about where it is going to be performed. Is it going to be performed at BEAST? It's not over, the composition never ends as the performance and space is going to change it. That's all really important. The loudspeaker set up and sound quality of the performance is extremely important because we spend hours composing this work in a studio. Coming from the electroacoustic tradition means the performance is a really important part.

When it leaves the studio it's going to change the whole sound of the piece. Then we talk about sound diffusion.

N: Is there a comment/critical issue you try to highlight through your work with environmental sounds?

B: Yes. Noise pollution.

My longest piece is *Oz*. That is a whole tranquil, dreamlike experience of the Australian sound world and then at the end there is all this high-pitched material and a lot of screeching made from dust bin collectors and a ferry we took to an island where the tail was dragging along the concrete.

Also, my piece *192*. It's the only piece which I hate, but an important part of my practice because that's where analysis came in. Really analysing the tones in the bus engine. This was all about noise and being exposed to this commute every day from Stockport to Manchester going through Levenshulme. It was so loud and noisy and sometimes you would be waiting for the bus and it would come up and screech and ever since I wrote this piece I have a heightened sensitivity to bus brakes.

Also, in my latest piece *NightEscape* at the end. There are a lot of different layers in this piece. I wrote this piece for myself really. As a kind of meditative, relaxing, floaty atmosphere where you could just get away from everything and the end of that piece almost takes you out of it. It's kind of a release. It takes you to a place and all of a

sudden you can see things clearer. I deliberately embellished the sound of the plane at the end because during our recording sessions in Florida the plane noise was always there, driving us crazy so I thought I would do something with it.

Going back to your question, I suppose it's biophony and geophony versus anthrophony (Krause). There's always an interplay there with this. Not in everything.

N: Do you think it is common in the field of soundscape composition? That composers are often trying to highlight an issue?

B: I think a lot of composers do this. We are all within soundscape studies. When we look at it and study it, it all stems from Simon Fraser University and that's why the World Soundscape Project was started. It was that Murray Schafer felt that things were getting louder.

N: Soundscape composition is an ever-expanding field and there is often an overlap between soundscape work and other fields of work. Do you think there can be a clear definition of what soundscape composition nowadays is? Do you think the term has evolved since the WSP?

B: I try and keep with their terminology. I like it. The acoustic ecology and soundscape studies. I want to be part of that and make pieces of music that people relate to and enjoy. But the soundscape term is thrown around a lot. People use it and it does have relevance, but Barry Truax defines the term and that is where I get my definition

from. It's all about the context. But then there are loads of composers that use field recordings and you can't even recognise the sounds. But that's different. That's pure acousmatic music.

N: Do you think that your work identifies with the work of the World Soundscape Project?

B: I think my methodology does. They gathered sounds. They were doing phonography, they were more of a Luc Ferrari type. But definitely the methodology and theory behind it, this is what influences my compositions. And that is just one creative output of soundscape studies – the soundscape composition.

N: I chose two of the pieces you played at BEAST FEaST that I hadn't heard before to discuss – *Beyond the Lakes & A Bit Closer to Home*. Can you tell me more about the recordings?

B: I was commissioned by the Octopus Collective to write a piece in response to industry in Workington, *Beyond the Lakes*. It's a really industrial town. It would never occur to you to go there but there is something about the area. In Workington, they received lottery money to build some art in the middle of the town and one of them was an ambisonic ring, it's like a shelter with speakers on the top and in the middle there are four seats. That is where I was going to perform the piece.

So, I went to Workington for two days to record. The first thing I did was get an Ordnance Survey map and try to look at the area and get an idea of good places to record. The hotel I stayed in was in a little concrete square with cobbles so there was a very strong reverb there and the dawn chorus and sea gulls would wake me up every morning at 4am. I stuck my microphones out of the window and recorded there. Then I went to a nature reserve, so I packed all my gear and walked and recorded there because I was quite interested in looking at the natural soundscape, hidden sounds, not only industrial sounds. Then I went to Workington Hall and I made loads of recordings around that area. Particularly hydrophone recordings and focusing on bird calls.

That piece was all about hidden sounds and getting away from the industrial side of things and looking at what people were perhaps missing or not aware of.

The first part of that piece is a breeze, a wind and that was recorded at the train station. It was a barely audible breeze coming through the doors in the train station. I boosted the sounds, extracted them and processed them to make them bigger. Then there is some birdsong and hydrophone recordings and then there is the squeaky gate which is really musical.

I started thinking about metal and vibration and that's what the ending is about. I spent a lot of time on a bridge that the trains would go under and the vibration would come up through this simple iron bridge. I spent ages getting the timetable and seeing when the next train would come through and I tried to capture this vibrating metal structure through contact mic recordings.

If you look at the structure it is very similar to *Oz*. You have the industrial section at the end and then it tails off with some seagulls in the square.

N: And the structure? When listening to it I felt as though it was in three sections. The first, the middle hydrophone section and then the last section, is that correct?

B: Yes.

N: Can you tell me more about the compositional process? Did many of the ideas come when you were out recording the sounds, or do you tend to have more ideas when listening back and when taking the sounds into the studio?

B: I think it's very simple really. And I do the same methodology. I categorise everything. So, I have my sound library – I have birdsong, my hydrophone recordings and then each section of a piece explores that. It's a showcase of natural sound (wind, water, geophony) and the animals (birdsong).

N: Was there an aim behind this piece?

B: I knew I had to create site-responsive work about Workington. There were loads of ideas at the beginning. Like a narrative sound journey of the life of Mary Queen of Scots. I found letters on the internet she had written to her cousin about how she was being treated and recorded myself narrating the letter, which I felt just sounded

ridiculous. I thought about more of a theatrical piece but due to time constraints and the fact that I was just working from home at the time I had to stop and just do this, so it became more about the hidden sound world and not about the industrial side of things.

N: Was this piece in stereo or multichannel?

B: Stereo

N: And the other piece – *A Bit Closer to Home*?

B: This was in 10 channels. The spoken word is separate, and the rest is in 8 channel so it can be performed/diffused.

N: So, the spoken word is a separate stereo file?

B: Yes, a separate stereo pair so that the narrative is fixed. The first time I performed it, the voice was in the main mix and I was diffusing it, so the voice was everywhere. I don't follow scores so I knew roughly when the voice was going to happen, but it was so stressful trying to get the voice back down, so I thought let me make the voice separate and leave it in one position and diffuse the rest.

N: I feel as though in a lot of your work you are using narrative, whether you have speech in your piece or not, you are narrating the listener through the piece. Can you expand on your use of narrative in this piece and in your work in

general? And in this piece, the relationship between the narrative and field recordings?

In my perspective, every time speech came in there was then sonic exploration of what the narrator was talking about.

B: Yeah, definitely.

I think I had a plan to do a piece based on field recordings from my hometown. What happened was, I went on a soundwalk with Hildegard Westerkamp for the The Global Composition 2012 conference and flew from Germany to Ireland and very quickly organised a soundwalk from home. It was the conversations I had with people that got me thinking about the sounds from the past and how the soundscape had changed over time due to industrial and economic developments. That's also what Cathy Lane looks at in her *Hebrides* work.

I started having all these interesting conversations with people who had no idea what electroacoustic composition was. I just had all of these encounters with people. I had put the event in the local church newsletter and went to the church to make sure they had put it in and I met this lady – Rosemary and asked to look at her newsletter. I ended up telling her what I was doing, she was a poet, she was actually from my hometown and her brother was a friend of my dad's. He was a Buddhist monk. We were just standing there, and she starts reciting this poem about the sound of our hometown.

The next day I went to their house for tea and recorded their conversation (with their permission of course) and that was used in my first piece, *The Thing About Listening Is...* There are two pieces.

Then I somehow started talking to my uncle about sounds and he was so articulate with the way he was describing sound, his relationship with sound and sound and memory. With this audio I edited into sections based on the different sounds. All together he talked about five different sounds and I picked three of them. I picked the sound of cars going over the bridge, the bells and the middle one was the sound of the mill. I had all the field recordings I had made of these sounds. The spoken word determines the sounds that I used and the sound world I was trying to create. So that, as you just said, reflects what's going on in the spoken word. They were all sounds from that place. From home.

It's quite a slow piece. It's about reconnecting with home but also a lot of people can relate to it because it will make people wonder and think about the sounds they remember from home. Also, I think his accent, because he is Irish, reinforces that sense of place. Place is about the people and the culture as well.

Those pieces took the longest to write. I spent a lot of time playing with the audio, playing with spoken word and processing it. I just deleted everything, hated everything and I decided to just leave it as a story.

N: When you were composing the piece, with small soundscape sections between each piece of speech, did you compose these individually or as a whole soundscape which was then mixed together with the speech?

B: No, I composed them each individually. They were in a different order for a while. It's very simple, they fade in and out really and then the narration starts again. For me, they were like images, pictures, like working on each picture and then finding a way of bringing them all together.

Interviewee: Claude Schryer

Interviewer: Nikki Sheth

Date: 07/10/18

Location: Face-to-face, Dieburg, Germany

N: How would you define the term soundscape composition? Do you think the term has evolved since the work of the WSP considering its original intention?

C: I started doing soundscape in the late seventies with analogue technology and I have done different kinds of soundscape composition, including mixed with instruments and radiophonic pieces. Right now, I am working in a completely different style and I will talk about that in a second.

How would I define it? Essentially, electroacoustic music has had many different streams and composers like me have used context-based field recordings as artistic content. It is quite different from Musique Concrète and other forms of electroacoustic music.

Increasingly, artists are using recorded soundscapes to layer field recordings and to get into that kind of space where two or more meanings or contexts overlap and create new meanings.

You heard *Winter Diary* by R. Murray Schafer that I helped produce. That is an example of the work I used to do, which was a series of composed soundscapes, playing on the ambiguity between context and music.

Now, what I produce is a project called *simplesoundscapes* where I listen, and I feel what is going on around me and I get a sense of what I think is going to be an interesting field recording. I then record the visual image and the sound and publish 3-minute episodes. The composition is the use of the microphone and it is about awareness and being in the moment.

[Further discussion via email later on the same day.]

C: Soundscape composition is close to my heart. I think it has expanded the vocabulary of music and connected with other fields of practice such as radio art, documentary, sound design, etc. I define soundscape composition as composing with context-based field recordings and recontextualising them for artistic purposes, either as an aesthetic and/or a representational experience. There are many forms and styles of this work, many nuances of intentions but in the end it's a product, not unlike other music/sound art forms, where the listeners' perception is what makes the work. So, when I told you about *simplesoundscapes*, it is my way of keeping the work simple and focused on reality. My intention is to create awareness exercises; however, I don't know what will happen in the viewer's/listener's perception.

Interviewee: Chris Watson

Interviewer: Nikki Sheth

Date: 05/09/2018

Location: Skype

N: Can you briefly explain your compositional practice?

C: I am a sound recordist. So, my work starts on location and the most important part of my compositional practice is where I put the microphone before I start recording. I go to places and work a lot with sounds in the natural world, not exclusively.

A lot of my compositions are informed or led by other forms of media. I go to places, sometimes for film, sometimes television or radio programs, or sometimes commissions by galleries or festivals. So, I do some research and I go somewhere, and I sit and listen. I listen through my microphones, which is the most important part of my composition. Then I make a whole series of recordings over hours, days, sometimes weeks or months and then start to work with these materials in post-production.

Most of my work isn't abstract, it's linear. Because I started working with music in studios and then film sound and film sound post-production is a linear activity. That's how I follow most of my work, there's a timeline to it. Most recently, some of my work in Arctic Norway, with a Sámi joiker has been of a circular nature. But most often it is linear. I think of it quite often in terms of a journey or the geography of a place,

sometimes in time as well, expansion or reduction. For example, recreating the sounds of a place through a different time scale.

After I work with it in post-production, if I have a choice then the outcome of the piece is sometimes film soundtracks, but most interesting for me is multichannel installations.

N: Can you expand more on the terms linear and circular?

C: Linear has a start and end, a form to it.

A lot of my work covers a piece of geography or a time scale. For example, when Hull was City of Culture, I was commissioned to make a piece which I called *Trent Falls to Spurn Point* and it was a journey down the Humber Estuary. A geographical piece that I spent eighteen months recording at different times, which was the representation of a journey. That is the linear part of it.

Another piece I continue to work on is a piece based on the Vatnajökull glacier, Iceland. This follows the journey of a piece of ice. It's less geographical and more time-based linear form. It starts with a piece of ice forming at a place called Kverkfjöll at the summit of the glacier and then flowing down to Jökulsárlón, the glacial lagoon by the coast, and it takes the piece of ice about 10,000 years to make this journey. I was interested in compressing ten thousand years into a listenable form that initially had to fit onto one track of a CD.

There are two examples of linear works. Circular is something I was really introduced to relatively recently by Ande Somby, who is a Sámi joiker based in Arctic Norway and I have done some performance pieces with Ande. Joiks are circular and neither a loop, maybe spiral would be a better term, in my opinion. So, that's a piece that evolves into different shapes over time and doesn't really have a beginning or an end apart from when you decide to start or cease it. I'm interested in that and I am working on a CD where I am applying this technique at the moment.

N: Is your work normally site-specific?

C: Yes, it is. Always, I think. It is rooted in location because that's what I do. I am a location sound recordist. It's very important to me. It's also when I make or present works, the idea of location is important to me, so it's rooted in places.

N: Is there a comment/critical issue you try to highlight through your work with environmental sounds?

C: I don't try to highlight it, but it represents a large body of my work. I try not to preach but I try to present my work in a way that will interest and engage people and let them think about the consequences of the sounds of these places and their actions, politically and environmentally. It is deeply important to me, but I try not to have a message in that regard. But that is one of the main focuses of my work, I am interested in the sounds of places, the natural world but also in the contrast and musicality of the man-made world. Environmental sounds, mechanical as well as natural.

N: How do you use field recordings within your work?

C: My work is field recordings. Almost exclusively, not entirely. I use them exclusively in my compositions and sometimes I use them in their original form and sometimes I modify or process them to fit whatever I am doing.

N: You mentioned earlier that you identify yourself as a field recordist. Do you think you identify with the term ‘soundscape composer’ at all?

C: I identify with the term composer. I am sound recordist and composer. I compose work for lots of different things. You could narrow it down but to be honest that’s for journalistic terms that people use. If people ask me what I do, I say I am a sound recordist and if people ask me what I do with those sounds, I say I compose with them. It covers so many different mediums.

N: And how would you categorise the compositions you create?

C: As music.

N: Do you feel as though there is a cross over in your work between fields? For example, with my own work I go between soundscape composition, acousmatic and field recording? Do you think there is a cross over in your work between any fields?

C: Yes, I think they are all basically the same. I don't want to disregard that but those kinds of definitions I don't pay much attention to, to be honest. I understand working in an academic environment, then that's important, for you to define those. It doesn't matter to me, it's the work that is important.

The techniques that I use are all of those mentioned, but I also used musical techniques that I learned in the studio and other things I picked up from my experience. It's fairly intuitive I think, what I do. I don't pay much attention to those terms when I am working.

N: You said you approach your compositions from a musical background. What is your musical background before you started field recording?

C: It goes a long way back to when I was thirteen and my parents bought me a portable reel to reel tape recorder, fifty years ago. I began to discover the musical potential of tape recorders. Then I discovered the works of people like Pierre Schaeffer, Pierre Henry and Musique Concrète as a teenager. I then developed the tape recorder as my musical instrument and then was in a band for quite some time. I used that technique and those instruments and listened to a lot of music and learned from that. I learned about studio techniques and composition in the studio a little bit in those days and also about what I guess you would call song-writing. I really developed my experience from there and used those techniques in my compositional practice.

N: When you are composing using field recordings, do you think in terms of pitch, rhythm and other musical terms?

C: Yes. I do. I think pitch, texture and all of those things play a vital part. I am making these pieces to try and engage people and get them to listen to it. It has to be, first of all, something I enjoy listening to, otherwise I can't expect other people to. There are common elements in music, pattern recognition, textures, rhythm and dynamics that can apply to anything, from field recordings to Japanese noise music to Sibelius or Mendelssohn. Those terms apply across all different genres. And so, music is a bit limiting in that sense as people tend to think of more traditional aspects of music, although less so these days I guess.

N: Do you have an aim behind each of the pieces or albums you create before you start composing?

C: Yes, it is something I am urged to do. Something I want to do. It starts by going somewhere, going back to the first question. It starts on location. If I am inspired by a place, by the sounds of a place or an event then I want to try and represent it. I have to be inspired to make something. I don't do it for the sake of it, in that respect.

N: How do you begin the compositional process?

C: It begins on location, as said. If I make a recording or series of recordings that I am inspired by, then I want to work with them. I go back and listen to them. I listen to

them a lot, intensely, personally and listen to how those sounds affect me. I then decide if those sounds are worth working with. Sometimes I live with sounds for years. Or sometimes, it is more of an immediate emotional response. I start to develop that and then go with it.

N: I would like to discuss the album *El Tren Fantasma* as I find it quite inspiring. It is quite evident that you thought of pitch, rhythm and other musical terms when composing this album, but how much manipulation of sounds did you do when composing the album?

C: Well sometimes a lot and sometimes none at all. It is a good example, that album. It started off as a television program in a series called Great Railway Journeys which I worked on a long time ago. I was the sound recordist. We went with the chef Rick Stein and we make a Great Railway journey across Mexico from Los Mochis in the Pacific to Veracruz in the Atlantic. We lived on board the train and it was one of the last journeys of the once great Mexican state railways, Ferrocarriles Nacionales de México. Like British rail at the time, it was being privatized, becoming more expensive, more dangerous and started to disappear. All of the non-profitable routes were closed, and this was one of the final journeys of that Great Railway system. Hence the name, *El Tren Fantasma*, the ghost train, as you cannot now make that journey.

Because we lived on a train and we were quite often rocked to sleep by the rhythm of the railways as the train took us to the next location. The musicality of the railway system entered me physically, as I was part of the motion of that journey. I also

remembered things like *Études aux Chemins de Fer* by Pierre Schaeffer, one of the first pieces of Musique Concrète from 1948 and I think railways are in the rhythm of our bodies, it's a familiar, hypnotic, musical rhythm in lots of aspects.

And so, I knew when I was making the documentary that I wanted to do something else with the sounds, other than just service the television documentary. When we finished, I did a deal with the director and got the rights to use my recordings in other pieces. I sat on the recordings for years, actually. Until I felt I could work with them and recreate the journey so that the piece represents my version of that journey.

Some of it is heavily processed, tracks like *El Divisadero*, which I know sounds very cliché, but came to me in a dream whilst on the train. Other aspects were just the original raw recordings which served as really good stand-alone pieces. In terms of composition, I felt the flow and rhythm of the pieces represented not only the railway but the sounds of the country and the heat and the space and the textures. It fell into place really easily actually. Some things I left alone, and others required me to tease out of it what I felt was lurking there somewhere in the original recordings.

N: Is it common for you to leave your sounds/recordings for a while before you start to compose with them?

C: It comes and goes really. The piece I did in Hull, *Trent Falls to Spurn Point*, took me eighteen months to record. I knew I wanted the seasonal aspect, so I had to live with the recordings for two years because I was making other recordings to compliment

the whole work. And so yes, usually. Although interestingly this weekend I have been asked to produce a CD of work over a weekend with four others. I think it will be presented as a sort of 'work in progress', rather than a finished piece.

I have been making recordings for my next album with Touch for the last two years. I need to go to certain places and find the sounds. It is not instantaneous. I quite like that because it gives you time to consider it.

N: What kind of transformation processes do you normally use?

C: All sorts of well-established studio techniques really. Some things I started when I was working way back with tape. The usual things that people apply. Sometimes physical manipulation of the tracks. I sometimes transfer things to quarter inch tape to manipulate them, simply because this is the way that I learnt the process. Others are electronic transformations with plug-ins. I have also got a small modular synthesizer, with analogue synthesis modules which I spectrally transform sounds with. I also use diffusion, so I play back sounds in one place and re-record them, which is a fairly common film sound technique. So, anything really. I am quite open to how I work.

It starts off with having a good recording. One thing I have never done or been interested in doing is transforming a poor recording into something else, which I think is any good. It has to start with having a really good, useful, interesting, engaging sound to start with. The less I do to it, the better. But I am not bound by any rules, unless I am

doing natural history work and the integrity of the sound is important, so I don't tend to process that at all apart from compression and equalization.

N: Can you talk more about your multichannel work?

C: Yes. I am particularly interested in spatial sound. By that, I mean something more than twentieth century stereo.

For a long time, I have been working with Tony Myatt, who is a good friend of mine, a Professor of Sound at the University of Surrey. He is one of the world experts, I would say, in ambisonics. This is my preferred way of spatial sound recording. I use a Soundfield microphone to capture the sound of a space and I try and reproduce that in my work. Nearly all my installation work is ambisonic diffusion, some of it is horizontal sound, but my preferred technique is to work with Tony. I make ambisonic pieces and Tony designs and creates an ambisonic playback system for whatever space we are using. This is created uniquely on a place-by-place basis. Some of it is conventional surround, but most of it is usually, let's say, something like a twenty-two channel ambisonic system.

N: Do you use these same pieces decoded to stereo for your albums?

C: No. I re-work them. I don't think it works, just collapsing it down to stereo, therefore, I re-version them to suit the medium, destination or outcome. I sometimes mix ambisonic pieces down to stereo for demonstration purposes (as a section or

representation of the piece). If I am then making a stereo version of a piece, I re-work it entirely. I change it, so it is not really the same. Quite often my ambisonic pieces don't fit the timescale of a broadcast, record or radio program, and vice versa.

N: In your most recent album *Locations, Processed* was each of the works in the album based on the location in the title?

C: Yes, they were, entirely.

N: It seems to me that the recordings are very unprocessed in this album. Can you talk about this album a bit more?

C: Well some are, and some aren't [processed].

There is some sort of controversy about this album as I wasn't aware it was going to be released in this form. It is not my title and it is not my artwork; I am not sure where it has come from. That is why I have been relatively quiet about it.

I knew I had made the record, but I thought it was going to be part of a box set release to do with the Moog system. It is to do with Robert Moog, who invented the Moog synthesizer. He lived in New York and when I was invited to contribute to the project, around three years ago now, I realised that I had recordings from a lot of the places that would have sounded familiar to Robert Moog. That is what I based my record on, they were all places that he would have recognised, and they were all processed through his

Moog 55 system, a massive studio modular synthesizer which was brought over from America and installed at The University of Surrey for some time. Several people were invited to go and work with it and from that, make a record, which I assumed was going to be a box set. The title of this record and the release of it seems to have forgotten the concept that I was interested in – that is was directly connected to Robert Moog and the sounds of his environment.

It was a very quick process. I spent a week down there working with the system with the operator, Finlay Shakespeare, who assisted me in making this piece. I was interested in taking a journey from Queens, where Moog lived to the outer edges of New York and that is what the piece does. It imagines a journey out there, that's why there are so many sounds of transport. It starts in a hotel room where I stayed in Queens and ends out near the airport, at a nature reserve. That was the nature of the journey, but it was just disappointing to me that people chose to release it without that information, it seems perversely obscure in that respect.

So, the sounds are processed. But bearing in mind that this is an old system and what I didn't want to do was transform it into some electronic madness, so it is quite subtle, but most of the sounds are layered and processed. Where the title came from, I have no idea.

N: I did feel that the title was a little odd.

Well, I got a test pressing about eighteen months ago and I approved the pressing and then imagined as it was being described to me, that it would then be in a box set. There were lots of other artists working on it for several months, people who would have had different ideas and would work with the Moog synthesizer very differently. Quite a few well-known people and I assumed it was all coming out as a box set as it was all in relation to Robert Moog and the fact that it was all part of this system that everyone has access to for a certain period of time. What was interesting to me was what people came up with using the same system – whether they originated sounds from it or whatever. But all of that seems to have been lost.

N: That is a shame. That would have been really interesting to hear. All of the different takes on it.

C: Yes, it would have been for me too.

N: Going back to the trip to Orford Ness we took in 2016. Have you done much with your recordings from the trip?

C: Yeah, I have. I have been to Orford Ness several times. The first time was with a brilliant filmmaker, Emily Richardson. She made a film for Channel 4 on Orford Ness called *Cobra Mist* and Emily invited me to record the sounds of Orford Ness along with her film and then to work with a composer to create a soundtrack for the film.

I was fascinated by the space, the location and the contrast between the buildings at this atomic weapons research base and the shingle beach of Orford Ness, the longest shingle spit in Europe. I became fascinated by this concept, a place to study the dark arts of warfare and somewhere which is now, paradoxically, a wildlife reserve managed by the National Trust.

Again, because a lot of my work has different outcomes, I also worked with a writer, Paul Evans and made a Radio 4 programme about Orford Ness called '*Island of Secrets*'. My work began as a film soundtrack and became a radio broadcast. Then I did a workshop there with Jez Riley French a couple of years ago. That has not had a direct outcome although I was invited by a magazine in New York called Bomb magazine, to make a piece of work which they could issue with the magazine. I had not long returned from Orford Ness and because I was intrigued by the title of the magazine, B-O-M-B, I decide to use my recordings from Orford Ness where they used to environmentally test Britain's nuclear bombs, but that is the only place it has been to. I sent some recordings to a writer, Robert MacFarlane, who did a piece there too and he used some of my recordings for it. So, it has had a few different outcomes.

N: And how was your experience running a workshop at CAMP? I was there a couple of months before you for one of the first residencies they held there.

Well, it snowed quite a bit when we were there. It was a good group of people; we got some great places to record. But it was hard to record because of the big river that flows through the town. You have to get away from the sound of constantly running water and

so most of the time we travelled out of that valley, to other places. I enjoyed it, but it was quite hardcore living in that place. It was made good by the really interesting group of people on the workshop.

Interviewee: Hildegard Westerkamp

Interviewer: Nikki Sheth

Date: 07/10/18

Location: Face-to-face, Dieburg, Germany

N: I wanted to discuss the term ‘soundscape composition’, thinking about its meaning within the World Soundscape Project, how the term has evolved over time and how you yourself would define it now.

H: Well, the term didn’t really exist then, but there were moments in the Ten Soundscapes of Canada radio programs, created for the Canadian Broadcasting Corporation (CBC) in 1974, where my colleagues, like Barry Truax, experimented with some sound processing of the recorded materials.

In a short piece, which he calls *Soundscape Study*, he experimented with rhythms in space and time using train sounds and footsteps. The completion of that piece marked a moment in which we became aware of new possibilities of composing with environmental sound. In the Musique Concrète tradition the original recording was a sonic material, a departure point from which to abstract and obscure the original sound source and its meanings through sound processing. We realized that this *new* approach would do the opposite and would in fact highlight the relationship between the recorded sound source and its processed versions, in the interest of raising awareness of the richness and complexity of environmental sounds.

When I started working in the studio, the term soundscape composition was not in my consciousness whatsoever. I was just excited about working with environmental sounds and I also did not know that I would become a composer. I had no intention of becoming a composer. I just learnt the techniques in the studio. After I completed what I considered a first exercise, Barry said to me ‘that’s actually a really nice piece, not just an exercise’. So, I got into this kind of work in the studio very quickly and Barry taught me some of the analogue tape techniques that came out of the Musique Concrète tradition. I loved the process so much that I carried on working with environmental sounds from then on.

I never had a term for my work. It fell under the category of electroacoustic music for the longest time. Years and years later really, after I had done this type of composing for a long time it was defined as ‘soundscape composition’ and emerged as a kind of genre.

I think there is a danger in defining soundscape composition. The beauty about soundscape composition is that there is so much freedom. The environmental sounds themselves and the listening that comes with this kind of work, make a piece emerge. Structurally, you can’t define soundscape composition, as the structure always emerges out of the particular sounds or soundscapes that the composer uses and as a result can be different for every piece. I wrote an article in Organised Sound where I attempted to link acoustic ecology and soundscape composition, maybe you remember, I describe this linking in further detail there.

N: And do you think that the term has lost its original meaning?

H: What might be lost in the process is the connection with acoustic ecology that the term soundscape composition implies. I would not call all my pieces soundscape compositions, but some clearly are.

In my composition *Für Dich-For You* I use sounds that I loved in my German and Canadian environments and it is based on a love poem by Rainer Maria Rilke. Is it a soundscape composition? Yes, on some level it is, because it is about a relationship to soundscapes that has to do with connectedness and love. But it is very different from a piece such as *A Walk through the City*, where I am trying to connect the noisy and disruptive soundscapes of Vancouver's Downtown Eastside to the social challenges that people face in that environment.

I am very reluctant to try and pin my compositional work down to one type of definition. People may ask me, is this a soundscape composition? *Kits Beach* very obviously is and *Fantasie for Horn* as well in its own way, in which fog horns, boat horns and train horns make out the material. It is a very early piece in which I merely followed my passion of exploring environmental sounds and their marvellous complexities and musical sonorities. I had no standards that would bind me to a definition, such as soundscape composition. Many of my later compositions in one way or another continue to grapple with issues in our soundscapes and of acoustic ecology in general.

N: I think I feel similarly in my own work, in the way that each of my compositions are different. In some ways, I feel some are more electroacoustic and others more of a soundscape composition. Some I barely even process sounds in.

H: Exactly.

There is a whole spectrum of possibilities. I have been critical when a piece was called a soundscape composition when it clearly was not one. Just because a piece uses environmental sound as compositional material does not mean that it is a soundscape composition. Any kind of soundscape work implies that it is about the relationship between listener/composer and the soundscape.

The term soundscape has been thrown around without real understanding of its origins and original meaning and the same is happening to the term soundscape composition. Both have become buzzwords. So, people may use environmental sounds in their composition but do not really understand that these sounds can be much more than mere sound material for processing, that they can in fact be a form of language to speak of issues in the sonic environment. Many people don't understand this connection to or implication of the word soundscape. It's usually a lack of education that causes this misunderstanding.

N: And how was your soundwalk today?

H: Good, it was a small group, just 6 or 7 people. The weather was windy, so we heard a multitude of different leaf sounds. I did the same things (as we did on the previous soundwalk together), but this time in different places. We went to the sculpture again and decided to stop and look at it and imagine its sounds before we played on it. We broke the silence of the walk and I asked participants what they thought it might sound like. So, I used different approaches in each walk, suggested by the group atmosphere and by the weather. Yesterday we heard a leaf blower in one part of the walk and ended up moving further away. Its sound determined a lot of that route. Today we experienced a quieter Sunday morning feeling. There were church bells and there was the wind. Everyone seemed more relaxed than previous groups and I noticed that this one was moving really slowly no matter whether I changed my pace as the soundwalk leader! This also determined a lot of the nature of the walk and its route. Those variables, just like in soundscape composition, change decisions, change the route, its atmosphere. I love this kind of improvising that ideally is rooted in full awareness of all aspects of a soundwalk situation, the weather, the time of day, the temperature, the day of the week, the make-up of the group (earlier groups had as many as 30 participants) and so on.