

Creating and performing music for flute and electronics

by Dr Jean Penny

Babel flute Global Flute Convention, September 2023
Temple

INTRODUCTION

Hello! My name is Jean Penny, and I am a flutist, music creator and researcher/writer. This is a brief account of my engagement with creating and performing music for flute and electronics. I have included a lot of links to recordings, videos, and published articles, so feel free to be diverted along the way.

My career journey (from classical flutist, to academic, to creative performer) has been something of an iterative wayfinding, motivated by a huge enthusiasm for contemporary flute music, a deep curiosity about working with multiple media centred around flute performance, and the imaginary worlds this inspires. I have written quite extensively about these transitions in my career (most recently for The Babel Flute!), as well as detailed articles on particular projects I have undertaken and many of these can be found via my website at <https://www.jeanpenny.com>



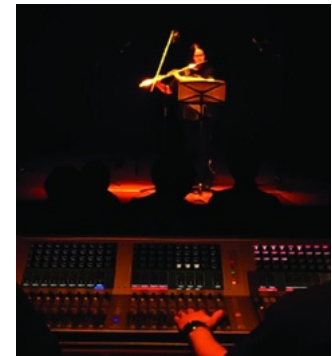
Creativity belongs to all of us and emerges in myriad forms. It contributes to any approach to music making, including learning repertoire, playing in ensemble, improvisation, and composing a notated piece. The first time I recognized an interest to improvise was in preparation for a DMA recital for flute and interactive electronics back in 2007. This performance required courage, but I found that I really enjoyed feeling the freedom, the control, and the curiosity this aroused. A while later, I approached some semi-improvised scores, and progressively found a love for creating as well as performing music.



In the academic sphere, I have been fortunate to have worked in a variety of locations from which I have drawn inspiration and new perspectives to explore through music. Working as Senior lecturer in Malaysia (2011-2015), for example, motivated intercultural enquiries through new electroacoustic composition and performance

collaborationsⁱⁱ. This expansive project led on to new projects exploring multiple sound, place ⁱⁱⁱ and performance questions. With the arrival of COVID-19, working in isolation became an excellent reason to examine home^{iv} and neighbourhood^v. With the end of lockdowns, aspects of place continued to intrigue, resulting in more projects, compositions and writing.^{vi} All of these projects have inspired further enquiry, and currently I am investigating aspects of intercultural breath/breathing in a piece for western flute, bamboo flutes, sound electronics and imagery.

Performances with flute and electronics usually require a collaborative sound technologist/ musician, although some performers work independently. Depending on your specific needs, equipment might include microphone/s, speakers, mixing desk, computer/s, pedals, software such as Max (cycling74) or other platforms, sensors and more. Having all this readily available has been a great enabling situation for which I am most grateful. It is still a challenging world to work in, with so many elements to take care of, but the results can be utterly amazing, stimulating, and joyful.



My enthusiasm is captured in the following quotes - written 14 years apart but still pertinent and true.

For me electronics created an amazing other world, a theatre of characters and new dimensions, of new sounds and moving sounds, of new emphases and altered perceptions, and it was the sounds I loved, and the concepts, and the arcane (to me) systems that created amazing new possibilities in performance (Penny, 2009, p. 14^{vii}).

Electroacoustic music performance abounds with beguiling ambiguities, astonishment, new connections, and potentials. As a flautist, captivated by the malleable sonorities and techniques of my instrument, these qualities have become entwined with the centrality of practice and the existent, transient, and indelible experiences of performance. (Penny, 2023^{viii})

I frequently remind myself that this is the reason I love working in this field, especially during difficult parts of a project, when all the diversity of the electroacoustic sphere might refract in a million ways, and processes become arcane and complex.

I will now outline some of the processes of my practice and give some examples of work.

PROCESS

Projects begin with an idea that I want to explore, such as a sound, or performance practice, or a place. I research the idea, investigate viability, visit many times (if it is a place), choose a sound aesthetic, instruments, and electronic techniques, devise a structure and parameters, begin to play around with techniques and music, notate some ideas, write notes about the work, play more, read more, rehearse with electronics, and continue to investigate and develop ideas throughout the whole process.

The following examples outline some of the steps involved in three recent projects. Processes were iterative and constantly evolving, focussed on questions, perhaps, but also on thoughts and responses to ideas and from the work as it developed. Each of these works is for flute/s and live electronics, with the effects activated within performance/recording. Here I make some comments on concepts, research layers, material choices, flute techniques, electronic techniques, and imagery.

1. Concept, research, and material choices in *Lal Lal Falls* for flute and live electronics (2022)



Images showing the top of the falls, the falls and gorge, and basalt columns to the south in various seasons (Author copyright).

Lal Lal Falls was inspired by a spectacular location southeast of Ballarat, in Victoria, Australia, where the Lal Lal Creek drops away and then continues on to the reservoir beyond. On many visits there I experienced intense sensations of sounds, the dramatic landscape and rock formations, the stillness of the open plains and flowing energies of wind and water. Sometimes there was little or no water; after rains, a gushing torrent. Apart from being beautiful, this landscape is full of subtexts and multiple histories: the geological history, as a volcanic basalt tunnel collapse about 1.8 million years ago; indigenous histories of land use and stories of Lal Lal Falls (meaning rushing waters in the local Wathawurrung indigenous language) as a spiritual site, including the story of Bundjil, the mythical eagle; colonial histories since around 1840 when Lal Lal was a busy gold mining area, and the falls a tourist attraction and site for gala race days; and the present

day as a picnic area and walking track set amidst private farmland and abandoned mines and railways.

I was driven to create a piece that captured and reflected on those experiences of place, a semi-improvised composition for flute and electronics in which live flute performance interacted with sound recordings and electronic technologies that combined with processed images of landscape. The following is an extract from an article I wrote in 2022 describing initial processes:

We listen, record, and photograph; we feel the wind, touch the trees, the rocks and earth; we observe the shapes and phenomena as they appear, ponder the traces of history, the invisible and immersive. A narrative unfolds in my mind as multiple layers of this ancient terrain seem to converge – histories and associations of indigenous, colonial, and present communities; myths, geologies, and notions of layered temporalities; the sensations and textures of the place, densities, openness, and fragilities. I begin to imagine music that might explore these layers along a meandering line of unfolding trajectories, stillness, and flow, looking back and ahead. Structural ideas begin to formulate based on these trajectories, as yet just impressions and ambiguous. Central to this re-presented space will be sensations of distance and proximity, grass texture and movement, old gum trees, stories, wind and water, cascading transitions, compression in the gorge, continuum in the river, and the reflective space of reality and imagination. (Penny, 2022^{ix})

The flute part includes an eagle call, but mostly this music consists of abstract sound structures made from the flute sound and electronic effects such as reverberation, looping, and harmonisation, that build up textures and shapes to create a space for reflection on both the beauty of the landscape and the many stories of this land. The environmental sounds include the wind, gurgling water at the top of the falls, the falls cascades, and birds. These sounds are woven into the fabric of the piece, in dialogue with the flute lines and effects. Below is an excerpt from the initial descriptive score for the piece, showing flute techniques and electronic techniques – suggestions that were later refined and added to.

The imagery in the video is a compilation of views of the falls area, which give an impression of the landscape and passing through it, from the carpark to the north, across grassland, down to the rocks and water at the top of the falls, the dramatic drop to the gorge lined with basalt columns, the river continuing its course through the gully and a return to the grasslands and surrounding landscape. The images were processed in Max/Jitter to interact with the sound of the flute through the piece.

Lal Lal Falls, flute and electronics descriptive score – Section 1 (3-4 mins)

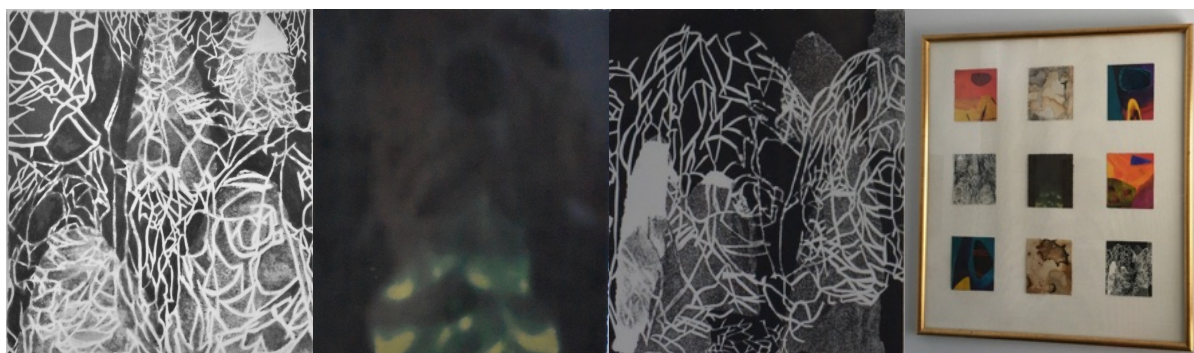
Location and images – undulating pastoral land, distant mountains, walking track, grass, wind, trees.

FLUTE	Intermittent microsounds becoming more extended (ad. lib. breath, 1/2 breath, pizz, key slaps, tongue rams, pfz, gliss, trills, undulations, multiphonics, swinging, undulating whistle tones, flutter, taps)	
ELECTRONICS Wind	“treated” wind – gradual harmonisation, other effects	
FLUTE	Eagle call	Gradual build-up of clusters, pitched material, breath at varied volumes
ELECTRONICS Flute capture and replay	Increasing interactivity, layering	
FLUTE	Reducing activity, multiple sonorities (ad.lib.) driving towards transition	
ELECTRONICS	Fading complexity as wind transitions to water (top of falls)	

Here is a link to my article which includes an audio recording of the piece:
<https://echo.orpheusinstituut.be/article/new-sounds-ancient-resonances-re-presenting-lal-lal-falls-in-music-for-flute-and-electronics>

If you would like to watch the video go to <https://www.jeanpenny.com>

2. Concept, art, and electronic techniques in *Postcards from Lockdown* for flute and live electronics (2021)



The 3 postcards, artwork of Belinda Fox (Used with permission) plus framed and hung images.

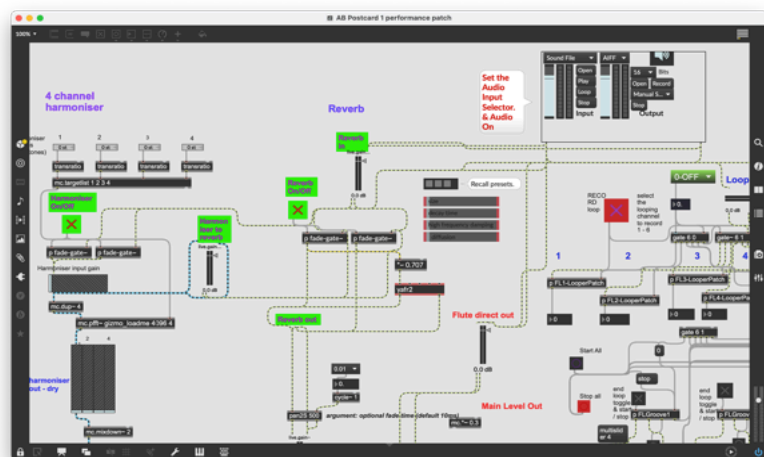
During the extended periods of lockdown in my home state in 2020, at first it was very strange and quiet, then we became more conscious of our neighbours, and then we became more attentive to the neighbourhood. It became interesting to explore the quotidian, and work-from-home alternatives, and a more intense awareness of place emerged, connections to multiple narratives, listening, and appreciation for the near-at-hand. Looking around at home, I observed what was on the walls more closely, including some postcard pictures in the music room. I

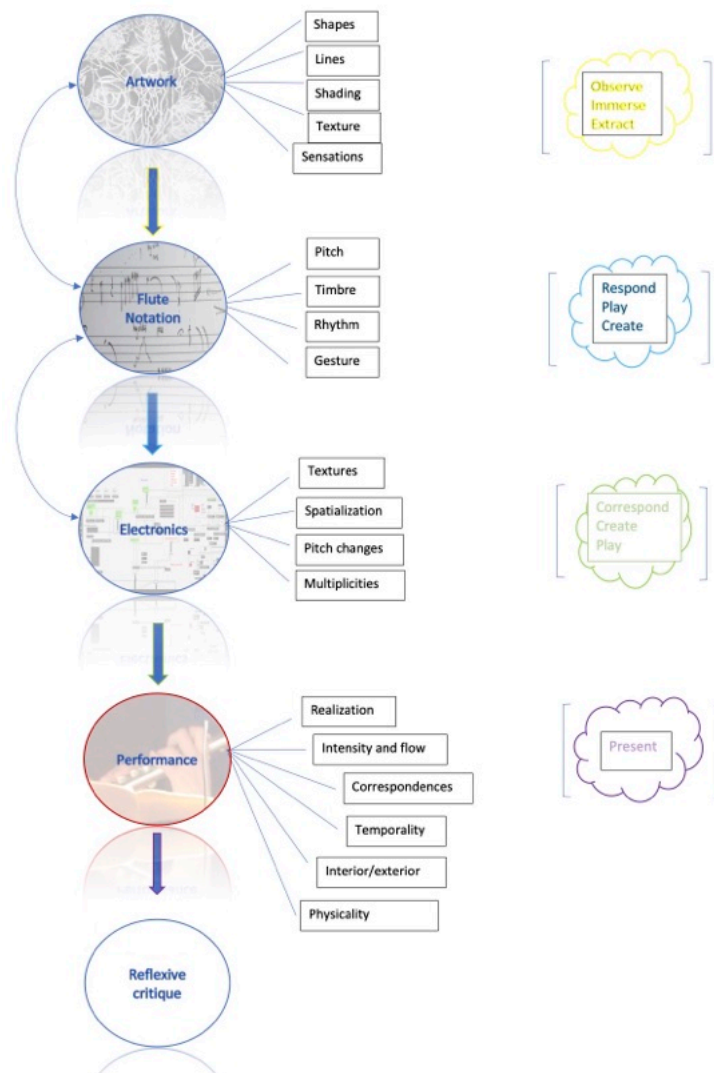
decided to explore transferring three into music in a semi-improvised piece for concert flute, alto flute and electronics and this became a great project investigating ideas and theories of translation, the nature of sound, sensation capture and composition. Immersing myself in the artwork created a space to respond, as described in the following:

As the flautist, I found that immersion early in the project in visual properties of the artwork invoked particular playing and thinking modes. I saw lines, shapes and shadings that suggested specific sounds: breath tones, wavering pitches, percussive techniques, whispered and forthright sonorities, rapid lineal gestures and static tones. Visual zones and gestures suggested structures, pitch, linearity and texture. I felt the sense of linearity in runs, episodes of polyphony and pitch glissandi; I felt fragmentation in isolated sound cells and silences; I felt a sense of blurred shapes in sliding and clustered pitches; I felt a sense of openness and place in reverberated passages and sustained notes, and a sense of correspondence with repeated gestures and invisible voices. (Penny, 2021, para 27^x)

Processes undertaken in this work can also be seen in the diagram below, where observation, immersion, and extraction of sensations in the artworks led to flute notation ideas, electronic effect choices, performance and reflective critique. The electronics consisted of added textures from harmonization, looping and delay techniques, as well as spatialisation from reverberation and sound movement. Sensations of lineal movement, blocks of light and shadow, interweaving lines, illusions of place, and other characters were generated by a bespoke Max patch, activated live in performance.

*Example of Max patch for
Postcards from lockdown.
Copyright A. Blackburn (used
with permission)*





Process diagram (Penny 2021, para 13).

You can read more details and reflections on creating this work in *3 Postcards from Lockdown, Translating Visual Art to Music for Flute and Electronics* which includes an audio recording of the piece:

<https://www.musicandpractice.org/postcards-from-lockdown-translating-visual-art-to-music-for-flute-and-electronics-2/>

A video of the art and sound can also be seen at

<https://www.youtube.com/watch?v=DLXIYlv9unw>

3. Concept, notation development, imagery in *Gadubanud Coastlines* for flute and live electronics (2023)

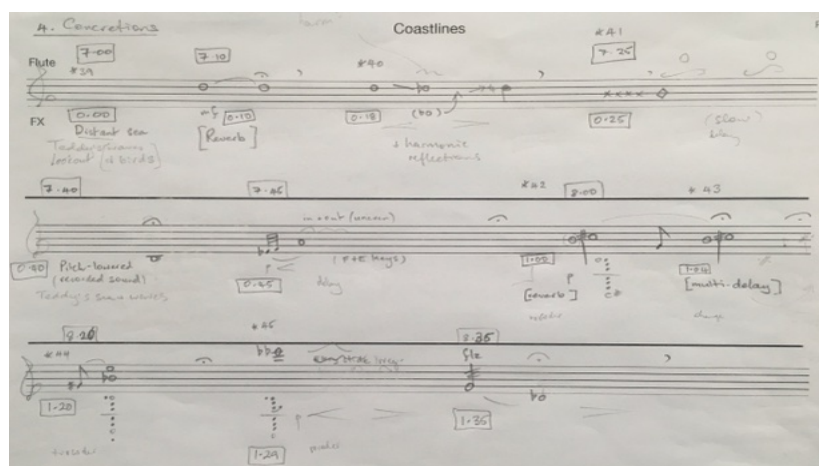


Images of Apollo Bay ocean- early morning, Skenes Creek beach materials, Lorne rock tessellations, and Teddy's Lookout view. (Author copyright)

I will keep this section brief, as I have outlined many of the details of this project in the Babel Flute Journal (June 2023).

Gadubanud Coastlines is an imaginary, non-mimetic re/presentation of place that reflects the often-volatile sensations experienced along the Great Ocean Road, in southern Victoria, Australia. It takes its name from the indigenous people and language of this area. Through the layering of environmental sounds (sea, wind, pebbles, shells, birds), instrumental sound (flute), electronic sound effects (amplification, reverberation, spatialization, multi-delay, vocoder, altered pitches,) and interactive processed visual imagery, four sections explore experiences at Apollo Bay (ocean waves), Skenes Creek (beach), Lorne (tessellated rock formations) and Teddy's Lookout, where 100 million year old concretions can be seen above a dramatic view of the coastline. Once again, this land/seascape is the holder of multiple layers, histories, and stories. Ancient geologies, stories of shipwrecks, accounts of massacres, and the incredible beauty of the place all influenced the way the piece evolved.

Notation of the flute part emerged from listening and remembering sounds and feelings of the sites. None of it is meant to replicate sounds, but rather the impressions and sensations of sounds, the wind, the rolling waves and beach materials such as shells and pebbles. The flute plays a lot of air sounds and percussive sounds interspersed amongst melodic gestures, always in dialogue with the recorded sound of the waves or wind, birds or water gushing across rocks or pebbles. These sounds may be unsettling, indistinct, or unpredictable, reflecting the instabilities and risks of this place. Pitches reflected sensations also, sometimes floating high or dropping deeply to suggest the sense of boundless time experienced at Teddy's lookout, where, with the ancient concretions at your feet, you gaze out across the coast and sea to the southern horizon, knowing that the next land is Antarctica. Here is a 'work-in-progress' score sketch from the final section:



Gadubanud Coastlines, flute score extract, section 4 (Author copyright).

The electronics for this work were constructed in Max, which activated live sound manipulations of the environmental and flute sounds. Added to this was processed imagery made from videos taken at each of the four sites. Colour effects and fluctuating, ever-changing shapes created a dialogue with the sound and original videos, accentuating movement and volatility, or calm and reflection.

The article on this project with audio and video files can be accessed at <https://thebabe flute.com/coastline-project/?unapproved=12019&moderation-hash=6a33c068e5db871ee0587a5ad63c4bbd#comment-12019>

The video is also at https://www.youtube.com/watch?v=3_XylRhbVrE

REFLECTIONS

The flute and electronics field is constantly evolving, adapting to new technologies, transforming performance ideas, and challenging pre-conceived notions of music making. My aim with this discussion is to share information based on my own work as a flutist/music creator/researcher – my enthusiasm for the magic, the processes, and this way of living art. A continuous drive to explore ideas and questions, to engage with new compositions and to interrogate artistic process, underlines a need to delve into the spaces and procedures of performance, to search for new knowledge of myself and others, and to propel myself headfirst into unknown territory, full of curiosity for the next step. Thank you for reading, and I hope you find inspiration here too!

ⁱ <https://thebabe flute.com/coastline-project/?unapproved=12019&moderation-hash=6a33c068e5db871ee0587a5ad63c4bbd#comment-12019>

ⁱⁱ The Imaginary Space: Developing Models For A Malaysian/Western Electroacoustic Music (2012-14)
You can download the research report here:
[https://www.jeanpenny.com/uploads/5/5/4/3/55434199/the_imaginary_space_frgs_2014_\(july_2015\).pdf](https://www.jeanpenny.com/uploads/5/5/4/3/55434199/the_imaginary_space_frgs_2014_(july_2015).pdf)

ⁱⁱⁱ See, for example, Penny, J. (2022) Performing the Ecstasis: An interpretation of Katharine Norman's *Making Place* for instrument/s and electronics in *Journal For Artistic Research*, Issue 27. Online at <https://www.researchcatalogue.net/view/1260967/1753737>

^{iv} See Penny, J. (2021) Postcards from Lockdown: Translating Visual Art to Music for Flute and Electronics. *Music and Practice online journal* ISSN 1893-9562, Norwegian Academy of Music, Oslo. Online at <https://www.musicandpractice.org/postcards-from-lockdown-translating-visual-art-to-music-for-flute-and-electronics-2/>

^v Penny, J. (2022) *ibid.*

^{vi} See, for example, Penny, J. (2023) New sounds-ancient resonances: Re/presenting Lal Lal Falls in music for flute and electronics in *ECHO - a journal of music, thought and technology*, Issue 4 New Mimesis (ed. Jonathan Impett. Online at <https://echo.orpheusinstituut.be/article/new-sounds-ancient-resonances-re-presenting-lal-lal-falls-in-music-for-flute-and-electronics>

^{vii} Penny, J. (2009) *The extended flautist: Techniques, technologies and performer perceptions in music for flute and electronics*. Doctoral thesis available online at https://www.jeanpenny.com/uploads/5/5/4/3/55434199/penny_the_extended_flautist.pdf

^{viii} Penny, J. (2023) Performing intercultural music for flute and electronics: Reflections on heterotopian (s)p(l)ace in *The Routledge Companion to Music, Autoethnography and Reflexivity*. Eds Wiley, C. and Gouzouasis, P. London and New York, Routledge (forthcoming publication).

^{ix} Penny, J. (2022) *ibid.*

^x Penny, J. (2021) *ibid.*