



UOA D32

ART AND DESIGN:
HISTORY, THEORY AND PRACTICE



RESEARCHER

Linda O Keeffe

OUTPUT TITLE

Hybrid Soundscapes

OUTPUT TYPE

Artefact

DATE

2015 – 2017

FIG. 1
Installation of *Hybrid Soundscapes I-IV*, New Art Exchange, Nottingham, 2017.
Photo Linda O Keeffe.



Hybrid Soundscapes I-IV audio composition:
https://media.ed.ac.uk/media/t/1_u9eq2su4

Hybrid Soundscapes I-IV short video of installation at Gallery Oldham, Manchester.
available at:
https://media.ed.ac.uk/media/t/1_8zynve1t

Silent Spring album available at:
<https://flamingpines.bandcamp.com/album/silent-spring>

DOI:
<https://doi.org/10.7488/f88b511e-82e3-4324-ac47-7d6d33956b47>

01 / STATEMENT

Hybrid Soundscapes is a multi-component body of outputs investigating acoustic ecology. It is comprised of sound installation, an album, participatory community engagement activities and peer-reviewed publications.

The output was the outcome of three years of practice-led research into the impact of renewable energy technology on rural and natural landscapes. O Keeffe investigated four sites where new types of renewable energies have had an impact on natural landscapes: the southern region of Iceland, the Northern Terra Alta region of Spain, Barrow-in-Furness in the UK and Beijing, China. The research also investigated graphic composition as a mode of mapping sensory, social and ecological sonic experiences over time. The research employed different methodologies including retreats in natural landscapes, participatory listening workshops with local communities and documentary research.

Hybrid Soundscapes was commissioned by the curator Christine Eyene in 2016 (curator of the 2019 Moroccan Biennale) for a touring exhibition titled *Sounds Like Her* that would for the first time present established women artists who have expanded the field of sound art.

For the exhibition, O Keeffe presented four large printed graphic scores/sound maps and an immersive audio composition for five speakers. The scores comprised photographic images and drawings of the sites in which O Keeffe conducted field research. The audio composition functioned both as a single immersive audio work and a spatialised site-specific performance.

Hybrid Soundscapes I-IV was first presented in the exhibition *Sounds Like Her* at the New Art Exchange, Nottingham, 13 October 2017 – 3 January 2018. Subsequent exhibition presentations included: York Art Gallery, 12 July – 25 August 2019, and Gallery Oldham, 14 December 2019 – 7 March 2020.



FIG. 2
Installation of *Hybrid Soundscapes*
I-IV, New Art Exchange
Nottingham, 2017. Wall 1,
showing digital print of
graphic scores on wall.
Photo Linda O Keeffe.



FIG. 3
Installation of *Hybrid Soundscapes*
I-IV, New Art Exchange
Nottingham, 2017. Wall 2,
showing graphic scores
based on field trips to China.
Photo Linda O Keeffe.



FIG. 4
Installation view of *Hybrid Soundscapes I-IV*, York Art Gallery, 2019. Digital printed sound maps, Spain (left) and China (right).
Photo Linda O Keeffe.

02 / RESEARCH DIMENSIONS

The principal three research questions guiding the project were:

- In what ways can we interrogate the impact of new technological infrastructures within rural environments?
- How can sound alert us to changes within an ecological space?
- How can the collation of interdisciplinary research methods better inform us of the impact of technological systems on social and natural soundscapes?

In response to these questions, O Keeffe developed a methodology she termed 'Listening as Practice' – a combination of practice-led approaches including sound mapping, field recording and meditative listening, social science data collection methods, interviews, focus group workshops, ethnographic sound walks and visual documentation.

Through a series of practice-led, socially engaged processes, O Keeffe was able to make audible and visible the impact of technological infrastructures on different biological and social systems.

The research is grounded in acoustic ecology, the fine arts, social science and performance practice. It involves forms of embodied listening, working with community groups to explore different types of listening practices and presenting findings through a range of artistic modes, including performance, graphic scores and sound maps.

The research resulted in a body of outputs, including:

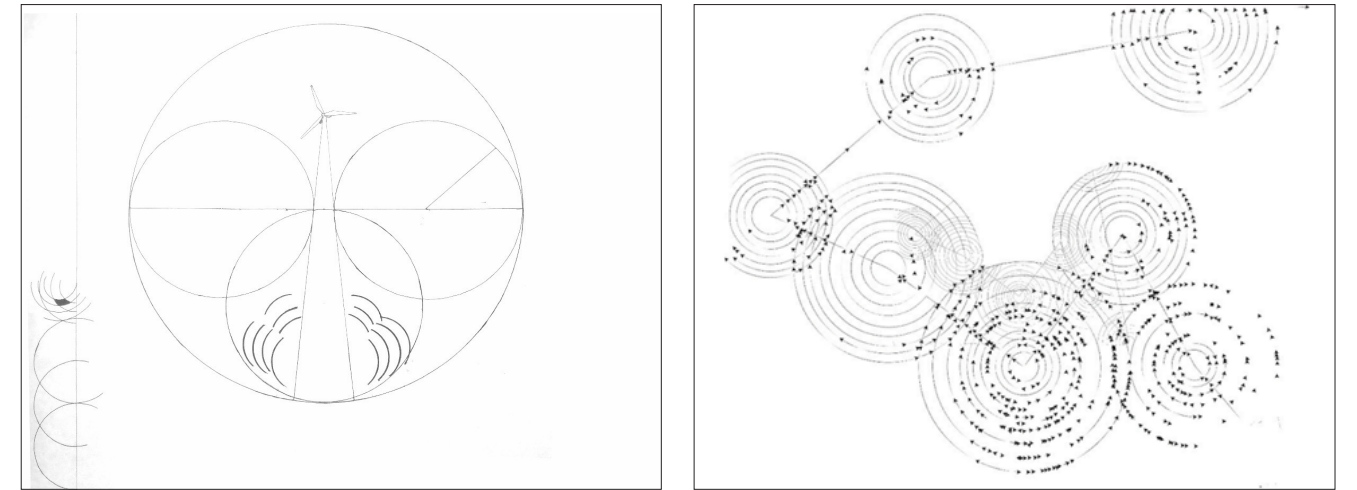
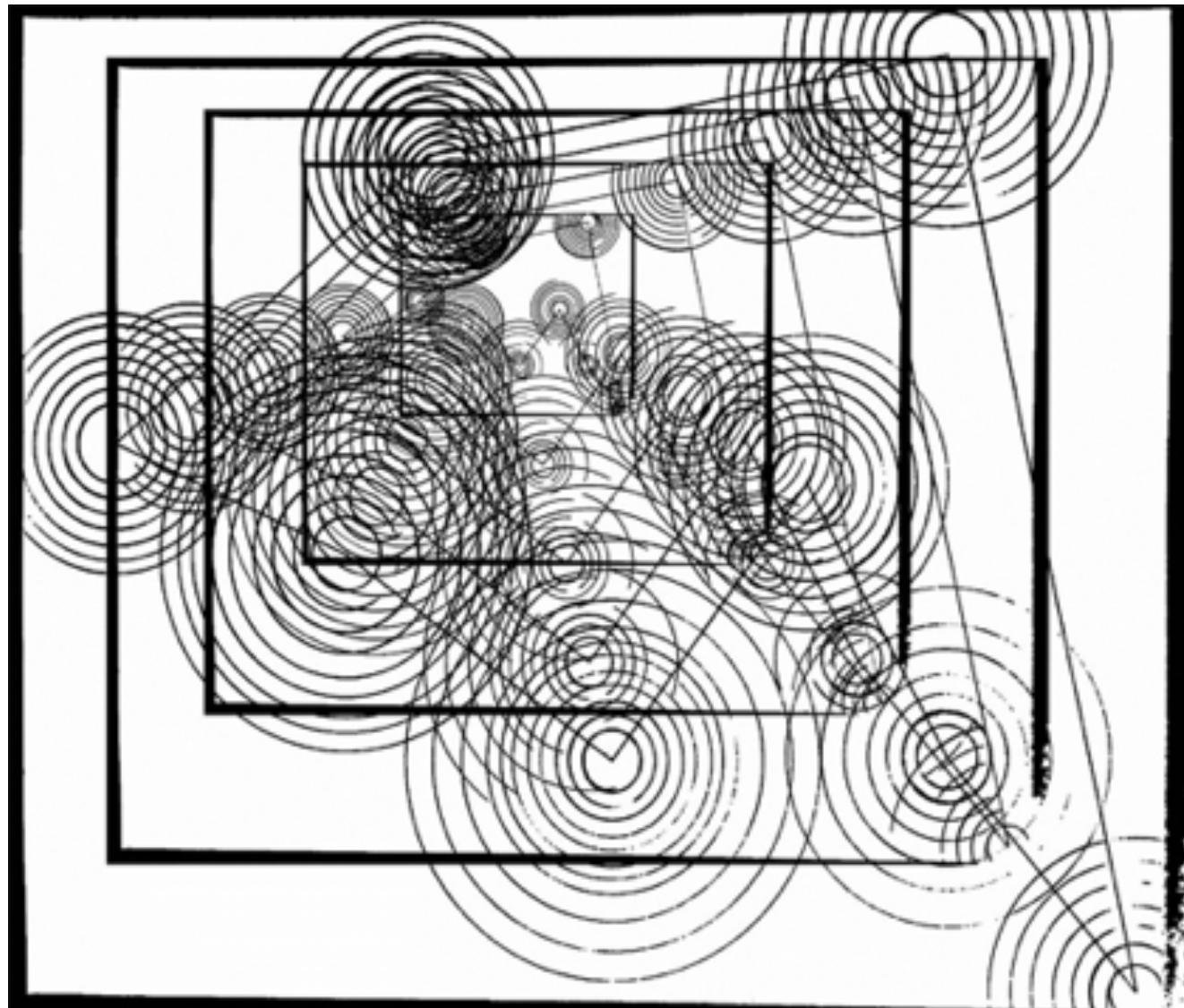
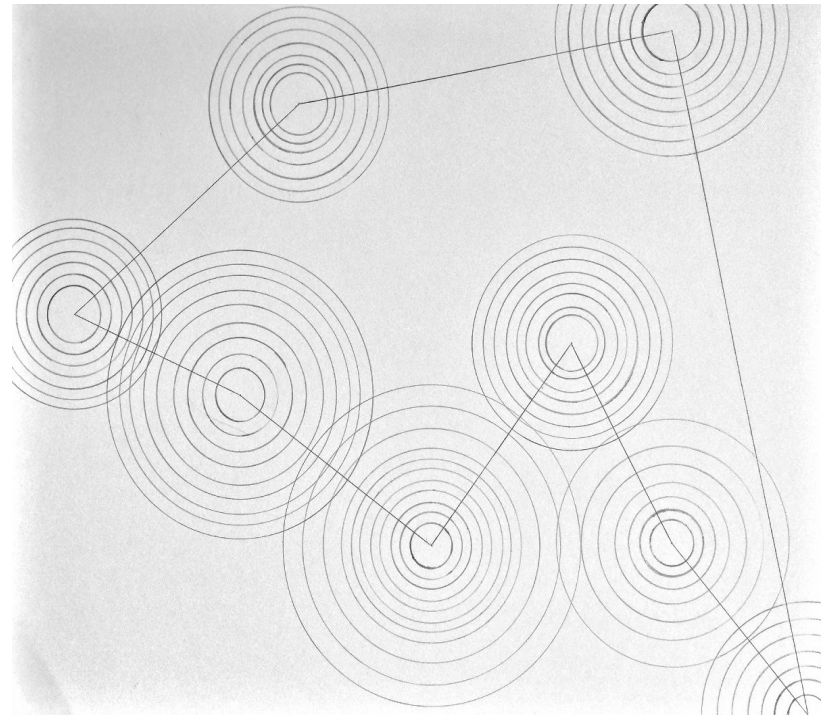
- Sound installation, titled *Hybrid Soundscapes I-IV*.
- The album *Silent Spring*, released 2019.
- Participatory community engagement activities, centred around workshops in York, Nottingham, Singapore and Barrow-in-Furness.
- Three peer-reviewed publications (see Appendix, page 30).

The scores of *Hybrid Soundscapes* are comprised of photos from each of the sites. They map confluences and influences related to the impact of technological infrastructures.

The audio composition is both a single immersive audio work and site specific. As the listener rotates to face a wall in the space, the sounds heard are linked to that score. The composed sound work was spatialised for a five speaker array.

FIGS. 5-6

Original drawings (top) which represent the movement of sound in different spaces, circulating by means of technology, the body and nature. These were then scanned into Adobe Illustrator and adapted for the development of the graphic score for *Hybrid Soundscapes I-IV*. Images Linda O Keeffe.



FIGS. 7-9

Drawings created in Adobe Illustrator for the final graphic scores for *Hybrid Soundscape I-IV*. Images Linda O Keeffe.

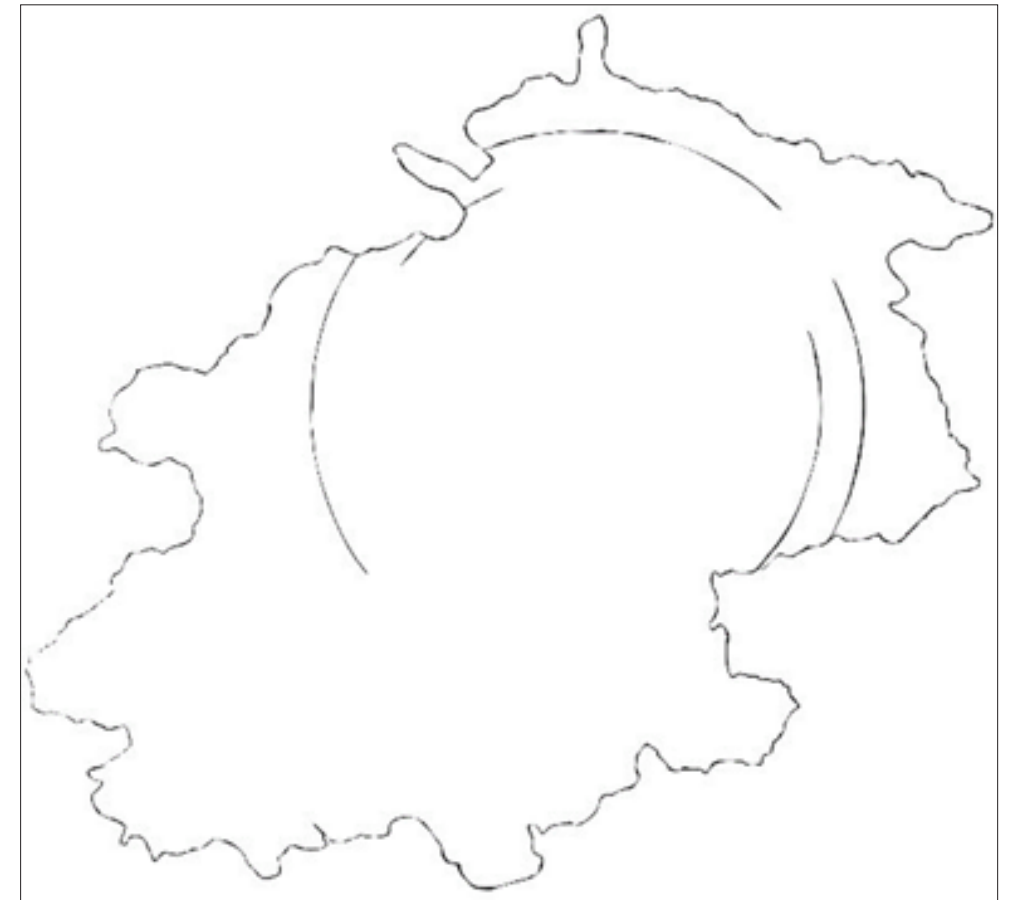


FIG. 10
Field recording, Terra Alta Region,
Spain, 2016. Photo Linda O Keeffe.



03 / ORIGINALITY

The research is innovative in its interdisciplinary combination of methodologies, crossing social science and performance and collaborative art practice.

It contributes to new understanding of acoustic ecology – in particular, the impact of renewable energy technology on rural and natural environments.

The comparison of four distinct sites – the southern region of Iceland, the Northern Terra Alta region of Spain, Barrow-in-Furness in the UK and Beijing, China – was a new approach, particularly within the context of contemporary art practice.

The research develops a new methodology – which O Keeffe calls ‘Listening as Practice’ – which maps sensory, social and ecological sonic experiences over time.

The research is also unusual in its intermedial dissemination – combining graphic scores, performance, sound, collaborative and socially-engaged practice and installation. This has enabled it to reach and engage broad audiences.

FIG. 11
Field recording, hydroelectric
power station, Iceland, 2015.
Photo Linda O Keeffe.



FIG. 12
Wind turbines and field recording
of the Walney Nature Reserve,
2017. Photo Linda O Keeffe.



FIG. 13

O Keffe collecting sounds and making video imagery of the wind turbines, Spain, 2016. Photo Tony Doyle.



04 / RIGOUR

The research was motivated by O Keffe's view – shaped by her study of the soundscape ecologist and musician Bernie Krause, who pioneered the recording and archiving of natural soundscapes – that sound is the best medium for capturing environmental change.

During the three-year period of research, O Keffe developed two modes of listening, shaped by her existing research on the impact of urban soundscapes on communities (O Keffe, 2015a, b):

i. A 'sound mapping method', in which each heard space would be noted by time and weather conditions. This would link sound effects to their production, capture the position of the listener relative to the sounds, and catalogue perceptions other than sound.

The word 'mapping' customarily implies a flattening of the perceived space, an approach that Michel de Certeau (1988) argued overlooks the subjective experience of place. Responding to this insight, O Keffe created an assemblage of data from notetaking to audio, video and photographic documentation, non-prescriptive interviews and participant observation, to construct a mode of embodied listening that deeply implicated subjective experience.

ii. Extending the method of 'deep listening' developed by the composer Pauline Oliveros, O Keffe developed a listening practice whereby passive and active listening, or directional and focused listening allows an attentive listener to tune in or out, and manage and comprehend past sounds, making links between what is heard and what is remembered. Passive listening here becomes a process of immersion in a present sonic environment, that incorporates reflection upon previous sensory moments. Notetaking was a key tool in documenting sonic moments.

In this way, the act of listening becomes as important as the process of recording sound for documentary purposes. Both methods informed community engaged projects and the development of *Hybrid Soundscapes I–IV*.

Research process

The research process began with a series of field trips to four countries with contrasting soundscapes. The first trip to the southern region of Iceland took place in June 2015. This was followed by two trips to the Northern Terra Alta region in Spain, in July 2015 and August 2016. O Keeffe spent the summers of 2017-18 in Beijing, China and, in early 2017, spent time field recording in the Walney Nature Reserve, in Barrow-in-Furness.

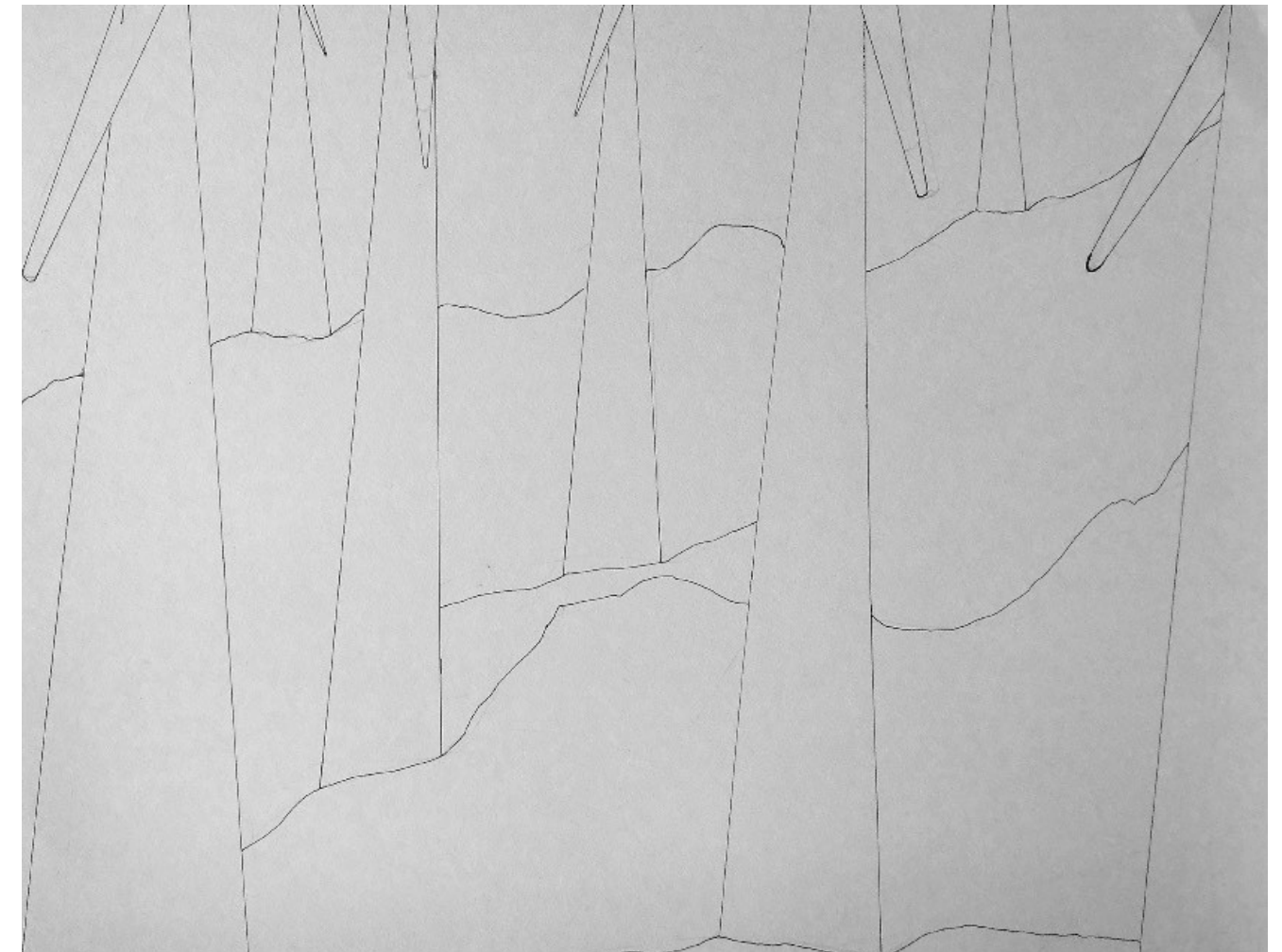
During these field trips, O Keeffe recorded the soundscape ecology of different parts of the landscape, conducted auto-ethnographic sound walks, created a series of drawings, and took visual documentation of the environments.

O Keeffe produced a group of different outputs from these experiences, including conference papers, presentations, performances and publications. The exhibition *Hybrid Soundscapes I-IV* was a culmination of these findings.

In 2019 O Keeffe produced and published the final output from this research, the album *Silent Spring*, commissioned and released by the label Flaming Pines (25.09 minutes). All 3 tracks were composed by O Keeffe. The title was inspired by Rachel Carson's pioneering 1962 book *Silent Spring*, which predicted that the first major impact of pollution would be sonic rather than visible.

Following the launch of each exhibition presentation of *Hybrid Soundscapes I-IV*, O Keeffe was commissioned by each gallery (York Art Gallery and New Art Exchange, Nottingham) to run community engaged workshops exploring the theme of environmental listening, walking and performing.

FIG. 14
Original drawings of turbines
scanned and digitally transformed
within Adobe Illustrator for large
wall print. Images Linda O Keeffe.



Iceland, 2015

During the trip to the southern region of Iceland in June 2015, O Keffe explored the sonic impact of renewable energy technologies within various acoustic territories. Iceland is now heavily reliant on hydroelectric dams.

O Keffe's research focused on field recording and auto-ethnographic soundwalks. For twenty days she documented the soundscape of the natural acoustic ecology, hydrothermal and hydroelectric power plants and dams, alongside the surrounding natural environment in the region, working with with a group of international field recordists, which included the renowned environmentalist Chris Watson.



FIG. 15
Field recording in Iceland,
June, 2015. Photo Unknown.

FIG. 16
Thermal springs, Iceland, 2016.
Photo Linda O Keffe.



FIG. 17
River outside hydroelectric
power plant, Iceland, 2016.
Photo Linda O Keffe.



Spain, 2015 & 2016

On her trips to the Northern Terra Alta and Tarragona regions in Spain, in July 2015 and August 2016, O Keeffe used binaural field recording microphones and shot film of different soundscapes, along with hundreds of images, of these sites. Spain has built some of the largest wind farms in Europe and, until now, the impact of these technological infrastructures on the surrounding regions, the local agro economies and the natural soundscapes had not been examined.

Her images (FIG 22) represent hundreds of photographs collected over time, documenting changes to the local community. The images and field recordings were deconstructed (FIG 23) to use in *Hybrid Soundscapes I-IV*.

In Spain, O Keeffe also documented the sounds of thousands of cicadas, which dominated the natural soundscape. She collected photographs and made drawings of the insects (FIGS 20-21).

O Keeffe conducted a series of focus groups with older adults, to explore what was understood of renewable technologies, ecology, noise pollution, and the general soundscape.

In discussion with community leaders and locals in the rural village of La Fatarella, Spain (FIG 18), O Keeffe learnt that traditional farming practices had dwindled due to government subsidies, which has led to a lack of employment for younger generations who have dispersed to the cities – and in turn a quietening of the rural community youth soundscape – a marked reduction of archetypal or ‘historic’ sounds. O Keeffe has published these findings in a website and a book chapter (see Appendix, page 30).

FIGS. 20-21
Drawings of cicadas, Spain, 2015-16. Images Linda O Keeffe.

FIG. 18
Talking with and recording local community groups, Bar Casal, La Fatarella, Spain, 2017. Photo Linda O Keeffe.



FIG. 19
Field recording the annual festival of youth, La Fatarella, Spain, 2016. Photo Linda O Keeffe.



FIG. 22
Collecting sounds in Spain: this image represents hundreds of images collected over time, documenting changes to the local community and included many hours of audio recordings. Photos Linda O Keeffe.



FIG. 23
The images and field recordings from Spain were deconstructed and compiled in 3d in Adobe Photoshop to use in *Hybrid Soundscapes I-IV*. Images Linda O Keeffe.

China, 2017/18

In the summers of 2017–2018 in Beijing, China, O Keeffe conducted a series of focus groups with young people (who represent the majority age range in the city) to explore what was understood of renewable technologies, ecology, noise pollution, and the general soundscape.

China expends massive funding towards renewable technologies, yet has some of the world’s worst pollution levels.

O Keeffe once again used binaural field recording microphones and shot film of different soundscapes, alongside images of these different sites and objects to deconstruct to use in *Hybrid Soundscapes I–IV* (FIG 29).

FIGS. 24–27
Visual documentation from Beijing, 2016-2017, documenting different moments of listening: from the number of air conditioning units in the city to roadways and the underground. The aim was to identify spaces where humans live and work alongside significant technological sounds. Drawings Linda O Keeffe.

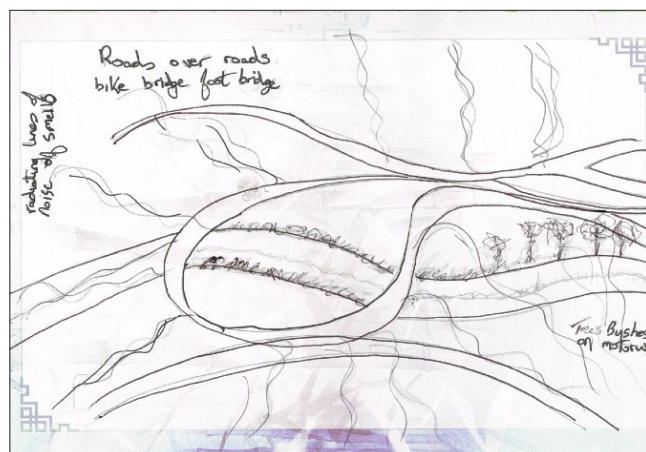
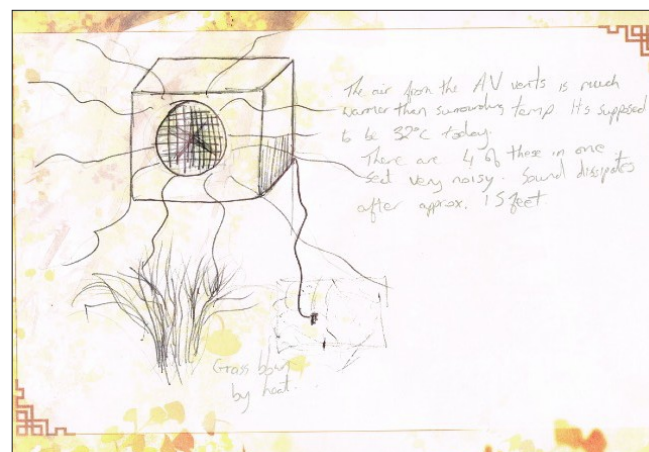
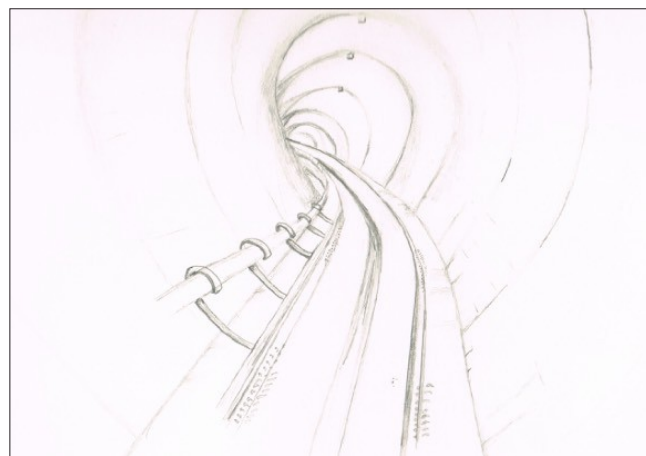
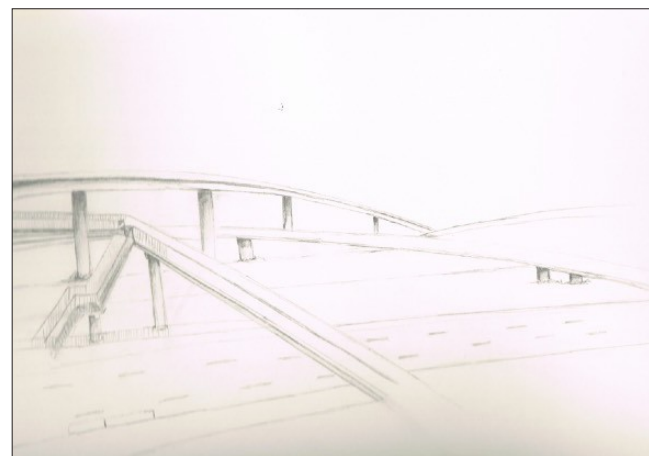


FIG. 28
Field recording with a group of young people, Beijing, 2017. Photo Linda O Keeffe.



FIG. 29
The images and field recordings from China were deconstructed and compiled in 3d in Photoshop for use in *Hybrid Soundscapes I–IV*. Images Linda O Keeffe.



Barrow-in-Furness, 2017

In early 2017, O Keeffe spent time field recording in the Walney Nature Reserve (WNR) in Barrow-in-Furness, which has one of the world's largest offshore wind farms, and the largest offshore wind turbine in the world. Naturalists working in WNR suggest that the depletion of bird sounds in the region is, in part, a result of these turbines and their position off the coast.

O Keeffe worked with participants in a 'listening project' for World Dawn Chorus Day. The aim of the project was for listeners to explore both the natural habitat and reflect on the technological infrastructure encroaching upon it. O Keeffe created listening meditation notes (FIG 31), to encourage modes of listening, and the collection of sounds and sounding objects.

Notes and texts written by the participants on their mediation forms (their compositions) were later used in a performance in March 2017.

This workshop was followed by a live broadcast performance with members of the local community, organized and funded by the *Full of Noise* collective, a sound art and new music organisation based in a public park on Cumbria's Furness Peninsula. The workshop focused on training participants in listening techniques and encouraging them to explore the different soundscapes of the Barrow-in-Furness region, the soundscape of the Walney Nature Reserve and the sounds from the local town. O Keeffe also conducted an interview with the nature reservist in Walney.

FIG. 30
A telematic performance on Walney, broadcast live around the world on 6 May. Photo Glen Boulter.



FIG. 31
Printed sheet given to workshop attendees for the project at Walney, May 2017.

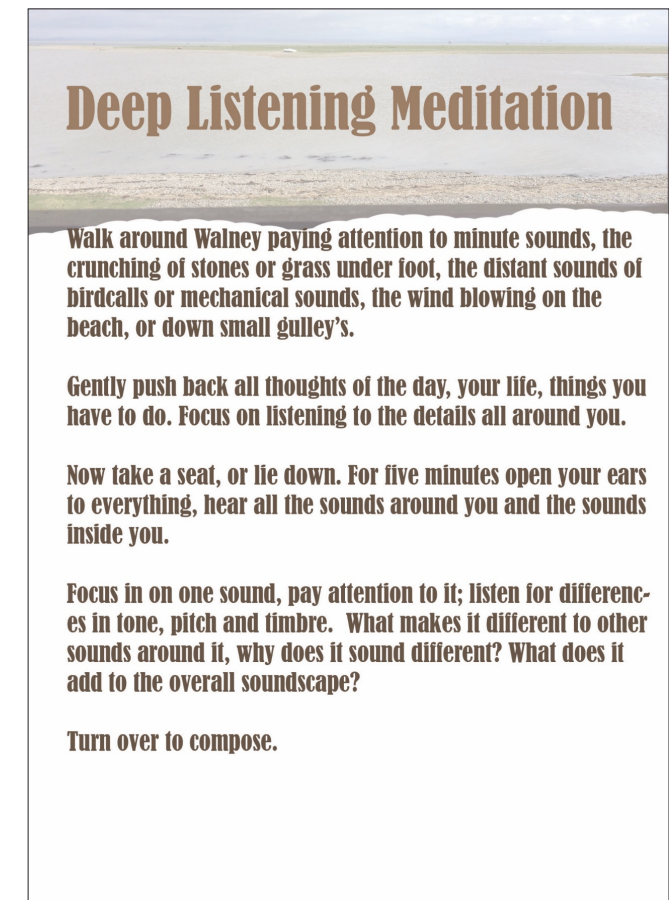


FIG. 32
Walney workshop, day 1, 2017. Photo Linda O Keeffe.



FIG. 33

Exhibition install of work at York Art Gallery, July 2019. Turner Prize winner Lubaina Hamid listening to the work, which she described as 'deeply emotional and wonderfully vibrant'. Photo Linda O Keeffe.



05 / SIGNIFICANCE

The output's significance lies in its contribution to the intersections of acoustic ecology and performance and socially engaged art practice, through its novel interdisciplinary methodologies and approaches to collaboration that have had impact on the way communities understand their environment.

The output was disseminated through three exhibitions and their related events, conference participation, an original album, and peer-reviewed publications. Attendance at the exhibition in Nottingham reached 13,121 visitors.

Hybrid Soundscapes I-IV was commissioned in 2016 by the curator Christine Eyene, an international curator and art historian known for her enquiry into contemporary African art, gendered perspectives and non-object based art practices, for a touring exhibition titled *Sounds Like Her, Gender, Sound Art & Sonic Cultures*. This was the first exhibition to present a group of international women artists at the forefront of sound art. The exhibition sought to challenge the largely Western and male-dominated frameworks of sound art. Other featured artists included Ain Bailey, Sonia Boyce, Elsa M'bala, Madeleine Mbida, Magda Stawarska-Beavan and Christine Sun Kim. The exhibition was a partnership project funded through Strategic Touring funds from Arts Council England. New Art Exchange was the lead partner and project manager for the exhibition, its associated tour and audience development programme. The project presented a unique opportunity for reaching wide audiences through innovative events programming at each partner venue.

The exhibition was staged at the New Art Exchange, Nottingham, 13 October 2017 – 3 January 2018, York Art Gallery, 12 July – 25 August 2019 and Gallery Oldham, 14 December 2019 – 7 March 2020.

The outputs received a number of favorable press reviews. See Appendix, page 30.

(Quote redacted)

Rachel Willcocks, *Left Lion*, October 2017.

(Quote redacted)

Tom Emery, *Art Monthly*, No 411, November 2017.

'*Silent Spring* is a true celebration of field recordings made in Iceland (hydroelectric dam) Spain (wind turbine farms) and amidst the threatened Brazilian Amazon. The gulls opposing the fluid mechanisms on Icelandic Reveries actually has a strange ring to it, associative and otherwise. O Keeffe combines her collected sounds in collagist patterns that seem to emphasize tensions and harmonies between species of all sizes, with a particular focus on human nature. The fact that she has travelled to these particular locations will be of interest to not only sound lovers but also environmentalists, and those seriously combatting the raw truth and reality of climate change.'

TJ Norris,
Tone Shift, 28 October 2019.

(Quote redacted)

Milena Droumeva and Randolph Jordan,
Sound, Media Ecology, Palgrave, 2019.

'Field recordings are great, but often they're an either/or: human or nature. The latter can sometimes come off as, 'Ahh nature' fetish documents or relaxation material. Linda O Keeffe's *Silent Spring* however, is doing something totally different, in collaging sound recordings to think about how the changes demanded by climate crisis will change our soundscape. Her compositions are made from recordings taken at a hydroelectric dam in Iceland, wind turbine farms in the Terra Alta region Spain and acts of sounding and listening in the Brazilian Amazon. Aside from the appeal of the political thinking-in-sound, its patterns of sound repeated and overlapped, water, whirring, breathy voices, and birds are extremely pleasing.'

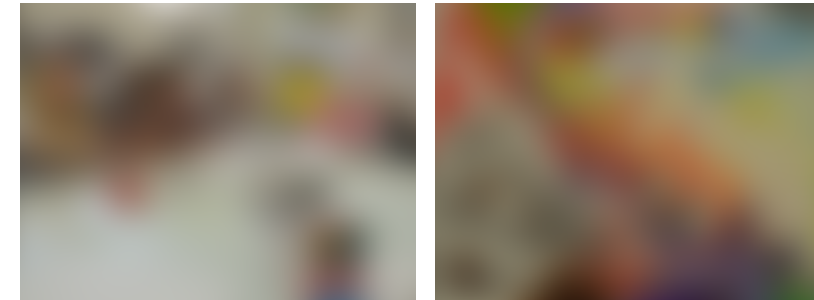
Jennifer Lucy Allan,
The Quietus, 30 October 2019.

Following the *Sounds Like Her* exhibition, Christine Eyene published *Gender, Sound Art and Sonic Cultures*, *Beam Editions*, 2019. In it, she writes:

'Linda O Keeffe's *Hybrid Soundscapes I-IV* (2017) proposes an altogether different take on the listening process of a familiar environment. In this case familiarity is not synonymous of a 'narrowed listening', blocking out insignificant sounds. Rather it is the aural canvas against which are perceived changes from within a known environment.'

Silent Spring was broadcast and discussed on 'The Wire' on *Adventures In Sound And Music* hosted by Frances Morgan, October 2019.

It has also received favourable commentaries in respected blogs about experimental music (see Appendix, page 30).



Feedback from questionnaires of groups from York workshops – 'What is the single most important thing you will remember about your experience here?'

(Feedback redacted)



FIG. 34–36
Workshops in York over 13, 15, 16 July 2019. *Sound Walking, Gendered Listening, Sound and the Environment*. These works were developed in response to the exhibition. Photos Sarah Yates.

06 / APPENDIX

Publications and Conference Papers

O Keeffe, L. 2019. 'Listening to Ecological Interference: Renewable Soundscapes', in *Sound, Media, Ecology*, edited by M. Droumeva and R. Jordan. Canada: Palgrave Macmillan.

O Keeffe, L. 2017a. 'Ecological Interference: Hybrid Soundscapes'. 'Balance UnBalance' Conference, in *A Sense of Place*. Plymouth, UK: Plymouth University.

O Keeffe, L. 2017b. 'Listening To Ecological Interference: Renewable Technologies and Their Soundscapes'. 'Balance UnBalance' Conference in *A Sense of Place*. Plymouth, UK: Plymouth University.

Album

Silent Spring released October 14, 2019 with label Flaming Pines.
<https://flamingpines.bandcamp.com/album/silent-spring>

Video

Brief recording of installation at Gallery Oldham, 2020.
https://media.ed.ac.uk/media/t/1_u9eq2su4

Sounds

To get a sense of ambient soundscape play all sounds simultaneously.

Ambient Soundscape 1
https://media.ed.ac.uk/media/1_06cf81di

Ambient Soundscape 2
https://media.ed.ac.uk/media/1_k3hxx3d

Ambient Soundscape 3
https://media.ed.ac.uk/media/1_c5hch6

Ambient Soundscape 4
https://media.ed.ac.uk/media/1_qsih8xb8

Ambient Soundscape 5
https://media.ed.ac.uk/media/1_wb59s7ie

Exhibition

Exhibition guide for *Sounds Like Her*, New Art Exchange, Nottingham .
<http://www.nae.org.uk/uploads/exhibitions-attachments/131/20181022131948-Exhibition%20Guide%20SLH%20version%20for%20print.pdf>

Performances

O Keeffe, L. 2016, *The Wind Turbines*, performance, commissioned by sonic arts group SIRGA, Flix, Spain.

Reviews

Left Lion, October 2017.
review:<https://www.leftlion.co.uk/read/2017/november/sounds-like-her-at-new-art-exchange-exhibition-review/>

The Wire, 2017.
<https://www.thewire.co.uk/audio/on-air/adventures-in-sound-and-music-hosted-by-frances-morgan-56755>

Keynote Speaker

8 May 2019
Sonic Waves: Music and Sound Beyond Borders Symposium, University of Manchester.

28 November 2018
Guest Speaker, *RMA Research Colloquia Series*, University of Glasgow.

4 June 2018
Sound and Space: Theory and Methods in Sonic Geographical Research Symposium, Cardiff University.

7 May 2017
A commission to explore listening in the Walney Nature Reserve, for World Dawn Chorus Day, Barrow-in-Furness.

2–3 April 2016
Two day keynote workshop on listening, Urban Studies Conference, NUS Yale University, Singapore.



FIG. 37
Cover of *Sound, Media, Ecology*.
Photo Linda O Keeffe.



FIG. 38
Cover of *Sounds Like Her: Gender, Sound Art & Sonic Cultures*.
Photo Linda O Keeffe.



FIG. 39
Art Monthly, No 411,
November 2017.

FIG. 40
Video installation of *Hybrid Soundscape 1, Balance UnBalance Conference 21–23 August, 2017* in Plymouth, UK, where O Keeffe presented papers and art works. Photo Linda O Keeffe.

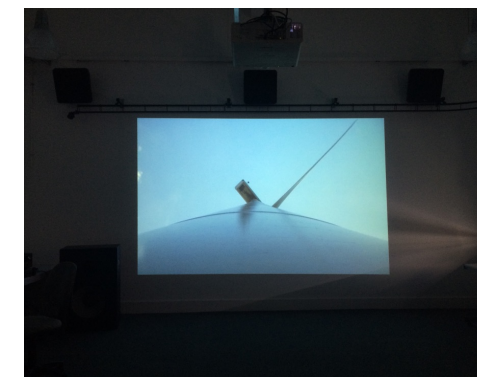


FIG. 41
Listening workshop Singapore, 2016. Photo Mark Joyce.



FIG. 42
Concert and presentation of artworks Flix, Spain, 2016.
Photo Tony Doyle.



FIG. 43
Telematic performance at Walney Nature Reserve, May 2017.
Photo Linda O Keeffe.



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