



Echoes of Lough Neagh

for fixed media and live piano

Tianrui Xiong

2026

About the Work

Echoes of Lough Neagh is a work for fixed media and live piano, inspired by the environmental crisis affecting Lough Neagh in Northern Ireland and its surrounding wetland ecology.

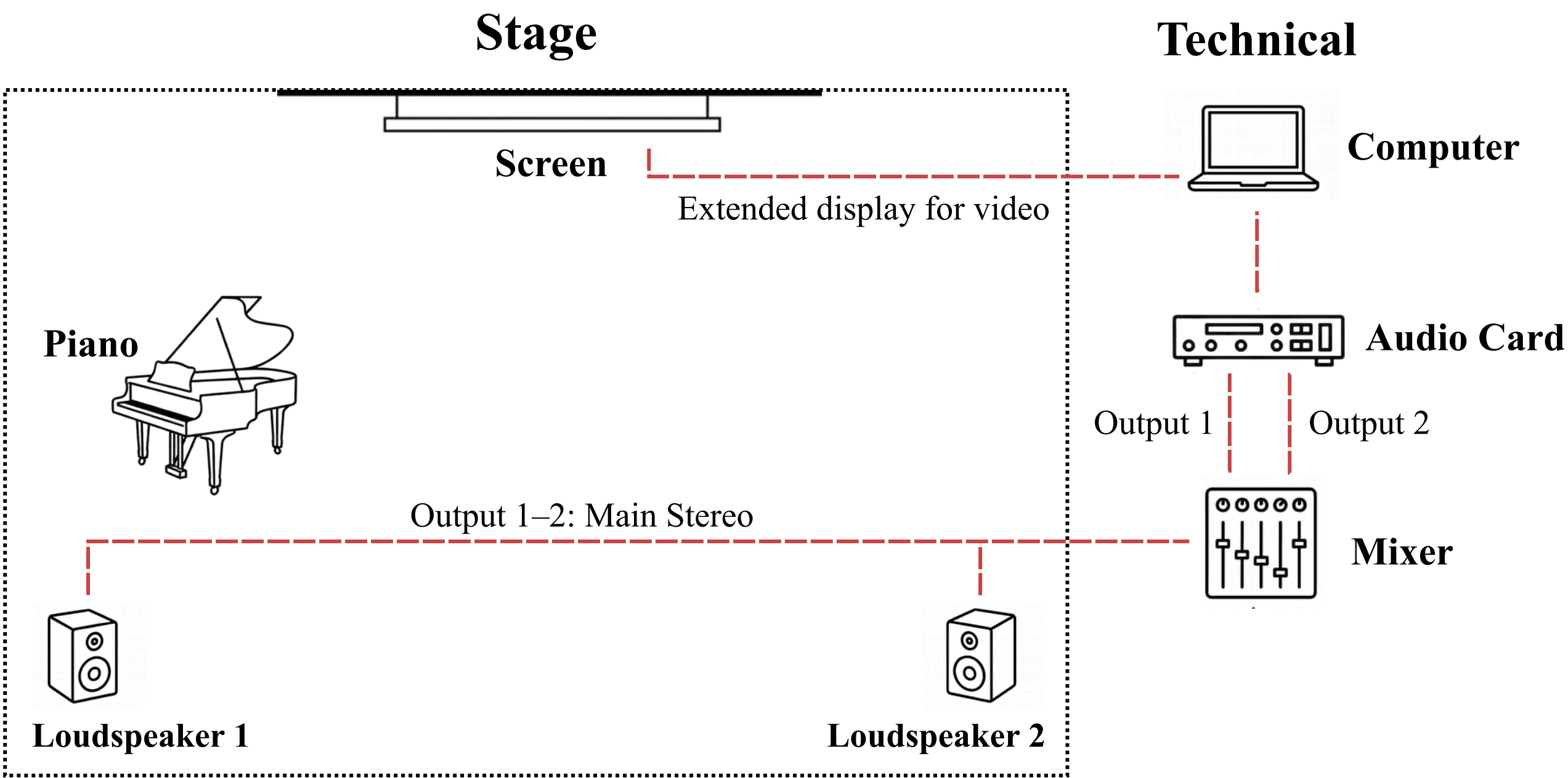
The wetland was once a vibrant living system shaped by the interaction of water, plants, animals, climate, and sound. In recent years, however, Lough Neagh has increasingly become a symbol of ecological imbalance. Excess nutrient input from agricultural runoff, fertilisers, and animal waste has continuously damaged this wetland. Algal blooms, toxic blooms, and eutrophication have not only altered its environmental appearance but also transformed the ways in which it may be heard and perceived.

Through the interaction of fixed media and live piano, this work traces the wetland's trajectory from balance to destruction, and then to a fragile form of recovery. The fixed media are based on the composer's original recordings made at Lough Neagh, which are continually transformed through sound-processing techniques, guiding both performer and audience into an ever-shifting ecological imagination. Additionally, the work includes a synchronised video featuring a built-in timer, which serves as a visual cue and timing reference for the performer during the live performance. The piano part combines graphic notation, verbal instruction, and improvisation, without prescribing every detail, and allows the performer to respond freely within a specific sonic environment and imaginal framework.

The work unfolds in four stages. The first presents the wetland's initial soundscape: overcast, humid, and quiet, though not entirely peaceful, already marked by a latent unease. In the second stage, human activity begins to intrude upon this environment: drainage pipes, mechanical construction, and industrial gestures gradually enter the wetland, interrupting, compressing, and distorting its natural sonic ecology, and turning the overall atmosphere towards menace and tension. The third stage is the most intense and violent part of the work, symbolising the full escalation of pollution, the spread of algal blooms, and the death and disappearance of plants and animals under increasingly deteriorating ecological conditions. The fourth stage turns towards a hesitant and fragile repair: people finally recognise the crisis and begin to withdraw the heavy machinery and pipes, allowing the wetland ecosystem to gradually regain stability. Yet this recovery is not a true return to an original state, but rather a form of damaged continuation.

The work ultimately remains suspended in a condition of incomplete hope: although the wetland begins to recover, traces of toxic blooms still linger, invasive zebra mussels remain, and the legacy of pollution has not fully disappeared. In this sense, *Echoes of Lough Neagh* presents not only the damage and transformation of an ecological environment, but also an acoustic reflection on wetland ecology.

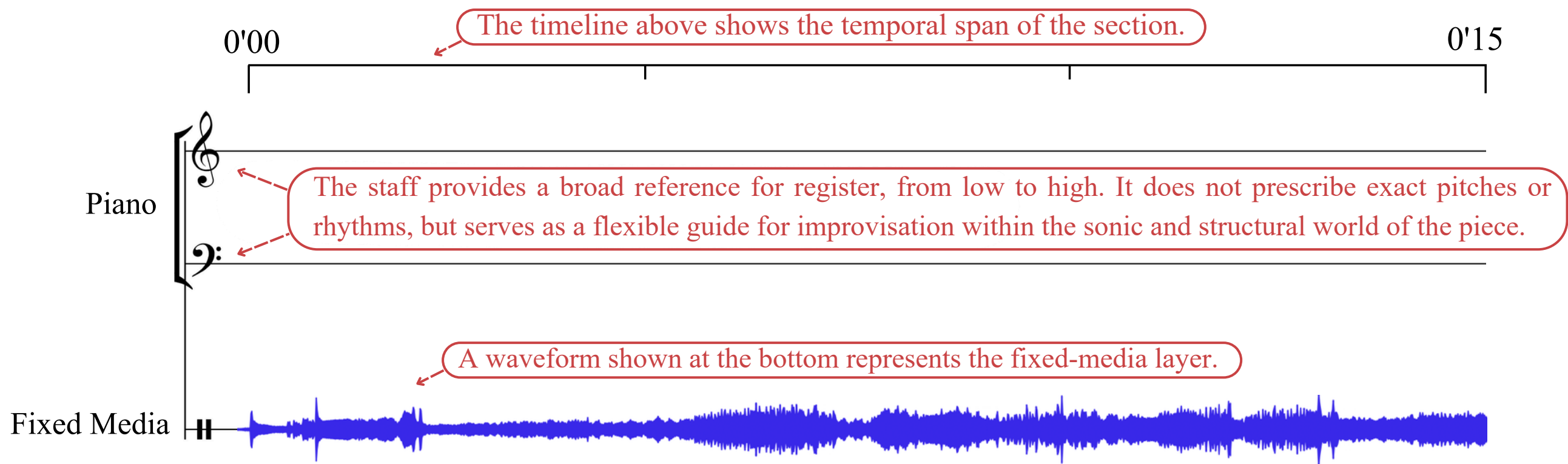
Stage Map



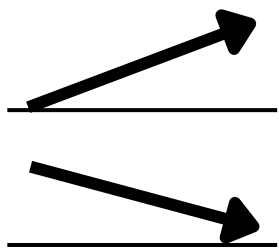
Performance Notes

Pitch Register and Timeline

This layout indicates the general pitch register and approximate timing of events.

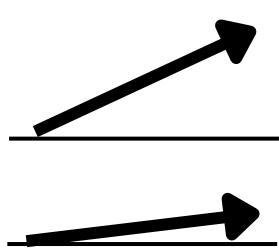


Arrows



1. Direction

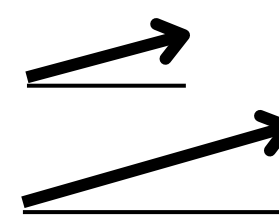
An ascending arrow indicates movement to the right across the keyboard; a descending arrow indicates movement to the left across the keyboard.



2. Gradient

The angle of the arrow indicates the speed of playing.

A steeper angle suggests a faster gesture; a gentler angle suggests a slower gesture.



3. Length

The length of the arrow indicates the duration of the gesture.

A longer arrow indicates a longer duration; a shorter arrow indicates a shorter duration.

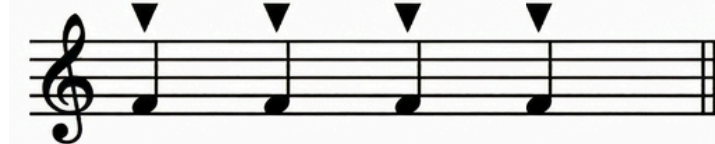
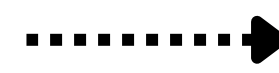


4. Solid and Dashed Arrows

Solid Arrow (Legato): Indicates a continuous, uninterrupted musical gesture. The sound should be smooth and connected, equivalent to traditional legato phrasing:



Dashed/Dotted Arrow (Staccato): Indicates a discontinuous, fragmented gesture. The density of the dashes corresponds to the degree of detachment—the more segmented the arrow, the sharper and shorter the articulation (ranging from non-legato to an aggressive staccatissimo), equivalent to the traditional phrasing below:



Notation and Techniques

In addition to the piano, the performer is required to bring a small mallet and a whistle flute for producing specific extended sounds during the performance.

Techniques are indicated by symbols placed before the arrow (for example, “.....→”). In such cases, the arrow continues to indicate the direction, speed, and duration of the gesture, while the symbol defines the playing technique.



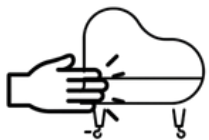
Play the piano normally.



Pluck the inside strings of the piano with the fingers to create a harp-like sound.



Scrape the keys with a baton, pencil, or fingers to produce scratching sounds.

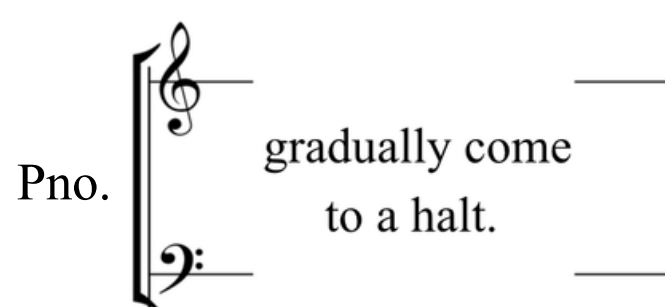


Strike the outer rim of the piano with the palm.



Make unvoiced vocal sounds (for example, “shu,” “ci,” “xi,” etc.).

This work is intended to support improvisation, and the score does not prescribe every detail. Arrows and technique symbols are used only where specific aspects such as direction, duration, energy, or playing technique need to be clarified. Elsewhere, short verbal instructions appear in the score, inviting the performer to respond more freely. Together with the fixed-media environment, these indications encourage the performer to imagine the scene and improvise using a wide range of techniques, sounds, and gestures, as illustrated in the examples below.



Fixed Media Materials

The fixed media files for this work are available at the following link:

<https://drive.google.com/drive/folders/1zCSVz6WADIYuSBjLS4Q9aDaLbW-GbjVA?usp=sharing>

This folder contains two files: the fixed-media electroacoustic composition of the work and a video version with a time counter. The video version may be used by the performer as a timing reference during rehearsal and performance, allowing them to follow the visible time counter and synchronise their improvisation with the fixed-media timeline.

Echoes of Lough Neagh

Tianrui Xiong

I

Calmly

0'00

0'15

Piano

Begin playing after the fixed media starts; imagine yourself gently entering an overcast wetland soundscape.

pp

Fixed Media

p

0'15

0'30

Pno.

mf

p

f

p

Now imagine moving deeper into the wetland,

F.M.

0'30

0'45

Pno.

surrounded by insects and humid air,
freely intersperse low staccato notes, creating a more oppressive atmosphere,

F.M.

The musical score for the Pno. part consists of two staves. The first staff has a treble clef and the second staff has a bass clef. The tempo is marked '0'45' at the beginning and '1'00' at the end. The dynamics are marked *ppp*, *p*, and *f*. The instruction 'gradually come to a halt.' is written above the first staff. A diagram of a piano's action mechanism is shown, with a dashed arrow indicating the movement of the hammer and the damper. The F.M. part is represented by a blue waveform at the bottom of the page.

1'15

II Ominously

1'20

1'30

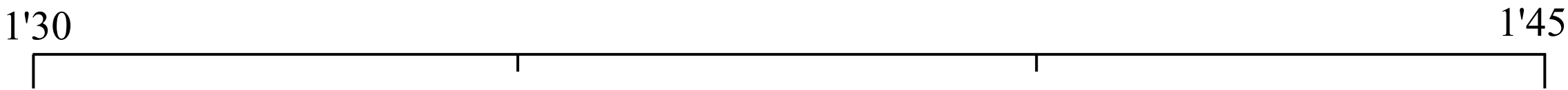
Pno.

mp *pp*

Imagine industrial drainage pipes beginning to intrude into the wetland.

p

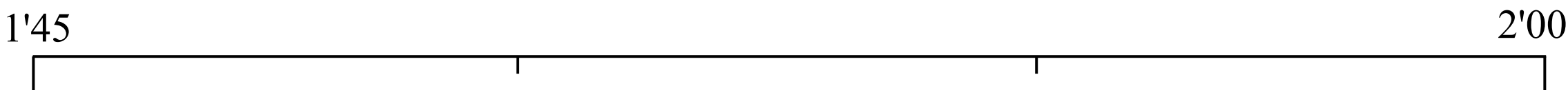
F.M.



Pno.

Use the voice to imitate the uneasy sounds of wetland animals, and the piano to evoke the environment of mechanical construction.

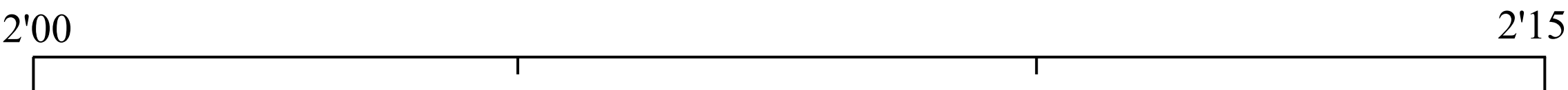
F.M.



Pno.

Imitate sounds of agricultural runoff, fertilisers, and animal waste flowing into the water, alongside sand extraction and rising water temperatures.

F.M.



Pno.

Imagine toxic algae and algal blooms beginning to spread, creating a sense of the animals facing an increasing threat to their survival,

F.M.

The image shows a musical score for a piece titled "Violently". The score is divided into two main sections by a double bar line at 2'20. The first section, from 2'15 to 2'20, is marked "then gradually come to a halt." and features a piano (Pno.) part with a treble and bass clef. The second section, from 2'20 to 2'30, is marked "Violently" and features a field music (F.M.) part with a treble clef. The F.M. part is represented by a dense, blue, textured line. The piano part is represented by a treble and bass clef. The score is titled "Violently" in a large, bold, serif font. The time markers 2'15, 2'20, and 2'30 are placed at the top of the score. The piano part is labeled "Pno." and the field music part is labeled "F.M.".

2'15

III

Violently

2'20

2'30

Pno.

then gradually
come to a halt.

pp

Scrape the inside strings of the piano, imagining the cries
of plants and animals.

F.M.

2'30

2'45

Pno.

The musical tension continues to build, symbolising the escalating pollution and the increasing loss of plant and animal life.

p

F.M.

Red.

The musical score consists of two staves. The top staff is for the Piano (Pno.) and the bottom staff is for the Field Mixer (F.M.).

Piano (Pno.) Staff:

- The staff is in treble clef.
- The melody is a series of eighth notes, starting on a middle C (C4) and ascending to a high C (C6) over the course of the piece.
- The dynamics are marked as *pp* (pianissimo) at the beginning and *ff* (fortissimo) at the end.
- There are accents (>) over the first, third, fifth, seventh, and ninth notes.
- The piece ends with a final note on a high C (C6) marked with a fermata.

Field Mixer (F.M.) Staff:

- The staff is in bass clef.
- The track contains a continuous, dense, blue-colored waveform, representing a complex, noisy sound.

3'15

Pno.

Imagine the environment now severely damaged; people finally recognise the crisis.

F.M.

3'30

The image shows a musical score for a piece titled "IV Tentatively" by John Cage. The score is divided into two main sections by a vertical line. The first section is marked with a time signature of 3'30 and the second with 3'40. The first section contains a piano part (Pno.) with a treble and bass clef, and a field music part (F.M.) with a treble clef. The piano part has a dynamic marking of *pp* (pianissimo). The field music part is represented by a blue waveform. The second section contains a piano part (Pno.) with a treble and bass clef, and a field music part (F.M.) with a treble clef. The piano part has a dynamic marking of *pp* (pianissimo). The field music part is represented by a blue waveform. The score is titled "IV Tentatively" and is by John Cage.

3'30

3'40

3'45

Pno.

Imagine people beginning to withdraw the heavy machinery and pipes.

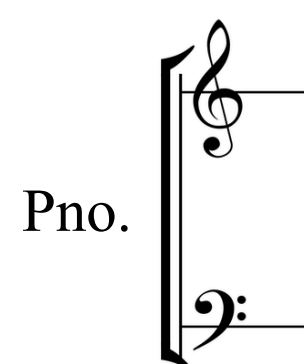
pp

F.M.

Imagine the wetland gradually beginning to recover.

3'45

4'00



Imagine the plants and animals of the wetland gradually returning, the ecosystem becoming more stable, and the rivers and streams becoming cleaner.

F.M.



4'00

4'15



Imagine the wetland never fully returning to its former state: toxic blooms still linger, invasive zebra mussels remain, and the legacy of pollution endures.

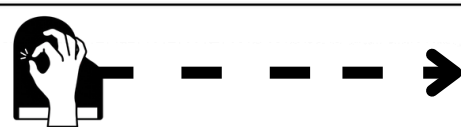
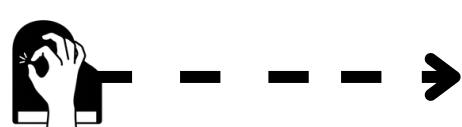
F.M.



4'15

4'30

Pno.



mp ————— *pp*

mp ————— *pp*

Red.

Red.

F.M.

