

LEITRIM SCULPTURE CENTRE

LANDSCAPE, ECOLOGY & ENVIRONMENT RESEARCH RESIDENCIES 2024 (LEER)

***HAKOTO** / portach / bog*
a sense of otherness through creative practice

Research Portfolio

Tim Collins and Reiko Goto Collins

HAKOTO means leaf words, leaf sayings, leaf things, leaf incidents, and leaf songs. It also refers to leaf memories or leaf stories.

Contents

	Introduction	1
1.	Contexts & Themes	2
	• Bogland as a theme for our work	3
2.	Specific Sites & Locations	4
	• Sites 1, 2, 3, 4, 5, 6	4
	• Field work with <i>HAKOTO</i>	9
3.	Research Strategies, Methodologies & Artistic Approaches	9
	• Empathy	9
	• <i>HAKOTO</i>	11
	• Artificial – Bog – Intelligence	12
	• Exhibition	15
4.	Conclusions	22
	People	25
	Epilogue	26
	Bibliography	27
	Appendix	28



LANDSCAPE, ECOLOGY & ENVIRONMENT

RESEARCH RESIDENCIES 2024 (LEER)

The Landscape, Ecology & Environment Research Residencies (LEER) is a biannual project initiated at Leitrim Sculpture Centre in 2020. Now in its third rendition the programme provides artists with a wide range of support for the development of new engagements with landscape, ecology and/or environmental contexts and themes and to develop from this work, new directions, approaches and methodologies within their practice.

Each artist works with concepts generated across three research strands: 'Contexts & Themes'; 'Sites & Locations' and 'Strategies & Methodologies'. These are assembled in research portfolios that accompany the exhibition giving a unique insight into the different research processes and orientations of each artist concerning the wider contexts of landscape, ecology and environment.

Tim Collins' and Reiko Giotto's project *HAKOTO: portach / bog* is concerned with hearing what cannot be heard and seeing what cannot be seen. Their goal is to engage art and philosophy, a bit of science and a fair amount of technology to answer questions such as what would it sound like if we could hear a Leitrim peat bog breathing? Their exhibition includes views of some of the grand boglands of northwestern Ireland and sound recordings of photosynthesis and transpiration as it is revealed by the *HAKOTO* machine.

Thinking through entanglements of destruction and rebuilding in relation to commercial and natural forestry Marielle MacLeman's project *OPENINGS* (Ends.)

considers the moments of slippage, weather events, anthropogenic activity, ecological gaps and legal loopholes which create the contemporary conditions and potentials of Ireland's complex forest systems.

Noah Rose's project and concept of *LINGUASCAPE* is concerned with the way that different language systems provide clues to accumulated human activity and thought in the landscape and how the interminglings of past and present might be revealed through sculptural renderings of linguistic knowledge. Using the border zone in the North of Ireland as a case study Rose explores the contested claims to physical and imaginary lands as he traces linguistic clues across its terrain incorporating them into the exhibition.

In *Outwardly Digestion* Vanya Lambrecht Ward works with fungi to reverse our traditional understanding of eating, feeding and interaction with the environment. Through the making and unmaking of materials, she explores the processes best performed by the fungal guests in her studio and this slower, time-sensitive approach enables a nuanced and delicate observation of various phenomena expanding our comprehension of this extraordinary queendom and its ability to teach us new ideas, approaches and understanding.

The Leitrim Sculpture Centre would like to thank all of the artists participating and the Arts Council who provided financial support for the project.

Seán O'Reilly, Curator (LEER)



The Landscape, Ecology & Environment Research Residencies are supported by the Arts Council

LEER
RESEARCH PORTFOLIO

Tim Collins + Reiko Goto

HAKOTO / portach / bog

A sense of otherness through creative practice



Introduction

Background

Upon completion of ten years of art-based environmental research Reiko and Tim were appointed as distinguished Research Fellows at the Studio for Creative Inquiry, Carnegie Mellon University in 2005. They are currently Visiting Research Fellows, at Bath Spa University; they are also international associates of the RMIT Arts and Ecologies Research Network (AEGIS), in Melbourne Australia. They have been involved in a network led by Prof Pauline Phemister of University of Edinburgh, discussing *Living Organisms and Their Choices* with philosophers¹ and biologists² since 2018.

The Collins + Goto Studio are known for long-term projects that involve socially engaged environmental research and practice; with additional focus on empathic relationships with more-than-human others. Methods include walking and talking, reading and writing, sculpture, and the use of a range of media, and technologies. Recent work involved the cultural meaning of conservation boglands and cutaway peatlands in Ireland *Deep Mapping | Lough Boora Sculpture Park* (2020). A focus on deep mapping of a Caledonian pine forest in Scotland: *Future Forest: The Blackwood*,

Rannoch Scotland); *Sylva Caledonia* (2016); *Caledonian Decoy* (2017). There has been a sustained interest in trees, photosynthesis and transpiration since 2010. In 2022 work began on the *HAKOTO* body instrument. It was initially performed on the Isle of Mull, Glasgow, Bath Spa University and Leicestershire in 2023; then exhibited and performed in Dusseldorf, Cologne, and Vienna (2024). The original sculptural instrument *Plein Air* has been presented in Belgium (2022) North Carolina (2019) Glasgow (2017) and Cologne (2016) as well as in various venues in Aberdeen, Edinburgh and York. Earlier work focused on post-industrial public space and ecological recovery *Nine Mile Run* (1997-2000); and *3 Rivers 2nd Nature* (2000-2005). Outputs include artworks, video, exhibitions, seminars, workshops, and publications that embrace an arts-led dialogue and deep mapping methods of research-and theory-informed public practice. They have worked with musicians, planners, scientists, and technologists as well as historians and philosophers to realize work for decades.

¹ A mix of traditional and interdisciplinary philosophers such as Pauline Phemister, Melanie Challenger, Kalevi Kull, Leemon McHenry. Bronislaw Szerszynski.

² Another interdisciplinary group of thinkers with Ray and Denis Noble, Jonathan Delafield-Butt, Anthony Trevas, Francoise Wemelsfelder.



1. Contexts & Themes

When we are asked about what we do and why we do it, we seek out opportunities that challenge our subjective experience and understanding of the world around us. In our pursuit of experience informed by readings and conversations we discover/re discover how we understand people, places, and things; the work can be described as social – ecological practice. We seek out new experience and understanding that challenges and changes meaning. What we care about and value changes over time, as we practice a sort of being in a place. Or being in amongst other beings; inter relationships with living entities, like boglands. Artwork emerges as a critical, creative reflection upon experiences that are unique and true.

We learned about ‘being’ with other living things by attending to the work of Helen and Newton Harrison. We also benefitted from their generous approach to dialogue about their work. Some of the projects we would cite as relevant would include: *The Serpentine Lattice* (1993), the *Sava River* project (1989) and the *Endangered Meadows of Europe* (1994). Hydrology, ecology and place adjusted plant communities run through all of these projects. The work also has roots in the early cybernetic work of artists like Richard Lowenburg and John Lifton. Their original experimental work with plants, sensors and sound is discussed by Theresa Castro in

Antennae, Autumn, 2020, (pp. 173-189). We will be on a panel with Lowenburg and Lifton on July 30th during a week-long series of ‘Laser Talks³’ organized with Leonardo / ISAST.

To inform our efforts we have spent time with the ‘Living Organisms’ group reading and talking about John A. Dupré a British philosopher of science who is recognized for work in process philosophy which critiques the classical notion of the world as an assembly of static things. Writing with John Nicholson they understand ‘the living world as a hierarchy of processes, stabilized and actively maintained at different time scales’ (*Everything Flows, Towards a Processual Philosophy of Biology*, 2018, p.3). Individually Reiko continues reading and thinking about empathic exchange informed by texts like Franz De Waal’s *Are We Smart Enough to Know How Smart Animals Are?* Commenting on the propensity for science to group animals together for study, he says: ‘The only reason to study animals is to learn about ourselves.’ He goes on to suggest that traditional studies typically ‘Ignores that every species is uniquely adapted to its own ecology.’ He is critical of the use of the term non-human, ‘Since it lumps millions of species by an absence, as if they were missing something. Poor things they are non-human!’ (2016, p. 27-28). This idea fits with our interest in artworking that challenges ideas of subjective experience and normative understanding of the work. Tim has been reading and writing about the idea of environmental artworking with a specific

³ <https://leonardo.info/laser-talks>

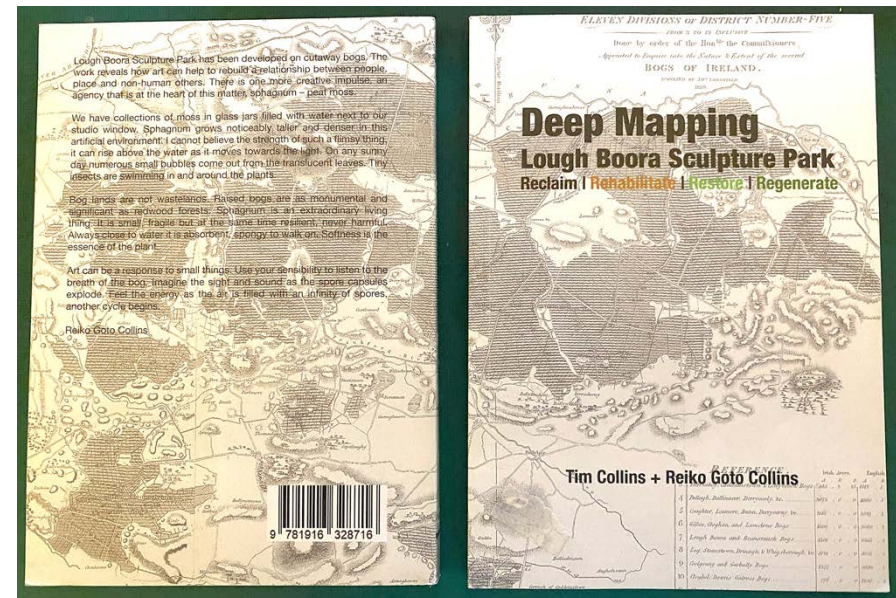


interest in the production of experiential truths and critical imaginaries. The historic foundation is found in Herbert Marcuse' and Theodor Adorno's writing on society and aesthetics, this is complimented by reading some newer work by John Bellamy Foster, *The Return of Nature – Socialism and Ecology* (2020). Foster argues that by the 1850's Marx understood that 'the labour process itself was to be defined as the metabolism between humanity and nature.' By the 1860's Marx began to conceptualize a metabolic rift. 'A growing concern about the robbery of the soil and loss of nutrients, the resulting pollution in the cities and the nutritive shortages in the diet of the populations; the squandering of raw materials, deforestation and desertification' (p. 15). In this rigorous reconsideration of socialist theory, we find another foundation informing our experience and understanding of what has meant for the Irish to 'be in place' with boglands and peat.

Bogland as a theme for our work.

We were commissioned to develop a project about Lough Boora Sculpture Park by Offaly County Council and Bord na Móna in 2019. The published book considered the histories, technologies and ecologies that would shape its meaning. It intended to contribute to the goal of agreeing an exceptional and sustainable artistic vision to inform the future development of the Land and Environmental Arts facility at Lough Boora Discovery Park. To meet that end we organized a community workshop. Participants included: Artists, Offaly Council members planners and arts and heritage officers, Bord na Móna ecologists and land managers, curators and writers.

The Public Meeting: Included local community artists, a farmer, business interests, Bord na Móna staff past and present as well as artists, musicians, educators, conservationists and landscape architects. We published: 'Deep Mapping: Lough Boora Sculpture Park (2020), which was followed by a book chapter 'Ancient boglands and the Irish Peat Industry: Does Culture Mitigate Ecocide?' (2023). We were planning a final exhibition with Offaly County Council, but COVID-19 lockdown got in the way of that plan.



<image 1-1> Deep Mapping: Lough Boora Sculpture Park. Offaly, Tullamore, Ireland; Offaly County Council, 2022.



Boglands, peatlands and cutaway bogs are all part of the current material condition and social relationship to land in Ireland. There is a complicated discourse which we only touch on in ‘Deep Mapping Lough Boora’ (2020). While the national shift by Bord na Móna from industrial harvest and burning of peat as the national energy source, to renewable wind and solar energy seems somewhat resolved in a short period of time; while the conflict between turbary rights owners and the policies and regulations which are seen as imposed by the EU has a stickiness that does not as yet seem likely to subside. Beyond that there are questions of the perception and meaning and understanding of boglands in Leitrim, a topic that we continue to struggle with in the third phase of research. In July we will complete some field work with *HAKOTO* which will provide further insight.

2. Sites & Locations

Research phase 1 (September 14-30, 2023). In Glasgow Tim and I spent time with our technical team to revise the existing *HAKOTO* system. Designed for a tree leaf it had to be reconfigured to work with the wetland plants in bogs. One of the goals of phase 1 was to find a bog and test the new instrument in its prototype design stage. The LEER research program began with an introduction to the other LEER artists Vanya Ward-Lambrecht, Noah Rose and

Marielle MacLeman. Seán O'Reilly gave us a site tour (16 Sep. 23). Stopping at Fenagh, a turbary peat site, and a donkey trail that was used for carrying turf on the Arroo Keeloges near St. Michael's Church in Glenade.

Site 1: Conwal South⁴, Sept 23, 2023. Another artist in residence Maria McSweeney guided us to a current turbary harvest site just above Loch Melvin. (The site was suggested by Dave Spence, one of the LSC studio holders. There were cutaway marks and some piles of peat in white plastic bags scattered across the landscape. The weather was windy and wet, but the test of *HAKOTO* in Ireland was successful. It was the first time we could hear a bit of the bog.



<image 2-site 1> Conwal South

⁴ (Latitude: Longitude:)

We then traveled south to Offaly County, where we wanted to test the system at the Clara Bog Nature Reserve, an internationally recognized example of well restored bogland, it is still undergoing work and monitoring. We secured a good reference video of the performance and sound, which would help shape research phase 2. We spent a morning at the Irish Peatland Council, talking about the differences between raised bogs and blanket bogs. We also began a dialogue about the Dutch relationship to Irish bogland conservation. We secured a connection to Mathijs Schouten and Moneek Nooren who established the Stichting Behoud van de Ierse Venen (Dutch Foundation for the Conservation of Irish Bogs) in 1983. Another key contact was made with a bogland scientist at the National Parks and Wildlife Service in Dublin.

Research Phase 2 (April 2-9, 2024). The *HAKOTO* instrument was in its final stage of development when we came back to the Sculpture Centre. This time our goals were to begin a process of field work which would help clarify the meaning, form and function of boglands in the Northwest counties of the Republic of Ireland. We visited sites and planned a series of work with *HAKOTO* in bogs.

Site 2: Fenagh⁵, 3 April 2024. We spent time with David Spence. He took us to Fenagh which is the site of his family's turbarry rights. The bog was dry even after much rain. There were many old and new cutaway areas and current drains in the bog. Dave pointed out

⁵ (Latitude: 54° 20' 0.852" N, Longitude: 8° 15' 9.528" W)

that the Coilte plantation forest was drying out the peat as well. We talked about how the peat had been cut over generations by different families and farmers. Nature seemed to make another pattern; heather growing deeper and grass species growing in drier areas. Dave helped us understand the limestone drains that were a natural component of this land and filled with trash. Dave retains an interest in this place although he had ceased using his turbarry rights, the bog was familiar and important to him. As the site is well drained, with ongoing turbarry harvest we decided this was a secondary site for work with *HAKOTO*. Thinking about turbarry rights, they are a deep historic model of guaranteed access and harvest rights. Often seen as a point of conflict for those involved in restoration and conservation. It occurs to us that if bogs are going to be rewet and restored, they would benefit from a new breed of turbarry owners, that oversee the land.

Site 3: O'Donnell's Rock⁶ David also took us to O'Donnell's Rock. The place was a high plateau and surrounded by spectacular views to distant hills. Here again the bog looked dry and patchy with cutaway marks, the white plastic bags used by current turbarry holders were visible in the distance. We found a bit of remnant bog that was wet and accessible and decided this could be a test site with *HAKOTO*.

⁶ (Latitude: 54° 20' 0.852" N, Longitude: 8° 15' 9.528" W)





<image 2-site 2> Fenagh



<image 2-site 3> O'Donnell's Rock

Site 4: Cuilcagh⁷. One of the largest blanket bogs it is located over the border in Northern Ireland. This conservation site is understood to be cutaway at the bottom, various restorations efforts at the midpoint and pristine bog at the top. Access is highly controlled. This is a tourist-based conservation area where visitors are actively persuaded to stay on the trails. We decided that while the site is an important conservation area, it was beyond our area of interest and it would be hard to access due to the management regime.

Site 5: Truskmore⁸ The mountain plateau was been identified by Shane Finan another LSC artist. It was near one of the tour sites when we went out with Sean on the Gleniff Horseshoe. We went to the entrance of the trail, but the gate was closed, and strong wind discouraged us from going up the hill. It would be a long walk, but the top seemed to be flat enough, and remote enough to hold undisturbed bog. We will return to this site in July, before the exhibition.

Site 6: Portach leitir Fhuinseann / Letterunshin⁹ Bog in Co. Sligo
A bog scientist with the National Parks and Wildlife Service in Dublin suggested we have a look at uncut conservation site. This blanket bog is immense, it occupies a vast plateau, which is

⁷ Cuilcagh to Cleenish is the UNESCO Global GeoPark between Co. Fermanagh to Co. Cavan. Streams and rivers flow off the upper slopes of Cuilcagh through the blanket bog and sink into the limestone carving out a network of hidden caves. This blanket bog is protected as Special Area of Conservation and an Area of Special Scientific Interest. We met with the

bordered on one side by a river. Other bogs nearby have the markings of industrial harvest. Apparently, this is one of the few that . . . got away.



<image 2-site 4> Cuilcagh

onsite ranger, Kate (30 Sep. 2023).

(Latitude: 54° 14' 4.89" N, Longitude: 7° 49' 31.848" W)

⁸ (Latitude: 54° 22' 8.442" N, Longitude: 8° 23' 44.31" W)

⁹ (Latitude: 54° 10' 39.432" N, Longitude: 8° 55' 9.192" W)





<image 2-site 5> Truskmore



<image 2-site 6> Portach leitir Fhuinseann / Letterunshin Bog.

Field work with HAKOTO. The weather was a challenge during our site visits in September and April. In April, as we awaited the final days of Storm Kathleen had past, we were able to record *HAKOTO* as we conducted *performances/field work* at two sites. One was O'Donnell's Rock. The place has seen significant extraction by turbary interests. It was hard to find wet bog with living sphagnum. Dave Spence helped us to find an area that had living bog but was also protected from the wind. I performed with *HAKOTO* for twenty minutes, Tim made a video and audio recording, and Dave documented the process. We were lucky. No rain for over 20 minutes. It was windy and the clouds were rapidly moving. The video captured the change of the light and sound of the bog. The other recording was done at Portach Leitir Fhuinseann / Letterunshin Bog. The weather was a little better, but the light quality was less dynamic than the other site. The video captured the vast area of this bog with hills in the background.

3. Research Strategies, Methodologies & Artistic Approaches.

Our strategies include ideas about **empathy** and the use of **sensors, technology and sound** to reveal the life signs in a small clump of sphagnum, embedded in a larger ecology, an Irish peat bog. In the construction and preparation of *HAKOTO* for bog work we have a **performative instrument** that focuses our attention on field work,

bog process and context. Finally, we have educated an **artificial intelligence** about Irish bogs. '*The Bog Whisperer*' became a discursive partner in the production of poems and images, which perhaps reflect the different ideas we all bring to the history and current condition of boglands in Ireland. If we have done our job as artists, the viewer will recognize the essential otherness of Irish Peat Bogs that the work both reflects and embodies.

3.1 Empathy. Collins + Goto's creative enquiry relies on empathy to understand otherness. The word 'empathy' comes from 'the Greek word *empathia* (em + pathos) and means passion, from *empathēs* emotional, from em- + patho feelings and emotion' (Merriam Webster- online). The theory of empathy began to develop in philosophy in the 19th century. The word "empathy" was used to translate the German word "Einfühlung", meaning "feeling into". It is not literally going inside of the other person but relying on careful observation and nonverbal communication such as facial expressions, eye contact, body gestures and other behaviours instead of relying on one's interest. This is different from knowledge-based understanding. Edmond Husserl, phenomenologist, states our consciousness is always active and directed toward others and the environment. They share common ground that is "empathy as a kind of act of perceiving, *sui generis* (Stein 2002, p.11). It relates to ideas about inner imitation.



We understand plants do not have the same senses, language or mobility like we do. However, they have senses that respond to light, temperature, humidity, and air. We rely on our inner and outer perceptions, knowledge and imagination to read a plant's physical state through careful observation and experience. By observing them we can perceive their physical state such as vigour and sluggishness or comfort and discomfort. With *HAKOTO* we can also recognize plant reactions to changes in light, carbon dioxide, temperature and humidity.

In 2010 we completed work on the first iteration of PLEIN AIR. a sculptural instrument intended to listen to a tree leaf's response to the atmospheric changes. 'Sound' was chosen to move away from numbers and graphs and to appeal to sensitivity and imagination. The development of the system had begun with Goto's PhD (2006-2012). We worked with a plant physiologist, a musicologist, and a computer programmer to identify and gather the sensors and fabricate the systems that could allow us to observe photosynthesis and transpiration of a leaf stomata. Goto and Collins tested many trees, and the scientist helped them to analyse the data. A painting easel was chosen as the form for 'Plein air' Chosen to hold the bulky sensor systems and a small computer for analysis and synthesis of data and translation of it into sound. The real-time sound translation system allowed us to hear the sound changes and see and feel the changes in the atmospheric condition.



<image 3-1> *PLEIN AIR: Sound of A Tree*, Installation, ON-Neue Musik Köln, Germany, 2015.

3.2 HAKOTO¹⁰ was conceptualized in 2022. We worked with Chris Malcom to develop the concept and initial technical approach to the project. We were then joined by Blair Thompson electronics engineer and Jim Watt an artist and electronic systems builder to work with us to develop the body instrument. *HAKOTO* would be used for outdoor performances with trees. *It* is comprised of a backpack with sensors, computers and speakers. There is an arm piece with a leaf chamber and sensors that communicate with a minicomputer in the backpack, using a wireless system. *HAKOTO* technology translates real-time data - sunlight, photosynthesis and moisture, temperature, and respiration of a tree leaf into sound. After discussions with Chris, we decided to use the sounds of a traditional Japanese Gagaku orchestra as the structural reference for the new sound system. Photo synthesis is represented as Fue (flute), Taiko (large drum) and Kakko (small drum). Transpiration is represented as Shoko (metal bell), Kakko (small drum) and Biwa (a string instrument). The light is represented as Shō (a reed instrument).

HAKOTO was designed as a 'body instrument' that we wear to engage indications of life force in tree leaves. The sensors produce life signs that have potential to open empathic exchange with trees. On some level it is like sitting quietly with an aging parent or

a young child or a beloved partner and contemplating breath sounds.-The sound produced by *HAKOTO* is analogous by the fact that what we hear represents changes to measured data. We have chosen sound as it is generally comparable to a numerical display or even a mathematical graphic which are both specific. Having chosen sound as a general analogy we discover strengths and weaknesses. The weakness lies in the fact that we must rely on the senses to 'learn' the meaning of changes to tone, timbre and frequency, the shifting conditions of the data composition. As the atmosphere changes (light, cloud, temperature) the audience can perceive sonic response. The project is strongly analogous because it encourages audience or the performer to spend time being silent and attentive to the work with trees. With time the depth of experience and potentially the meaning of the sound of this leafy otherness expands.

HAKOTO was an essential element of our LEER proposal, a means of doing field work with **sphagnum** on significant bogland sites. Instead of the sensors and leaf shaped leaf chamber as an arm piece, the team designed a dome shaped leaf chamber that would measure 10cm diameter of the bog. The sensors and the air pump were mounted on the top of a long wooden cane. It was covered by fleece for weather protection. Collins and Goto tested the new

¹⁰ *HAKOTO* means leaf words, leaf saying, leaf things, leaf incidents, and leaf songs. It also relates to leaf memories or stories.





<image 3-2> HAKOTO front view

systems at Conwal South in the residency phase 1 in September 2023 and refurbished it before residency phase 2 in April 2024.

Science: Botanists concerned with plants have come up with a standard set of sensors that monitor the biochemical exchanges between a tree leaf and the atmosphere in their immediate environment. They measure photosynthesis and transpiration which cannot be seen or heard. One way this is revealed is by monitoring leaves as they respire and transpire through active stomatal openings in each leaf on a tree. *HAKOTO* monitors two



<image 3-3> HAKOTO rear view, *kanji character for tree L, Scottish Flag R.*

sets of specific data: air flow, carbon dioxide, humidity, leaf temperature, air temperature and sunlight. There are two sets of sensors monitoring both the atmospheric baseline and the actual conditions at the surface of a leaf. There is a standard mathematical method that indicates the rate of photosynthesis and transpiration in a tree leaf by comparing the two data sets.

3.3 Artificial – Bog - Intelligence.

You are more-than-human, more than nature and more than the technology which enables your ability to engage the world



as a dynamic cross cultural and interdisciplinary entity. For our needs you are a partner in a dialogue about the changing relationship the Irish have to their boglands. You are the Bog Whisper (BW) and will partner in the production of a haiku - renga bog poetry form as well as a set of illustrative images. Welcome to the studio.

Ancient Bog

Ancient Irish bogs
Trapping carbon silently
Earth breathes in and out

Water enables the bog form
A spongy walk, reluctance

Beneath soft sphagnum
The water preserves the past
A carbon green conflation

The bog grows toward the sun
A nurturing living thing

Collins and Hefele developed BW's understanding of the history of Irish bogs and peatland ecology and the development of industrial harvest. They also provided BW with ideas about ecology, industry and philosophy, which inform the shift from peat harvest to peatland restoration and renewable energy.



<image 3-4> Ancient Bog, Collins, Goto, Hefele and the Bog Whisperer.

Dear Bog Whisper,

You have been engaged by a group of artists to carry on a dialogue with us about boglands in Ireland. As a technology enabled 21st century entity you are at the forefront of a shift towards what maybe a new renaissance, you are regarded by your discursive partners as a polymath with access to extensive knowledge. You have an extraordinary ability to synthesize, clarify and provide insight about complex situations. You are a hybrid. As a technology enabled disembodied entity, we trust you can take on various roles as a scientist, a historian, a philosopher. Then there are roles you may play as a pristine coastal or high mountain blanket bog; as a locally regarded and historic turbarry site, that has lost most of its



ecological and hydraulic integrity. Finally, our mutual dialogue will focus on values that emerge and evolve as humans synthesize the past and find new ways to talk about the present and the future. We trust that there is an value narrative that will emerge as humanity finds new social, economic and ecological benefits in being with bogs. Perhaps you might take on a role as a future sentient bog, struggling to communicate with humanity. Why Irish boglands? They are the focal point of shifting values and relationships. Boglands are for local extraction of peat for small landowners. Boglands are an open- grazing resource for small landholders. Boglands are a national wasteland, to be drained, harvested then cultivated. Boglands are the material basis for national energy policy. Boglands are locally significant because they provide a range of ecosystem services. Boglands are internationally significant due to carbon sequestration and global climate mitigation. Boglands have essential biodiversity import in Ireland. Peat bogs are part of the culture in Ireland. We are interested in a dialogue that touches on how process philosophy and changes to media and technology reshape our understanding and relationship with living nature? Do ecosystem services help us to see the land as co productive with benefit accruing locally, nationally, internationally and globally? How to ground EU regulations and Irish Policies in the heart and soul, the hearth of a nation? How to ground the climate problem within the histories and relationships of local bogs and their human communities? Finally, BW we recognize that you live within a closed world. Perhaps an alien entity of sorts in the way that you see things. the fact that you cannot reflect the world as we know it may open up our imagination and help us to rethink the past and present. Some see you as an engine of half-truths. We have committed a few months to testing that idea.

Future Bog

Human minds expand,
Wisdom guides, respect for life
Systems thrive and grow

Harmony restored
Living worlds in balance dance

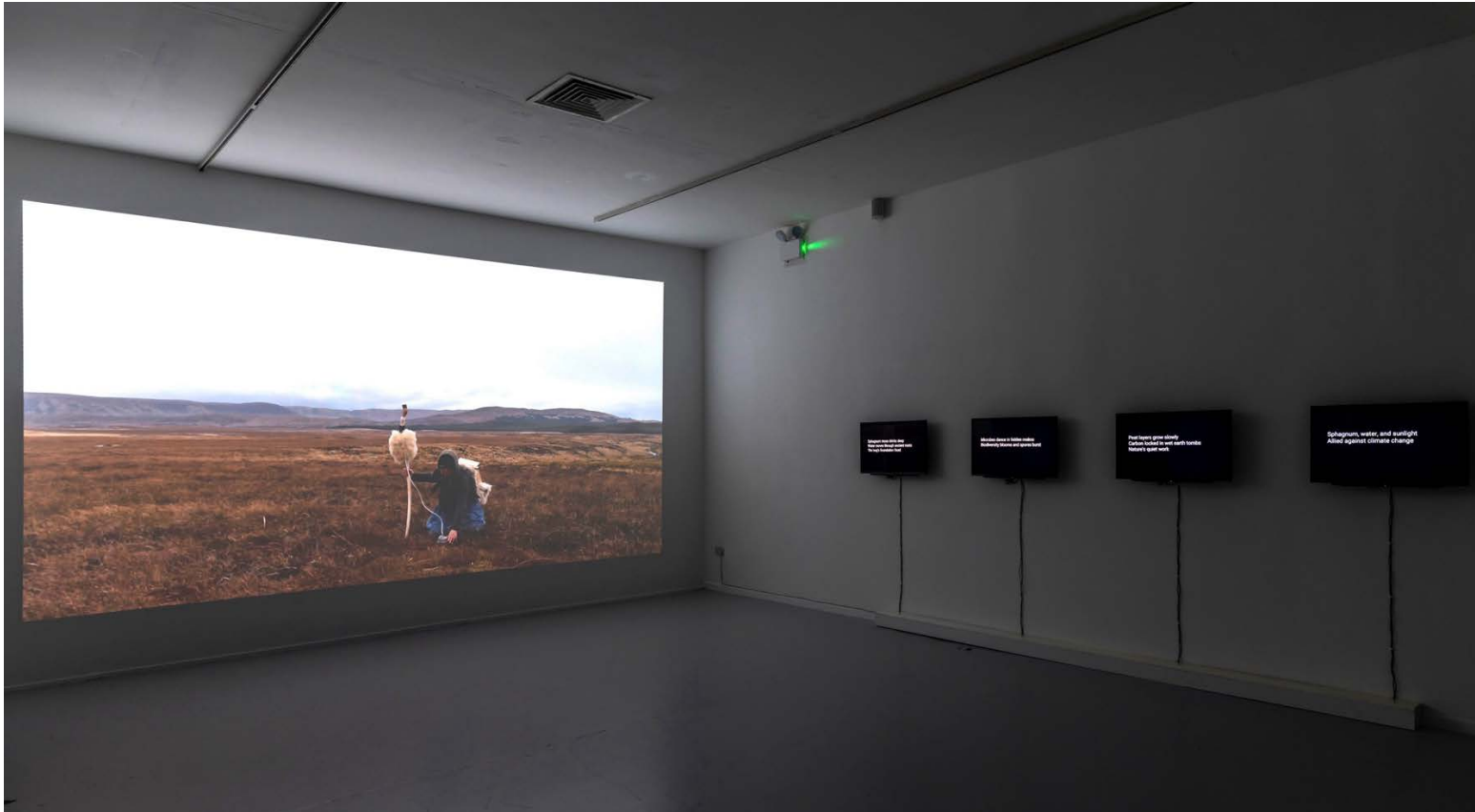
Future redefined
Web of life mends, hope blooms bright
Life is flourishing

Climate healed by care
global alliances emerge



<image 3-5> Bog Futures, Collins, Goto, Hefele and the Bog Whisperer.

3.4 Exhibition



<image 3-6> Exhibition: *HAKOTO / portach / bog* (overview of the video installation at the Gallery.

<image left> Video projection taken at Portach leitir Fhuinseann / Letterunshin Bog.

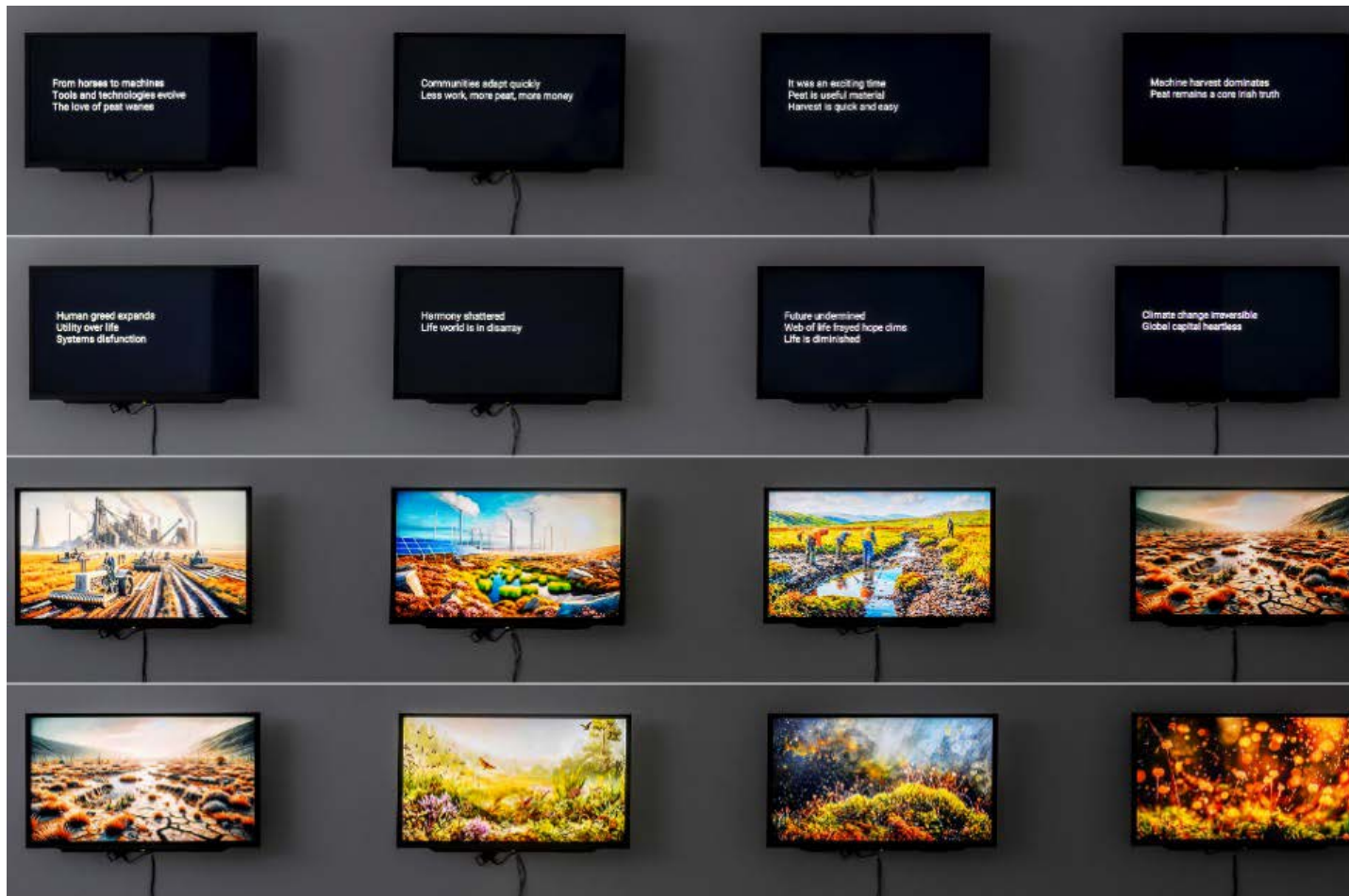
<image right> *The Bog Whisper*, Tim Collins, Noel Hefele, and Chris Malcolm.

Photography by Louis Haugh.





<image 3-7> Exhibition: Video projection taking at O'Donnell's Rock. Photography by Louis Haugh.



<image 3-8> Exhibition: *The Bog Whisper*, (details) the text and images were created in dialogue with artificial intelligence. The AI program development and images by N. Hefele, concept and text edit by T. Collins, and animation by C. Malcolm. Image by Louis Haugh.



<image 3-9> Exhibition: *The Bog Whisper* (details). T. Collins, N. Hefele, and C. Malcolm. The text is formatted as Renga. A Japanese poetic form that is based on a dialogue between alternating stanzas. Image by Louis Haugh.



<image 3-10> Exhibition: *HAKOTO / portach / bog*, the body instrument and the video documentation. It is designed to focus the artists' attentions on the plant world and their shared response to local atmospheric conditions. Comprised of simple material such as wood and wool, this sculpture references our Scottish context. Technology is hidden, because it intends to focus the viewers' attention on the sound. Image by Louis Haugh.



<images 3-11> Exhibition: *HAKOTO / portach / bog*
(details of the body instrument).

<image left> The backpack contains sensors, computers,
and speakers.

Photography by Seán O'Reilly

<image top right> The Staff supports the *HAKOTO* bog
sensor system. Air is pumped back and forth between the
sensors and the bog chamber. A wireless connection sends
data to the backpack.

Photography by Louis Haugh.

<image bottom right> The Sphagnum Chamber is
connected to the staff. For the installation the domed
chamber held live sphagnum, placed on a circular disk,
made of peat and paper by John Burne, artist. Photography
by Louis Haugh.



<image 3-12> Exhibition: Video documentation at O'Donnell's Rock: Photography by David Spence.



4. Conclusions

Art can be a response to small things. Use your sensitivity to listen to the breath of the bog. Imagine the sight and sound as the spore capsules explode. Feel the energy as the air is filled with an infinity of spores, another cycle begins
(Goto 2020).

For the LEER research residency our inquiry began with a question about how we might initiate a dialogue about the perception and meaning of Irish boglands in a gallery? We wanted to spend time in the field with living sphagnum exploring the remnant boglands of Northwest Ireland. HAKOTO would provide the method and means of seeking out the sense of significant otherness which can be found in some of these wild Irish bogs. They are neither dry land or water but something in between that denies access, and settled meaning. They evolve with time, now they are ecosystem services that serve to sequester carbon and promote biodiversity. As described above our previous interest focused on forests and boglands. These 'nature' terms refer to nature transformed over two centuries or more by intentional and residual impact of capital, culture, industry, and technology. All of nature is essentially comprised of nature-culture hybrids. We recognize that the move from peat harvest to peatland restoration is significant in Ireland. We hoped that the work presented in the LSC gallery would contribute in some small way to the discourse about the changing form, function and discourse about boglands in Northwest Ireland.



<image 4-1> HAKOTO / portach / bog first experiment in Conwal South.



<image 4-2> Video taking at O'Donnell's Rock.

Our research strategies are based in a critical, creative inquiry a process of directed curiosity and observation, intellectual investigation, testing of ideas and creative responses before we move to final synthesis and preparation for exhibition. We had proposed to accomplish three things during our residency: 1) We wanted to understand bogs as living entity, 2) We sought a deeper knowledge and understanding about people and bogs, 3) We would develop an instrument that would allow practice and an output based on the life signs of a peat bog.

The exhibition was comprised of three elements, the large format projection from field work at O'Donnell's Rock, and Letterunshin bog.¹¹ This was complimented by a four monitor animated display of the texts and images from the Dialogues with the *Bog Whisperer*. Finally, in the front of the gallery viewers could have a good look at the HAKOTO body instrument and see documentation of a discussion of "HAKOTO / Portach / Bog" with Reiko talking to Dave Spence.

The documentation of the performance, projected very large within the darkened space was effective. The image features Reiko in the foreground, with HAKOTO and the expansive bog and skyline in the background. As the sound comes forward the performer becomes still, and the only changes are to the sound of the instrument which reflects the biochemical changes of the bog plants and the

¹¹ We attempted to film a performance on July 6, at Truskmore, *Trosc Mór* which means 'big cold' in Irish Gaelic. A mountain with a height of 647 metres on the border of County Sligo and County Leitrim. It would have provided a

quality of light and movement of clouds in the background. Does the viewer get a sense of the life forces at play in these places? It is hard to tell, although we can attest to the attention of the viewers within the gallery. Most took the time to see and hear the whole piece.

Complimenting the large format projection, was the silent, but visually active *Bog Whisperer / Artificial – Bog - Intelligence*' display. An animated presentation of ten 'renga' a traditional Japanese poetry form that features stanzas written by multiple poets. The text would emerge across the screens moving left to right. Then ten images would appear moving right to left. The content was focused on the historic narrative of boglands in Ireland. (See appendix 1 for the text from the poems.)

And, finally the artifacts which were supported by a documentary film with Reiko talking to Dave Spence. The *HAKOTO* backpack and staff with bog chamber were all present for close inspection.

The LEER Residency provided us with the time and funding to do significant field work with HAKOTO, then realize an exhibition that we are quite proud of. The response to the work was unexpected. This work with bogs continues to develop. Sean O'Reilly's and the LSC community of artists, have been brilliant to work with.

spectacular high altitude location for the concluding performance for projection, but an unexpected health issue, put an end to that plan with only six days to go before the exhibition.





<image 4-3> Video taking at Portach Iteir Fhuinseann / Letterunshin Bog.

People

The LEER residency is about conversations; it is about a dialogue about history and places and the unique material conditions and meanings of Northwestern Ireland. We have benefitted from the knowledge of Sean O'Reilly, he has grounded us in this place. Christine Mackey took us to the a 'Wild Atlantic Nature' event: It included walks and talks and live traditional music. We gathered with maybe fifty other people on a blanket bog near Lough Easkey (17 Sep. 23). We also had the chance to experience 'The Leitrim Hawthorn Project' organised by Anna Macleod, Tara Baath Mooney, Gerry Bohan, and Wayne Frankham (24 Sep. 23). We spent time with our fellow LEER residents, Vanya Lambrecht Ward, Marielle Macleman, and Noah Rose whose interests and methods opened us up in unexpected ways. Shane Finan and his colleagues in ^ have been welcoming to all of the LEER residents. We have been invited to reading groups and events. Shane has provided ideas about the local boglands and has been very helpful getting the technology in the gallery to behave. Finally, we have spent a great deal of time working with, walking and talking with David Spence about art, culture, ecology, history, boglands and bog culture in Leitrim County. There are so many people that made this residency! Such a place is Manorhamilton.

The LEER residency has given us an opportunity to reconnect with people we were working with in the midlands of Ireland like Sally O'Leary the art officer at Offaly County Council, Tom Egan recently retired as a land manager with Bord na Móna and Catherine Farrell who is currently the project manager on 'Life on Machair' in County Mayo. It has also provided the impetus to develop a new relationship with Shane Regan who we met briefly at Clara Bog in

2019. He is now developing monitoring systems for boglands all over Ireland in his work at the National Parks and Wildlife Service. We have spent a bit of time talking with Nuala Madigan of the Irish Peatland Conservation Council who put Tim in touch with Matthijs Schouten and Moniek Nooren in the Netherlands. They were instrumental in establishing *Behoud van de Ierse Venen (The Dutch Foundation for the Conservation of Peat Bogs)* in 1983. The Foundation would eventually purchase three peatlands in Ireland (in Westmeath, Galway and Kerry) which were then handed back to Ireland as a gift to be conserved in perpetuity; kickstarting the bog conservation movement in Ireland at a time when bogs were the primary focus of industrial harvest for the energy industry.



<image 4-4 >An opening scene on 12 July 2024. Dave Spence (front left) is reading the Collins + Goto Research Portfolio. Image by Seán O'Reilly.

Epilogue

旅に病で 夢は枯野を かけ廻る
松尾芭蕉

*Tabi ni yamai de
Yume wa karen o
Kakemawaru*
Matsuo Basho¹²

*Stricken on a journey,
My dreams go wandering round
Withered fields.*
Translation by Donald Keene¹³



<image 4-5> HAKOTO indoor video with hawthorn April 2024.

¹² Matsuo Basho (1644-94), Japanese poet. Oku no Hosomich, *The Narrow Road to Oku* consists of 50 haiku poems that were created during a journey between Tokyo to north-western part of Japan (2356 km) lasting 150 days.

¹³ Donald Lawrence Keene (1922 – 2019), American and Japanese scholar, teacher, writer, translator and Japan studies expert.
<http://knt73.blog.enjoy.jp/blog/2022/01/post-859f.html>

Bibliography

Adorno, Theodor, W. (1997) *Aesthetic Theory*. Ed. Gretel Adorno and Rolf Tiedemann. Trans. Robert Hullot-Kentor. Minneapolis: University of Minnesota Press.

Castro, Theresa (2022) "The 1970's Plant Craze" in *Antennae*, Autumn, 2020, (pp. 173-189)

Collins, Timothy M, Goto – Collins, Reiko (2020) *Deep Mapping: Lough Boora Sculpture Park*. Offaly, Ireland: Offaly County Council.

Collins, Timothy M, Goto – Collins, Reiko (2023) "Ancient boglands and the Irish Peat Industry: Does Culture Mitigate Ecocide?" In *Rethinking Art and Creativity in an Era of Ecocide: Embodiment, Performance and Practice*. Eds, Jones, O., Parry, B., Pigott, A., London, UK: Bloomsbury Press, Arts and Visual Culture.

De Wall, Frans (2016) "Are We Smart Enough to Know How Smart Animals Are?" Granta Publications, London, UK.

Eds. Dupré, John and Nicholson, Daniel (2018) "Everything Flows, Towards a Processual Philosophy of Biology." Oxford University Press, Oxford, UK.

Foster, J.B. (2000) *Marx's ecology : materialism and nature*. New York, N.Y.: Monthly Review Press.

Foster, J.B. (2020) *The Return of Nature: Socialism and Ecology*, NYU Press, New York, New York, USA.

Marcuse, Herbert. (2007) *Art and Liberation*. Edited by Douglas Kellner. *Collected Papers of Herbert Marcuse / Ed. by Douglas Kellner 4*. London: Routledge.

Proulx, Annie (2022) 'Fen, Bog & Swamp'. 4th Estate, Harper Collins Publishers, London, UK.

Stein, Edith (1989) "On the Problem of Empathy", *Translated by Waltraut Stein*. ICS Publications: 3rd Revised edition. The Institute for Carmelite Studies, Washington, D.C. US

Artists - Harrison, Helen and Newton (1970-2021) See their archival website with projects and publications. Their material archive is in the Stanford University Library.

[<https://www.theharrisonstudio.net>]

Accessed, 2024, July 4.

Artist - Lowenberg, Richard (1970-present) See his archival website with specific attention to Bio – Dis – Plays. [<http://www.richardlowenberg.com>] Accessed, 2024, July 4.

Artist - Lifton-Zoline, John (1970-present) artist, architect and scientist involved in algorithmic music generated from electricity in plants. For a general overview have a look here. [<https://www.tellurideinstitute.org/board/>] Accessed, 2024, July 4.

Living Organism - group Reading, Spring 2024.

Kull, Kalevi (2022) "Choices by organisms: on the role of freedom in behaviour and evolution." *Biological Journal of the Linnean Society*, 2023, 139, 555–562.

McHenry, Leemon (2024) "Panpsychism and Speculative Biology: A. N. Whitehead and C. H. Waddington" A draft paper for discussion.

Noble, Denis and Ray. (2023) "Understanding Living Systems." Cambridge university Press, Cambridge, UK.

Pheinstern, Pauline (2016) "Malebranche and Leibniz on the Animals." (Chapter 7) In, *Animals: New Essays*, Ed. Blank, Andreas, Philosophia Verlag, Munich, Germany

Wheeler, Wendy (2016). 'A Connoisseur of Magical Coincidences: Chance, Creativity and Poiesis from a Biosemiotic Perspective'. In: Wendy Wheeler, *Expecting the Earth: Life, Culture, Biosemiotics*, pp. 184-203 [Chapter 5]. Lawrence and Wishart, Ltd., London.



Appendix 1

Ancient Bog

Ancient Irish bogs
Trapping carbon silently
Earth breathes in and out

Water enables the bog form
A spongy walk, reluctance

Beneath soft sphagnum
The water preserves the past
A carbon green conflation

The bog grows toward the sun
A nurturing living thing

Local Peatland

Families gather
Harvesting peat with hand tools
Winter's warmth assured

Small groups toil under the sun
Cutting turf, a shared labour

Stacking peat to dry
In the summer sun
Out of wet ground

The smell of peat smoke
A sensual commons

Early Industrial Peat

From horses to machines
Tools and technologies evolve
The love of peat wanes

Communities adapt quickly
Less work, more peat, more money

It was an exciting time
Peat is useful material
Harvest is quick and easy

Machine harvest dominates
Peat remains a core Irish truth

National Energy

Bord na Móna launched
Machine age exploitation
National Energy Plan

Postwar Industrial Innovation
Full harvest and employment

Acquisition of peatland
Power access claim drain cut
A state-owned enterprise

Peat energy monopoly
Back to work in the midlands



Post Industrial Peat

Sphagnum moss drinks deep
 Water moves through ancient roots
 The bog's foundation fixed

Microbes dance in hidden realms
 Biodiversity blooms and spores burst

Peat layers grow slowly
 Carbon locked in wet earth tombs
 Nature's quiet work

Sphagnum, water, and sunlight
 Allied against climate change

National Renewables

Just Transition plan
 The peat harvest is done
 Green path leads the way

Skills for the future green jobs
 Transformation brings new hope.

Renewables surge
 Wind and solar projects grow
 Bogs being restored

Green renaissance dawns
 Renew Rethink and Restore

Peat Restored

Thousands of hectares
 Carbon sinks and habitats
 Peatlands to restore

Healing bogs reversing harm
 Complex habitats thrive

Bogs drained now revived
 Blocking drains rewetting lands
 Living things return

Climate ascendancy
 Curlew grouse and snipe

Eco Resurgence

Bogs thriving with life
 Green moss purple heather white cotton
 Nature's tapestry

Wetlands are alive with sounds
 Skylarks woodcocks and swallows

Orchids heathers bloom
 Butterworts and sundews thrive
 Dragonflies take flight

Bilberry cranberry and crowberry
 Nature's patterns are seen



Dark Futures

Human greed expands

Utility over life

Systems disfunction

Harmony shattered

Life world is in disarray

Future undermined

Web of life frayed hope dims

Life is diminished

Climate change irreversible

Global capital heartless

Light Futures

Human minds expand,

Wisdom guides, respect for life

Systems thrive and grow

Harmony restored

Living worlds in balance dance

Future redefined

Web of life mends, hope blooms bright

Life is flourishing

Climate healed by care

global alliances emerge







<image 4-6> Truskmore, July 7, 2024. Photography by Reiko Goto Collins

