THE GUIDE

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Artist Siobhan McDonald explores the connections between plants, the environment and the air that keeps us alive in her latest exhibition at Trinity College Dublin, writes **Cathy Dillon**

BREATHE THE PRESSURE

reathe in. Breathe out. Did you know that when you do so, you are inhaling particles of space dust that have fallen into our atmosphere? Parts of meteors, parts of planets? Me neither. But this is just one of the things artist Siobhan McDonald points out in Future Breath, her forthcoming exhibition at Trinity College Dublin.

The recipient of the 2017 Trinity Creative Award, McDonald has been working with the Department of Botany in the college to look at all aspects of breathing – human and plant – and the connections between our respiration, plants and our environment. The project is her response to the fact that carbon trapped in our atmosphere is destroying our planet.

"I used to have asthma, so I'm very conscious of air," she says. "And, of course, when you walk around a city, whatever you breathe in goes into your body. I decided to think of Trinity as the body of Dublin – because it's in the heart of the city and it's been here for more than 400 years.

"Thinking about it from a metaphysical point of view, I decided to map a human person onto it. And when you think about the entrance to Trinity, it's like the mouth, and the campanile is like the heart. Behind that were these two huge trees – two Oregon maples – like lungs. And so, to me, that was the centre body. Then the rest of the campus, the libraries and the archives, became the veins and the arteries – the circulation."

The Monaghan-born McDonald is working with a PhD student who has collected samples of the air all around Dublin in petri dishes, so every combination of toxins and pollutants is recorded. In addition to those toxins, the air also contains particles that come down from space all the time and form part of our bodies.

"Every six months, you basically recreate the cells in your lungs. So if you're in a place that has really bad air, it's forming who you are," McDonald says.

"I was also thinking about our connection to our breath - in Eastern philosophy, it's known as your sutra. It's connected to our sense of autonomy in the world. And each breath is the difference between our being here and not being here. We come into the world with our first breath, and we leave with our last."

Breathe in. Breathe out. I'm trying to breathe normally, rather than in self-conscious gasps, while

Each breath is the difference between our being here and not being here



standing in front of a microphone stand in the Botany Department's Herbarium, an old, narrow, elegant room lined with books. I have a small, yellow-topped mic pinned to either side of my chest, and wires extend from them into a machine manned by sound recordist David Stalling. He is working with McDonald, recording the breathing of 50 volunteers who have agreed to have their respiration monitored as part of an installation that will combine the sounds of human breathing with the vibrations given off by the respiratory systems of plants.

"Plants have a vibration, and they communicate with each other. And they have the ability to take pollution out of the atmosphere. Without them, we can't breathe," says McDonald.

Though once rare, collaborations between art and science are becoming more common. But working in the realm of science is nothing new for McDonald, who has always seen the disciplines as two sides of the same coin. She thought about studying geology before ending up in art, and that curiosity has fed her work and taken her to places far beyond the confines of the studio, including the Eyjafjallajökull volcano in Iceland, the Arctic Circle and, last summer, Mount Etna in Italy. It has also led to the use of unusual materials in her work, such as crushed bones, prehistoric charcoal and iron gall ink.

"I like to consider disciplines such as physics from an artistic point of view," she says. "I'm interested in the way visual art can unleash the potential infinity encapsulated in a given story."

Future Breath is a multimedia project. The breathing installation combines the recordings of the humans and plants with a projection (made in collaboration with New York filmmaker and theatre designer Christopher Ash) that fuses images of

human and plant cells.

The two Oregon Maple trees, which McDonald had thought of as the lungs of the 'body' of Trinity College, and which had been growing in the square for 170 years, were destroyed during last summer's heatwave. One spontaneously combusted (in the middle of the night, no less) and because they were 'sister' trees with intertwined roots, the other also died within a month.

McDonald and Standing have made recordings of the trees' conjoined root system and 50 plants from the department's Physic Garden. These will be combined with the human breath recordings to signify our dependence on the plant world for the air we breathe.

"You walk into this room and become conscious of your own breath," says McDonald.

She photographed and recorded the whole process of the trees' demise, and discovered that the area is more than 1,000 years old. It was the site of a monastery long ago, and monks were buried in the ground where the two trees later grew. Installations on this theme also form part of Future Breath.

There will also be a series of paintings, entitled To Breathe. "The idea is that people will come in and be given a map, and they can go on a journey through the grounds of TCD as though travelling through its anatomy," says McDonald.

Future Breath will be launched at the Science Gallery in Trinity College Dublin on December 12, and runs until December 15. It will be further developed for exhibition at Limerick City Gallery, January 2019; at the Deutsches Hygiene–Museum, Dresden, as part of 'The People and Plants' in April 2019, and at the European Commission's SciArt Exhibition in Milan in June 2019