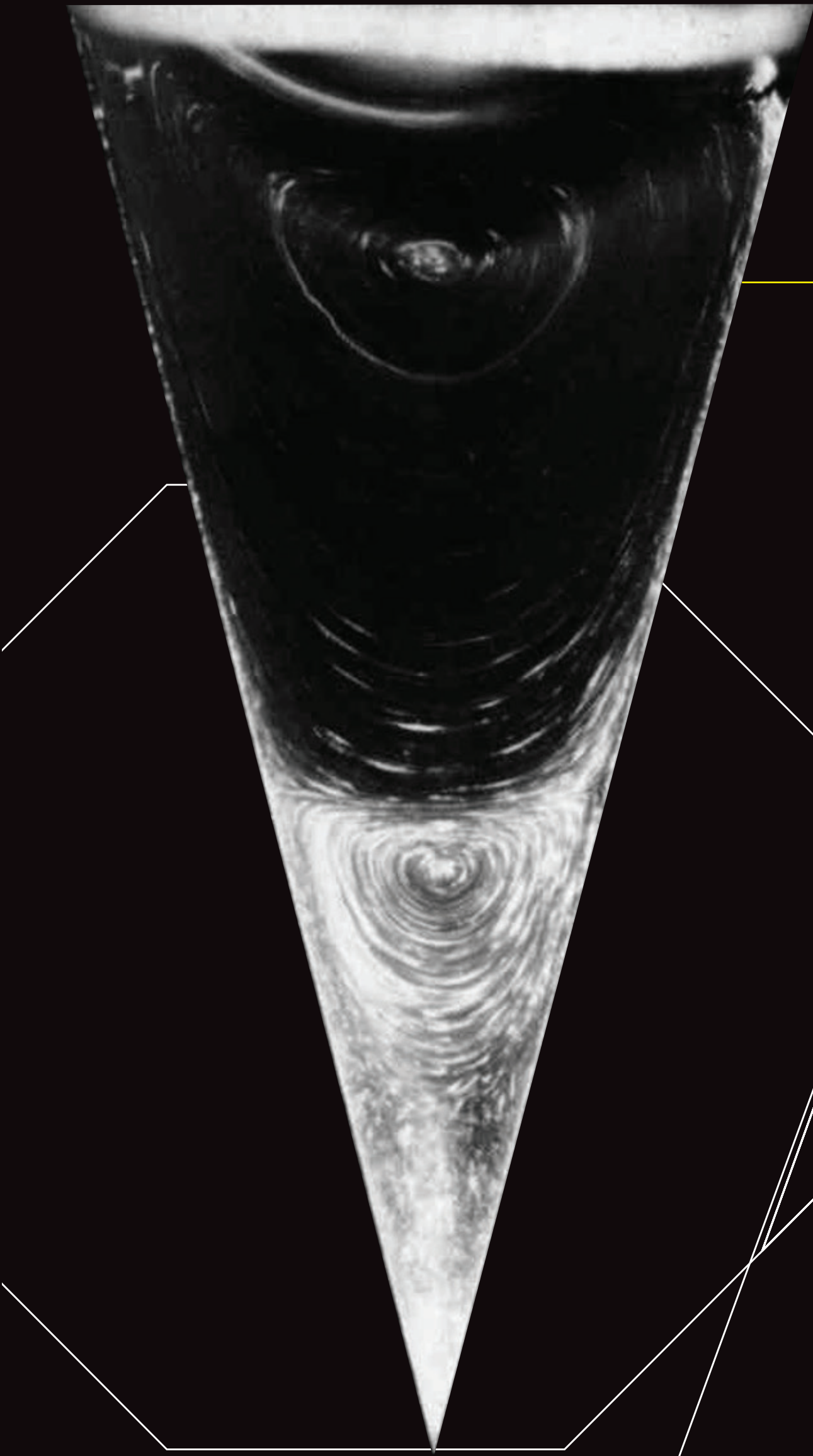


# The Wind Egg: Local and Global Turbulence Patterns



Creeping Flow in Wedge. Album of Fluid in Motion, Van Dyke, p.13, 1982

The wind touches us but it cannot be touched. We cannot see the wind, we can only see the way it effects the things around us. The wind carries many things, such as nutrients essential to Amazonian ecosystems across the Atlantic from the Sahara. The flags of all political entities visualize the von Karman double-street vortex, and the characterization of this vortex pattern reveals that nature tends to instability but that instability is predictable. The wind slips between metaphorical and physical space and contaminates both.

A specific turbulence pattern has been created for the exhibition space at M HKA. We have created a movement of air using a series of ventilators. They create a clockwise rotation of air within the space. The triangular shape of the space leads to the shedding of vortices which counter rotate and form their own pressure zones as the space narrows.

The vortex pattern was developed with Prof. Olivier Chazot by creating a water tunnel model of the space. It is created at 1:17 to the space. Olivier's voice can be heard at the model describing the phenomenon observed and experienced and the difference between the two. A third scale between the model of the space and the space itself is introduced when we are invited to acoustically inhabit the model through underwater recordings made by Arzu Saglam who also edited the audio.

Water is 17 times more dense than air. This proportional scaling allows us to approximate the fluid conditions of the air in the space to the fluid conditions of the water in the model. Vortices created with magnetic stirrers induce a flow within the space. They approximate the placement of the ventilators in the space. Aluminum dust allows us to see the movement of the water. Similarly, reeds installed in the space allows us to see the movement of air.

## Reed

Reed native to the region was collected from the Broes family farm on the banks of the Rupel River, in Schelle, just south of Antwerp. The harvesting was done by Jef Scholiers, Leen Scholiers, Jef Broes, Jef the Horse, and myself. The Schelde River into which the Rupel converges, lies just past the windows of the exhibition space. It was dried on the roof of M HKA for four weeks ahead of being installed in the space. The robust plant moves to visualize the wind in the gallery as it does outdoors. Floral artist Alice McCabe, assisted by Simona Piras, collaborated on the creation of the reed elements.

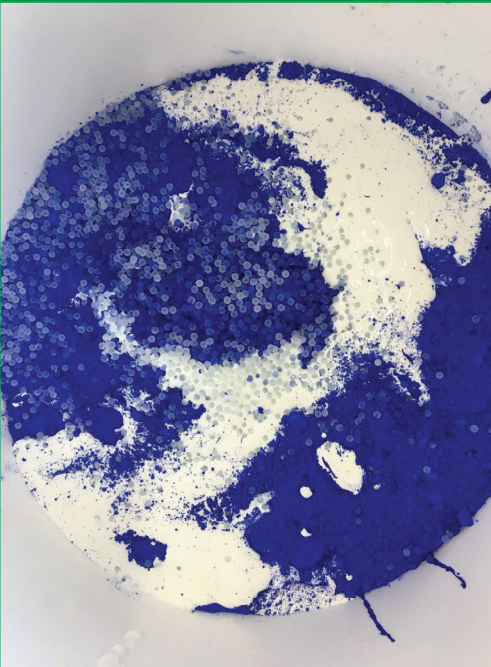
## Vortex Patterns and Geometric Patterns

The reed is installed in specially designed and fabricated platforms. The arrangements of the platform articulate a pattern created by repeating the octagonal form of the Tower of the Wind and Vulture beyond the walls of the space.

This pattern can be seen at a smaller scale repeated in the arrangement of holes on the surface of the reed platform. A specially hue of ultramarine blue highlights the form of the reeds. Artist Adrien Lucca assisted in the creation of this particular color. The columns supporting the reed platforms feature Ionic capitals which feature an inverted face of the wind.



Reed on the banks of the Rupel River on Jef Broes farm



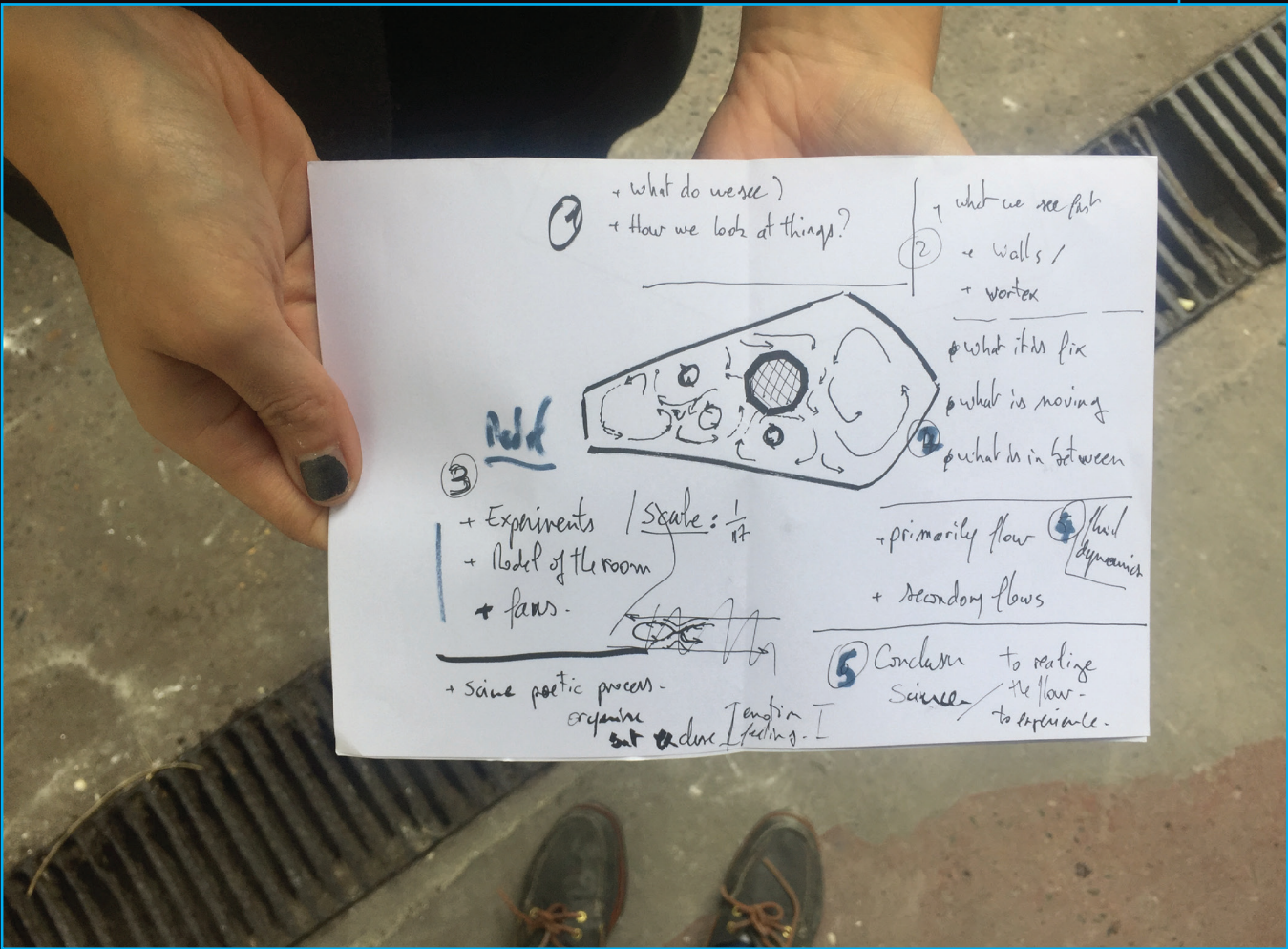
Mixing of custom ultramarine blue paint



Jef Scholiers harvesting reed. photo: Leen Scholiers



Sound designer Arzu Saglam recording fluid dynamicist Prof. Olivier Chazot



Drawing of flows in water tunnel and notes by Prof. Olivier Chazot

**Contributions:**  
Prof. Olivier Chazot, Arzu Saglam, Alice McCabe, Leen Scholiers, Jef Scholiers, Jef Broes, Jef the Horse, Adrien Lucca, Vincent Desmecht, and Simona Piras

**The event would not be possible without the support of:**  
Prof. Staf Van Tendeloo, head of the EMAT research group at the University of Antwerp; Prof. Olivier Chazot, Prof. at the von Karman Institute; Harlan Levey Projects gallery team; and Werner Van dermeersch, Livin Mentens, and Ruth Loos of Sint Lucas Antwerp University College of Art and Design; Nav Haq and the Museum of Contemporary Art Antwerp (M HKA) team; The Size Matters artistic research group at the Zurich University of the Arts led by Prof. Florian Dombos and supported by the Swiss National Science Foundation; Clara Herrmann and Academy Schloss Solitude.