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Design agency Brandes en Meurs will participate in the new development plans of Amsterdam Airport Schiphol. Winners of the international competition, the Dutch team proposes a new kind of sound barrier reducing low frequency noise pollution caused by aircrafts during take-off. The long-lived Dutch fascination with wind and water is reflected in Brandes en Meurs' environmental-friendly concept: their «Dobber» takes shape of a floating dynamic screen. When sound reduction is necessary, eight large water pumps fill ballast tanks inside the barrier's structure. This changes the centre of gravity forcing the structure to stand up: it takes up to four minutes for all of «Dobber's» 103 sections to rise to a height of 13m above ground level. When water is released from the ballast tanks, the screen returns to the flat, inactive position: covering the waterway, it becomes almost invisible in the landscape. All heavy components are placed at least half a meter below ground level — everything here has been devised in compliance with flight safety regulations for the landing aircraft. Compared to a static barrier, «Dobber» can be located much closer to the source of the sound, enabling an effective noise reduction while consuming a minimal of materials and space. This lightweight construction does not require a deep foundation; it floats on the water and sways freely with gusts of wind. Photovoltaic cells on the barrier's upper surface are expected to generate three times more energy than the system consumes, while the basin that accommodates «Dobber» contributes to the required water storage capacity in the area.



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