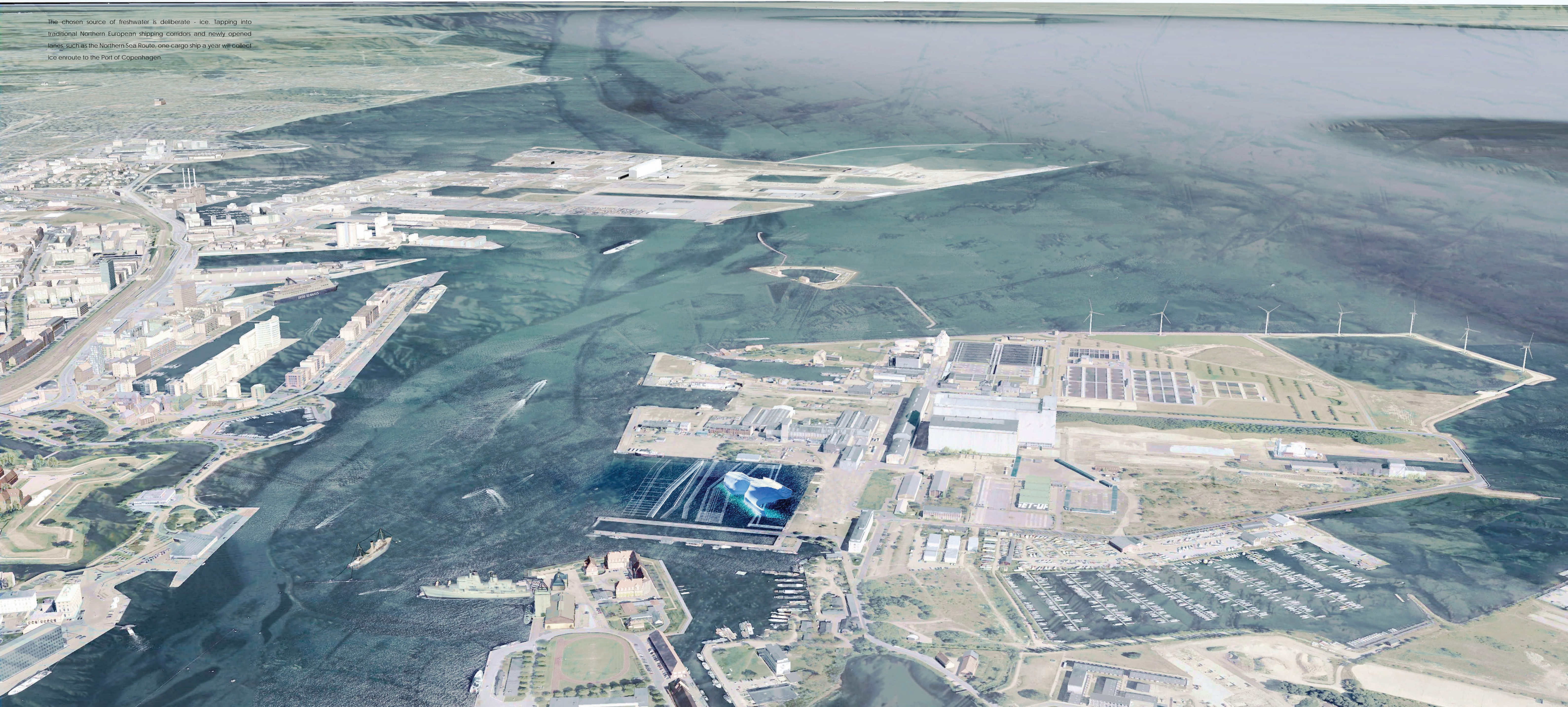


Osmotic Gradients

Osmotic Gradients situates itself between time – a retrospective of the Danish cultural landscape and its future potential as a post-carbon society. It harvests energy found between freshwater and saltwater to become a site of public remembrance for a future of climate change that could have been.

Osmotic Gradients is not conceptual - it uses an energy supply technology called osmotic power that equalizes the salinity of freshwater and saltwater to create a subtle pressure, generating electricity. Through this process, the proposed public sculpture of piping and platforms can harvest enough power to generate electricity for 30,000 European homes. The project uses two materials found in abundance in the northern European landscape – seawater and ice. Through the interaction of these two materials, and considering seasonality, light, and climate, the project weaves a narrative of the future Danish cultural landscape.

This is not a story of preservation or nostalgia. It is a story of remembrance that is both productive and innovative, where the landscape reflects and responds to modern urban demands and future needs. It is not a story of erecting long lost landscapes, but instead, is robustly optimistic and pragmatic. It is hopeful and playful, it anticipates future environmental change, without knowing what that change necessarily may be. We begin with dreams of wondrous new landscapes with the hope they will transform into measurable and tactile forms that can be sensed at the scale of a fingertip but engineered at the urban and regional scale.



The chosen source of freshwater is deliberate - ice. Tapping into traditional Northern European shipping corridors and newly opened lanes, such as the Northern Sea Route, one cargo ship a year will collect ice enroute to the Port of Copenhagen.