

The Refshaleøen

ENERGY DUCK

Energy Duck is an entertaining iconic sculpture; a celebration of local wildlife; a renewable energy generator, store and exporter; a habitable destination and a city scale information beacon.

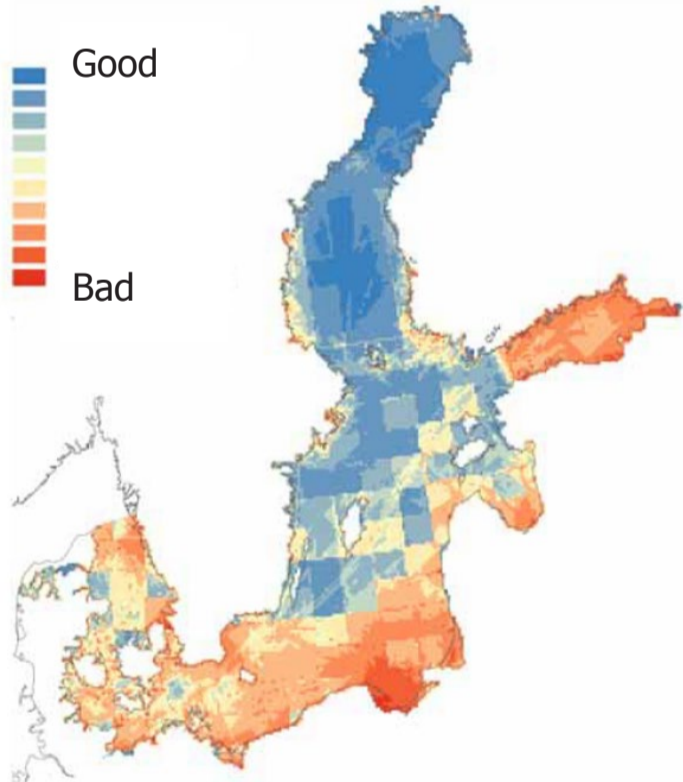
The common eider duck is resident in great numbers in Copenhagen, however its breeding habitat is at risk from the effects of climate change. Energy Duck takes the form of the eider to act both as a solar collector and a buoyant energy store.

Solar radiation is converted to electricity using low cost, off the shelf PV panels. Some of the solar electricity is stored in the form of gravitational potential energy via water pressure. At night, when there is no solar radiation the water pressure can be released through hydro turbines within the duck's belly providing renewable electricity at all times. The floating height of the duck is an indicator of the amount of city wide energy use relative to the renewable generation.

Often the prospective negative environmental effects of climate change, brought about by excessive CO2 emissions can seem a removed and distant issue. Energy Duck frames the issue of climate change, ecology and the importance of renewable energy in a local context.



Common Eider



Baltic Sea Pressure Index
Showing combined effect of all environmental pressures.

