Ø - danish for Island

Construction

‘Ø’ is a simple circular earthwork highest in the southern part, the height decreases and is lowest in the north. The outside is planted with moss & sedum (stone herbs) and the main part of the south surface is covered with a mosaic of solar panels. The inside is grassy and leaning only slightly so there is a large green spectator area. ’The stage floor’ is graveled. Piers, trails and the quay around the plant are made of concrete.

The ’outside’ inclination of the earthwork is approximately 45 degrees, which corresponds to the natural limit of a slope of soil. It is also the optimum angle of solar radiation at Copenhagen (55 degrees northern latitude). And it is a functionel slope for natural cleaning of the large expanses of glass in front of the frameless solar panels.

Solar technology

The solar project is designed with frameless polycrystalline solar panels. The panels will be ”sky blue” with shimmering colors. From a distance the surface seem alive with shades that vary with exposure to light. The solar panels are fitted with 64 mm angle bracket mounted directly in concrete points in the Sedum surface. The modules are mounted with black clips and the overall system will be simple, light and floating. The panels will be placed 60 mm above the surface.

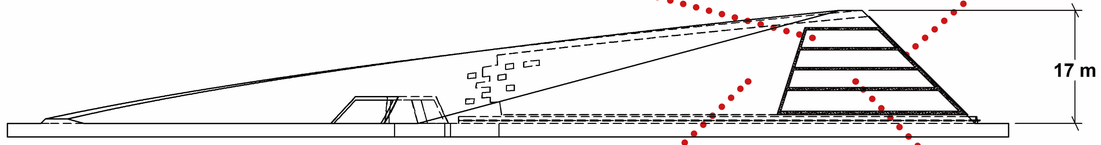
In addition to the shimmering play of colors, the surface is active in the form of solar panels in green energy production. The surface represents a photovoltaic plant of approximately 600 kWp and produces on an annual basis 620,000 kW/h, equivalent to 100 households. The energy will wherever possible be used for the operation of the ’Ø’. Green concerts will run on green energy. There could be free electricity for charging people’s phones, computers, etc. In wintertime the stage could be covered with ice for skating and cooled by solar energy.

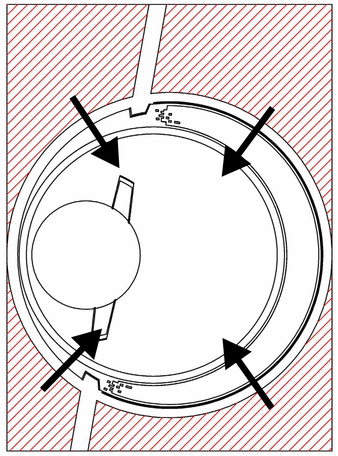
The vision is that the concept of placing solar panels directly on ground slopes covered with low Sedum herbs could be scaled up and applied to large noise barriers surrounding infrastructure as railways, airports and highways.

#3

Inside the earthwork there may be set up a reservoir of ’on site’ collected rainwater for irrigation and a sea water reservoir for energy storage.

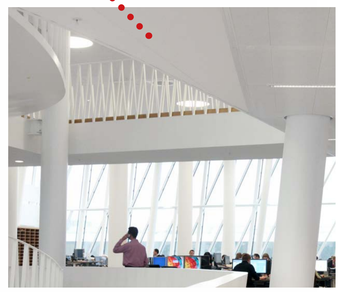
’Sky blue’ solar panels



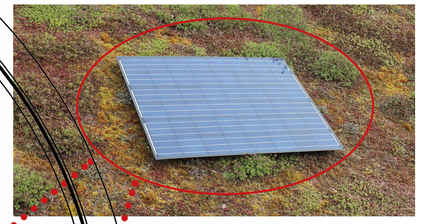


Sustainable ’re use’ of ’on site’ construction material

’Ø’ could be completed in a very simple ’earthwork only’ version.



Or ’Ø’ could be completed in a advanced version, with large open spaces under semitransparent solar panels for office or public use.



1:1 model of frameless solar panel in Sedum herb environment

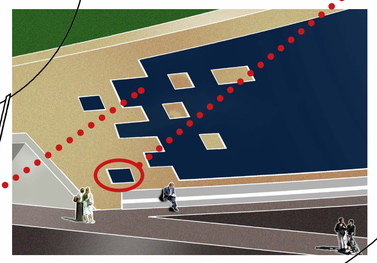
North

South

A

A

Ø 50 m



Detail of the start of the solarpanel pattern.

The vision is to make large scale energy plants by placing solar panels in sedum herbs directly on major noise barriers at highways, airports or railways.

Ø 150 m

Ø 140 m

The solar panels should be in a ’Sky blue’ surface style.