

ROTTERDAM.CLIMATE.INITIATIVE

## PRESS RELEASE

# Construction floating pavilion commenced

**Rotterdam, 2 November 2009 – The first EPS blocks for the floating body of the Rotterdam-based floating pavilion are in the water, presenting a visible signal that construction work has commenced. The blocks were manoeuvred into place in Rotterdam today, near the RDM Campus at Heijplaat. In six months' time, the pavilion will be ready and moored in the Rijnhaven.**

In May 2010, Rotterdam will have a new floating icon: the floating pavilion. This pavilion will be remarkable not only because of its shape, consisting of three floating half-spheres, but also because of its climate change resilient, innovative, sustainable and flexible qualities. A pilot and a catalyst for floating construction efforts in Rotterdam, the floating pavilion will remain moored in the *Rijnhaven* until 2015, after which it will be shipped off elsewhere, to be deployed in another part of *Stadshavens*.

### EPS in a concrete shell

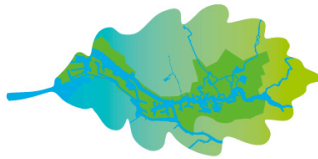
In the *Heijsehaven* in Rotterdam, two floating islands are currently under construction; one for the plaza island and one for the pavilion itself. To guarantee the lightweight and unsinkable qualities of these islands, they are constructed of expanded polystyrene sheets (EPS). Five layers of EPS will be placed one on top of the other, the thinnest layer measuring 20 centimetres in thickness, and the thickest 75 centimetres. The thickest layer will contain a grid of concrete beams, which will be fastened to prefab concrete slabs. These slabs form the hard shell of the island, protecting it against the beating of the waves, for instance. Placed on top of this, a 20 centimetre thick concrete floor will, together with the beams, render the island a rigid unit. The thickness of the island will be 2.25 metres. The top of the floor will be about 80 centimetres above the water level.

### Foundation

Translucent half-spheres will be erected on the island, measuring ten and twelve metres in height. The skin of the domes is constructed of ETFE, a multilayer, thin, translucent, lightweight foil, approximately 100 times lighter than glass, so that the floating foundation requires only a limited thickness. The building is designed to accommodate a maximum of 500 people.

The floating body will include basements for technical facilities.

The Rotterdam Climate Initiative is the climate adaptation programme of the City of Rotterdam, the Port of Rotterdam, Deltalinqs and DCMR Environmental Protection Agency Rijnmond.



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The pavilion will boast a lot of technological innovations, including systems to use solar energy and surface water for the building's heating and air conditioning. Furthermore, the building will be divided into various climatic zones for maximum efficiency in energy use for heating and cooling.

### **Objectives**

The innovative pavilion responds to the collective objectives of Rotterdam to reduce emissions of the greenhouse gas CO<sub>2</sub> by 50% and to ensure that the city remains climate change resilient also in the future. With its remarkable shape, the building will be a highly distinctive and prominent landmark in the city. The floating pavilion is the first result of Rotterdam Climate Proof (part of the Rotterdam Climate Initiative) and its ambition to build climate change resilient constructions in the areas outside the levees. In the *Stadshavens* (City ports) district, some 13,000 climate change resilient homes will be built over the next few years, approximately 1,200 of which will be built on water.

### **Design and development**

The complex is a design by the design team Deltasync/PublicDomain Architects. It will be constructed by Dura Vermeer. FlexBase is responsible for the floating foundation. Collaborating in the construction of the floating pavilion will be several professional education courses of *Hogeschool Rotterdam* and *Albeda College* which are accommodated in the RDM Campus at Heijplaat. The floating pavilion including basic fittings is planned to be completed in May 2010.