



THE PROJECT SI-93925 EXPLANATORY NOTE

Nemunas island is a city centre park. The urban island concept comprises the following:

- A dynamic arrangement of vegetation, open sports grounds;
- A green western side of the island, starting from the Daukanto Street pedestrian bridge;
- A built-up area in the eastern part of the island, near the Žalgiris arena.

The location of the anticipated building /a science center/ is to the north of the Žalgiris arena. This location takes into account the existing infrastructure, utility networks and the proximity to the expected path through the island towards the planned bridge.

The creation of a micro space between the science center and Žalgiris arena provides clear views to the old town of Kaunas, Christ's Resurrection Basilica with the city skyline, and the river Nemunas. The building design is in keeping with a park building. The building represents free form, with expressive roof contour, not following the contours of the adjacent city forms. The regular internal geometrical structure is determined by the need for functionality, in an effort to ensure that all space is useable.

The lower ground floor, semi-dug in a slope, has planned main entrances, a warehouse, a workshop and other ancillary premises. Exhibition and other major spaces are constructed on the ground floor, which is at the same level as the square of Žalgiris arena; it opens the views of the city panorama. Part of the ground floor is overlaid; this level is designed for administrative premises.

Specific materials could be chosen as follows:

- Holding structure of the building: lower ground floor and its ceiling - concrete, 1st floor and roof - metal construction. Constructions are exposed, serving as a design feature.
- Roof finish: a metal, e.g. titanium.
- Facades: aluminum-glass construction.

A sustainable building should have renewable energy sources. During the cold season it could use geothermal heating. During the warm season it could use the land's "passive" cold to cool the rooms.

Therefore, building heating/cooling should be a floor, panel, ceiling or chilled beams, which works without additional electric motors and condensation systems. When there is no condensation the building saves up to 30% of its energy.

Lighting of the common areas and open spaces, along with the exhibition areas, works in three modes: manual, from the security checkpoint; control buttons, the automatic zones, with motion-light sensors; centrally remotely from a central building management system. During working hours, in the absence of people in the room, only a minimum lighting is provided. Full lighting is activated once a person enters into the room. Roof-mounted 10 kW photovoltaic modules would be installed to light the security room and exhibition premises.