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Prague dd. 10. 6. 2018

Review diploma work Lucia Cyprianová

The goal of the diploma project by Lucia Cyprianová is the design of a kindergarten in Český Brod, with attention to sustainability. The assignment is based on the current existing kindergarten that no longer offers adequate function. The site is the same as the current school, and the program is updated for today's use. The site is near city center, and at the north very near the railroad line that runs on an elevated level. The parcel is quite large, which gives the benefit of a large garden and outdoor space for the school and children. In her concept, Lucia Cyprianová decided to maximise the positive aspect of the garden area by creating a two-story building. This has additional advantage that the surface-volume ratio is much more sustainable for the energy balance. This solution also allowed to retain maximum number of existing trees in the parcel. A two-story building has the disadvantage though, that it necessitates additional vertical circulation and emergency escape routes that in a one-layer building are much easier to establish. The concept uses the two layers to its benefit however, by introducing an interior atrium that visually organises the building from the interior, and connects to the garden in the south façade.

The main material of the kindergarten is structural wood, with concrete cores for the vertical circulation and the base floor slab. Wood in terms of sustainability is a very good solution, which is also a natural and pleasant material for children. However, wood faces complications in terms of fire safety, which is solved by a covering of gypsum boards.

The base rectangular grid is optimally used in the layout of the kindergarten, resulting in clear spaces with regular proportions for the rooms. The noisy north side facing the railroad track is reserved mainly for staff spaces, whereas the children's spaces connect to the garden in east, south, and west.

Through the use of parametric design software developed by dr. Pavlíček in our department, Lucia Cyprianová has simulated and optimised the energy performance of the building. The comprehensive sustainable concept includes green roof, rain-water usage, ground-coupled heat

exchanger, heat recovery unit, and night cooling through the atrium roof. Additional attention is paid to the garden layout and possibility for children to observe and grow vegetables and fruit.

The architectural expression of the design is kept sober, and makes good use of the linear quality of wood in the façade panels. The building has an adequate character for the city of Český Brod.

To conclude, I propose that the diploma work by Lucia Cyprianová is passed, with mark 'A'.



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