



PEB Exchange, Programme on Educational Building 2002/11

Hungary's German School  
of Budapest

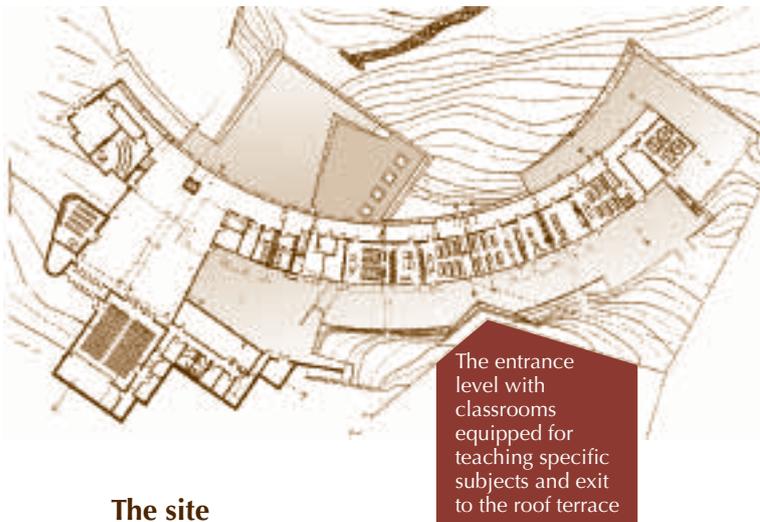
OECD

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# PROJECTS

## HUNGARY'S GERMAN SCHOOL OF BUDAPEST

Hungary's newly-built German School of Budapest is adapted to its site, is safe and environmentally friendly, and has comfortable indoor areas that are tailored for its users, including those with physical disabilities. The school's new three-storey building, put in operation in August 2001, caters to students in grades five through 12.



The entrance level with classrooms equipped for teaching specific subjects and exit to the roof terrace

### The site

Erected on a steep slope, the building is adapted to the difficult features of the site and opens out onto nature at every possible location. One section of the building curves around the hill while others are embedded in the slope. Each floor directly connects with the gardens, terraces or rural landscape of the hillside. A group of healthy trees on the grounds were preserved during construction.

### Safety

In case of fire, the school's 320-360 students can rapidly evacuate the building to a safe place. For easy evacuation, the building is divided into fire protection sections according to the logical structure of the layout. The smoke detectors, fire alarm system and evacuation routes were carefully designed. The many links to the outdoors are highly functional for evacuation.

### Environmentally friendly

The German School of Budapest successfully uses environmentally friendly products and installations. Non-hazardous and non-allergenic products are used for

cleaning. The lavatories and toilets are equipped with water-saving devices. Motion sensors in the restrooms reduce electricity consumption, and low-consumption lighting units are used throughout the building. Energy for heating is provided by a fully automatic gas boiler with an energy-saving control system. Evidence to date indicates a low level of energy consumption, despite the building's large glass surfaces, openness and spacious rooms.

### Indoor areas

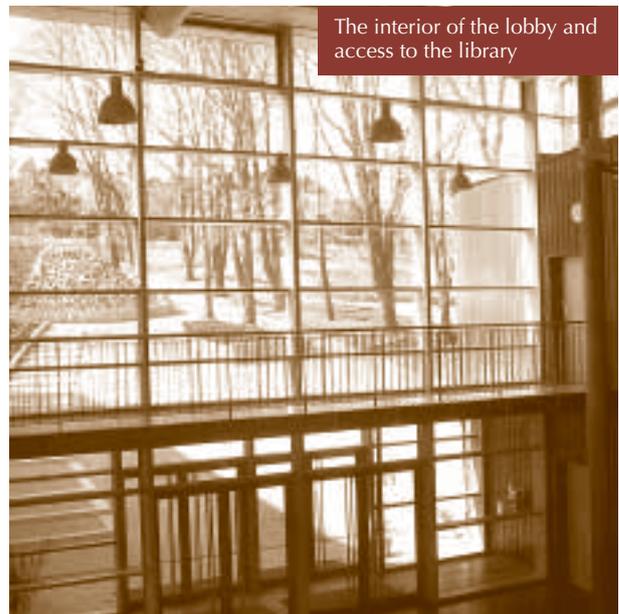
The surfaces and structural solutions throughout the building were chosen to meet the needs of teachers and students, with special attention to those with physical handicaps. The lighting, ventilation, indoor climate and acoustics are well adjusted to the function of a school. Examples are given in the descriptions below of the lobby, classrooms and other areas.

### Lobby

The school's main entrance gives onto a two-storey lobby that serves as the centre of the school community and provides links to the outside. The lobby is the central area from which most communal functions are accessible: the teachers' room, the administrative offices, the library, a 300-seat theatre and an eating area. The lobby's link to the garden and array of doors leading to the roof terrace ensure direct contact with nature year round. Its glass walls look onto the inner yard, where one can exit to the hilltop.

A durable, dark, easy-to-clean stone surfacing and brightly lit spaces characterise the lobby. Its glass walls let an abundance of light into the building. The panelled ceiling improves the acoustic features of the predominantly glass and stone surfaces.

However, the lobby can become too warm in the summer, a problem that could have been avoided if an extensive green roof had been designed for the building.

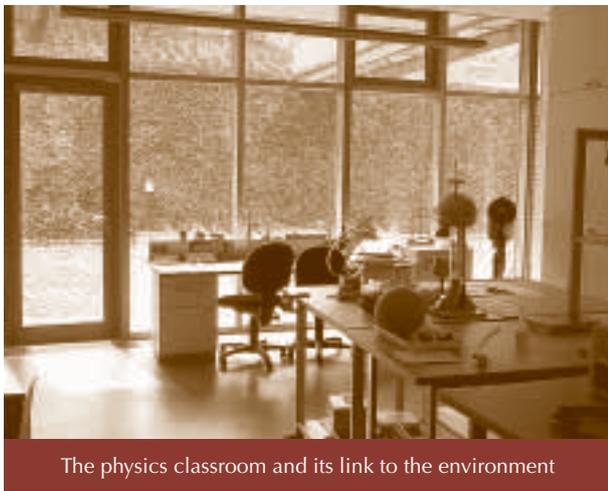


The interior of the lobby and access to the library

## Classrooms

The new school building has 32 classrooms. Sixteen traditional classrooms form the educational wing that wraps around the hill; they are lined up opposite a wall of lockers, and their windows offer a pleasant view of Budapest. Six smaller classrooms for group work are arranged on a separate corridor. Ten additional classrooms equipped for teaching specialised subjects share a third corridor with a laboratory and equipment storage areas.

The classrooms provide ample room for 20 people and allow for different types of furnishings. They are equipped with mobile desks, ergonomically designed



chairs, a mobile screen, a blackboard and a water supply connection. A television and video and slide projectors can be wheeled into the classrooms on a stand. While not every classroom has computers yet, connection points for Internet and Intranet are installed throughout.

The classroom doors, floors, walls and ceiling were designed with consideration for use by people with disabilities and students in general. The doors are wide enough for wheelchairs, are without thresholds, close automatically and have an excellent acoustic design. The floor covering is an easy-to-clean, environmentally friendly cork linoleum, that does not produce hazardous gases in case of fire. Some walls are painted with additive-free white paint, and others are covered with laminated wooden boards with an acoustic back panel. The ceiling is also designed to reduce noise.

Good lighting and ventilation are ensured by well-designed windows with controls accessible to all. The windows are made of aluminium, and most have fixed glazing. The upper hopper windows, which can be

controlled manually or through a central control system in each room, can be used to let fresh air into the classrooms. The classrooms receive a great deal of natural light due to their southern exposure. Proper shading makes it possible to darken rooms when necessary for certain presentations. The control switches for the windows and shades are low enough to be used easily by teachers or students in wheelchairs.

## Other areas

Internal circulation was also given particular attention. The corridors constitute a consistent, clear and well arranged system. Their walls and ceiling are acoustically designed. Elevators are wheelchair accessible and equipped with audio information systems and tactile control panels. A colour-coding system facilitates finding one's way around the building.

The library is designed as a stand-alone box. An extension with the Internet café and its windows looking onto the park make it friendly and open to the world outside.

The gymnasium is a flexible space. It is large enough to be used by two groups simultaneously; a mobile partition wall can divide the space in two. An ergonomic floor covering was chosen to reduce the risk of injury. Apparatuses attached to the ceiling can be lowered for use. The gymnasium is adapted to wheelchair activities.

## Cost, regulations and results

The total cost of construction amounted to EUR 10 million, or EUR 23.5 thousand per person based on the institution's 426 students at the time of construction. The area cost was less than EUR 1 700 per square meter for a total area of 6 000 square meters.

The school was set up under an intergovernmental agreement, and its layout and design had to take into account German standards for school buildings as well as Hungarian regulations.

The German School of Budapest received the 2002 Building of the Year award from Hungary's Ministry of Agriculture and Rural Development, and the experience from this building will be helpful for designing further public education facilities in Hungary.

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