

DORIAN LUCAS

# NEW STRATEGIES FOR SUSTAINABLE ARCHITECTURE

## ECOLOGICAL BUILDINGS



BRAUN

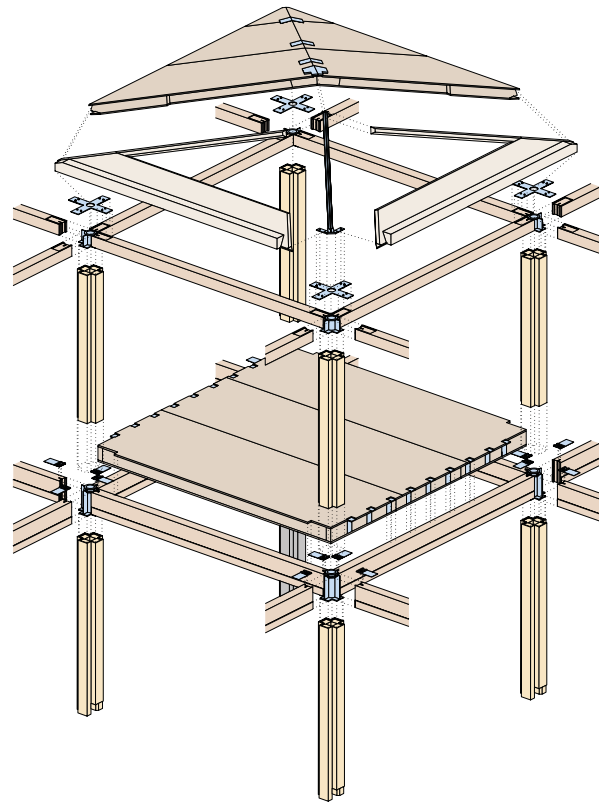


## AKADEMIE AM CAMPUS KOTTENFORST WAECHTER + WAECHTER ARCHITEKTEN

**Location:** In der Wehrhecke 1, 53125 Bonn-Röttgen, Germany | **Completion:** 2017 |  
**Client:** Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn |  
**Construction partner:** ap88 Architekten Part mbB, Heidelberg | **Structural engineer:**  
merz kley partner GmbH, Dornbirn | **Building type:** education | **GFA:** 6,245 m<sup>2</sup> | **Photos:**  
Thilo Ross / [www.thiloross.de](http://www.thiloross.de) (46, 49 a., m.), merz kley partner GmbH, Dornbirn (48 a.),  
Achim Birnbaum / [www.achimbirnbaum.eu](http://www.achimbirnbaum.eu) (49 b.)

The new building of the AIZ – Akademie der Deutschen Gesellschaft für Internationale Zusammenarbeit (short GIZ) – found its new location at the Campus Kottenforst near Bonn. Waechter and Waechter architects certainly set about planning a building that would create the ideal learning atmosphere. The structuralist design approach expresses the restlessness of learning – the constant searching, reflecting, rambling, the curious, looking in all directions, this despite everything disciplined and with systematic order. The building playfully fits into the building window and enters into a dialogue with the existing building through its diagonal position. The pavilion-like new build-

ing nestles into the landscape space of the adjacent Kottenforst and fits into the built, heterogeneous context in a small-scale and scaled manner. The triple-glazed transparent surfaces enable passive solar energy use. Vertical larch wood lamellas of the façade, supplemented by interior glare and sun protection curtains on the upper floor and exterior screens on the first floor ensure summer thermal protection. The main basis for the DGNB Gold Standard is increased energy efficiency and the associated low primary and final energy demand of the building.



Together with the cluster-like and economically structured building design and the selection of resource-saving materials, the requirements for life cycle assessment and life cycle costs can be achieved. Environmentally compatible, pollutant-free materials are a prerequisite for improving indoor air quality. Particular attention was paid to limiting formaldehyde concentrations through the use of low-formaldehyde bonding of the wood box elements and formaldehyde-free tree-layer panels.

The building structure based on the wooden skeleton allows high variability and flexibility. This enables sustainable usability for the educational building, which can be well adapted to the future needs and necessities of educational and teaching concepts. The energy concept combines structural (passive) measures with an efficient plant technology consisting of block heating power plant and heat pump with geothermal probe field - seasonal pendulum storage - and absorption chiller.



**Ecological aspects:** energy concept combines structural (passive) measures with efficient plant technology consisting of block heating/power plant and heat pump with geothermal probe field (seasonal pendulum storage) and absorption chiller | timber construction with environmentally friendly, pollutant-free materials | high flexibility and reusability, multi-modal learning landscape | module construction

**Certificates / standards:** DGNB standard Gold of the German Deutsche Gesellschaft für Nachhaltiges Bauen

