

The experimental house

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THE EXPERIMENTAL HOUSE

Founded in 1948, the International Union for Conservation of Nature (IUCN) is headquartered on the outskirts of Gland (VD). The Union brings together 80 countries, more than 100 government offices, over 800 NGOs and around 10,000 scientists from 181 countries in partnership. Experts from various disciplines assess the state of natural resources worldwide and support the Union in promoting conservation. The headquarters was designed for a staff of 110 and completed 15 years ago. Since then the organisation has grown to employ more than 190 people, necessitating an extension of the building for the sake of efficient communication and continuity in the Union's work.

Funded mainly from donations to the IUCN, the extension for a staff of 130 seems unspectacular at first glance. Yet it is a carefully planned whole that integrates environmental, social and economic considerations in an exemplary manner. The low-tech solutions chosen for the space, structure and user-focused arrangements are combined here with high-tech building services and sophisticated building management. For example, the provision of free bicycles and a car pool compensates for the peripheral location of the headquarters. The car park and mechanical equipment room are half-sunk into the ground that slopes downwards to Lake Geneva and the excavated material was used to level the terrain in relation to the existing building. The supporting structure of the three-storey building is a column-and-slab construction partially made of recycled concrete. The façade is a post-and-beam construction made of spruce with mineral insulation. Exterior balconies function as emergency exits as well as protection from the summer heat. Thanks to a flexible partition system and modular construction engineering, the new building can be adapted to changing needs: all combinations are possible, from an open-plan workspace to an individual office. The uncovered building management system with a modular structure within a single fire compartment is also open to future technical developments. The building's energy requirement is accordingly low: just 25 kWh/m²a satisfies its need for heat energy. The building meets the toughest certification requirements in existence today (Minergie-P-Eco and LEED Platinum).

With its solar and geothermal installations, the building is also a small power station. Built into the roof, the 1,400 m² of 150 kW solar panels supply around 70 % of the building's total power requirement. 15 geothermal probes at a depth of 180 m cover a large proportion of the requirement for heating, cooling and hot water. The building for the IUCN also benefits from the first practical application of a decentralised, volume flow-controlled ventilation system, which makes it a "breathing building". The lightly air-conditioned and decentralised ventilation is controlled by a building management system connected to the power grid and responds differently to the levels of CO₂ in each room.

The extension of the IUCN headquarters is impressive because of the successful and, in some cases, experimental combination of available knowledge and state-of-the-art technology at various levels. The result is a prototype of zero-emissions architecture that also takes account of social and economic criteria of sustainable construction in an exemplary manner.

AWARD

IUCN EXTENSION, GLAND (VD)

Location

Rue Mauverney 28, Gland (VD)

Client

IUCN, International Union for Conservation of Nature

Team

Architecture: agps.architecture, Zurich
Civil engineering: Gussetti & Tournier SA, Carouge

Building services: Amstein + Walther SA, Geneva

Supporting structure: Ingeni SA, Carouge
Landscape architecture: Nipkow Landschaftsarchitektur, Zurich

Biology: Florian Meier, Genolier

LEED consultants: Architectural Energy Corporation, Colorado (USA)

General contractor: Karl Steiner SA, Geneva

Planning 2006–2008

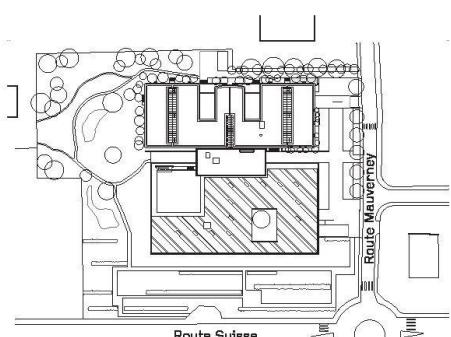
Execution 2008–2010



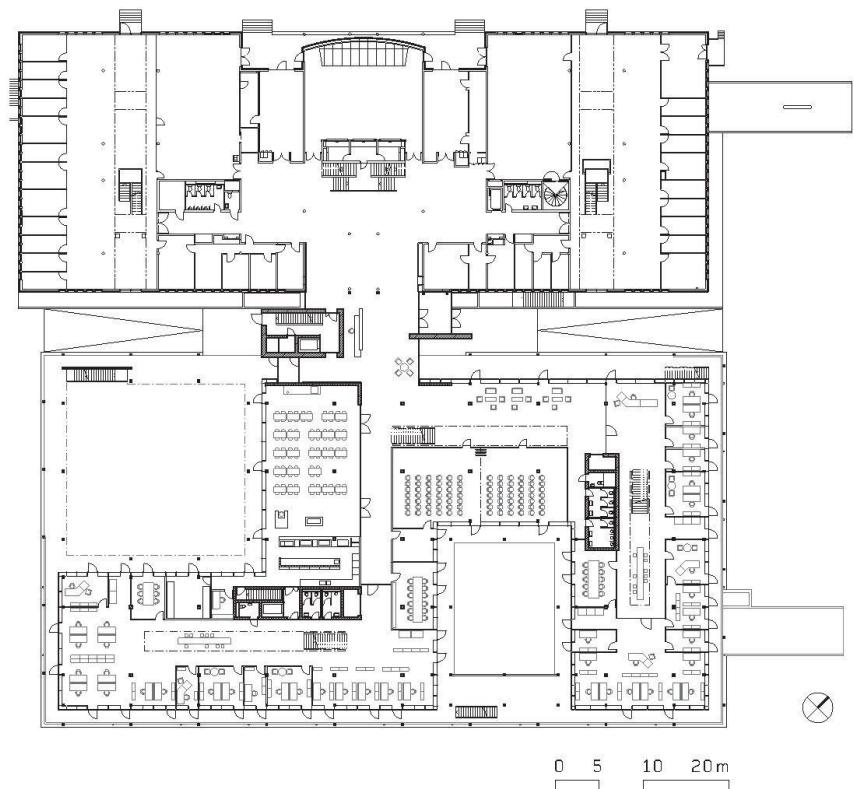
01



02



03



04

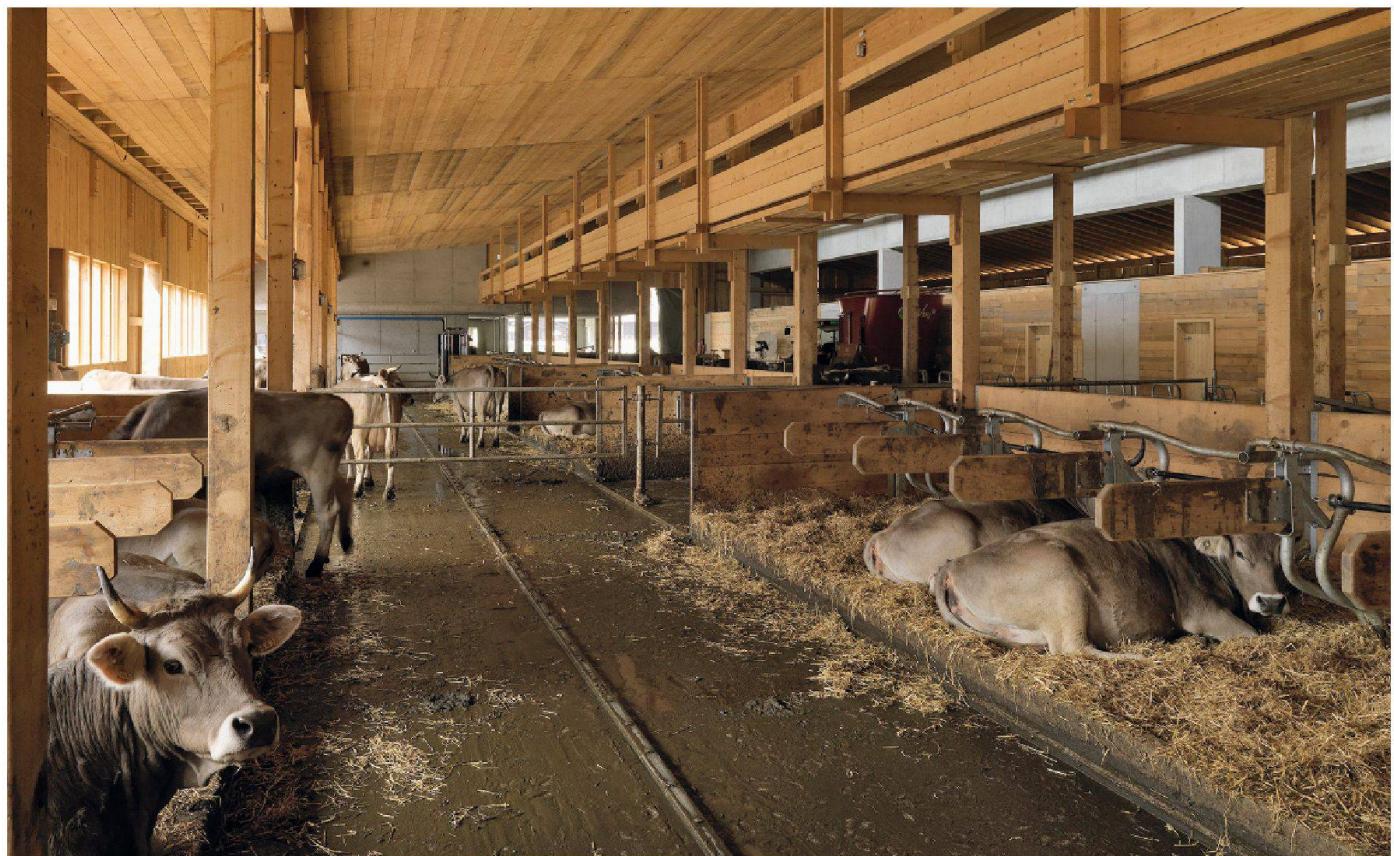
01 Eastern façade and entrance area (photo: Alain Bucher)

02 + 03 Map (plans: agps.architecture)

04 Ground floor plan



02 IUCN extension, Gland (VD) (photo: Reinhard Zimmermann)



03 Farm at the Benedictine monastery, Disentis (GR) (photo: Lucia Degonda)





02 IUCN extension,
Gland (VD)
(photo: Jules Spinatsch)