Louvain-la-Neuve new university town (Belgium)

PROGRAM: NEW UNIVERSITY TOWN INCLUDING ALL URBAN FUNCTIONS INITIATOR: CATHOLIC UNIVERSITY OF LOUVAIN GENERAL ADMINISTRA-TOR MICHEL WOITRIN

DESIGN TEAM: GROUPE URBA-NISME ARCHITECTURE-UA (RAY-MOND LEMAIRE, JEAN-PIERRE BLONDEL, PIERRE LACONTE)

CONSTRUCTION PERIOD: 1970-...

CONSTRUCTION COST: 400 MILLION EUR (ESTIMATED)

University owned area: 920 ha Local authority: Commune of Ottignies, changed into City of Ottignies-Louvain-la-Neuve in 1991 When obliged to leave the Flemish-speaking city of Louvain, the French-speaking Louvain University decided to create a completely new university town rather than just a university campus. In 1969 it acquired 920 ha of agricultural and forestry land near Ottignies, a small rail industry town. This lies 30 km from central Brussels, to which it has been connected since 1975 by a railway extension. "Think nature as well as city" was the leitmotif of the masterplan adopt-ed in 1970, which has remained the development guideline for the subsequent 50 years.

The "think nature" leitmotif was implemented in the new university town in the following ways:

- University, residential, service and leisure activities were mixed and concentrated on the 400-ha central zone of the university's domain. The existing forests and patches of green land were preserved.

- The water reserves of the site were preserved by separating sewage water, requiring treatment, from rainwater, which was collected in a reservoir, treated as a lake with a variable water level.

- The balance between the natural landscape and the 400-ha built-up area remained constant at every stage of development. Within the built-up area the balance between buildings, gardens and planted open space was preserved, including the area above the underground rail tracks, roads and parking. This was aimed at preventing heat islands. Commercial streets are protected from sun and rain by canopies.

- Air quality was enhanced by giving priority to pedestrians and cyclists, and by forbidding heating oil.

Pedestrian mobility was aimed not only at encouraging informal personal contacts but also at saving land and fossil fuels. Automobiles can be parked underground or at the periphery, but they are needed neither for local mobility (there is a maximum walking distance within the city of 600 metres from the centre) nor for longer distance travel (thanks to an S-Bahn connection and express buses to Brussels).

Today's permanent resident population is 12.000, while the day population is 32.000. The shopping mall linked to the station has eight million visitors per year.

Louvain-la-Neuve received the international union of architects' Abercrombie Prize in 1978.

Its emphasis on human contact, air quality and saving non-renewable resources may be considered as a lasting and exemplary form of urban development. Together with its research park, it is credited to be the most dynamic growth pole of the Walloon region. It is replicable in other peri-urban locations as an alternative to urban sprawl.

All land acquired by the university remains in its ownership. Development takes place under long term leases ("Erbpacht" in German), in which the ownership of land is separate from that of buildings. This allows a reduction of the cost met by users, and for housing to be affordable.

At the periphery of the 400 ha compact new town four plots of land (230 ha) have been developed as the Louvain-la-Neuve Science park.

This part of the university domain is reserved to science related research and development firms, or services to such firms. These firms are often start-ups generated by university research and employing former students. Their lay-out is of lower density in order to accommodate temporary uses linked to experimental manufacturing projects (fab-labs). This development is further described in the Stadfahig Exhibition.



Figure 1: Sciences Library (1972), transformed into Museum in 2017. Architect André Jacqmin. Photo Koen Raeymaekers.



Figure 2: Station, University headquarters and pedestrian space on artificial ground (1975). Architects Yves Lepaire and Joseph Polet. Photo Pierre Laconte.



Figure 3: Theatre Jean Vilar, restaurants and shops. Arcaded pedestrian place on artifical ground (1975). Photo Pierre Laconte.



Figure 4. Artificial lake located at the lowest point of the site. Photo Pierre Laconte.



Figure 5: Strip cartoon Hergé Museum seen from the Station (Architect Christian de Portzamparc). Photo Pierre Laconte.

Rain/storm water is piped into a reservoir treated as a lake with a variable water level. This concept of a natural reservoir with variable water levels was in line with traditional river valley management in the Brussels area (fig. 4, left). It keeps water reserve on the site and attract residential development.

Figure 6: This diagram shows the separation of water flows. Pre-monitoring of rain/storm water before entering the lake ensures fishing quality of the lake. Source: Architecture et Climat, LOCI UCLouvain 2019.



Figure 7 (below): The new university town now includes all urban functions on its central 400 ha of compact and green development. Photo UCLouvain INESU IMMO.

