

International Seminar on “Historic Spring City Cultural Landscape”

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PLANNING FOR WATER-RELATED CITIES AND TOWNS. CASES OF AMSTERDAM AND LOUVAIN UNIVERSITY TOWN

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BACKGROUND.

The City of Ji'nan, formerly Tsinan, the capital city of Shandong Province in Eastern China, is a historic city, referred to by the nickname "City of Springs".

The Ji’nan municipal urban landscape and forestry Bureau is hosting an international Forum 5-7 in September 2016, as an occasion to establish an international Association of Spring City Cultural Landscape, as Ji'nan itself, and similar spring or water related cities around the world. One afternoon of the Forum is especially dedicated to a seminar about the spring city cultural landscape conservation and the Ji’nan world heritage nomination preparation.

For this theme seminar, ICOMOS CHINA was invited to co-organise and help the local host in gathering international heritage experts on water related urban landscape.

ABSTRACT.

The present paper is based on the author’s experience in planning of cities and towns with reference to history and water resource conservation. It will expand on the following two case histories:

- large city : the world heritage nomination of Amsterdam 17th century ring of canals and urban development,
- small city : the water resources heritage enhancement in the planning of the Louvain new university town.

1. AMSTERDAM.

1. THE FACTS OF THE CASE.



Fig. 1. The medieval town. The medieval town developed southwards from the port along an inland waterway opening to the sea, but was confronted in the early 17th Century with the need to accommodate major population growth.

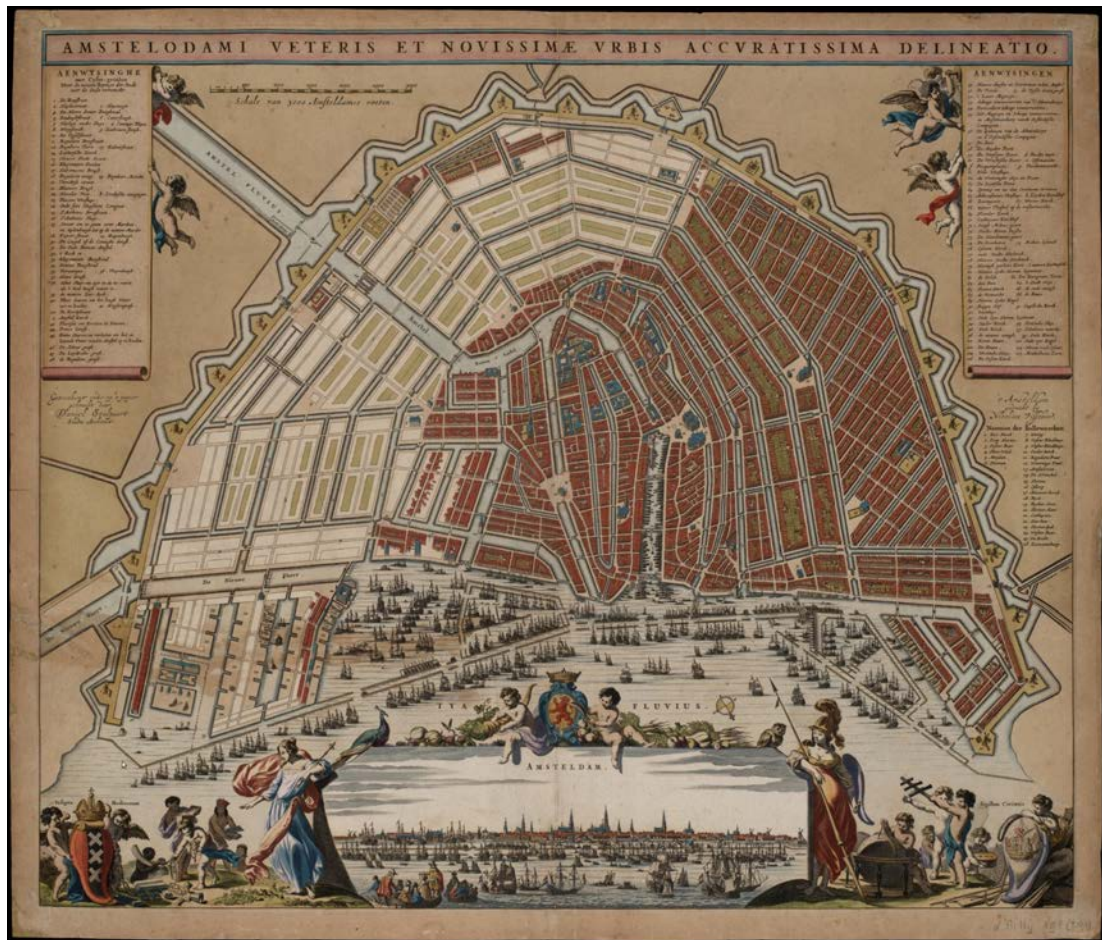


Fig. 2. The “Novissima Urbs”. The city adopted a curvilinear development framework, surrounding the old town with a triple circle of canals and a grid of service streets linking them. This plan was implemented over some 400 years and became a World Heritage site in 2010.



Fig. 3. View of the early building phase. *The Bend in the Herengracht* by Gerrit Berckheyde (1671-72).

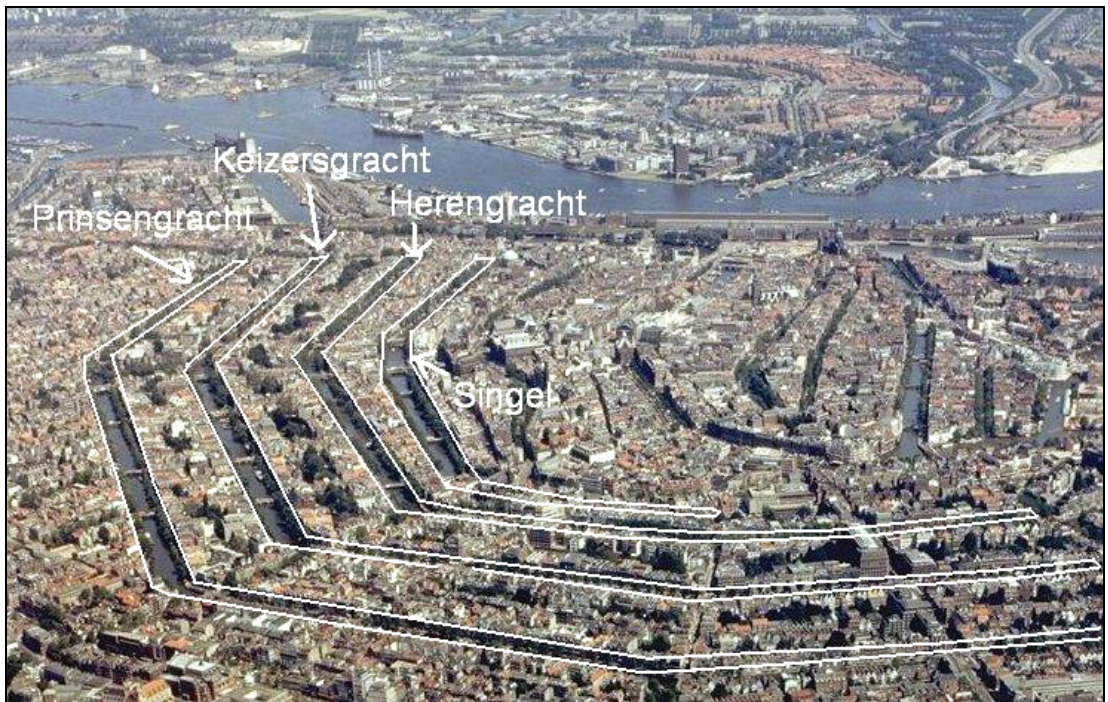


Fig. 4. View of Amsterdam's Singel canal area. It indicates the framework of three ring canals.



Fig. 5. View of Central Station, Amsterdam. This photo, taken in 1900, shows the station's link with the old town and the canal area, while remaining outside it.



Fig. 6. Random view of a canal today. This shows the multimodal use of the canals, adapting to changes in transport modes, while remaining an amenity in their own right.

2. ANALYSIS OF THE CRITERIA ON THE BASIS OF WHICH THE PROPERTY IS NOMINATED.

The dossier chose to retain three of the ten possible criteria, what was in line with the rules, according to which one criterion of the list of ten was sufficient. These criteria were: (i) to represent a masterpiece of human creative genius. (ii) to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town planning or landscape design (iv) to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage (s) in human history.

The justification statement, based on these criteria, addresses planning, development controls, implementation and international influence.

- Planning of the area reveals a great mastery of land and water interface, of land parcelisation in small plots, of bulk control, design and materials vocabulary, tree planting and simplicity in urban block design made of row houses (architectura minor), punctuated by a limited number of iconic monuments (architectura major). - Development controls were entrusted to a public private partnership system bound by countervailing powers. - Implementation has spanned over a very long period and confirmed the sustainability of the master plan. It has also confirmed the continuity of a “Baukultur” made of technological/engineering strength and interest for the art of landscape design. - International influence has been acknowledged by urban historians at large and lately by the international Symposium “New Urbanism and the grid: the Low Countries in International Context. Exchanges in Theory and practice” (Antwerp 8 May 2009).

How well are the values recognised in the nomination?

Admittedly additional criteria could have been used, namely (v). Indeed the interaction of human settlements with the maritime environment has been a trademark of the Dutch planning practice throughout history. The religious values and their influence could also have been more emphasized. As a whole the merchant values and ethics are sufficiently present in the dossier not to jeopardise the nomination.

3. ANALYSIS OF THE COMPARATIVE ANALYSIS INCLUDED IN THE NOMINATION DOSSIER (WEAKNESS/STRENGTH, POSSIBLE ADDITION).

1. The nomination dossier (3c page 107 sq) includes a “comparative analysis (including state of conservation of similar properties)”. It starts with a survey of “Amsterdam in the International history of town planning”, i.e. a literature survey about Amsterdam’s place in the town planning literature. It goes on with a comparison of Amsterdam with other historic cities in the Low Countries and in European countries such as Italy, France, England, Germany and Denmark. It confirms the uniqueness of the canal ring area.

2. As to St-Petersburg, Russia, the dossier points out the influence of Amsterdam but also the difference in urban Planning (imperial vs merchant) and the difference in implementation (fast implementation through imperial enforcement). More could perhaps be said about the remarkable difference in plot subdivision typology (“parcelisation”, or “parcellaire” in the Françoise Choay terminology). The St-Petersburg approach (subdivision in large palatial parcels) is strikingly different from the small plots for merchant row-houses, beautifully illustrated in the old maps of the dossier). This difference could perhaps be expanded, the more so that much of today’s planning tends to move towards large parcels for large buildings, whatever their energy consumption.

3. The superior mastery of water flows in Amsterdam vs St-Petersburg is underlined. This aspect could not enough be emphasised, at a time when sustainable water management has become of international concern. In the wake of globally rising water levels, Holland is continuing its long tradition of water management. It is probably the world pioneer in protecting itself against future floods, to the benefit of its historic areas as well as to the benefit of its newer settlements.

4. CONCLUSIONS.

1. The dossier is to me most impressive, if only by its size and presentation. It seems successful in its justification to have the specific canal ring area inside the Singelgracht on the World Heritage list.

2. The canal ring’s lay-out (residential canals and service streets), its land subdivision in small plots and its implementation framework and control have proven both their robustness and their sustainability, along several centuries.

3. Its integrity and authenticity are well underlined (3.d, pp.130 sq.). It has been able to accommodate changes in functions as well as changes in building styles and building techniques. The photographic material illustrates very well this adaptability.

4. The boundary between public space and private space has been preserved. This is the more important to be underlined that the public-private boundaries are frequently blurred in “modern” planning (anonymous “green spaces” à la Sarcelles instead of public spaces and gardens).

5. Conservation policies are treated at length, both inside the boundary and at its edge (e.g. pp. 173 sq.). The issues confronted by the area at its edge are clearly stated (see my general comment).

6. Consequences for the UNESCO nomination are well stressed. Perhaps the consequences OF the nomination might also be pondered, taking into account recent German cases. The chapter 6 “Monitoring” (only 9 pages) might be somewhat expanded to address the monitoring of the WH site once the nomination has succeeded.

2. LOUVAIN NEW UNIVERSITY TOWN WITH EMPHASIS ON WATER MANAGEMENT.

1. FROM THE VICTOR GRUEN ASSOCIATES MASTERPLAN (1968) TO THAT OF THE “GROUPE URBANISME ARCHITECTURE” (1970).

Having opted for building a new town, the university board, on the proposal of its general administrator Prof. Woitrin, decided in the spring of 1968 to hire the established international planning firm Victor Gruen Associates (Los Angeles), a pioneer of American shopping malls, to draw up its masterplan. The Gruen plan, which was led by functional considerations, included a large central air-conditioned mall surmounted by high-rise buildings, ignoring the landscaping value of the plateau and its rich water resources.

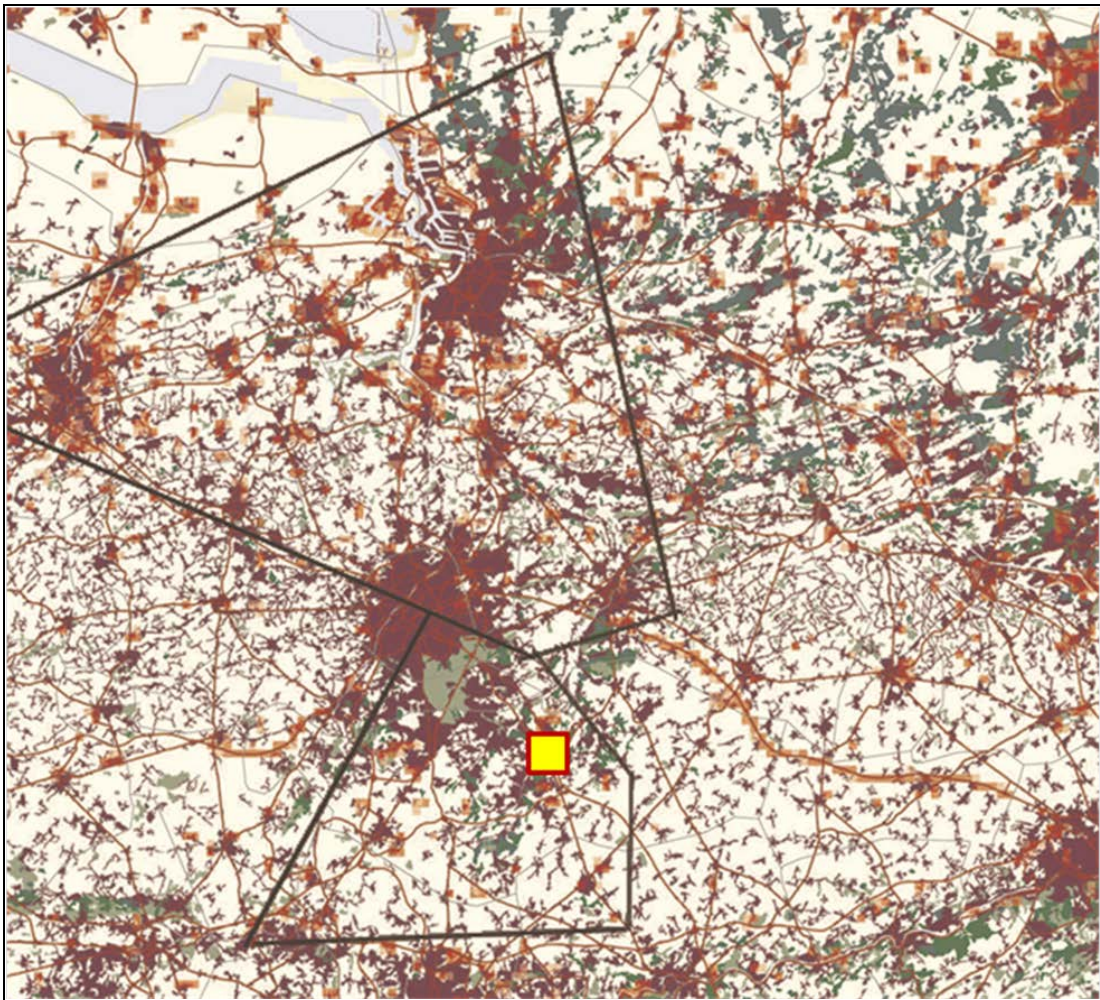


Fig. 7. Satellite map showing the urbanised area of central Belgium, around Brussels. In the Flemish region Antwerp lies 50 km to the north, Ghent 60 km to the west and Louvain/Leuven 25 km to the east of central Brussels, forming a kind of diamond. The loose urban zone south of Brussels forms a kind of triangle. The new town of Louvain has been located (see yellow square) in this part of the Walloon region, some 30 km south of central Brussels.

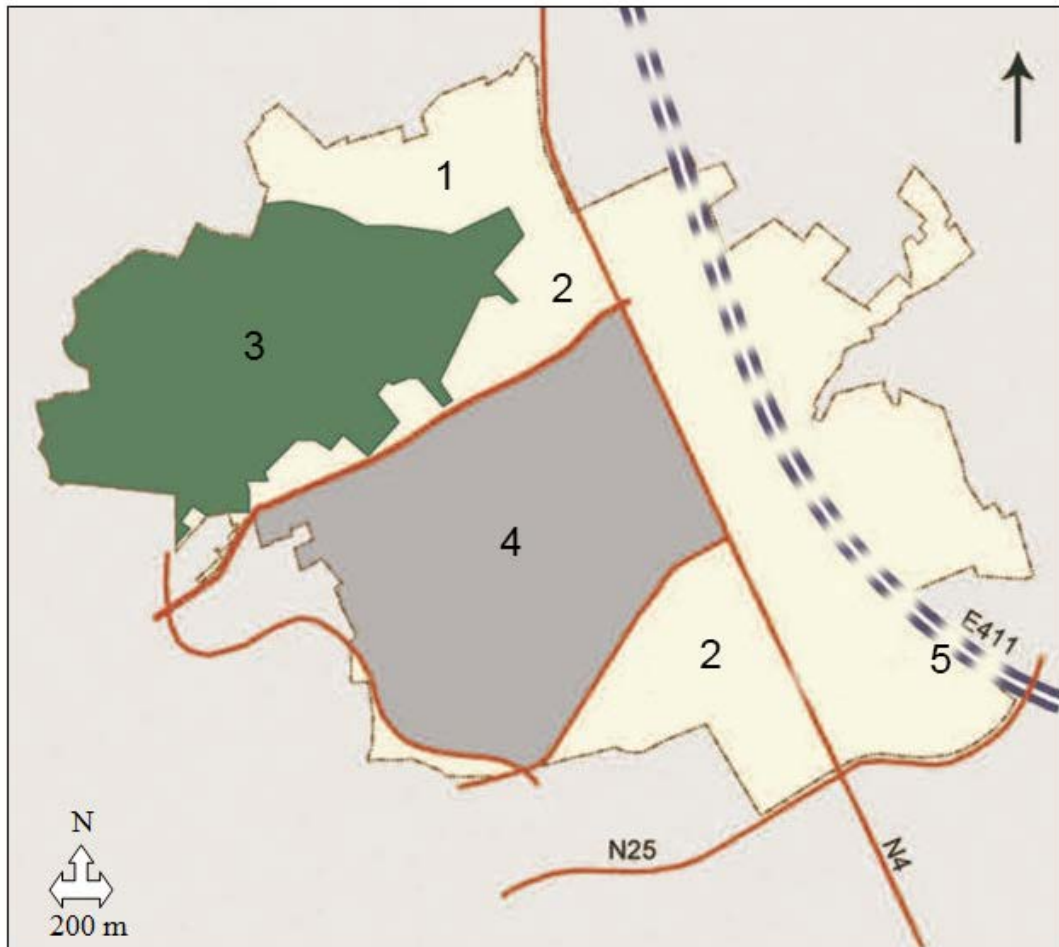


Fig. 8. The 920 hectares of land acquired by the university in 1969. The new town is anchored to the only existing infrastructure, i.e. the N4 road linking Brussels to Namur and Luxemburg.

The E411 motorway did not exist at that time and is shown by dotted lines. Dense mixed-use urban development was restricted to the central part of the site (4). The northern area in green was reserved as forest (3). The areas east of this and south of the dense urban development became a research and development park (2). The area north of the forest was developed as a golf course (1). The area east of the N4 road became an extension of the research and development park.

The Gruen masterplan was presented to the university board and the academic community in September 1968 and rejected by a large majority.

The university board then decided instead to entrust the planning and architectural coordination of the new town to an interdisciplinary design team recruited by the board itself. This team, called “Groupe Urbanisme Architecture”, was jointly headed by a well-known specialist on historic towns (R. Lemaire), an architect-planner (J-P. Blondel) and an urban economist (P. Laconte). The “Groupe Urbanisme Architecture” took its inspiration from university towns throughout Europe, and from the garden cities developed in Britain in the early 20th century (Letchworth and Welwyn Garden City). It relied on the millennial experience of successful multifunctional cities and neighbourhoods, rather than that of a few

decades of functionalism with its spatial separation of functions, generating the need for motorised transport to link them.

In contrast with the Gruen masterplan the “Groupe Urbanisme Architecture” emphasized the human scale of buildings and public spaces, and respected the natural curves of the site and its central dry valley. A central linear pedestrian spine – a concept pioneered in England by the University of Lancaster, visited by the author in 1968 –allows step-by-step development. Vehicle access to buildings and parking are located on each side of the spine, with occasional underpasses (Figure 9). Each phase of development included a mix of urban functions, allowing it to be brought into use immediately, unhindered by work on extensions. The total length of the spine is around 1,5 km.

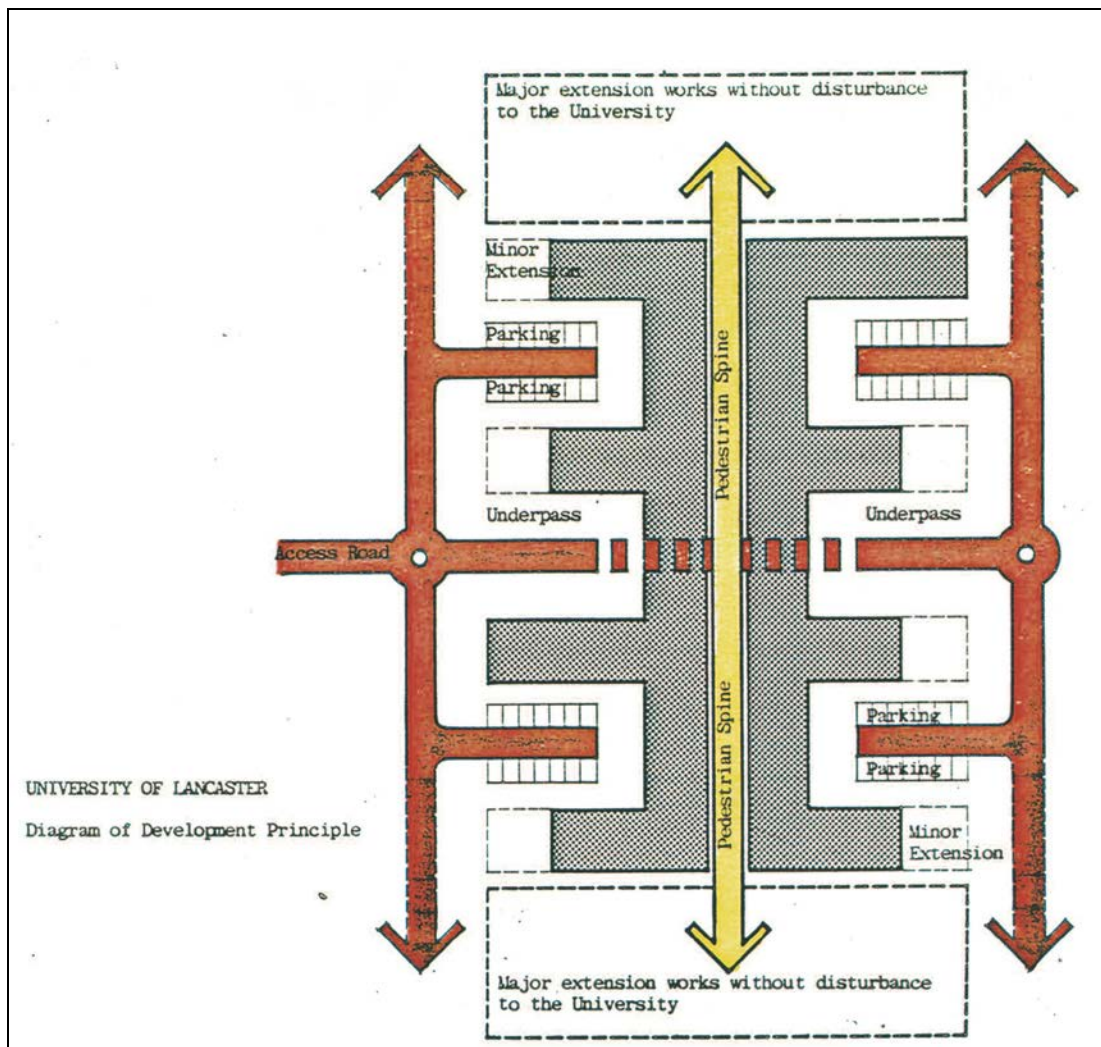


Fig. 9. Starting from the existing main road, a linear pedestrian central spine – on the model of the new Lancaster University development plan - allows mixed urban development to proceed step-by-step. Car access to buildings and parking is placed outside the spine, with occasional underpasses.

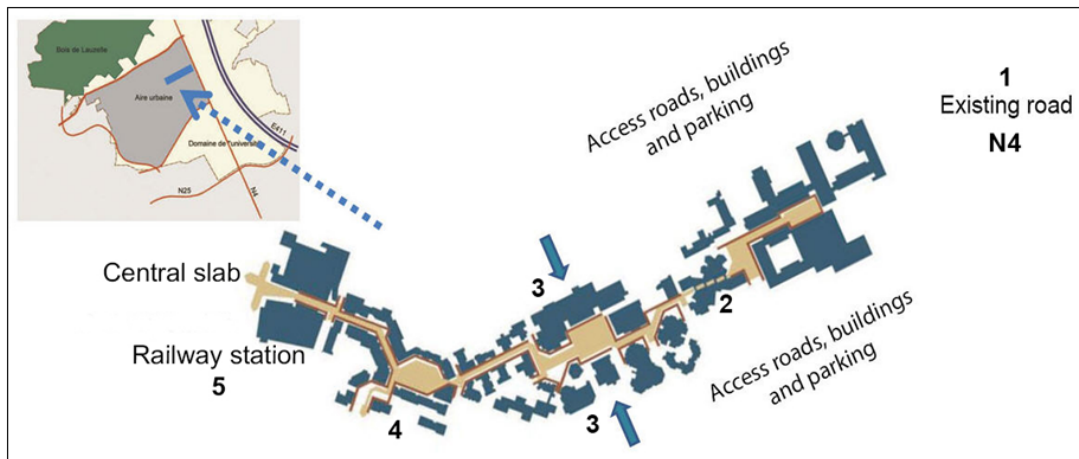


Fig. 10. The first phase pedestrian spine. The eastern starting point is the existing N4 road (1), followed by a string of public spaces and passages through buildings, indicated by dots (2). The diagram indicates the location of access roads and parking lots. The arrows indicate the road underpass below the “Place des Sciences”(3). The piazzas have different shapes and their street access is either perpendicular or tangential to the spine(4). The underground railway station (5) marks the beginning of the subterranean infrastructure.

This pedestrian linear spine allowed savings to be made in land take and in the cost of initial road infrastructure investment. It mainly generated space for people to meet. Its length is limited to the space compatible with pedestrian accessibility (a radius of ca 600 m.)

The concept of a central pedestrian spine (Figure 9) was translated into the actual urban design as a string of public spaces, starting from the existing road to the east of the site (Figure 10). It came into being in 1972 in the eastern part of the site, and was soon extended to the railway station (opened in 1975) and from there to the future centre of the city and to the western part of the site.

This string of spaces has been compared by P. Lombaerde to the string of piazzas in old Florence. Car access to buildings, and parking, is located on each side the spine. Outdoor parking spaces were treated from the start as public gardens, planted with a range of tree species in order to attract a variety of birds, as a tribute to biodiversity (landscape architect: J-N. Capart). They have in practice become an ornithological reserve.

The centre of the first phase was the science library, an iconic concrete building seen as the cathedral of a university town, with its public square (“Place des Sciences”) built above a vehicle underpass. For some 45 years it has been a place for social contact, with university buildings, shops and restaurants conceived by the architect A. Jacquemain of the architectural team Ateliers d’Architectes de Genval (Figure 11).

In 2015 the same team was entrusted with a facelift of the string of public spaces west of the “Place des Sciences”, to be implemented by 2018. The science library will move to the central university site, and the present building is to be converted into a new museum of the university by 2017.



Fig. 11. The centre of the first phase was the science library, a huge concrete building seen as the cathedral of a university town with its plaza (parvis), above a vehicle underpass. It is a social meeting place with university buildings, shops and restaurants (architect A Jacqmain). The first phase of the linear development started in 1972, from the existing road (N4). In 1976 an underground railway station was brought into service. The street and road network was developed stepwise, as required by the needs of the urban development.



Fig. 12. The station. The entrance to the station (architect Y. Lepere) on the arcaded pedestrian spine is at the point where the platform starts. A new station was built by the State railway company SNCB/NMBS in 1975. The station provides a direct rail link to central Brussels in 35 minutes, and is to be expanded as part of Brussels' new fast commuter rail network. It is entirely below ground. Open air tracks are to be covered at a later stage. The full development of the spine included a central platform covering the lower part of the site. Besides the railway tracks it hosts access by car,

2. WATER MANAGEMENT.

A key feature of the planning of Louvain-la-Neuve is the conservation of the plateau's water resources. A dual water collection system has been installed in many buildings. Only waste water goes to the treatment plant. Storm water is collected into an artificial lake that serves both as a reservoir and an amenity. The water level varies according to the amount of rain.

Pre-monitoring of water entering the lake and adding oxygen allows the water quality for fish to be maintained. This water saving policy has become more pertinent than ever at a time of increased resource awareness.



Fig. 13. All storm water is collected in an artificial lake that serves as a reservoir and an amenity. The banks allow room for flooding.



Fig. 14. *Pre-monitoring of water entering the lake, and of oxygen levels, allows the water quality for fishing to be checked.*



Fig. 15. *An aerial view of the city taken in 2014 shows the high-density low-rise character of most of the development and the potential for further extensions close to the lake.*

About the author.

Pierre Laconte is President of the Foundation for the Urban Environment, which seeks to link urban planning, transportation and the environment. A past President of the International Society of City and Regional Planners, and former Secretary General of the International Association of Public Transport, he was evaluator for the European Green Capital Award 2012 & 2013 and a member of the Lee Kuan Yew World City Award Council. He is one of the three planners responsible for Louvain new university town in Belgium, which received the Abercrombie Award of the International Union of Architects. His publications include « Sustainable Cities - Assessing the Performance and Practice of Urban Environments » (Co-ed, C. Gossop, 2016) ; Brussels: Perspectives on a European Capital (co-ed., C. Hein), which shared the Society for Human Ecology 2008 Award for best publication; Water Resources and Land-Use Planning: A Systems Approach (co-ed., Y.Y. Haimes, 1982); and Human and Energy Factors in Urban Planning: A Systems Approach (co-editors, J. Gibson and A. Rapoport, 1982).