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**OPERATIVE  
LANDSCAPES**  
Building  
Communities  
Through  
Public Space

Alissa North

# BELVAL-OUEST I

## BELVAL-OUEST, LUXEMBOURG, 2001

Size: 120 hectares / 297 acres

Project Lead: Buro Lubbers (landscape), Jo Coenen & Co (urban planning)

Team: n/a

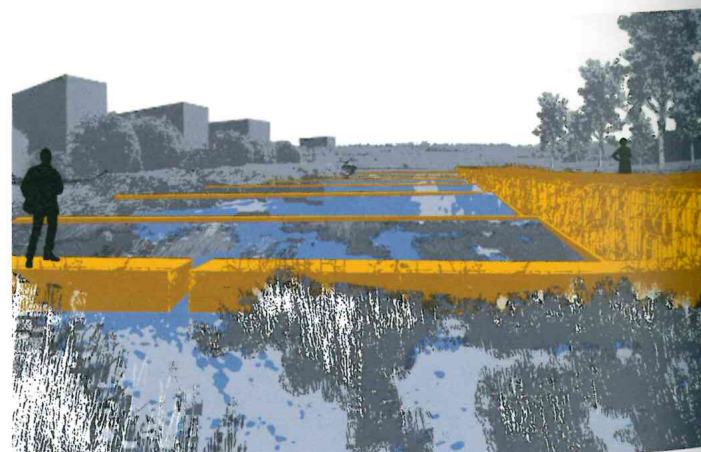
Client: Agora Development Group

Located at a former iron and steel production site in the heart of Luxembourg, Belval-Ouest is an urban brownfield redevelopment project that has actively engaged the site's industrial landscape to promote a strategy premised upon the reuse of its structural and vegetation features. In particular, the master plan bears witness of the interest and understanding of the natural succession of vegetation that has occurred during the post-industrial state of this site.

Critical to the project's objective of recalibrating the site's industrial landscape is the careful articulation of its phasing strategy. In order to encourage density while preserving the core of the site's vegetative character, the master plan prioritizes the implementation of public space and infrastructure, including parking space, using these open areas to strategically guide built form and phase its development.

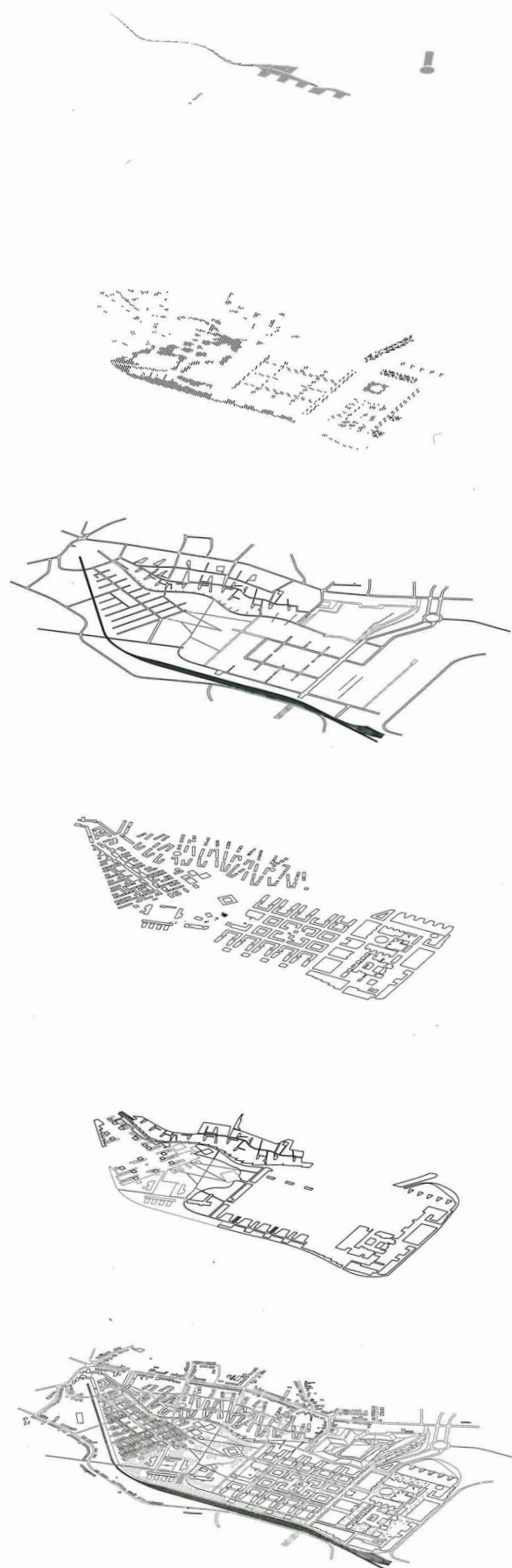
The vast emptiness of the site is emphasized by minimal additional constructions; for instance, seating areas serve as focal points within the large empty areas, with detailing that will allow a new patina to mark the site. In terms of the site's overall development policy, design interventions in public space will be minimal during times of low building development, allowing for natural succession to continue, and will be maximized during times of intense urban development, keeping the available public space aligned with current community requirements.

The master plan focuses on the reuse of the site's industrial buildings, which have been repurposed as institutional buildings, business incubators, cultural facilities, and housing units. The intentional mixing of research, economic, and cultural facilities, and the provision of a variety of housing for people native to Luxembourg as well as new international residents, aims to promote innovation that will help further remediate and develop the site. Five districts compose the site: these include the Blast Furnace Terrace that now consists of science, research, and university facilities; the Square Mile, which concentrates housing and retail development in close proximity; Park Belval as the site's public open space armature with varied ecological communities, including dry and wet meadows, as well as prairie grasses; Belval-Sud, which consists of institutional buildings that connect to Park Belval; and Belval-Nord, which is a pasture meadow comprised of courtyard buildings that face the open space.



The preservation of the industrial buildings as well as the natural successive meadows and grasses is achieved with revenues generated from the real estate development, which also pay for the cost of the public spaces and planting of new vegetation. The site fits into the larger industrial region regeneration strategy, reformed as an ecological, cultural, and economic circuit.

A rich textural palette of materials, forms, and vegetative communities reimagines this cultural landscape as a historic site. Heritage in the case of Belval-Ouest is not relegated to relic objects, but rather builds upon the character of the industrial landscape through incremental growth that will guide the site's regeneration and the development of its community.



Opposite: The brownfield redevelopment site.

The master plan prioritizes public space to guide its development.

Perspective of industrial remnant reuse.

Plan components from top: water, vegetation, circulation, existing and proposed buildings, public space, all layers.



A temporary landscape to encourage development. Buildings and industrial remnants become icons in the public realm.



Vegetation gives a sense of evolving succession.  
A long allee helps define the site and provides a sense of scale.  
Detail plan of first development phase.

# MONNIKENHUIZEN

## ARNHEM, THE NETHERLANDS

### 1998 (DESIGN), 2000 (IMPLEMENTATION)

Size: 6.5 hectares / 16 acres

Project Lead: Buro Lubbers

Team: S.V. Khandekar, Atelier Z, Meyer en Van Schoten

Architecten, Van de Looi en Jacobs Architecten,

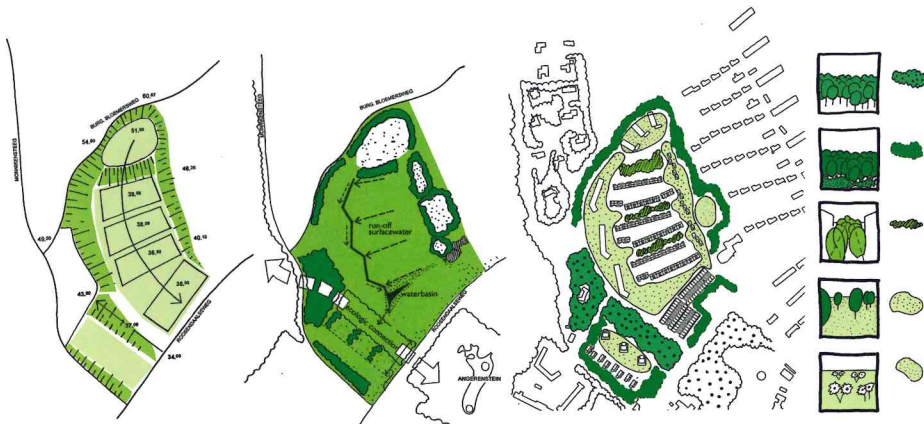
Vera Yanovshtchinsky Architecten

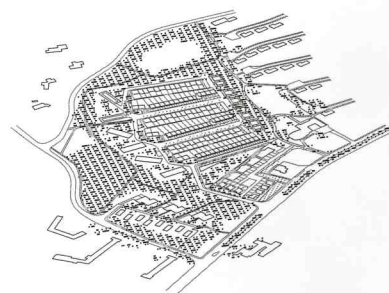
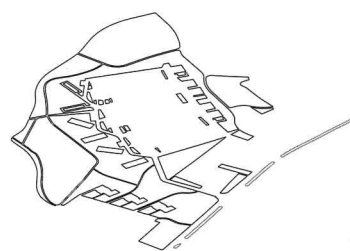
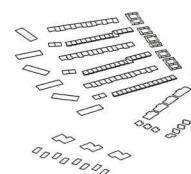
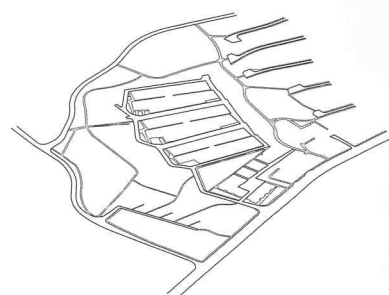
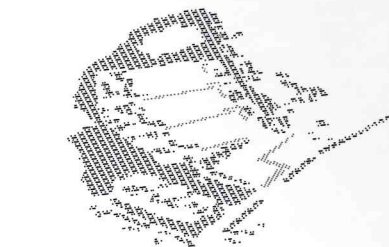
Client: Johan Matser Projectonwikkeling and the  
Municipality of Arnhem

Monnikenhuizen is a community housing project that has capitalized on the landscape to enhance the community's infrastructural performance capabilities. The project's conceptual design was inspired by the adjacent forested areas, which produce a range of spatial and visual perspectives, assisting the development in taking a dramatic departure from the site's former use as a series of football fields.

Inspired by the visual opportunities afforded by the undulating heights of the existing forest canopy, the design creates a spatial effect of the houses being arranged within outdoor rooms, further enhanced by an extensive tree-planting scheme: a heavy mixture of oak and birch species helps to establish dominant perspectives and allow the houses to feel as if they were nestled within the topography. The substantially maintained topography is structurally supported by gabion walls that add texture to the site and create interplay between the ground plane and the vertical structures of the houses.

The respectful siting of homes within the landscape is further dramatized by the project's prime feature of an open rainwater collection system, which not only serves the purpose of collecting, containing, and recycling rain water in ponds that vary in design based on topography, but also creates a spectacular effect during rain events.





Opposite: Topography, surface run-off and ecological connections, and vegetation typologies diagrams.  
An important feature of the plan is the collection and recycling of rainwater.  
Plan components from top: water, vegetation, circulation, buildings, public spaces, all layers.



The system of water collection, transportation, and storage is made visible through grooves alongside the houses that collect rainwater and funnel it into a network of troughs and subtle grading down the center of the roadways, which eventually ends up in a storage pond and is used for various site functions.

Harnessing the beauty of the forest and terrain, Monnikenhuizen formulates a spatial planning strategy that shares a close interaction with its natural features, made further evident through the use of landscape as infrastructure.



Specific use of tree species connects the site to the surrounding forest, creating a variety of spaces and adaptable uses.  
Ponds and wetlands serve as landscape infrastructure.  
Precise grading allows the architecture to be appropriately sited, creating a sense of community that is grounded to its site and context.