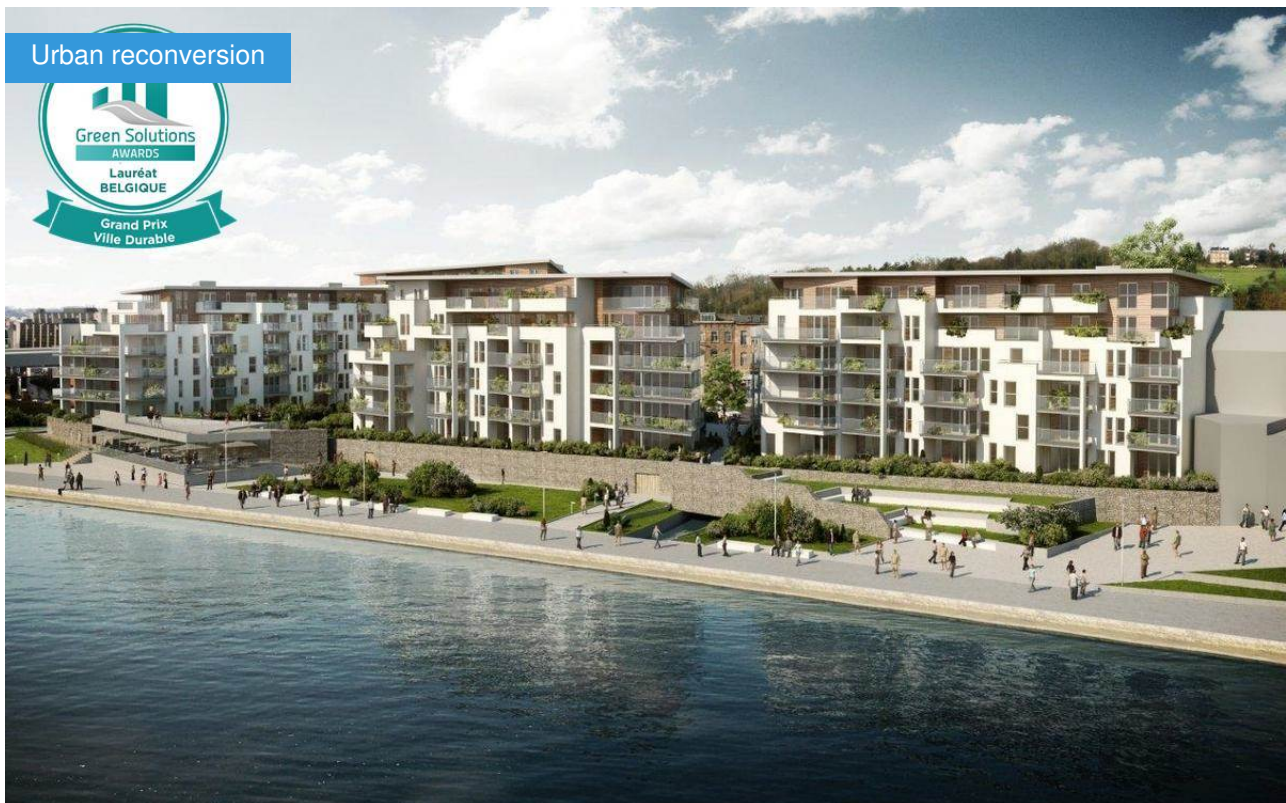


Eco district PORT DU BON DIEU

by Alessia VERZARO / 2018-06-15 15:42:29 / Belgique / 7876 / FR



Address 1 - street : 5000 NAMUR, Belgique

Gross density : 29.49 logt/ha

Population : 560 hab

Number of jobs : 6 emplois

Starting year of the project : 2011

Delivery year of the project : 2016

Key words : Low energy, housing, shops, restaurant, proximity, mobility, public spaces



2 ha



23 600 000 €

ID CARD

The project involves the construction of a multi-residential, diversified and low energy complex of more than 2 hectares, comprising 140 apartments of one to four bedrooms, five shops and a restaurant. The whole is built on a common basement composed of 156 parking spaces, small cellars and technical premises.

Located on the left bank of the Meuse, at the entrance of the city, this project focuses on the integration of a contemporary quality building in an open urban environment. Emphasized by the presence of water, it has been designed according to high standards in terms of sustainable development.

On the Meuse side, the unhooking of the volumes and strata of the terraces spread from the edges planted along the towpath to the penthouses. The docks have been refurbished into a public garden and agora mosane, offering a convivial promenade area at the water's edge. The refitted towpath contributes to the extension of the RAVEL.

Side boulevard, a plot creates a break in the built front, in line with Houyoux.

In association with Montois Partners Architects.

Programme

- Housing
- Businesses and services
- Public spaces
- Others

Project progress

- Operational phase

Key points

- Quality of life
- Economic development
- Mobility
- Biodiversity
- Energy /Climate

More info

<http://www.arbredor.be/>

Data reliability

Self-declared

TERRITORY

Type of territory

- Relief of the ground and slope of the natural ground:
 - less than 6%
- Type of soil:

The land is located in the alluvial plain of the Meuse at Jambes, above 1.75m to 2.20m from the towpath. The embankments were reported during the original construction.

The Meuse gravel is located $\pm 1,00\text{m}$ below the level of the water table. It is located at the Meuse (Z IGN $\pm 78.50\text{m}$). Above, there are silty deposits and a mineralized upper layer.

• Land use other than existing constructions (wasteland, vacant lot, garden, cultivation, meadow, forest, heath, fagnes, wetland, etc.):

Nil: Since the land is entirely occupied by industrial-type constructions, 100% of the surface is currently mineralized.

- Presence of groundwater, catchment points:

It is rather the aquifer of the Meuse; The project is not capturing anything.

- Direction and discharge points in the runoff water system:

The rainwater from the project will be stored in storm basins and underground cisterns, the overflows of which will be evacuated in a gravitational manner to the public sewer, Avenue Albert I, or to the

The sewage and faecal waste will be connected, in the sewers of the Avenue Albert 1er, or the street of the quay, according to the choice and the respect of the procedure of connection which will indicate to us the SPW, the City and the INASEP.

- Rivers, ponds, springs, potential catchments:

The Meuse is in the immediate vicinity (see above)

- Summary evaluation of the biological quality of the site:

This fully urbanized land has no biological quality, no fauna or flora.

(see also EIA attached to SAR request).

Only the presence of the nearby Meuse and Houyoux in the basement distinguish it, especially from the landscape point of view to / from the Mosane Valley.

Climate zone

[Dfb] Humid Continental Mild Summer, Wet All Year

More info

<http://www.arbredor.be/gall/ensemble-multiresidentiel-du-port-du-bon-dieu/>

KEY FIGURES

Green areas, roofs included

Green areas, roofs included : 3 783 m²

Public spaces area

Public spaces area : 545 m²

Commercial floor area

Commercial floor area : 333 m²

Public facilities floor area

Public facilities floor area : 2 379 m²

Housing floor area

Housing floor area : 20 280 m²

Number of residential units

Number of residential units : 140

Green spaces /inhabitant

6.76

Public spaces/inhabitant

0.97

Total investment costs (before tax)

Total investment costs (before tax) : 2 360 000 € HT

GOVERNANCE

Project holder

Name : Namur Waterfront

Type :

General description :

Namur Waterfront is a subsidiary of the Atenor Group, a real estate development company specializing in large-scale urban projects (offices, mixed and residential complexes).

Project management

Description :

It was Atenor, the developer, who piloted the project. He made a financial package that took into account the purchase of the land, soil remediation, the construction of the residential building, the redevelopment of nearby approaches requested by the administrations (redevelopment of the surroundings along the

haul and sidewalks with integration of a bus stop along the avenue).

Several administrations were questioned as part of the planning permission procedure: the SPW for the redevelopment of the surroundings along the towpath, the city of Namur and the SPW for new sidewalk developments along Avenue Albert 1er, the waterways (the Meuse being close), non-navigable roads (the Houyoux passes under the car park), the fire department, etc.

The residents also had the opportunity to express themselves in the context of the public inquiry.

Project stakeholders

GOLD TREE WORKSHOP

Function : Architecture agency

Complete architectural mission (design, construction and site monitoring)

archi@arbredor.be

[Construction21 company page :](#)



More info : <data/sources/users/1927/2036-ao-logo-rvb-archis.jpg>

<http://www.arbredor.be/>

Montois Partners architects

Function : Architecture agency

Complete architectural mission (design, construction and site monitoring)

montois@montois.be

[Construction21 company page :](#)



More info : <data/sources/users/1927/montoishd2013.jpg>

<http://www.montois.be/contact/>

Atenor

Function : Investor

ATENOR is a property development company listed on the continuous market of Euronext Brussels. Actor of the city, Atenor invests in major real estate projects, meeting specific criteria in terms of urban planning, economic efficiency and respect for the environment.

+32 2 387 22 99

[Construction21 company page :](#)

More info : <data/sources/users/1927/atenor.jpg>

<http://www.atenor.be/fr/>

QUALITY OF LIFE

Quality of life / density

The gross density of the project, calculated over the entire SAR perimeter, 3ha 2a and 27 ca, is limited to 33 dwellings / ha, excluding the other functions above which should be accommodated.

The calculation of this gross density limited to the right of the project, according to the draft structure diagram, ie with half of the adjacent roads, gives 188 dwellings / ha, higher than the "minimum of 45housing / ha" imposed by the SAR "to guarantee optimal use of space ". This density of the project is equivalent to that which we can see in the Namur Recycle Bin.

The templates of the project exceed locally only the "ground + 4 floors + a floor on the roof" as recommended by the SAR, which gives the faculty to "locally wear this template to one more floor".

Thus 6 of the 8 blocks: C, D, E, F, G & H are in R + 4 + T, while the 2 blocks A & B are brought to R + 5 + T, locally at the angle of the avenue Albert I and rue du

Quai.

This local elevation is justified in a place without nuisance for the vis-à-vis avenue Albert 1er: parking visitors Ores offices, and given the large size of the School of Cadets vis-à-vis the other side of the railway.

The urban composition of the facades has favored the vertical jutting of facades and varied the acroterions of the terraces on the upper floors, both side Albert 1 and Quai Street side Meuse, so as to avoid a monotonous and horizontal volumetry.

Particular attention is paid to the degression of volumes on the Meuse side, along Quai Street, as well as to the connection with the terraced houses on the left.

The volumetry is also marked by the high obliquity of volumes, taking the lines of force of the landscape, ie the parallelism to the Meuse and Houyoux, Avenue Albert 1er and the railway.

These obliques are treated in a succession of perpendicular recesses that vertically punctuate the facades and intimidate the terraces of neighboring apartments relative to each other.

The floors on the roof are topped with green roofs and slightly inclined, with overhangs crowning the entire project. These roofs take up the biased shapes of the implantation composition.

Net density

-0.26

Social diversity

The functions included in the permit application are essentially residential, with a trade at the corner of avenue Albert 1er and rue du Quai, and a restaurant on the Meuse side.

Two buildings, separated by the Houyoux in the basement, take respectively:

- Côté Ville, the first building comprises 3 AB, CD & GH condominiums, which total **94** apartments, including one adapted to the PRM, and 1 trade on the ground floor;
- Side CHR, the second building includes the 4th condominium EF, **37** apartments.

A common parking in the basement is the 5th condominium.

An independent restaurant is located, slightly elevated compared to the ground floor.

It should be mentioned that other functions set out in the SAR to obtain "*a reconversion of the site based on a mix of functions*", including public and community facilities, of which the city authorities have clearly expressed the wish, on the other parts of the SAR perimeter, in consultation with SPGE and the other public stakeholders concerned.

SOLUTIONS

- o Urban densification
- o Proximity services
- o Noise exposure

Company :

ECONOMIC DEVELOPMENT

% of public spaces

3

% of commercial area

2

TRANSPORT

Mobility strategy

The EIS that accompanied the SAR request detailed the various traffic studies available on Albert 1st Avenue. Without going back, the current project, 2 times smaller than that previously envisaged, will entail a fortiori no disturbance on the traffic of this avenue (following meeting with the SPW - DG01.31, routes and Annex 9.3), especially that parking access will be from the street quai, currently unusual.

The only left-turn necessary from the avenue, entering the city, is already arranged to the right of this street. The other accesses and exits are in turn to the right,

the one to the City will be made via the square of plain St Nicolas or the roundabout.

We will not return to the presence of immediate public transport site, railway or bus, which serves it ideally.

The car park meanwhile, has a capacity of 149 cars, including 9 PRP, or 1.1 car per apartment, as requested by the SPW and in accordance with the municipal regulation, and 5 locations for trade and restaurant, plus 9 motorbikes.

Roadside spaces, not to mention the St Nicolas plain relay car park, complete the parking offer for visitors and customers of the trade and restaurant.

For bicycles, the car park has 236 locations in specific premises to which can be added 132 in private kiosks, or 2 to 3 bikes per apartment.

Regarding PRM, contact had been made with Gamah to verify the compliance of access to buildings, common and entrance of apartments and to make the requested corrections to the plans. A special effort is made, with a minimum apartment. on the ground floor whose interior layout meets the standards of use PRM.

SOLUTIONS

- Soft transportation
- Collaborative transportation
- Parking management
- Other

Company :

Company :

RESOURCES

Soil management

Environment - navigable and non-navigable waterways

- Regarding the construction on the banks of the Meuse:

The project is built near the potentially floodable area.

In the high flood hazard zone (the limit of which is included in the site plan), no construction is planned and the surrounding areas remain at the level of the towpath (79.80 m level).

The development of a small Mosan Agora in tiers, downstream of the project, is planned in an area currently of medium and low flood hazard.

Similarly, the restaurant and its terrace are built in a medium to low hazard zone, on a smaller area than the current base of the ex-Bigmat shed in elevation.

The volume capable of flooding is preserved or slightly increased.

The restaurant is elevated at the 81.00 m level, 1.20 m higher than the towing, so as to protect it from any risk of flooding, even centenary.

The habitable ground floors (level 82.90), raised above the Avenue level from 0.90 m to 1.35 m, pose no risk of flooding.

Underground parking (level 80.16 m to 79.84 m) is located in an area not covered by flood hazard, higher than the towpath (level 79.80), itself 1.30 m above the Meuse level (level 78.50).

In order to protect it from any risk of flooding, the car park consists of a sealed concrete tank, the main access of which is raised in the street side of the wharf and the access to the Meuse side bikes will be protected by watertight doors or splints.

- **Concerning the construction above Houyoux:**

The Houyoux is currently vaulted throughout its crossing of the city to its mouth in the Meuse. As it crosses the site, it is currently dominated by a former hangar of the former Collot establishments.

In order to respond to the previous remark, the Applicant has carried out various surveys and surveys to reproduce the existing situation as best as possible, in plan and section.

The buildings in superstructure do not overhang, voluntarily, the layout of Houyoux and no

work is of course planned in the watercourse itself, since the foundations are deviating from it.

Only the project car park overlooks Houyoux; It is built at a semi-buried level, so as not to alter the existing situation. Above the Houyoux, the current concrete slab will be demolished and replaced, with the agreement of the SPW, by a new concrete slab, horizontal and whose smooth underside will allow a better coefficient of friction, to improve the stream flow in case of flood.

Finally, the recent sanitation work allows the Houyoux to find safe water. Also, the stripping of the creek near its mouth can be considered, for the landscape and environmental interest that it would offer, as to blow up the cork formed by this lower vault. However, this influence of Houyoux at its mouth, as well as the vortex made, remaining property of the SPGE, it would be up to them to achieve this discovery, in agreement with the SPW and the City.

SOLUTIONS

- Soil management

BIODIVERSITY

Biodiversity and natural areas

The green spaces of the project consist on the one hand of the public gardens arranged on the ground floor and on the other hand of the garden in joint ownership, of the private gardens Meuse side of the apartments on the ground floor and, to a lesser extent, plant and tree troughs of the plot, side roads. Together, these spaces represent more than half of the parcel area. For memory,

currently the entire surface is mineralized.

The layout on the Meuse side by the Applicant consists of:

- Public gardens and walking paths, full foot with the towpath.
- gabion walls, at the edge of the public and private right-of-way, surmounted by a hedge, and in which are arranged 2 accesses to the underground car park, reserved exclusively for bicycles and, where appropriate, for the delivery of vehicles nautical;
- A Mosane Agora consisting of terraces and grass;
- an elevated terrace for the restaurant

Note that the public gardens are in the ground, while the condominium and private gardens, as well as the planters are located above the underground car park.

Incidentally, the facades are embellished with plantations and the roofs are green, extensive.

Regardless of the project and its plot and private condominium garden, important public spaces will be well and truly developed by the Applicant, in consultation with the public authorities, in "green spaces, full foot with the towpath, in link with the use of the river and the promenade of the Meuse", so that a significant part of the SAR perimeter will already be converted into green spaces, in addition to mineral public spaces: Ravel on the towpath, forecourt of public buildings, walks, ...

SOLUTIONS

- Other

Company :

ENERGY/CLIMATE

Climate adaptation, resources conservation, GHG emissions

Traditional construction with low energy consumption (low energy objective):

- Structures and load-bearing walls up to the 1st floor in reinforced concrete and masonry in silico-limestone (recyclable and high-performance material in stability and acoustics);
- reinforcement of the thermal insulation (cfr calculation of K attached to PEB file) and performance acoustic glazing (see acoustic study) and the airtightness of the building;
- double flow ventilation in base;
- 8 high efficiency condensing boilers (one per block);
- use of preferably natural and recyclable materials.
- extensive green roofs; partially planted facades; plantations of the surroundings.

BUILDINGS

Buildings

a) built front

"The built front, as expressed in the SAR, must avoid being continuous so as not to isolate the inhabited areas of the Meuse and urbanization projects must therefore provide openings to the Meuse, equivalent to one third of the population. total length of the site. This will be obviously respected:

- by accentuating probably the openings in front of the inhabited districts, mainly plain Saint-Nicolas, where the ground becomes narrower and was little built previously and;
- conversely, by concentrating more buildings in front of office buildings of Ores, old houses, some occupied by Electrabel, where the site of the project is currently built, so that the few inhabitants vis-à-vis visibly can not deplore a loss of view or sunshine.

However, the openings to the right of the project are:

- in addition to the opening constituted by the public right-of-way of the quai street, maintained;
- a new opening of ± 7.60 m wide is created, between the two buildings, above the influence of Houyoux.

This opening extends that more widely offered by:

- the new condominium plot, with a length of ± 36.80 m and a depth of ± 20 m, increasing, vis-à-vis the houses Avenue Albert 1er, the views and sunshine. For the outside population as well, it is preferable to maintain perspectives on the Meuse and the Citadel downstream of the project, on both sides of the roundabout, since at the approach of the project the view is blocked towards the upstream by the Luxembourg railway bridge.

b) Decline

The desire of the SAR to "develop, given their location at the entrance of the City, projects as a whole and taking into account their characteristics, presenting a limited distance from the road" is again respected in the project since the buildings are :

- lined up at the edge of the sidewalk at their last bays, side street of the wharf and terraced houses in left, as well as to the entrance halls of blocks A, B, E, F, G & H; - in hindsight limited to 2.00 m (width of the plant containers) in the other bays; - in greater distance, ± 20 m, to the right of the plot, in order to avoid a continuous building front. However, we find the alignment with respect to the boulevard by the succession of front of public space. On the Meuse side, the much larger decline varies from ± 27 m, for the apartment at the end of Quai street, to ± 67 m, for those of blocks A & B at the end of the garden in co-ownership. Following the acquisition of land SPGE, all buildings have a recoil in accordance with the provisions of the Civil Code in terms of views on neighboring properties, including those adjoining the project on the left.

For architecture, we can add again, with regard to:

c) Façades and materials The facades present:

- an alternation (see above) of vertical and horizontal recesses punctuating the spans;
- a marked verticality of the bays, particularly on the avenue side, whose staggered overlay meets on the one hand the requirements of compartmentalisation RF fire prevention and on the other hand, the will to give a variation of rhythm to the facades;
- the Meuse side, the presence of large terraces increasing the comfort of residents is however tempered by a marked verticality of full piers and smaller bays arranged to new staggered. - The modenature of the bays alternates 3 vertical modules of variable width according to the functions interior and the play of facades. Differentiated materials combine tradition and modernity:
- Insulation plaster and stone foundations are a reminder of the Austrian heritage of the architecture of the City Center; - Wooden cladding, glass railings and plant structures contribute to the renewal of the image of this important entrance to the City.
- The extensive green roof, slightly inclined, has overhangs to avoid overheating due to sunshine, which crowns the volumes with lightness. The combination of these few forms and materials gives the whole an impression of brightness and sobriety, counterbalancing the massiveness of silhouettes such as the CHR, the Orjo or the Cadet School.

d) Acoustics

If the project itself will not cause any noise nuisance, except during the construction, an acoustic study was conducted to protect the residents from the nuisance of the avenue and the railway. According to the conclusions of this study, additional protection (triple glazing) is recommended for the rooms on the avenue and railway side. As for acoustic protection between apartments, it meets the recent standards in this area.

Contest

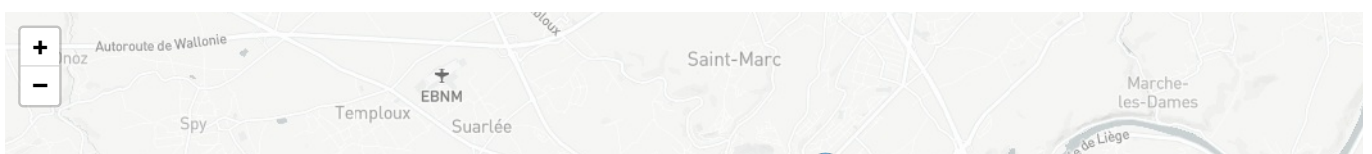
Building candidate in the category



Grand Prix Ville Durable



Coup de Cœur des Internautes





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