

CAEN (FR)

THE JACQUARD SITE : BETWEEN URBAN AND SOCIAL LINKS

INTRODUCTION

The Chemin Vert district is an area with a strong historical legacy. The initial closure of the school followed by the relocation of the associations that had been based there following the scheduled demolition of the buildings, was traumatic for local residents and users.

As a former major hub of community life, the future of the site must respond to a number of challenges: how can the district be given a new lease of life as part of a metropolitan urban renewal scheme? What kind of programming is needed to ensure the continuity of the district's community life, while meeting urban diversity goals? How can we strengthen the Molière commercial hub and open up the district? How can we propose a project that promotes social diversity within the neighborhood?

THE SITE IN THE METROPOLIS

Trame verte, a "green web"

The project site lies at the crossroads of major landscape components: the East-West landscape diagonal, which is being redeveloped as part of the "Authie du Chemin Vert" project, the "Parc de la Colline aux Oiseaux" to the north and the "Coulée verte" in the northern and southern part of the "Chemin", transforming the Rue du Chemin Vert into a landscaped urban boulevard.

The project site is therefore at the interface of several strong landscape lines that need to be articulated through an urban and landscape composition that allows these entities to be linked together and taken advantage of.

Urban network

The main urban arteries in the immediate vicinity of the site are the "Rue du Chemin Vert" to the west and the "Boulevard Périphérique" to the north. Today, the ring road forms a break with the "Parc de la Colline aux Oiseaux". A forward-

looking vision leads us to anticipate a potential evolution and to facilitate the North-South networking of the site, on the one hand to connect the neighboring districts, and on the other hand to guarantee easier connections to the Park in the future.

Rue du Chemin Vert is a major traffic artery linking the district to the city center, and will be the site of the new tramway line, with a scheduled stop at the Molière shopping center. This major urban amenity is a keystone on which the project must rely on for the reconfiguration of the shopping center, its accesses and the entry points to the Jacquard site.

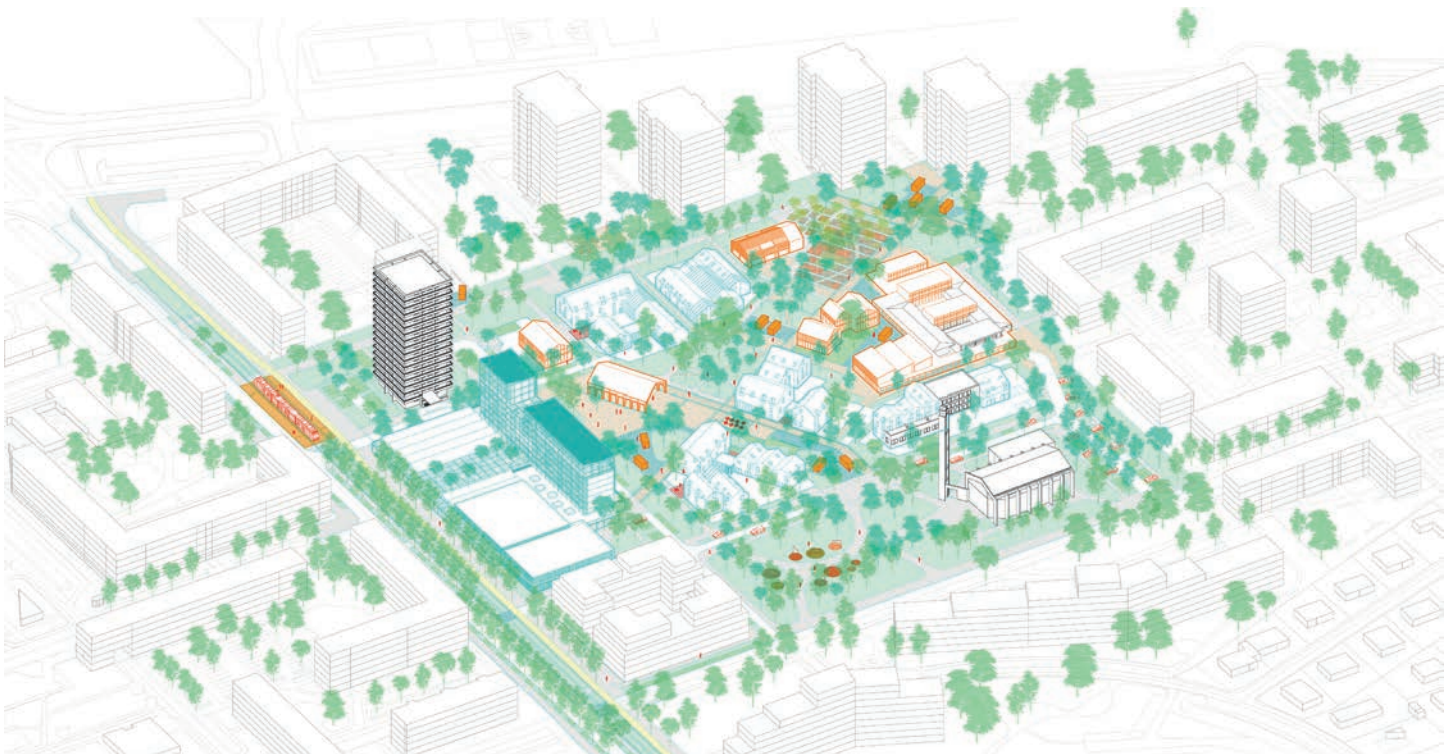
Surrounding web

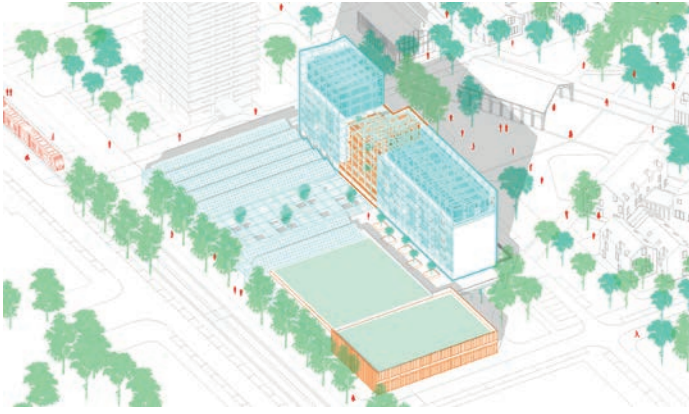
The Jacquard site lies at the heart of an orthogonal urban system, typical of large housing estates, with a predominance of housing, local amenities and a church. The former secondary school, which is currently being demolished, has a range of buildings (R+1, R+2) that contrasts with the surrounding housing estates (Molière tower R+16).

A / SITE CHALLENGES

Today, the project site is marked by the middle school, which occupies a major central position. Destined to disappear, the question arises as to what will become of the school's current site.

Today, the site suffers from being closed in on itself. Despite significant landscaped areas, the surrounding buildings and the lack of legibility of the district's entry points create breaks between the heart of the Jacquard site and its surroundings. Today, the shopping center is characterized by a lack of dynamism, declining footfall and security problems. Its current configuration makes it unattractive and contributes to enclosing the site, notably due to the lack of porosity between the Jacquard site and Rue du Chemin Vert.





Despite the demolition of the school buildings, traces of the site's buildings and vegetation are still present: the Caisse d'Allocation Familiale, local social services, the library, the many major trees, etc.

The project must therefore open up the site, work with the existing buildings to safeguard the plant heritage, add dynamism by configuring the shopping center, and propose an occupation of the former school site in line with the major ambitions set for the area.

B / OUR APPROACH

Urban and landscaping project

When you look around the site, you will see a number of major urban landmarks in terms of height, building typology and programming. These include the 16-storey Molière tower and future tram line station to the north-west, the Molière bar and shopping center to the west and Saint Joseph church to the south-east.

In addition to these built urban landmarks, the site also crosses two major landscape components, as previously mentioned (the East-West green corridor and the future green corridor on rue du Chemin Vert).

The project proposes an urban composition that breaks with the site's orthogonality, linking the identified points of interest via two major axes: one marked by the station, the Molière tower and the church, the other by the two green corridors of rue du Chemin Vert and the East-West Diagonal, the church square and the green spaces of the large housing estates to the south.

This composition, coupled with the east-west breakthrough of the Molière shopping center, places it at the heart of the urban composition. Thus it becomes a pivotal joint articulating these two major axes. A new open hall completes the shopping center and physically marks the intersection of the two main axes. It can accommodate flexible programming and becomes an open living space for the neighborhood.

The new buildings are built around these two main axes, giving rhythm to the route. The proposed urban forms take up the height of the college buildings and local facilities on the site. The aim here is to integrate delicately and sensitively into the built environment, respecting the great views of the site's landmarks (church, Molière tower, residential towers) and perpetuating a built landscape that has long been remembered..

Programming

The project is a mixed-use development combining local amenities, major facilities and a new range of housing units of various types, including senior housing.

In order to strengthen the commercial hub and link it to the city and the district, a commercial facade is proposed to the east, allowing for the restoration of shops

that have been removed to create an east-west breakthrough, and the creation of new retail units.

The housing offer includes not only new construction, but also refurbishments (the socio-cultural center had been converted into housing) and elevations (the Molière bar and the socio-cultural center) that build on the structures of existing buildings. Building on the periphery of the site means that density is kept to a minimum in the heart of the site, leaving a major place for public space and its users.

The new facilities are organized around the elevation and extension of the neighborhood life center. The project includes a day care center, the reinstatement of the library, an intergenerational home linked to the intergenerational housing, a temporary exhibition space for local artists, and a solidarity restaurant opposite the new open hall. In the north-east, an agricultural community facility is proposed, to promote local consumption, create social links by pooling resources and knowledge, and create a major focal point opening up the site to the surrounding neighborhoods.

A silo parking lot will be set up in the continuity of the existing "Carrefour City" commercial box, to meet the parking needs of new developments in the area (in addition to the residential parking lots on the built-up blocks).

Public space programming :

Current public spaces around the site are struggling to bring the neighborhood to life. Although very generous, most of them are unqualified and do not allow residents to make them their own. The two major axes are accompanied by a significant amount of public space, which reinforces the green character of the site. Programmatic sequences are proposed to mark out the use of the site around the two axes.

The main square is designed around the new open-air market hall and the Molière shopping center, and is deliberately kept free of elements guiding its use: the idea here is to be able to host a variety of events (the market on the Jacquard site, a stage for the "Fête de la Musique", a show, etc..).

An undergrowth area is proposed, in keeping with the existing landscape composition and reinforcing the existing landscape island.

The area around the agricultural hall includes vegetable gardens and a community orchard, providing urban spaces for social exchange and short supply chains.

Given the site's history, the project proposes to include an artistic dimension in the programming. Spaces dedicated to art are arranged along the axes and accompany the sequences of public space. These take the form of re-used shipping containers (the port of Ouistreham is located 20 km to the north-east). These containers are reworked and used to accommodate artists on a temporary basis, in conjunction with the association Le Cadran. Artistic expression spaces are also provided on the buildings, offering mural frescoes that punctuate the urban space.

Public spaces :

The major axes are treated as major mineral guidelines, guided by thick borders that organize the division of the urban space. Landscaped or mineral spaces are grafted around these axes.

The project is designed to allow flexibility in the design of the public space. Programmatic strips (plazas, artistic plazas, etc.) and landscaped areas (undergrowth, cultivated areas, landscaped valleys, etc.) grafted onto the axes can become planted spaces and vice versa.

Water management is a major issue in the development of our neighborhoods. The permeability of the site is maximized, by proposing permeable pavements wherever possible, by maximizing planted surfaces to encourage absorption by soil and plants, and thanks to an integrated stormwater management system

that is an integral part of the project design. The project's main arterial roads take advantage of the site's slope to allow overhead rainwater management, and are profiled to channel water to the nearest green spaces. Overhead rainwater management throughout the site will also actively reduce heat island effects.

Architectural project

The architectural project developed revolves around key concepts for new housing. The aim is to offer intergenerational housing that encourages interaction between seniors and the rest of the population (students, family units with multiple profiles, people in precarious situations, etc.). To achieve this, senior housing is distributed across all the housing lots on the site. Common spaces are provided within each lot. The aim is to offer both functional common spaces (laundry, storage) and social spaces (gardens, relaxation areas, etc.). These outdoor garden spaces take the form of bioclimatic greenhouses, providing efficient ventilation for the through-housing units and ensuring optimum thermal comfort (natural ventilation by thermal draught).

Spaces at the interface between public and private are arranged within the lots, and can be either open or closed. They correspond to an identified desire to offer places for senior citizens that are directly linked to the urban space and active life of the neighborhood, encouraging social interaction.

The Molière bar and shopping center have been completely refurbished. The breakthrough in the first floor reorganizes the shopping center. A building bay was eliminated on the ground floor and throughout the height of the bar. On the first floor, this bay becomes a covered public space in connection with the reorganized shops. On the upper floors, this breakthrough becomes a structuring landmark in the new district. It highlights the entrance to the Molière hall and continuity with the site's urban and landscaped spaces. We are proposing a program of vertical public spaces and sports facilities on the scale of both the city of Caen and the Chemin Vert district. This vertical programming creates an urban landmark on a city-wide scale, and enables the district to respond to the site's prominent southern landmarks: the Molière Tower, the bell tower of Saint Joseph's Church and the North Towers.

The roof of the Molière hall has been renovated and fitted with a shed roof. Unlike the existing roof, the shed roof brings light into the shops while enhancing thermal insulation. It allows natural ventilation of the retail units, and enhanced thermal comfort. The new roof also offers the possibility of installing photovoltaic panels. The shopping center's flat roofs are planted to take advantage of the natural inertia of the substrate (earth) and the roof's water retention capacity.

Aware that the future of housing production must not focus solely on the construction of new dwellings, we are proposing here to work on existing

buildings and their potential for rehabilitation and extension/upgrading. In this way, the dwellings removed by this opening in the bar are restored by means of two- and three-storey elevations. These elevations take up the bay pattern of the existing building, which has been partially preserved, and reinterpret the original façade. The grafting and heightening are organized around the preserved vertical service elements. The elevation is made possible by the installation of a secondary wooden structure supported by the existing building.

The housing offer is completed by a graft of studio flats on the facade. These take advantage of residual space on the landings to increase the total surface area and number of apartments.

All the external dividing walls have a new thermal envelope (bio-sourced insulation on a wood frame).

Renovation of the bar led to a new internal division of the apartments to make them accessible to people with reduced mobility. This redistribution work makes it possible to offer T3 and T4 through-housing units.

Each bay has a vacant unit that will be rented and managed by the co-ownership. Rental income will be used to maintain the building and contribute to the management of the communal areas (balconies, plantations, vegetable gardens, etc.)

The balconies of the existing building have also been modified to increase the outdoor surface area. Each unit will have two balconies. Deeper than the existing balconies, they allow for greater user appropriation: outdoor living, sports, meals, planting (each dwelling has its own growing space thanks to the treatment of the planted railings).

C / THE PLACE OF THE RE-SOURCE IN THE PROJECT

In France, the construction sector accounts for 43% of annual energy consumption and generates 23% of greenhouse gas emissions. Despite energy-saving policies, the sector's consumption has increased by 20% in 30 years. Its impact on our environment is therefore considerable. In this context of climate crisis, it is our duty to stop using materials that are at the root of the catastrophe wrought by the world of builders.

"We are borrowing ecological capital from future generations, knowing full well that we will never be able to pay it back" - René Dumont

Building for global warming is no longer an option, but an imperative. As such, our bioclimatic design approach embraces and supports the challenges of Environmental Construction Quality and Energy Performance, and sheds specific light on the urban and architectural design of the future district.



Preserving resources: frugal project design:

Like a palimpsest perpetually rewriting itself, the project proposes to conserve, rehabilitate and enhance its urban and landscape heritage. As far as possible, the development project for the Jacquart site preserves existing trees, and rehabilitates and elevates existing buildings that are compatible with the urban composition in order to increase density at the edges of the site. Certain elements of the project are also part of this resource-saving approach: overhead rainwater management throughout the site, the use of local bio- and geo-sourced materials and the re-use of old containers as exhibition spaces.

This frugal approach is also reflected in the design of the homes: bioclimatic greenhouses, refurbishment of the homes in the Molière bar to make them walk-through, installation of renewable energy production systems, green roofs, etc. Each building will be required to have a system for capturing and storing rainwater (roof water collection). This water will be used to maintain planted areas, water crops or for domestic purposes (WC, washing machine, etc.).

The use of bio-sourced materials for new buildings, renovations and extensions makes the project part of a sustainable development approach to development and construction. The design choices made favour renewable energies, low grey energy consumption and low consumption of exhaustible raw materials (use of wood, bio-sourced insulation). The project promotes the local and circular economy, in order to reduce environmental impact and limit and control energy costs.

As part of the urban project, we are proposing a methodology that includes the prescription and characterisation of materials. The approach consists of defining the potential for reusing local materials (earth, straw, hemp) and the resources available in the area, and enables the right foundations to be laid at the earliest stages to initiate a relevant bioclimatic approach. In this way, the various projects can be designed to take into account the issues of adapting to climate change, in particular summer comfort and water management, health and biodiversity, through a coherent choice of materials.

New homes are organised in such a way that they can be upgraded, in particular by creating communal areas that can be changed, or by systematically using wooden post-and-beam construction systems that allow homes and premises to be upgraded. By opting for these constructive solutions for the covered outdoor spaces, the projects can be easily counted to facilitate the evolution of the plots

(densification, changes to the layout, new programming).

The programming of buildings and public spaces also encourages local consumption by setting up a local food production system based on solidarity.

Lifestyles and inclusivity: creating social links

The project will provide spaces conducive to social interaction, both in the public space and within the private plots. The intergenerational dimension of the homes, with their communal spaces and links to the public space, reinforces the inclusive nature of the project. The building programme is also a lever for promoting "living together" in the neighbourhood: local services but also programs that encourage social interaction (community bar/restaurant, daycare, exhibitions, etc.).

The flexibility of the public spaces makes it possible to accommodate a transitional approach to urban space, as well as being part of a citizen consultation process. Aware of the involvement of local residents and their attachment to the district, we are proposing to set up an iterative co-design process to shape the living spaces by listening to and interacting with the memories and experiences of former and future residents.

The urban project will be phased to allow the site to be used on a temporary basis. We are proposing to renovate and raise the height of the Molière hall, then build the new hall and associated public spaces, so that dynamics can be created on the site right from the start of the project. These first installations could be the setting for a neighbourhood life to be built up (market, festivals, meetings, public gatherings, etc.).

The artistic approach is also part of a desire to create social links based on local knowledge, and to restore the historical artistic dimension of the redeveloped area: it restores to local residents a part of the cultural appropriation of the site previously achieved, and creates the conditions for a dynamic exchange with local associations.

