

URBAN GROWTH WITHOUT SPRAWL: FOUR EXAMPLES IN THE GENEVESE REGION

Densification in urban Geneva: issues and examples

In his new master plan adopted in 2001 and validated by the confederation in 2003, the canton of Geneva has included the development of its territory for the next fifteen years, with a view to agglomeration and sustainable development. Likewise, the policy of settlements from the confederation insists on the need to curb urban sprawl by the densification of city centres and densification modulated peripheral areas.

These two approaches based revising the master plan of the municipal city of Geneva, the centre of the canton and the city and home to major infrastructure, job centres, recreation centres and cultural areas of habitats the most important territory. Geneva remains the town's most attractive and most dense in terms of housing, employment and transport.

In order to better control the negative effects (pollution, traffic, land speculation and real estate etc.). This density on its territory and at the same time exploit the advantages it can offer (economic development, multiculturalism etc.) That the density and urban densification plays an important role in revising its master plan communal whose main objective is to "reinvent the city."

1) Issues of urban densification

The state of urban density and its evolution is an important element in the policy thinking of urban planning. The density urban arose with a new urgency in 70 years, and this in a context of a declining population centers of European cities to the suburbs. But over the past 90 years, it seems that we are witnessing a phenomenon of redensification centres and a deceleration of urban sprawl.

The debate on the density is still valid, especially in cities where very dynamic pose significant problems of housing. In addition to a dense city is seen as more favourable to public transport and can reduce the nuisance to automobile use. There is also a concern to preserve natural areas.

1.1 What does urban density mean?

The urban density is a process leading to sound management of urban space by concentrating housing, jobs and transport in an area as limited as possible while respecting the quality of management of these spaces. The aim is to meet the development needs of the city to avoid urban sprawl that increases the pressure on natural areas and which makes city management, because of the long distances induced more complicated and more expensive.

1.2 Which forms (unipolar-polycentric-linear)?

What forms of urban densification envisaged should it take to combine quality and rationality?

In a city like Geneva facing the small and the saturation of its space, the densification of the city is as much a necessity that a difficulty in its implementation. So a unipolar densification would not only make significant gains in housing but would increase the resistance and opposition as an argument with the densification is not distributed in a balanced manner on the territory.

A linear density in the city of Geneva seems possible but not effective in relation to the aim

pursued. Densification according to the streets or major focus will not necessarily enhance all areas densifiables throughout the territory.
As the polycentric densification, it appears to us as the wisest and most able to converge the views and interests.

First, it allows departing on a more or less balanced new housing in the territory already urbanized. Second, it helps develop urban polarities secondary side of downtown Geneva narrowing and hypertrophy of the centre. Finally, it can create much more rewarding housing areas which are best suited while promoting their integration into the existing urban fabric. This implies densification polycentric prior to the census of all sectors likely to be densified. This is what a little meadows the project currently under elevated buildings. However, the draft densification must demonstrate that it will not be followed by a rise in rents for people in places in density and that it plans to set up the necessary equipment nearby.

2) Perceptions on the urban densification

2.1 Is densification an anti-urban act or not?

The density urban raises various perceptions on the part of urban actors. According to urban planning of the State and the City of Geneva, it represents a boon in the fight against excessive consumption Space cities. It promotes, in their view, the rational management of urban space in contexts of small and dense cities like Geneva. It will preserve spaces and natural greens in the peripheries of cities needed to preserve the quality of life and well being in a city. It avoids the concreting progressive. Similarly, it does not necessarily mean the establishment of huge towers that bear shadows or creating gashes cutting sight in the territory.

For associations against concreting in the city, the urban densification destroyed the charm of a city and contributes to lower its quality of life. In raising buildings and reducing the empty spaces in the city, densification contributes, according to them, to develop enclosed spaces in the city, instead promote friendly urban away a little more urban dwellers from each other.

2.2 Does density allow to reinvent the city?

Cities today symbolize the economic vitality of a country. The more the economy of a country believes, the more these cities continue to spread. A city like Geneva is rich, attractive and competitive. Hence, despite the expensive cost of living, it welcomes every year thousands of people qualified or not to pursue its economic performance. Since 2000, the canton of Geneva hosts an average of 5000 people per year and only half in 2005 or 2500.

On the other hand, the annual production of housing in the township is 1600 in a context where space cantonal but especially communal no longer offers many opportunities to build. In this respect, the issue of urban density in Geneva has its importance and its relevance as a means to reinvent the city, a way of combining economic growth and urban growth, a way to rationalize consumption of space Urban.

3) The consequences of urban densification

Which are the consequences of densification on the space plan?

The urban densification involves a number of consequences for the space plan: reducing gaps in the city and / or raising the height of buildings. According to the authorities of the city of Geneva, the idea is not to make an American city with skyscraper cleaning but make sure to concentrate housing and jobs in buildings with a height reasonable in seeking to avoid wasting space unnecessary and costly in terms of management.

3.1 On the political level

Given the difficulty and oppositions that can create urban density in Geneva, a strong political consensus at the elected officials of the city exist to bring the draft densification. In terms of political actors, for the left, urban densification can meet part of the social housing needs while the right is an opportunity to invigorate the market for construction sclerosis by the housing crisis.

3.2 On the economic front

In economic terms, two consequences are noteworthy. First, the costs of densification are high in terms of investments. Who will pay and how the apportionment will be done between stakeholders? Secondly, the density may result in an increase in rents likely to exclude access to categories of the population with low incomes. How to enable them to take on such rents?

3.3 In terms of transport

In the territories of the automobile, the density increases the need for parking place. Even if it can reduce the tilting movement, it does not, however, needs to travel in the city centre. That is why the establishment of public transport is an indispensable accompaniment to discourage car use and to fight against noise pollution.

3.4 On the environmental front

The urban densification results in reduced pressure on natural areas and agricultural areas. From this point of view, it is a way to preserve the urban ecology maintaining green lungs around the city. It is also a way of reducing urban pollution.

3.5 On the cultural front

The urban density, instead of creating habitat dispersed, helps develop the mix. It can break down the social boundaries of a city, reinforcing its cultural vitality by the cohabitation of different social classes.

3.6 Facilities nearby

They are assumed to be an important aspect of the densification especially in relation to the quality of life that involves increasing the capacity of schools or increasing their numbers. The same is true for nurseries, parking places and especially greenspace.

4) Examples of “without sprawling” densification in Geneva: the site of Artamis, the tip of the junction, the “Golden Rectangle” and the “Etoile-Annemasse”

delay of entrainant surcoups on construction budgets. Apart from the villas or availability of space exist, but where the construction of types of housing is virtually impossible, the only space available to the city of Geneva are Artamis, the tip of the junction and the sector Vernets and acacias. A further difficulty is in addition to the unavailability of terrains, namely the cost of remediation of polluted sites such qu'Artamis. After the demolition of warehouses on the spot and given the level of pollution very advanced on the spot, the costs of pollution amounted to over 25 million Swiss francs. Who will pay these costs? How these costs will they be allocated among the various players? The former occupants of the site will contribute to these charges? Prospective tenants they bear a portion of these charges? These are all issues that come into play in the development space of the site and the sharing of responsibilities between different public and private actors involved?

4.1.2 Economic and Social issues

Beyond the spatial and architectural value of the site, densification site Artamis highlights economic issues of great importance for the attractiveness and economy of both the city and the canton of Geneva. In general terms, first, Geneva is home to clusters of jobs in services, industrial zones and several international operations that need people competent and qualified workforce where a substantial need for housing to accommodate new people when the housing crisis continues to worsen. Secondly, housing construction and reclamation of wasteland unused or under-utilized is an incentive sent some companies to stay within the town at a time when other cities and municipalities on the fringes of space manoeuvres broader trying to attract companies on their territory. At the local level, recovery space sites leads to economic recovery ward and local shops nearby. New environments are born and are more consistent with the experiences and expectations among locals. These new environments are related to dating and the types of activities of the newcomers know their passage in nurseries, schools, shops, bars and restaurants, green spaces and play areas for children.... These new activities, dating and moods can create small domestic jobs and / or services to the person and thus contribute to vitality of neighbourhoods or sites concerned.

4.1.3 Environmental Issues

An environmental issues the most visible of the density urban sites Artamis and the edge of the junction is the economy of space. The density helps prevent urban sprawl horizontally thereby reducing pressure on green areas, agricultural and ornithological. But the most important issue is the concept ecological and sustainable approach that landscape which is implemented in these two projects. The draft Artamis which is only the beginning, is entirely based on the principle of "ecoquartier" banning the use of car and car parks, a very judicious use of energy and a strong verdoyance site.

As the project from the point of junction which is much more advanced since it has been a contest, the choice of design jury selected based on the following highlights:

A coherent response and relevant to the densification of the tip of the junction that safeguard the natural qualities and landscape.

A thorough understanding of this enigmatic and poetic place vested in the community. A gradual integration of buildings, landside to greenspace side of the river with exceptional public facilities. A great potential homes for a mix of functions, housing for public facilities.

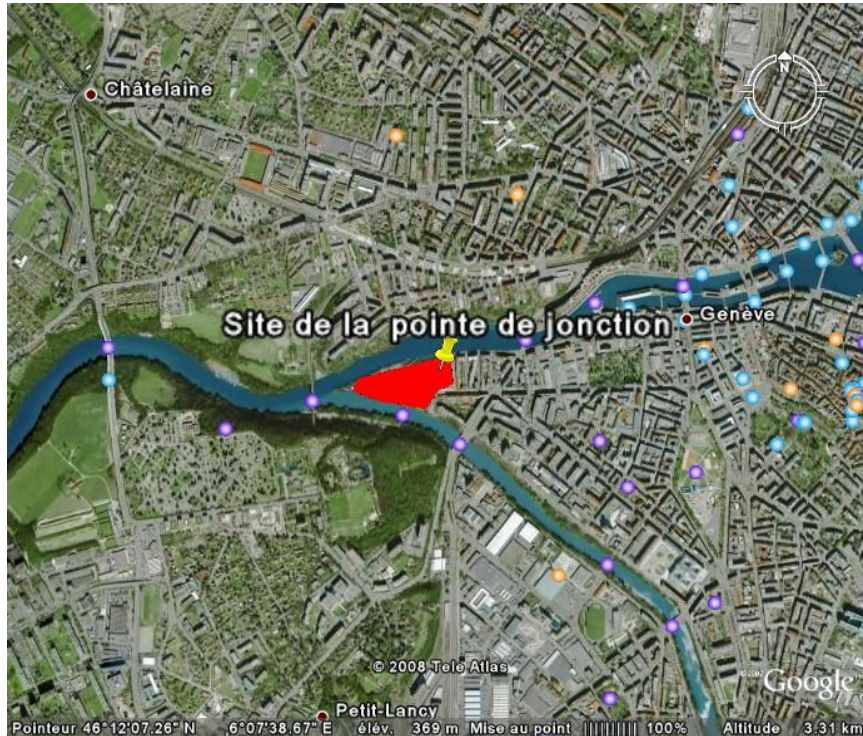
Photographs of Artamis:



"This project has imposed the jury as one who provides the answer most consistent and SALL relevant to the question of how content to the edge of Junction while preserving and strengthening its natural qualities and landscape undeniable. The sponsors have fully understood the specifics of this place. Located opposite the bay of Geneva, surrounded by cliffs on the convergence of two rivers, this parcel of Geneva should both strengthen its public role, vested in the community and preserve a certain mystery and a sort of "rude poetry" that gives the close proximity of the two rivers mingling their waters in a ballet constantly renewed. The gradual dissolution of buildings to the point of junction of rivers to suggest a new major public space while preserving large green parcels. The unit is provided by a frame orthogonal extending the urban fabric and implements a series of public spaces, semi-public and private. This continuity with the existing system is also respected in the choice of "building a court", whose various sizes and locations offer great potential for office, housing for public facilities. The axis of liaison with the roundabout of the junction leading to a central place that punctuate the historic buildings - the workshops Kugler and the building of TPG - and a new public building exceptional. The implementation of these programmes and representative dialogue with existing buildings preserved are able to boost the urban dimension of the place while ensuring a diversity of appropriations and usages ".

Speech of the State Council of Geneva, at the proclamation of contest's results, February 7th, 2008

4.2 *Pointe of the Junction*



Source: Google Earth Image

The site of the tip of the junction lies on a triangular-shaped perimeter of about six hectares, located between the Rhone in the north and south Arve, divided into two sectors:

On one is a property of the State of Geneva, limited to the east by the rue de la Truite, much of which is located in zone of greenery. On this field are located an installation of Industrial Services of Geneva, the building of the Canoe Club and a former serving as a cover for filing Geneva public transportation (TPG), two thirds into a zone of greenery and third in construction zone, Near the factory Kugler.

Two parcels form the second sector, with the former administrative building of the Geneva Company trams and electrical installations latest TPG.

The banks and walking near the Arve and the Rhone are also part of the perimeter.

Photographs of the “Pointe de la Jonction”



4.3 The region Geneva-Gex (The Golden Rectangle) **A territory-border with exceptional assets**

The project of the Golden Rectangle is intended to be a pole of economic development and urban anchored on Geneva International Airport and International Institutions located in the districts of the Place des Nations.

This airport inserted into the urban fabric, has a number of advantages:

- *Near the centre*: the airport is located just five kilometers from downtown, near rare for this type of equipment, a region characterized by low density in the North, French side, and occupied areas Activity in the South.
- *Accessibility*: This location is also a good accessibility to the metropolitan scale, with travel time very short: only seven minutes to reach the centre by train.
- *Intermodality*: accessibility is enhanced by the importance of intermodal hub at the airport:
 - . by the diversity of means of transportation-buses, trains, cars,
 - . by the national and international infrastructure: motorway to France and the rest of the country, station-important over one hundred and fifty trains per day.

The project is part of a process of territorial development on a wider geographic area incorporating the Pays de Gex and the north-west of the Canton of Geneva. This project involves both common French-Prévessin-Moëns, Ferney-Voltaire, Ornex and Saint-Genis-Pouilly-Swiss-Vernier, Meyrin Grand-Saconnex, Bellevue. It is the largest cross-border development project in Europe at the moment.

The Golden Rectangle



Source: Google Earth Image

The project of the Golden Rectangle is one of ten projects border defined in the Charter of

Planning Greater Franco-valdo-Geneva. By virtue of the Regional Committee Franco-Genevois between 1992 and 1997, these projects aim to create a better distribution of activities and employments within the metropolitan area Franco-valdo Geneva-notably by developing new areas of activity.

The identification by the Charter of the sector as a major hub of economic development was followed up by the Master Plan canton of Geneva-approved by the Grand Council on November 21, 2002 and the Confederation March 14, 2003 -- and the Master Plan du Pays de Gex.

In 1999, the influence of the project was expanded to a larger scope, so as to integrate CERN, the neighbourhood sector to the International Organizations and the general topography of the landscape of the foot of the Jura. This project should boost the entire border region concerned and generate several thousand jobs, and the arrival of about 40,000 inhabitants in the region.

The objectives of the Golden Rectangle are four:

- The development of business aviation,
- The development of high technology related to technology transfers CERN,
- Boosting hosting international economic activity, places of exchange, housing and services for foreign space Franco-Geneva,
- Enhancing the attractiveness of the territory: the creation of natural areas, utilities.

The measures adopted to meet the economic needs of the region and to the needs of residents, are as follows:

- The creation of a zone of cross-border activity,
- The creation of a new terminal for civil aviation,
- The definition of a service road to landscape character,
- Bringing green areas around the airport area,
- Setting up a network of cross-border transport,
- The restructuring and retraining of the urban area surrounding the airport on territory Geneva.

In light of these considerations, the Golden Rectangle project aims to:

- improve regional integration while maintaining its status as an international metropolis. Geneva airport is the linchpin of the project. New jobs must be created in the vicinity of the airport, particularly in the areas of services, high technology and environmental quality,
- think again about the whole site as a development centre designed both sides of the airport and the border. It behaves in a part redesigning the existing Swiss sector and, secondly, the creation of a new line of activities in Pays de Gex.

In this connection, on the pole "Geneva - Pays de Gex," the occupation of territory is very mixed, with very dense constructions Swiss side, very sparse side France.

This contrast, five kilometers from downtown Geneva, is due to the double barrier of the border and four kilometers from the runway of the airport, which has always functioned as a dam containing the expansion 'normal' l'Agglomération.

Swiss side, the buildings are massed along the airport in a very tight fabric aggregating highway, rail, car parks and buildings. French side, human occupation is confined to a peri-urban low-density, punctuated by the old village and alternating with broad surfaces of farmland and forests.

Between Geneva and its airport, many companies are located, the vast Palexpo hall there is leaning. Today, there is almost over possibility of implementing this side, in the face on the french territory, hectares remain virgins, as difficult to urbanise, because of their proximity to

the runway. This territory, very active, thus multiple failures due to lack of homogeneity of facilities and traffic problems and transportation arising. It is also saturated and no longer significant adjustments.

To the west of the airport, on the other hand, the common French-Prévessin Moëns and Ferney-Voltaire in the Pays de Gex offer better availability of land, allowing the establishment of new activities.

The project also foresees the establishment of cross-border transport including the creation of new services and road transport, and the design of a landscape park on both sides of the airport, in order to preserve sites of the surroundings.

4.4 L'Etoile Annemasse-Geneva

This is another cross-border project included in the "Charter for Development of the Greater Franco-Valdo-Geneva, located east of Geneva.

This urban project, which takes place around the station Annemasse, a sector crucial to a polycentric development of the metropolitan area Franco-optimized organization in Geneva, is defined by:

- An area of 30-35 hectares, currently representing about 120,000 inhabitants, which will locate housing, shops, equipment, a business serving the metropolitan area Franco-valdo-Geneva
- A centre of exchange between intermodal trains, buses, cars, cars, bicycles, pedestrians.

The Etoile-Annemasse



Source: Google Earth Image

It should be noted that the urban project builds on the realization of "CEVA", an acronym for "Cornavin-Eaux-Vives-Annemasse," the missing link between railways and French Swiss, which will contribute to the development of a new pole attractive within a dense urban area. Clearly, it creates a new railway infrastructure between the Praille and Eaux-Vives. The perimeter located around the station Annemasse offers opportunities that allow land to

consider a major urban operation: indeed, this area contains spaces likely reusable, as the area formerly used by the filing and maintenance locomotives.

In terms of mobility, the main objectives of the Community of Communes of Annemasse and surroundings are as follows:

- The integration of the "Pole Station" in the service patterns of Annemasse and surroundings by urban transport,
- The development of trans-extension of transmission lines on public land-Geneva.

Three French communities are affected by the project:

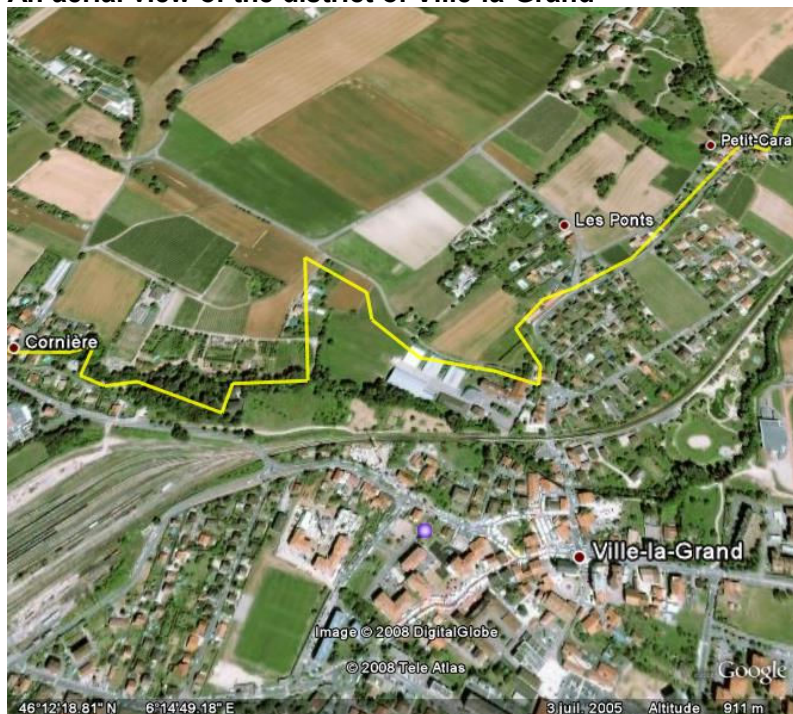
-Annemasse: the purposes are:

- 1) treat the "rue de la Gare" as the main spine of the extension of the centre. It is planned to conduct an extension of the tramway by this route. The development of this street, by creating a true urban landscape and structure of future facades facilitate commercial distribution on the ground floor,
- 2) set up the "peri-centric," by defining a new road-type "urban boulevard" to circumvent the hyper-centre and irrigate the site of the station.

-Ville-la-Grand:

- 1) study a road accessibility North East linked to the project, and provided for in its Plan Local d'Urbanisme, complemented by structural consecutive at the border Angles, a component of the project,
- 2) study a continuity of routes between "station" and "centre", but also a possibility of more parking deterrent to the East, with an extension of the railway line Geneva-Annemasse.

An aerial view of the district of Ville-la-Grand



Source: Google Earth Image

-Ambilly:

1) aim at an enhancement of the quality of life with the facilities necessary for the continuity of CEVA on French territory, seeking the environmental qualities of sustainable development, 2) establish liaison with Switzerland (customs Mon-Idea) to promote the passage of a transit system that should facilitate the functioning of a station accessible from all sides.

An areal view from Ambilly



Source: Google Earth Image

The first phase of the Etoile-Annemasse resulting in the development of the BIA (Zone Planning Concerté) of the Etoile South-West, in progress:
34'000 square meters of offices and housing are built on land between Avenue Emile-Zola and the track.

On this linear plot of more than three hundred metres will be located six to eight buildings designed primarily to accommodate tertiary activities.

They are designed to give rhythm to the built landscape: five to six floors, escaped from sight and sun, as well as passages in line with the sector already built south of this track.

Small squares and various open spaces punctuate the urban ambience, with the aim of environmental quality. Two "green roof" and a landscaped area of 3,000 square meters offer breathing space to all.

Multiple services to the entire south-east of the town Franco-Valdo-Geneva will be developed: hotel, shops, offices. Thanks to the host of NGOs and associations working for international solidarity, the City of Solidarity could find his place. 24,000 square meters are expected in this sector be reserved for service activities and administration.

The project of “City of Solidarity” with essentially NGO’s



Source: <http://www.ghs74.ch>

The Area Planning Concerté also extends to the other side of the avenue Emile-Zola. With an area of approximately 10,000 square meters, the sector will be reserved for the construction of residential areas. Of the old factories still to be demolished, a hundred homes will be built around a square of 2,000 square meters and a lot of ground.