



REINACH, BASELLAND
Single family house suburbia





1. Cantonal Route 18



5. Attached Family Houses



2. Core Zone

6. Single Family Houses



3. Shopping



7. Rebberg



4. Living



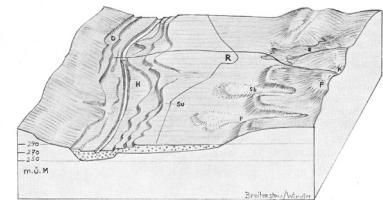
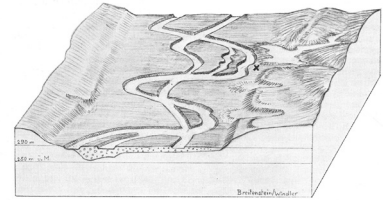
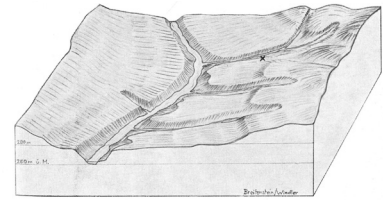
8. Panoramic View

The Birs

The Birs is an inflow river of the Rhein, arriving from the south. Its source is at the Col de Pierre Petrus in the Jura Massive. It crosses the cantons Bern, Solothurn and Baselland. On the one hand it is responsible for the topographic shape of the natural landscape and on the other hand it has acted as the main driving force for the development of infrastructure along its course.

The alternating increase and decrease of volume and catchment area, originating in the extreme climatic changes over thousands of years, led to erosions and sedimentations. As in the warming epochs the melting glaciers released material, the valleys on the contrary gained more and more height. A more differentiated and more sensitive terraced relief the result of these activities. The river itself constantly deepened its riverbed into the ground until it reached the more firm and rocky subsoil, what then eventually determined and limited the rivers flow and its spread. This more permanent condition could attract first settlers and the remaining net-veined like river arms kept the land fertile together with other small streams.

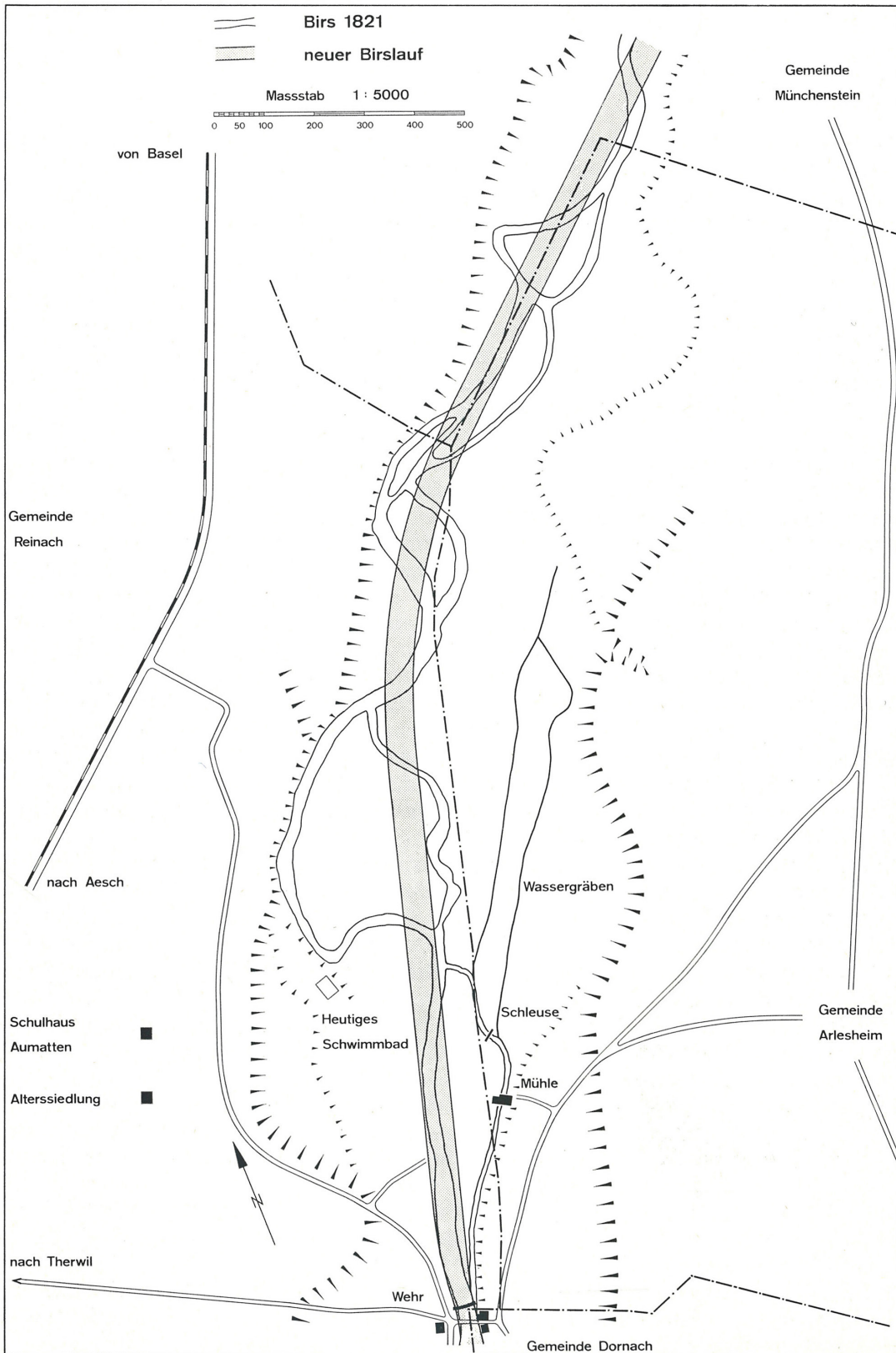
Although the river was not navigable, it has formed together with the former roman path "Pierre Pertuis" an important and protected transport axis of the Roman Empire. It was excessively used for wood shipping, fishing and in order to run mills, forgeries and glassworks. In the 19th century, after a successful correction of the riverbed the previously frequent floodings could be stopped and with the train connection Basel- Biel the industrial development was stimulated even more.



Topographic Development related to the Birs since the last glacial epoch (150 000 B.C.)
(Reinach BL, Hans Windler, 1975)



Birs today (pixelwelten.ch)
F. Lodewig, 1956



Correction of the Birs (Reinach BL, Hans Windler, 1975)
 F. Lodewig, 1956

Reinach

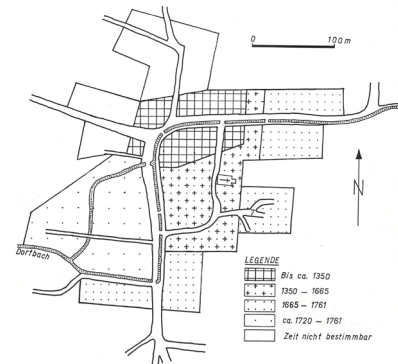
Reinach experienced a series of ownership changes in the course of its history. In 1239 it was bought by the Birseck's lordship, however pawn in the period 1373- 1435 to the family Ramstein. In 1522 it became part of the prince-bishopric of Basel. The old chapel in the village center was inaugurated as the new parochial church. In 1631 the village obtained independence but remained under the spiritual supervision of the bishop. Unfortunately Reinach's early development was stopped due to the 30-year-old war (1618-1648), which left the commune devastated and nearly unable to recover. In 1724 a new salt deposit was built on its terrain and helped Reinach to develop further.

For a better transportation the commune on the one hand moved the old connection route Reinach-Basel eastwards on drier land, because the "Dorfbach" was likely to flood nearby terrains and endanger the traffic's flow. On the other hand a west-east connection (to Birsigal) was constructed and Reinach became an relatively important controlling point.

During the French Revolution it was occupied by the French Empire, however after the Congress of Vienna returned back to the authorities of Basel. In 1833 after the assassination of an important citizen Reinach decided to split from Basel City and to join the newly declared canton of Baselland.

In the 19th century the agriculture was modernized, but further industrialization developed very slowly, mostly as a consequence of the missing train connection despite great efforts to include Reinach into the network.

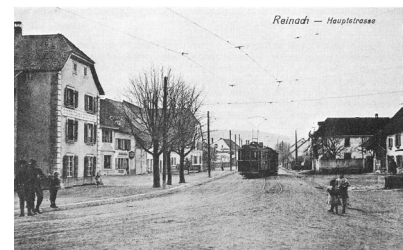
In 1907, as a compensating solution, a tram connection from Basel to Aesch, passing through Reinach was built, and it has resulted in enormous growth. New quarters emerged which attracted new occupants like investors and companies. New branches were founded and working places created. But still the vicinity to the city of Basel was of most important value. Many people took the possibility to live in a green and more friendly space outside the city, and commuted for work to the center of Basel. Statistics from 1941 considered 53 per cent of the population to be commuting, in 1970 even 67%. Today 40% of the population of Reinach are commuting out of commune.



Phases of early development
(Reinach BL, Hans Windler, 1975)
F. Lodewig, 1956



Reinach 1761, Plan
(Reinach, Ein Halbes Jahrhundert Baugeschichte, Claudia Fetzer, 2007)
F. Lodewig, 1956



Reinach 1910, Tram Line
(Reinach BL, Hans Windler, 1975)

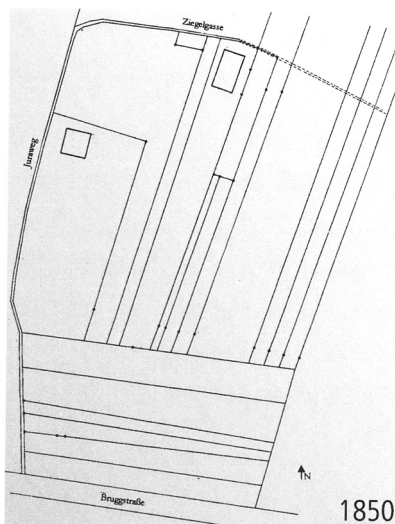
Rebberg: Single Family Housing

Rebberg is the neighborhood in Reinach along the slope of the "Mossholz". It is known for its very sunny location and the perfect view over the Birstal. Until the mid 20th century it was used solely as agricultural land and most importantly for wine-cultivation. Because of the "phylloxera," the vine-pest, most of the stocks were destroyed at the beginning of the century, and only partly rebuilt through federal help. The official land development plan of 1941 added then the Rebberg step by step to the housing zone, thus reducing its agricultural zone. A paradise for potential single family house builders developed.

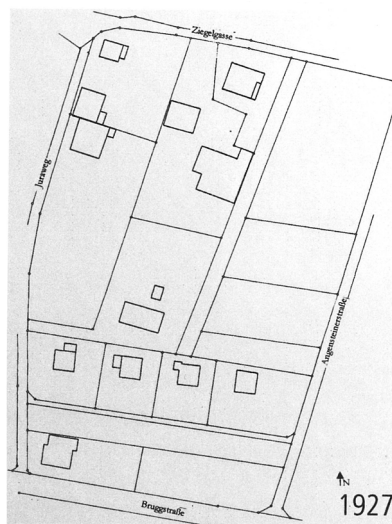


Rebberg, wine-cultivation

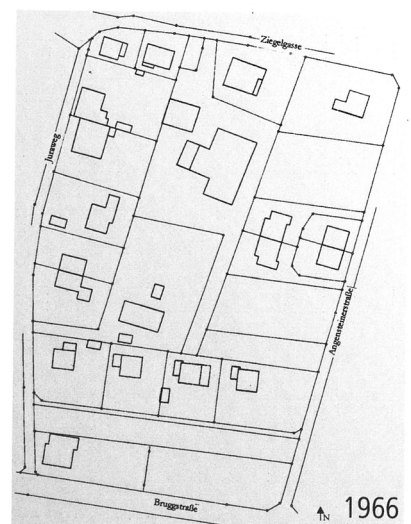
This history and structure is clearly in contrast to other famous single family housing developments around the world. The characteristics of Reinach are for sure the step by step adjustments instead of an ideological large-scale plan with determined and specific parameters. This results in a more organic and natural development, but seems very random too. Also this very close situation of living and agriculture was specific for Reinach earlier in time. Valuable rural land has had to give way to housing and industrial zones. Other concepts of single family housing like Levittown or London Garden Suburb had from the beginning on a more radical structure, based on a masterplan.



1850



1927

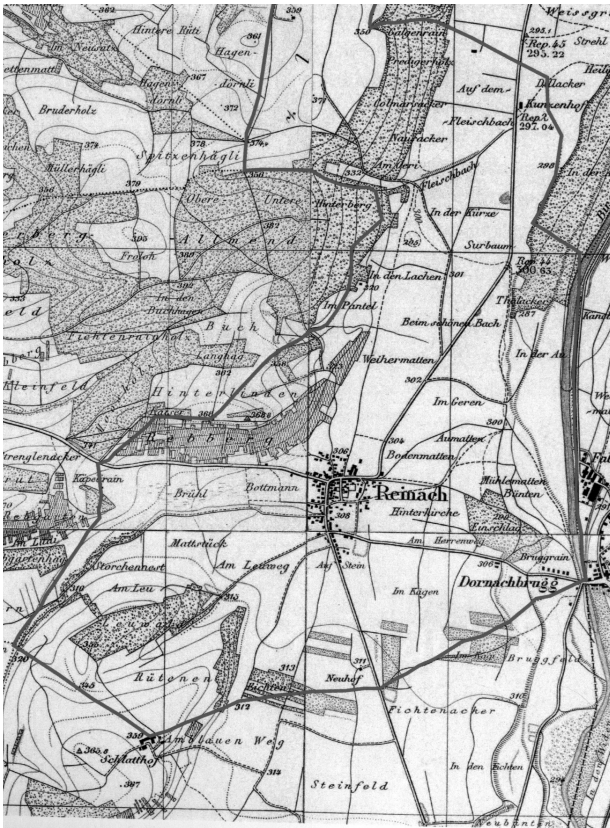


1966

Parcelling over the years 1850-1966

(Reinach, Ein Halbes Jahrhundert Baugeschichte, Claudia Fetzer, 2007)

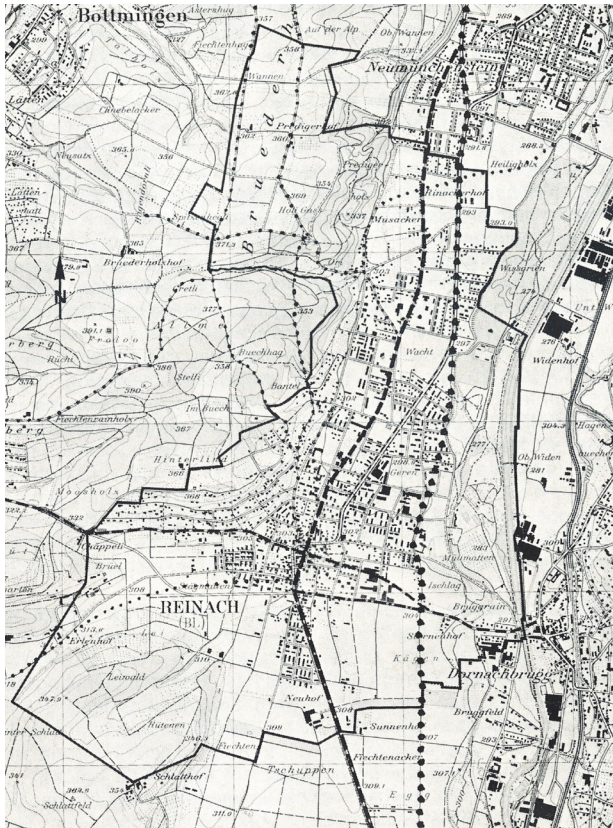
Overview: Reinach 20th century development



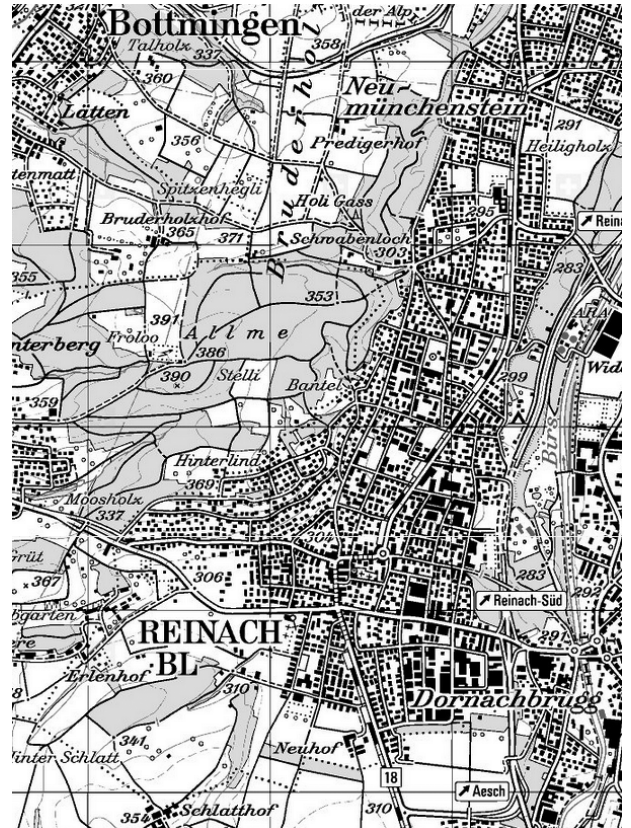
Reinach, 1902
(Reinach, Ein Halbes Jahrhundert Baugeschichte, Claudia Fetzer, 2007)



Reinach, 1936
(Reinach, Ein Halbes Jahrhundert Baugeschichte, Claudia Fetzer, 2007)

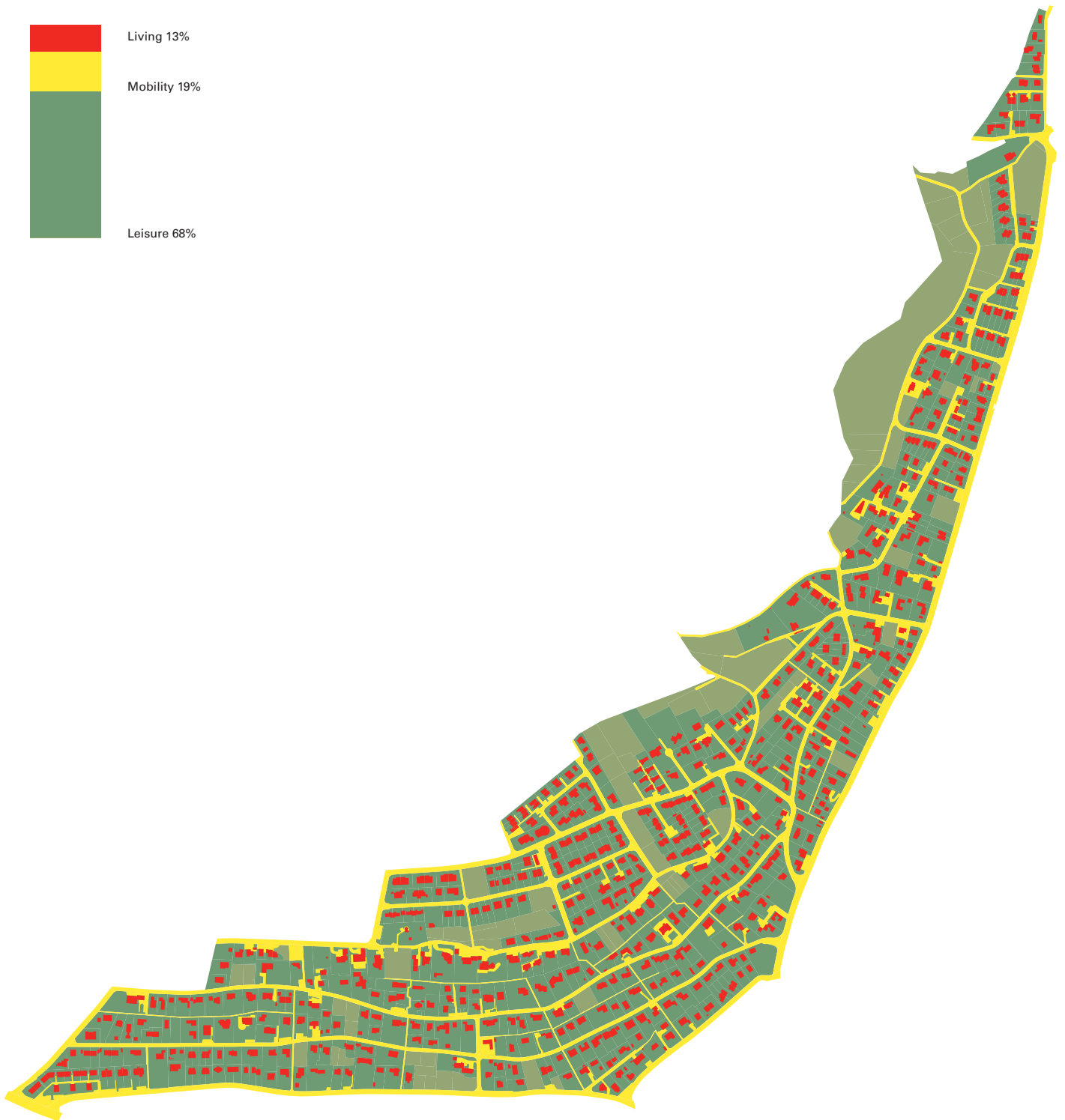


Reinach, 1975
 (Reinach BL, Hans Windler, 1975)



Reinach, 2011
 (www.geo.bl.ch)

DENSITIES OF FACILITIES



SPACE COVERAGE



Green 68.0%

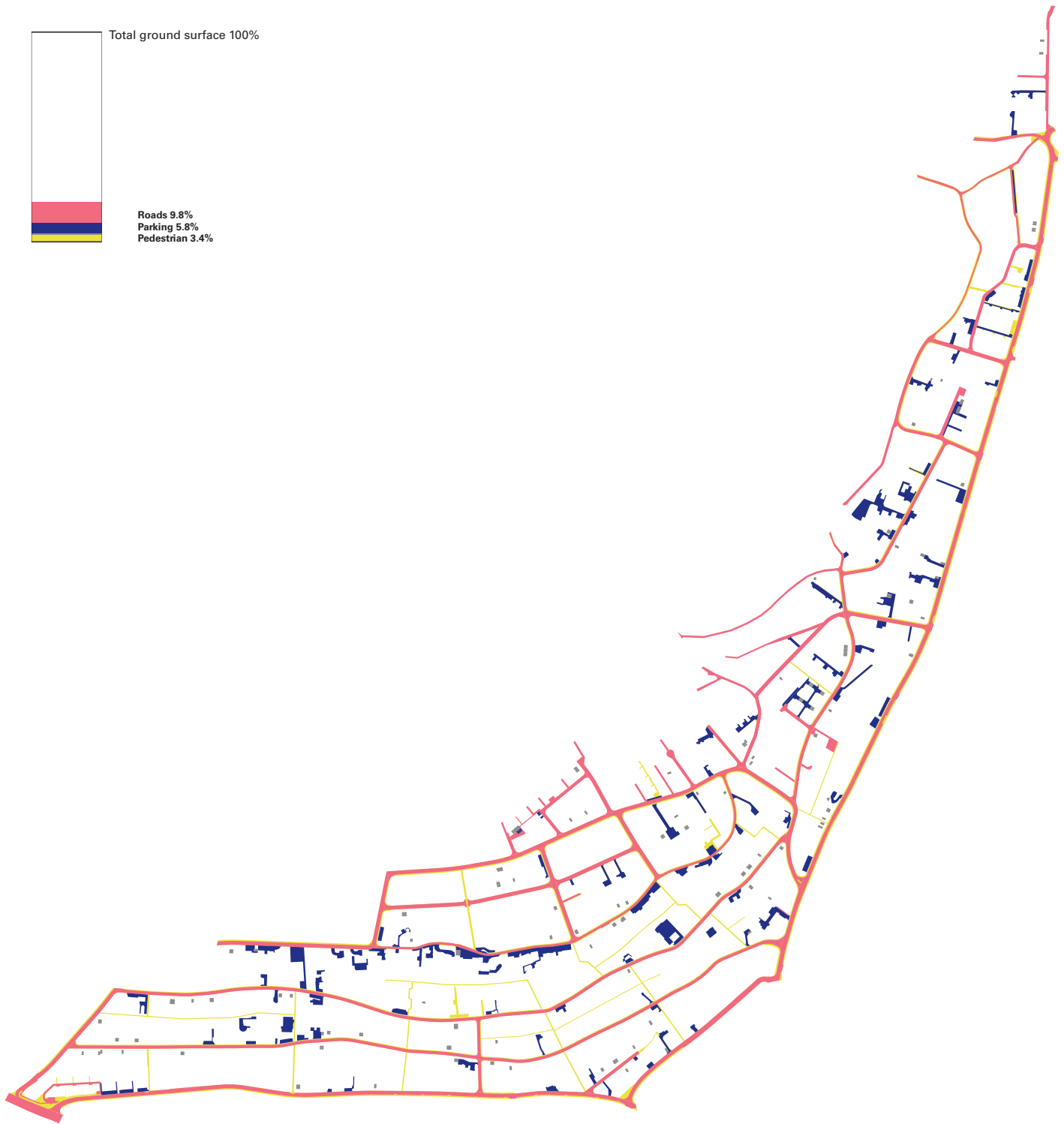
Streets (asphalt) 11%

Sidewalk 8%

Buildings 13 %

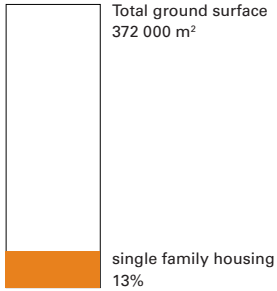


SPACE OF MOBILITY

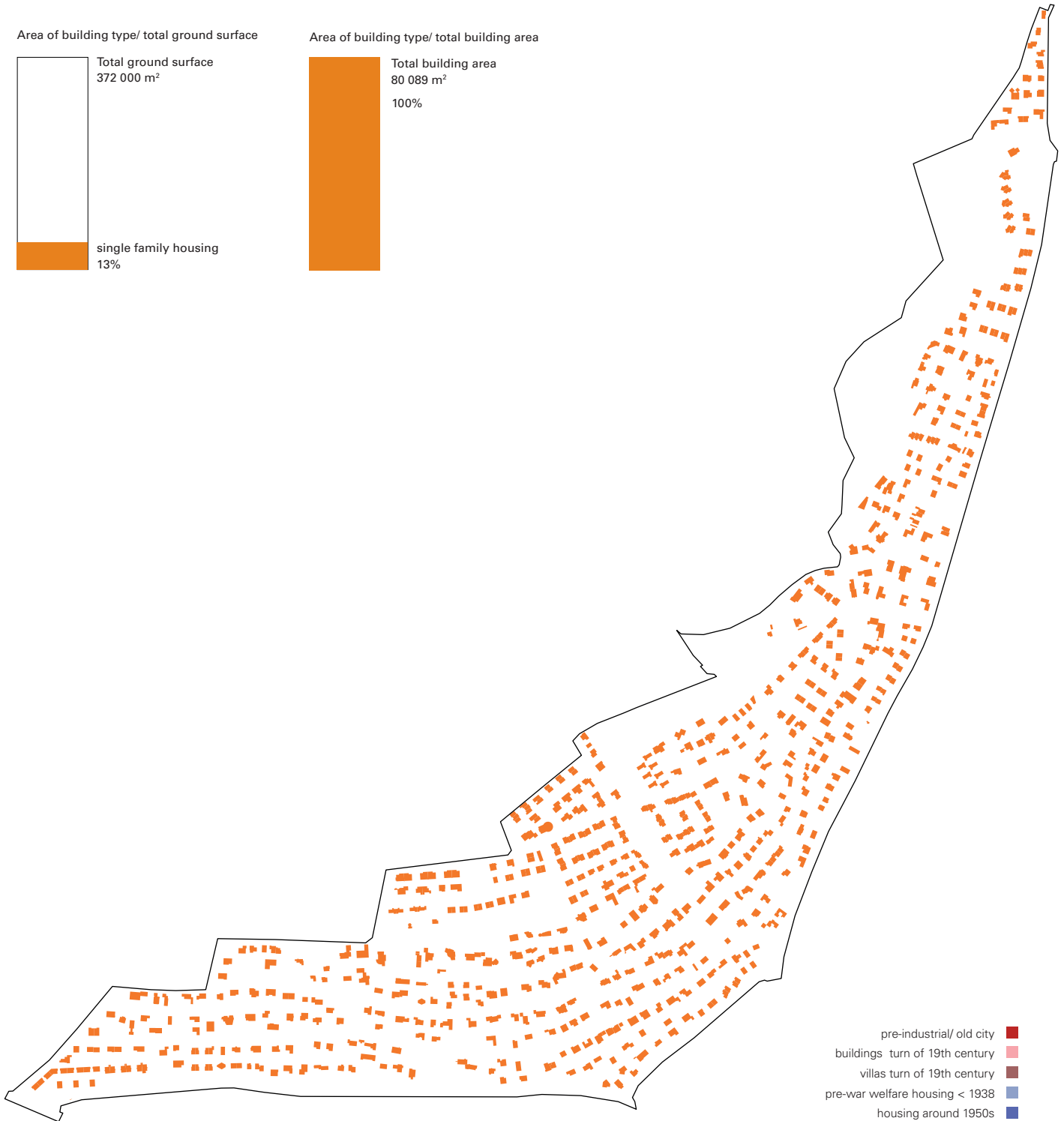
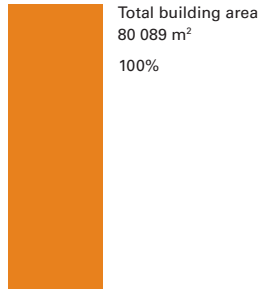


BUILDING TYPE

Area of building type/ total ground surface



Area of building type/ total building area



- pre-industrial/ old city
- buildings turn of 19th century
- villas turn of 19th century
- pre-war welfare housing < 1938
- housing around 1950s
- residential buildings 1960s-1980s
- residential buildings since 1990s
- single family homes
- highrises
- new buildings since 1990s

PREMISES AND STRATEGIES FOR TRANSFORMATION

General Overview

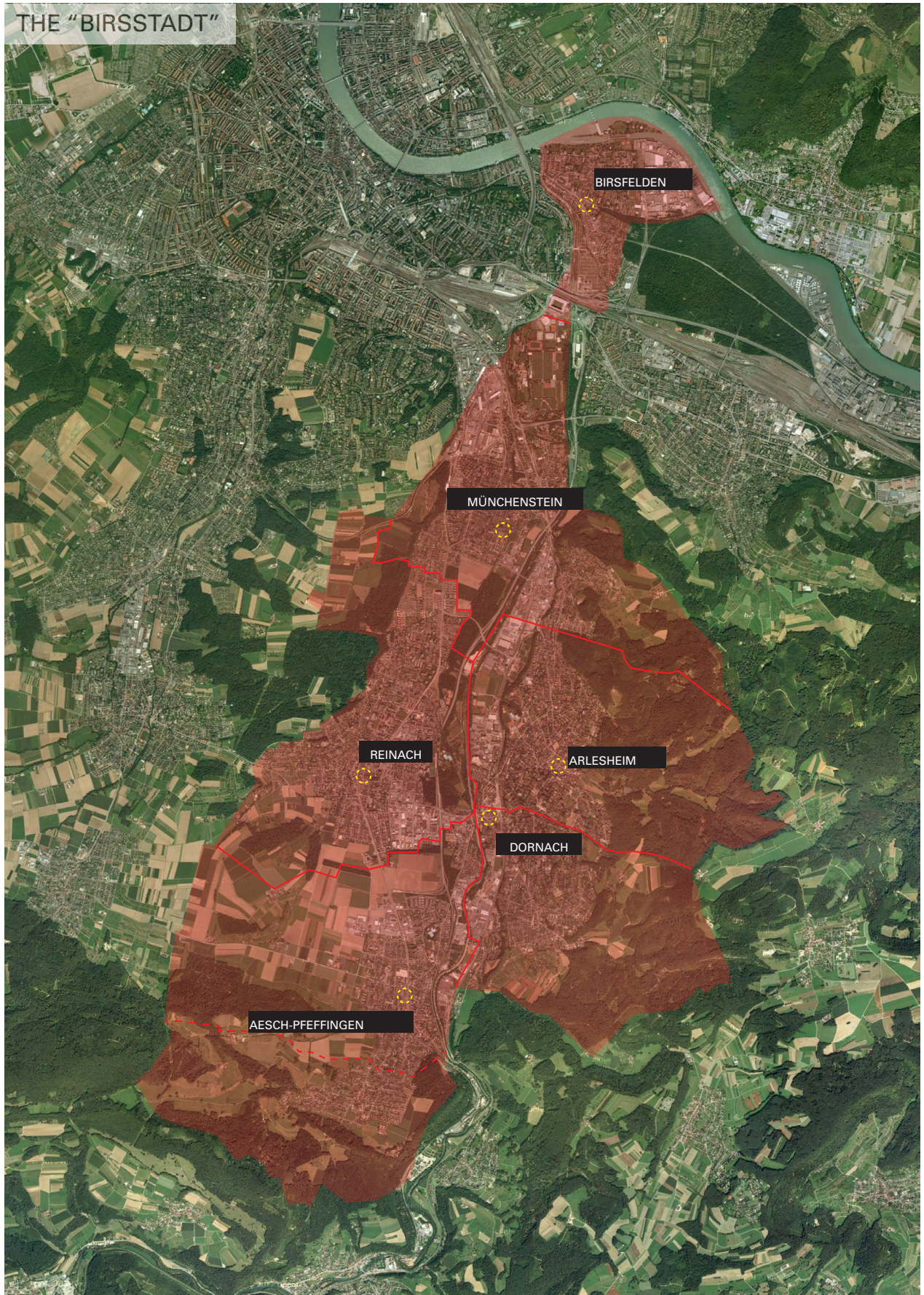
Generally the main aspects of my typology are decentralization and mono-functionality. Consequently in order to get to the other functions like working, shopping, educational and recreation places the inhabitants must move, mostly by car or public transport what results in a very high energy consumption for mobility. In order to analyze this figure, I looked in the at the number of commuters and their average distance. Then I split this number into private transport and public transport, and knowing of each the energy value per m I could calculate the total energy consumption for 1 person.

Seeing the result the question was raised if it would be possible to reduce the commuting distance. A deeper analysis of Reinach however showed that actually all services are available in the region and in the nearest distance. The fact that people commute is a personal choice and probably related to the lower taxes (-16-30%) in Baselland as well.

Other reasons why people favour this kind of typology is the wish or demand for quiet, nature, privacy and independence. I want to notice here that this kind of typology is not very old at all. It developed parallel to the industrialization. The analysis shows in one point its highly inefficient related to embodied energy, mainly because the number of the users is limited to the inhabitants and their guests.

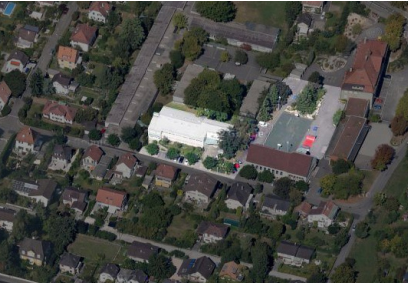
Each individual scenario I will present in the following tackles one or two of the problematic aspects I have mentioned before. There is no absolute solution, but the propositions focus on the idea to improve the typology's performance through a series architectural interventions, within the single-family housing typology and beyond.

THE "BIRSSTADT"





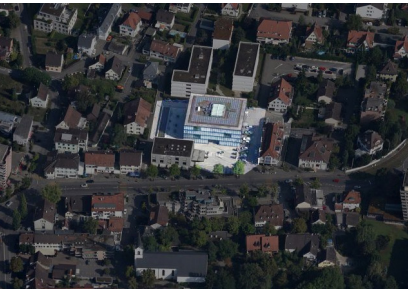
BIRSFELDEN



ARLESHEIM



MÜNCHENSTEIN



REINACH

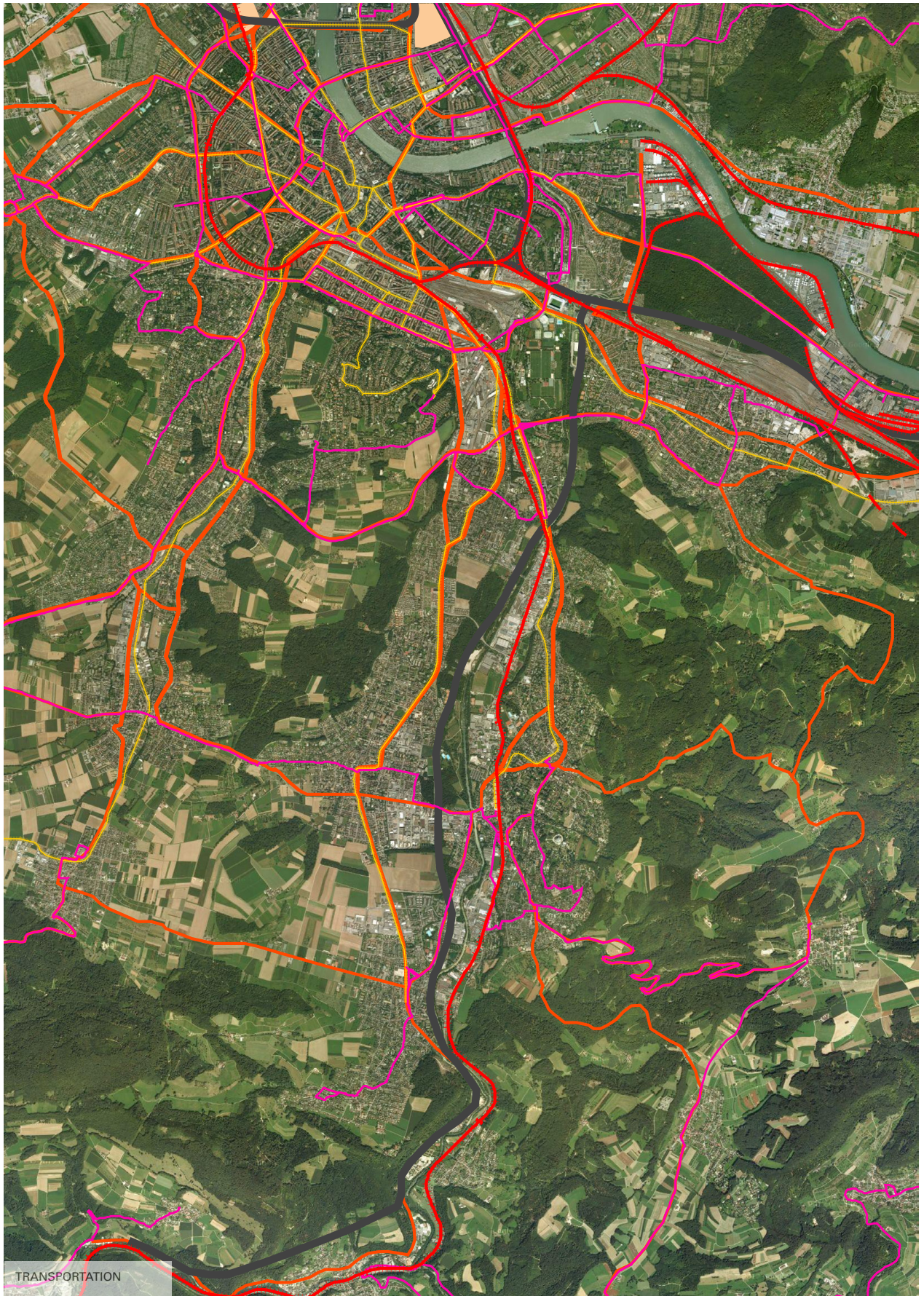


DORNACH



AESCH





TRANSPORTATION

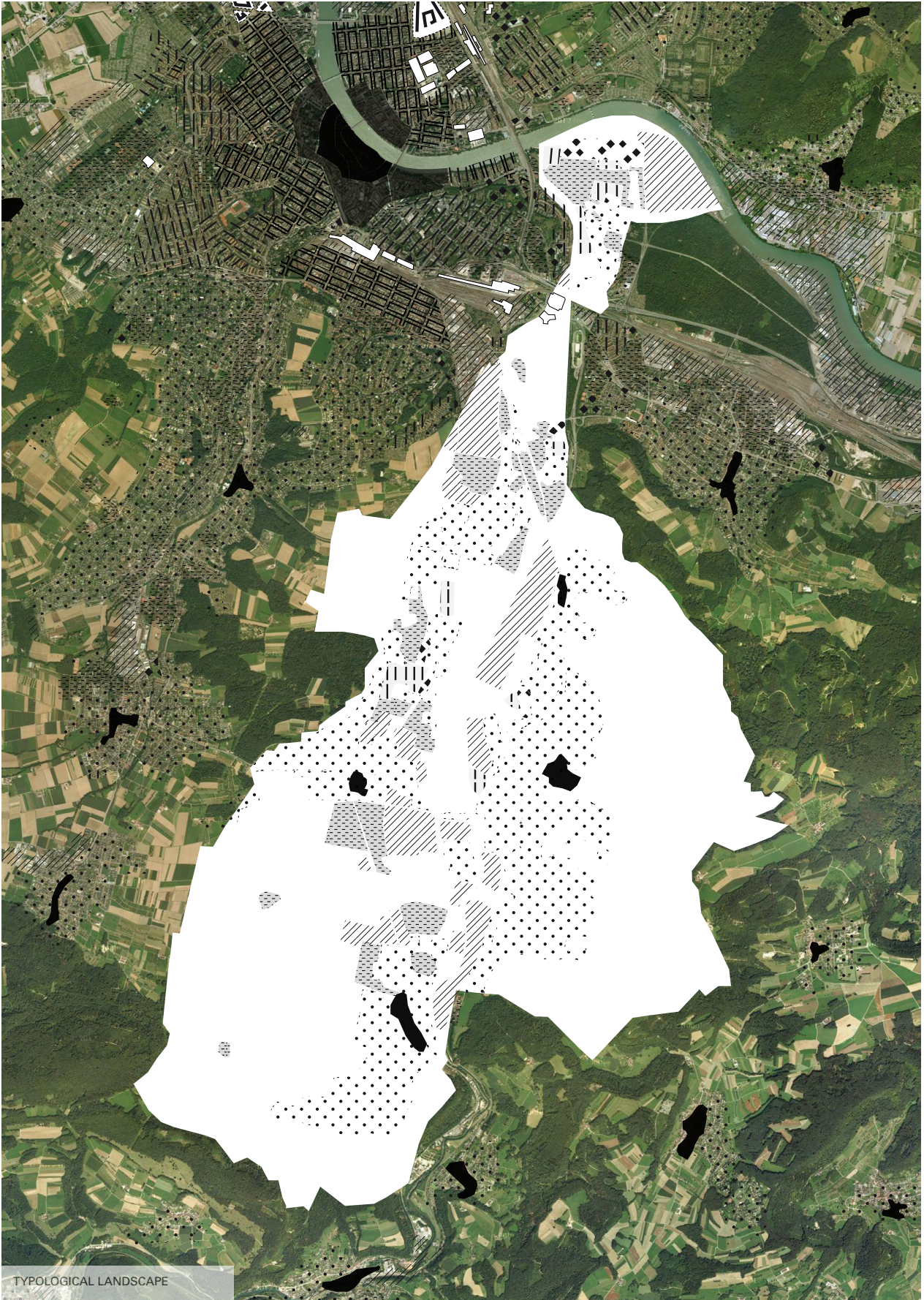


TOPOGRAPHY

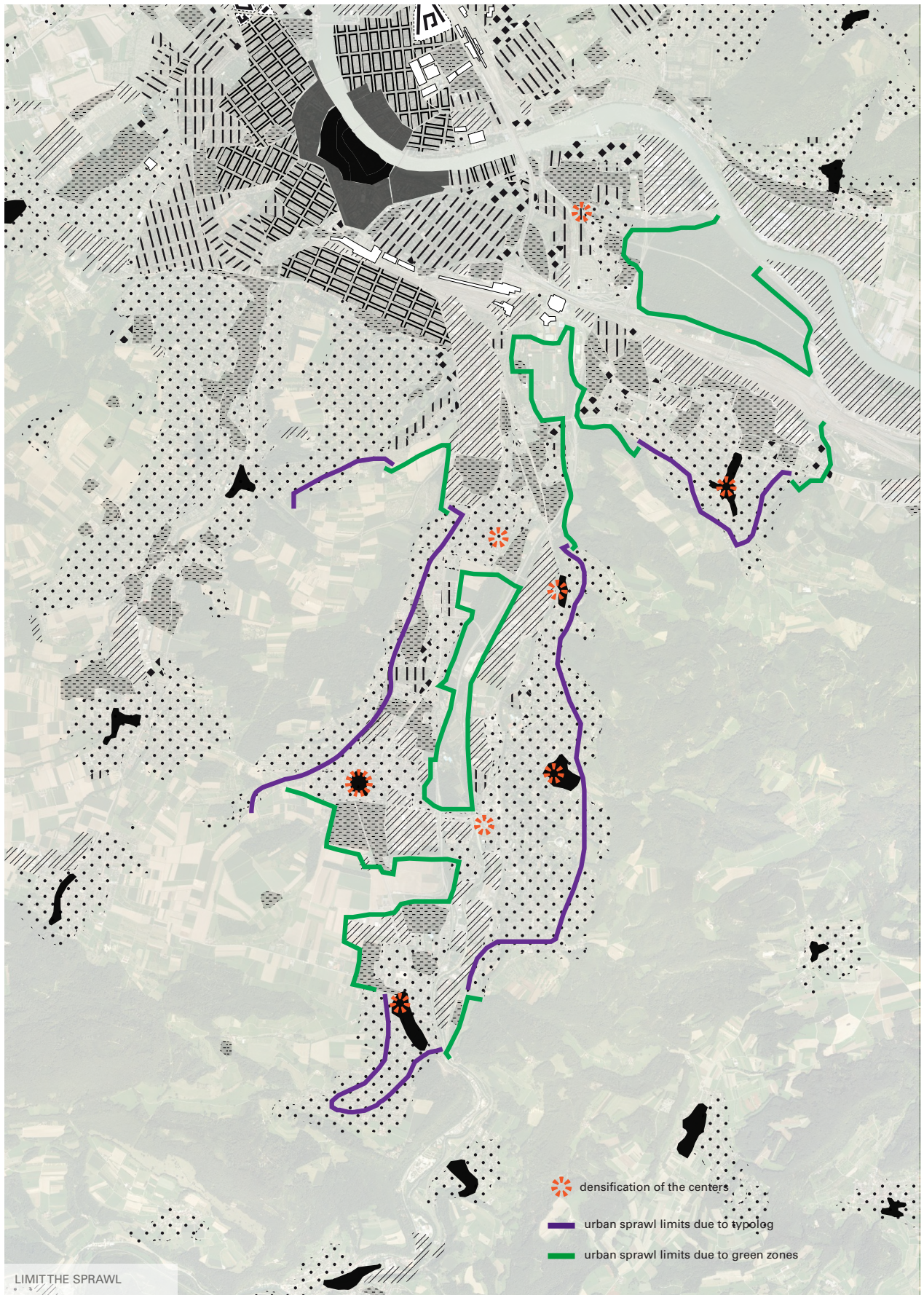
topographical boundary



GREEN ZONES



TYPOLICAL LANDSCAPE



LIMIT THE SPRAWL