

Urban composition of Birštonas

Martynas Stakvilevičius





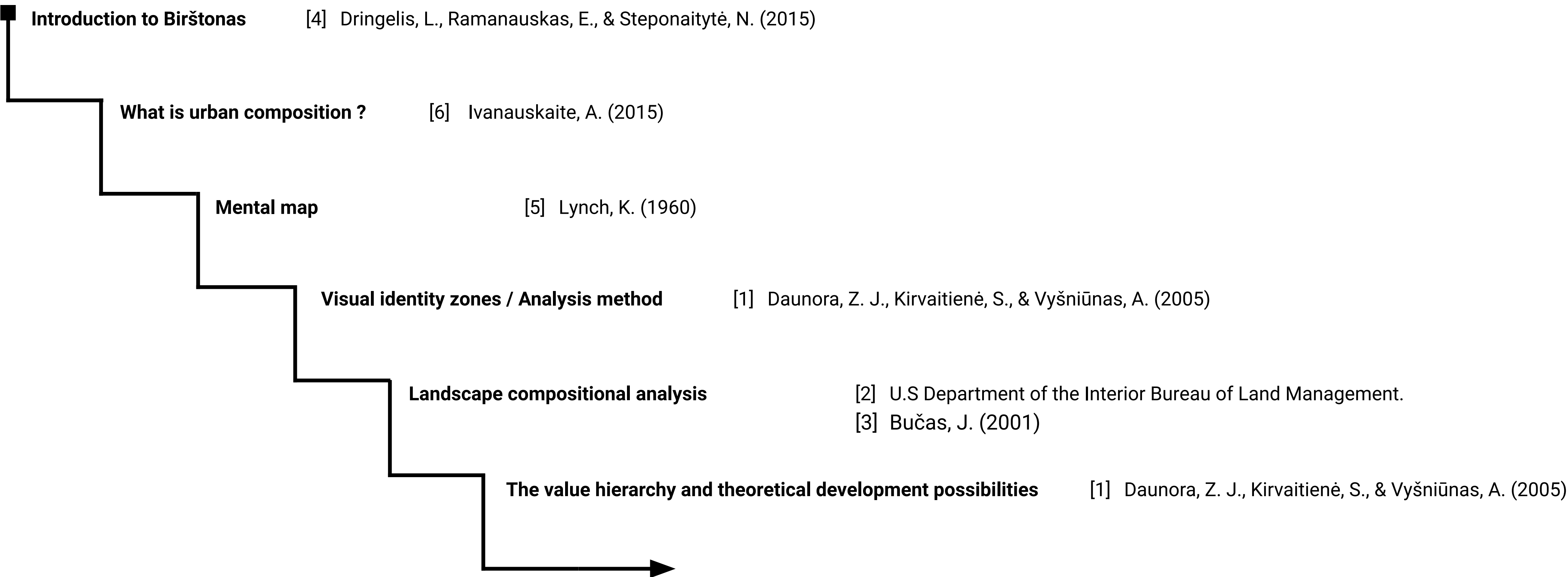
Contents

Study plan	4
Urban composition of Birštonas	4
Introduction	5
Birštonas.....	5
Local and national importance.....	7
Understanding urban composition	8
Example	9
Analysis methods	10
Landscape compositional analysis	11
Explanation of rating criteria	12
City plan overview	15
Kevin lynch mental map method to study Birštonas	16
Nature morphology	17
Terrain analysis	18
Characteristics of the Key Elements of Birštonas City's Visual Identity.....	19
Tree canopy overlook.....	20
Contrasting zones	21
Visual compositional relationships of natural elements	22
Visual identity zones	23
Key views capturing essence of a place	32
Conclusions	41
Manifesto	42
Strategy phase	43
Opportunities and constraints.....	44
SWOT analysis.....	45
Hypothesis	46
Explanation of terms	47
Eco-friendly	47
Sustainable Urban Continuity: Weaving the Past, Present, and Future	48
Urban typology	49
Birštonas development strategies	50
Adopt life cycle thinking prioritising sustainable materials.	50

Alleviate fragmentation and formulaic development.	54
Adopt habitat integration and biodiversity.	56
Leave the car behind	60
Combined strategy	63
Community participation	64
LEGO City Builder: Birštonas Edition	64
Design phase	65
Typology	66
General area	66
Types.....	67
"The other bank"	73
Birštonas vienkiemis.....	74
Special plan	75
Etnographic architecture	76
Layout	76
Masterplan	77
Further development	77
of Vienkiemis.....	77
Axonometry	79
Main	79
Details	80
Section	84
1.....	84
2.....	85
3.....	86
Perspective	87
aero	87
hill side.....	88
the square.....	89
the docks	90
layout	91
materials.....	92
main road.....	93
References	94

Study plan

Urban composition of Birštonas



Introduction

Birštonas

The town of Birštonas is the municipal center. It has a population of 2,646 (2011). In addition, Birštonas is a long-known Lithuanian balneological climatic resort.

The city is located on the left bank of the Nemunas River. The highway Prienai - Vilnius passes next to it.

The area is mentioned in written historical sources from the 14th century, the town near the mound grew in the 15th century. The first church was built before 1529, and the current brick church: in 1909. in 1932 Birštonas was declared a resort.

The city is located in a unique place, the Nemunas river loop. The city is characterized by a rectangular urban plan and by the harmony of architecture and nature. There are preserved public buildings and villas from the interwar period. In addition to valuable resort buildings, Birštonas is characterized by a very rich natural environment - the Nemunas loops, the surrounding forests, and the mound (Vytautas mountain).

[4] Dringelis, L., Ramanauskas, E., & Steponaitytė, N. (2015)





Introduction

Local and national importance

Location:

Nestled along the southern bend of the Nemunas, Lithuania’s largest river, Birštonas enjoys a strategic position offering access to water transportation and fertile riverbanks. This location fosters a connection to the broader Lithuanian landscape and has historically influenced trade and development.

Geology:

Beneath the town’s surface lies a hidden treasure – mineral springs rich in healing properties. These natural wonders, a product of the region’s unique geological composition, have shaped Birštonas’ identity as a prominent spa and wellness destination.

Topography:

Surrounded by verdant forests and gentle hills, Birštonas offers a diverse natural landscape. The Nemunas floodplains provide fertile land for agriculture, while the forested slopes create a scenic backdrop and harbor hiking trails, encouraging outdoor recreation.

Natural Resource:

Birštonas’ mineral springs are a rare and valuable resource, not only for the town’s spa industry but also for research and medical tourism. Their unique composition contributes to Lithuania’s geological diversity and attracts visitors seeking these specialized treatments.

Biodiversity:

The forests surrounding Birštonas are home to various flora and fauna, contributing to the region’s biodiversity and creating a valuable ecological area within Lithuania. Their preservation strengthens the town’s natural allure and ecological importance.

Tourism Corridor:

Birštonas is situated along a crucial tourism corridor, connecting major Lithuanian cities with rural areas and natural attractions. This strategic location draws visitors interested in exploring both cultural and natural aspects of the country.

[4] Dringelis, L., Ramanauskas, E., & Steponaitytė, N. (2015)



Introduction

Understanding urban composition

Urbanistic composition is the visual aspect of urban form. It encompasses the arrangement and interrelation of elements such as axes, rhythm, scale, and symmetry. Urban composition reveals the city as a work of art, emphasizing its aesthetic value and appeal.

[6] Ivanauskaite, A. (2015)

Key Features:

Visual Aspect: Urban composition focuses on how the city looks visually, how different elements are interconnected, and what overall aesthetic experience they create.

Complex of Key Elements: Urban composition does not include all elements of the city, but only the key ones that have the greatest impact on its visual integrity and character.

Reflection of Values: Urban composition can reflect the city's values, identity, and history. For example, symmetrical arrangement of buildings can symbolize order and rationality, while asymmetrical arrangement can symbolize creativity and dynamism.

Expression of Uniqueness: Each city has its own unique urban composition that distinguishes it from other cities.

Importance:

Aesthetic Value: Urban composition enhances the attractiveness and appeal of a city for both residents and visitors. It can create a harmonious and aesthetically pleasing environment where people feel comfortable.

Identity Formation: Urban composition can help to shape the city's identity and strengthen the sense of community. It can become a symbol of the city and reflect its unique characteristics.

Heritage Preservation: Urban composition can help to preserve the city's historical heritage. By protecting and nurturing traditional compositional principles, it can be ensured that the city will retain its authenticity and continuity.

References:

- Cowan, R. (2005). The dictionary of urbanism and architecture. London: Routledge.
Grunskis, R. (2010). Miesto kompozicija: meninės kūrybos objektas. Urbanistika ir Architektūra, 34(1), 52-59.
Šešėlgis, K. (1975). Miesto kompozicija. Vilnius: Mintis.



Mental map

Example

Kevin A. Lynch (1918-1984), American urban planner and author who revolutionized our understanding of how people perceive and navigate urban environments.

He is most famous for his 1960 book **“The Image of the City”**, which introduced the groundbreaking **mental map method**. This method identified five key elements that form our mental maps of cities: paths, edges, districts, nodes, and landmarks. By analyzing these elements, Lynch argued we could gain crucial insights into how people experience and interact with urban spaces.

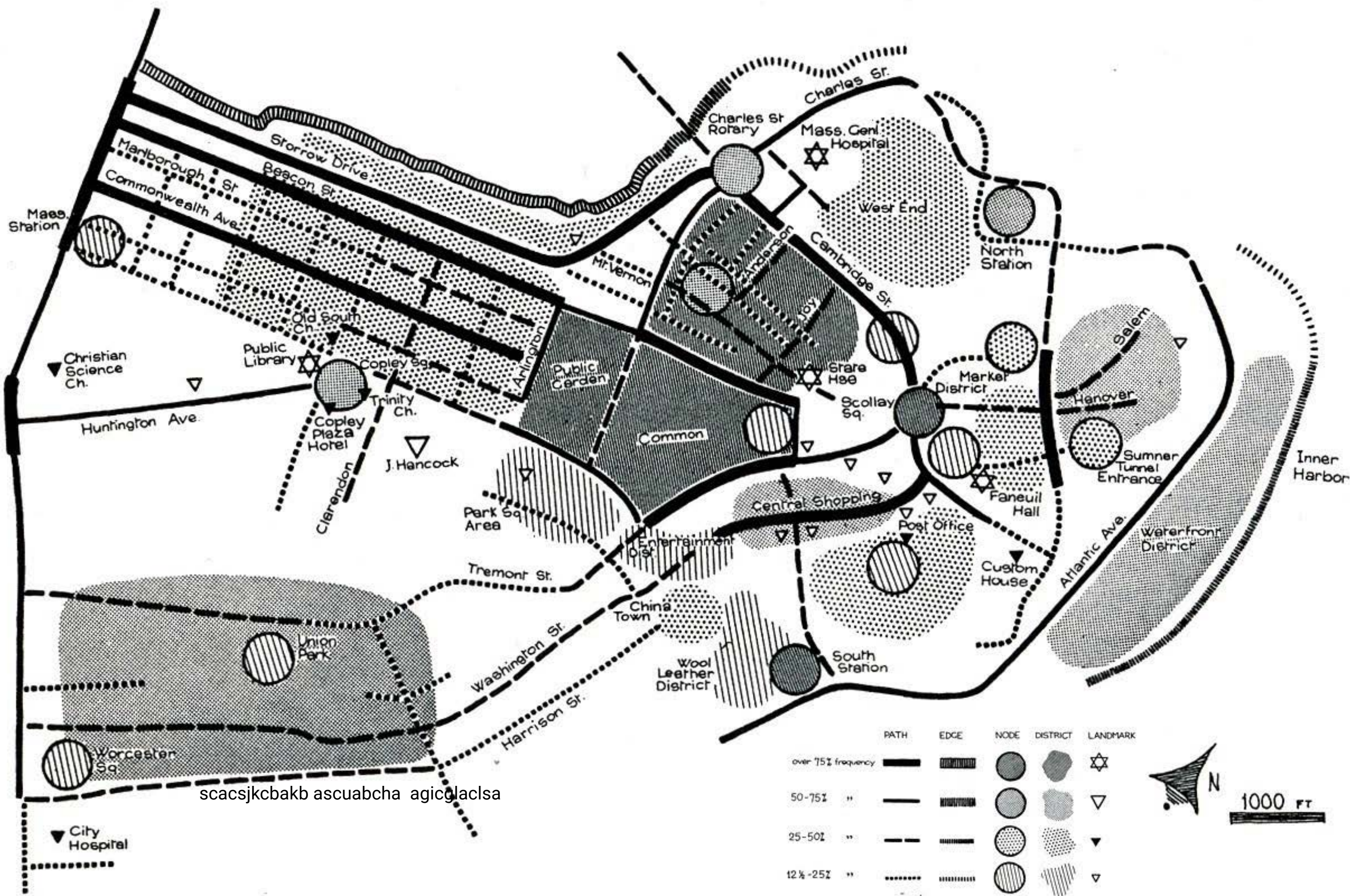
Paths: The routes we travel, like streets, sidewalks, or public transport lines.

Edges: The linear elements that define boundaries, like rivers, walls, or railway tracks.

Districts: Areas with distinct character, like neighborhoods, plazas, or commercial hubs.

Nodes: Key points of connection and decision-making, like squares, intersections, or landmarks.

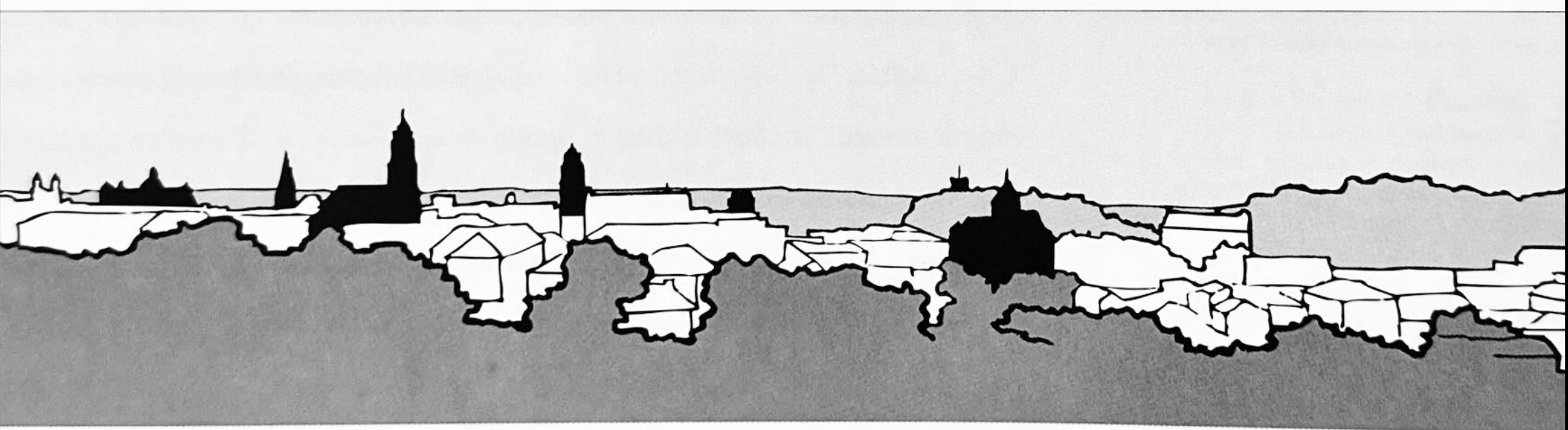
Landmarks: Prominent and easily recognizable elements, like buildings, monuments, or statues.



Analysis methods

- 1. Compositional - structural links between separate elements of an object
- 2. Compositional - structural links between separate objects
 - a. The elements of nominal frame
 - b. Shillouette elements
 - c. Panorama elements

[1] Daunora, Z. J., Kirvaitienė, S., & Vyšniūnas, A. (2005)

Anaysed object	Author	Proccess explanation	
Form / Volume	Individual artist creation	Physical object changes	
Nominal space	Individual artist creation / social product	Physical space changes	
Shillouette	Social product	Historic, social, political changes or heritage expresion	
Panorama	Social product	Historic, social, political changes or heritage expresion	

Landscape compositional analysis

Methods of structural (quantitative and comparative) analysis.

These methods are used to study the structure of the landscape, its components and elements, their interrelationships, and the factors that determine them. The landscape is assessed based on the parameters of its structure - the number of components and elements, their properties, and interrelationships (psychophysical paradigm).



Landscape compositional analysis

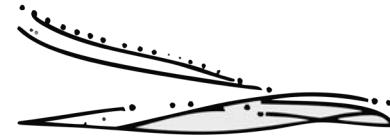
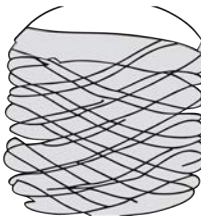
Explanation of rating criteria

Landform	Water	Adjacent Scenery	Compositional frame
Topography becomes more interesting as it gets steeper or more massive, or more severely or universally sculptured. Outstanding landforms, monumental, exceedingly artistic and subtle as certain badlands, pinnacles, arches, and other extraordinary formations.	That ingredient which adds movement or serenity to a scene. The degree to which water dominates the scene is the primary consideration in selecting the rating score.	Degree to which scenery outside the scenery unit being rated enhances the overall impression of the scenery within the rating unit. The distance which adjacent scenery will influence scenery within the rating unit will normally range from 0-5 miles, depending upon the characteristics of the topography, the vegetative cover, and other such factors. This factor is generally applied to units which would normally rate very low in score, but the influence of the adjacent unit would enhance the visual quality and raise the score.	A compositional framework is a network of spatial landmarks of unequal exposure activity, called exponents, that compositionally connect and give meaning to the landscape background. Three types of exponents are distinguished: dominants, accents, and subdominants. The hierarchy of exponents is an essential feature of the compositional ramework of the Lithuanian town landscape, which determines the level of its compositional maturity.
Vegetation	Color	Scarcity	Composition - harmony
Give primary consideration to the variety of patterns, forms, and textures created by plant life. Consider short-lived displays when they are known to be recurring or spectacular. Consider also smaller scale vegetational features which add striking and intriguing detail elements to the landscape (e.g., gnarled or wind beaten trees, and joshua trees).	Consider the overall color(s) of the basic components of the landscape (e.g., soil, rock, vegetation, etc.) as they appear during seasons or periods of high use. Key factors to use when rating “color” are variety, contrast, and harmony.	This factor provides an opportunity to give added importance to one or all of the scenic features that appear to be relatively unique or rare within one physiographic region. There may also be cases where a separate evaluation of each of the key factors does not give a true picture of the overall scenic quality of an area. Often it is a number of not so spectacular elements in the proper combination that produces the most pleasing and memorable scenery - the scarcity factor can be used to recognize this type of area and give it the added emphasis it needs.	This is a harmony of planes, volumes, and colors, where the compositional framework spatially connects the landscape background. It can be considered complete only when it has a framework structure that compositionally links all background planes into a unified ensemble of spaces and spatial landmarks.

[2] U.S Department of the Interior Bureau of Land Management.

Landscape compositional analysis

Explanation of rating criteria

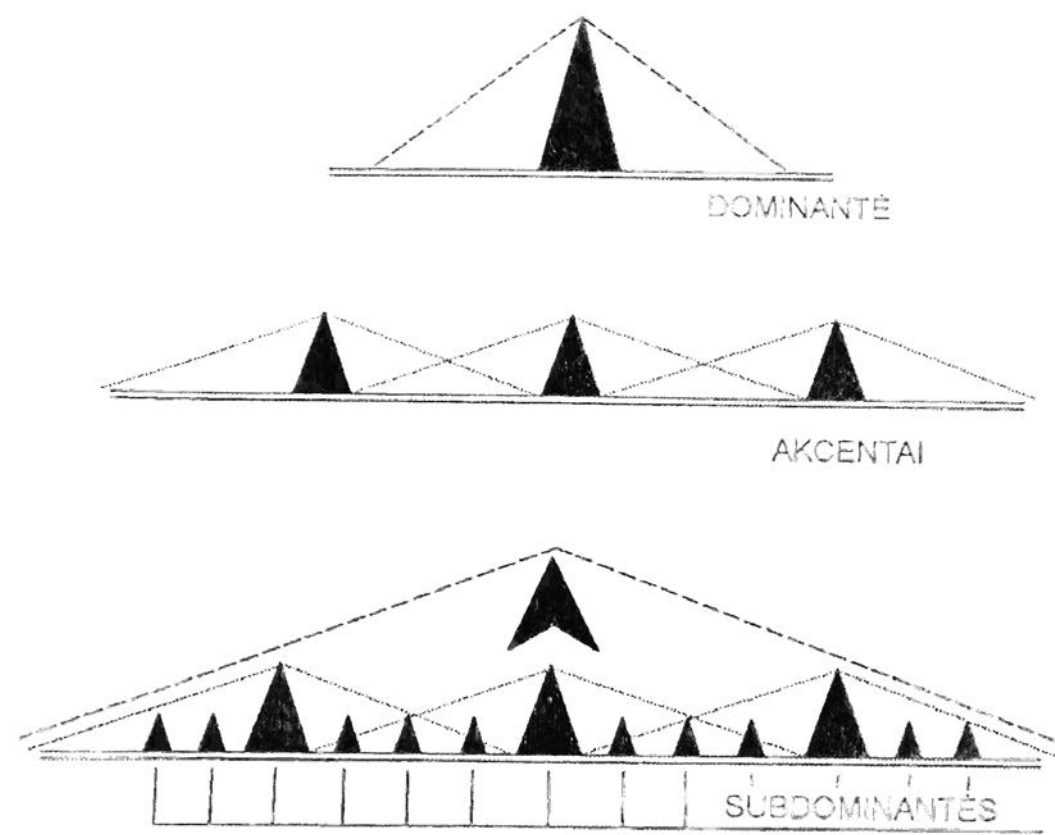
Landform 	3 High vertical relief as expressed in prominent mounds, cliffs, or rock outcrops, or severe surface variation or highly eroded formations including major badlands; or detail features dominant and exceptionally striking and intriguing.	2 Medium surface variation, low rolling foothills or flat valley bottoms. Interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional.	1 Few or no interesting landscape features.	0 Terribly looked after terrain with visible man made damage.	Color 	3 Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, rock, vegetation, water, the urban environment.	2 Some intensity or variety in colors and contrast of the soil, rock, vegetation or the urban environment but not a dominant scenic element.	1 Subtle color variations, contrast, or interest; generally mute tones.	0 Mute and scarce color accent.
Vegetation 	3 A variety of vegetative types as expressed in interesting forms, textures, and patterns.	2 Some variety of vegetation, but only one or two major types	1 Little or no variety or contrast in vegetation.	0 Little or no vegetation	Influence of adjacent scenery 	3 Adjacent scenery greatly enhances visual quality	2 Adjacent scenery moderately enhances overall visual quality.	1 Adjacent scenery has little influence on overall visual quality.	0 Adjacent scenery is not visible.
Water 	3 Clear and clean appearing, still, or fast flowing water, any of which are a dominant factor in the landscape.	2 Flowing, or still, but not dominant in the landscape.	1 Present, but hardly or not noticeable.	0 Not present.	Scarcity 	3 One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc.	2 Distinctive, though somewhat similar to others within the region.	1 Interesting within its setting, but fairly common within the region.	0 Common and uninteresting.

[2] U.S Department of the Interior Bureau of Land Management.

Landscape compositional analysis

Explanation of rating criteria

Compositional frame	3	Dominant, accent and subdominant are all visable and follow a hierarchy, creating an ansamble, reinforcing the compositional frame.
	2	One element of the compositional frame is missing or is hidden, or is of very poor quality, making the compositional frame uneven.
	1	One element of the compositional frame is visible: dominant, accent or subdominant and it is of poor quality.
	0	None of the compositional frame elements are visible.



Dominant - a spatial landmark with the highest exposure activity, standing out against the background of the landscape as the brightest focal point. It is the highest hierarchical level of spatial landmarks (exponents) in the landscape compositional framework.

Accent - spatial landmarks with medium exposure activity that are directly visually related and rhythmically repeated, forming an intermediate link between dominants and subdominants in the landscape compositional framework.

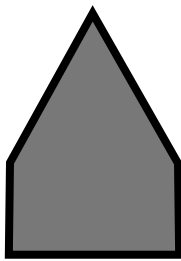
Subdominants are landscape elements with the lowest exposure activity, whose exposure zones are covered by the exposure zones of spatial landmarks with higher exposure activity. They represent the lowest level of exponents in the landscape compositional framework.

[3] Bučas, J. (2001)

Composition harmony	3	Adjacent scenery elements transitions are harmonious, subtle. All elements feed into the bigger picture.
	2	Most of adjacent scenery element transitions are harmonious.
	1	Flawed compositional frame, or adjacent scenery doesnt transition harmoniously. Scenery elements contradict each other.
	0	Chaotic landscape and scenery, a lot of visual pollution and oversaturation.



Built-up area	3	Structures of outstanding architectural qualities.
	2	Structures have quality architectural elements, but lack consistecy
	1	Poor architectural quality
	0	No man made structures



[2] U.S Department of the Interior Bureau of Land Management.

City plan overview

Birštonas is characterized by a square city plan. The city 'square' is adjacent to the Prienai - Vilnius highway. That separates the town into two parts.

The town is surrounded by Nemunas river, that contains the town from sprawling to the surroundings and keeps it compact. Another feature of the natural landscape is the protected forest that envelope the town.



Mental map

Kevin lynch mental map method to study Birštonas

Birštonas is surrounded by Nemunas river, and further more by the forrest and small hills in all directions.

Birštonas is connected to the wider context by a singular main road.

The marked mental districts are: industrial, recreational and residential. Birštonas seems to have 3 clusters of recreational territories and in between them is where the residential and other zones are squeezed in.

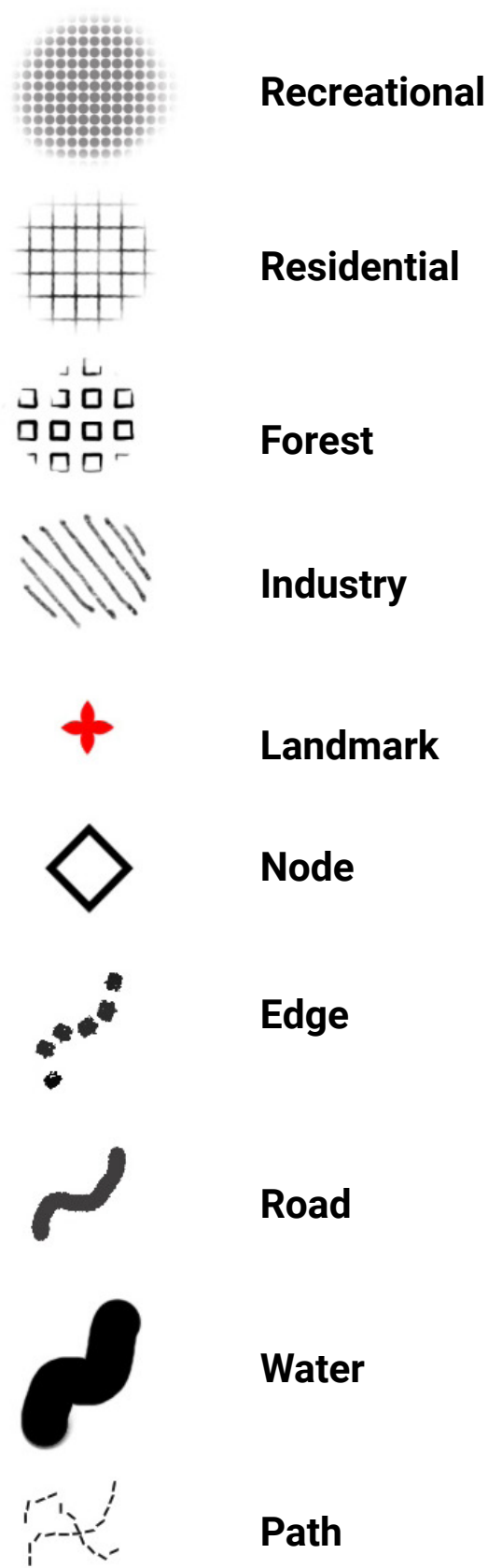
Landmarks are located within the recreational districts, and the most import nodes are situated by the recreational areas aswell. The landmarks seem to be clustered together around major spa's.

It is important to point out that the part of the city that is seperated by the main road lacks any kind of landmarks, nodes or mixed use zones it is mostly residential.

The east shore of Nemunas river in not developed in a recreational or residential zones, now its mostly a forrest.

In the mental map of Birštonas where some larger areas of a forest starts, there is a marked edge, because it acts as a mental, visual and sometimes a physical wall. Although the lush greenery seems to cover most of the city itself, sprouting wherever there is space.

The city is compact and has a well developed pedestrian infrastructure. As a consequence most of the nodes mark pedestrian choices.



scacsjkcbakb ascuabcha agicglaclsa



Nature morphology

Topographic heritage is one of the most important natural factors determining the development of the urban structure and, at the same time, not only the structure of green spaces, but also the system of natural forms, which in turn determines the characteristic diversity of the spatial structure of the cityscape and the uniqueness of the image

Topographic heritage: This refers to the natural features of a place, such as its hills, valleys, and rivers.

Spatial structure: This refers to the three-dimensional arrangement of elements in a space.

Cityscape: This refers to the overall appearance of a city, including its buildings, streets, and natural features.

[1]Daunora, Z. J., Kirvaitienė, S., & Vyšniūnas, A. (2005)

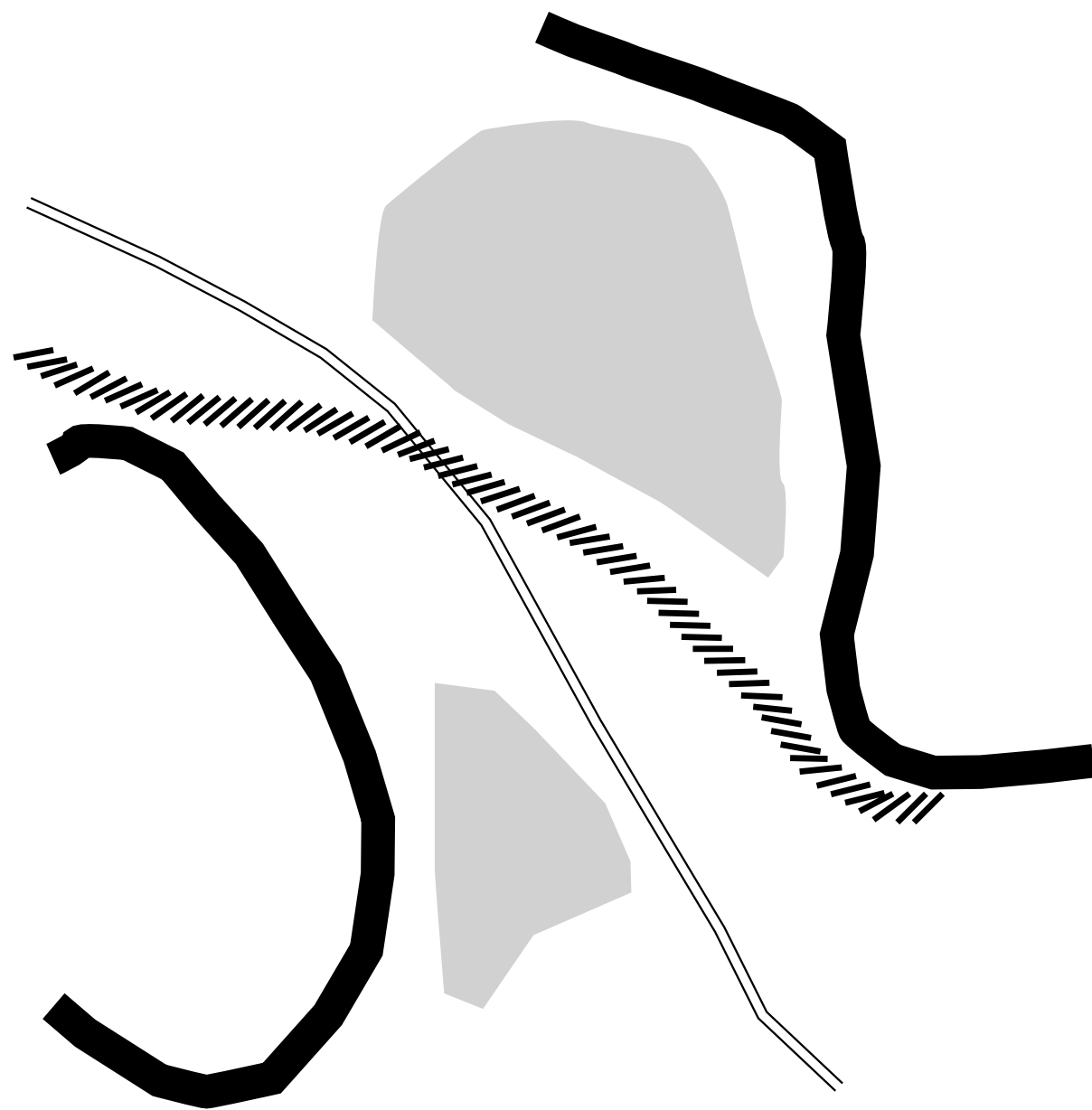


Nature morphology

Terrain analysis

Analysing the terrain the division between 2 parts of Birštonas is even more pronounced. The terrain follows a similar direction to the passing road, creating an even more pronounced barrier between the main part of Birštonas and Birštonas vienkiemis.

It is also clearly visible that Birštonas Vienkiemis is situated on a kind of plateau, quite a bit higher than the rest of Birštonas. The origins of Birštonas, the old town started to develop by Vytautas hill, in the river valley.



Nature morphology

Characteristics of the Key Elements of Birštonas City's Visual Identity

scaesjkobakb ascuabcha agicglacisa

Nature morphology

Tree canopy overlook

Lidar data from 2022 was used to analyse the tree cover of Birštonas and the nearest surroundings. The data comprises of Points located in 3 - dimensional space. The points carry data about height, position and the material that they bounced off. There are millions of points and combined they give a great overview.

The map shows tree cover over the town of Birštonas. Black masses in the map represent buildings and other urban structures of a certain height. The red colour represents vegetation. There are 3 variations of red, that differ in lightness. The redder the color - the higher the vegetation. Brightest red color represents tree canopy cover when the height of it is a minimum of 4 meters.

The collected data shows that 40 % of Birštonas and its nearest surroundings are covered by high vegetation. It is interesting to see that inside the city there is more forest cover than at some nearby fields. Out of this analysis came out the conclusion, that that different parts of Birštonas have a different tree coverage, thus are part of a different visual zone. The most obvious zone is a forest, that shows up as a red mass in the map. Then there are 3 more subtle zones in Birštonas marked 1, 2 and 3.



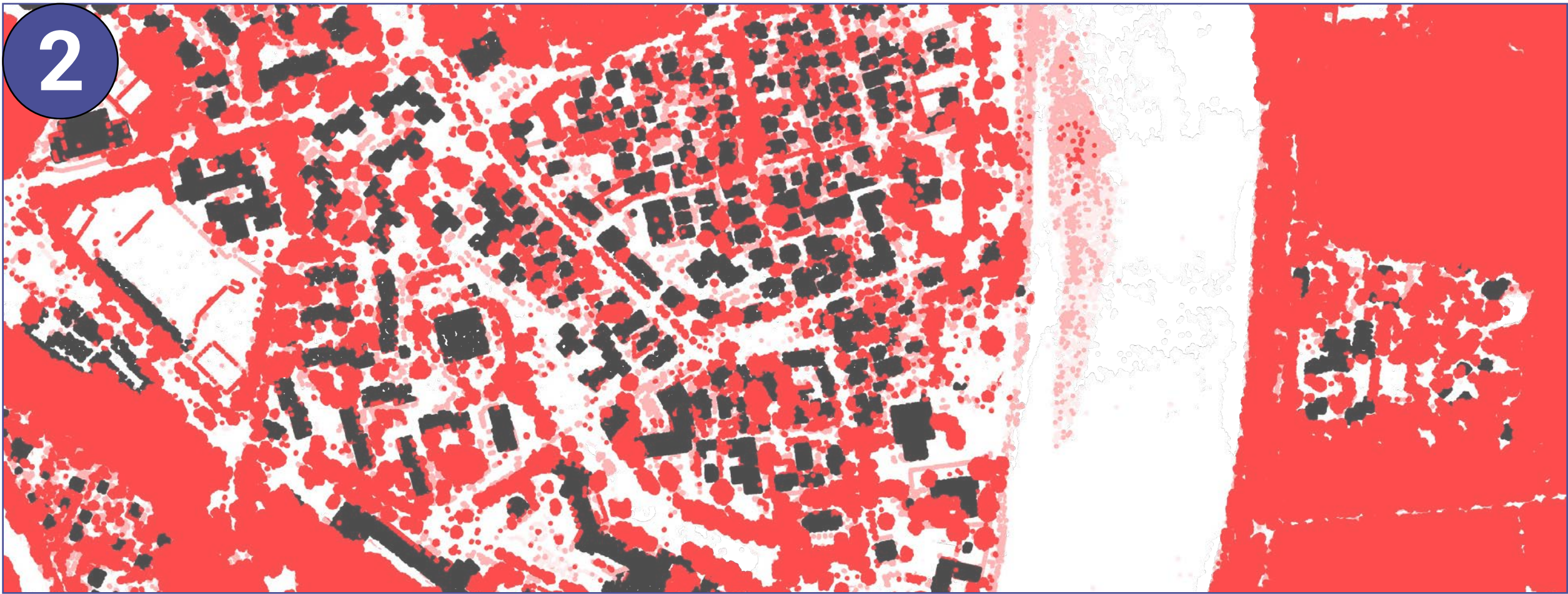
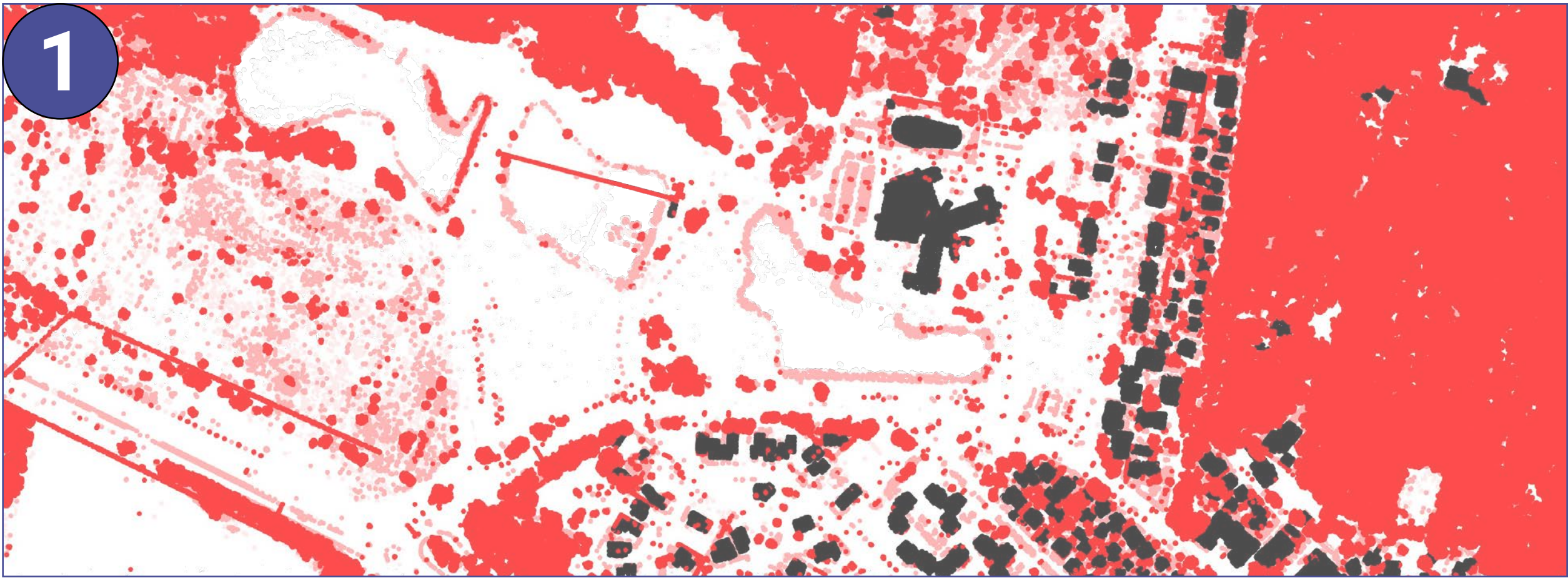
Nature morphology

Contrasting zones

1 zone - Vytautas, Ego Spa territory differs from the rest of Birštonas because it is a part of the city, yet the tree coverage is unusually light. This makes the huge area see through, more spacious and scarce. Such large vacant zones are uncommon in a compact city and contrast with the rest of the town.

2 zone - Birštonas old town and center. This territory is the core of the city, it creates the mental image of the town. The area is dense with vegetation and man made structures. This creates a unique sense of a town inside a forest.

3 zone - Birštonas Vienkiemis has a severly differing tree canopy overlay comparing to the Main part of Birštonas. The buildings here are a lot smaller and the tree coverage is situated by the small streets. There are little to none clusters of vegetation. Although the river bank of Nemunas could be considered a forest and a barrier.



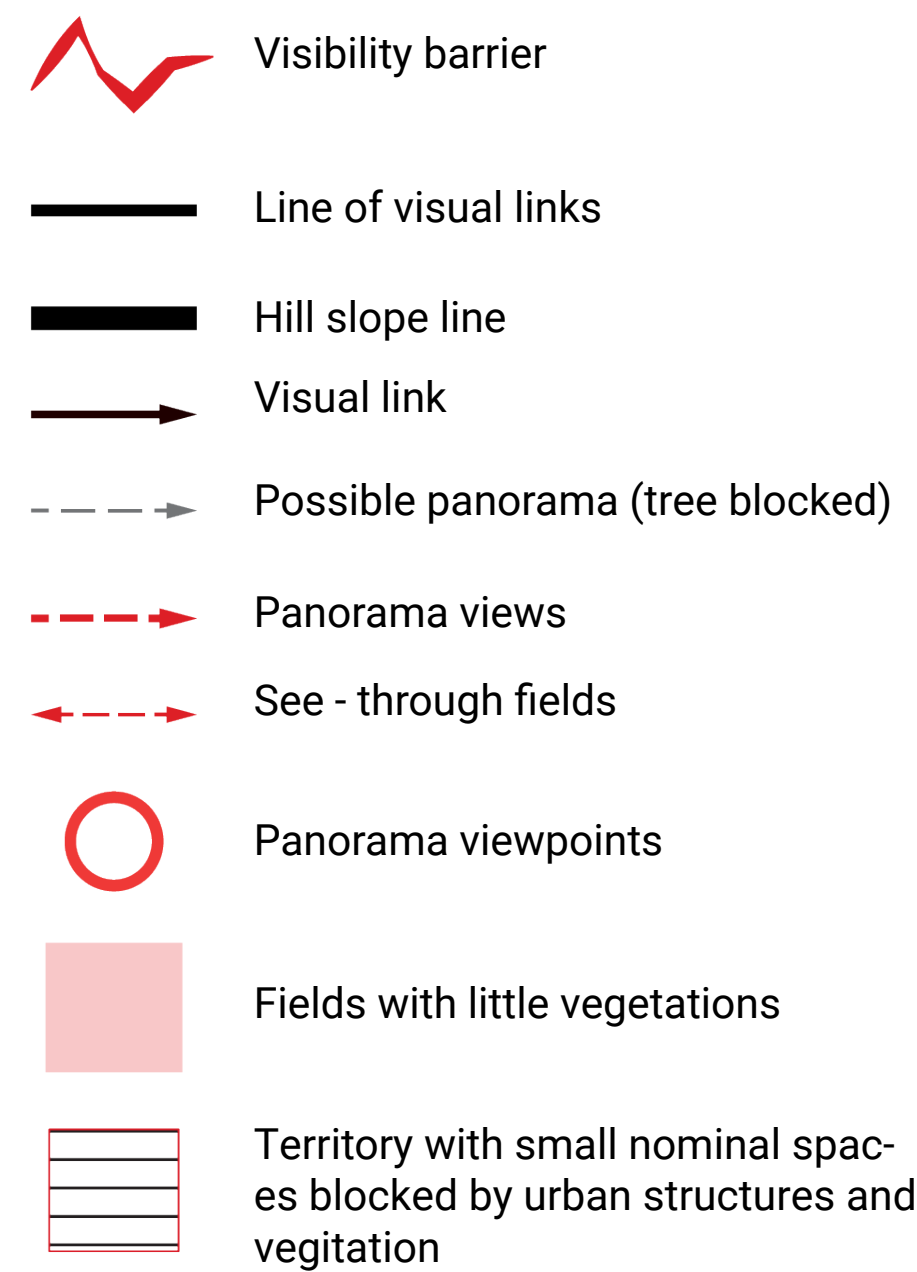
Nature morphology

Visual compositional relationships of natural elements

After analysing the Nature morphology of the territory - the terrain and the vegetation, different visual zones became apparent. The zones differ in landform, vegetation, visual space, visual links.

Zones :

- Vytautas, Ego Mineral spa
- Old town, center (further separated by building typology)
- Birštonas central park, Eglė sanatorija
- Vytautas hill and park
- Nemunas riverside
- Birštonas Vienkiemis

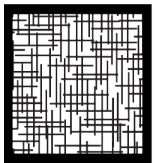
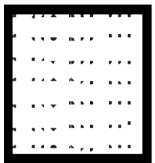
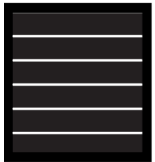
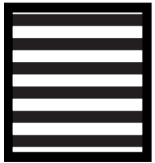
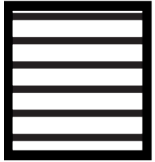
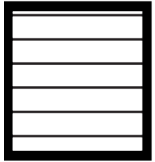
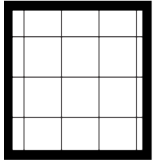


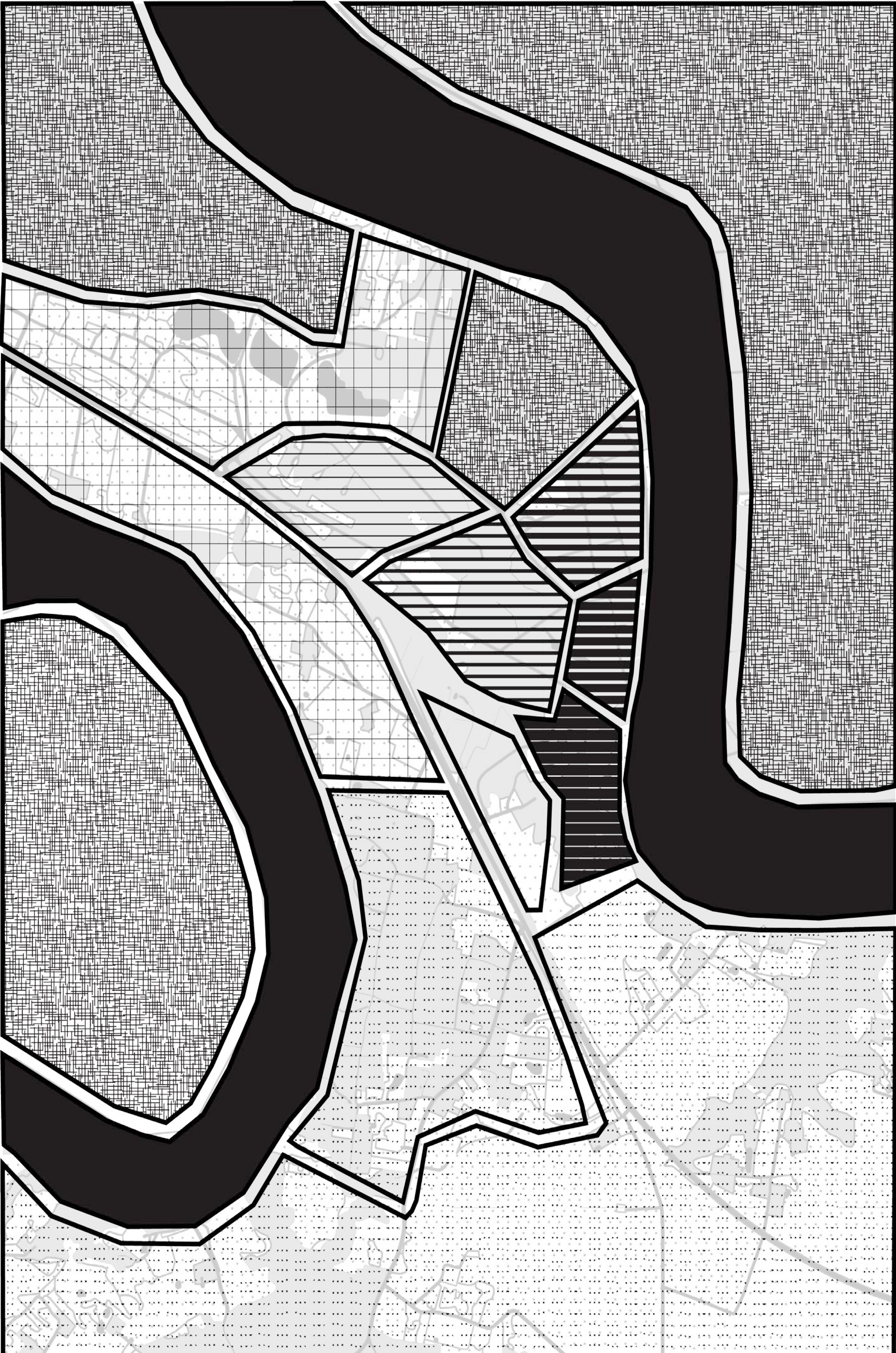
Visual identity zones

Within the ever-evolving realm of urban and landscape design, the concept of visual identity zones is a valuable tool for understanding and shaping the character of specific locations.

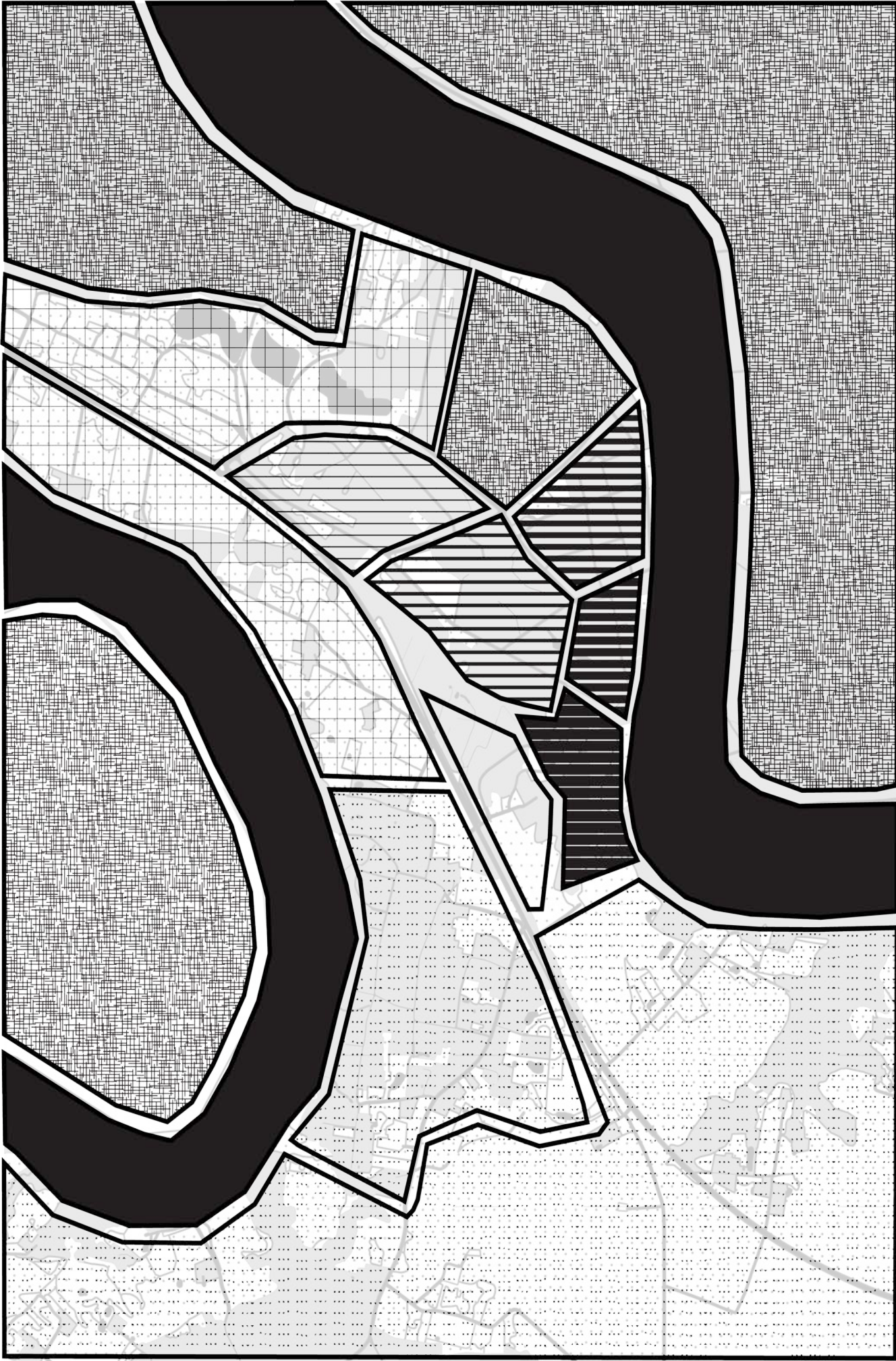
These zones can be defined as distinct areas within a city or landscape that possess a unified and recognizable visual language. This language manifests through a combination of tangible elements, including:

- Landform
- Vegetation
- Water
- Color
- Adjacent scenery
- Compositional fram
- Composition - harmony

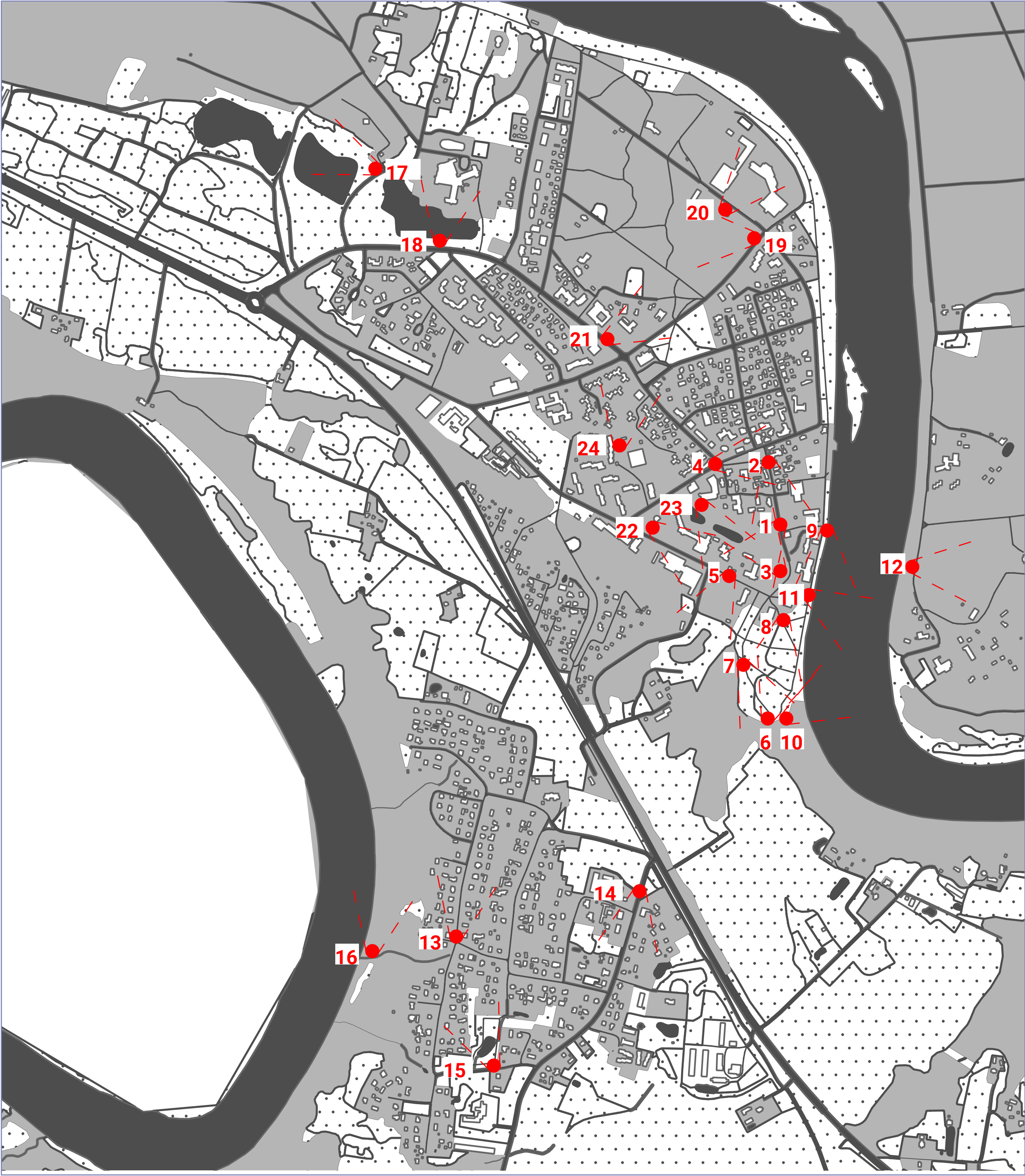
	Riverside
	Forest / park
	Village / fields
	Vytautas hill / park / oldtown
	Old town / Tulpė SPA
	Old villas
	Soviet complexes / apartments
	New development
	Vytautas, Ego SPA / vacant fields



Visual identity zones



Viewpoint



Old town



Evaluation criteria	Points 0 - 3
Landform	2
Vegetation	3
Water	0
Built-up area	3
Color	2
Adjacent scenery	2
Scarcity	2
Composition - spatial landmark hierarchy	2
Composition - Harmony	3
SUM	19

1

3

Evaluation criteria	Points 0 - 3
Landform	2
Vegetation	3
Water	1
Built-up area	3
Color	3
Adjacent scenery	2
Scarcity	2
Composition - spatial landmark hierarchy	3
Composition - Harmony	3
SUM	21



Evaluation criteria	Points 0 - 3
Landform	1
Vegetation	2
Water	0
Built-up area	3
Color	1
Adjacent scenery	2
Scarcity	1
Composition - spatial landmark hierarchy	2
Composition - Harmony	2
SUM	14

2

4

Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	1
Water	0
Built-up area	2
Color	1
Adjacent scenery	1
Scarcity	1
Composition - spatial landmark hierarchy	1
Composition - Harmony	1
SUM	8



Vytautas hill / park



Evaluation criteria	Points 0 - 3
Landform	3
Vegetation	2
Water	0
Built-up area	1
Color	1
Adjacent scenery	1
Scarcity	2
Composition - spatial landmark hierarchy	1
Composition - Harmony	0
SUM	11

5

7

Evaluation criteria	Points 0 - 3
Landform	3
Vegetation	3
Water	0
Built-up area	1
Color	3
Adjacent scenery	3
Scarcity	3
Composition - spatial landmark hierarchy	2
Composition - Harmony	3
SUM	21



Evaluation criteria	Points 0 - 3
Landform	3
Vegetation	3
Water	3
Built-up area	3
Color	2
Adjacent scenery	3
Scarcity	2
Composition - spatial landmark hierarchy	3
Composition - Harmony	3
SUM	25

6

8

Evaluation criteria	Points 0 - 3
Landform	3
Vegetation	3
Water	0
Built-up area	0
Color	1
Adjacent scenery	3
Scarcity	3
Composition - spatial landmark hierarchy	2
Composition - Harmony	3
SUM	18



Nemunas river side



Evaluation criteria	Points 0 - 3
Landform	2
Vegetation	1
Water	3
Built-up area	2
Color	2
Adjacent scenery	3
Scarcity	1
Composition - spatial landmark hierarchy	2
Composition - Harmony	2
SUM	18

9

11

Evaluation criteria	Points 0 - 3
Landform	3
Vegetation	3
Water	3
Built-up area	1
Color	2
Adjacent scenery	3
Scarcity	1
Composition - spatial landmark hierarchy	0
Composition - Harmony	2
SUM	18



Evaluation criteria	Points 0 - 3
Landform	2
Vegetation	3
Water	3
Built-up area	1
Color	2
Adjacent scenery	2
Scarcity	1
Composition - spatial landmark hierarchy	0
Composition - Harmony	1
SUM	15

10

12

Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	2
Water	0
Built-up area	0
Color	2
Adjacent scenery	1
Scarcity	0
Composition - spatial landmark hierarchy	0
Composition - Harmony	2
SUM	7



Birštono vienkiemis

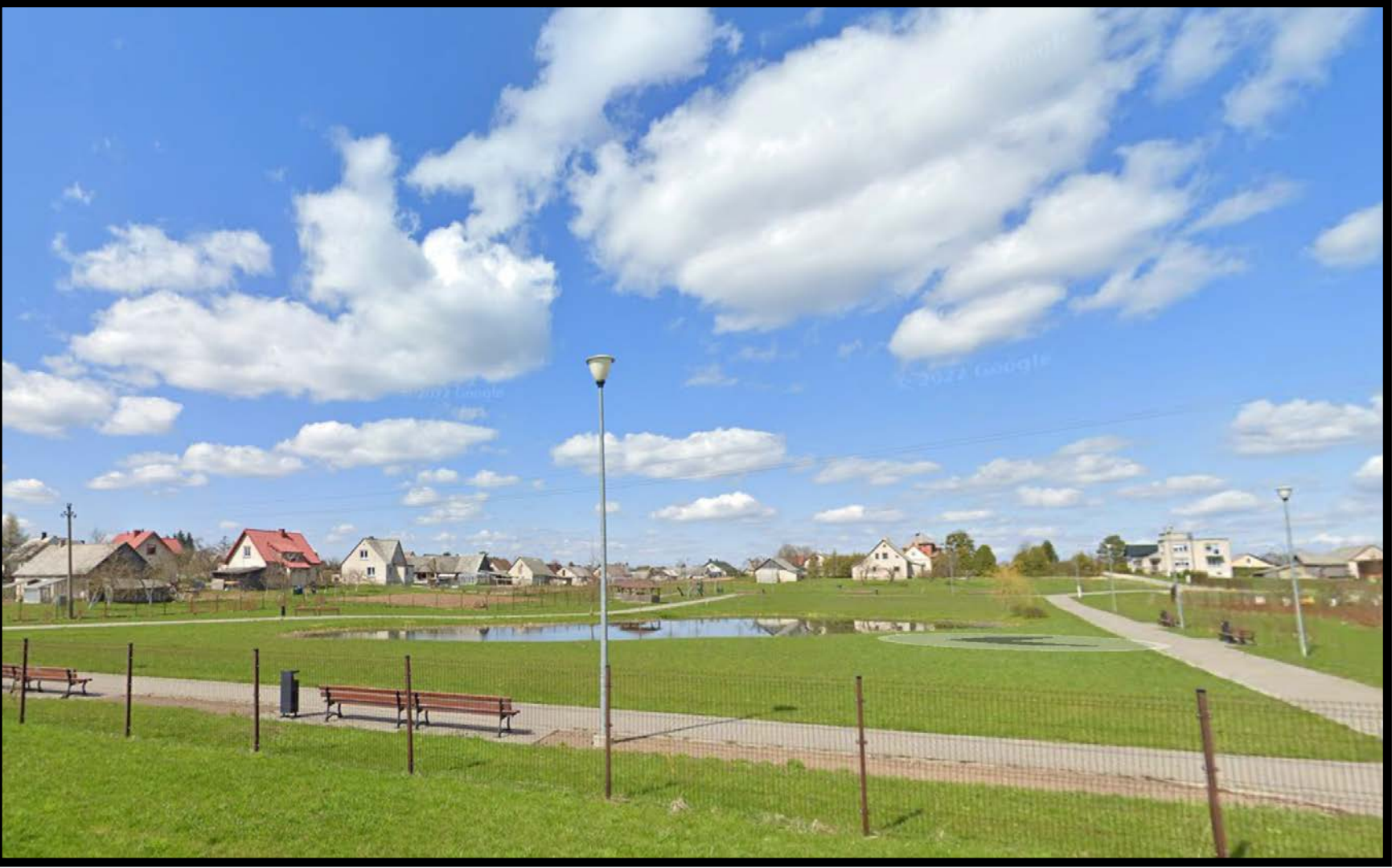


Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	2
Water	0
Built-up area	1
Color	2
Adjacent scenery	1
Scarcity	0
Composition - spatial landmark hierarchy	1
Composition - Harmony	1
SUM	7

13

15

Evaluation criteria	Points 0 - 3
Landform	1
Vegetation	1
Water	1
Built-up area	1
Color	2
Adjacent scenery	1
Scarcity	0
Composition - spatial landmark hierarchy	1
Composition - Harmony	1
SUM	9



Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	2
Water	0
Built-up area	0
Color	2
Adjacent scenery	2
Scarcity	0
Composition - spatial landmark hierarchy	2
Composition - Harmony	2
SUM	8

14

16

Evaluation criteria	Points 0 - 3
Landform	2
Vegetation	2
Water	3
Built-up area	0
Color	1
Adjacent scenery	3
Scarcity	1
Composition - spatial landmark hierarchy	2
Composition - Harmony	3
SUM	17



Vytautas, Eglė SPA



Evaluation criteria	Points 0 - 3
Landform	1
Vegetation	2
Water	2
Built-up area	0
Color	1
Adjacent scenery	2
Scarcity	0
Composition - spatial landmark hierarchy	0
Composition - Harmony	2
SUM	10

17

19

Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	3
Water	0
Built-up area	0
Color	2
Adjacent scenery	2
Scarcity	2
Composition - spatial landmark hierarchy	1
Composition - Harmony	3
SUM	13



Evaluation criteria	Points 0 - 3
Landform	2
Vegetation	1
Water	3
Built-up area	2
Color	2
Adjacent scenery	2
Scarcity	1
Composition - spatial landmark hierarchy	1
Composition - Harmony	1
SUM	15

18

20

Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	2
Water	0
Built-up area	2
Color	1
Adjacent scenery	1
Scarcity	0
Composition - spatial landmark hierarchy	2
Composition - Harmony	2
SUM	10



Soviet complexes

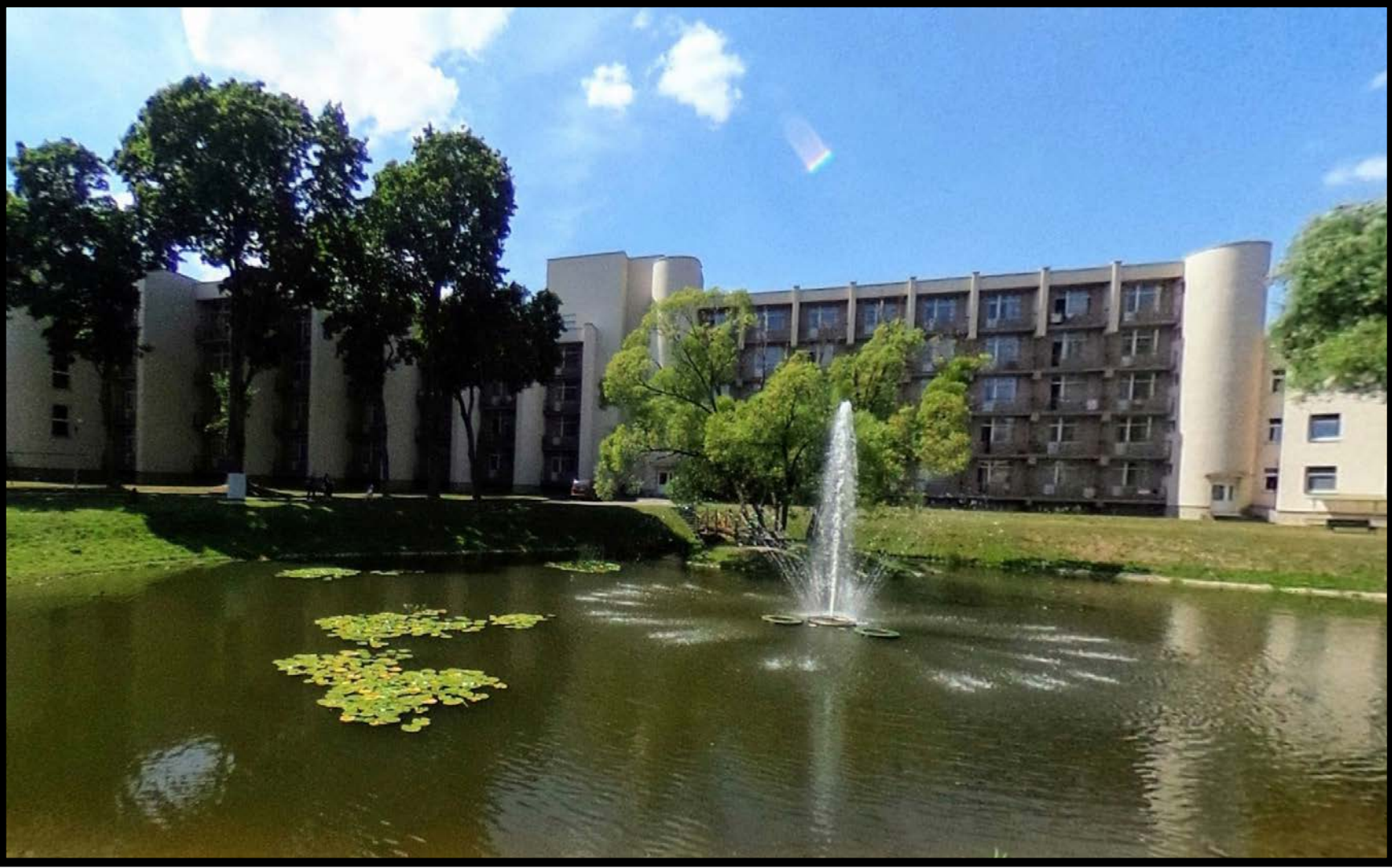


Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	2
Water	0
Built-up area	2
Color	2
Adjacent scenery	2
Scarcity	0
Composition - spatial landmark hierarchy	2
Composition - Harmony	2
SUM	12

21

23

Evaluation criteria	Points 0 - 3
Landform	2
Vegetation	3
Water	3
Built-up area	2
Color	1
Adjacent scenery	2
Scarcity	1
Composition - spatial landmark hierarchy	2
Composition - Harmony	3
SUM	19



Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	2
Water	0
Built-up area	1
Color	2
Adjacent scenery	1
Scarcity	0
Composition - spatial landmark hierarchy	2
Composition - Harmony	1
SUM	9

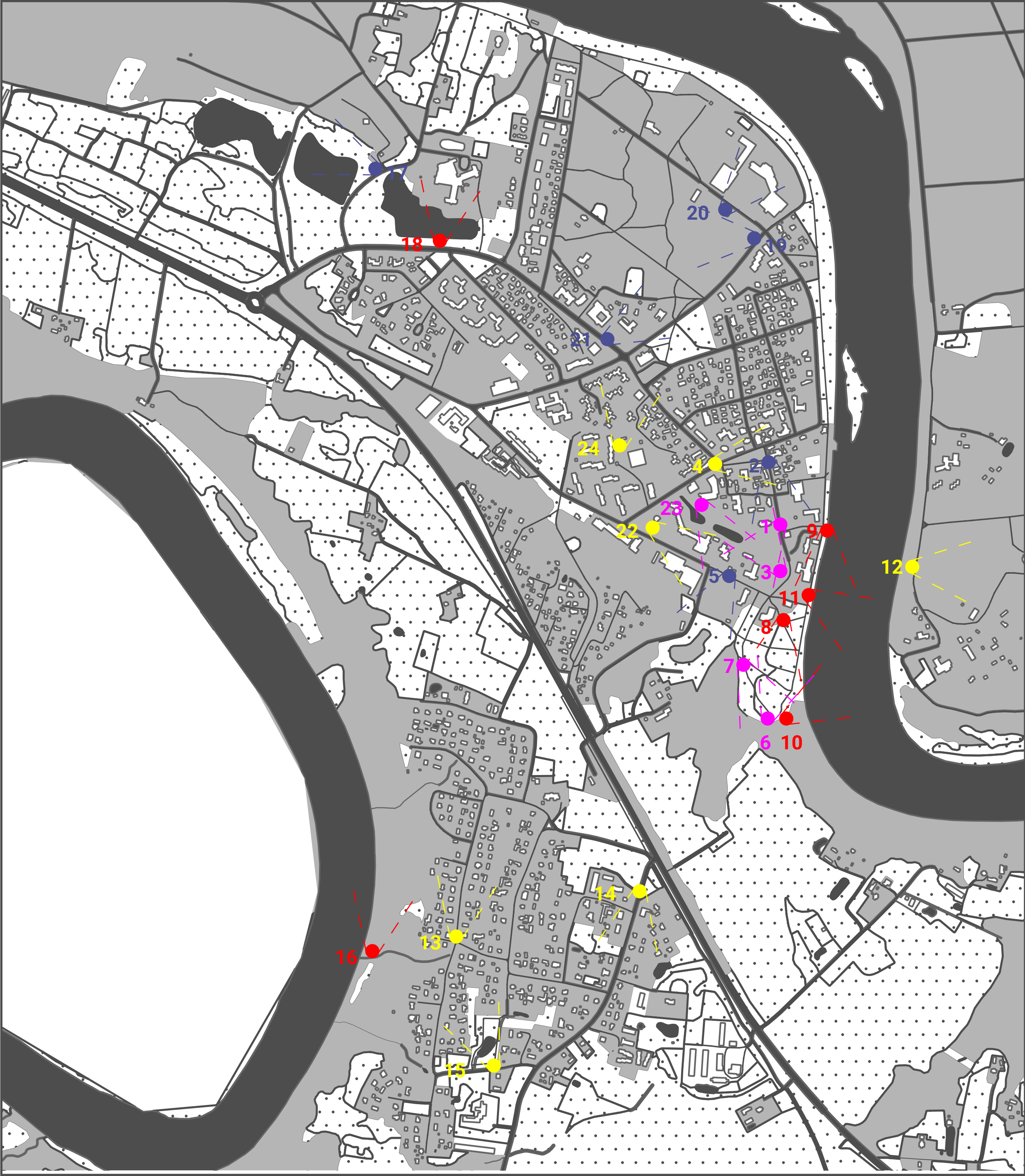
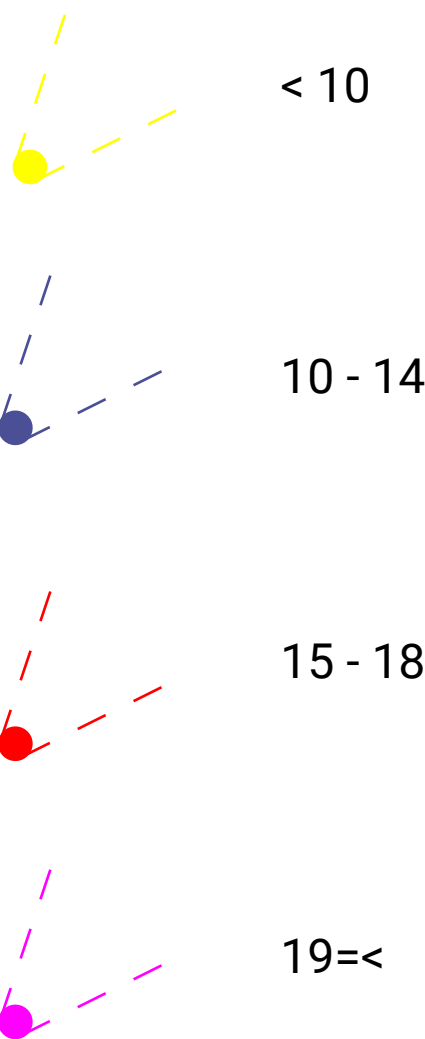
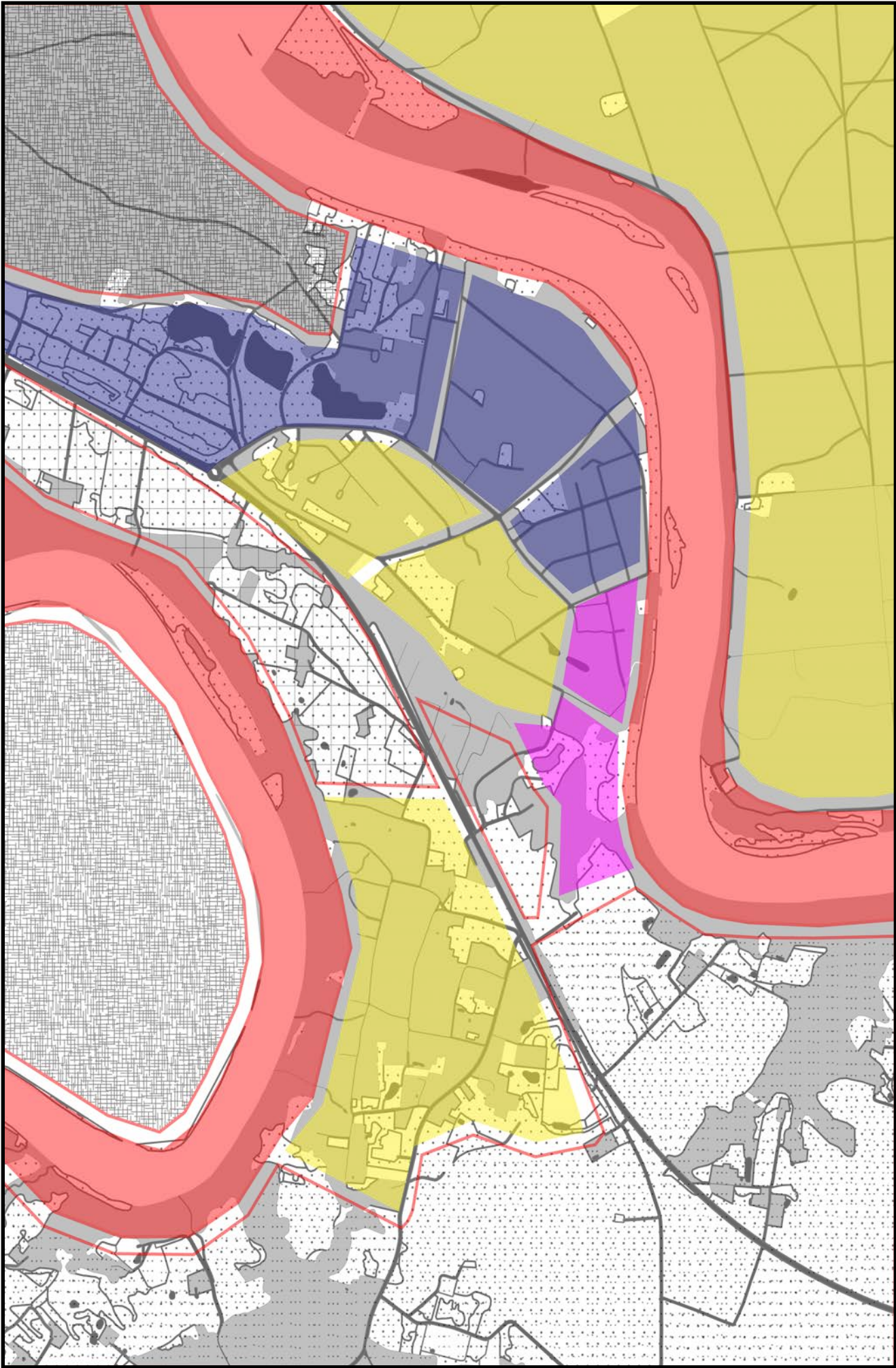
22

24

Evaluation criteria	Points 0 - 3
Landform	0
Vegetation	1
Water	0
Built-up area	1
Color	2
Adjacent scenery	1
Scarcity	0
Composition - spatial landmark hierarchy	1
Composition - Harmony	2
SUM	8



Visual identity zones

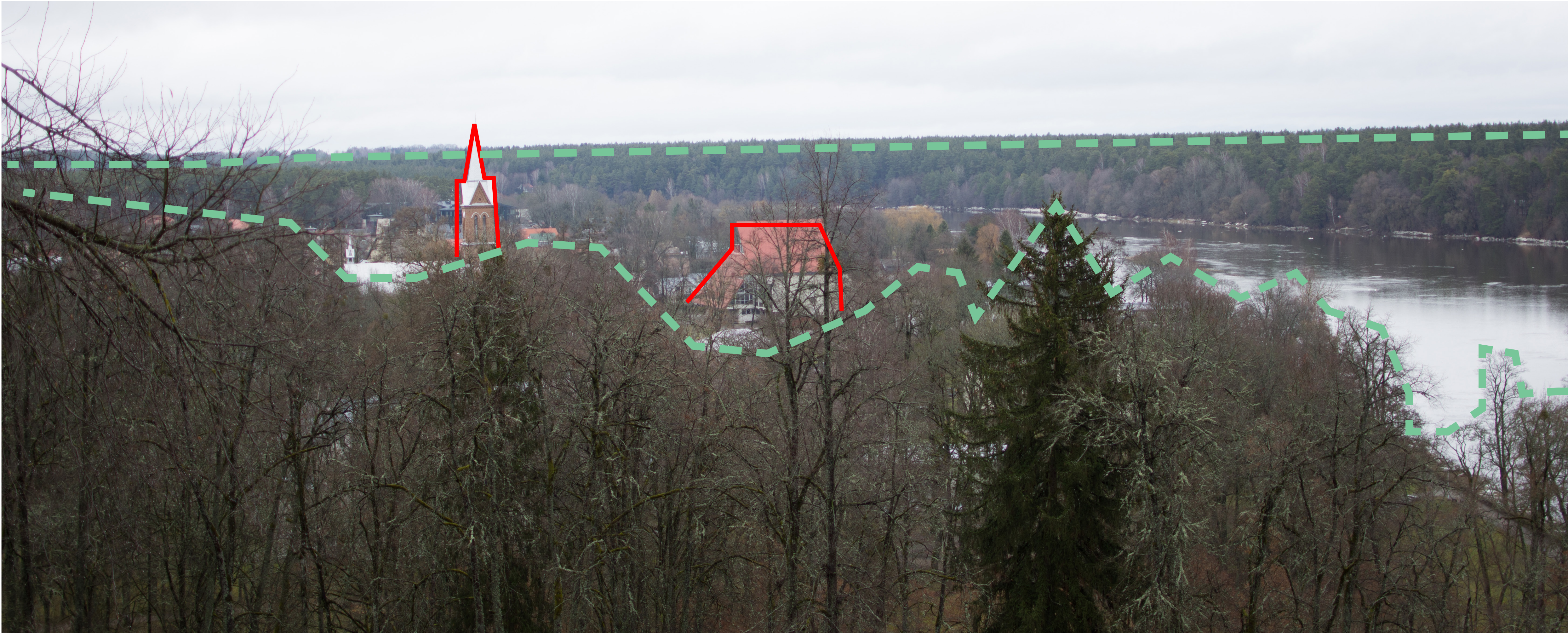


Key views capturing essence of a place

Key iconic visual images capture the essence of a place. These are often landmarks, skylines, or specific streetscapes that become instantly recognizable and synonymous with the city they represent.



Key visual identity panoramas



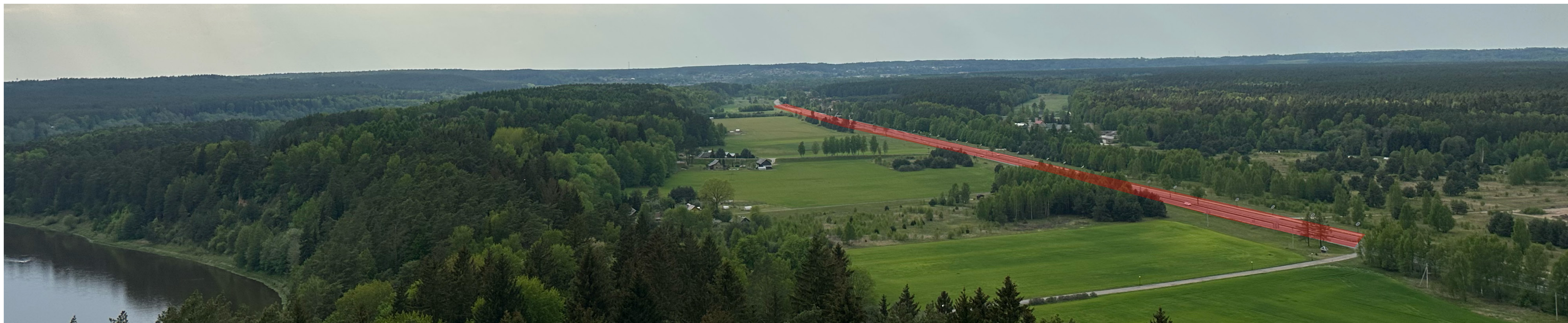
Key visual identity panoramas



Key visual identity panoramas



Key visual identity panoramas



Key visual identity shillouettes





Key visual identity shillouettes



Key visual identity shillouettes

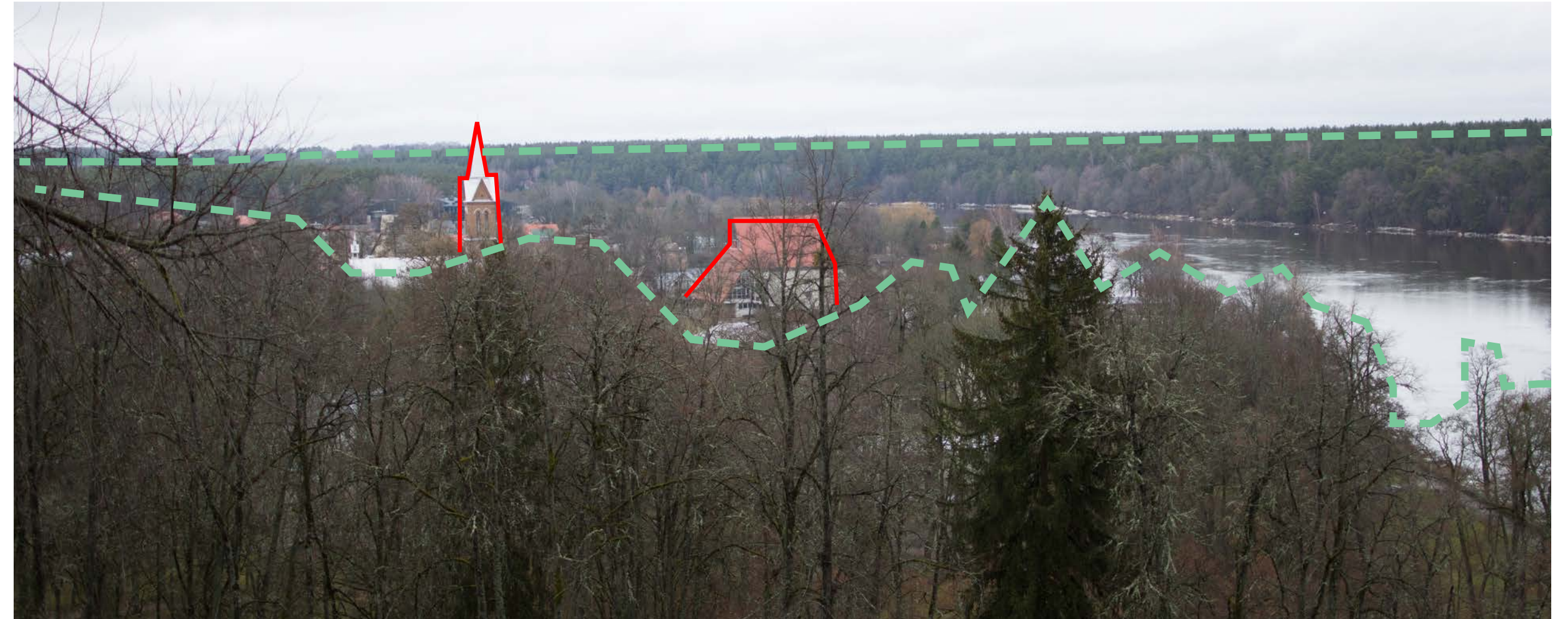


Key visuals

capturing essence of a place

Conclusions

Birštonas is made special by the nature that surrounds it. It lacks highrise landmarks that make it instantly recognisable. Some structures like the Kurhaus are iconic, but sense it blends into the landscape, it could be said that the surrounding forrests and the river take higher priority. That might be a problem, when creating an instantly recognisable city image.



Manifesto

The dominants

Birštonas identity elements are :

The nature - surrounding forest landscape, that is interspersed in the town itself. Tree canopy dome in the town streets create a unique, obscured visual field.

The river - Birštonas is a healing mineral water resort, bounded and shackled by Nemunas river.

The terrain - located in a river valley, there is a greatly limited amount of panoramic viewpoints overlooking the landscape, because of the dense vegetation obscuring the view.

Because of Birštonas nature morphology, its visual identity revolves around an idea of a 'town merged with the forest', what is great for a resort.

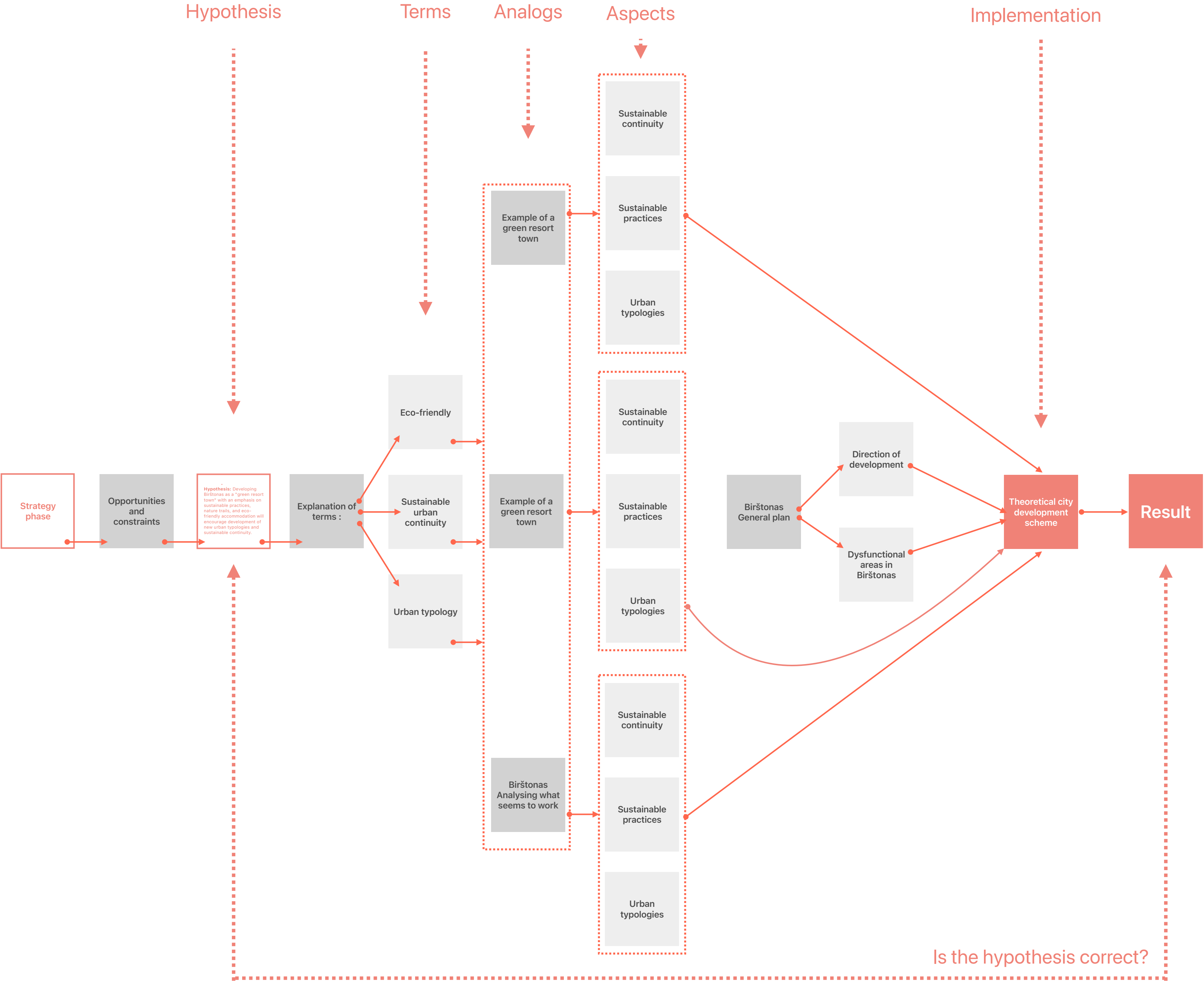
However, some parts of Birštonas are more pleasing than the others. One of these zones is Birštonas old town, in whose views the church tower is almost always present, acting as a beacon in the forest. My analysis conclusions are : if Birštonas were to grow, and enhance its identity, it would need to focus on the opposite river shore, that has the needed identity elements, link both shores together, and raise a new dominant, that would overlook the people.



Strategy phase

The strategy phase starts with opportunities and constraints of Birštonas.

After the general overlook, a hypothesis is formed, that will determine the direction of further analysis.



Opportunities and constraints

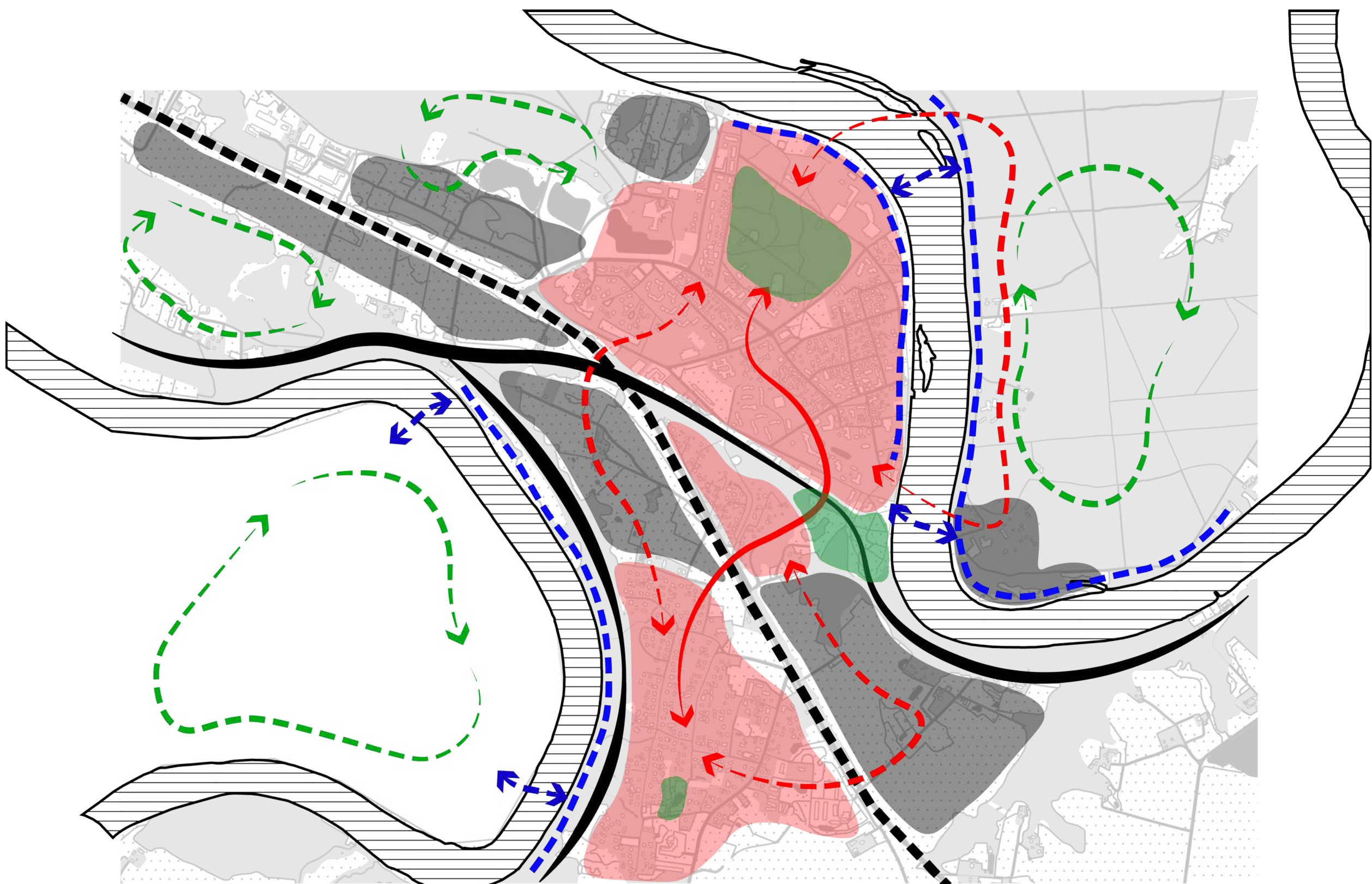
Birštonas

Birštonas is a small town, that is surrounded by highly valuable land. It has a huge potential for development and growth. Although when considering growth, it is important not to hurt the essential natural frame of Birštonas, that makes it valuable and unique. It is important to remember, that Birštonas first of all is a recreational town, and its hard to image recreation without nature.

First opportunity is to connect Birštonas and Vienkiemis so they would be more accesable and walkable. These territories are highly contrasting, so it is essential to develop Vienkiemis in an eco-friendly way, keeping similar values as the main part of Birštonas. This would encourage development in Vienkiemis and release the pressure of off city center, that already is highly urbanised.

Second opportunity is to ease the access to the Nemunas river as well as developing the recreasional infrastructure there. Birštonas has a huge potential for water recreation considering the ammount of it and favourable aspects as: slow river speed, horizontal width, gentle terrain gradiant in most parts. Ferries, pedestrian brdiges could be considered aswell.

Birštonas neighbours a large ammount of farming land, that could host eco-friendly accomodation to satisfy the hunger for development, turned into green spaces, parks. Although that must planned thouroughly, to limit urban sprawl, encourage walkability.



Opportunities

- Extensively urbanized territories
- Needed connection
- Possible connections
- Possible ferry connections
- Nature trails
- Riverside recreation

Constraints

- A16 Prienai - Vilnius highway
- Hill slope
- Nemunas river

General

- Urbanised territories
- Main parks

SWOT analysis

Strenghts

Natural Assets: Birštonas boasts stunning natural beauty with the Nemunas River flowing alongside it and surrounded by forests. This provides opportunities for creating a car-free, pedestrian-friendly environment with walking/biking paths and green spaces.

Spa and Wellness Reputation: Birštonas is renowned for its mineral waters and spas, making it a well-established health and wellness destination. This reputation can be leveraged to attract further investment in spa facilities, medical tourism, and wellness retreats.

Compact Size: Birštonas' relatively small size allows for easier walkability and creates a more intimate atmosphere. This can be further emphasized through well-designed pedestrian areas and plazas.

Cultural Heritage: Birštonas has a rich history with architectural gems like the historic Vytautas Park. Preserving and promoting this heritage can attract visitors interested in Lithuanian culture.

Unique Microclimate: Birštonas has a unique microclimate known for its fresh air and therapeutic qualities. This further enhances its appeal as a health resort, attracting visitors seeking natural ways to improve their well-being.

Weaknesses

Seasonal Dependence: Birštonas's tourism industry relies heavily on the summer season. This can lead to economic fluctuations and under-utilization of resources during the off-season.

Limited Infrastructure: While Birštonas has a charming appeal, its infrastructure, such as roads or public transportation, might not be sufficient to accommodate significant growth in tourism or population.

Limited Entertainment Options: Beyond its focus on wellness, Birštonas might have a limited variety of entertainment options, particularly during off-peak seasons. This could restrict its appeal to a wider range of tourists.

Vulnerability to Development Pressures: As Birštonas grows, there's a risk of poorly planned development that could disrupt the town's natural beauty and unique atmosphere. Careful planning and regulations are needed to ensure new development complements Birštonas's character.

Brain Drain: Smaller towns like Birštonas can face challenges retaining younger generations who might seek educational or job opportunities in larger cities. Investing in educational facilities and attracting businesses could address this.

Opportunities

Vision: Imagine Birštonas transformed - a seamlessly connected town where the Nemunas River acts as a central artery, pulsing with life. Pedestrian and bicycle bridges gracefully span the water, creating a unified urban fabric. These bridges aren't just functional, but become iconic landmarks, offering stunning vistas and serving as vibrant public spaces. Skylines on each bank of the river complement each other, showcasing Birštonas' unique character, but with a sense of shared identity.

Thematic Districts: Create distinct districts within Birštonas with unique atmospheres. For example, a "Forest Therapy District" with cabins nestled in the woods offering guided nature walks and mindfulness practices. An "Arts & Wellness District" could house art galleries with wellness themes and studios offering creative workshops like pottery or dance focused on relaxation.

"Glamping" Integration: Cater to the growing trend of "glamping" (glamorous camping) by offering luxurious, eco-friendly accommodations amidst nature. Imagine luxury tents with spa treatments on-demand or tree-house cabins overlooking the Nemunas.

Digital Detox Retreats: Capitalize on the desire to disconnect from technology in today's digital world. Offer "digital detox" retreats with designated phone-free zones, technology lockers, and activities that promote mindfulness and connection with nature.

Interactive Nature Experiences: Develop interactive nature experiences that blend technology with the outdoors. Imagine augmented reality trails through the forest that educate visitors about local flora and fauna, or light and sound installations that enhance the natural beauty of the Nemunas River at night.

Constraints

Environmental Concerns: Development near the Nemunas River needs careful consideration to avoid environmental damage. Strict adherence to sustainability principles and conducting thorough environmental impact assessments will be essential.

Maintaining Town Character: New development must be sensitive to Birštonas' existing charm and architectural heritage. Uncontrolled development could lead to a generic, characterless town. Clear design guidelines and regulations will be needed to ensure new structures complement Birštonas' unique identity.

Nemunas River as a Physical Barrier: The Nemunas River, while a beautiful asset, also acts as a physical barrier. The current lack of bridges creates a disconnect between the districts on either side, hindering a sense of unified community and limiting pedestrian and bicycle traffic across the river. The hilly terrain on the southern bank adds another layer of complexity for creating easy connections.

Socioeconomic Disparity: Birštonas' districts exhibit a noticeable difference in affluence. The area around Vytautas Park boasts a historic charm and a higher concentration of resorts and spas, attracting wealthier visitors. In contrast, some districts across the river or the main highway might have a more modest economic character. This economic disparity can lead to a sense of division within the town and make it challenging to create a development plan that benefits all residents equally.

Hypothesis

" Developing Birštonas as a "green resort town" with an emphasis on **sustainable practices**, and **eco-friendly accommodation** will encourage development of new **urban typologies** and **sustainable continuity**. "



Explanation of terms

Eco-friendly

Life Cycle Thinking: Considering a building or development's environmental impact throughout its entire lifespan, from material extraction and construction to operation, maintenance, and eventual demolition/renovation. The goal is to minimize resource use and environmental impact at every stage.

Prioritizing Existing Infrastructure: Reusing and revitalizing existing buildings and infrastructure whenever possible is far more eco-friendly than demolition and new construction.

Energy Efficiency: Designing buildings and urban spaces that minimize energy consumption.

Sustainable Materials: Selecting building materials with low environmental impact. This includes using recycled or regionally sourced materials, minimizing embodied energy, and favoring materials with responsible life cycles (e.g., sustainably harvested wood).

Water Conservation: Designing buildings and landscapes that minimize water use. This involves incorporating water-efficient fixtures, harvesting rainwater for irrigation, and promoting drought-tolerant landscaping.

Healthy Indoor Environment: Creating buildings with good ventilation, natural daylight, and healthy building materials to promote occupant health and well-being. This reduces reliance on artificial ventilation and minimizes exposure to harmful indoor pollutants.

Habitat Integration and Biodiversity: Designing buildings and urban spaces that integrate with the natural environment and support local wildlife. This could involve creating green roofs, incorporating native plants in landscaping, and providing nesting boxes for birds.

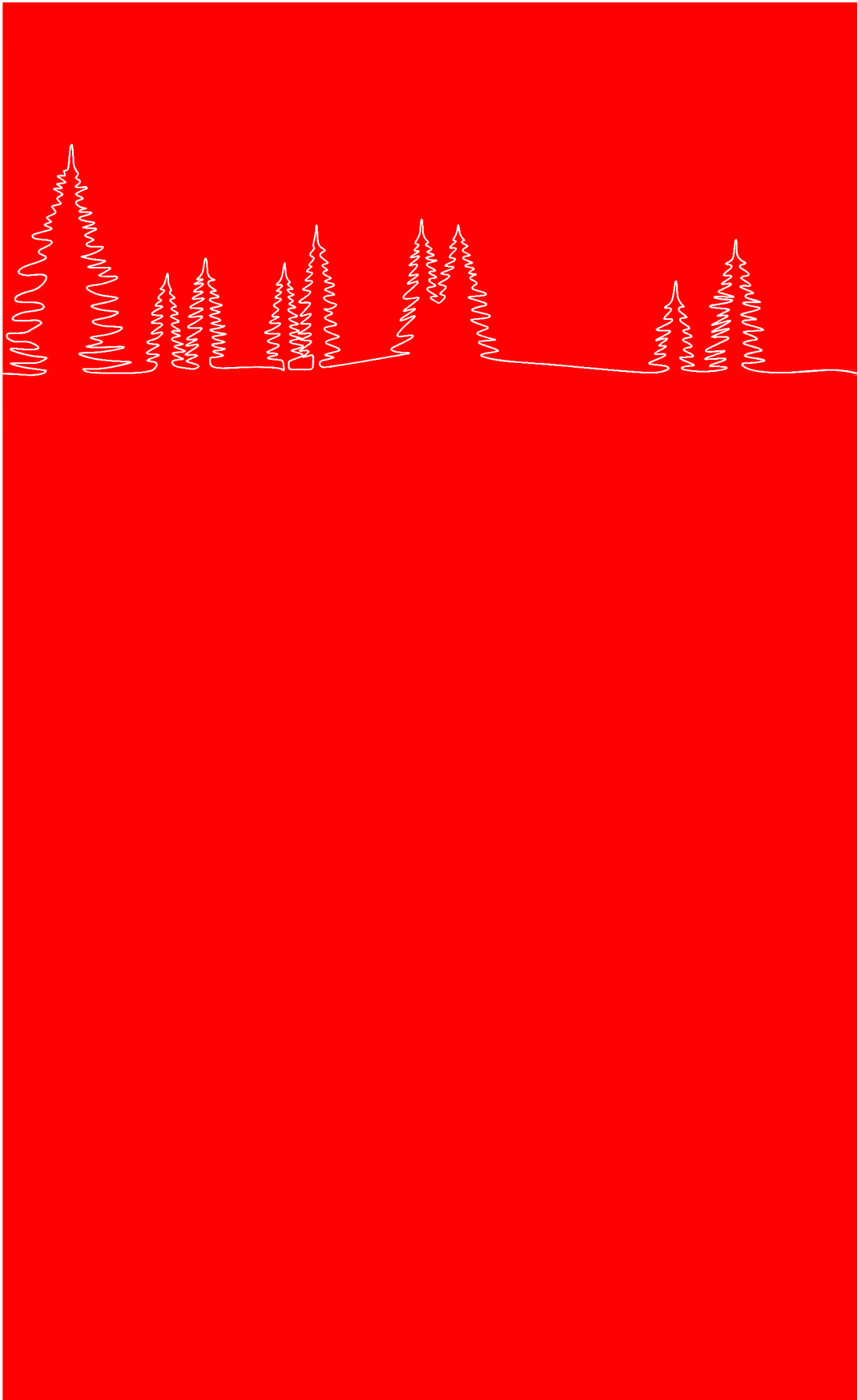
Walkability and Connectivity: Encouraging a walkable and bikeable urban environment reduces reliance on cars, the biggest source of transportation-related emissions. This involves creating a network of pedestrian and cycling paths, mixed-use development, and well-connected public transportation.

Critical Considerations:

Embodied Energy: Don't be fooled by a building's operational efficiency alone. Consider the embodied energy in the materials used. A highly energy-efficient building constructed with materials with high embodied energy might not be truly eco-friendly.

Displacement and Gentrification: Be wary of eco-friendly development projects that displace existing residents or businesses. Sustainable development should benefit the entire community, not just a select few.

Long-Term Maintenance: Eco-friendly features are only effective if properly maintained. Factor in the long-term costs and feasibility of maintaining green infrastructure like green roofs or rainwater harvesting systems.



Example: A Truly Eco-Friendly Building Project:

Imagine a mixed-use development project that revitalizes a historic brownfield site (previously contaminated land). The project incorporates existing structures, uses recycled and locally sourced materials for new construction, and prioritizes passive solar design and energy-efficient systems. Green roofs provide insulation and stormwater management, while native plant landscaping attracts pollinators. The development is located near public transportation and offers dedicated bike lanes, encouraging car-free living. This project exemplifies a holistic approach to eco-friendly architecture and urban development.

By critically evaluating projects based on these points, you can avoid greenwashing and identify developments that truly prioritize environmental sustainability and the well-being of the community.

"Greenwashing is a sustainability charade. Real progress requires transparency and a deep respect for the ecological and social fabric of our cities." - Dr. Nadya Kabanova, urban planning scholar and author of "Cities for All: Reclaiming Public Space in a Divided World."

Explanation of terms

Sustainable Urban Continuity: Weaving the Past, Present, and Future

Sustainable urban continuity sounds idyllic - preserving the past while shaping a vibrant future. But in practice, achieving it requires navigating complexities and avoiding pitfalls. Here's a critical look at some key aspects:

Uncritical Preservation: Freezing a city in time can stifle innovation and ignore the needs of a changing population.

Gentrification: Uncontrolled historic preservation can lead to gentrification, pushing out long-time residents and homogenizing neighborhoods.

Car Dependency: Simply creating bike lanes in a car-centric city might not be enough. Addressing existing car infrastructure and promoting a cultural shift towards active transportation is crucial.

Inefficient Systems: Simply building public transportation doesn't guarantee ridership. Focus on creating a reliable, affordable, and well-connected system that serves the needs of the entire population.

Fragmentation: Isolated green spaces don't create a cohesive network for ecological benefits or community interaction.

Formulaic Development: A monotonous mix of chain stores and generic apartments creates bland, soulless neighborhoods. Development should prioritize local businesses and a unique character.

Focus on New Construction: Neglecting the energy efficiency and sustainability of existing buildings undermines the overall impact. Retrofitting existing structures is crucial.

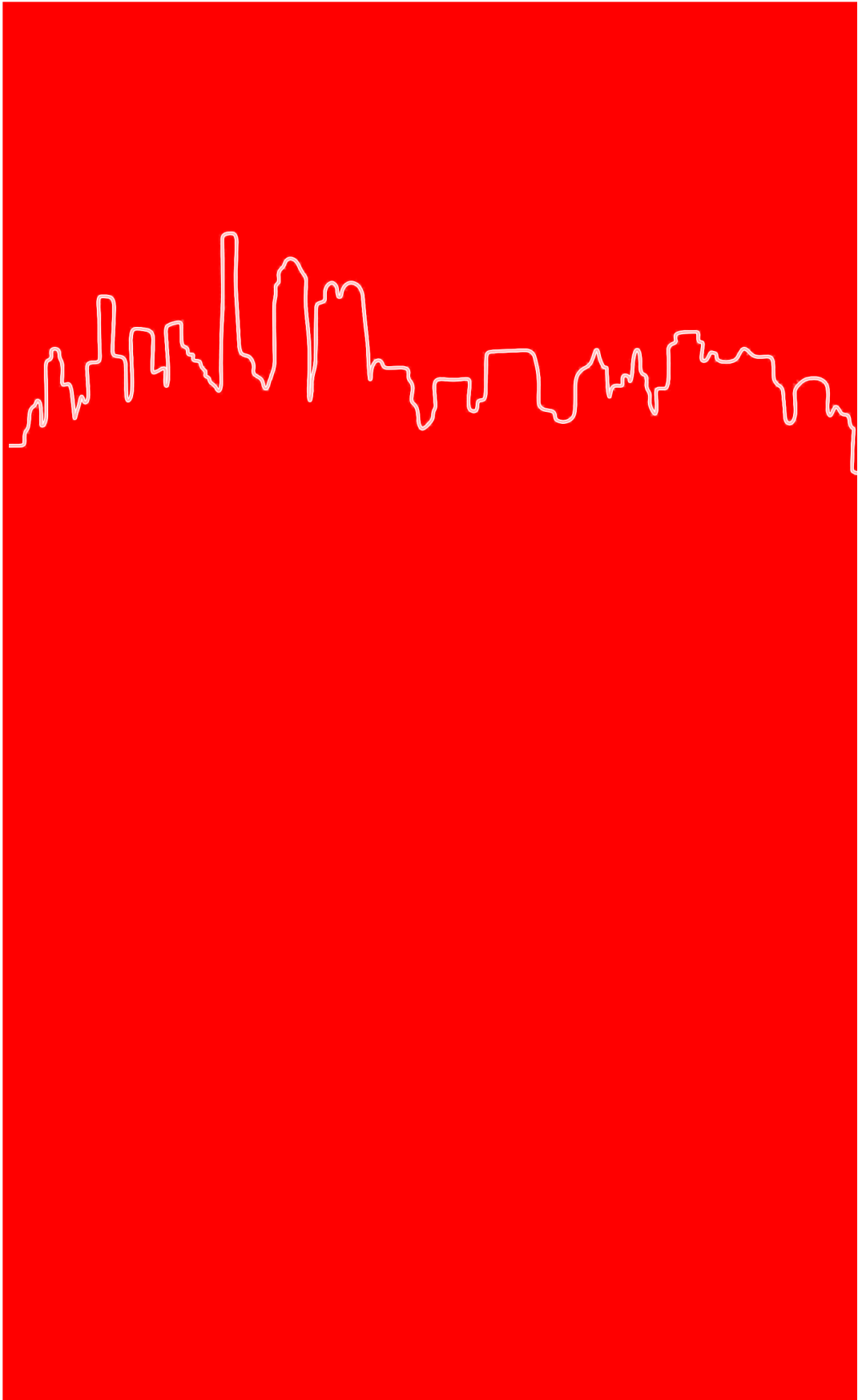
Tokenism: Top-down planning disguised as engagement doesn't lead to genuine buy-in. Community participation must be meaningful and influence decision-making.

Critical Considerations:

Preservation Paradox: Overly strict historic preservation can stifle progress. Cities risk becoming beautiful museums, failing to adapt to changing needs. Find the balance: respect heritage while creating a vibrant present.

Car-Centric Trap: Don't just add bike lanes to car-dominated streets. Embrace a complete streets approach, reallocating space towards pedestrians, cyclists, and public transit. Make car ownership less essential.

Green Gentrification: Sustainable development shouldn't displace residents. Focus on inclusive strategies, invest in existing communities, and ensure everyone benefits from the green improvements.



Example of True Sustainable Urban Continuity:

Imagine a revitalization project in a historic city district. Vacant historic buildings are not simply preserved, but adaptively reused as vibrant community centers, art studios, or local shops. Wide sidewalks and dedicated bike lanes encourage walking and cycling, while a new tram line seamlessly connects the district to other parts of the city. The project prioritizes mixed-use development with a focus on locally owned businesses, ensuring a unique and vibrant neighborhood character. Existing residential buildings are retrofitted for improved energy efficiency, while new construction adheres to strict sustainability standards.

Crucially, the project prioritizes extensive community engagement. Residents participate in design workshops, voicing their concerns and aspirations for the district. This project exemplifies sustainable urban continuity - it respects the past, fosters a vibrant future, and empowers the community to be active stewards of their evolving urban environment.

"The true test of sustainable urban continuity isn't just preserving buildings; it's preserving the spirit of a city. It's about honoring the past while fostering vibrant communities where history and progress dance in harmony." - Li Wei, architect and author of "Cities of Memory: Weaving the Past into the Urban Fabric."

Explanation of terms

Urban typology

At its core, an urban typology is a way of classifying different city areas based on their key characteristics. Imagine it like **sorting Legos** - you group them by size, shape, and function. In urban planning, typologies group buildings and spaces based on things like:

Form: This includes physical characteristics like building heights, density, street patterns, and open spaces.

Function: What activities take place in the area? Is it residential, commercial, industrial, or a mix?

History: How did the area develop? Was it a planned development or an organic growth over time?

Urban typologies are **not rigid categories** but rather a **spectrum**. Many areas might exhibit characteristics of multiple typologies, requiring a nuanced approach to classification.

Value:

Urban typologies are the **building blocks for understanding a city**. By classifying neighborhoods based on features like density, function, and history, planners gain valuable insights. This knowledge helps guide future development, promoting sustainability through walkable neighborhoods or green spaces. It also informs efforts to preserve a city's unique character and facilitates communication between planners, architects, and residents. In short, urban typologies bridge the gap between a city's past and its future, **ensuring development is informed and intentional**.

Why it is important to develop new urban typologies?

Responding to Community Needs: Evolving cities require evolving typologies that reflect the aspirations and needs of their residents.

Fostering Resilience: Cities face challenges like climate change and rising sea levels. Rethinking urban typologies allows for incorporating features like green infrastructure or flood protection measures, creating more resilient urban fabrics that can adapt to changing environmental conditions.

Enhancing Sustainability: Traditional models often prioritize car dependence and sprawl. New typologies can focus on walkability, mixed-use development, and integration with public transportation, promoting a more sustainable and environmentally friendly urban environment.

Promoting Diversity and Innovation: Rigid adherence to existing typologies can lead to homogenous urban landscapes. Developing new typologies allows for experimentation and the creation of vibrant, diverse neighborhoods that cater to a wider range of needs and lifestyles.

Accommodating Change: Traditional typologies might not address the needs of a constantly changing population. New demographics, economic realities, and technological advancements necessitate typologies that can adapt and evolve. Imagine incorporating co-working spaces into residential areas or designing urban farms within dense districts.



Example of a courtyard typology. This typology is characterized by a cluster of buildings arranged around a central, shared courtyard space.

Key characteristics:

Compact Development: Buildings are typically two-to-four stories high and arranged close together, maximizing land use and creating a sense of community within the courtyard.

Shared Courtyard: The central courtyard serves as a vital social space for residents. It might be used for children's play, communal gardens, or simply socializing.

Mixed-Use: Courtyard typologies can be found in both residential and commercial settings. Historically, ground floors might have housed shops or workshops, with apartments above.

Benefits : Sense of community, Efficient land use, Climate control

"A good city is like a good melody. The parts are interdependent. You can't play one part without the others." - Christopher Alexander, architect and author of "A Pattern Language."

Vauban District, Freiburg, Germany

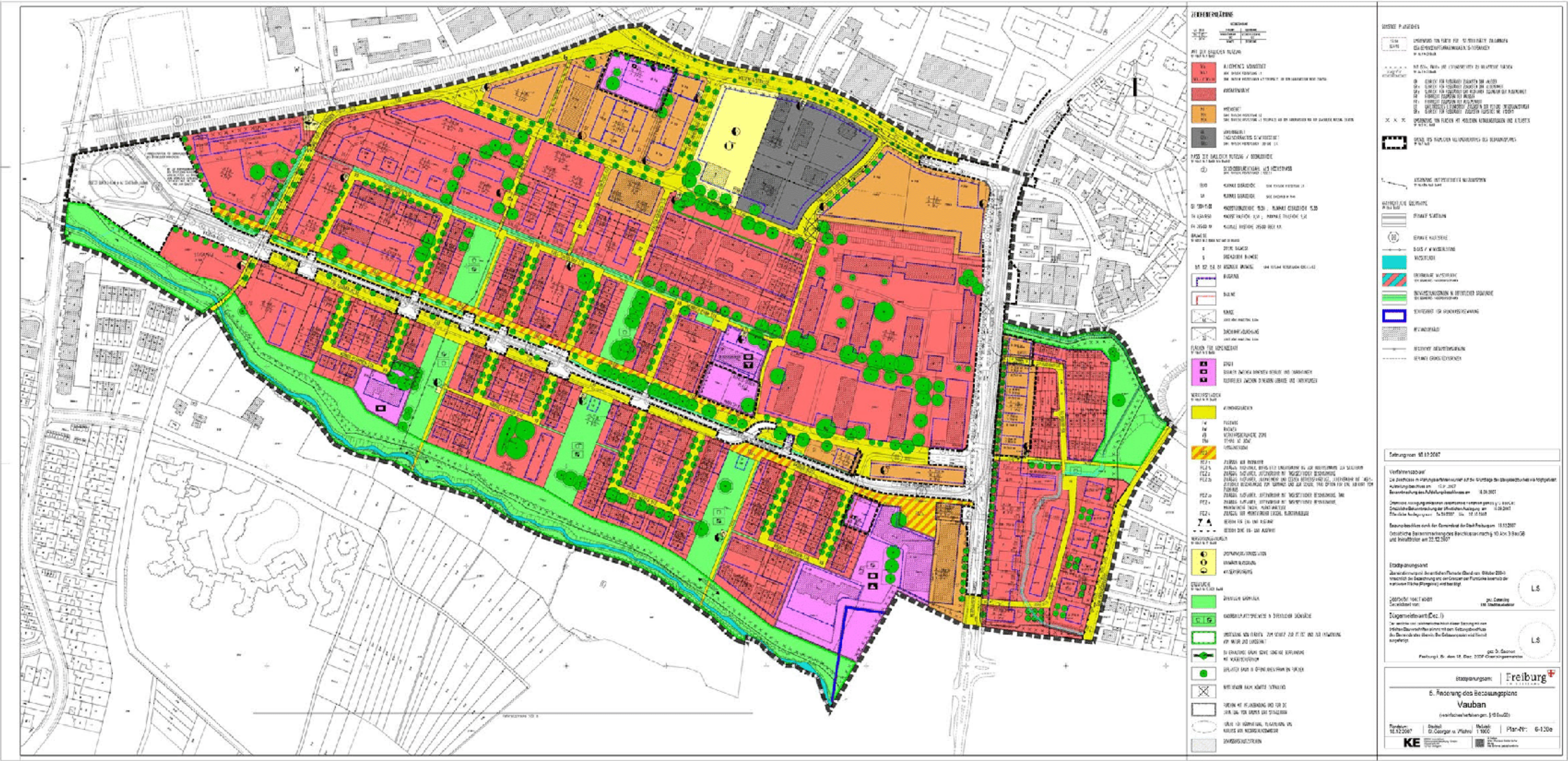
Adopt life cycle thinking prioritising sustainable materials.

"The World's Most Successful Model for Sustainable Urban Development?"

[-smartcitiesdive.com](http://smartcitiesdive.com)

Before the development of the Vauban district in Freiburg, Germany, the area was primarily occupied by military barracks and facilities. The site was part of the former Vauban Barracks, which were used by the French military until the early 1990s.

When the French military withdrew from Freiburg in 1991, the barracks became vacant, leaving a significant amount of land available for redevelopment. Instead of demolishing the existing buildings entirely, the city of Freiburg opted for adaptive reuse and redevelopment of the former military site.



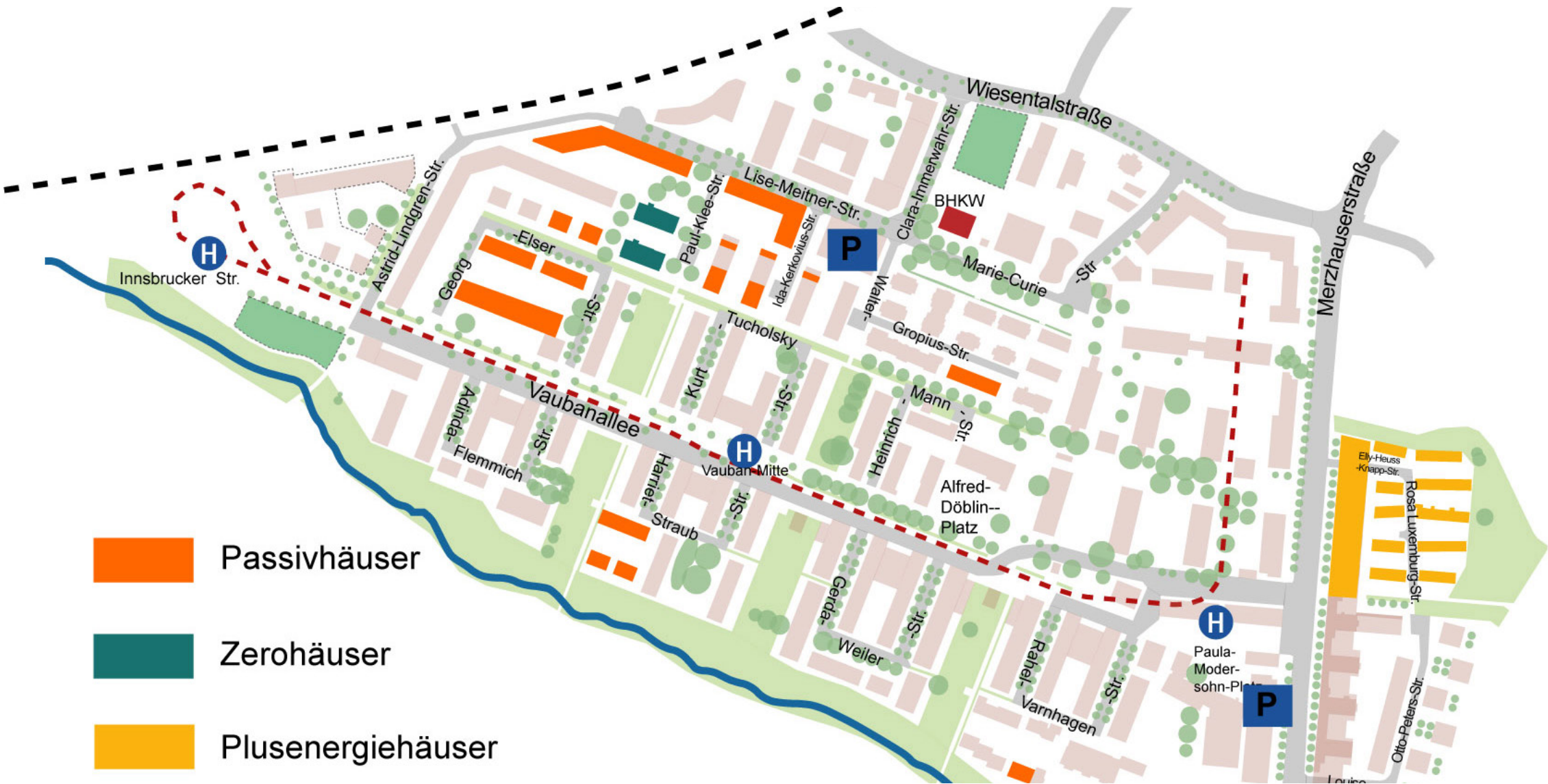
Vauban District, Freiburg, Germany

Adopt life cycle thinking prioritising sustainable materials.

The Vauban district, developed in the late 1990s and early 2000s, prioritized sustainable materials in its construction. Buildings in the district are designed using environmentally friendly materials such as wood, clay, and recycled materials.

The planning and development of the Vauban district embraced life cycle thinking by considering the environmental impacts of materials and infrastructure over their entire life cycle. This approach involved evaluating factors such as resource extraction, manufacturing, transportation, construction, use, and end-of-life disposal. By prioritizing materials and design strategies with lower life cycle impacts, the Vauban district aimed to minimize its ecological footprint.

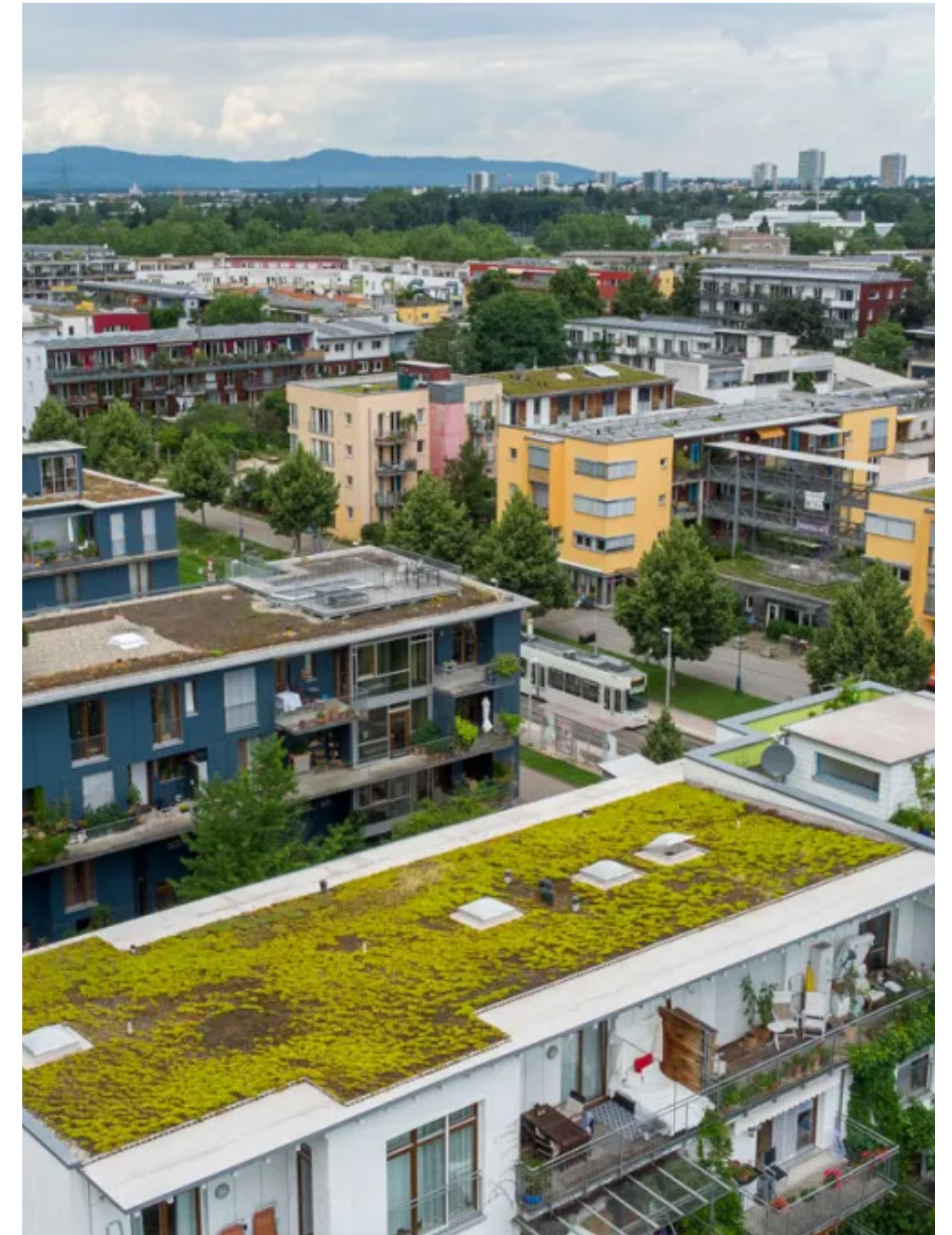
The Vauban district is designed for long-term sustainability and resilience. Its buildings and infrastructure are built to high standards of durability and adaptability, minimizing maintenance needs and ensuring longevity. Additionally, its focus on renewable energy, energy efficiency, and sustainable transportation reduces its vulnerability to future energy crises and climate-related impacts.



Vauban District, Freiburg, Germany

Adopt life cycle thinking prioritising sustainable materials.

Energy efficiency is a key focus of the Vauban district. Buildings are designed to high energy efficiency standards, incorporating features such as passive solar design, superior insulation, and efficient heating and cooling systems. Additionally, the district utilizes renewable energy sources such as solar panels on rooftops and facades, as well as district heating networks powered by renewable sources. These measures reduce energy consumption, lower greenhouse gas emissions, and promote resilience to energy supply disruptions.



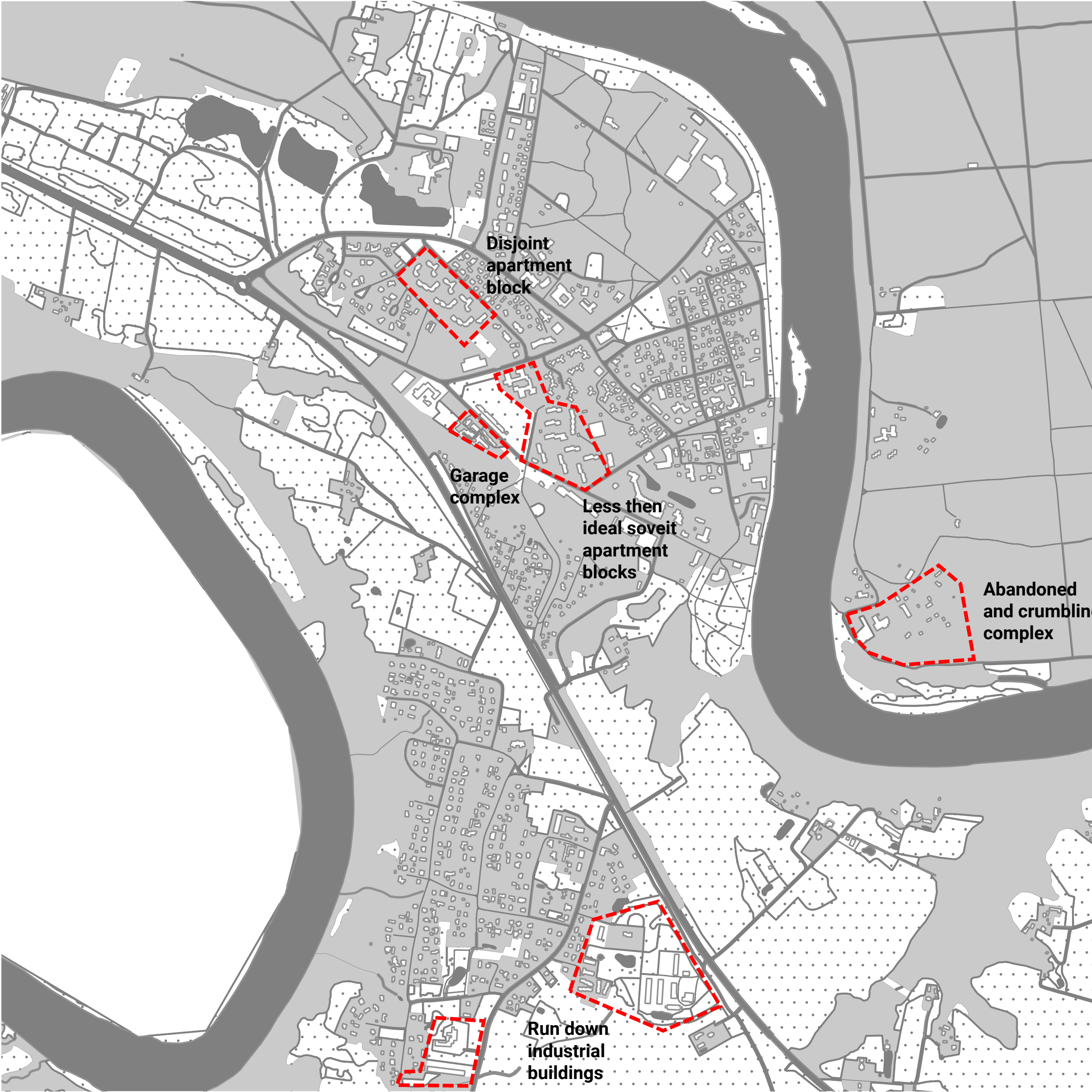
Birštonas development strategy

Adopt life cycle thinking prioritising sustainable materials.

Its damaging to the enviroiment to developpe land, that has never been developed. Improving already exist-ing infrastructure is key to sustainable development. Birštonas, however compact it is, has a number of these territories, that range from Birštonas vienkiemis, city center and outskirts, to the other shore of Nemunas river. Redeveloping these territories focusing on life cycle thinking and sustainable materials could satisfy Birštonas need for development at the moment without any damage done to the future of the town.



Apleista Birštono turizmo bazė



Superblock, Barcelona, Spain

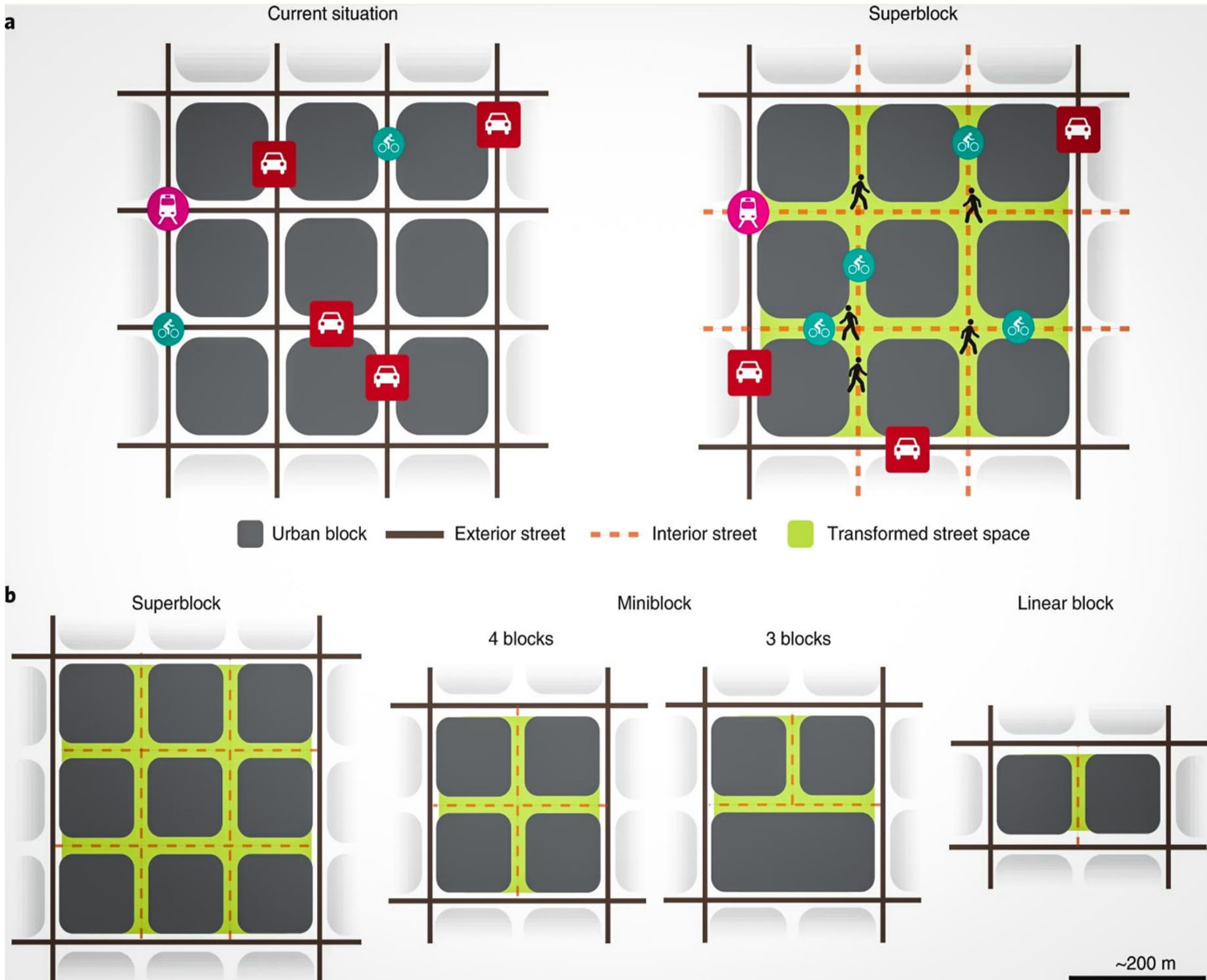
Alleviate fragmentation and formulaic development.

The superblock concept in Barcelona is a pioneering urban planning strategy aimed at reimagining city streets and public spaces to prioritize pedestrians, cyclists, and public transport over private cars. This initiative seeks to alleviate traffic congestion, improve air quality, enhance public health, and create more livable and sustainable neighborhoods.

Pedestrian Priority: By limiting vehicle access within the superblocks, Barcelona prioritizes pedestrians, making it safer and more enjoyable for people to walk and linger in public spaces. Sidewalks are widened, crosswalks are enhanced, and street furniture is added to encourage pedestrian activity and social interaction.

Public Transit Integration: Barcelona's superblocks are designed to seamlessly integrate with the city's public transit network, making it easier for residents to access buses, trams, and metro stations within walking distance. Improved transit connectivity reduces the reliance on private cars and contributes to a more sustainable transportation system.

Mixed-Use Development: Barcelona's superblocks encourage mixed-use development, combining residential, commercial, and cultural amenities within close proximity. This diversity of land uses promotes walkability and reduces the need for long-distance travel, fostering vibrant and inclusive urban neighborhoods.



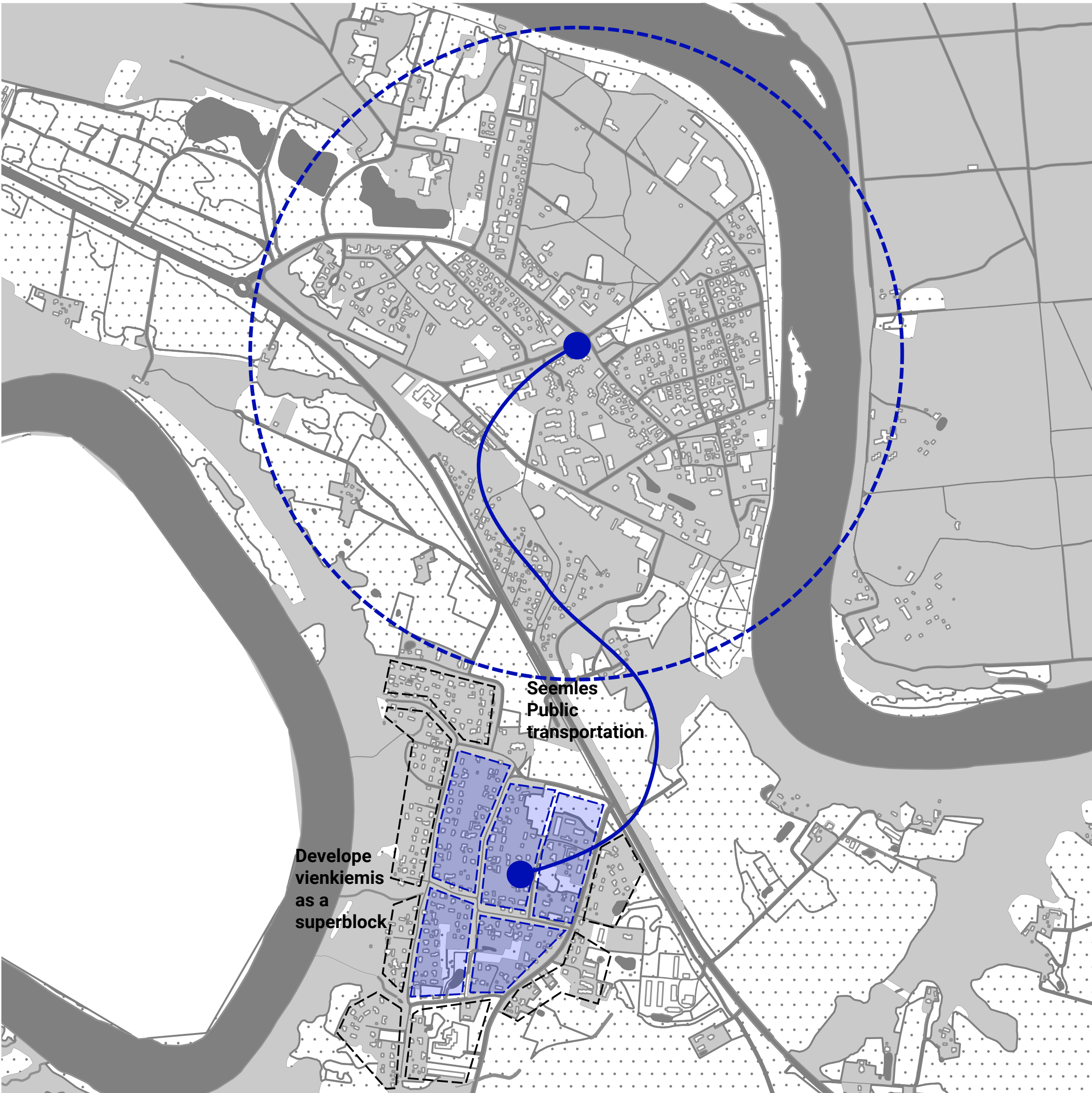
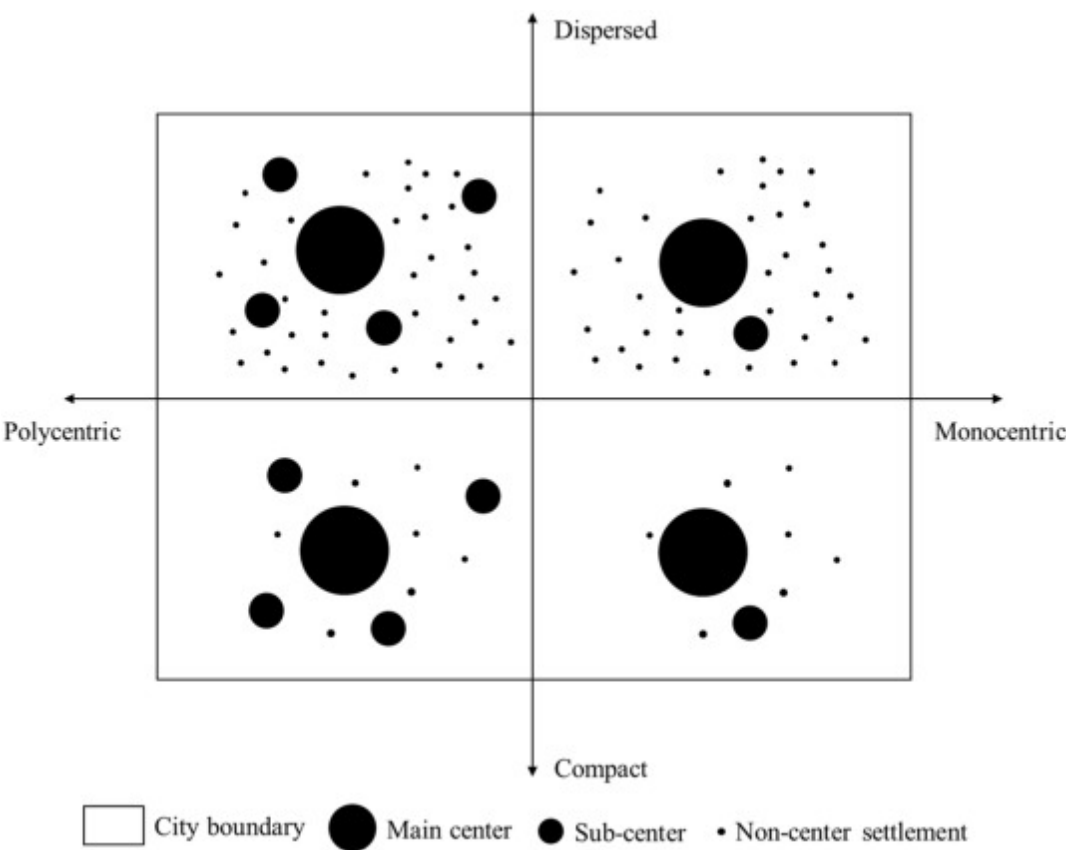
Birštonas development strategy

Alleviate fragmentation and formulaic development.

It is obvious from the previous analysis that the main body of Birštonas and Birštonas Vienkiemis are nothing alike character wise, further more they are physically separated from each other.

Second strategy focuses on developing Birštonas Vienkiemis as a sort of a Superblock of Birštonas. The idea is to make it more dense, self reliable, mixed-use, pedestrian friendly.

Barcelona's superblocks are designed to seamlessly integrate with the city's public transit network. That is a very important feature in Birštonas as well. Birštonas Vienkiemis and Birštonas center are 1.5 km apart, and that is if you go in a straight line. 3 km journey is hardly a walkable distance, hence the public transportation.



Adopt habitat integration and biodiversity.



Partnerships and Collaboration: The project collaborates with local governments, conservation organizations, businesses, and volunteers to implement biodiversity-friendly practices and initiatives across urban landscapes. By working together, stakeholders can maximize the impact of their efforts and create a more resilient and biodiverse environment.

Monitoring and Evaluation: The "My Wild City" project monitors and evaluates the effectiveness of biodiversity conservation actions over time. This helps track progress, identify successes and challenges, and inform future decision-making and planning processes.

"Imagine a city where whole streets and communities get together to transform gardens and open spaces. From planting for pollinators in our gardens to influencing the space around us, we can all help to make a city better for people and wildlife."



"My wild city" Bristol, UK

Adopt habitat integration and biodiversity.

"The Northern Slopes are made up of three green spaces near to Knowle and Bedminster in South Bristol. Wedmore Vale (the Bommie) and Glyn Vale are designated Local Nature Reserves and home to many species including bats, birds, slow worms, badgers and hedgehogs. There are wildflower meadows and woods with streams to explore, and if you make it the top, beautiful views over Bristol to the suspension bridge. Keep a look out for birds of prey soaring across the skyline."

Location: The Northern Slopes Nature Reserve, Daventry Road, Bristol, BS4 1DQ

Northern Slopes



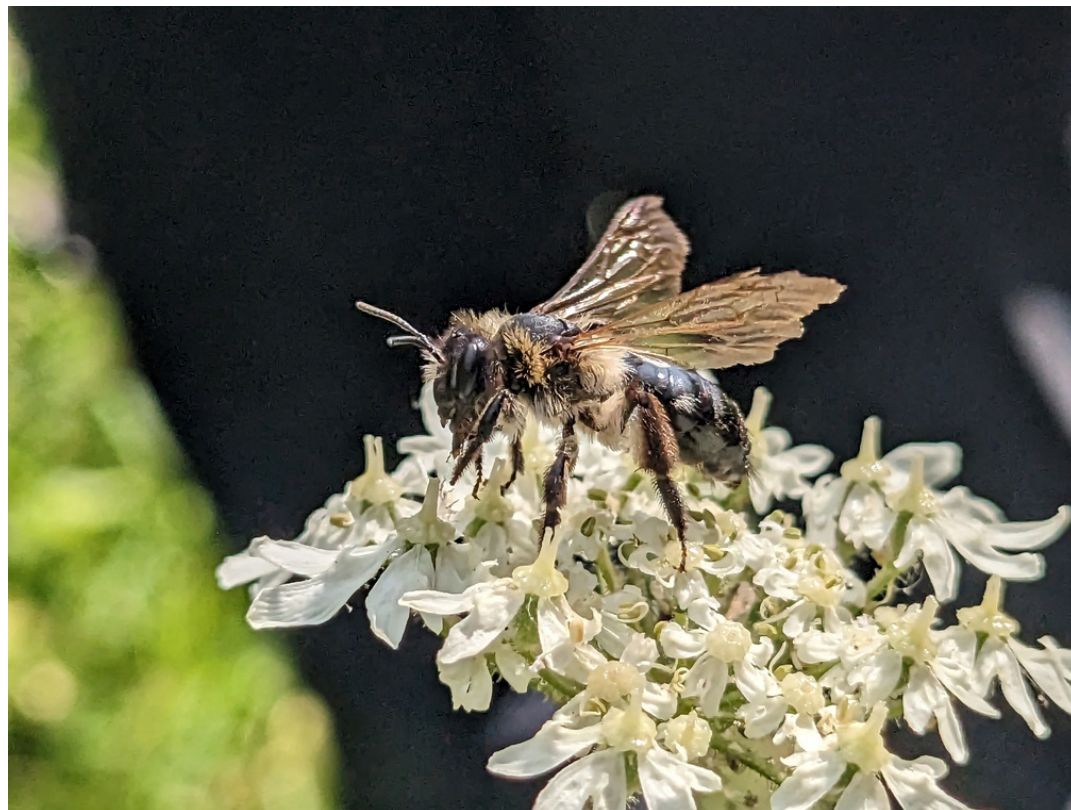
"My wild city" Bristol, UK

Adopt habitat integration and biodiversity.

" Hengrove Mounds is a hidden gem near to the popular Hengrove Playpark. Continue round the path and you'll discover a wildlife haven that has developed over an old landfill site. The raised doughnut shape of the mounds provides a circular walk amongst wildflowers and scrub that provides habitat for many butterflies, bees and insects. Goats were brought onto the mounds in early 2023 to help manage the scrub (they'll eat freshly emerging bramble shoots!), and are looked after by Street Goat."

Location: The two sites are located in Bristol's southern suburbs and are classed as Sites of Nature Conservation Interest (SNCI). The Mounds are bordered by a cinema complex, Hengrove Park Leisure Centre, Hengrove Way and Whitchurch Lane. Hawkfield lies to the south of Whitchurch Lane, and is bordered by a road, a business park, housing and playing fields.

Hengrove
Mounds
&
Hawkfield
meadow

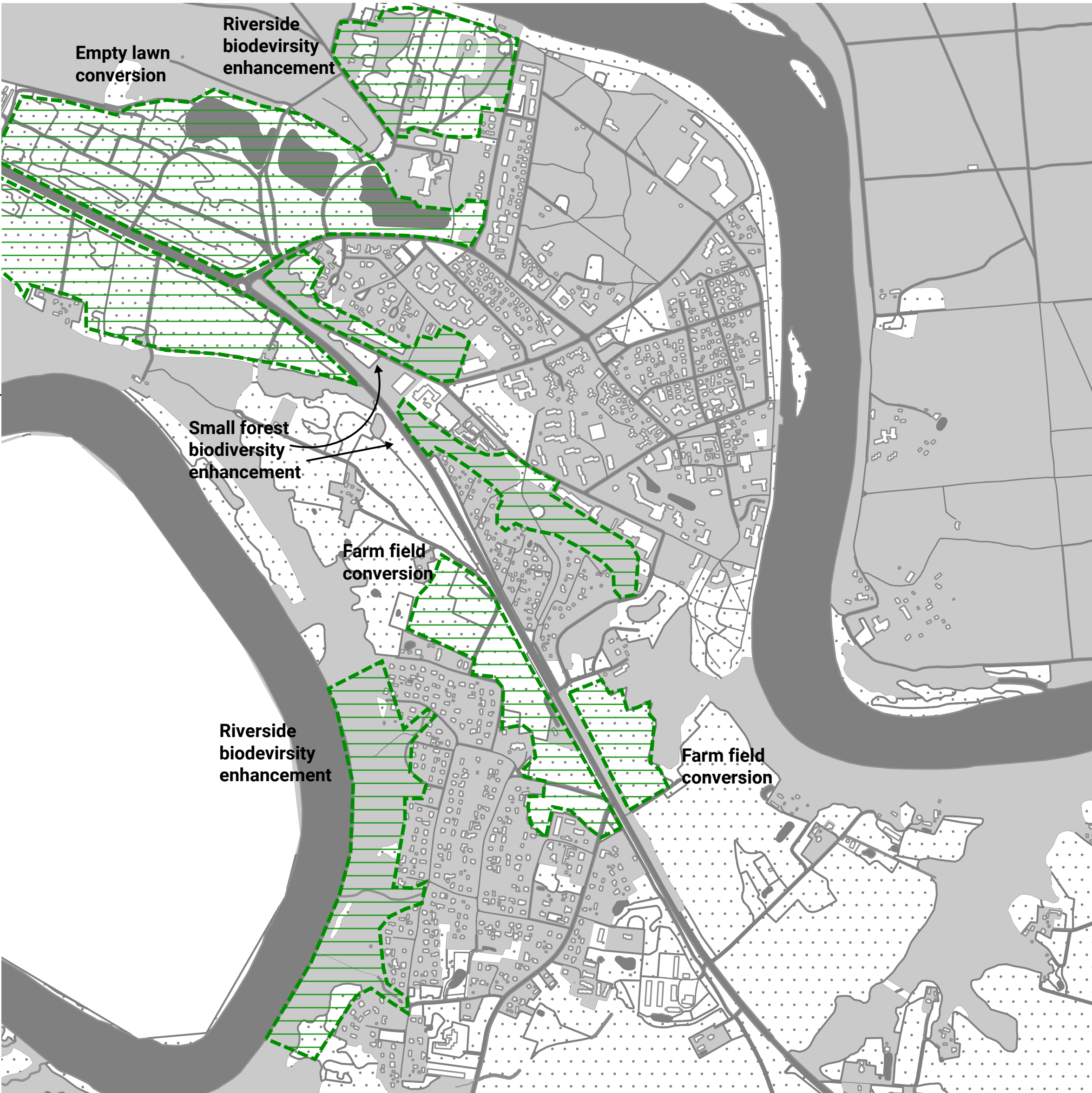


Birštonas development strategy

Adopt habitat integration and biodiversity

Improved Quality of Life: Green spaces and natural areas contribute to the overall quality of life for residents. By incorporating wildlife-friendly habitats and promoting outdoor activities such as birdwatching and nature walks, Birštonas could provide opportunities for relaxation, recreation, and connection with nature, leading to improved physical and mental well-being.

Tourism and Recreation: Birštonas attracts visitors seeking wellness and relaxation, with its spa resorts and natural surroundings. Implementing wildlife-friendly practices could enhance the town's appeal to ecotourists and nature enthusiasts interested in experiencing local wildlife and exploring biodiverse habitats. This could boost tourism revenue and support local businesses.



Giethoorn, Netherlands

Leave the car behind

Traffic Ban: Giethoorn is a charming village in the north-eastern Netherlands known for its picturesque canals, wooden bridges, and thatched-roof houses. Due to its narrow streets and limited infrastructure, the village experiences challenges with traffic congestion, especially during peak tourist seasons. To preserve its tranquil atmosphere and historic character, Giethoorn has implemented a traffic ban within its city center.

Boat and Walking Only: The village of Giethoorn is largely car-free, with streets restricted to pedestrians, cyclists, and boats. Visitors arriving by car are directed to park in designated parking areas located outside of the village center. From there, they can explore Giethoorn on foot or by renting a boat to navigate its scenic canals.

Canal Network: Giethoorn's network of canals serves as the primary mode of transportation within the village. Visitors can rent rowboats, paddleboats, or electric boats to navigate the waterways and explore the charming waterborne village. This unique transportation experience adds to the allure of Giethoorn as a tourist destination.

Preservation of Heritage: The traffic ban in Giethoorn contributes to the preservation of the village's cultural and architectural heritage. By limiting vehicular traffic, the village can maintain its traditional character and historic charm, allowing visitors to experience a glimpse of life in a bygone era.

Ecotourism Destination: Giethoorn's approach to managing traffic aligns with its commitment to sustainable tourism and environmental conservation. By promoting boat and walking tours as the primary means of transportation, the village minimizes its carbon footprint and reduces the impact of tourism on the local environment.

Visitor Experience: The traffic ban enhances the visitor experience in Giethoorn by creating a peaceful and pedestrian-friendly environment. Visitors can leisurely stroll along the canals, admire the quaint houses, and enjoy the tranquility of the surrounding natural landscape without the noise and congestion of cars.



Woonerf, Netherlands/Belgium

Leave the car behind

Woonerf is a Dutch urban planning concept which means “**living street**”.

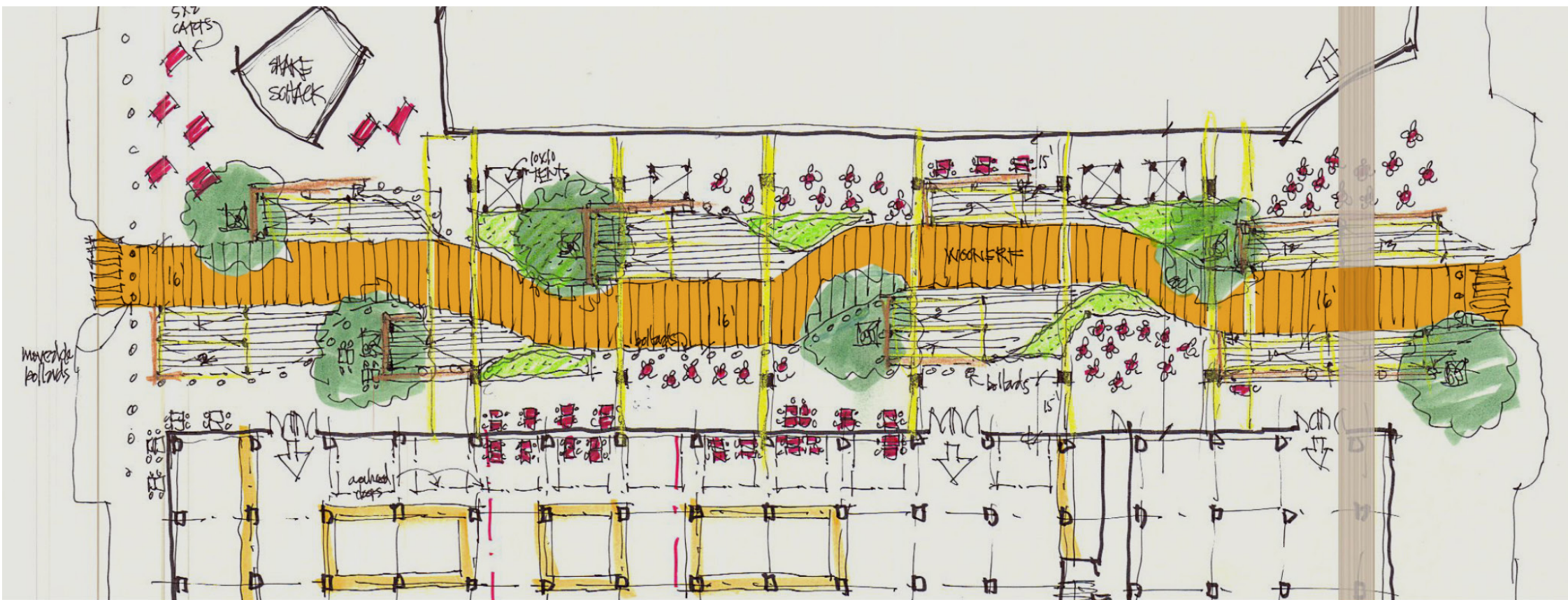
This street model of shared space, low-speed limits and traffic calming was first implemented in the Netherlands and Belgium.

A Woonerf design places emphasis on the overall quality of life, rather than the speed of it. It’s for this reason that street furniture or speed reduction measures like bollards, limited sight distance and narrow paths of travel are utilised to lessen the volume of traffic, offering residents a greater sense of ease, safety and comfort when making use of city streets.

By implementing Woonerf techniques, an urban street is transformed to become a wide social space where pedestrians are encouraged to make use of the entire roadway, move freely from one point to another and participate in recreational activities.

A Woonerf-designed street creates no division between vehicles and people. Hence, it is referred to as a “shared space” that is open for cars but is also catered to giving citizens a pedestrian-friendly and welcoming environment.

One characteristic feature of Woonerf is landscaping. Through community gardens, plant boxes and thriving city trees throughout the area, people can experience optimal health and community benefits when travelling through their local city streets.

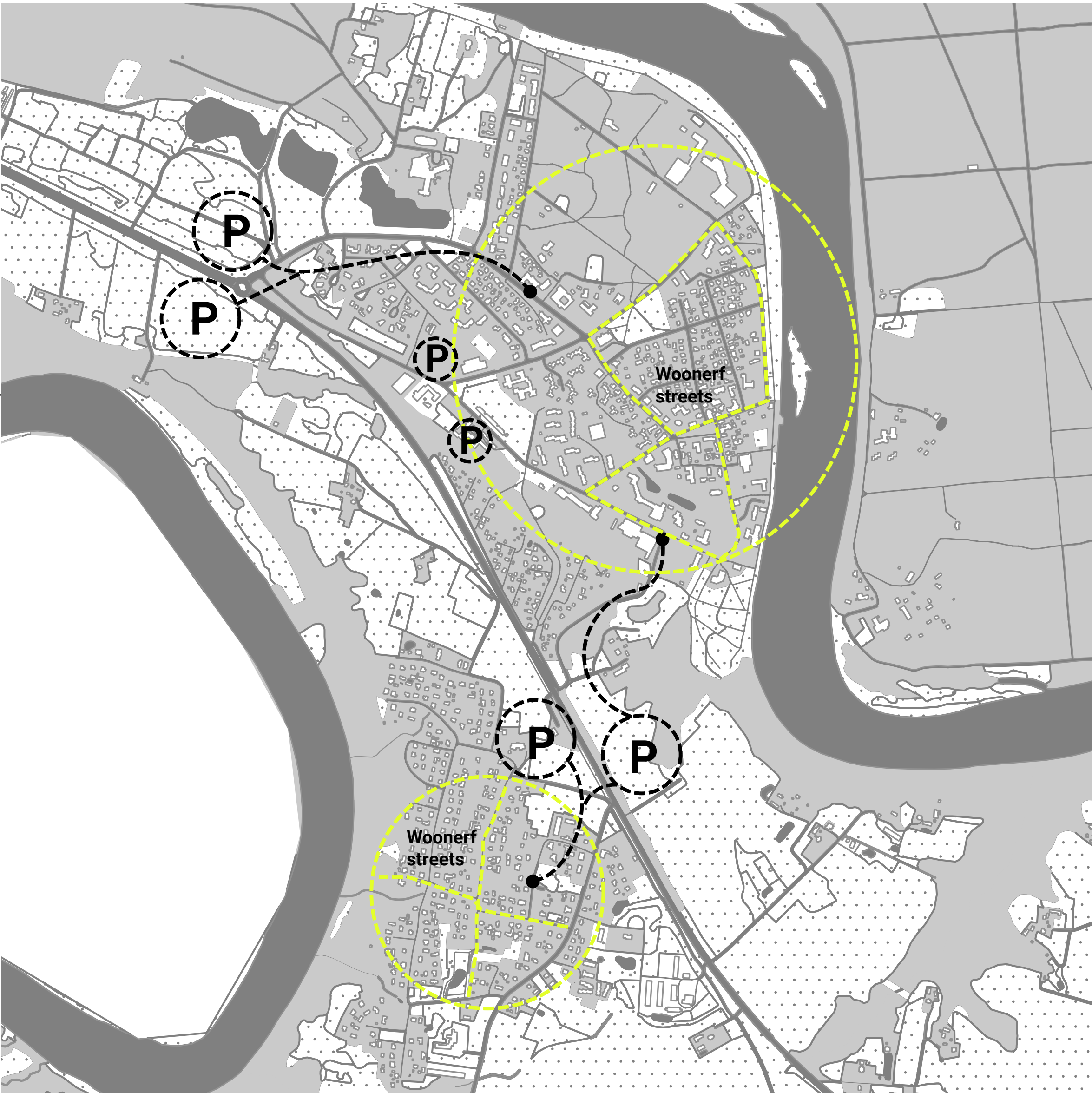
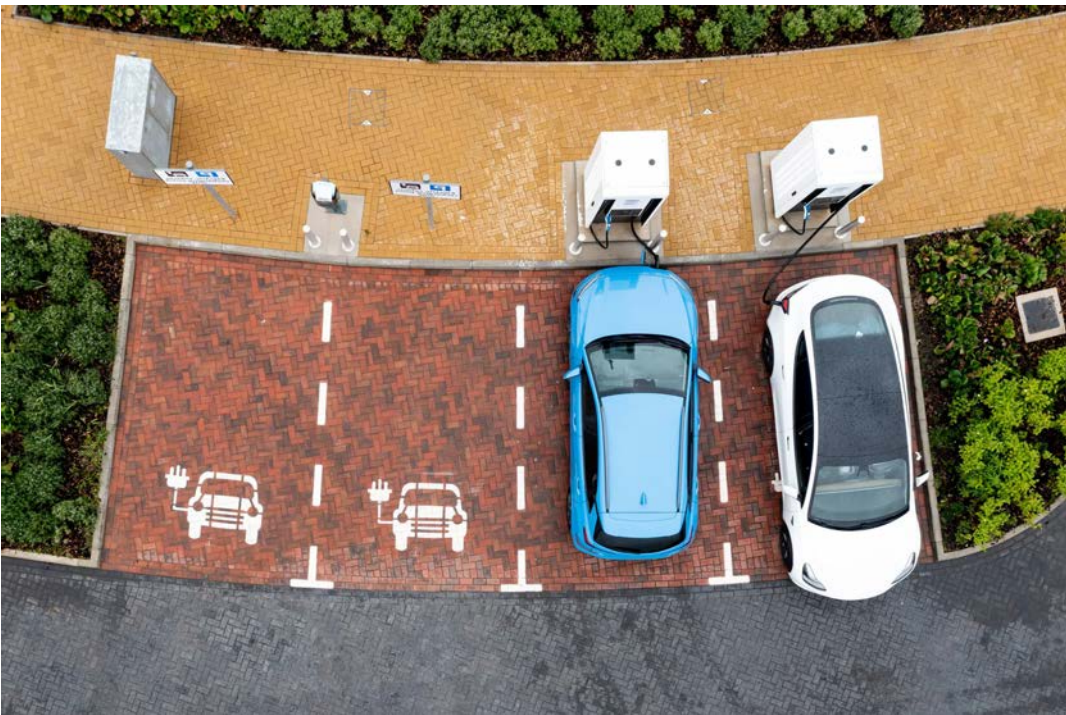


Birštonas development strategy

Leave the car behind

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Birštonas sustainable development

Combined strategy

Hypothesis -

"Developing Birštonas as a "green resort town" with an emphasis on sustainable practices, and eco-friendly accommodation will encourage development of new urban typologies and sustainable continuity. "

Strategies -

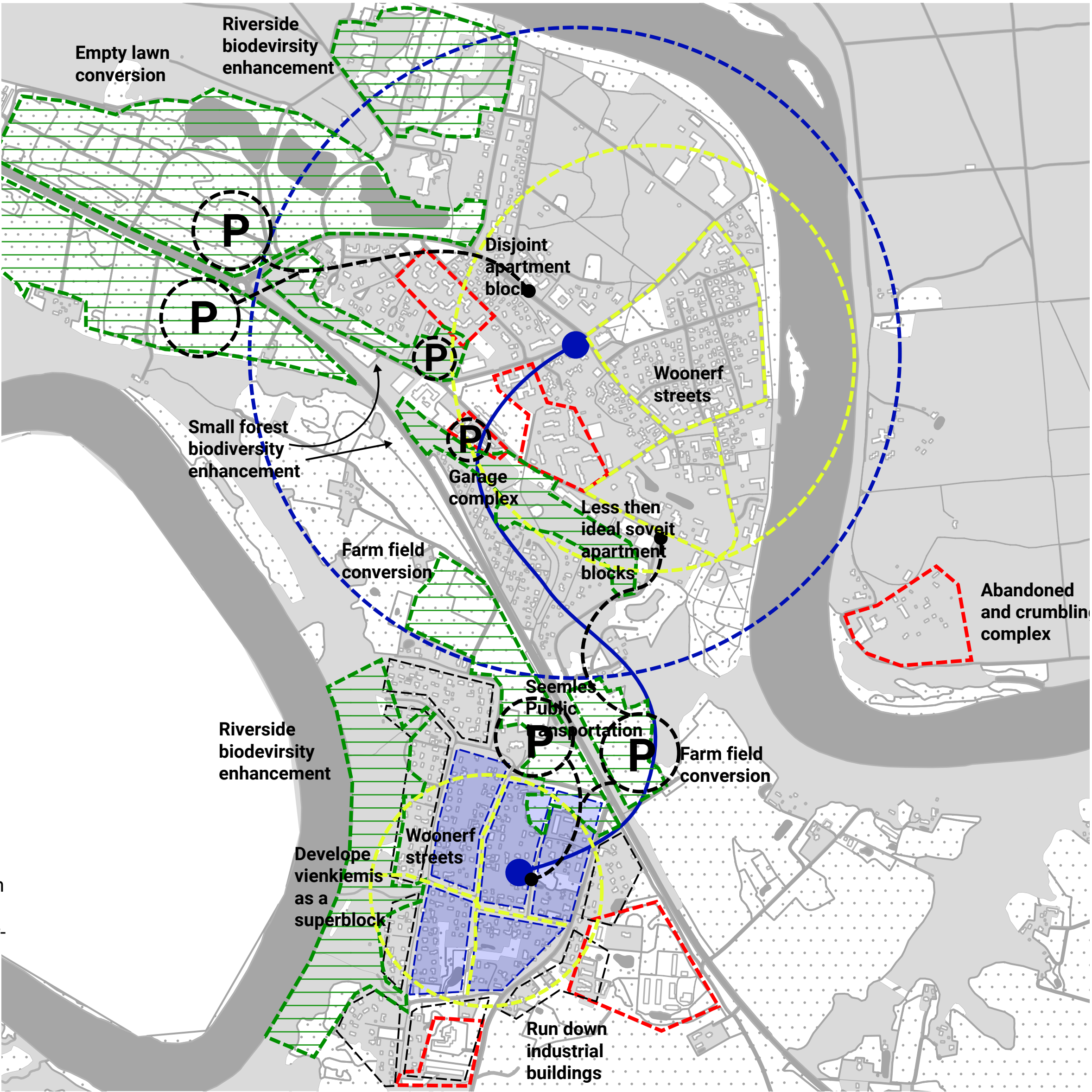
1. Adopt life cycle thinking and sustainable materials.
2. Alleviate fragmentation and formulaic development.
3. Adopt habitat integration and biodiversity.
4. Leave the car behind.

By adopting life cycle thinking and sustainable materials (**Strategy 1**), Birštonas can ensure that its infrastructure and buildings are designed and constructed with minimal environmental impact. This approach would align with the town's emphasis on sustainable practices, encouraging the use of eco-friendly materials and technologies.

Alleviating fragmentation and formulaic development (**Strategy 2**) would create a more cohesive and visually appealing urban environment, with interconnected green spaces, pedestrian-friendly streets, and mixed-use development.

Strategy 3, habitat integration and biodiversity, would enhance Birštonas' natural landscapes by creating wild-life habitats, nature trails, and green corridors throughout the town, promoting biodiversity and providing opportunities for residents and visitors to connect with nature.

Finally, by implementing **Strategy 4**, leaving the car behind, Birštonas can prioritize sustainable transportation options such as walking, cycling, and public transit, reducing traffic congestion and air pollution while encouraging a healthier and more active lifestyle for residents and tourists alike. Overall, these strategies would not only enhance Birštonas' appeal as a green resort town but also contribute to its long-term sustainability and resilience.



Community participation

LEGO City Builder: Birštonas Edition

Objective:

Participants collaborate to design and build LEGO models representing their ideas for improving specific areas of Birštonas, addressing challenges such as traffic congestion, lack of green spaces, or outdated infrastructure.

Organize a workshop or event where community members of all ages are invited to participate. Provide a variety of LEGO bricks, plates, and accessories in different colors, sizes, and shapes. Set up workstations with baseplates and reference materials (e.g., maps, photos, urban planning guidelines) to inspire creativity and guide the design process. Divide participants into teams or allow individuals to work independently, depending on the size and preferences of the group.

The LEGO City Builder game fosters creativity, collaboration, and community engagement in urban planning and development. It empowers participants to envision and articulate their ideas for improving Birštonas' built environment while fostering a sense of ownership and pride in the town's future. The diverse range of LEGO models generated through the game serves as valuable input for decision-makers and urban planners, informing discussions and guiding future development initiatives.

Gameplay:

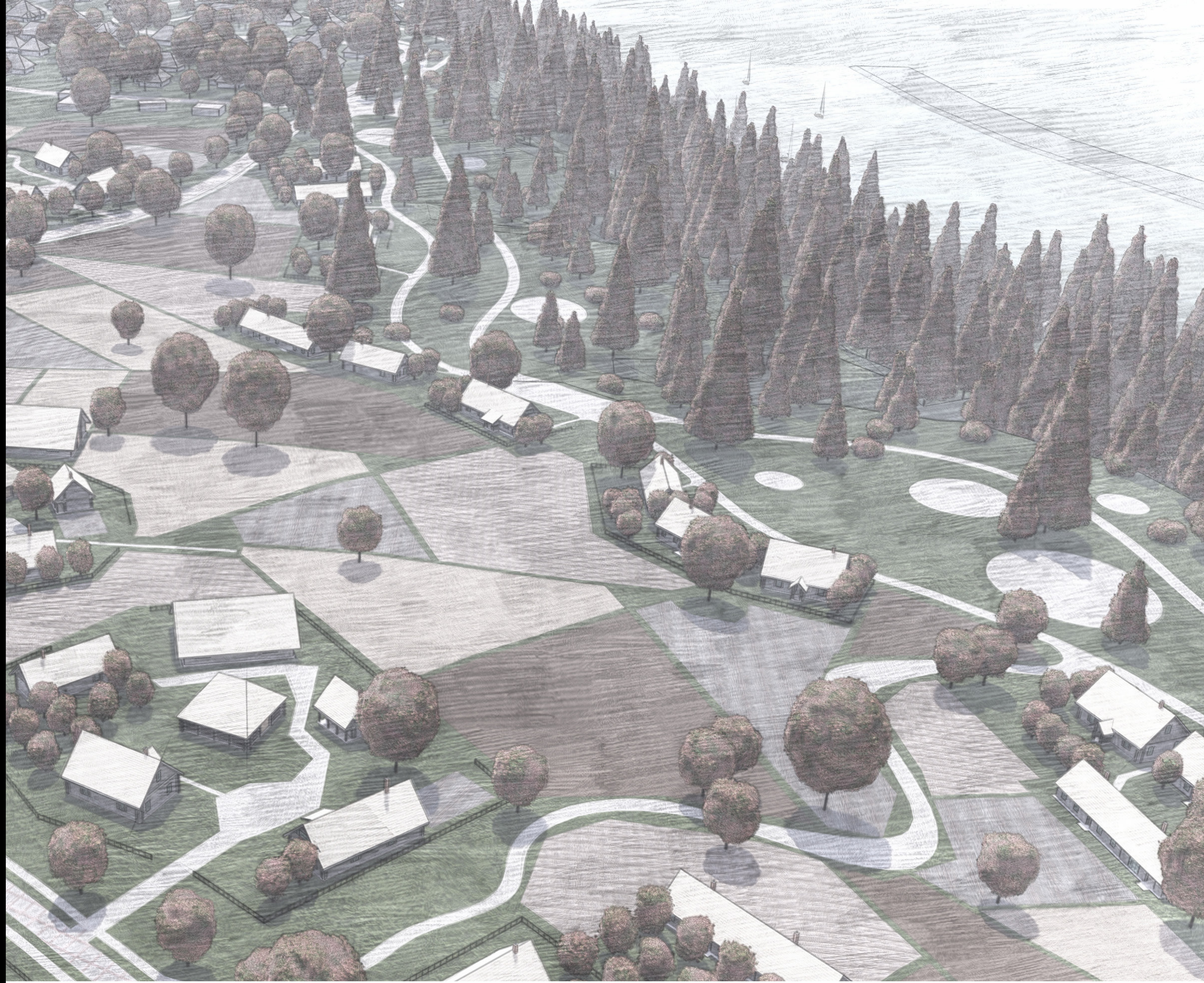
1. Identify Problematic Areas
2. Brainstorm Solutions
3. Design LEGO Models
4. Presentations and Feedback
5. Discussion and Collaboration
6. Iterative Design
7. Display and Showcase



Lego Rebuild the World – Eco Home (Asociative image) (image source - wallpaper.com)

Design phase

Introducing Birštonas specific typology based on traditional village architecture will ensure sustainable continuity of a "green" resort town



Typology

General area

Urban typologies are the **building blocks for understanding a city**. By classifying neighborhoods based on density, function, and history, planners gain valuable insights. This knowledge helps guide future development. It also informs efforts to preserve a city's unique character and facilitates communication between planners, architects, and residents. In short, urban typologies bridge the gap between a city's past and its future, **ensuring development is informed and intentional**.

Birštonas has a variety of urban typologies and is not homoginous. The dominating typologies are apartments blocks, recreational complexes, and single family owned housing. These typologies can be expanded further into certain subgroups, as their parameters varies greatly. Birštonas could be seperated into 3 unique zones, based on the typologies there. Birštonas proper, Vienkiemis and the "other bank"

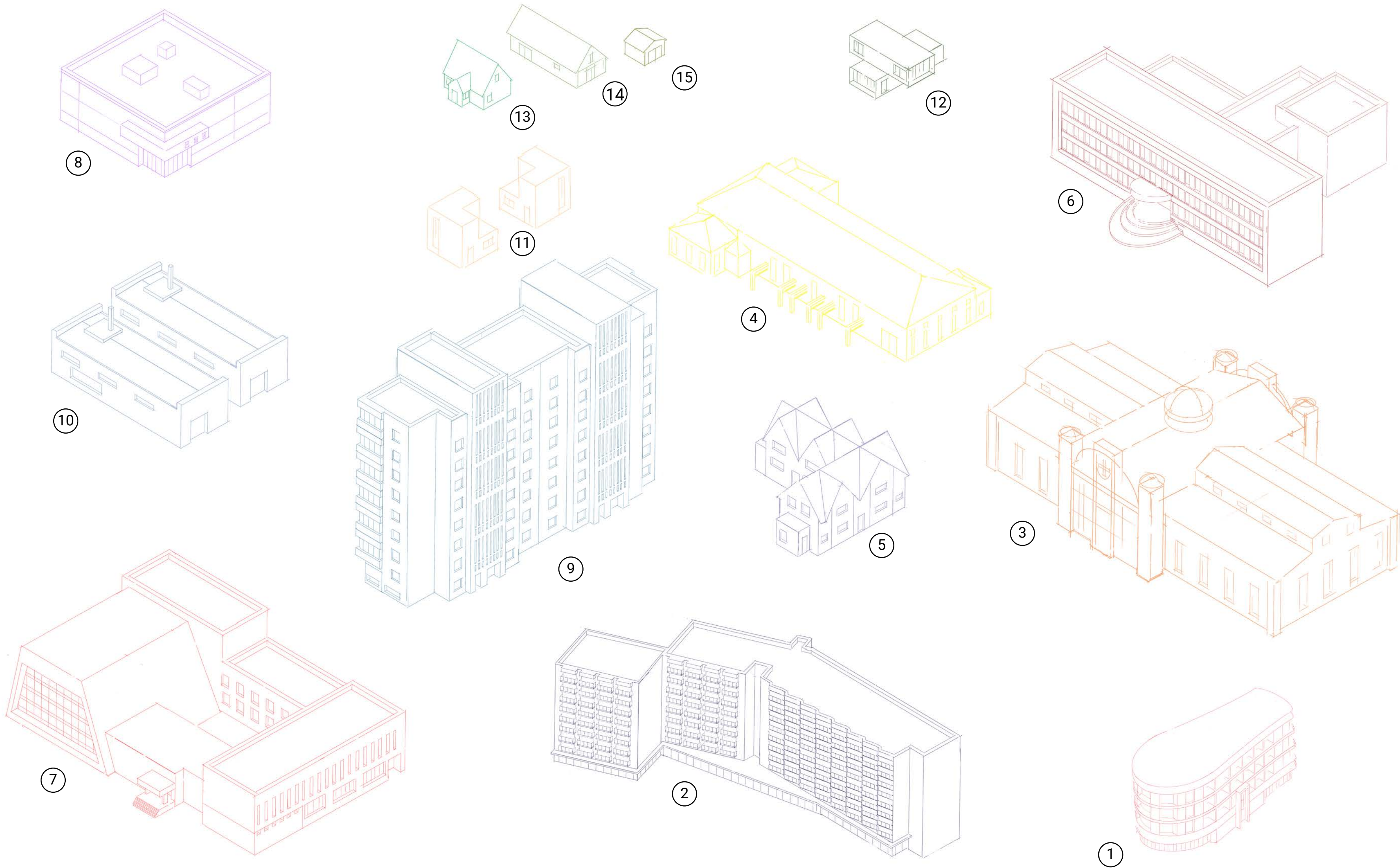
- Modern recreational complexes
- Soviet recreational complexes
- Soviet public buildings
- Modern public buildings
- Modern shopping and services centres
- Soviet apartments
- Soviet industrial complexes
- “resort town” apartments
- Interwar masonry recreational buildings
- Interwar wooden recreational buildings
- Modern cottage's
- Modern single family homes
- Old style single family houses
- auxiliary, agricultural gable-roofed building
- Carport, garage, and other small auxiliary buildings
- Non - evaluated structures



Typology

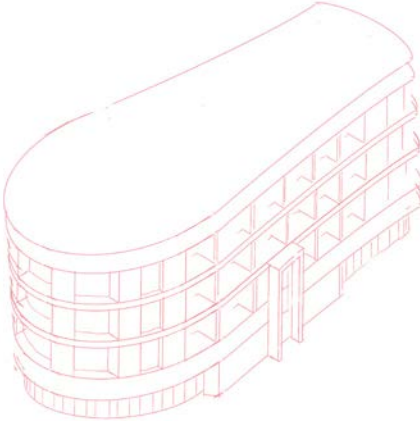
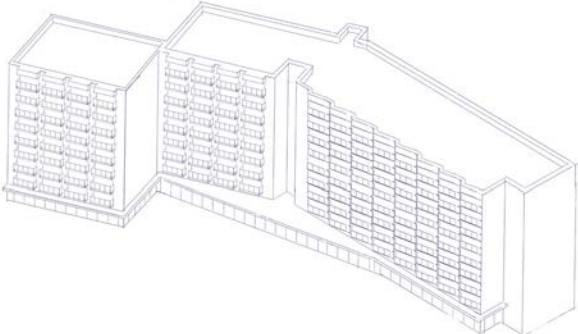
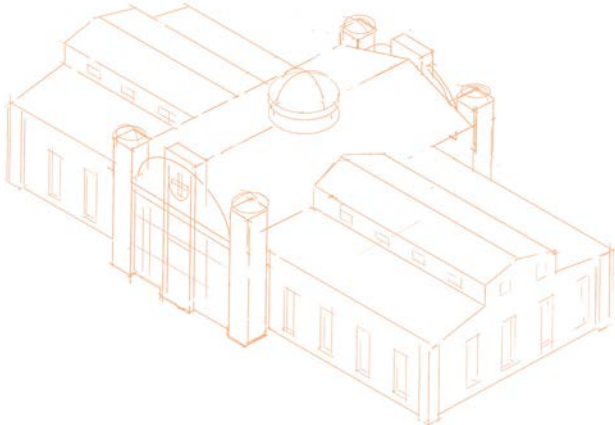
Types

- ① Modern recreational complexes
- ② Soviet recreational complexes
- ③ Interwar masonry recreational buildings
- ④ Interwar wooden recreational buildings
- ⑤ “resort town” apartments
- ⑥ Soviet public buildings
- ⑦ Modern public buildings
- ⑧ Modern shopping and services centres
- ⑨ Soviet apartments
- ⑩ Soviet industrial complexes
- ⑪ Modern cottage’s
- ⑫ Modern single family homes
- ⑬ Old style single family houses
- ⑭ auxiliary, agricultural ga-ble-roofed building
- ⑮ Carport, garage, and other small auxiliary buildings



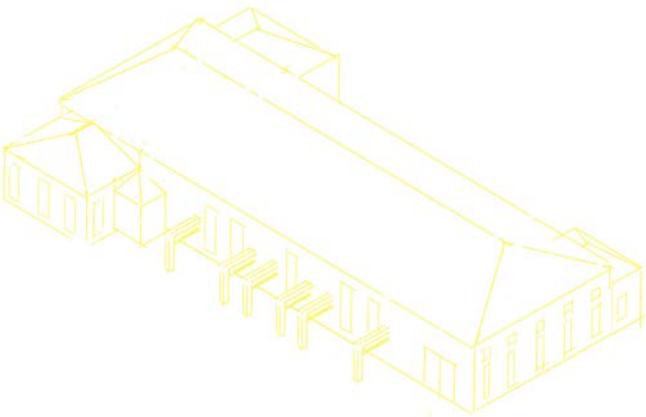
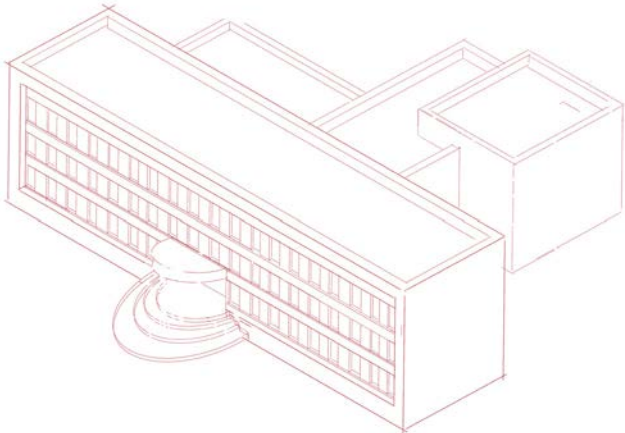
Typology

Types

Type	Illustration	Building height, number of stories	Built up site density and intensity	Dominating materiality	Description
Modern recreational complex		8 - 30 m; 2-15	5% - 40% 10% - 50%	Not defined	The modern recreational complex urban typology features sleek architecture with glass, steel, and sustainable materials. Sized from medium to large, layouts optimize space and include green areas. Buildings vary in height but prioritize human scale and accessibility, complying with zoning regulations.
Soviet recreational complex		8-30 m; 2-15	20%-70% 30% - 200%	Masonry, Brick, Reinforced concrete	Soviet recreational complexes embody utilitarian architecture, often constructed with concrete and functional designs. Typically large-scale, they prioritize communal spaces and may lack aesthetic embellishments. Layouts are straightforward, emphasizing efficiency over aesthetics, with minimal greenery. Height tends to be uniform, reflecting Soviet architectural norms.
Interwar masonry recreational buildings		6 - 20m; 1 - 5	10% - 50% 20% - 100%	Masonry, brick, stucco	Birštonas' interwar recreational masonry buildings, like "Tulpė," showcase elegant Art Deco architecture. Crafted with sturdy masonry, they boast intricate details and ornate facades. Despite their modest scale, these structures exude sophistication, featuring stylish elements such as arched windows and decorative motifs. Plots are compact yet well-planned, often surrounded by lush greenery to enhance the serene ambiance. Buildings stand at moderate heights, blending seamlessly with the picturesque surroundings.

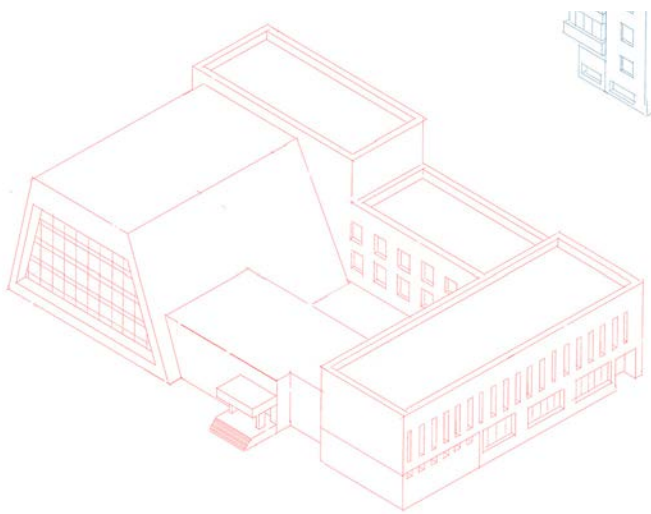
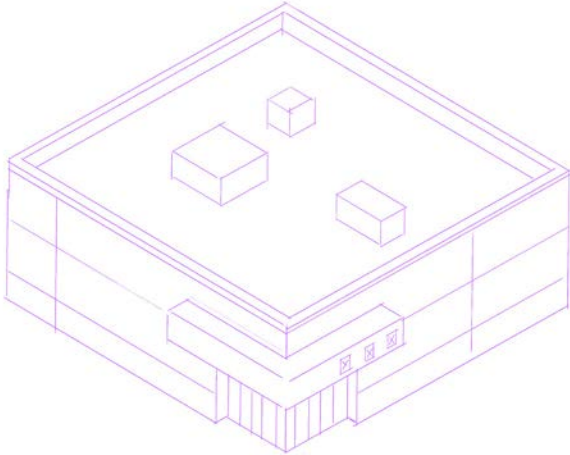
Typology

Types

Type	Illustration	Building height, number of stories	Built up site density and intensity	Dominating materiality	Description
Interwar wooden recreational buildings		4 - 14m; 1-3	10% - 30% 10% - 60%	Wood	Birštonas' interwar recreational wooden buildings, like Kurhauz, epitomize quaint charm with their traditional wooden architecture. Crafted from timber, they exude a rustic elegance, blending harmoniously with the natural surroundings. These structures feature simple yet tasteful designs, often adorned with intricate woodwork and traditional detailing. Nestled amidst lush greenery, the plots offer a tranquil retreat, enhancing the overall ambiance. With their modest heights and cozy atmosphere, Birštonas' interwar wooden buildings evoke a sense of nostalgia, providing a glimpse into the area's rich cultural heritage and recreational pastimes.
Resort town apartments		8 - 16m; 3 - 4	20%-80% 50% - 120%	Brick / Wood	Resort town apartments with gabled roofs exude a charming, cottage-like ambiance. Characterized by their medium-scale, these buildings feature traditional architecture with steeply pitched roofs and dormer windows. Crafted from durable materials, such as wood or clapboard siding, they blend seamlessly into the resort landscape. The layout is efficient, with compact footprints maximizing space while preserving scenic views. These apartments stand at moderate heights, maintaining a cozy atmosphere.
Soviet public buildings		12 - 24m; 1 - 6	40% - 80% 80% - 200%	Masonry, Brick, Reinforced concrete	Soviet public buildings in Lithuania epitomize utilitarian design with their robust construction and functional aesthetics. Built predominantly with concrete, these structures exude a stark, monumental presence. Their large-scale architecture reflects Soviet influence, featuring simplistic facades and minimal ornamentation. Plots are often spacious, allowing for ample open space surrounding the buildings. Heights vary, with some towering structures dominating the skyline. Despite their imposing appearance, these buildings serve as essential community hubs, housing various governmental, educational, or cultural functions.

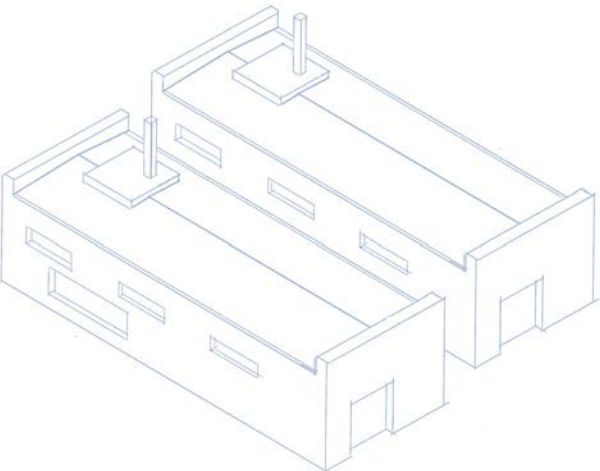
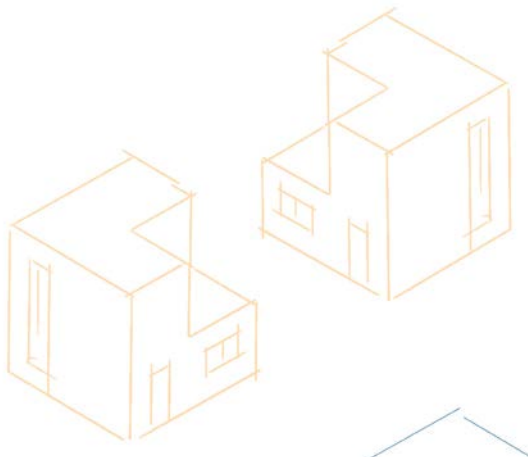
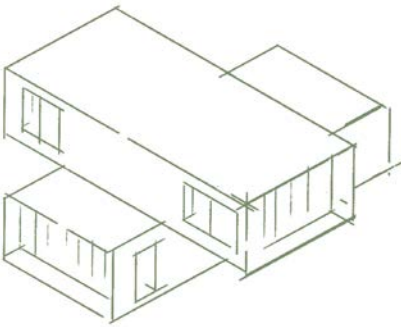
Typology

Types

Type	Illustration	Building height, number of stories	Built up site density and intensity	Dominating materiality	Description
Modern public buildings		8 - 30m; 1-6	70% - 90% 120% - 300%	Not defined	Modern public buildings in Lithuania embody contemporary architectural trends, blending innovative design with functionality. Constructed with a variety of materials, including glass, steel, and sustainable elements, these structures exude a sleek and dynamic aesthetic. Their scale ranges from mid-sized to large, with thoughtful layouts optimizing space efficiency. Plots are carefully landscaped, incorporating green spaces and pedestrian-friendly features. Heights vary, with some buildings showcasing striking architectural profiles that contribute to the cityscape. Serving diverse purposes, from governmental to cultural, these buildings reflect Lithuania's progressive spirit and commitment to modernity.
Modern shopping and service centers		8 - 14 m; 1 - 2	40%-80% 40% - 120%	Not defined	Modern grocery stores or supermarkets in Lithuania often exhibit uninspired architecture, constructed with mundane materials that lack durability and visual appeal. Utilizing cheap materials like flimsy metal and low-grade concrete, these stores lack the aesthetic charm of traditional markets. They come in various sizes, but regardless of scale, they fail to inspire a sense of ambiance or atmosphere. Inside, harsh fluorescent lighting and cluttered displays contribute to a chaotic shopping experience. Limited parking and cramped aisles further diminish the overall convenience. While they may offer a wide range of products, the lackluster presentation and subpar quality of these supermarkets fail to provide an enjoyable shopping environment.
Soviet apartments		14 - 40m; 1 - 9	Usually lacks plots	Prefabricated constructions, masonry, Brick, Reinforced concrete	Soviet-era apartments in Lithuania are characterized by drab and utilitarian architecture, constructed with low-quality materials and uninspiring design. These buildings often feature prefabricated concrete panels, contributing to a uniform and monotonous appearance. Lacking in aesthetic appeal, they are typically large-scale structures, comprising blocky, featureless facades that dominate the urban landscape. Inside, cramped living spaces and minimal natural light create a claustrophobic atmosphere for residents. Poor insulation and aging infrastructure further detract from the comfort and livability of these apartments. Despite their widespread availability, they offer little in terms of charm or character, serving primarily as functional housing units rather than desirable homes.

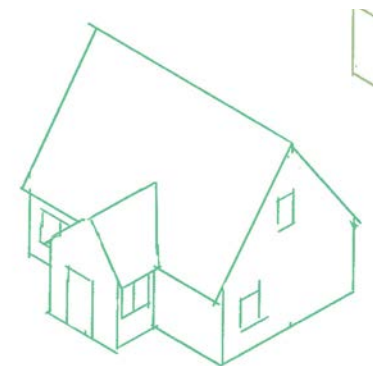
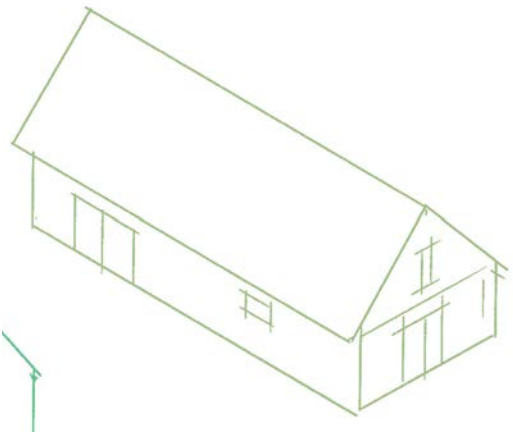
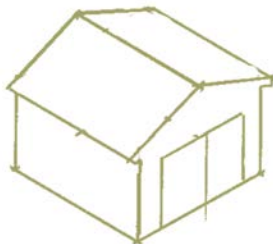
Typology

Types

Type	Illustration	Building height, number of stories	Built up site density and intensity	Dominating materiality	Description
Soviet industrial complex		4 - 12m; 1-2	40% - 100% 40% - 200%	Prefabricated constructions, masonry, Brick, Reinforced concrete	Soviet industrial complexes in Lithuania embody a stark and utilitarian aesthetic, characterized by massive structures constructed with basic materials. These complexes often feature sprawling factory buildings and warehouses, built with simple concrete and steel elements. Lacking in architectural finesse, they prioritize functionality over design, resulting in monotonous and uninspiring exteriors. Inside, the atmosphere is often harsh and industrial, with noisy machinery and dim lighting dominating the space. Environmental concerns are typically overlooked, with little consideration given to aesthetics or sustainability. Despite their essential role in supporting the Soviet economy, these complexes evoke a sense of bleakness and austerity, serving as reminders of a bygone era marked by centralized planning and industrialization
Modern cottage		4 - 8 m; 1 - 2	40% - 80% 40% - 80%	Not defined	Modern semi-detached housing in Lithuania often reflects uninspired suburban sprawl, characterized by cookie-cutter designs and lackluster construction. Built with cheap materials and rushed craftsmanship, these homes lack durability and charm. Architectural diversity is rare, with most units featuring generic styles that fail to inspire or differentiate themselves. Inside, cramped layouts and thin walls offer little privacy or comfort for residents. Outdoor spaces are often minimal and poorly maintained, further detracting from the overall appeal. While marketed as convenient and affordable, these developments often prioritize quantity over quality, resulting in a soulless and uninviting living environment.
Modern single family housing		4 - 14m; 1 - 3	20% - 70% 20% - 80%	Not defined	Modern single-family houses in Lithuania showcase contemporary residential design with a focus on functionality and style. Constructed with quality materials such as wood, brick, and sustainable elements, these homes boast sleek exteriors and thoughtfully planned interiors. Architectural diversity flourishes, offering a range of styles from minimalist to traditional, catering to individual preferences. Spacious layouts prioritize comfort and convenience, with open-plan living areas and smart home technology enhancing everyday living. Private outdoor spaces, including gardens and patios, provide residents with opportunities for relaxation and recreation. Energy-efficient features promote sustainability and cost savings.

Typology

Types

Type	Illustration	Building height, number of stories	Built up site density and intensity	Dominating materiality	Description
Old-style single family hoousing		6 - 12m; 1-3	10% - 50% 10% - 80%	Prefabricated constructions, masonry, brick	Old-fashioned single-family housing in Lithuania, dating from 1950 to 2000, often reflects a utilitarian approach to residential design. Constructed with basic materials and minimal architectural flair, these homes lack the charm and character of older or more contemporary styles. Exteriors typically feature simple brick or concrete facades, with little ornamentation or detail. Inside, layouts are traditional and compartmentalized, with small rooms and limited natural light. Outdated fixtures and finishes contribute to a dated aesthetic. While some may appreciate the nostalgia of these homes, others find them lacking in modern amenities and comfort.
Auxiliary, agricultural gabled-roof building		6 - 10m; 1 - 2	5% - 40% 5% - 80%	Wood planks, brick	Auxiliary agricultural gabled-roof buildings in Lithuania typically exhibit traditional design and construction methods. Dating from various periods, these structures often feature simple yet sturdy wooden frames and pitched roofs covered with thatch or metal sheets. With minimal ornamentation, they prioritize functionality over aesthetics. Inside, layouts are straightforward, providing ample storage space for agricultural equipment and livestock. While these buildings serve essential purposes on farms and rural properties, their aging infrastructure and lack of modern amenities may limit their usability.
Carport, garage and other auxiliary structures		3 - 5m; 1	2% - 20% 2% - 20%	Not defined	Carports, garages, and other auxiliary structures in Lithuania often reflect a utilitarian approach to design and construction. Typically built with basic materials such as wood, metal, or concrete, these structures prioritize functionality over aesthetics. Carports may feature simple metal or wooden frames covered with corrugated metal sheets or polycarbonate panels to provide shelter for vehicles from the elements. Garages, on the other hand, may have concrete or brick walls and a pitched roof, offering more secure storage space for vehicles and tools. Other auxiliary structures, such as sheds or workshops, follow similar design principles, with minimal ornamentation and basic layouts. While these structures serve practical purposes in providing storage and shelter, they may lack the architectural interest or charm found in more decorative buildings.

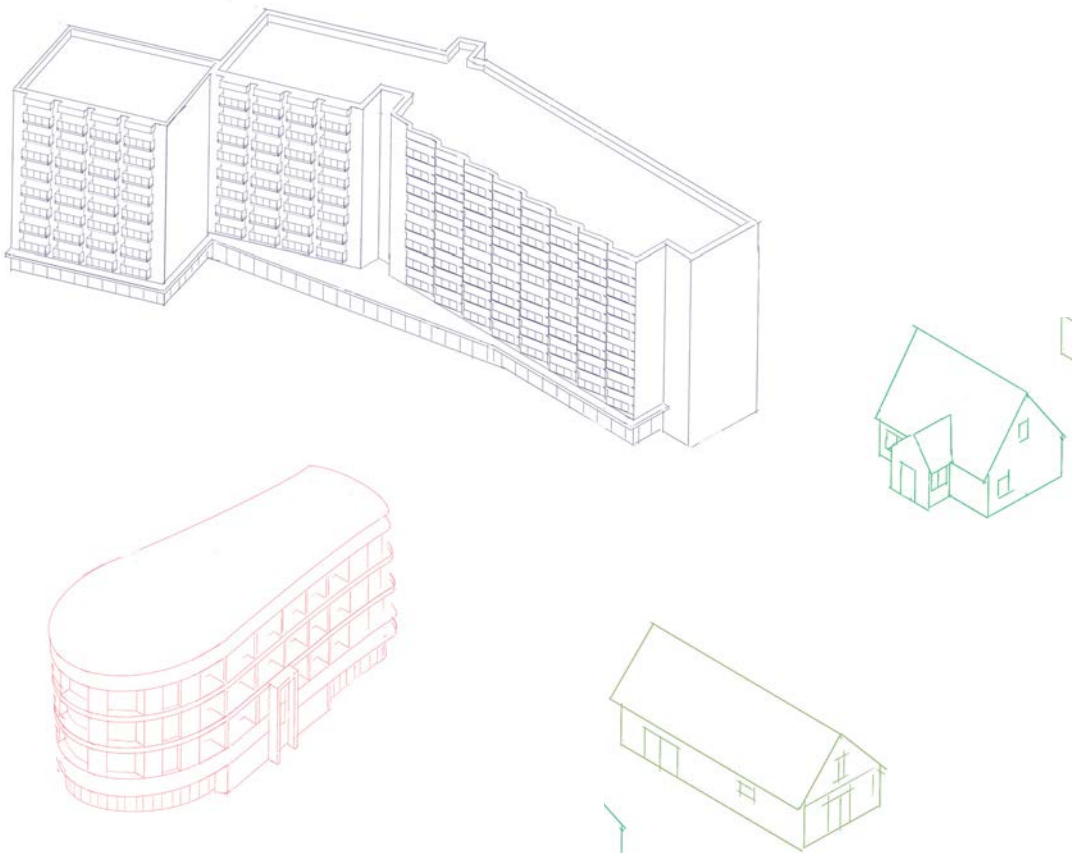
Typology

"The other bank"

Character defining urban typologies:

- Soviet recreational complexes
- Traditional small scale wooden housing
- Auxiliary, agricultural gable-roofed buildings

This part of Birštonas is mostly covered by forest. It is sparsely developed or inhabited. High seclusion and low intervention ads to the character of a place and is fitting of a resort town. Although there are defining structures in the area such as the ruins of an abandoned soviet recreational complex. Currently it is in ruin.



	Modern recreational complexes
	Soviet recreational complexes
	Soviet public buildings
	Modern public buildings
	Modern shopping and services centres
	Soviet apartments
	Soviet industrial complexes
	"resort town" apartments
	Interwar masonry recreational buildings
	Interwar wooden recreational buildings
	Modern cottage's
	Modern single family homes
	Old style single family houses
	auxiliary, agricultural gable-roofed building
	Carport, garage, and other small auxiliary buildings
	Non - evaluated structures



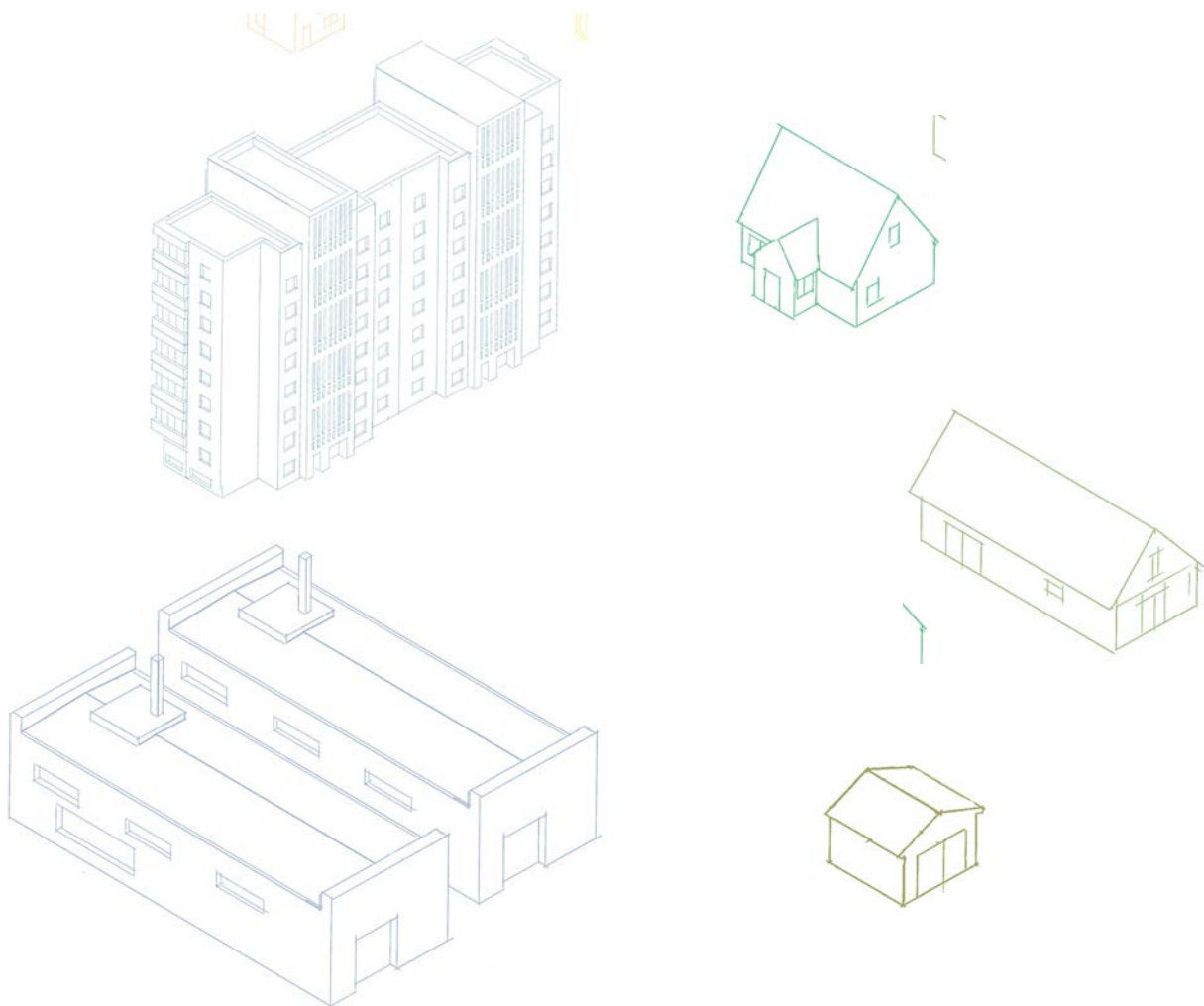
Typology

Birštonas vienkiemis

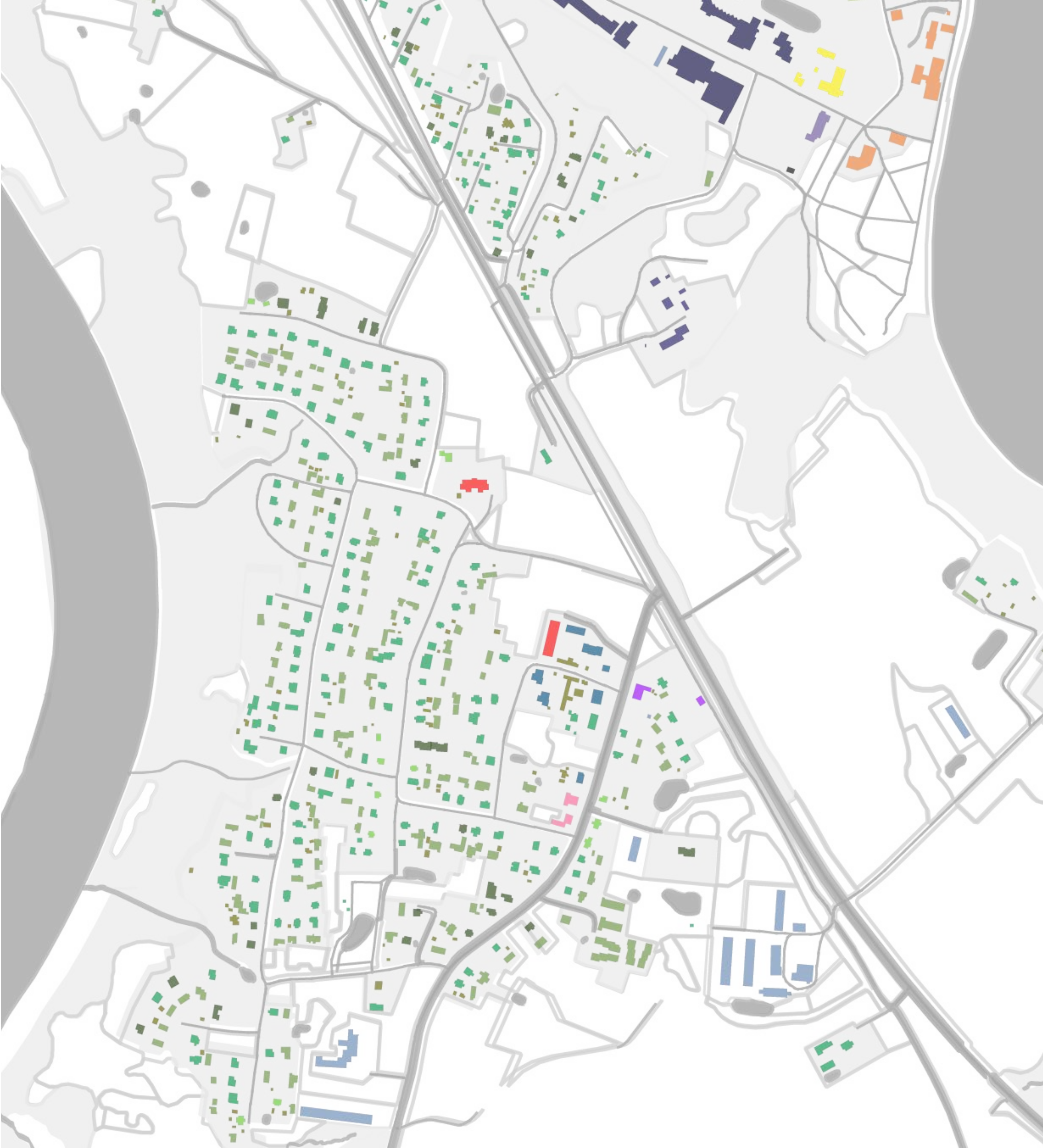
Character defining urban typologies:

- "Old style" single family housing
- Auxiliary, agricultural gable-roofed buildings
- Carports, garage and other small auxiliary structures

Birštonas Vienkiemis is a mostly residential neighbourhood that recently was joined to Birštonas city. It mostly consists of single family owned housing and auxiliary buildings. Some services, apartments and industrial complexes are dotted around the area but they dont play a crucial role in shaping the characteristic of a place.



	Modern recreational complexes
	Soviet recreational complexes
	Soviet public buildings
	Modern public buildings
	Modern shopping and services centres
	Soviet apartments
	Soviet industrial complexes
	"resort town" apartments
	Interwar masonry recreational buildings
	Interwar wooden recreational buildings
	Modern cottage's
	Modern single family homes
	Old style single family houses
	auxiliary, agricultural gable-roofed building
	Carport, garage, and other small auxiliary buildings
	Non - evaluated structures



Special plan

Typology

Recreational

- Historic wooden architecture
- Historic masonry architecture
- Soviet complexes
- Modern complexes
- Sport complexes
- Parks

Residential

- Soviet apartments
- Modern apartments
- “Resort town” apartments
- Mixed-use / highstreet
- Dense single family housing
- Riverside sindgle family housing / recreational
- Low intensity single family housing

Public / Commercial / Industry

- Soviet public buildings
- Modern public buildings
- Commercial shopping centres

Special symbols

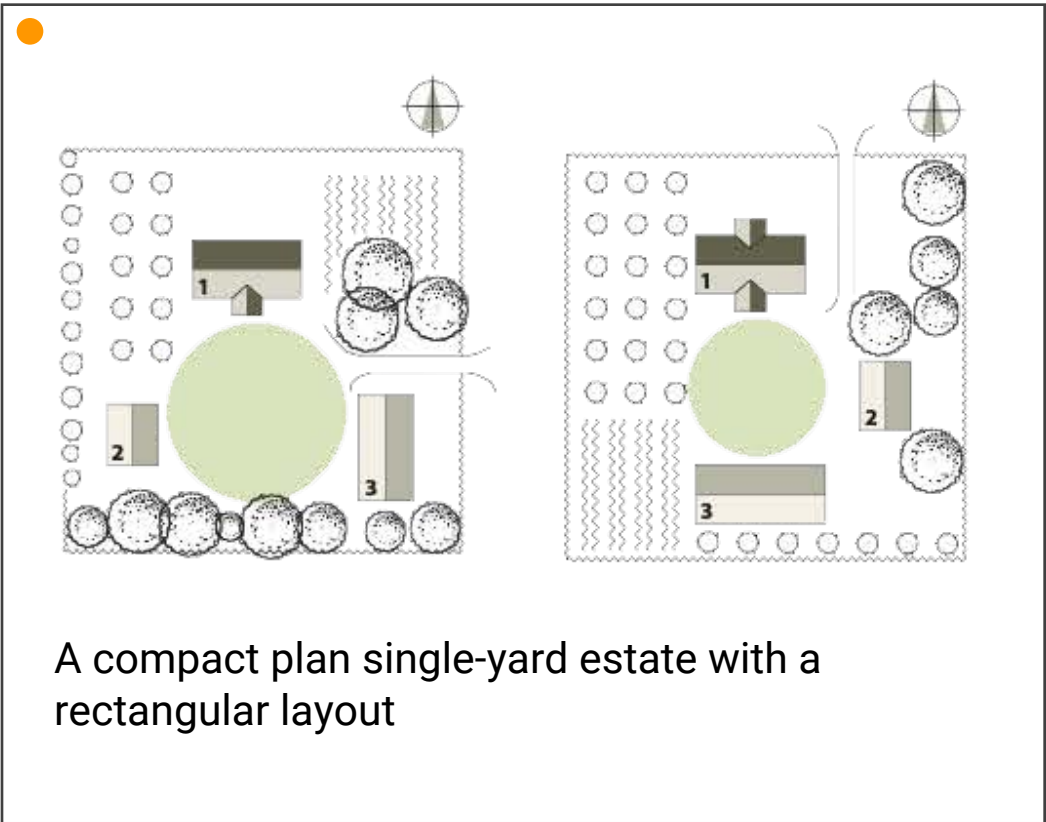
- Etnographic architecture area
- Birštonas city boundary
- Birštonas city boundary
- Birštonas city boundary



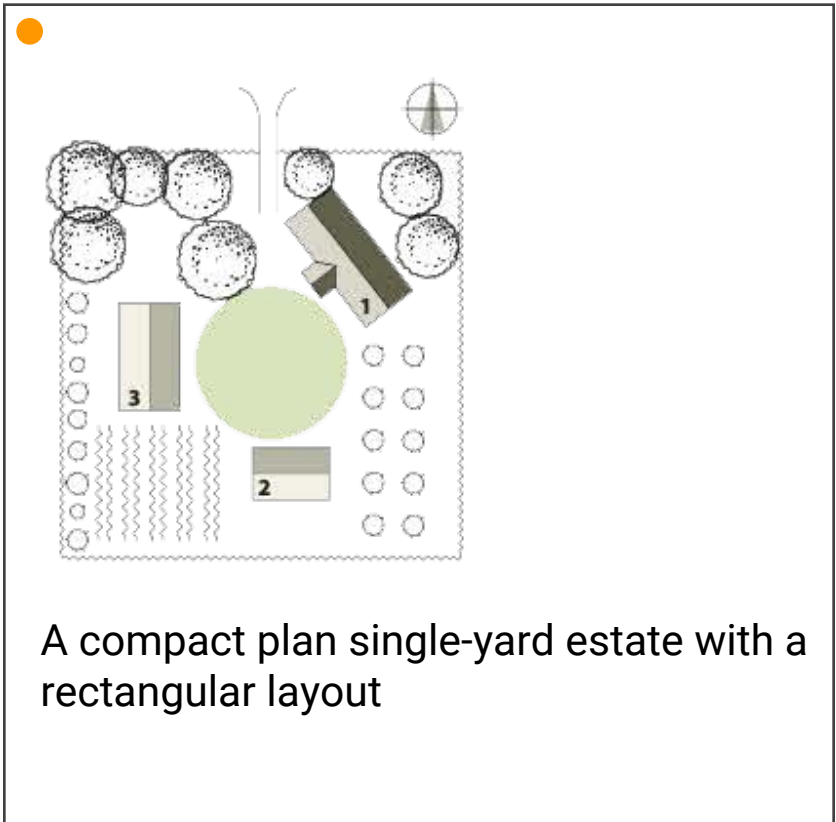
Etnographic architecture

Layout

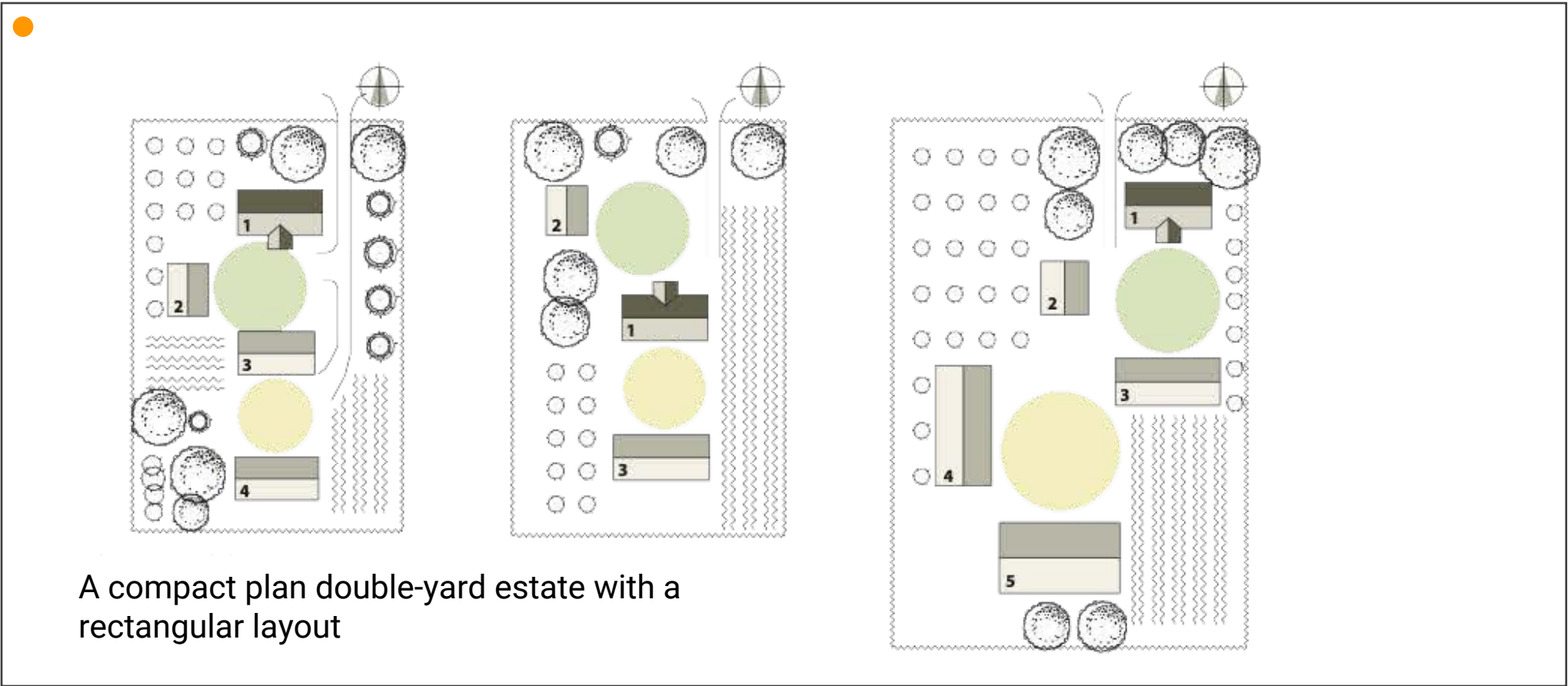
- "Good" yard
- "Work" yard



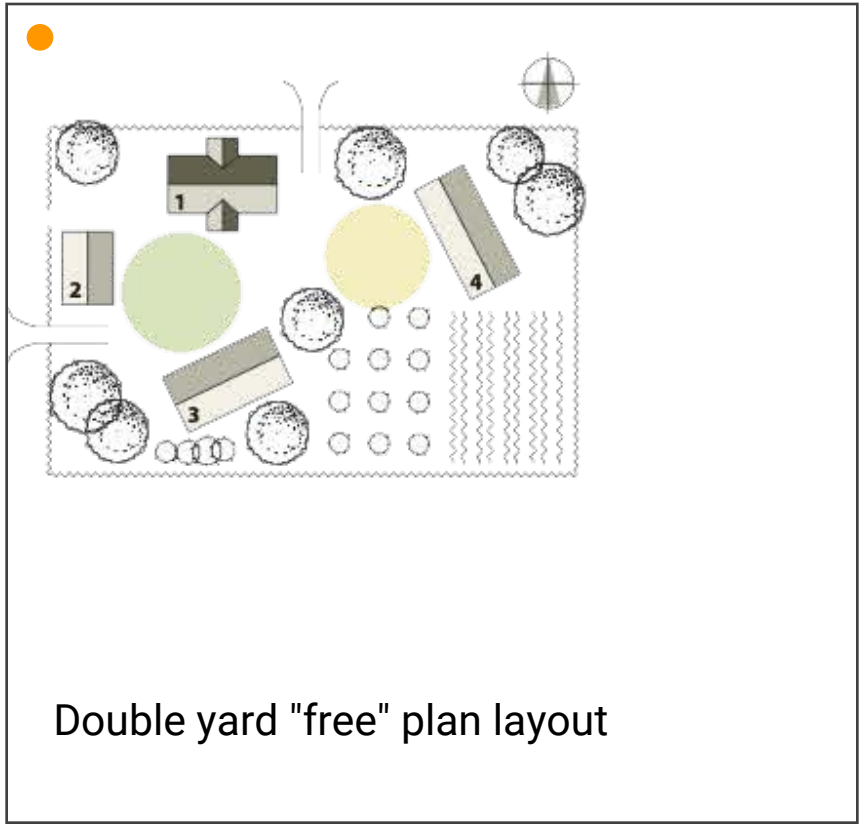
A compact plan single-yard estate with a rectangular layout



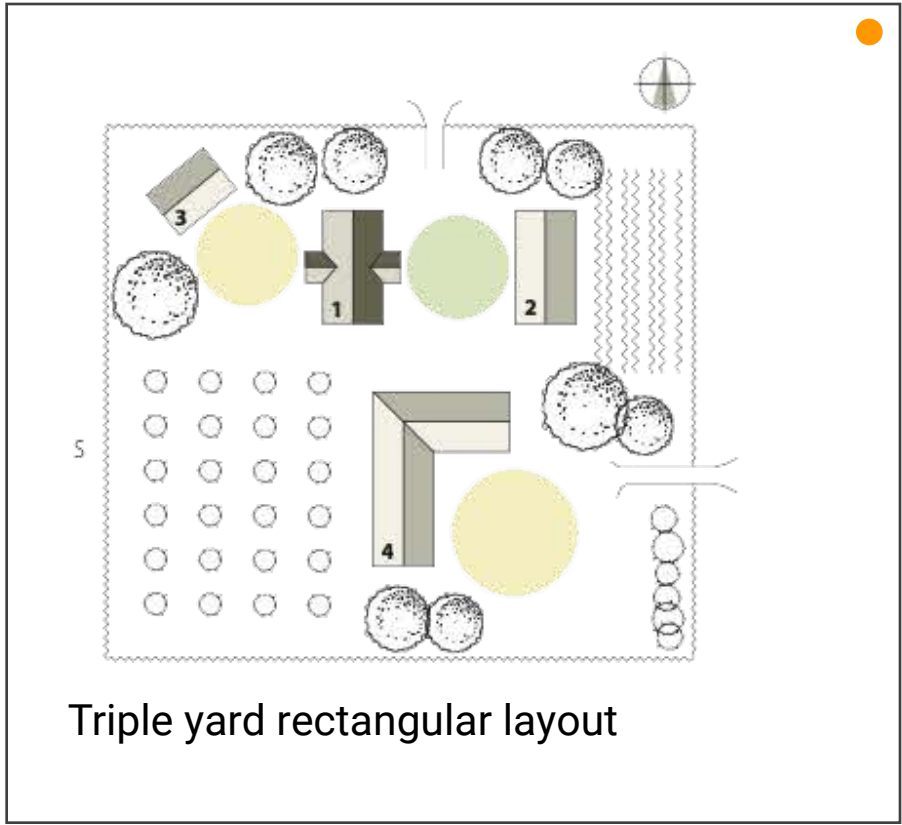
A compact plan single-yard estate with a rectangular layout



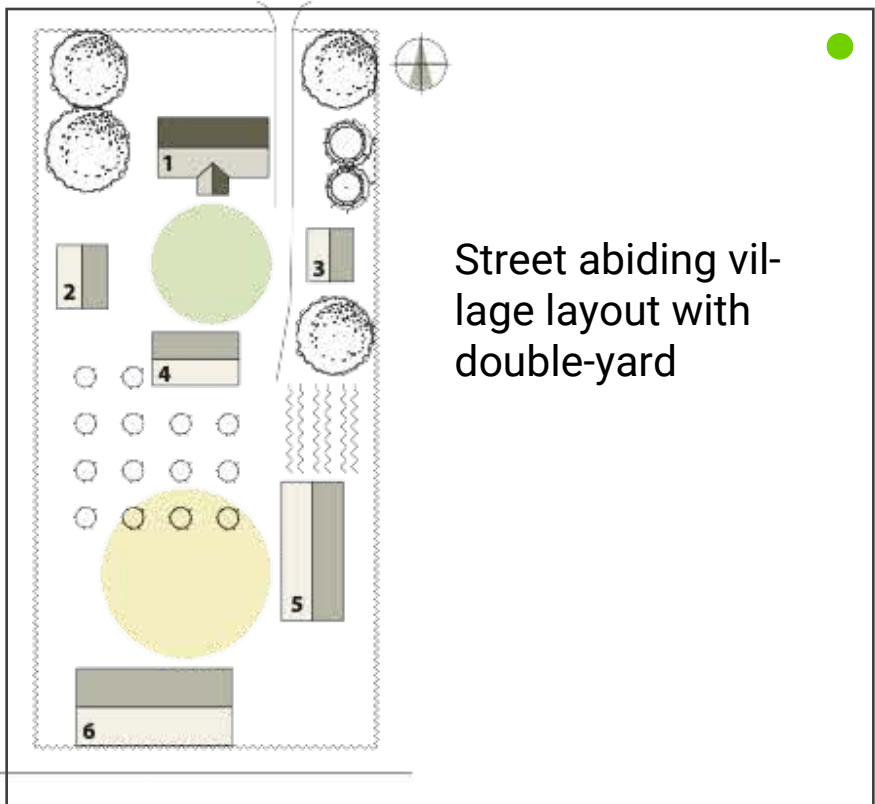
A compact plan double-yard estate with a rectangular layout



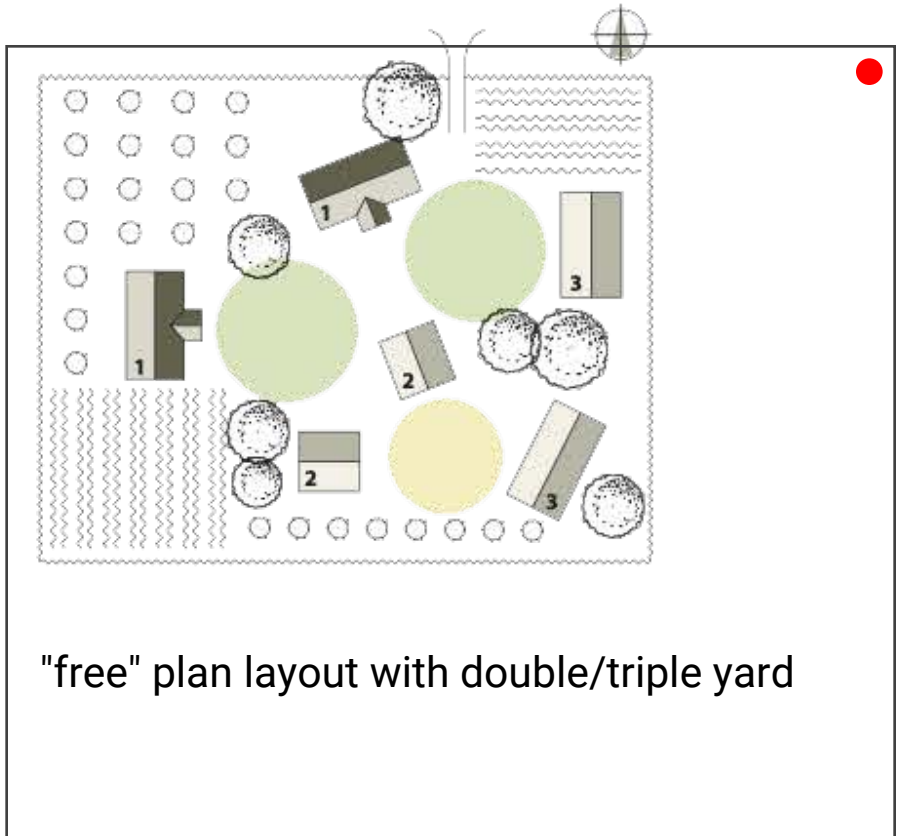
Double yard "free" plan layout



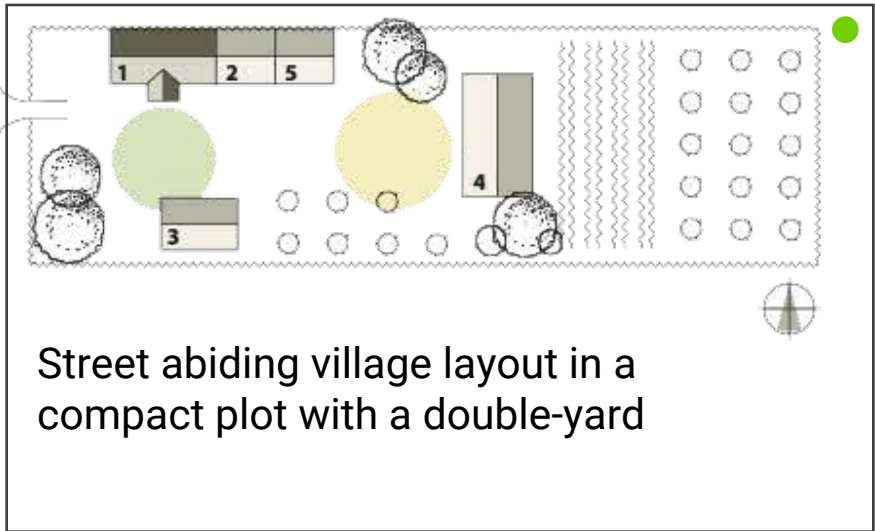
Triple yard rectangular layout



Street abiding vil-
lage layout with
double-yard



"free" plan layout with double/triple yard



Street abiding village layout in a
compact plot with a double-yard

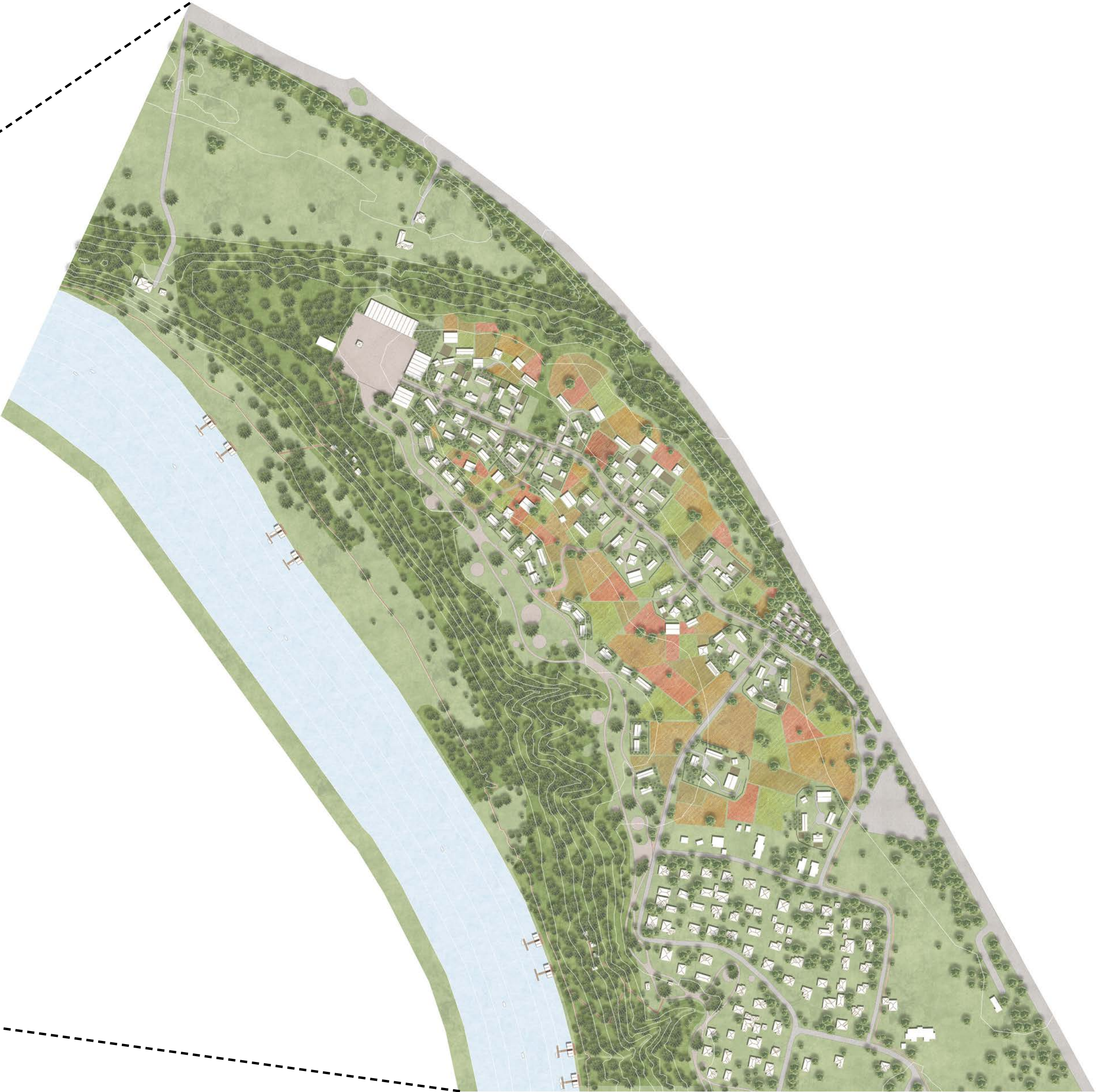
According to the plan (layout) of estates, various op-
tions are possible:

- Single-yard estate
- Street village estate
- chaotic, merchant type village estate

Masterplan

Further development of Vienkiemis

Main part of Birštonas is quite diverse considering urban typologies and architectural forms. It has a mix of large and small scale structures aswell as modern and historic features. The dominant typologies considering volume are residential apartments and single family owned housing. When considering Birštonas character the recreational complexes are the most important. Specifically the old town does most of the heavy lifting because of its unique interwar wooden and masonry architecture.



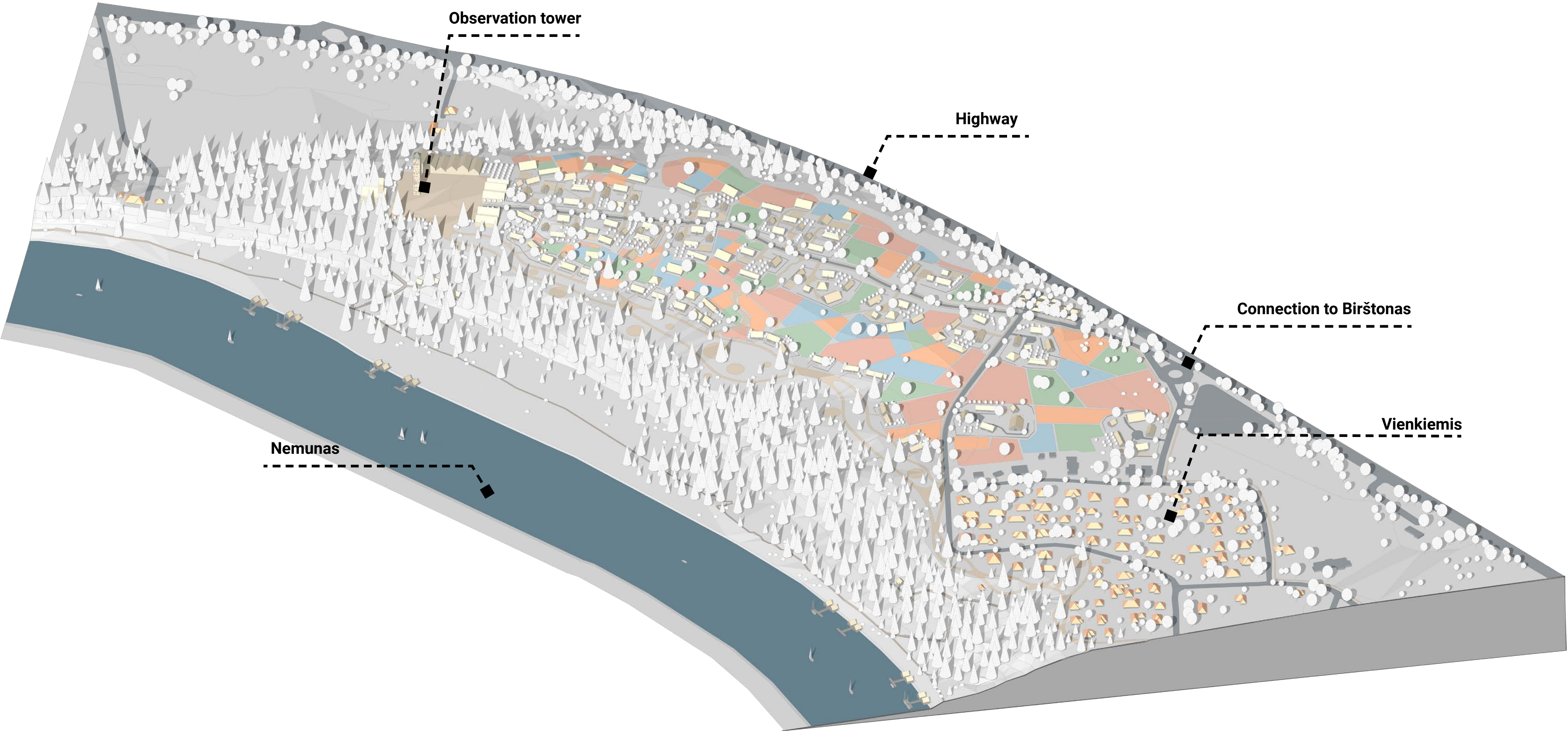
Masterplan

- 1 Covered parking lot
- 2 Main square
- 3 Stairway to the river
- 4 Retreat / sauna huts
- 5 Boathouse / docks
- 6 Park alley
- 7 Town path
- 8 Farm fields
- 9 Ethnographic housing
- 10 Dismantable path



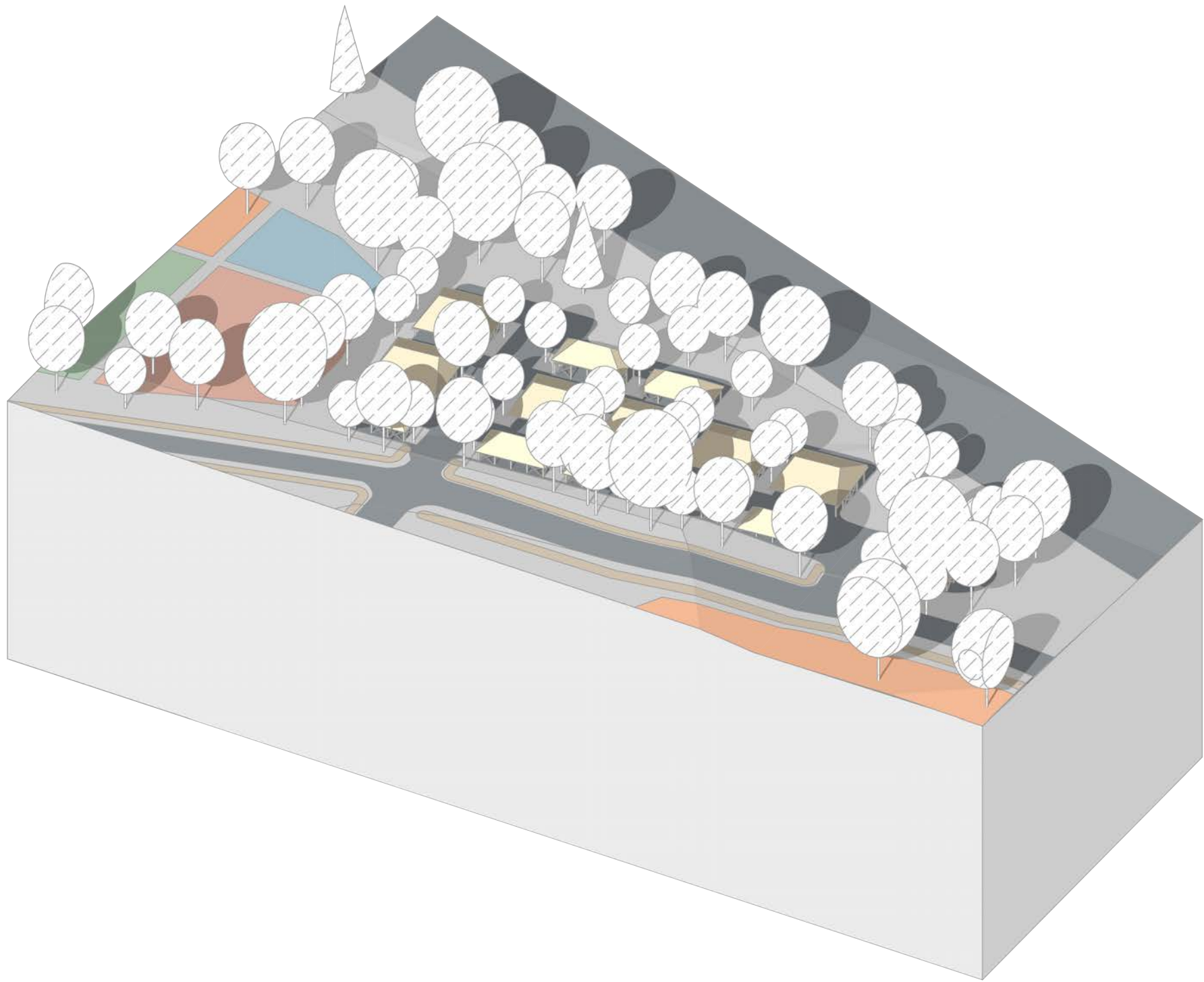
Axonometry

Main



Axonometry

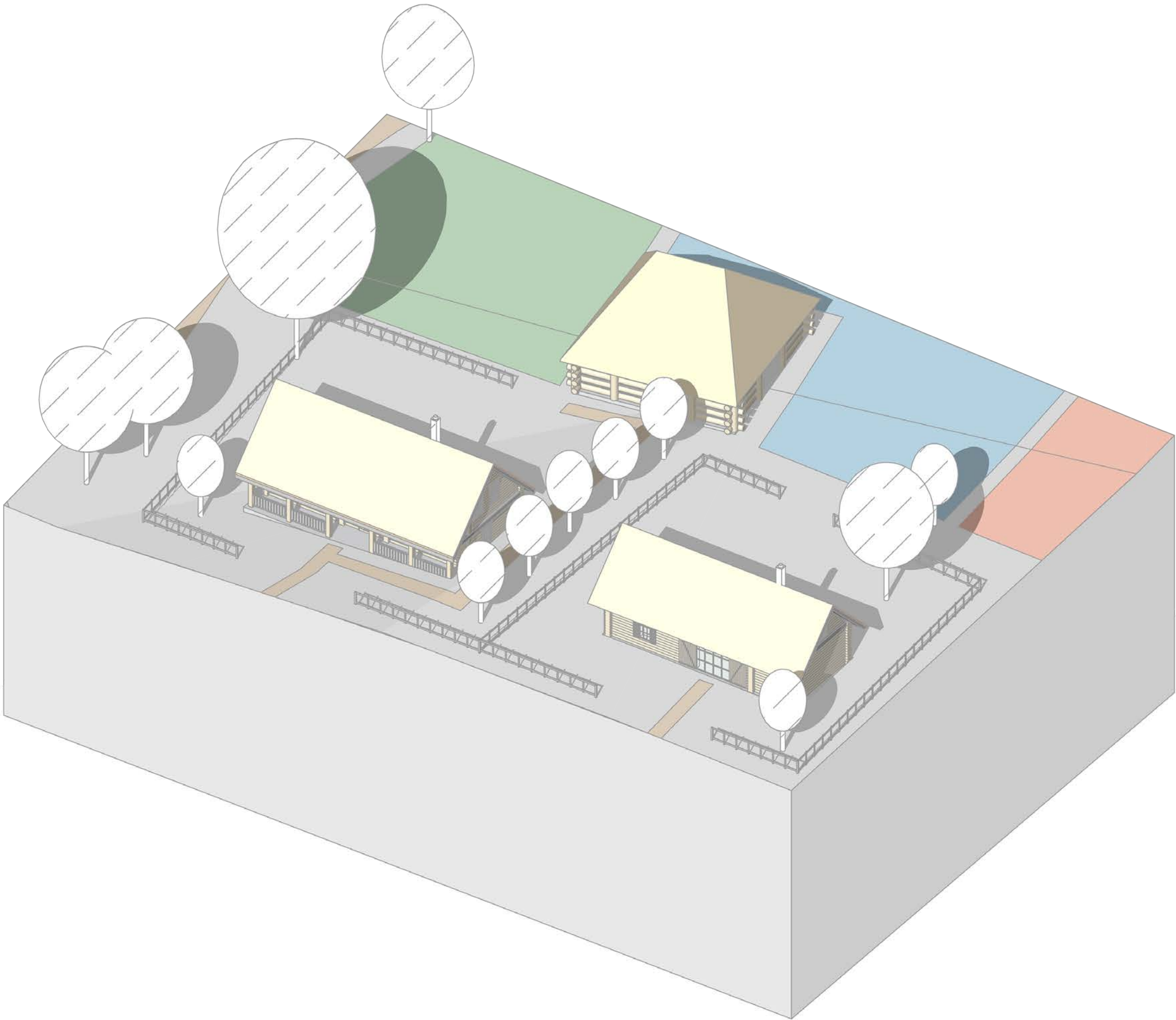
Details



Axonometric diagram of covered parking.

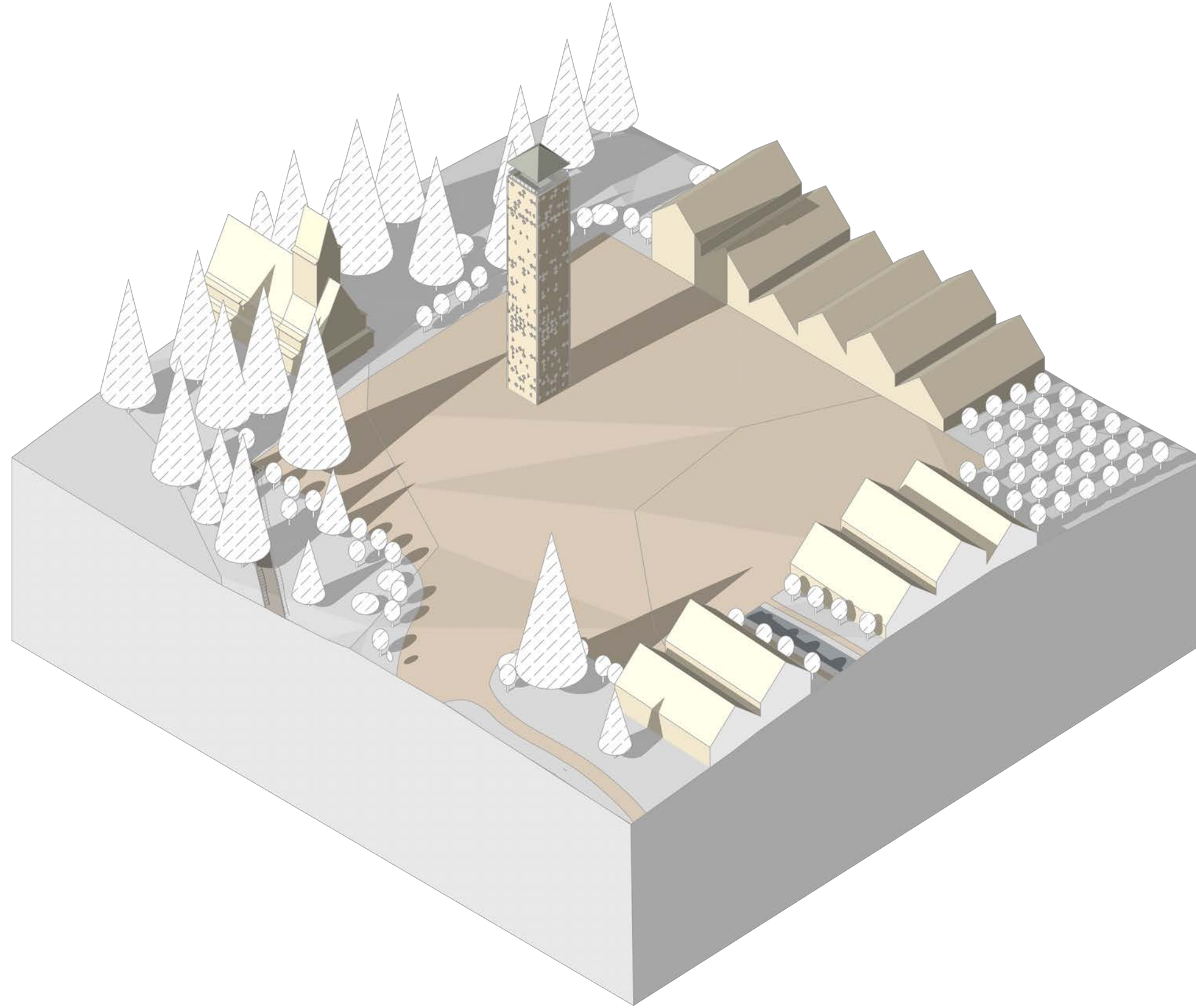
Since Birštonas proper and Vienkiemis are divided in a way that is hard to reach each other by foot car is still an essential tool to get around. tourists just as locals need a spot to park, as they are most likely travelling from far away. Parking is situated on the outskirts of Vienkiemis right by the main entrance. It is covered by lush vegetation around the perimeter. The parkin is comprised of dozens of gabled roofs to protect the vehicles and to merge into the ethnografic town landscape.

Since the territory is located in the Nemunas loop regional park the architecture here must adhere to the laws. The buildings have to be of an ethnografic nature, built from natural and local materials. The Layout of the plots also must follow a historic layout. This is all done for the purpose of enriching the landscape.



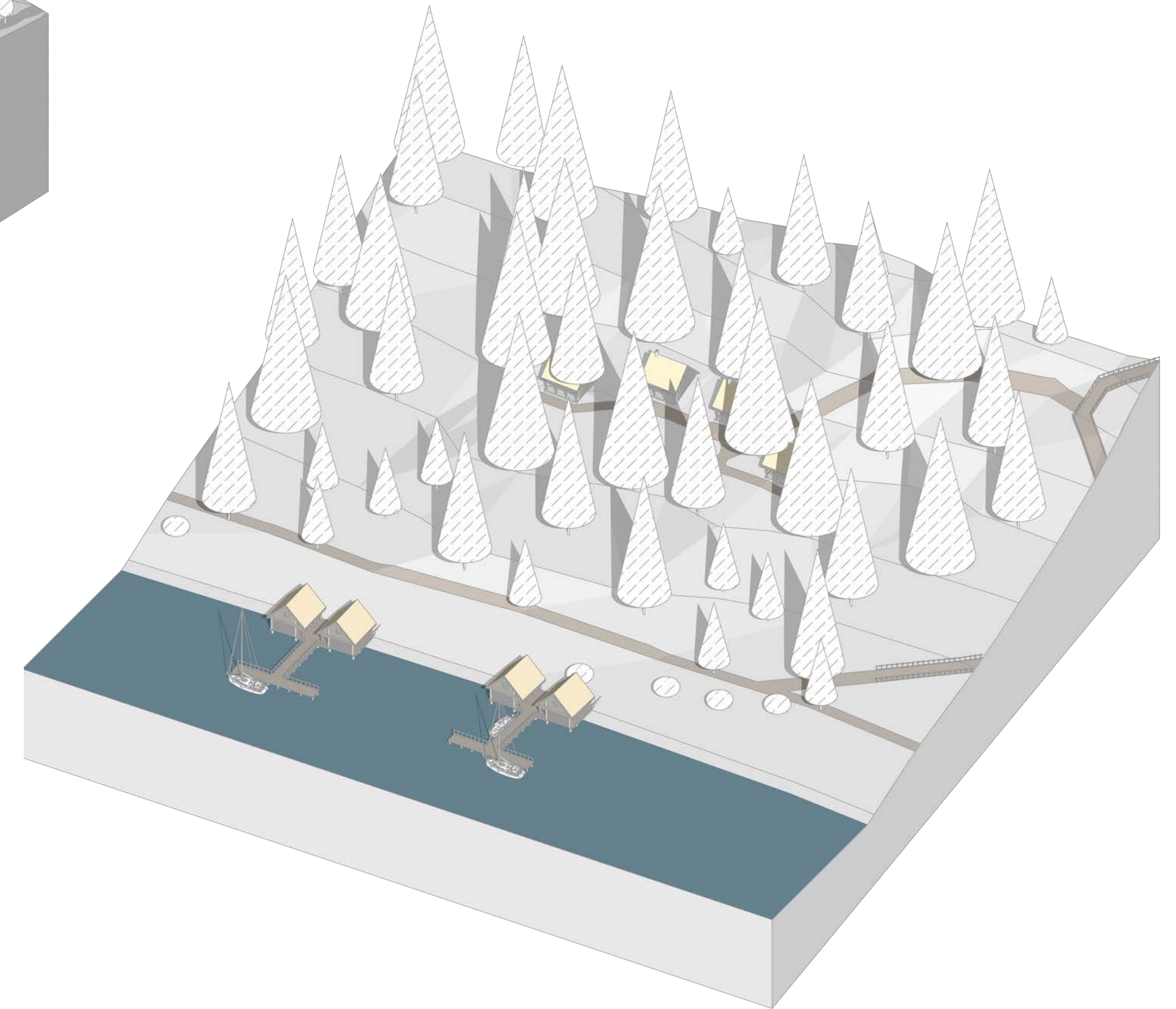
Axonometry

Details



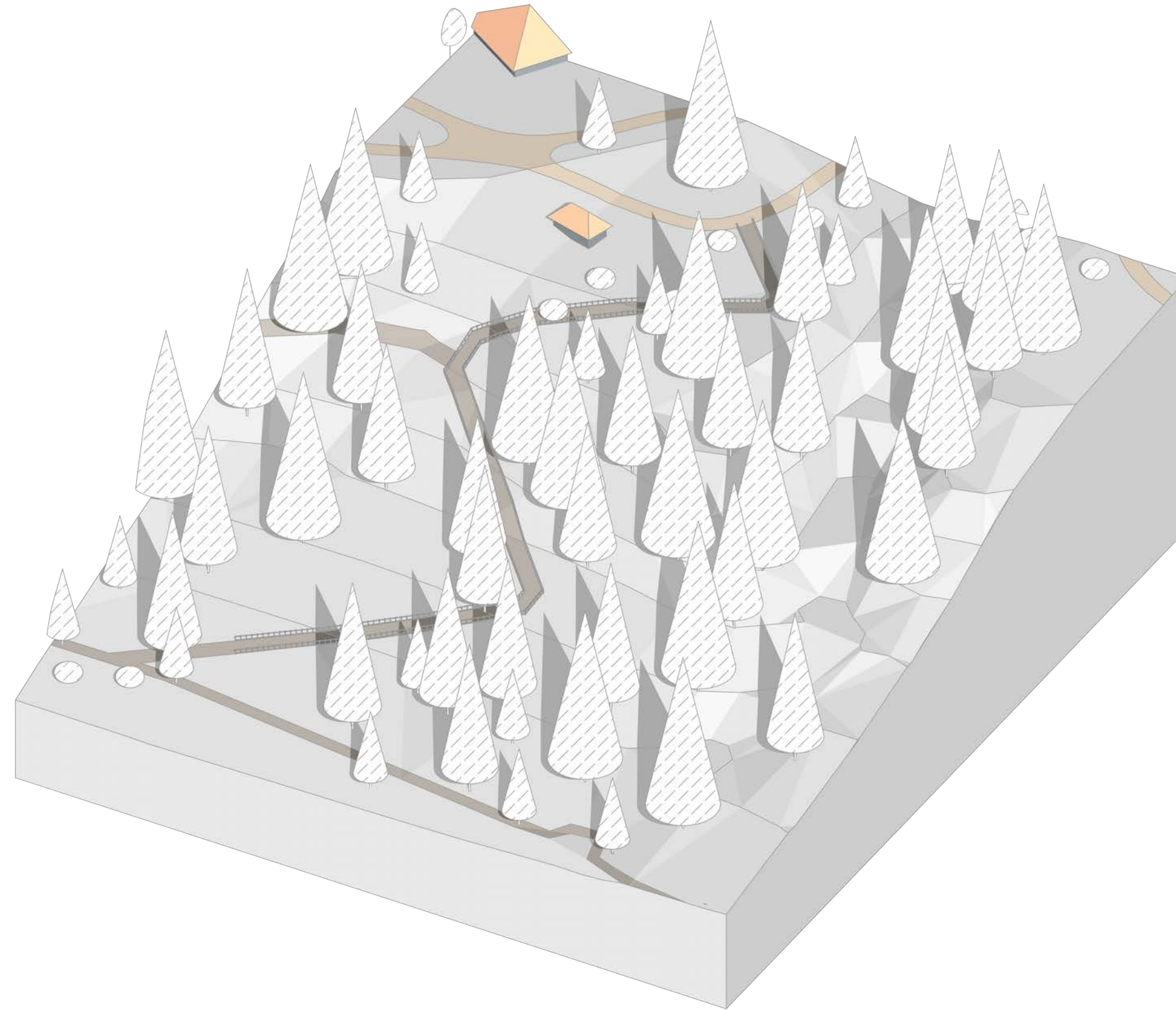
For every town, historically, **the square** was the most important space. It is a place of business, markets, social and public events. The square usually was surrounded by denser, perimetric architecture. It was also a space for the most important buildings, for example the church, town hall and so on. In case of this project, the square is created right by the existing observation tower, that is 50 m. high. It is the place where the main events take place. Also a church / community hall is located.

The area is located right by the Nemunas river. The river offers great recreational possibilities. Firstly, Nemunas river is large and deep enough to be used by **small ships and boats**. Secondly a fair amount of **water sports and leisure activities** could take place here. Thirdly, small huts for **nature retreat and sauna** could be built and hidden away in the slope for added value the locals and tourists.



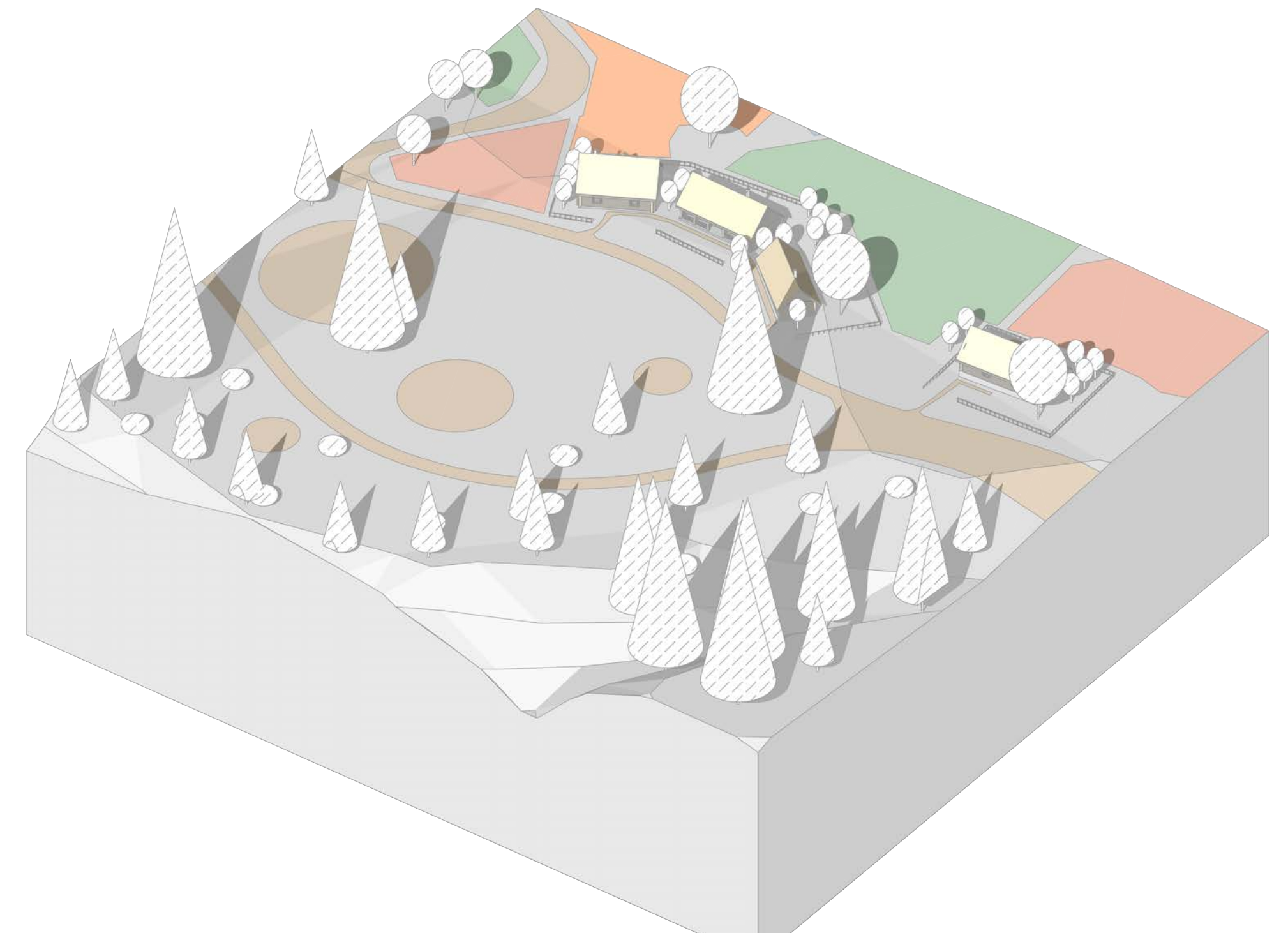
Axonometry

Details



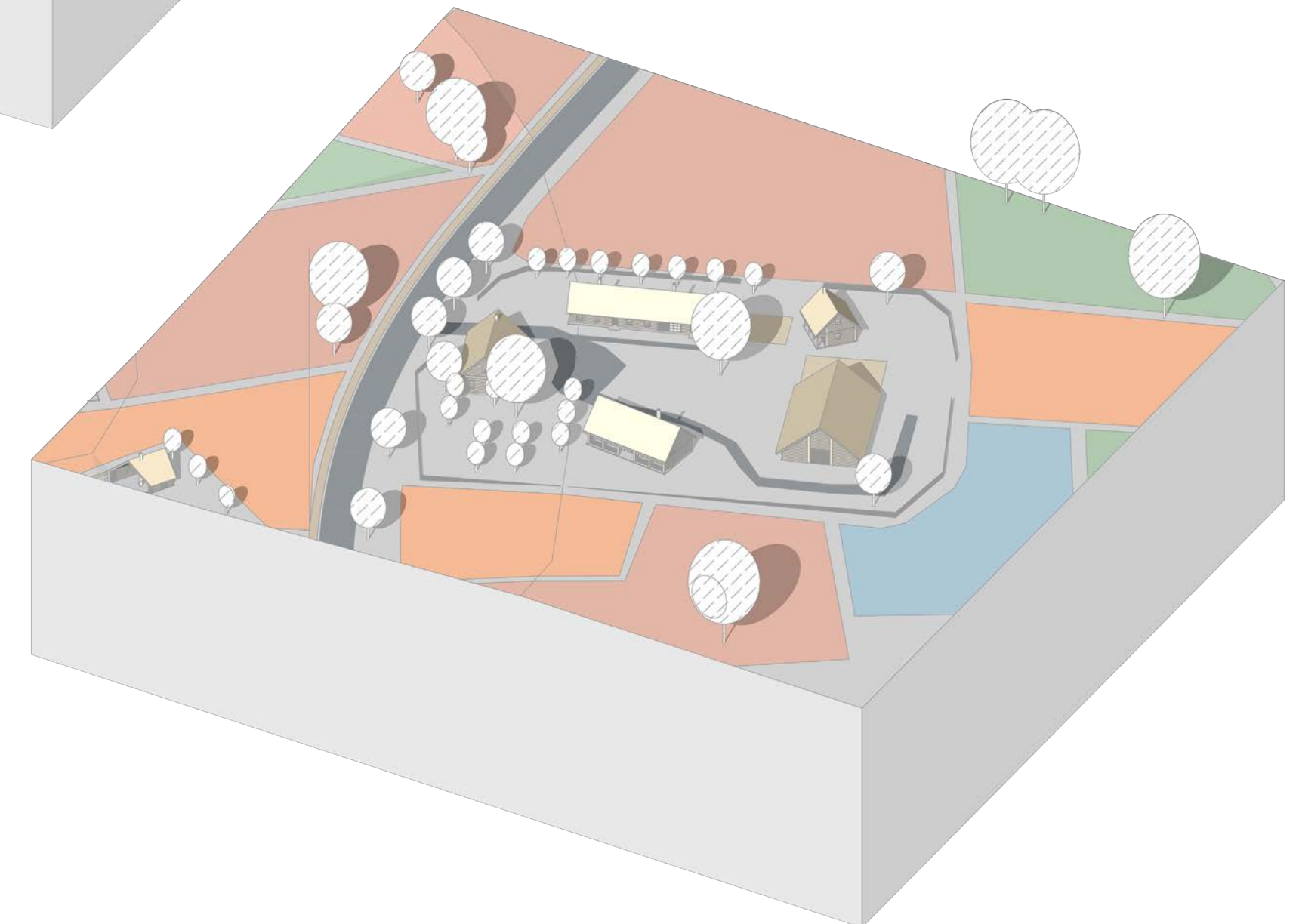
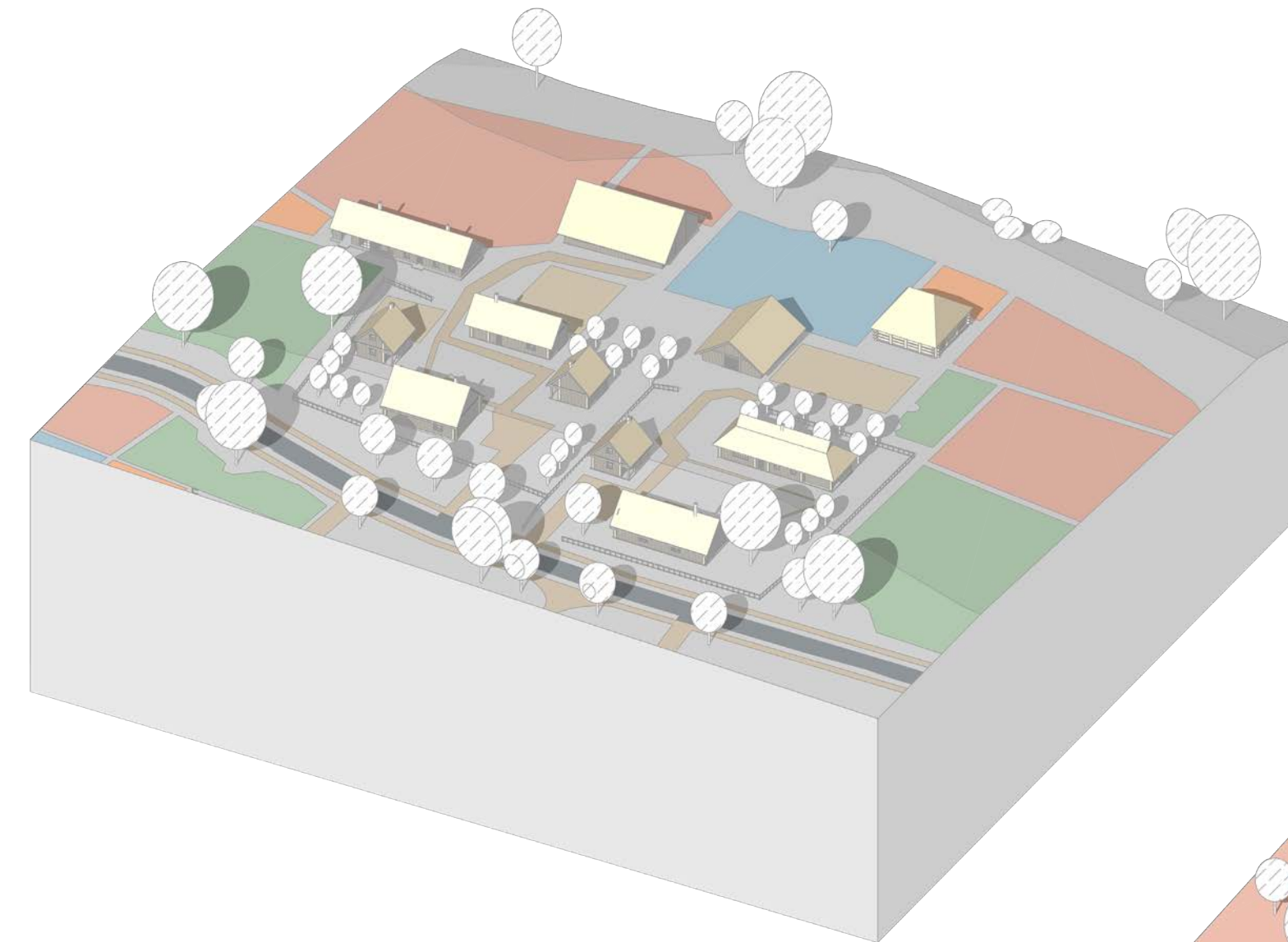
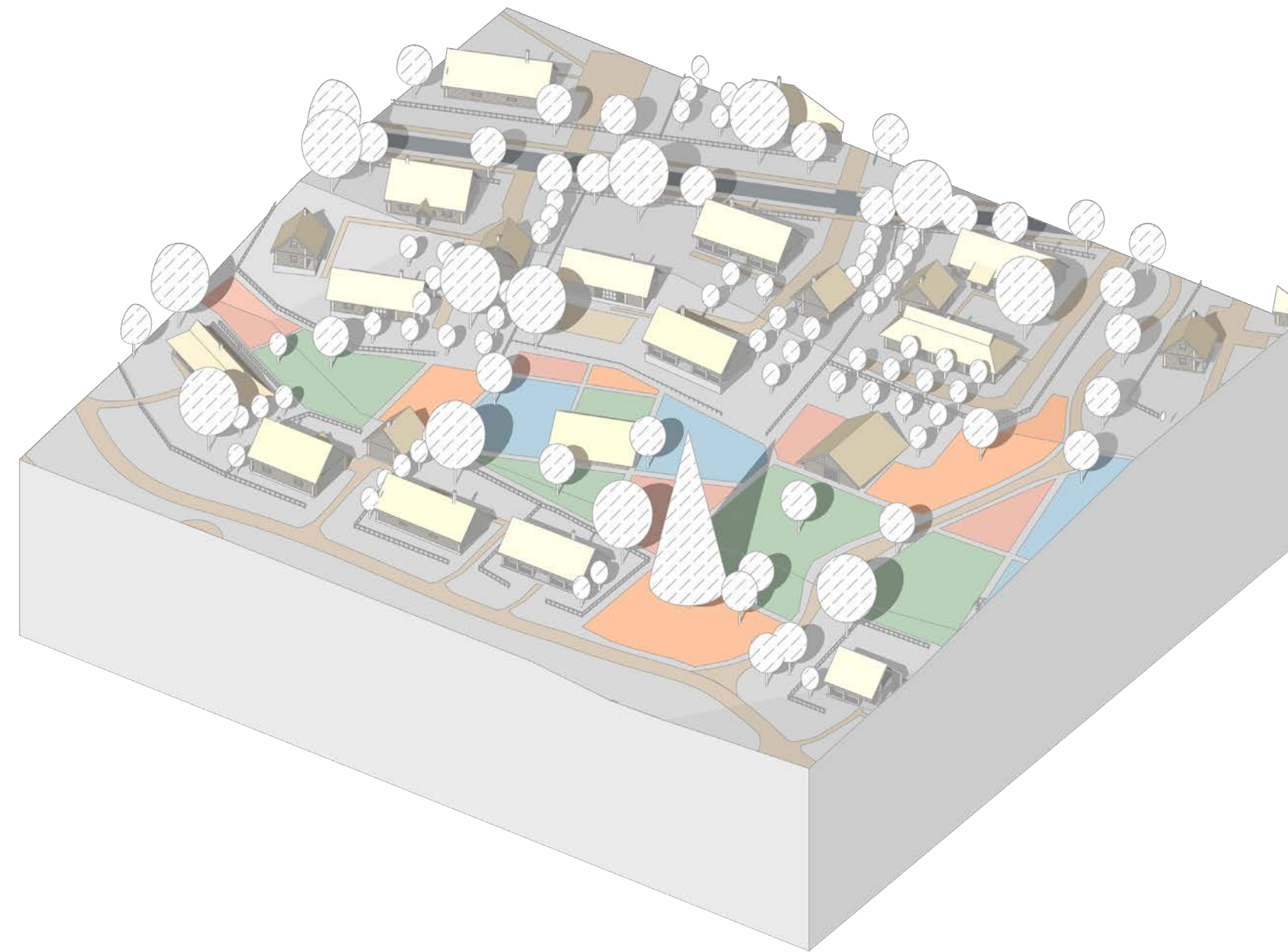
Although getting to the water is easier said than done. The hill plateau where the main part of the town sits and the Nemunas river is divided by a steep hillside. Additional infrastructure like a trail deck, ramps must be put in place to reach the shore. The wooden ramps follow the terrain elevation lines as to create a gentle gradient and be inclusive for the disabled people.

Right by the town plateau a hillside **pine forest** runs all along Nemunas. Currently its potential as a park connecting all of Vienkiemis together isn't used. Since Vienkiemis developed quite eratically it is now difficult to sew it back together in a sustainable and pedestrian friendly sort of way. This **alley could join it all up**, at the same time acting as a park. Comutting through all of Vienkiemis could all be a stroll in the park.



Axonometry

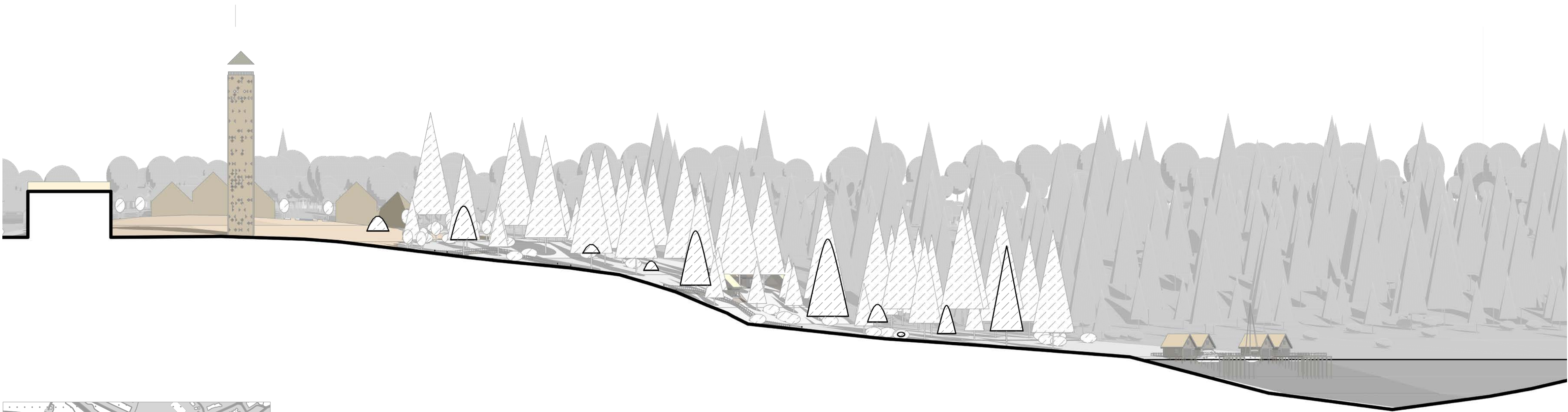
Details



Like most cities or towns suggested further development of Vienkiemis would have **varying** built up plot **densities**. The plots closer to the main square are smaller and more densely built up. Plots that are a fair way away from the town center would start to enlarge, have vegetable and farm land. And lastly the plots that are far away from the center would be more focused on farming activities and completely surrounded by farmland.

Section

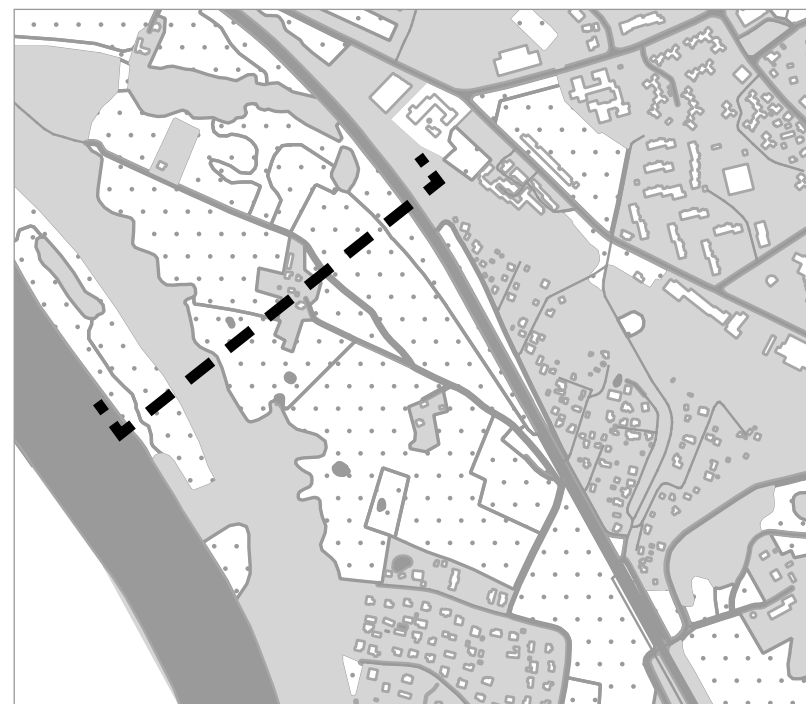
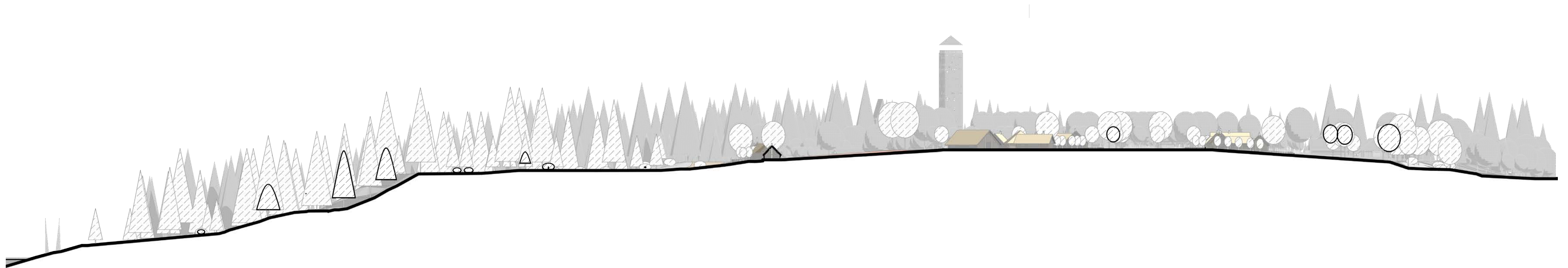
1



Section number 1 shows the terrain qualities of the main square, path to the river bank and the subsequent terrain qualities. This part of the studied area has **the most jagged and difficult terrain**. On one hand it makes it difficult to build and commute between the square and the river, but on the other hand it adds to the unique beauty and charm of the area.

Section

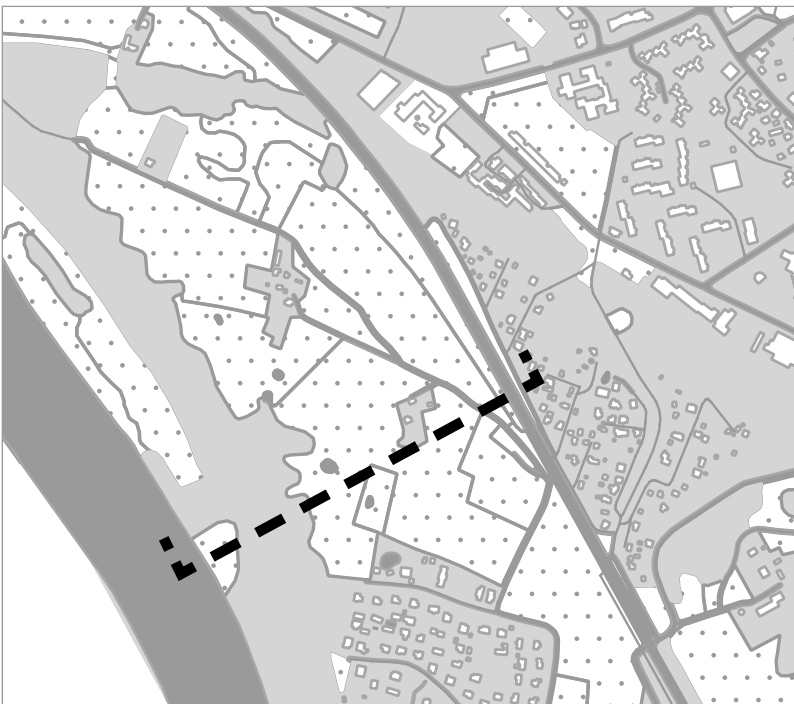
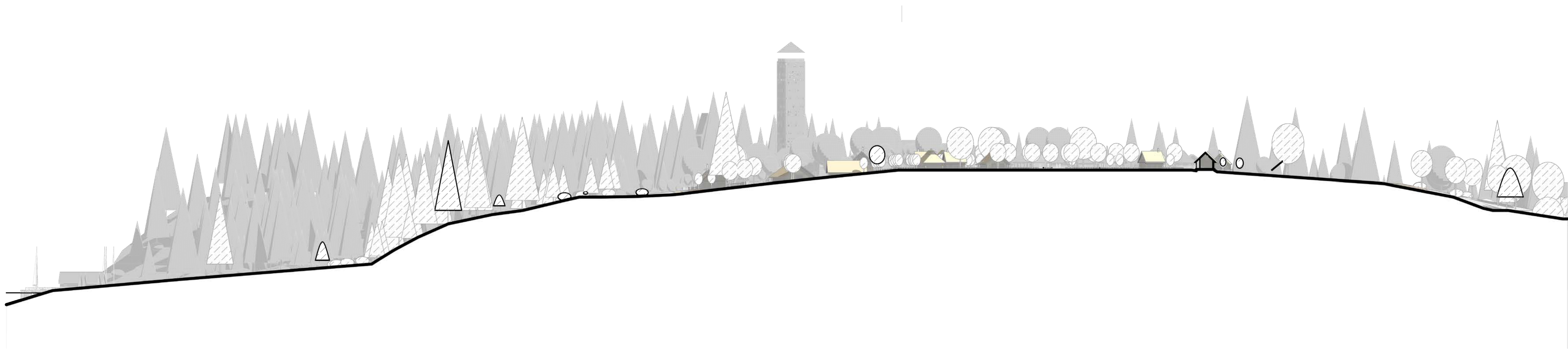
2



Section number 2 is cut in roughly the middle of the settlement. The **terrain here is noticeably more even**, there is more land that is more or less flat, meaning there is **more land to build, plant and farm**. Another important detail to notice here is that the hillside pines cover the village completely, hiding it from the other shore. This is a feature of ethnographic architecture not to stand out of the landscape, but to enhance it and make it livable.

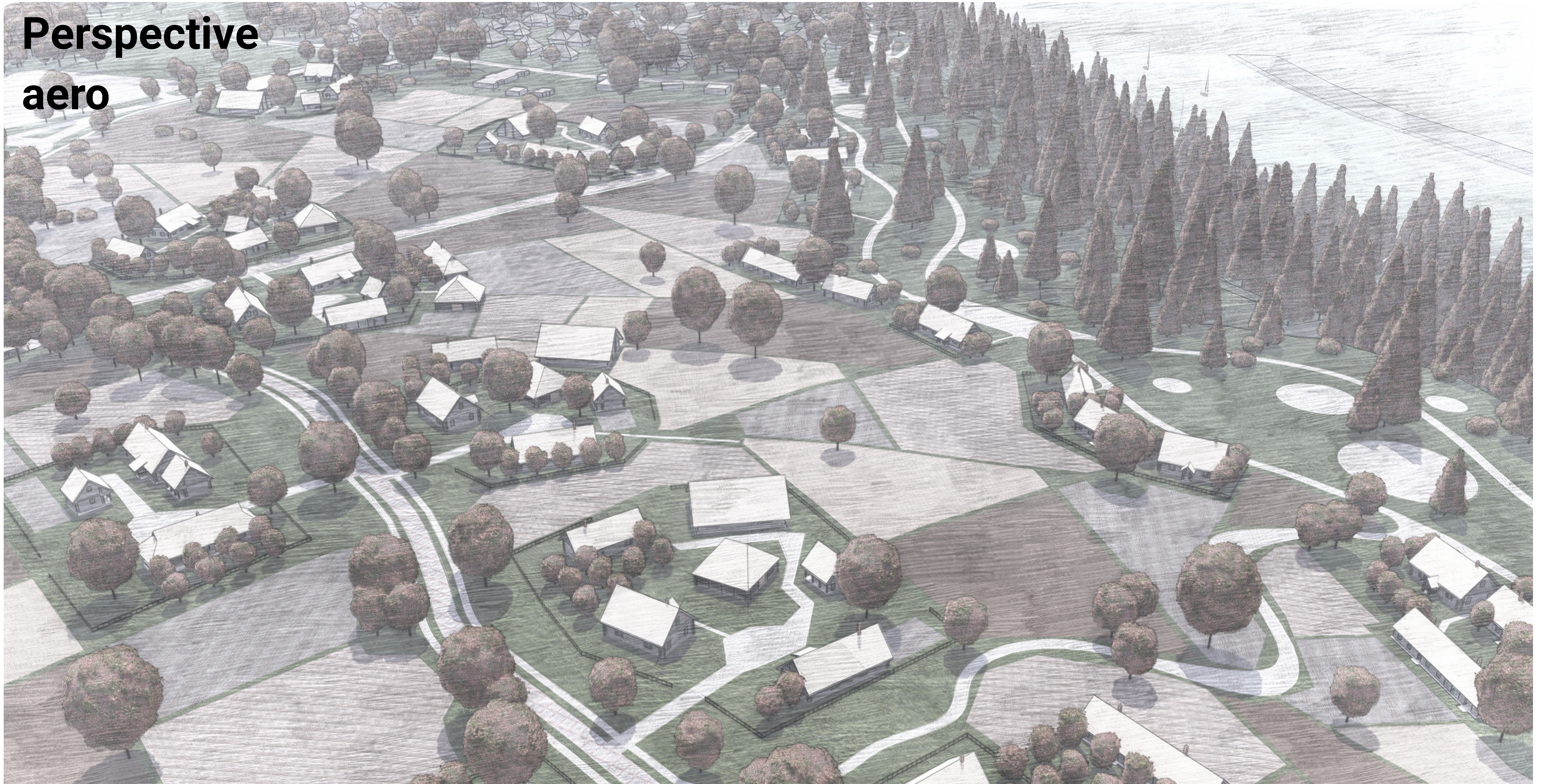
Section

3

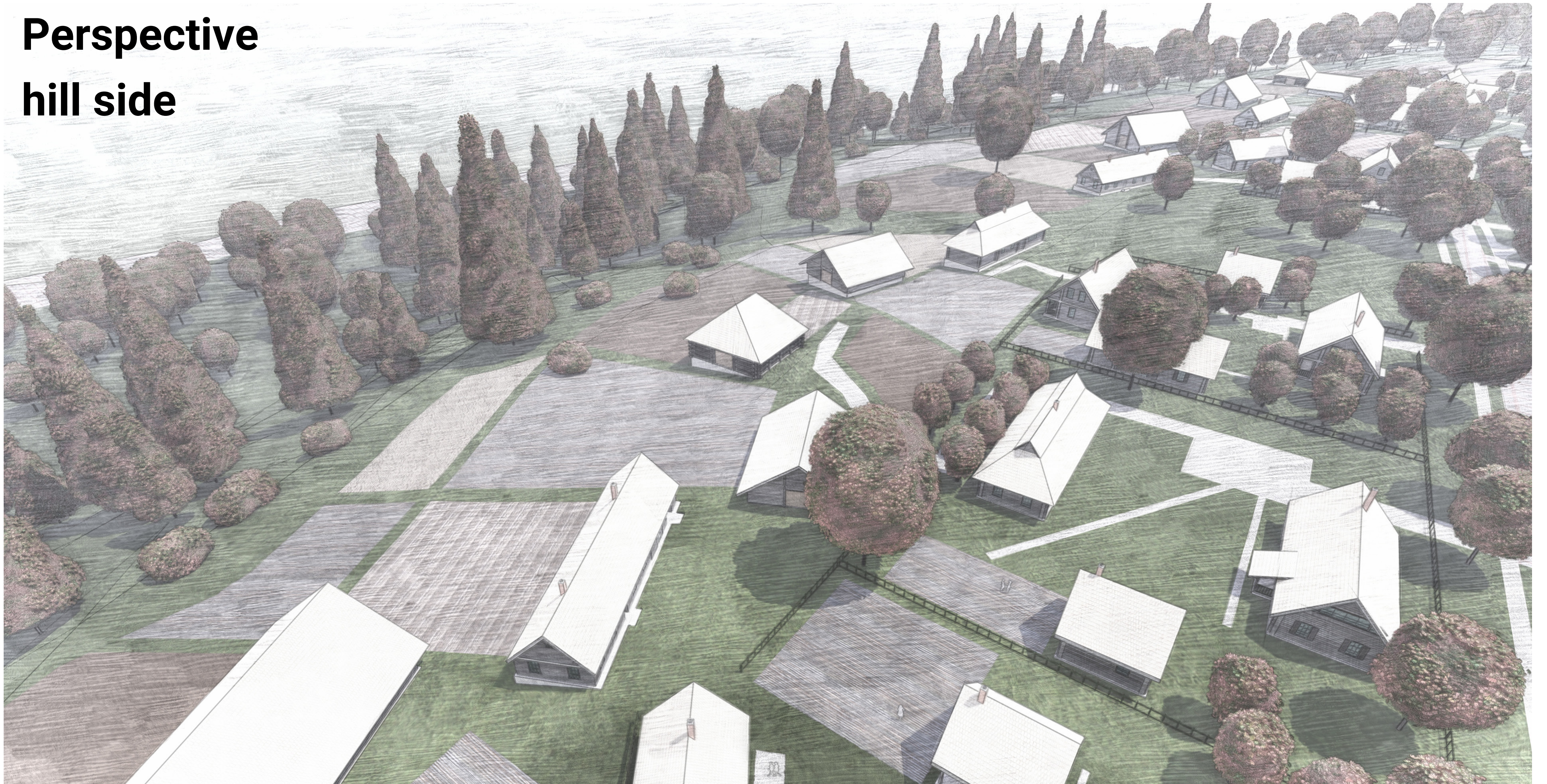


Section number 3 has roughly the same terrain as the before mentioned area. Since this part of studied are is quite a distance away from the center there is a lot **more land that is farmed than built up**. Also, there is less visual interest here, considering the moderate terrain and sparce trees. **The colourful farm, vegetable and flower fields help to create variety and enhance vibrance in an otherwise quite mediocre area.**

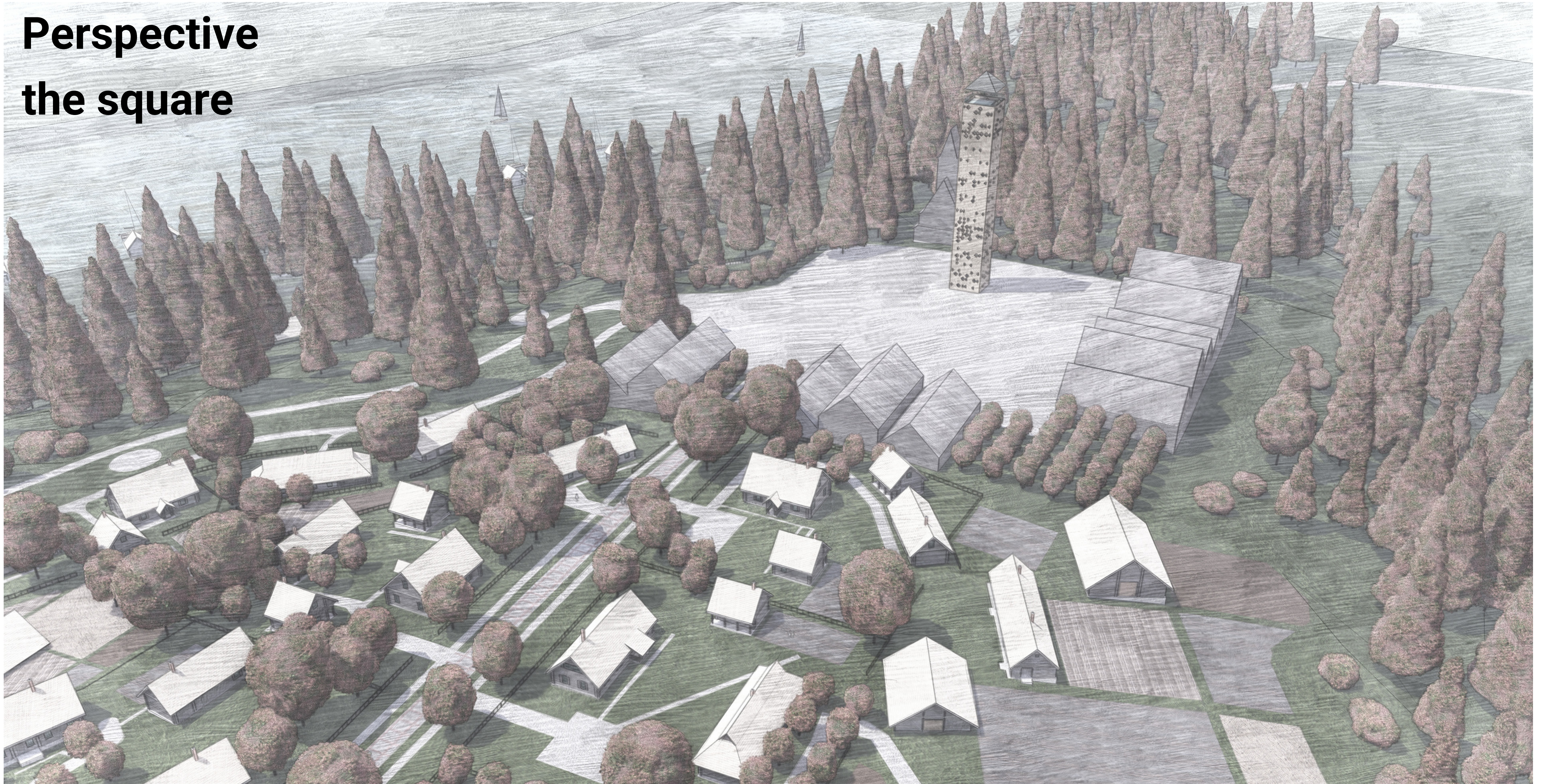
**Perspective
aero**



Perspective hill side



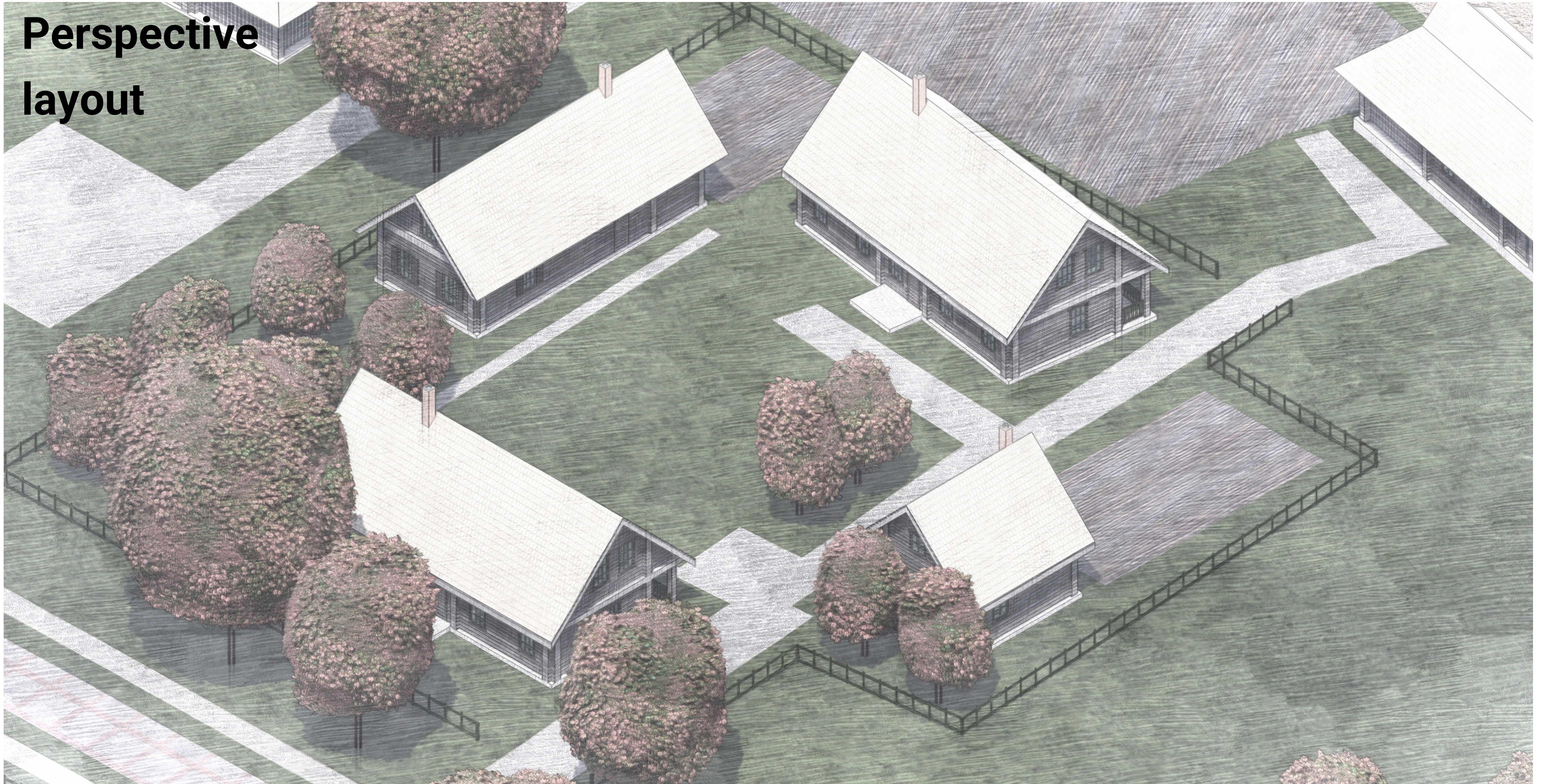
Perspective the square



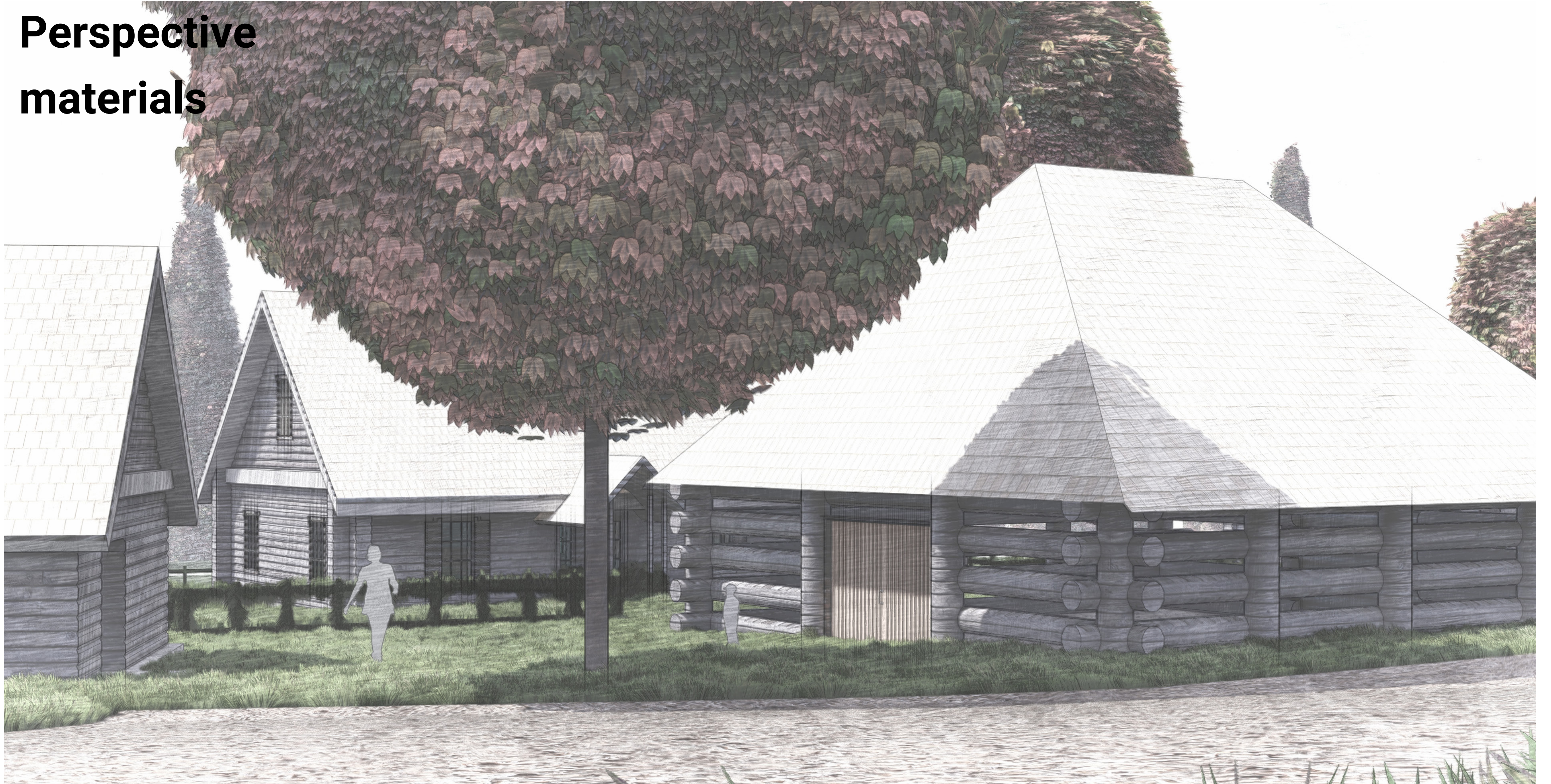
**Perspective
the docks**



Perspective layout



Perspective materials



**Perspective
main road**



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