

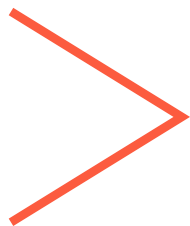
Birštonas

Urban design
portfolio

01
analysis

02
strategies

03
design response



Contents.

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Introduction.

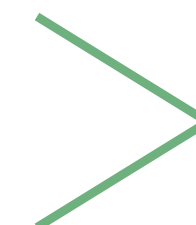
the town of Birštonas

Birštonas is a small town in southern Lithuania, located about 30 kilometers south of Kaunas.

The purpose of this portfolio is to serve as an exploratory and explanatory document, regarding the current urban situation in the town while also proposing multiple ways to improve it. Currently the portfolio consists of the first part, namely the analysis and initial insights into the current state and possible future scenarios of Birštonas.



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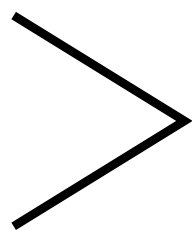
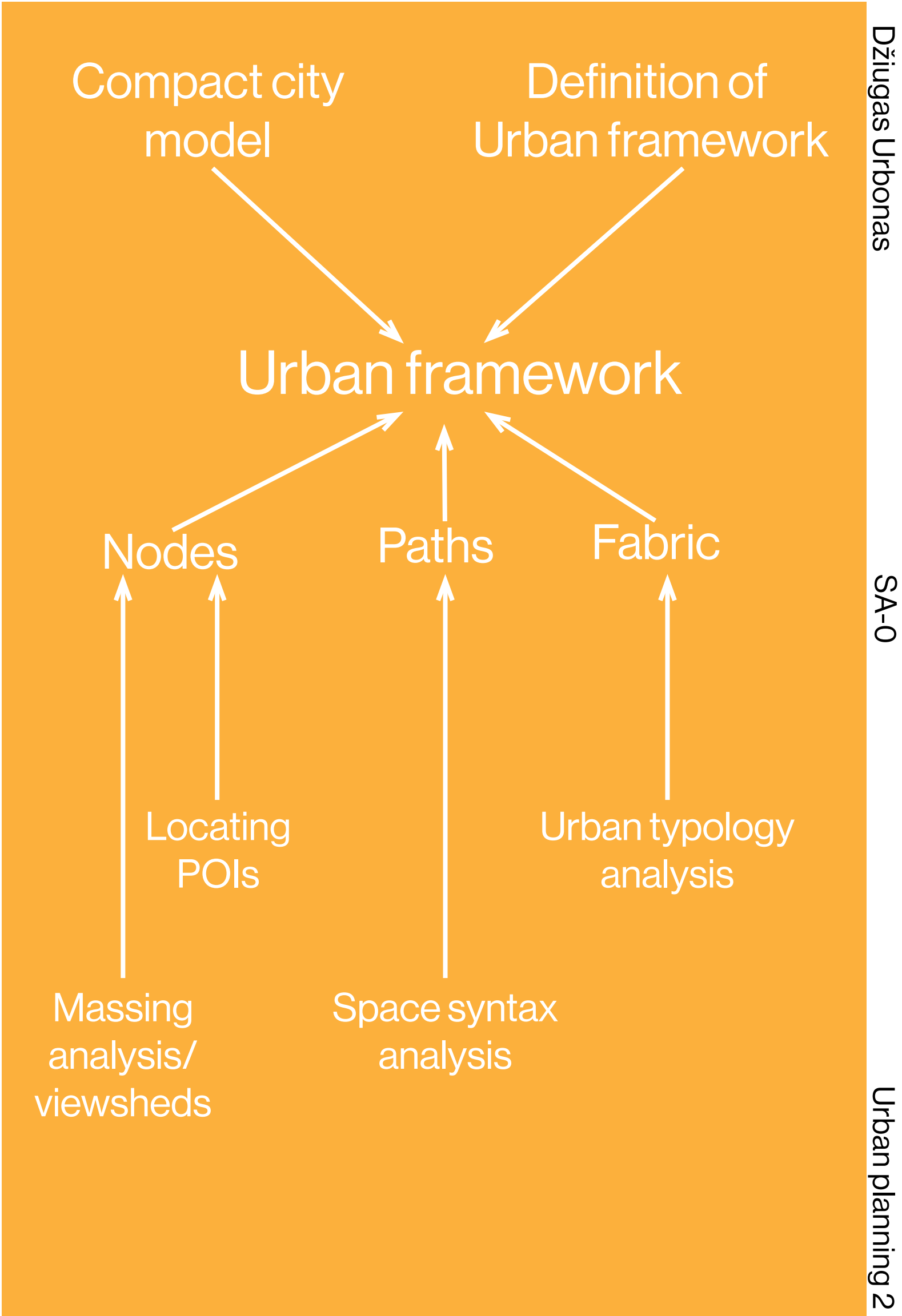
Methodology.

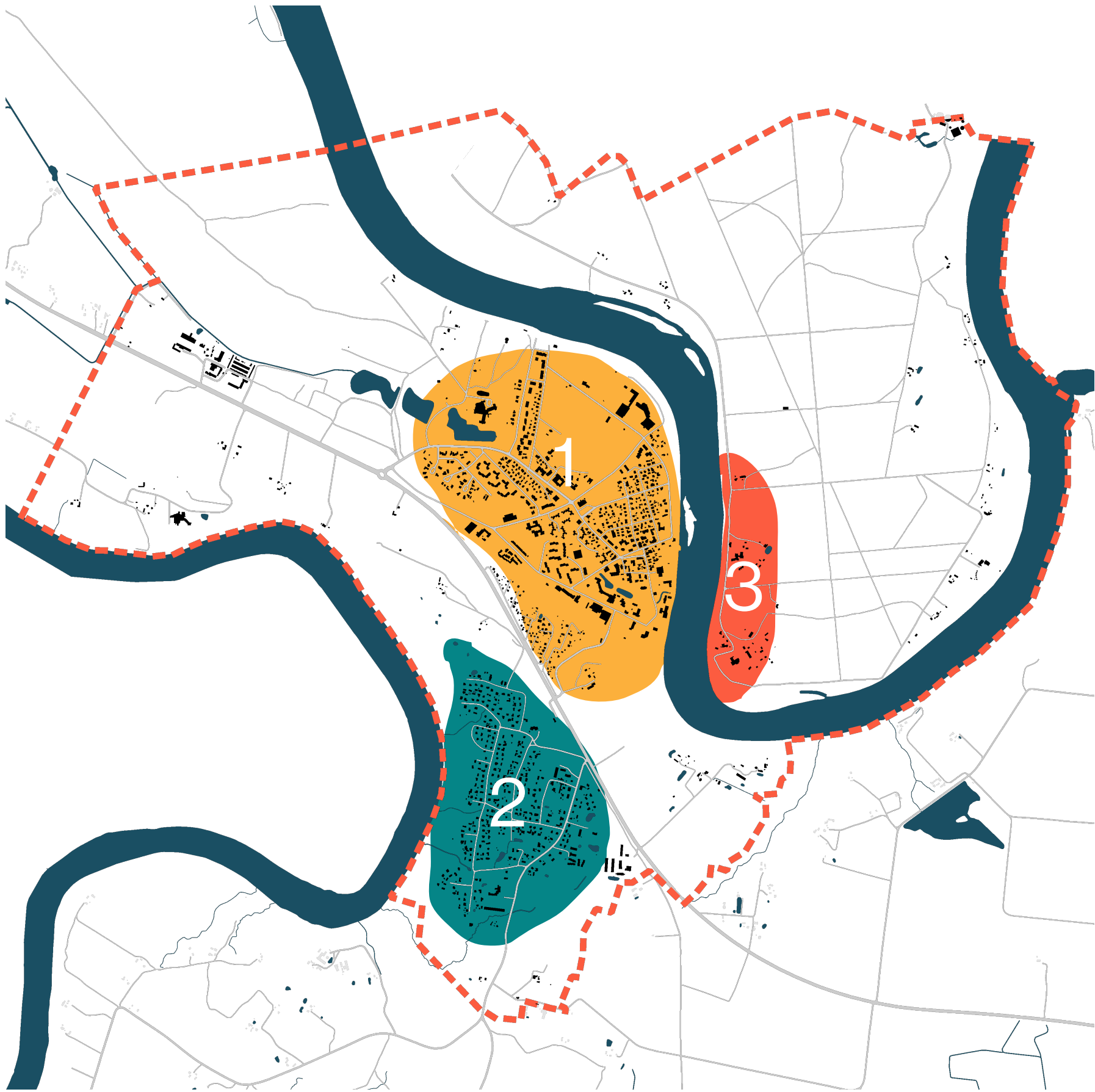
of analysis

The first step in analysing Birštonas is establishing the location and introducing the town. Afterwards, follows an introduction of Rogers' version of the theoretical compact city model and its' overlap with the town of Birštonas. Establishing criteria and makings of a compact city in relation to later theories. Following that, we establish what urban frameworks are, using J. Vanagas' definitions, also establishing the defining criteria in discerning the urban framework of a location, and defining the relation of the framework and the compact city model.

1st criteria in discerning the urban framework - nodes-POIs and visually dominant objects, using open source data from OpenStreetMaps.
2nd criteria - the paths of main traffic and pedestrian flow, discerned through space syntax methodology, by B. Hillier.
3rd criteria - urban fabric - the functionality and character of the areas created by their surrounding paths and nodes - discerned through the use of Birštonas BP. All of the previous analyses culminate in a final master scheme of the whole urban framework of Birštonas.

1.1





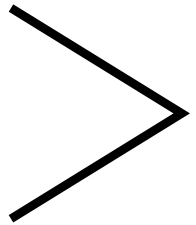
Overview.

- Birštonas city territory
- Roads
- Buildings
- River Nemunas

The town of Birštonas

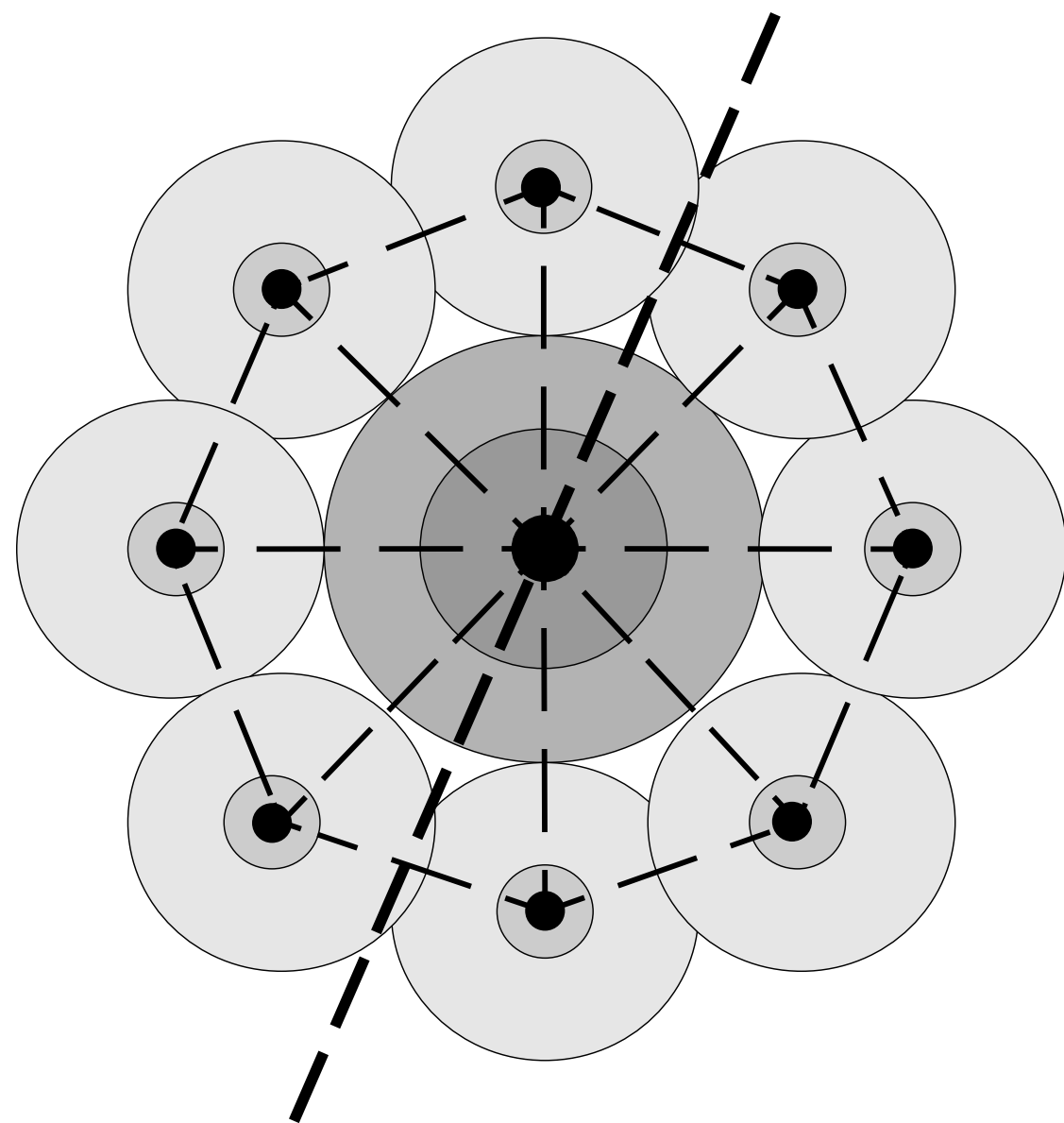
1.2

Birštonas is a small town in southern Lithuania, located about 30 kilometers south of Kaunas. It's known as a spa town, thanks to its mineral springs and natural healing resources. People have been coming to Birštonas for centuries to soak in the mineral-rich waters and enjoy the fresh air. The town consists of 3 main bodies, 1 - Main town, 2 - Birštono vienkiemis, 3 - Old sanatorium areas.

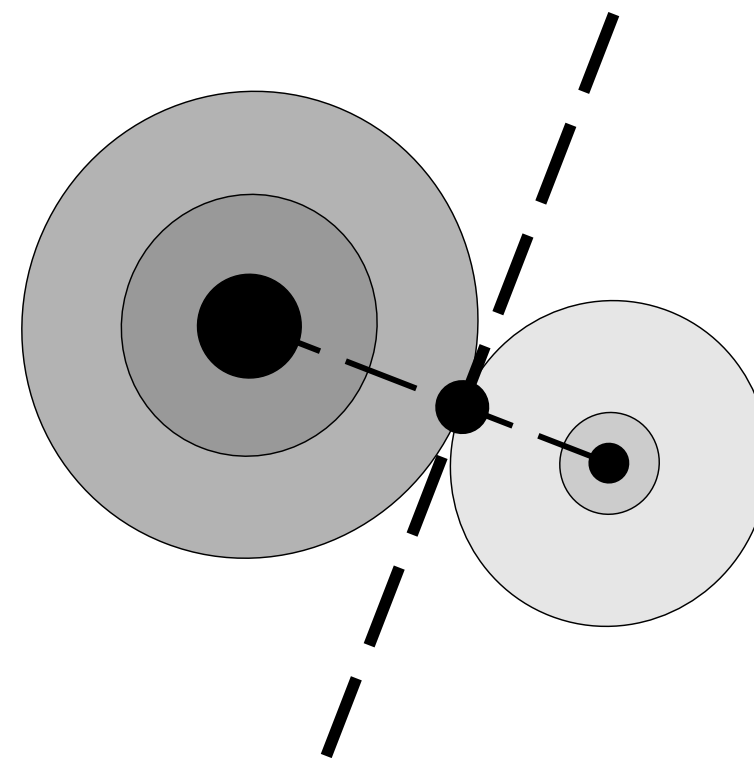


Compact city.

Theory
R. Rogers



Redrawn scheme of Ideal compact city, by R. Rogers



Scheme of ideal compact city adapted to Birštonas' case

1.3

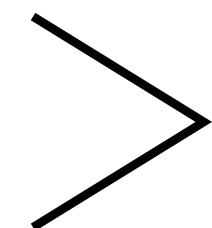
Compact city theoretical model

R. Rogers, in the book "Cities for small planets" advocates, that the creation of the modern compact city demands the rejection of single function development and the dominance of the car.

The compact city grows around centres of social activity located at public transport nodes - focal points around which neighbourhoods develop. Though in the case of Birštonas such points should be considered to be pedestrian attractor points, meeting places, simply because of its' size, which negates any need for public transport.

The compact city is a network of such neighbourhoods, each with its' own parks and public spaces and accommodating a diversity of overlapping private and public activities.

The current Birštonas does not yet follow this model perfectly, but it is my belief, which is to be proved through the following analyses, that it should in the future.



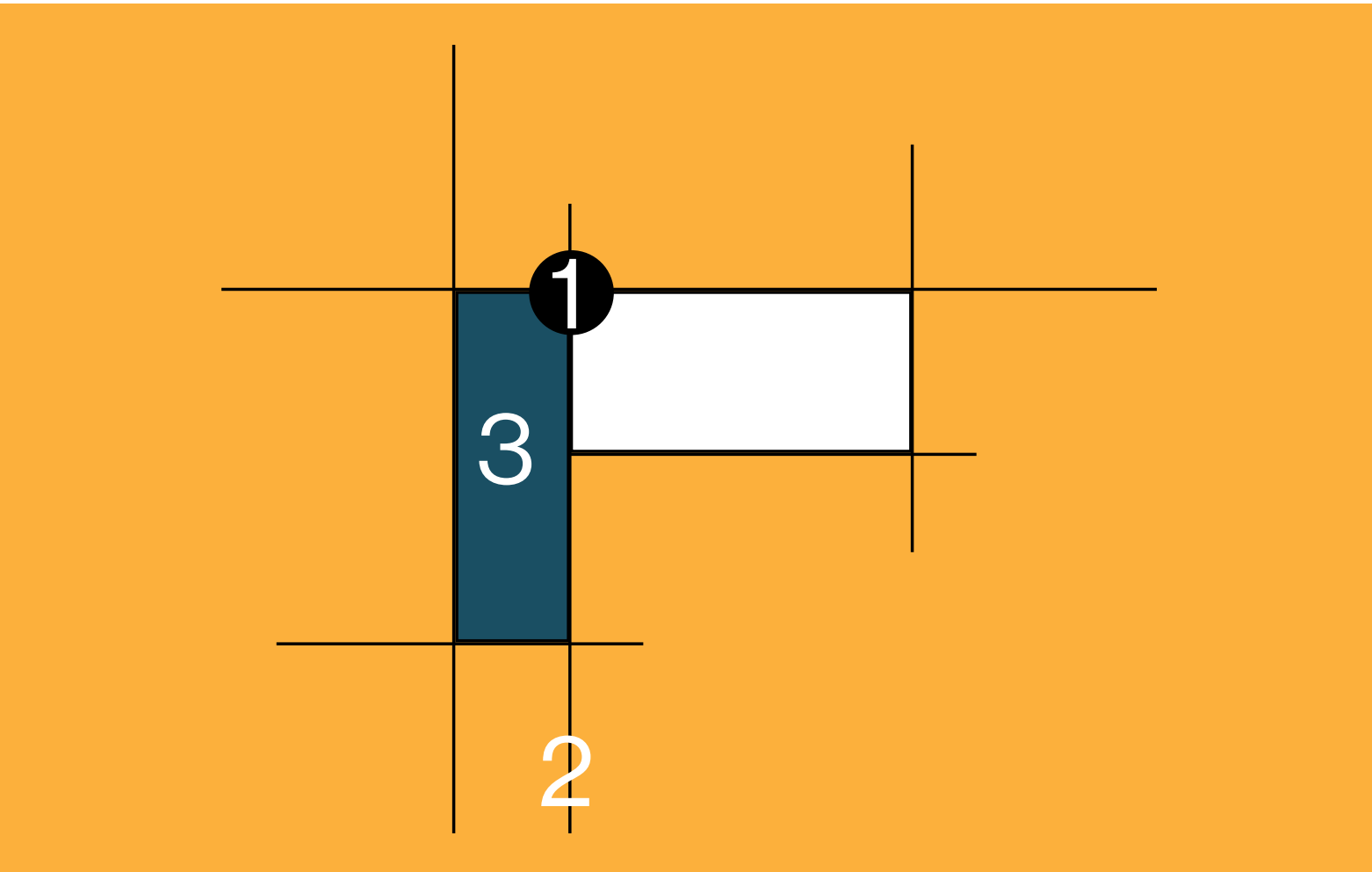
Urban framework.

Theory

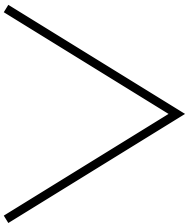
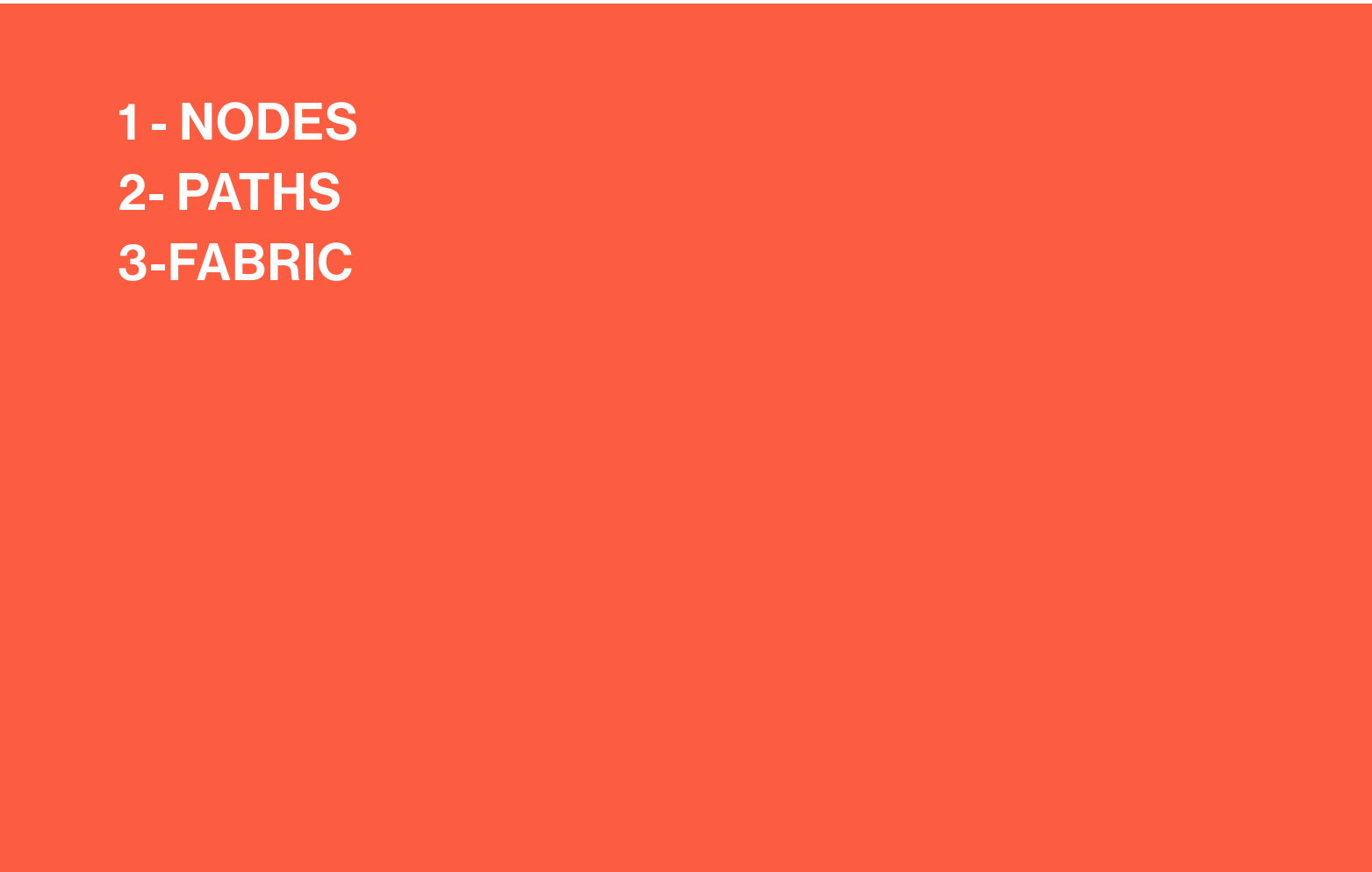
1.4

Framework

According to J.Vanagas, the part of the city/town forming the main urban structure, which includes the territorial pool of the most active mass activity processes of the population, the most intensively absorbed space. The framework is formed by the main highways, communication hubs, the city buildings connected to them - public, business, commercial and other unique complexes that attract massive flows of visitors -fabric. The term “urban framework” is not equivalent or synonymous with the term “network of settlements and roads”, it has a wider scope. The latter combination of words refers to the territorial structure, and “urban frame” refers to the main construction of that structure, the system of the most important elements.



Simplified scheme explaining the elements of urban fabric



POIs.

Functionally dominating objects

Locating nodes by discerning the main points of interest

In the context of urbanism, points of interest (POIs) are locations that attract people and contribute to the character and function of a city.

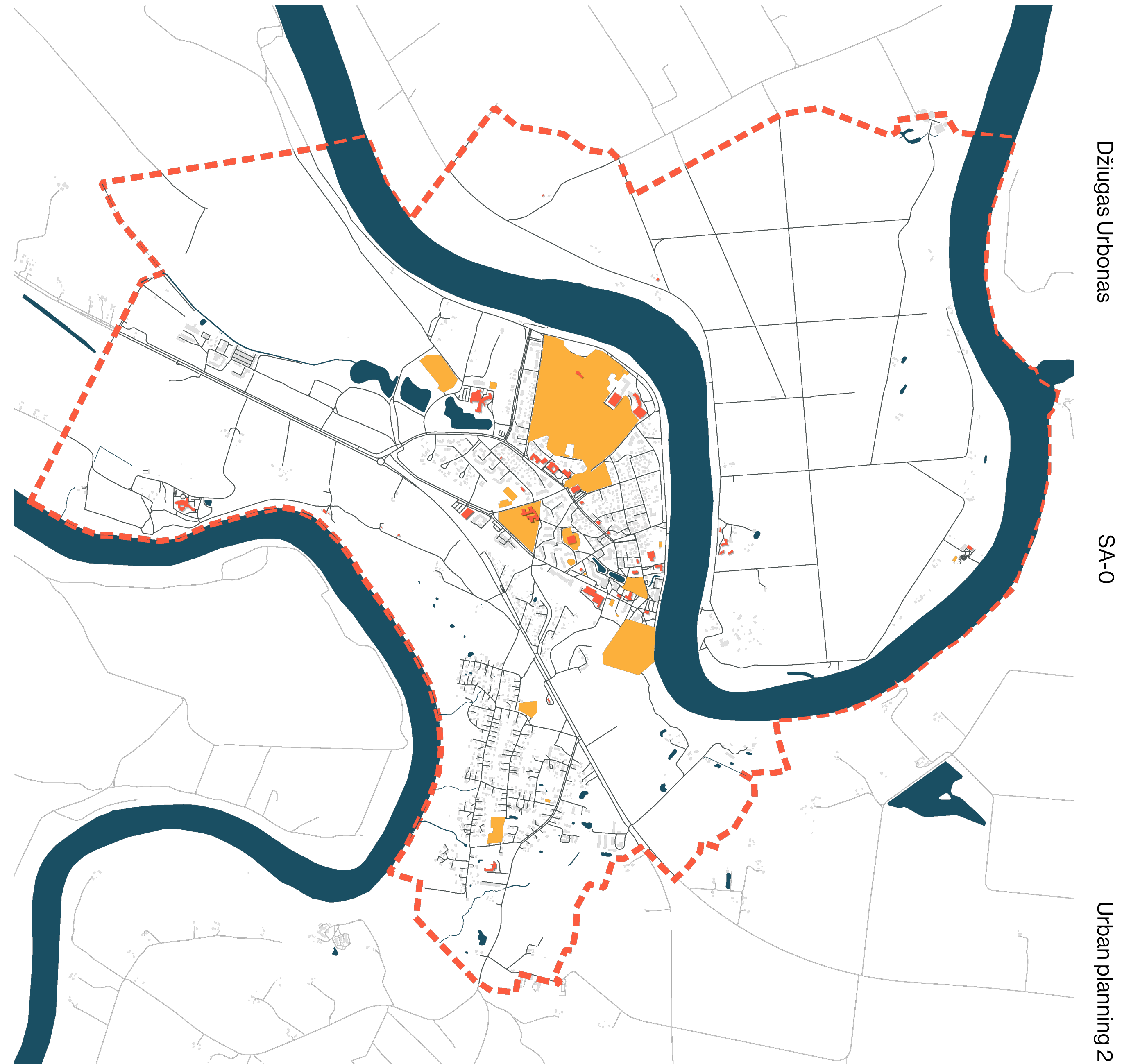
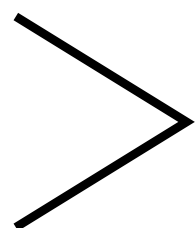
In an urban frame, points of interest form a part of the urban fabric, or can be seen as nodes - end goal locations of a commute, attractor points.

The presented scheme shows the territories (parks, squares, objects of nature, etc.) and buildings/objects (businesses, places of religion, education, hotels, resorts, medical, education and etc.), which can be considered as POIs.

POIs - territories (parks, hills, squares, etc.)



POIs - buildings (businesses, religion, resorts, hotels, education etc..)



Map of buildings visible from Vytauto Kalnas. Made using viewshed methodology from a point cloud DSM

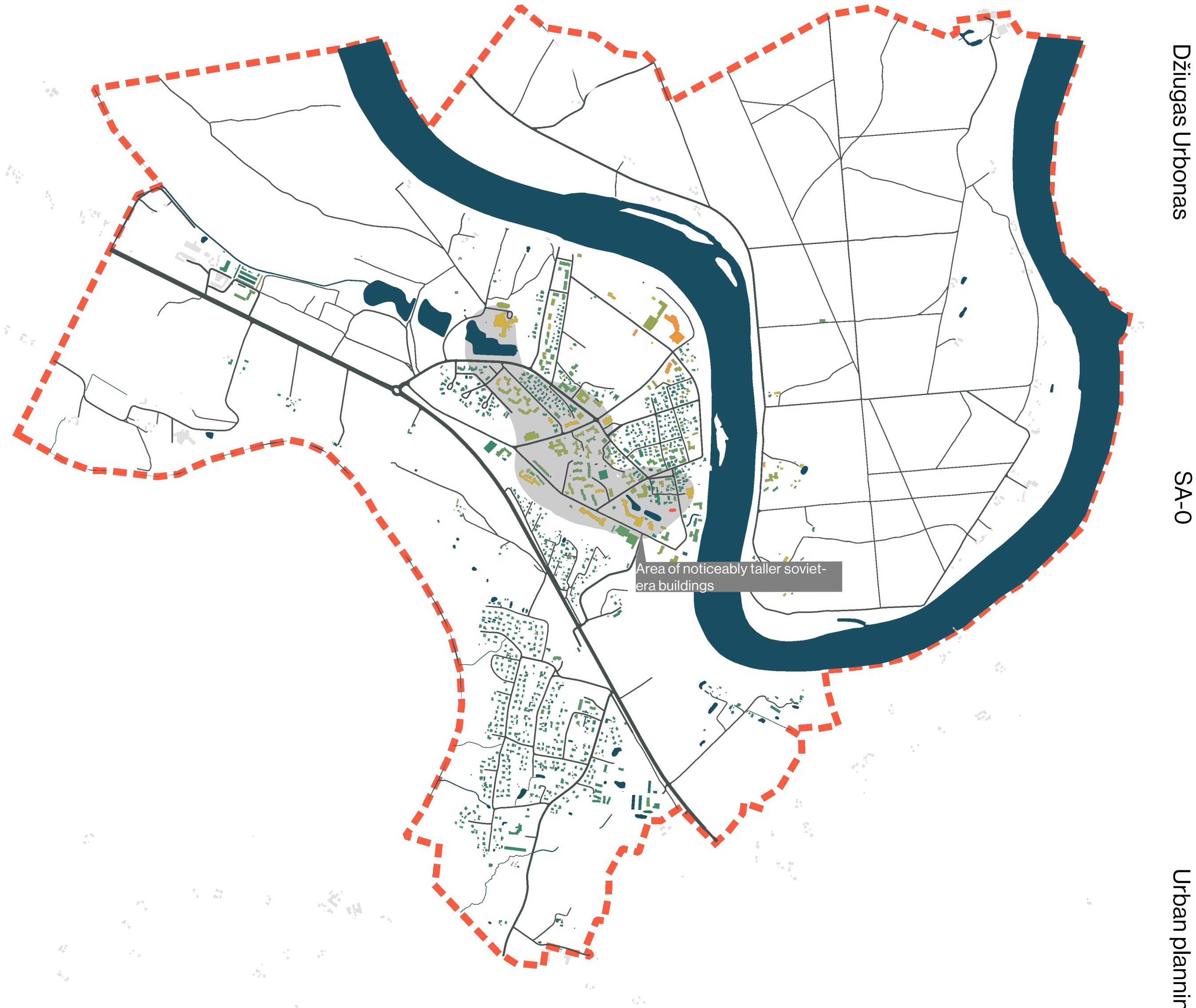
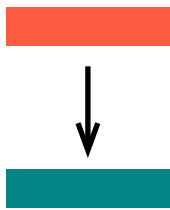
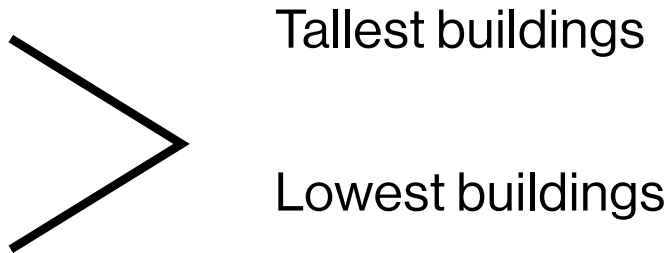
Massing.

Visually dominating
objects

Locating local visual dominants using physical statistics and viewshed methodology

Buildings can also become attractor points not only by the nature of their function, but also by their physical appearance. The presented maps shows the distribution of building heights in Birštonas. From it, we can see the area of Birštonas, which possesses the most visually dominant buildings, which also coincides with the area mostly developed during soviet times.

1.6



Map of buildings visible from Vytauto Kalnas. Made using viewshed methodology from a point cloud DSM

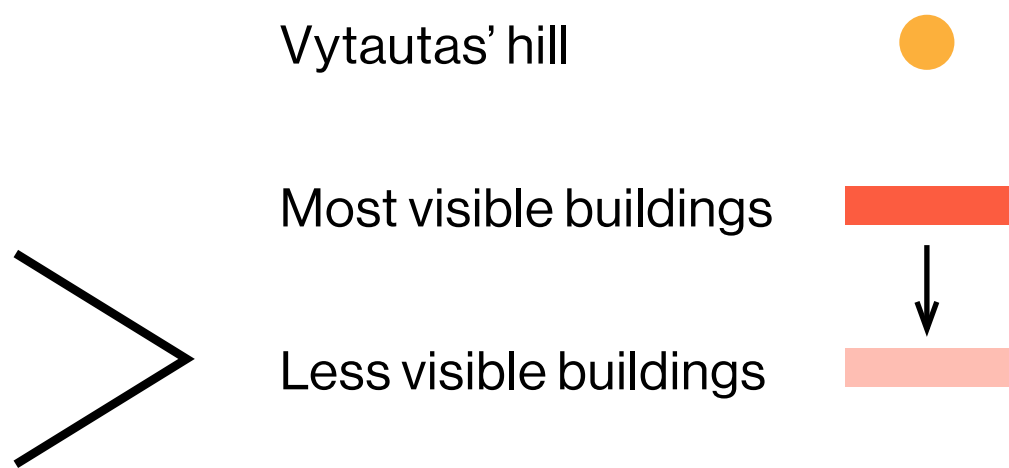
Massing.

Visually domineering objects

Locating local visual domimants using physical statistics and viewshed methodology

It is also important to consider how Birštonas looks not only from a street level, but also from the main viewing points around the city, the first one being vytautas’ hill, a major tourist attraction, because such view forms the image of Birštonas in the perspective of outsiders. The most notwehorthy buildings visible are The Church, Olympic rowing center and Eglės’ sanatorium.

1.6



Map of buildings visible from Vytauto Kalnas. Made using viewshed methodology from a point cloud DSM





1.6

Personal photos of St. Antanas Paduvietis' church



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Personal photos of Olympic rowing centre



Džiugas Urbonas

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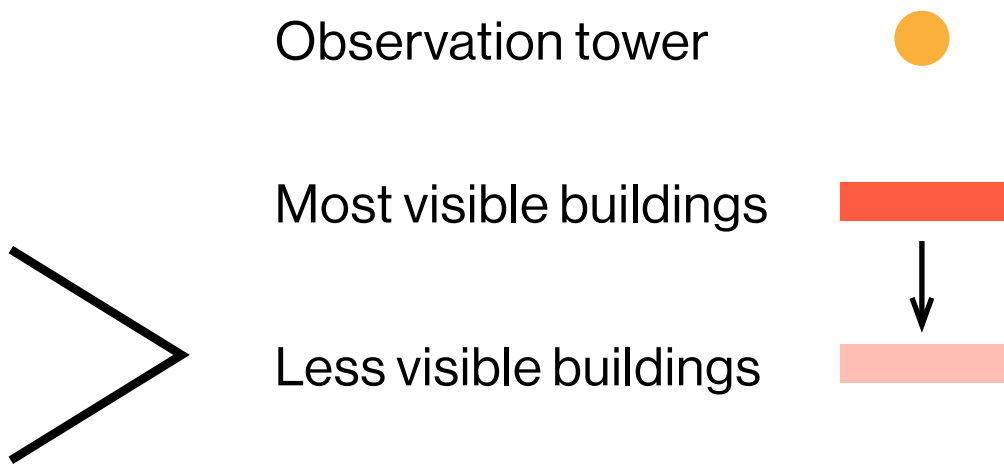
Massing.

Visually domineer-
ing objects

Locating local visual domimants using physical statistics and viewshed methodology

The other important view point, which forms outsiders' image of Birštonas as a whole urban structure, is the observation tower. Because of its' height, it is able to provide a much more detailed view of the town.

1.6



Map of buildings visible from the observation tower. Made using viewshed methodology from a point cloud

Space syntax.

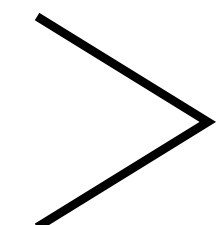
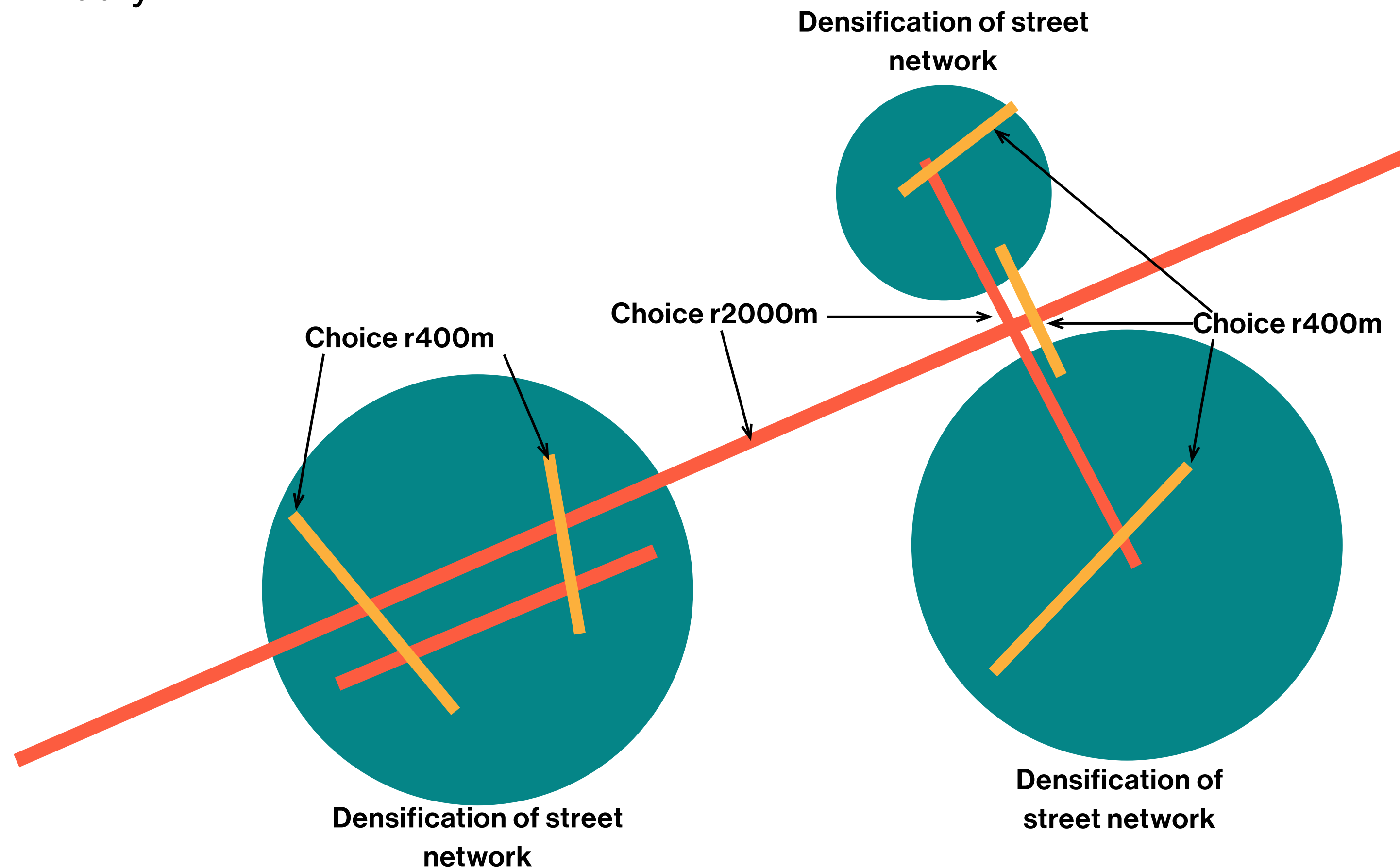
Theory

1.7

Framework

Space syntax models simultaneously analyse pedestrian, cycle and vehicle movement networks and have been applied in planning and design projects worldwide. They also explain key relationships between spatial location, spatial connectivity and urban performance outcomes.

In the case of Birštonas, space syntax will be used to analyse and deduct the current pathways in the urban framework of the town, by applying a particular space syntax analysis model, coined by K. Zaleckis. Through use of differentiating radiuses in graph theory calculations, the model is able to predict the most likely to be used parts of the street and path network, and differentiate their main end-user.



Space syntax.

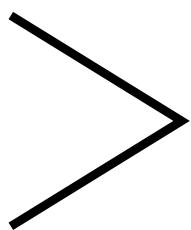
Metric choice
r 2000

**Locating transport movement using
Space syntax methodology**

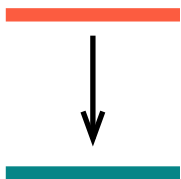
In space syntax theory, choice measures how likely an axial line it is to be passed through on all shortest routes from all spaces to all other spaces within a pre-determined radius. In general, it is used to determine how likely one is to chose a particular movement axis in a path/road network.

The size of the radius defines whether the choice is to be made by pedestrians or transport. In this map, the radius of 2 km is chosen, to show the most likely transport transit routes, and also because the distances between Birštonas' main parts centres' is approximattely 2km.

1.7



Paths most likely to be
chosen by transport
Paths least likely to be
chosen by transport



Map of axial metric choice in Birštonas within a radius of 2000m

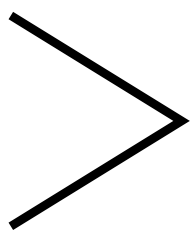
Space syntax.

Metric choice
r400

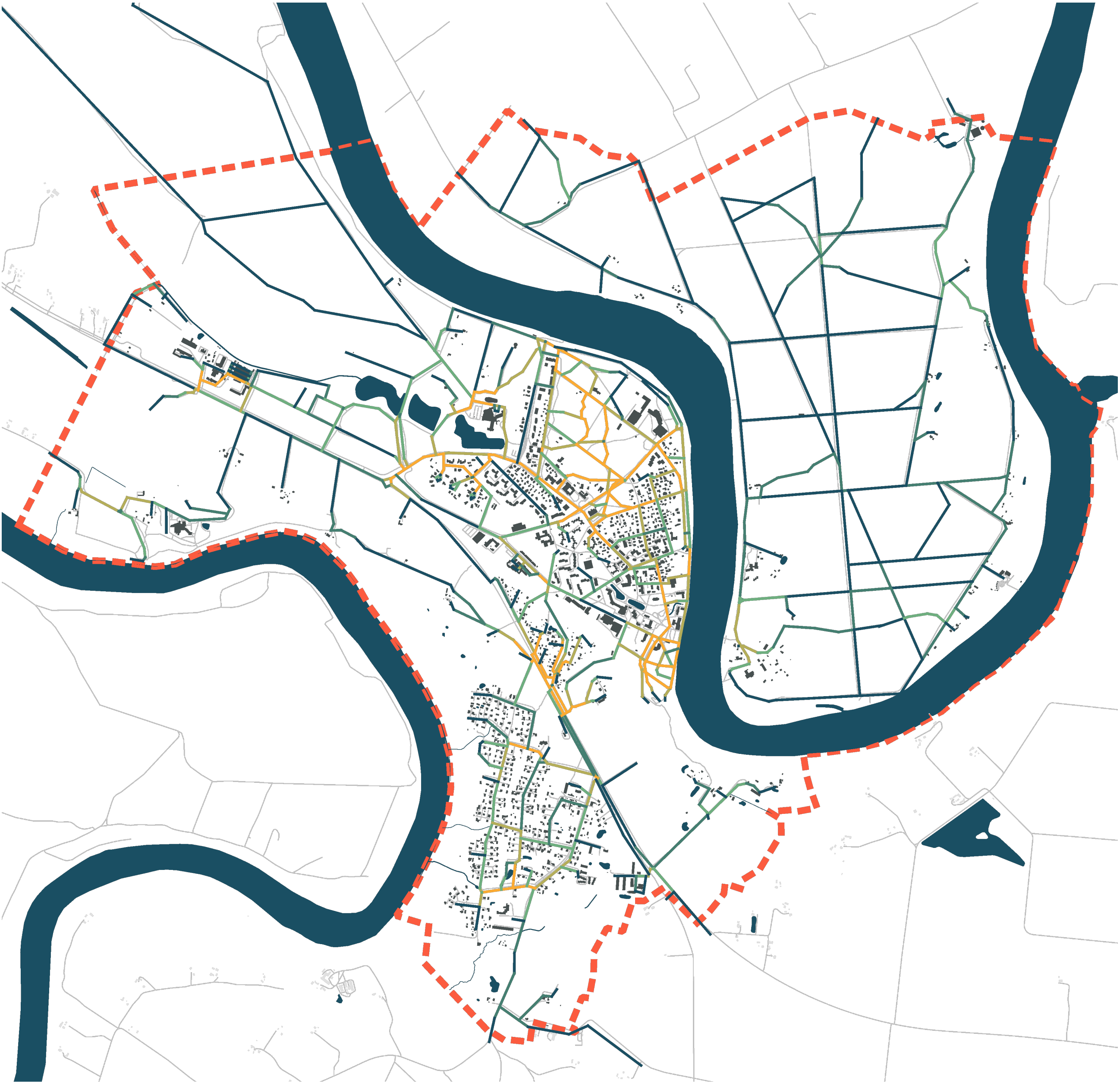
**Locating pedestrian flow using
Space syntax methodology**

The methodology can also be used to show most likely choices of pedestrian paths. A typical radius of 400m is chosen, which roughly translates to a 5 minute walk. The paths marked in yellow are ones to be most likely used by pedestrians, and the analysis results do coincide with reality, as they appear in the most central and most walkable parts of Birštonas.

1.7



Paths most likely to be
chosen by pedestrians
Paths least likely to be
chosen by pedestrians



Map of axial metric choice in Birštonas within a radius of 400m

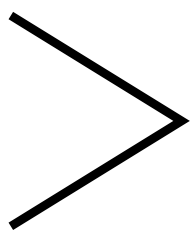
Space syntax.

Combined axial choice
r400 & r2000

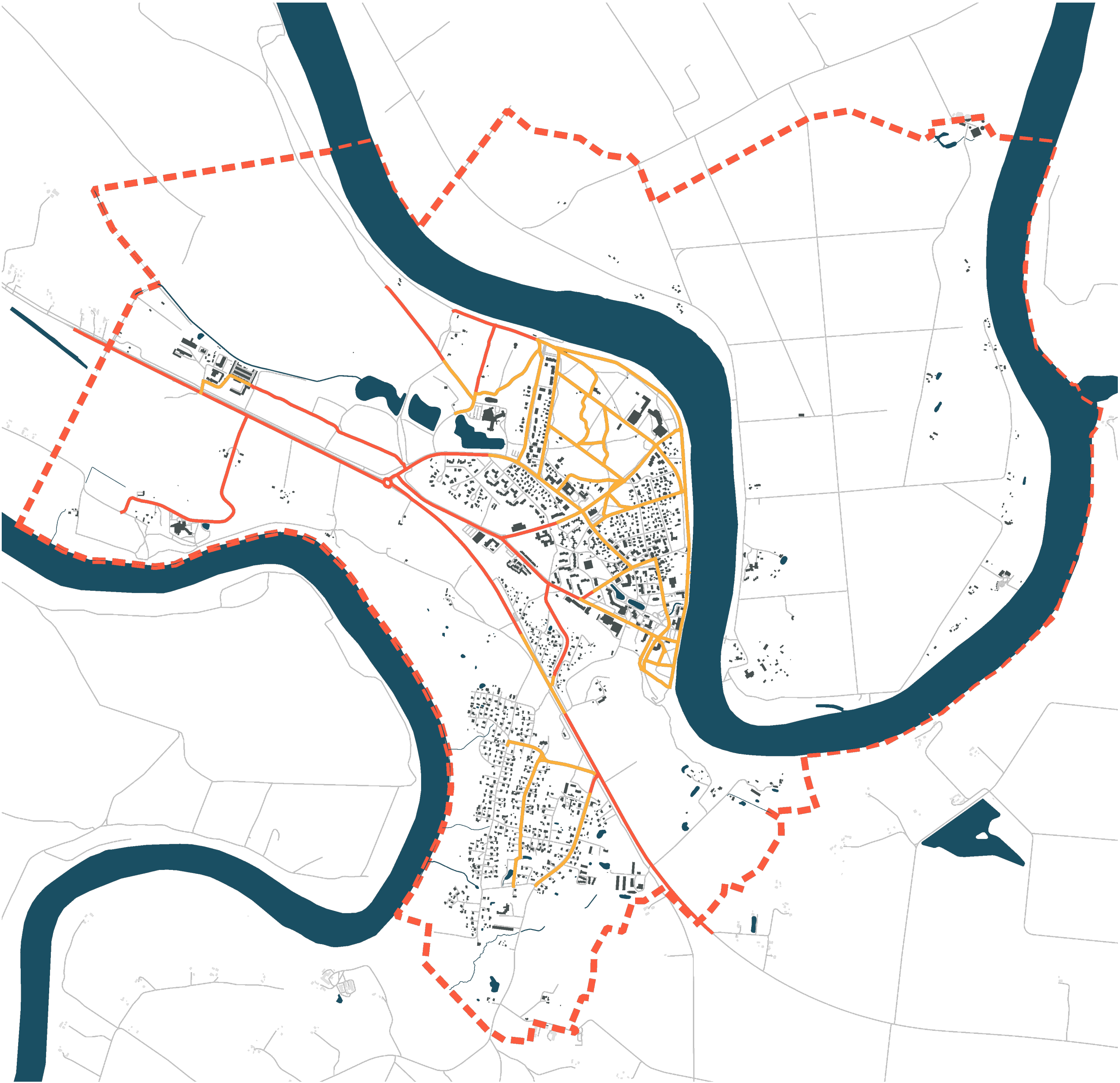
**Locating local centres using
Space syntax methodology**

The map presented is a combination of highest value paths from both previous schemes, applying K.Zaleckis' previously shown model. All the bright paths show the main traffic network of the city, with the red ones being for transport, and the yellow ones for pedestrians. In the case of Birštonas, the predictions of the model are accurate to reality.

1.7



- Paths most likely to be chosen by pedestrians ———
- Paths most likely to be chosen by transport ———



Interpretatory map of K. Zaleckis model of space syntax analysis, showing main pedestrian and transport paths in Birštonas

Urban typology.

Analysing the general plan

General plan

The presented plan is a redrawn general plan of Birštonas. The main takeaway from it is the distribution of service and other important territories in the main 3 residential parts of Birštonas. It is evident, that parts of the city are not as well developed as other, suffering a lack of businesses and infrastructure. The Vienkiemis area also has vast plots of land, marked as low-intensity residential, which are currently empty, and do not have much else going on. This could be a hint of these territories becoming suburban sprawl in the future.

- Industrial zones
- Service zones
- Intensive special complex zones
- Main town centre zone
- Social infrastructure zones
- High-intensity residential zones
- Medium-intensity residential zones
- Low-intensity residential zones
- Extensive-intensity residential zones
- Common use green zones
- Agricultural zones
- Extensive special complex zones
- Forest zones
- Engineering infrastructure zones



Redrawn map of Birštonas general plan. Original drawing source: <https://birstonas.lt/bendrasis-planas/>

Urban typology.

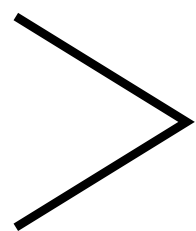
Identifying the fabric

General plan

Having a look at the simplified plan, it is even more evident, that the urban fabric of the Vienkiemis area is not even nearly as diverse in function as the others.

The green corridor dividing the centre and Vienkiemis also becomes much more evident.

1.8



- City centre 
- Green areas 
- Services, POIs 
- Residential areas 
- River Nemunas 
- Birštonas city territory 



Simplified map of Birštonas function, alluding to the urban fabric

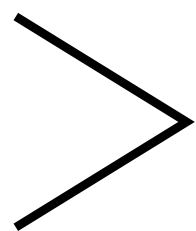
Urban frame.

Final scheme

The final urban framework scheme of Birštonas shows that the main part of the city is the most concentrated in function, having a healthy balance between it and the residential zones. When compared to the other parts of the town, it is evident that the vienkiemis area is neither connected, nor diverse in function.

The upper sanatorium part of Birštonas is also quite unbalanced, not having much connection to the rest of the city, and no flow of movement.

1.9



- Transport flow ———
- Pedestrian flow - - -
- City centre [orange hatched box]
- Green areas [green box]
- Services, POIs [red box]
- Residential areas [yellow box]
- River Nemunas [dark blue box]
- Birštonas city territory [red dashed box]



Master scheme of Birštonas urban framework

SWOT analysis

Personal findings

1.10 >

Džiugas Urbonas

STRENGTHS

Pre-existing adherence to the compact city model

Great natural resources

Main part of town is already quite walkable.

WEAKNESSES

The 3 main parts of the town are split, encouraging car-dependancy

‘Vienkiemis’area of town can be classified as suburban sprawl

Impossible to reach the main part of town from the other side of Nemunas, and its’ urbanised area, without crossing into a different municipality

OPPORTUNITIES

The small size of the town and willingness of local government may allow for making the city centre completely car-free in the near future.

The main 3 disconnected parts of town could be joined again, allowing for a more homogenous urban image and transportation.

THREATS

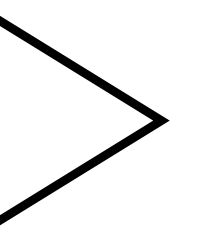
Current planning documents suggest that further development/expansion of the town may take on the form of suburban sprawl.

The disconnect between the torn-parts of town may also prove to be a economic disconnect, creating two separate zones with separate social classes.

SA-0

Urban planning 2

Manifesto.



1.11

The conclusion to the analysis results in a singular objective - tie together the torn urban fabric and threads, by connecting the main bodies of Birštonas.



Methodology.

of strategy

The first step is, using the previous analyses, to create an opportunities and constraints map, showing the general situation regarding possible future development of Birštonas.

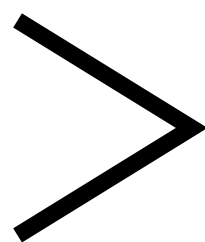
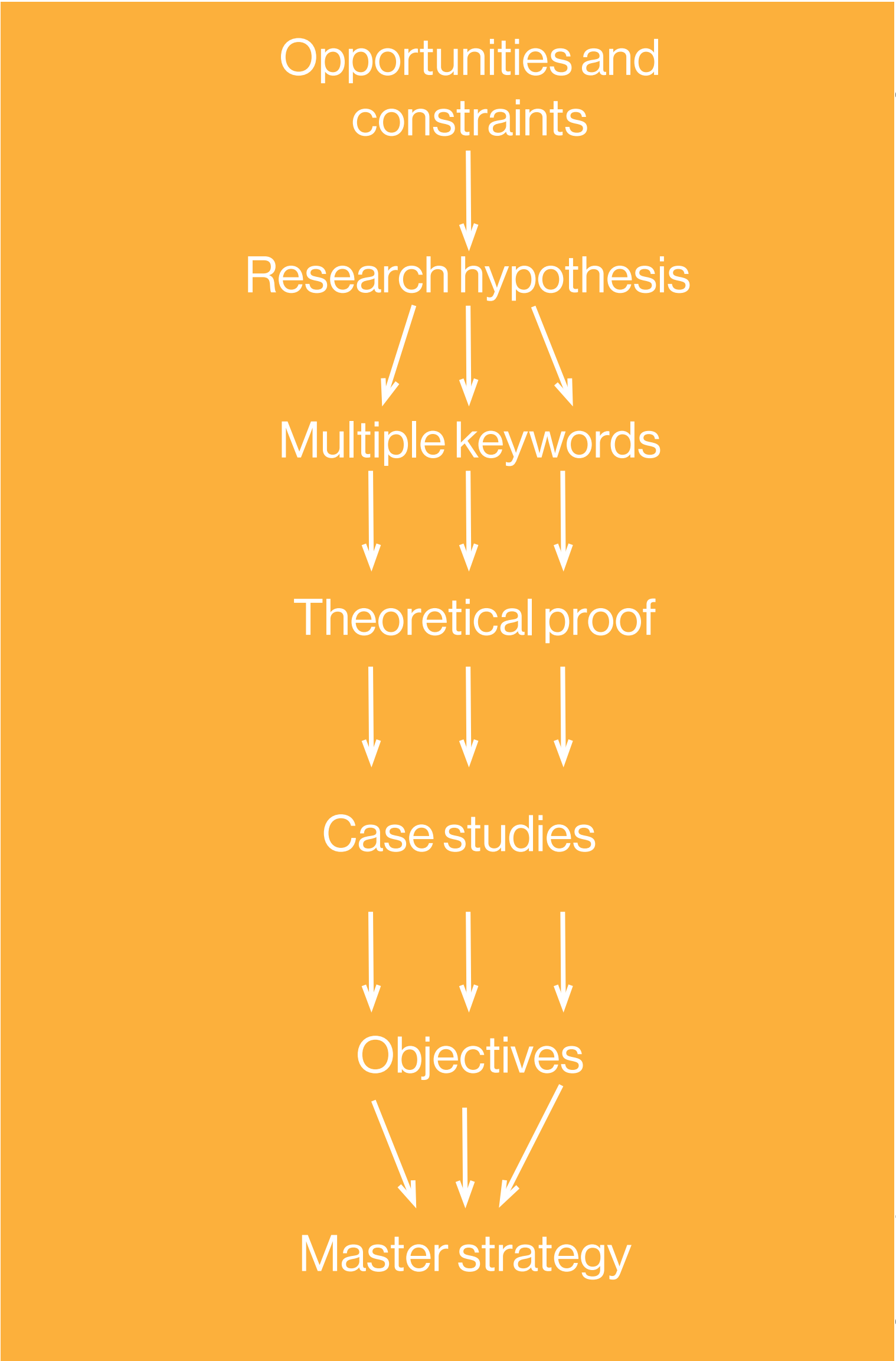
Following that, a hypothesis for the future development of Birštonas is formed.

The main keywords of the hypothesis are then separated and explained through theoretical proof, also examples from case studies are given.

These examples and theoretical proof then form separate objectives/strategies for each keyword, represented in graphic schemes/maps.

The last step is simplifying the objectives and merging them into one particular core master strategy, which would be the final graphic representation of the hypothesis, proved before by the theory and case studies.

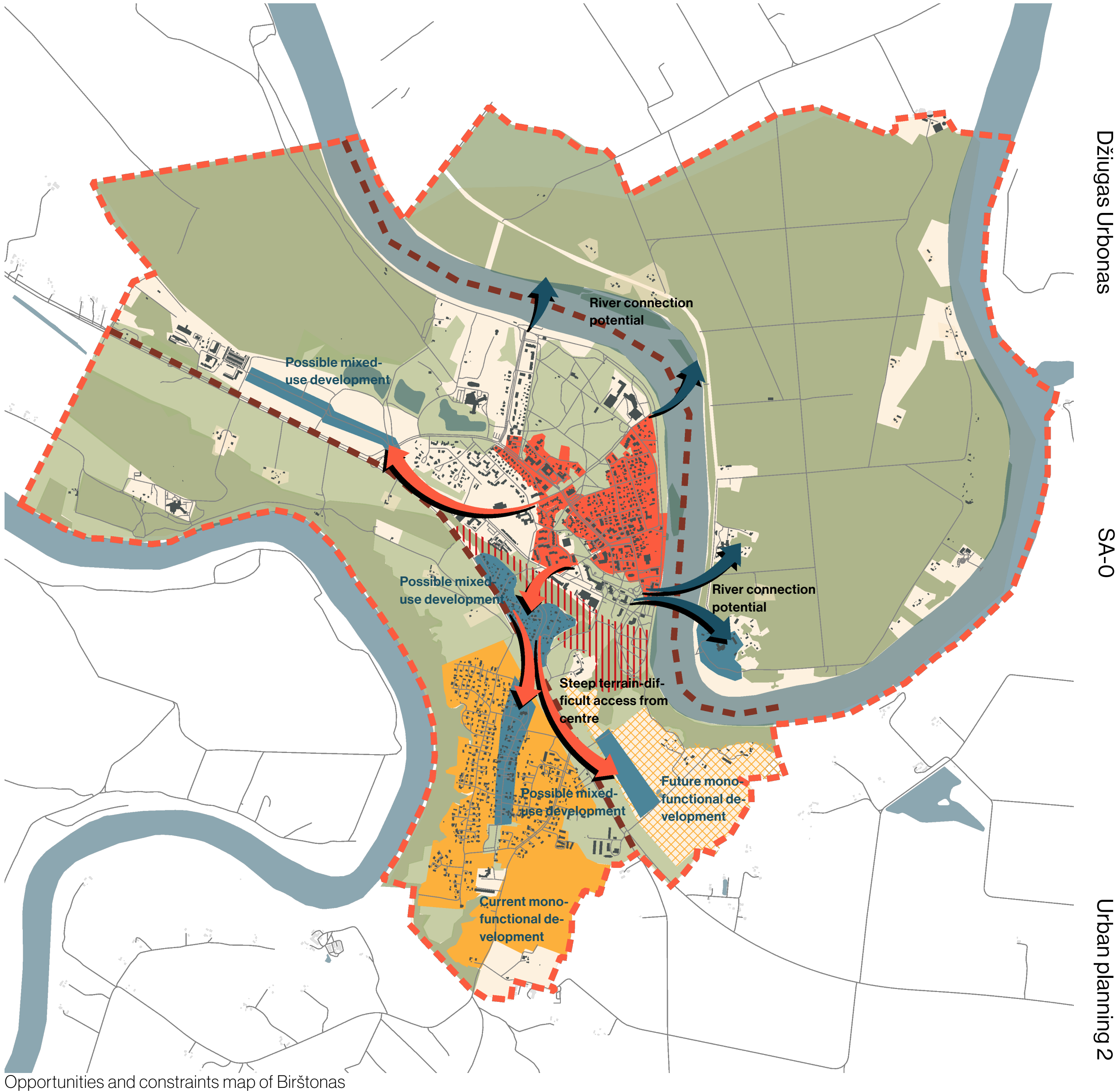
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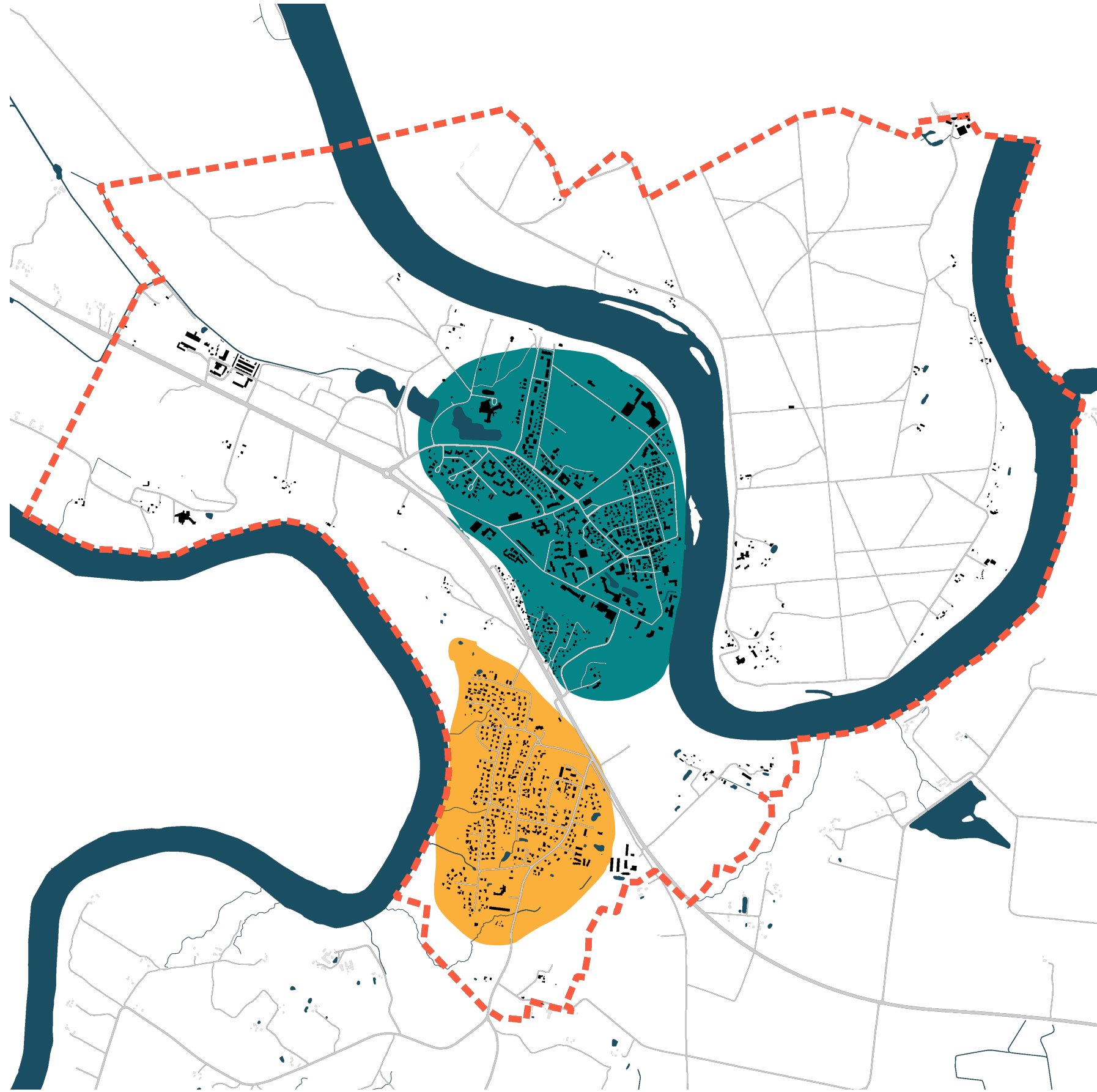
Opportunities & constraints

- Opportunities
- Potential connections between areas
 - River connections
 - Potential to decentralise
- Constraints
- Terrain change
 - Old town area
 - Monofunctional low-intensity residential area
 - Potential urban sprawl
 - Divide between main areas

2.2 >



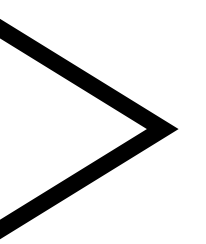
Opportunities and constraints map of Birštonas



Research hypothesis 2.3

In the town of Birštonas...

...bridging the gap (1) between northern and southern parts would help to **decrease segregation (2)** and **decentralize urban structure (3)**.



1. Bridging the gap

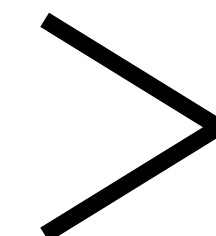
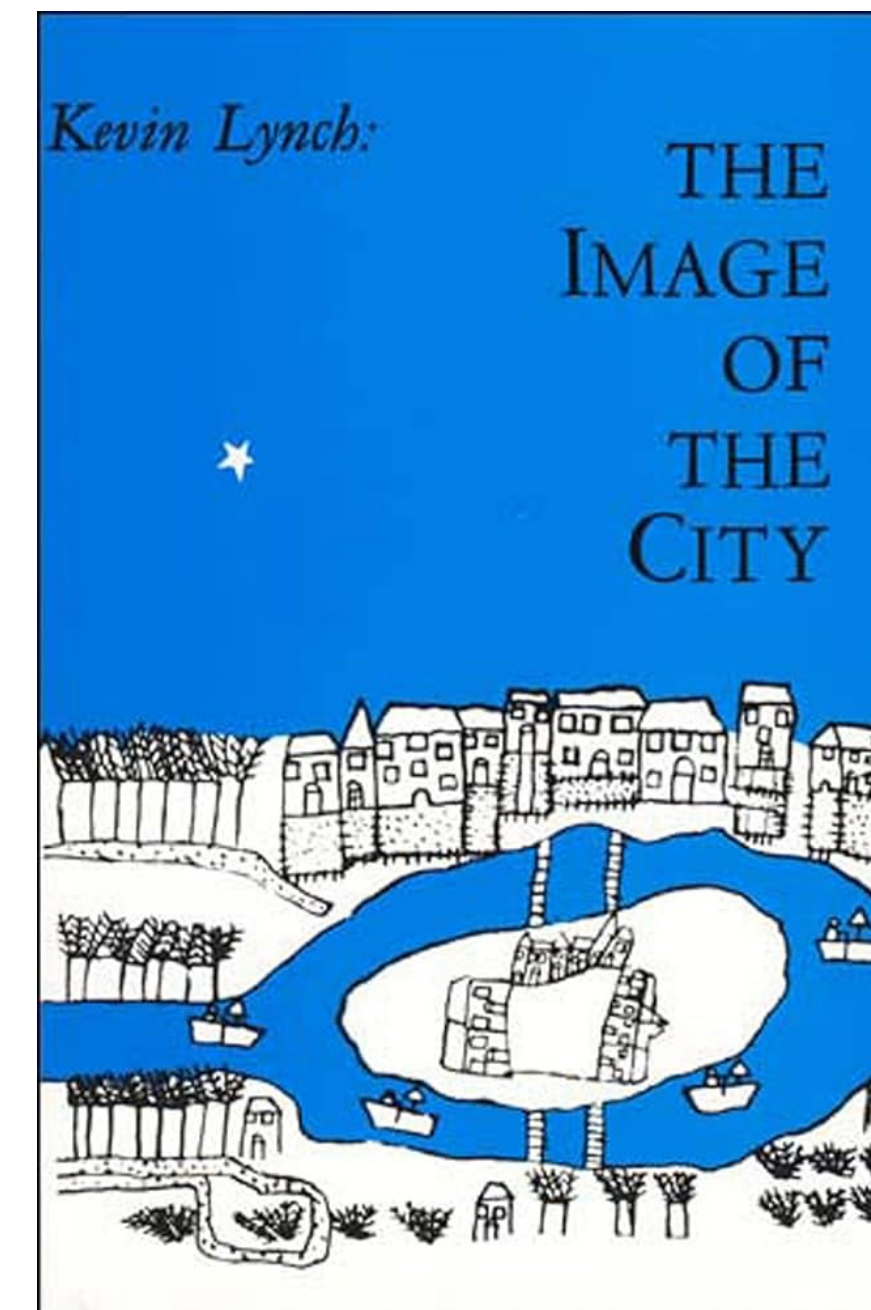
2.4

Theory

In urban planning, “bridging the gap” refers to initiatives that improve connectivity between isolated parts of a city.

Gaps are often car-centric, prioritizing vehicle traffic over pedestrian and cycling movement. Bridging these gaps with dedicated walkways, bike lanes, and safe crossings can encourage active travel, as highlighted by the concept of “imageability” in Lynch, K. (1960). “The image of the city,” where it is also noted that people tend to perceive disjointed parts of cities as independent complexes, and gaps between these are unwelcome places, so much so as to be ran through.

”Outside of these complexes there are gaps of identity; the observer must run blind to the next whole, even if only momentarily.”



1. Bridging the gap

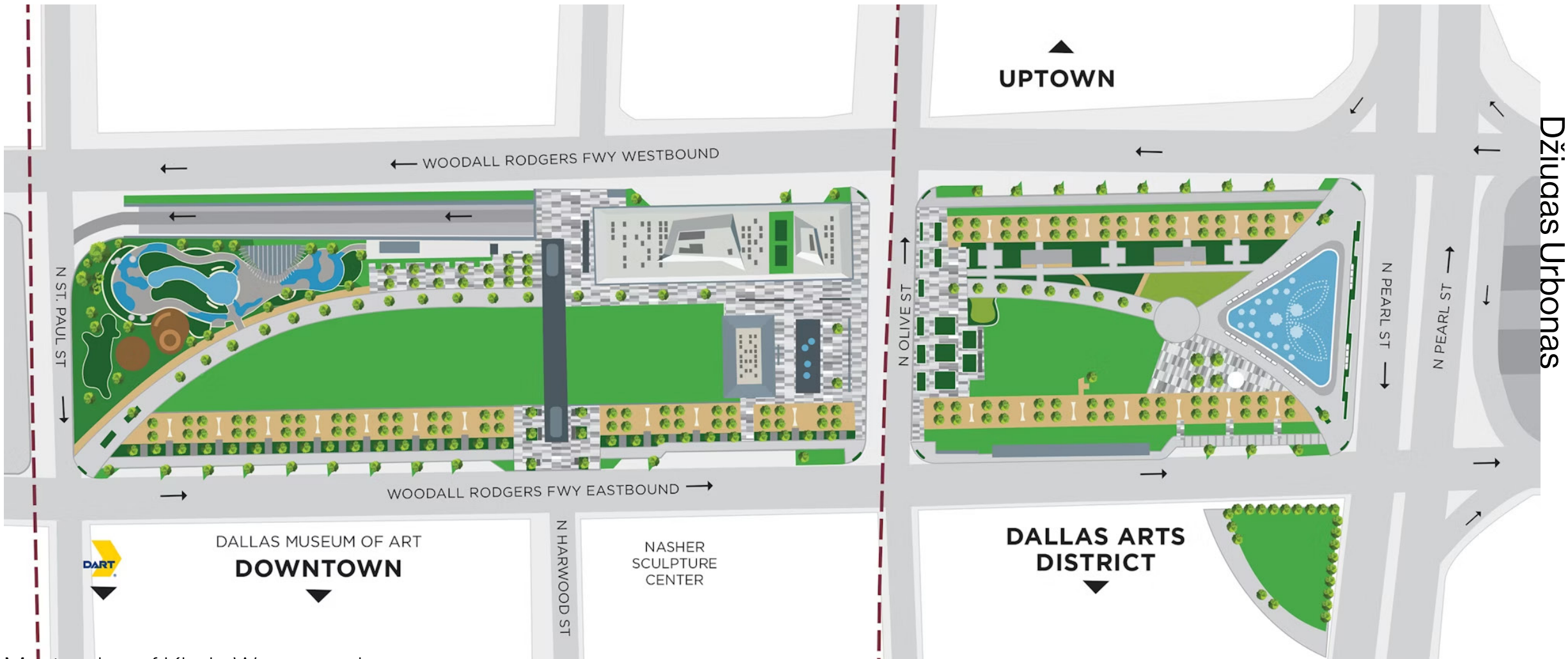
Case study Klyde Warren Park in Dallas, Texas

Klyde Warren Park in Dallas, Texas, offers an example of an alternative physical connection with significant positive impacts. A 5.2 acre park was built over a sunken freeway, creating a green oasis and a community space in the heart of the city.

Reuniting Divided Neighborhoods: Prior to the park's construction, the freeway acted as a physical and psychological barrier between the Uptown and Downtown neighborhoods. Klyde Warren Park bridged this gap, encouraging pedestrian traffic and fostering a sense of connection between the two previously isolated areas. This is directly applicable to Birštonas, where the highway currently divides the town.

Activation of Underutilized Space: The land above the freeway was previously an underutilized and neglected space. The park's construction transformed it into a vibrant hub for recreation, events, and community gatherings. Birštonas could replicate this by utilizing the space above or below the highway for a park, creating a new focal point for the south and attracting residents from the north.

Economic Revitalization: The park's construction spurred economic development in the surrounding areas, attracting new restaurants, shops, and businesses. A well-designed connection in Birštonas could have a similar impact, revitalizing the currently underdeveloped southern part and creating new commercial opportunities.



Masterplan of Klyde Warren park



Photos of Klyde Warren park



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Urban planning 2

1. Bridging the gap

Case study

Hamburger Deckel, Hamburg, Germany

The Hamburger Deckel project in Hamburg, Germany, offers a large-scale example of how strategic physical connections can revitalize divided urban areas. It involves a series of tunnels over a stretch of the Autobahn motorway, effectively “capping” it and creating a significant amount of new urban surface area. While its scale may not be directly applicable to Birštonas, it offers valuable insights for the town’s approach to bridging the gap between its north and south.

Reclaiming Urban Space: The project will transform a noisy and disruptive highway into a usable urban space. New parks, playgrounds, and recreational areas will be built on top of the tunnels, creating a more

attractive and livable environment for residents and space for a park or green corridor, reconnecting the currently divided neighborhoods and providing much-needed recreational areas for the south.

Improved Connectivity: The motorway creates a physical barrier between neighborhoods. The tunnels eliminate it, allowing for the creation of dedicated pedestrian and cycling paths across the former highway zone. Birštonas could implement similar strategies, prioritizing pedestrian and cycling safety in the new connection to encourage active travel and interaction between the north and south.



Džiugas Urbanas

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Urban planning 2

Renders of Hamburger Deckel

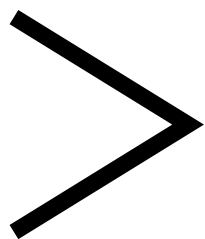
Key objective

1. Bridging the gap

- Divide between main areas
- Connections
- Overpass park
- ||| Functional center
- ||| Monofunctional southern areas

The idea is to create a large passover over the highway, effectively burying it. It connects the monofunctional south, the west area, which is officially currently planned to also be monofunctional and the southernmost part of the centre. Such a physical connection will lower the negative effects of the highway, provide new land for new functions while at the same time being accessible for pedestrians/cyclists from all parts of town. It also is both a prerequisite and cause of effect for latter objectives.

2.4



Scheme of bridging strategy in Birštonas

2. Decrease segregation

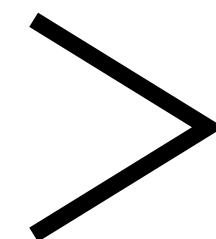
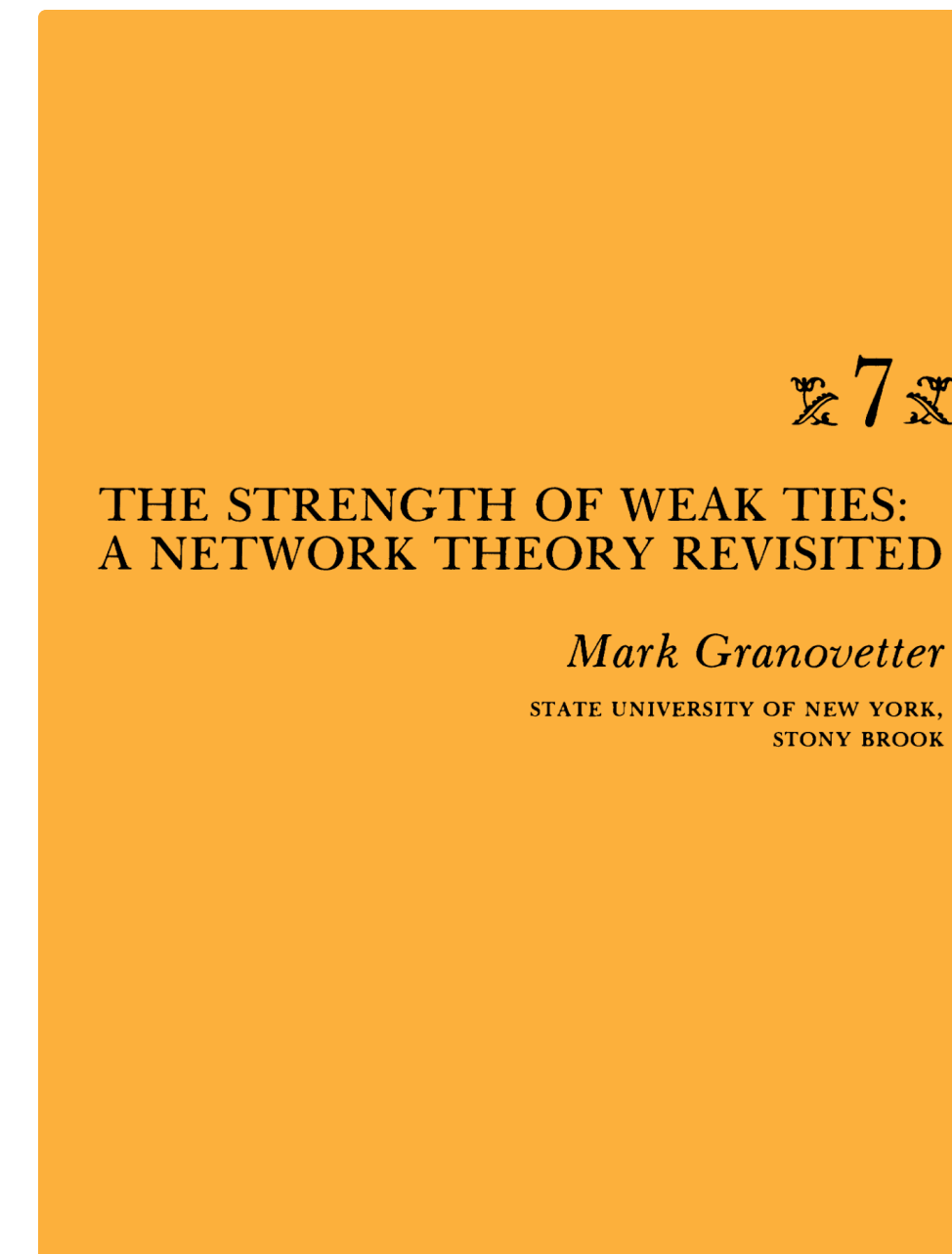
2.5

Theory

According to Granovetter, M. (1983). "The Strength of Weak Ties: A Network Theory Revisited", segregated neighborhoods often have limited interaction between residents from different socioeconomic backgrounds. This creates a situation where social networks are primarily composed of strong ties (family and close friends), limiting exposure to diverse perspectives and resources, which in turn prevents social mobility.

"Individuals with few weak ties will be deprived of information from distant parts of the social system and will be confined to the provincial news and views of their close friends. This deprivation will not only insulate them from the latest ideas and fashions but may put them in a disadvantaged position in the labor market"

By bridging physical gaps that separate neighborhoods, residents from different socioeconomic backgrounds are more likely to encounter each other in everyday life. This increases the possibility of casual interactions and conversations, laying the groundwork for weak tie formation. As residents from previously isolated areas interact, they gain exposure to different social networks and information sources. People in underserved neighborhoods may connect with individuals who can provide access to educational opportunities, job openings, or social services crucial for upward mobility.



2. Decrease segregation

Case study Vauban district in Freiburg, Germany

Vauban, a sustainable urban district within Freiburg, Germany, is an example of how thoughtful urban design principles can tackle social segregation.

Mixed-Income Housing: The district features single-family homes, apartments, and townhouses, all priced to cater to a range of incomes. This ensures residents from various socioeconomic backgrounds live in close proximity, fostering social interaction and breaking down economic barriers. Birštonas could implement similar mixed-income housing policies near the planned connection project. This could involve offering incentives for developers to include a portion of affordable housing units within their projects, ensuring the

south becomes a more attractive and accessible place to live for all income brackets. Zoning regulations could also be adjusted to promote a mix of housing types, preventing the creation of homogenous neighborhoods.

Shared Public Spaces and Community Gardens: Community gardens are a hallmark of Vauban, residents from all walks of life come together to cultivate vegetables, share knowledge, and build relationships. These gardens not only promote environmental awareness but also foster a sense of community and belonging. Integrating community gardens into the connection project in Birštonas would create a shared space where residents from both north and south can interact, collaborate on maintaining the gardens, and build social connections.



Photos of Vauban



residential commercial green spaces squares
Masterplan of Vauban

Key objective

2. Decrease segregation

- Overpass park
- Segregation connections
- Community gardens
- Mixed - income housing

The idea is to create a hub for social engagement and interaction, achieved by turning the top of the passover into a park and community gardens. Such a space will foster the “weak” connections mentioned beforehand and should help equalize the differences in social class of residents from different parts of Birštonas. Social mobility thorough casual interaction. Another helpful method of decreasing segregation is incorporation of inclusionary zoning, which means both new and existing development marked will be required to set aside a certain percentage of units for affordable housing.

2.5 >



Scheme of Birštonas segregation decrease' solution

3. Decentralize urban structure

2.6

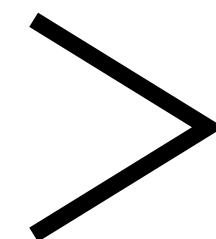
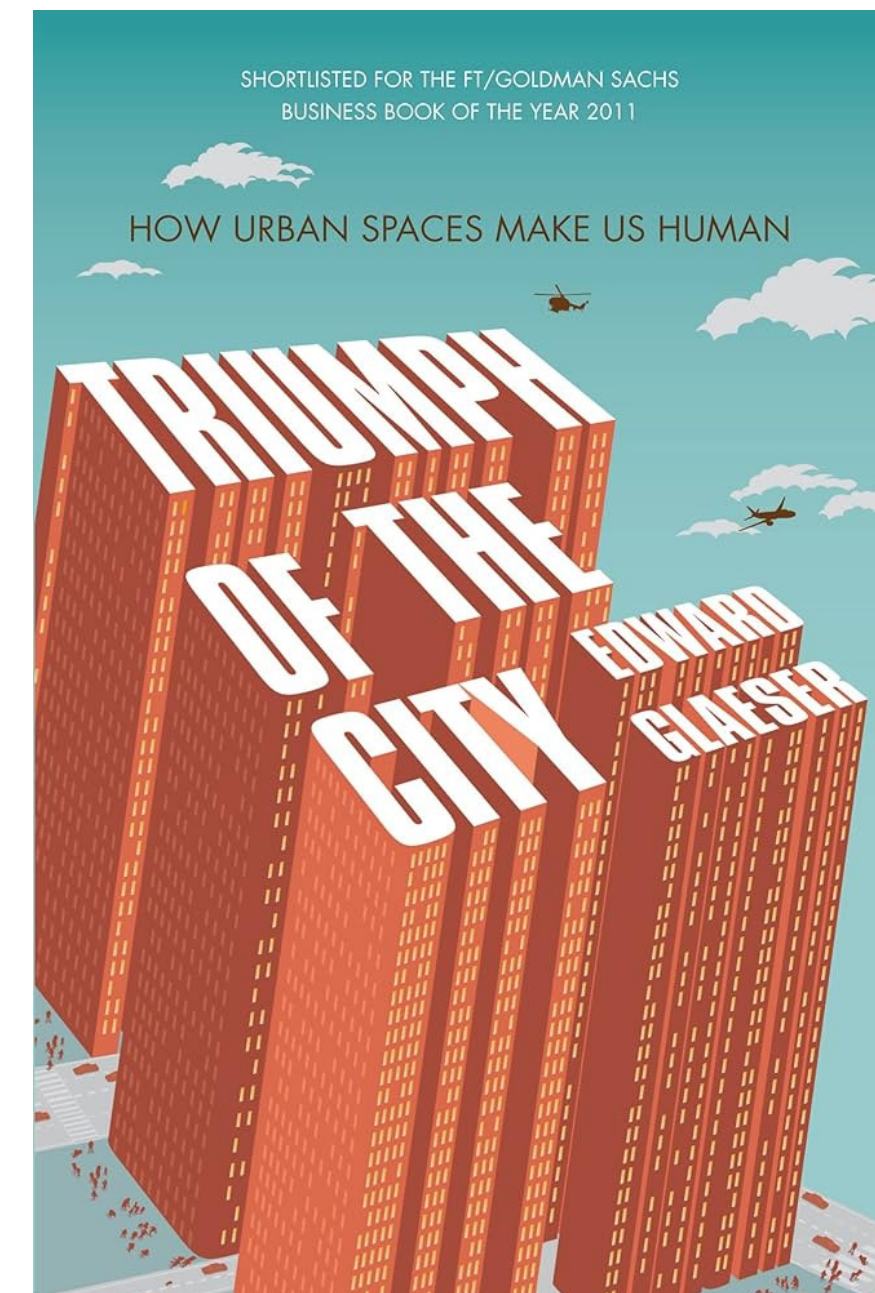
Theory

Urban decentralization refers to the shift of economic activity and population density away from the city center towards peripheral areas.

Decentralization can help alleviate traffic congestion in city centers by encouraging a distribution of jobs, services, and housing across a wider area. This improves accessibility for residents in outlying areas and can potentially boost economic activity in suburban or peripheral locations, as argued by Glaeser, E. (2012). “Triumph of the city”. Glaeser also acknowledges that not all forms of decentralization are beneficial. Uncontrolled sprawl development, characterized by low-density housing and reliance on cars, can actually worsen traffic congestion. He emphasizes the importance of “smart growth” principles when implementing decentralization.

The development of walkable, transit-oriented, functionally diverse communities on the periphery of cities can be an example of “smart” decentralization. These communities offer residents a range of housing options, jobs, and amenities within walking or cycling distance, reducing reliance on cars and potentially the overall load on the city center.

“Traffic congestion is a natural consequence of density. Lots of people and jobs in a small space create a crush for space on the roads. This is why the most congested cities in the world are also the most successful cities in the world... But the solution is not to magically make cities less dense. Instead, the answer is to spread out jobs and people in ways that make it easier to get around.”



3. Decentralize urban structure

Case study

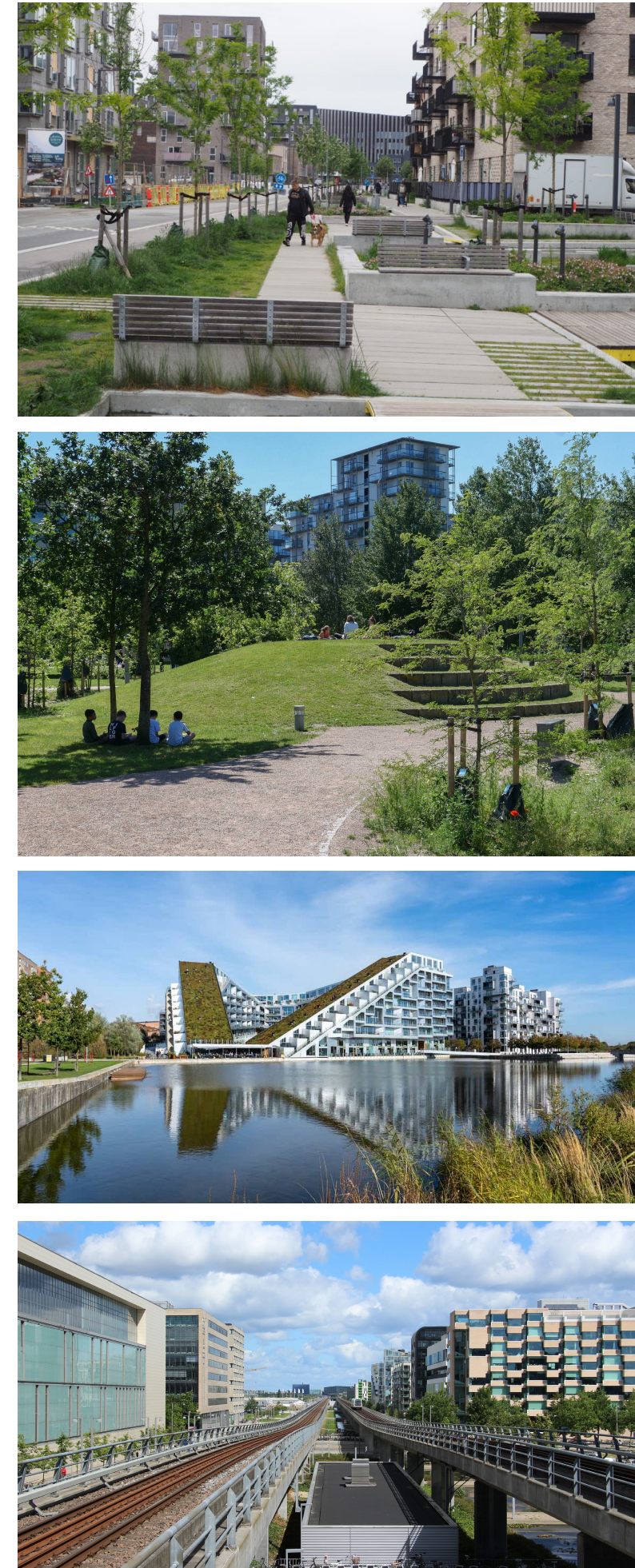
Ørestad neighbourhood in Copenhagen, Denmark

Ørestad acts as a decentralized development within the Copenhagen metropolitan area. It offers an alternative to high-density living in the city center, providing residents with a more balanced, mixed-use environment.

Ørestad demonstrates a form of “**smart decentralization.**” It offers a self-contained community with a focus on sustainability and walkability, while remaining well-connected to the broader metropolitan area through efficient public transportation. This model can be a valuable reference point for Birštonas, seeking to manage growth and revitalize the south while also making connections to regional infrastructure.

Mixed-Use Development: Ørestad prioritizes mixed-use development, integrating residential areas with offices, shops, schools, cultural facilities, and recreational spaces. This creates a lively and self-contained community where residents can access most of their daily needs within walking or cycling distance. Birštonas could adopt similar zoning regulations to encourage mixed-use projects in designated areas for expansion. This could involve transforming the newly reclaimed overpass and surrounding empty area into vibrant neighborhoods with housing options catering to both residents and seasonal tourism needs, alongside shops, restaurants, and recreational facilities.

2.6 >



Photos of Ørestad



Masterplan of Ørestad

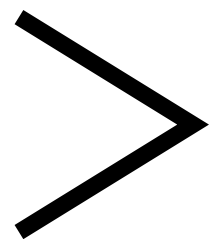
Key objective

3. Decentralize urban structure

- Divide between main areas
- Overpass park
- ▤ Mixed use streets
- New mixed-use development
- ◆ Transit hubs
- ▤▤▤ transit route

The idea is to form a new public transport system with hubs, connecting all the main areas of Birštonas. Following principles of transport oriented development, new mixed use development is formed on and around the newly reclaimed land, right at the edge of the overpass park/gardens. The mixed-use hubs gradually blend into the urban fabric by having the main streets that extend from them also become mixed-use if possible.

2.6



Master scheme of decentralization of urban structure in Birštonas

Master strategy

Combined objectives

- Divide between main areas
- Overpass park
- Community gardens
- Segregation connections
- ||| Functional center
- ||| Monofunctional southern areas
- New mixed-use development
- |||| Mixed use streets
- Mixed - income housing
- ◆ Transit hubs
- transit route

2.7 >



Master scheme of strategy objectives in Birštonas

RULESET:

The goal of the game is to find out as much as possible about Birštonas, while having fun (drinking) The game is aimed at Birštonas' locals.

1. Each player takes turns throwing a dart into the presented dartboard
2. Right before throwing the dart, each player draws a card from the deck - which is either red or blue.
3. Whichever place the player hits on the board, they must write down either a problem, or a thing they like about the space in 30 seconds on a sticky note and place it on the board.
4. If the player drew a red card, he must talk about something man-made.
5. If the player drew the blue card he must talk about something nature related.
6. Each succesful turn gets a point, a miss or failure to say anything, means the player has to take a shot (or alternatively gets deducted a point). Places already hit don't net any extra points if hit again by any player.
7. The first player to collect 10 points wins.

The data collected from the sticky notes afterwards can then be used as a basis for making changes in the town.

Cheers to change! Birštonas



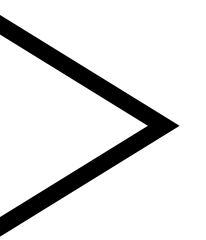
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Urban planning 2



2.8





Methodology.

of design

First step - additional analysis denoting the socioeconomic barriers between the southern and northern territories of Birštonas.

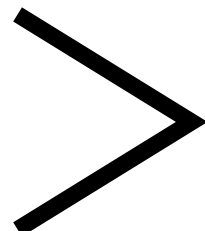
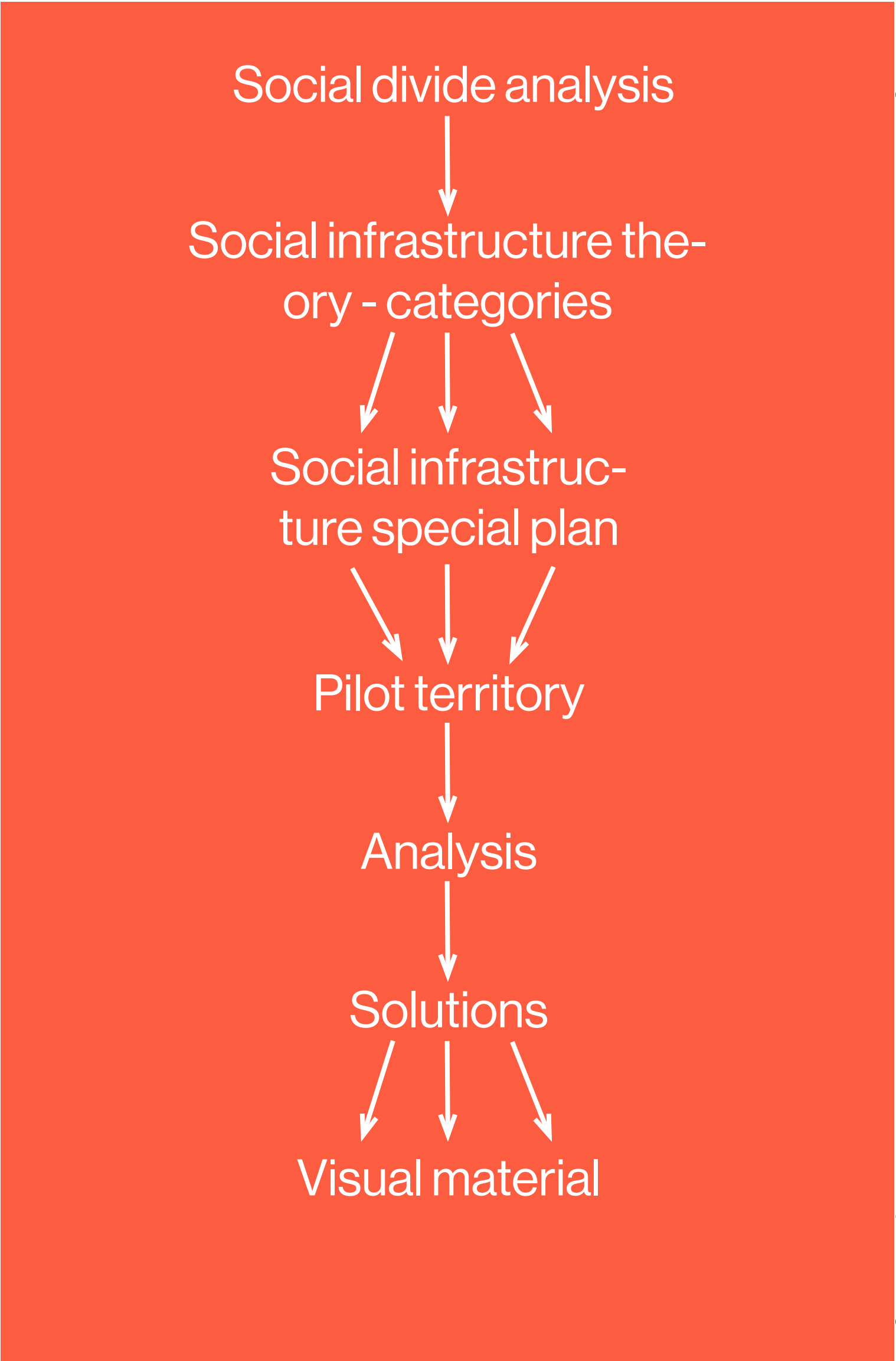
What follows is an analysis of social infrastructure terminology, continuing with a special plan describing all the social infrastructure to be implemented in different parts of Birštonas.

Afterwards, a pilot territory is chosen for detailing. Further analysis of this territory is conducted.

Solutions are presented for this territory, which rely on the results of previously conducted analyses, special planning, etc.

The solutions then are detalized with graphic material.

3.1



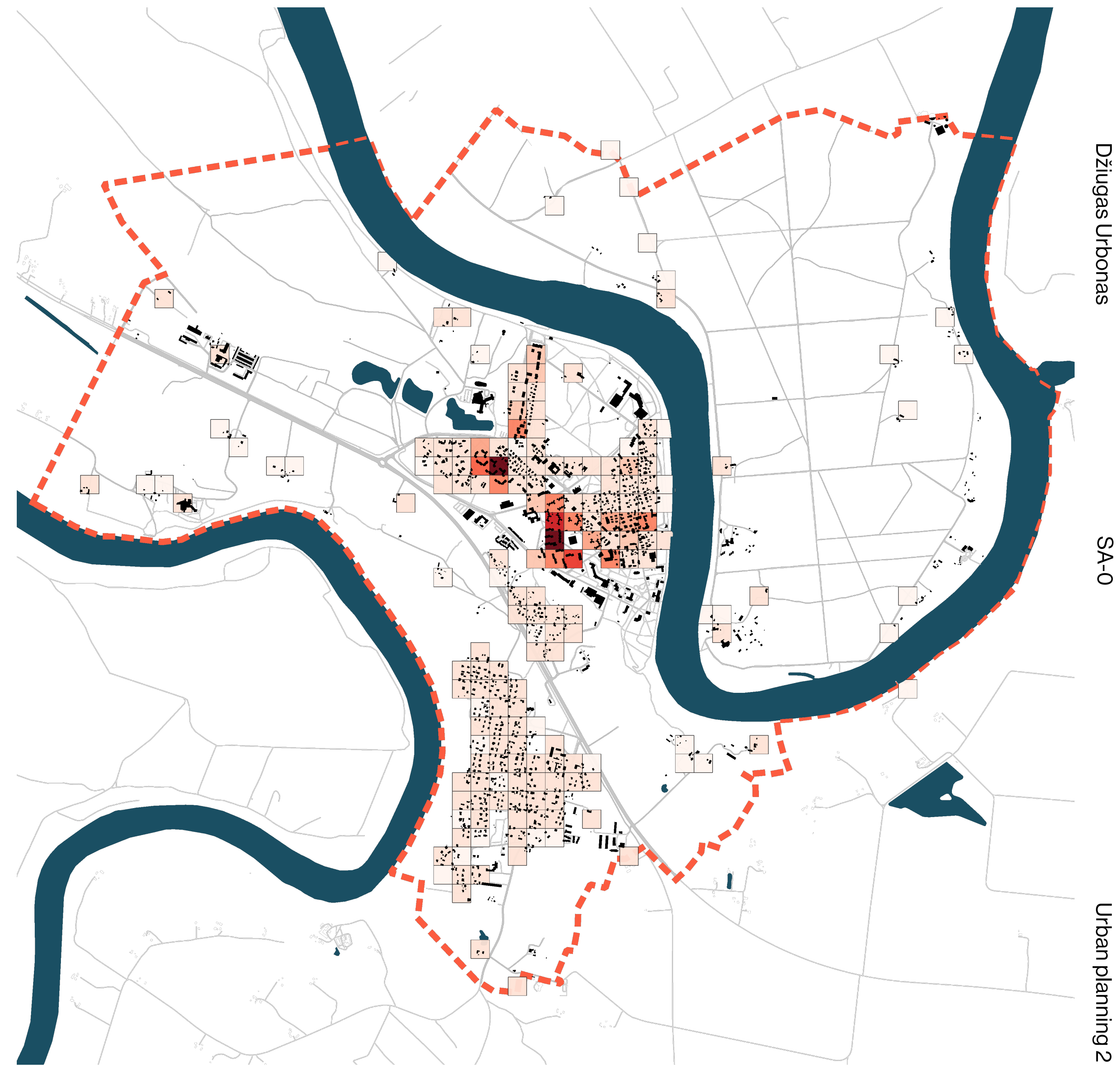
Socioeconomic segregation

Education analysis

Level of higher education in birštonas (more saturation - higher percentage of educated people per 100 sqm)

- 0 - 6.3
- 6.3 - 12.6
- 12.6 - 18.9
- 18.9 - 25.2
- 25.2 - 31.5
- 31.5 - 37.8
- 37.8 - 44.1
- 44.1 - 50.4
- 56.7 - 63

3.2 >



Scheme of Birštonas' educational segregation

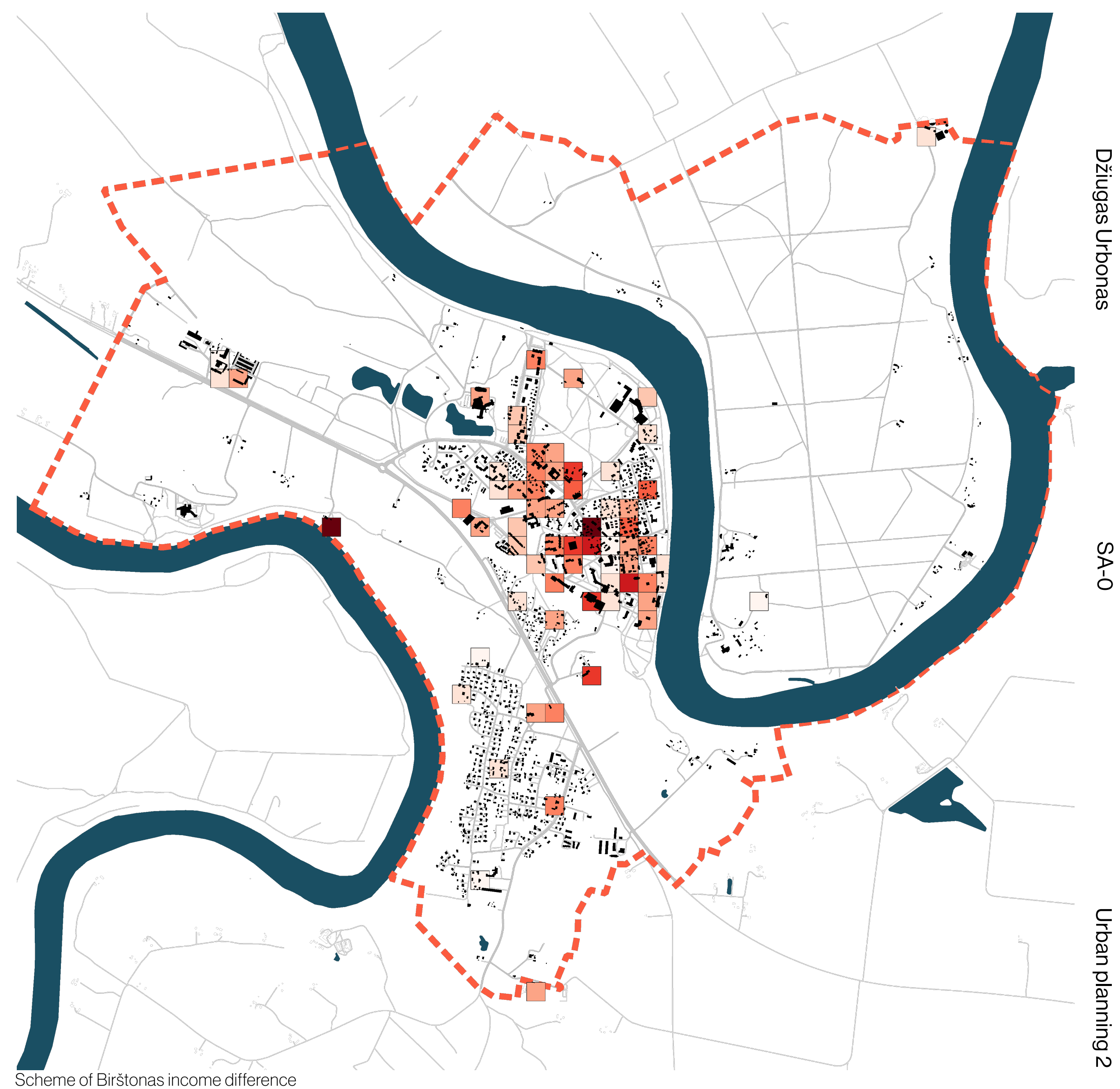
Socioeconomic segregation

Analysis of local employees' income

Yearly income of local employees in birštonas (more saturation - higher wage of employees per 100 sqm)

- 1615 - 4131
- 4131 - 6647
- 6647 - 9163
- 9163 - 11679
- 11679 - 14194
- 14194 - 16710
- 16710 - 19226
- 19226 - 21742
- 24258 - 26774

3.3 >



Social infrastructure

Terminology and meaning

According to a research paper "Corralling a Chimera: A Critical Review of the Term Social Infrastructure", social infrastructure can be categorised into 5 main categories, which are: Education, Healthcare, Housing, transport and Networking spaces.

Going forward, these categories will be analysed thorough special planning and other solutions, becoming a basis for making decisions, on what to add or /and subtract from Birštonas.

3.4 >

Definition category	Summary of category	Examples
Healthcare	Locations providing organized medical care to individuals or a community	Private/public hospitals, community medical centers, individual clinics, rehab centers, etc.
Networking spaces	Locations where day -to-day human interaction can build relationships between individuals and strengthen community ties.	Cafes, restaurants, sidewalks, grocery stores, libraries, parks, gyms, places of worship, parks, squares, casinos, etc.
Housing	Places of residence	Private housing, public apartment blocks, social housing, etc.
Education	Locations providing systemic education	Public/private schools, kindergartens, universities, vocational schools, etc.
Transport	A system of means of conveying people from place to place by various means	Bus, trains, tram , subway system, rideshare. etc.

Table describing categories of social infrastructure, according to "Corralling a Chimera: A Critical Review of the Term Social Infrastructure"

Social infrastructure

SPECIAL PLAN - HOUSING

- Town territory
- Water
- proposed residential complex territories
- proposed single family housing territories
- proposed social housing territories
- existing residential complexes
- existing single family residential housing
- existing social housing

3.5 >



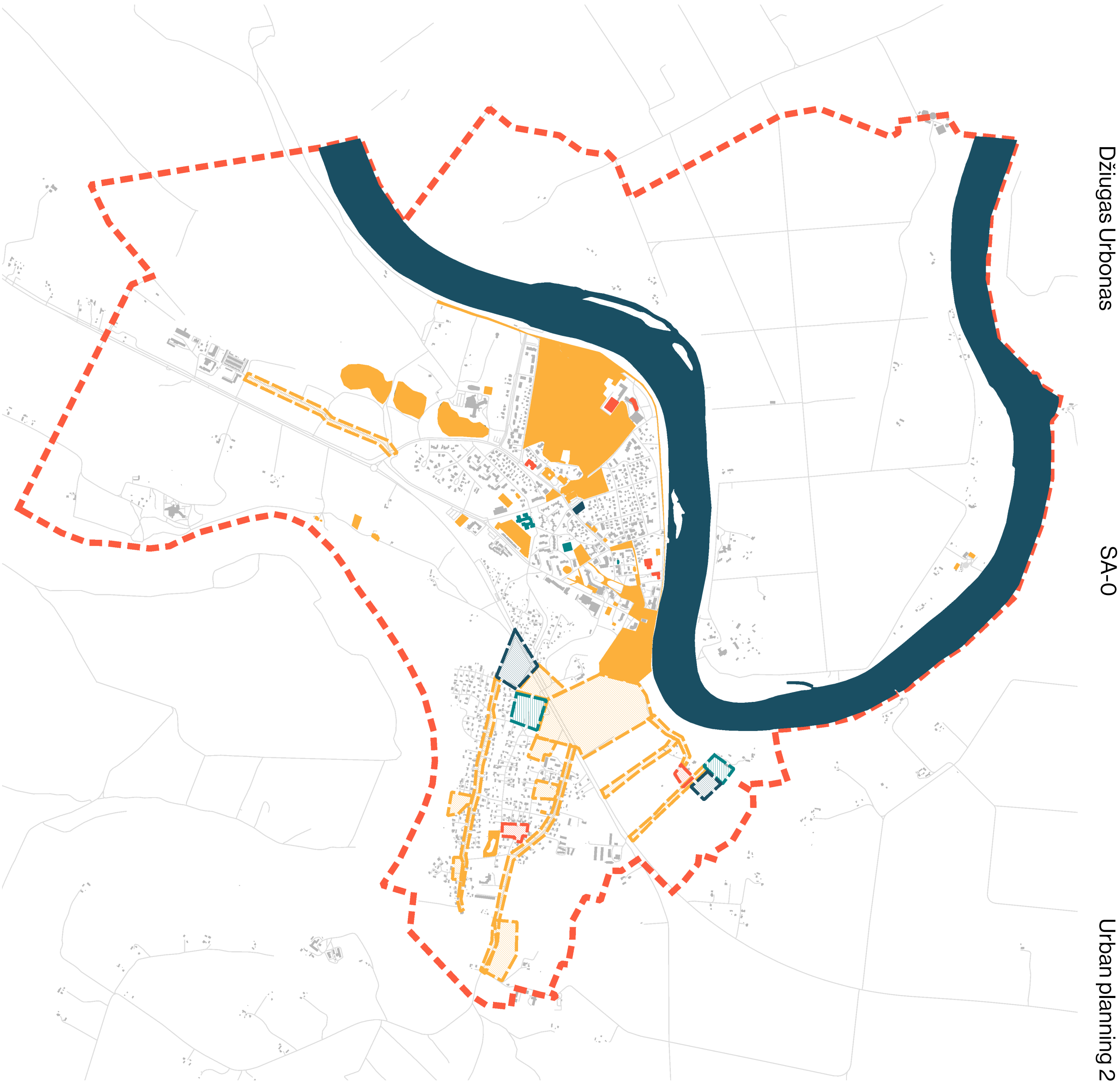
Housing special plan of Birštonas

Social infrastructure

SPECIAL PLAN - NETWORKING SPACES, EDUCATION, TRANSPORT, HEALTHCARE

- Town territory
- Water
- proposed new networking spaces
- education proposals
- proposed transport hubs
- healthcare proposals
- existing networking spaces
- existing networking buildings
- existing education buildings
- existing healthcare buildings
- existing transport hubs

3.6 >



Social service special plan of Birštonas

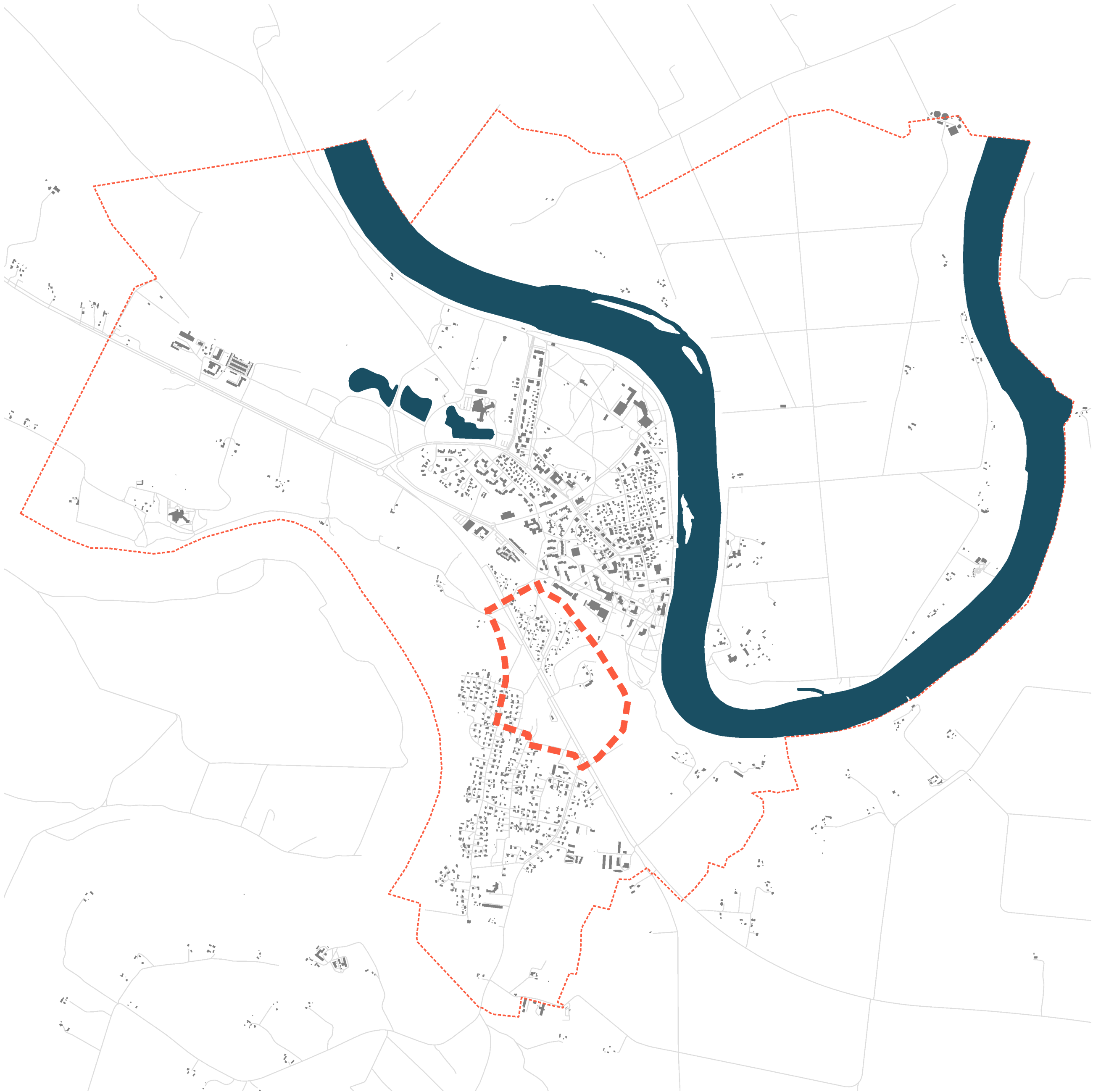
Overview

Chosen territory

- Town territory
- Chosen area
- Water

The chosen territory is sandwiched in between upper and lower parts of Birštonas. The territory, as of this moment, does not have much, apart from some single-family homes and a highway running through its' middle.

3.7 >



Scheme of chosen territory

Overview

Chosen territory

The territory is mostly unused fields of grass, the edges of which are lined by some single-family houses, which are all mostly old, varying from rotten wooden barns to examples of the 'kolkhoz-ba-roque' style.

3.8 >



Photos of cosen territory' objects

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Urban planning 2

Terrain analysis

-  Chosen area
-  1m contour
-  5m contour
-  5m contour

The northern corners of the territory are quite steep, as they form part of the Vytautas hill park complex.

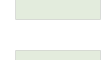
The southern part has a slight incline, which does not pose much problems for development.

3.09 >



Plan of chosen territory terrain

Functional analysis

-  Chosen area
-  Single family homes
-  Buildings to demolish
-  Birštono vandentiekis
-  Forest
-  grass
-  meadow

Most buildings in the territory are single family residential homes. The northeastern part houses “Birštono vandenys”.

The only building in the area that will be demolished according to further proposals is a gas station marked in red.

3.10 >

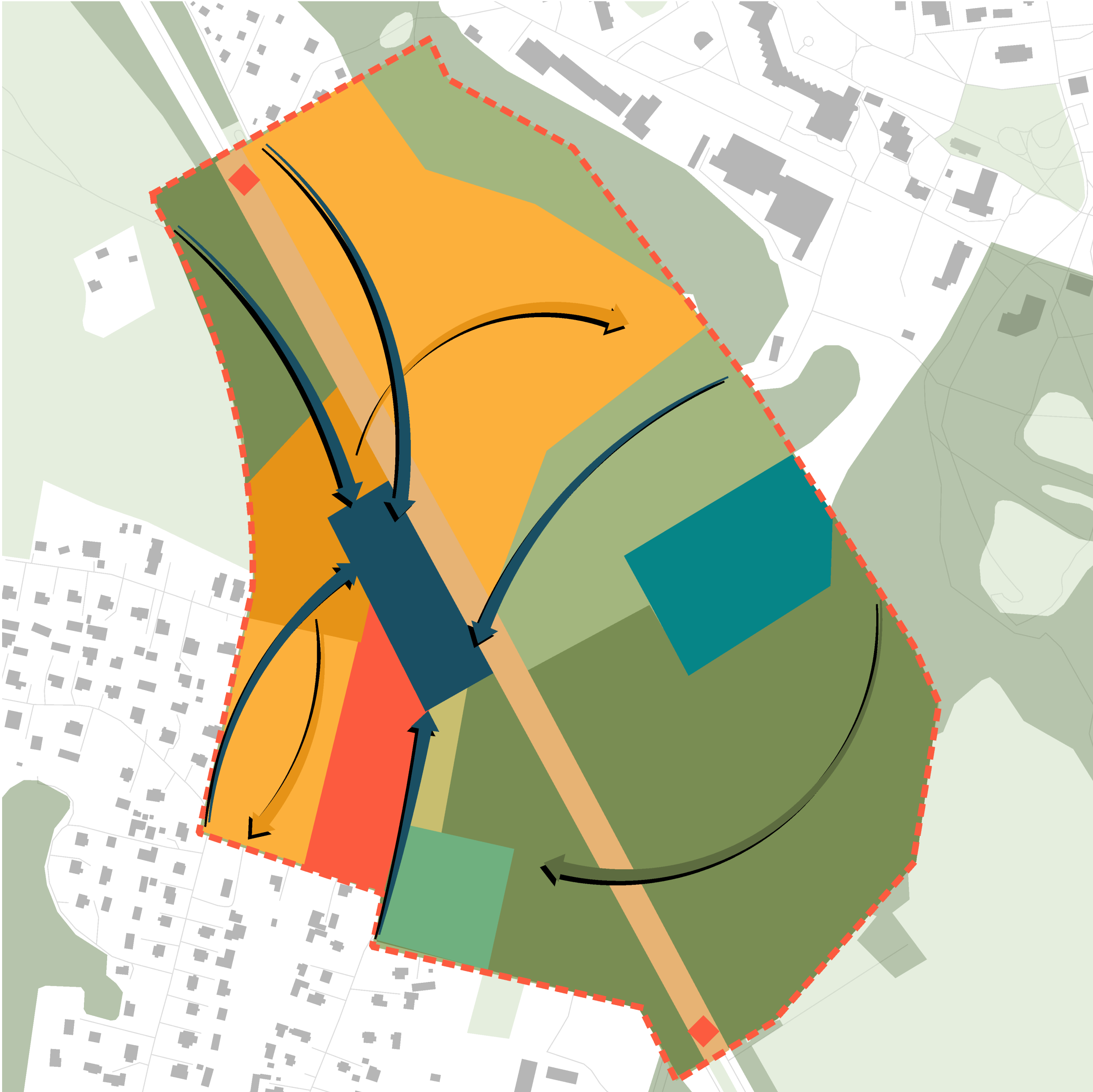
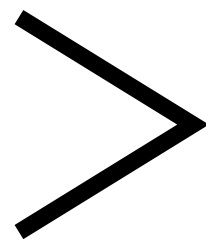


Plan of current functions in chosen territory

Functional strategy

-  Tunnel entry points
-  Underground highway
-  new transport hub
-  transport connections
-  Parks
-  Continuation of Vytautas' hill park
-  green areas
-  New school
-  Community gardens
-  new mixed-use social housing complexes
-  New single family housing
-  Morphotype continuity
-  Remaining single family homes
-  Birštono vandenys
-  Chosen area

3.11

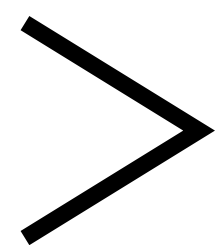


Scheme of Birštonas functional development proposal

Masterplan

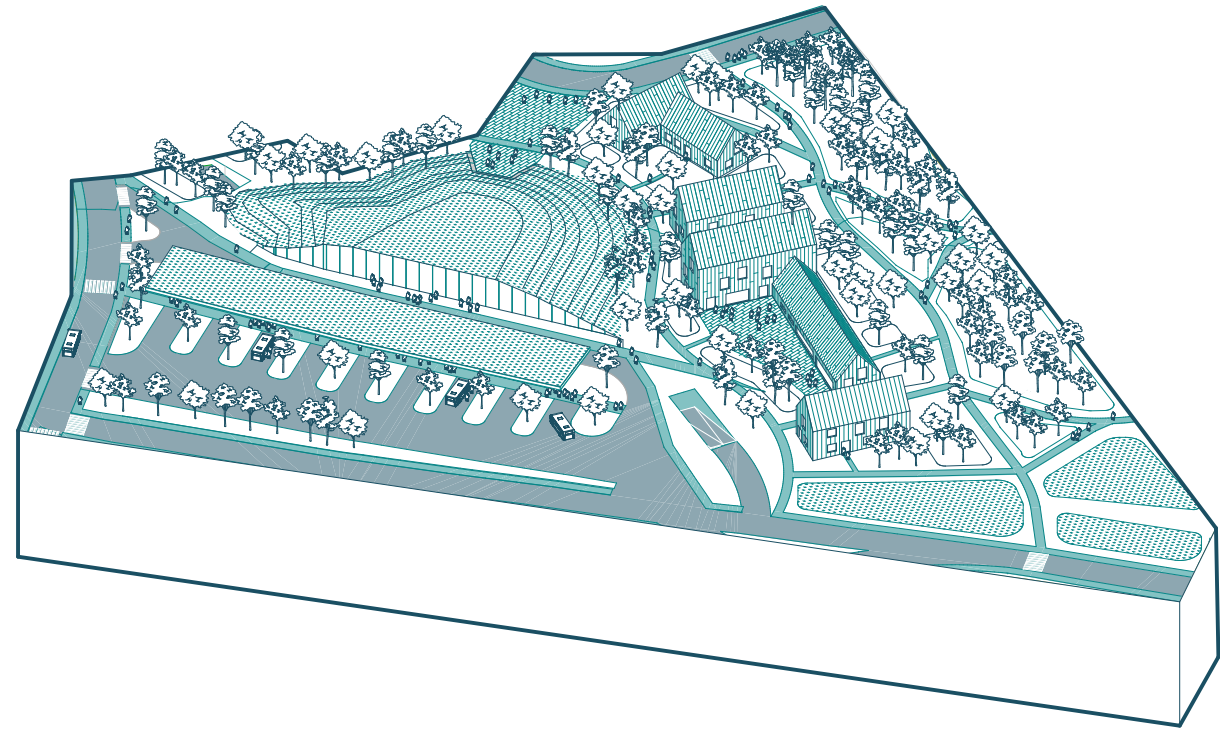
The master plan mainly follows the functional plan, proposing objects accordingly, while also offering some smaller scale solutions.

3.12



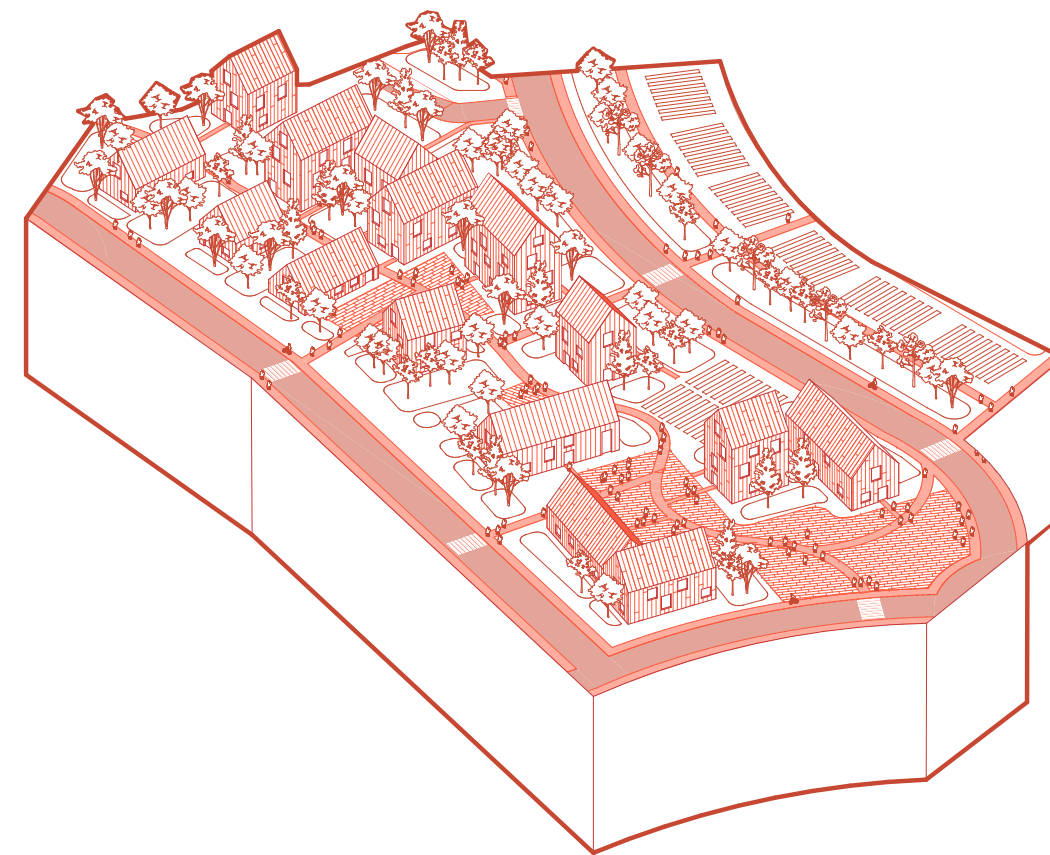
Master plan of chosen territory

General strategies



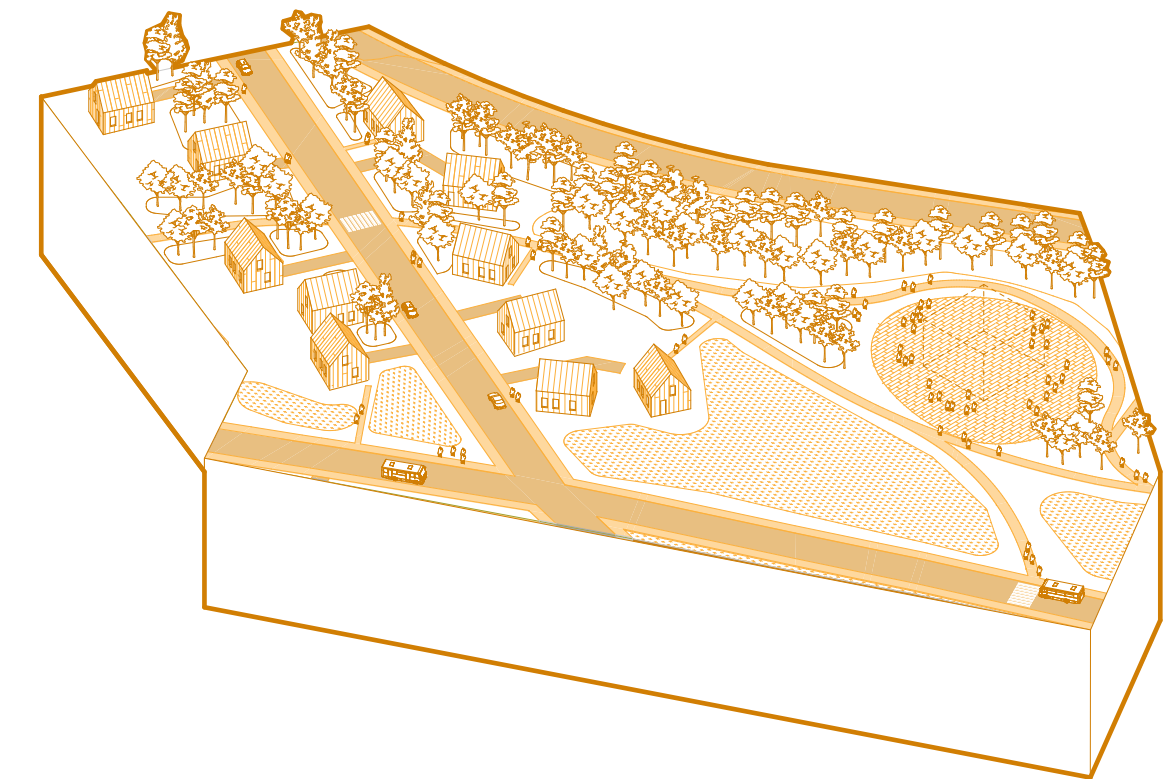
Transit - oriented development

According to this theory/principle, most of the development in the chosen area focuses around, and tries to be as close in proximity to the new bus station.



Mixed - use social housing

To ensure not only social, but also economical equalization between parts of Birštonas, mixed use functions are introduced for the proposed social housing.



Continuation of urban fabric

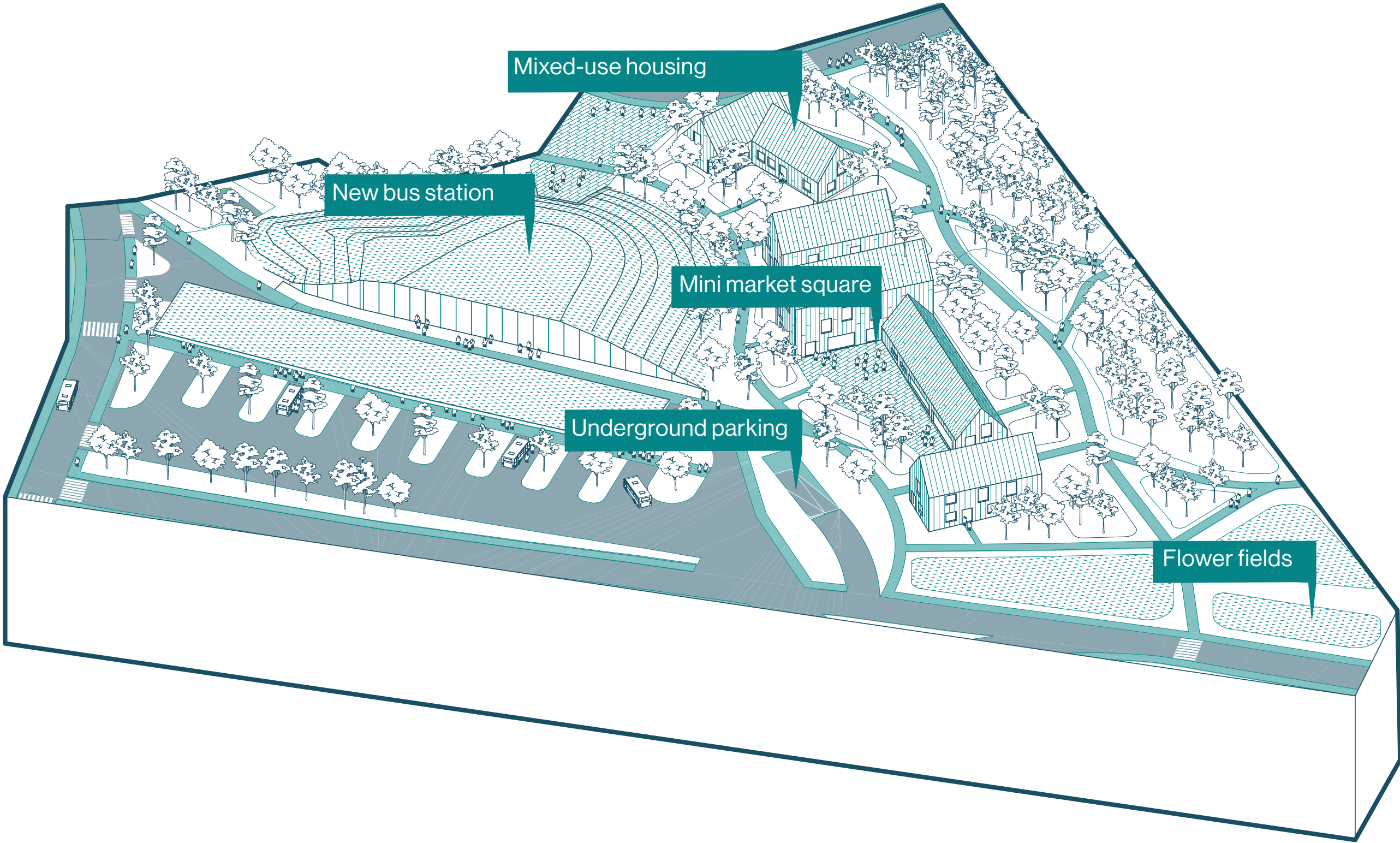
One of the aims of the proposed development is also to mend the torn urban fabric, which is done by filling in gaps with dominant pre-existing morphotypes.

3.13 >

New transit hub

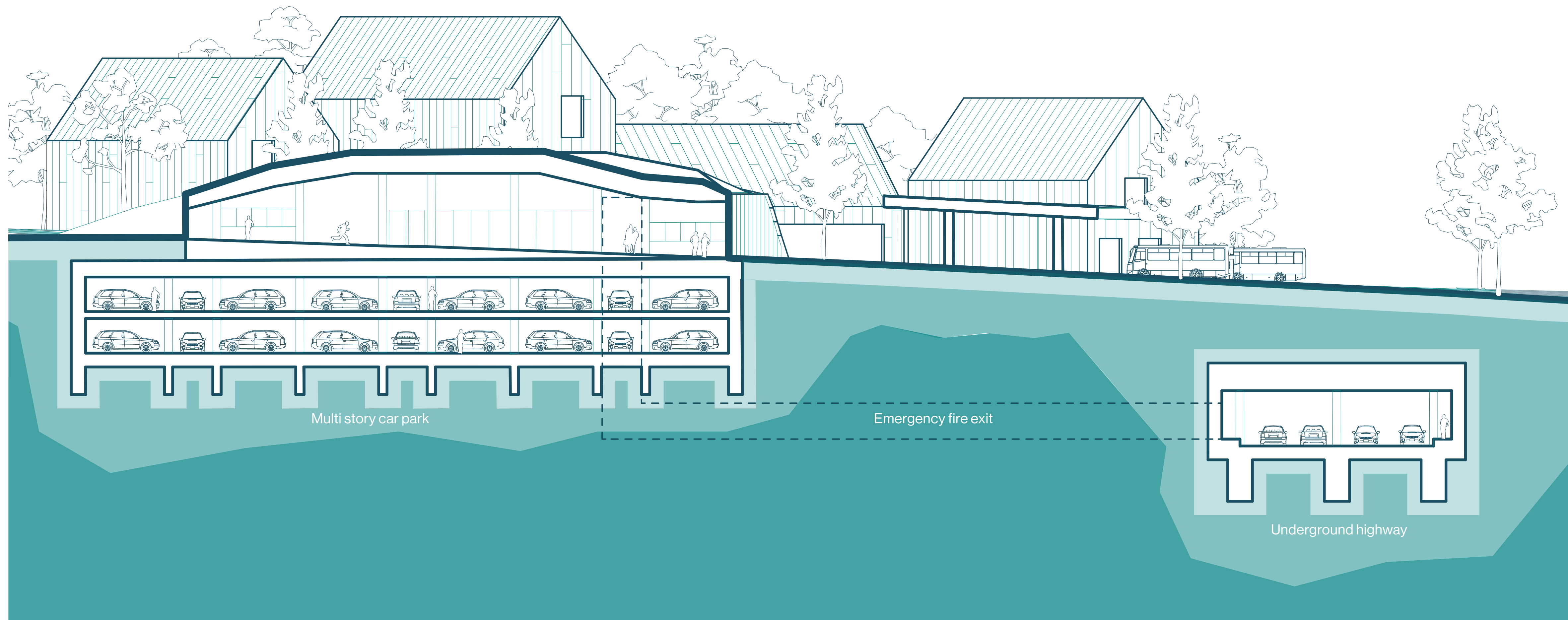
The aim of the new bus station is to become the axis of the whole area through transit - oriented development principles. The station itself is semi-buried underground, following the theme of ground-works'. The station also has a large - multi story car park, to service the needs of the newly formed surrounding residential areas and tourists.

3.14 >



Scheme of Birštonas segregation decrease' solution

New transit hub



Scheme of Birštonas segregation decrease' solution

New transit hub

The roofs of the station are covered in tall greenery - flowers, bushes and etc., to be as non intrusive and flush with the terrain as possible, to offset its' scale.

3.14 >



Scheme of Birštonas segregation decrease' solution

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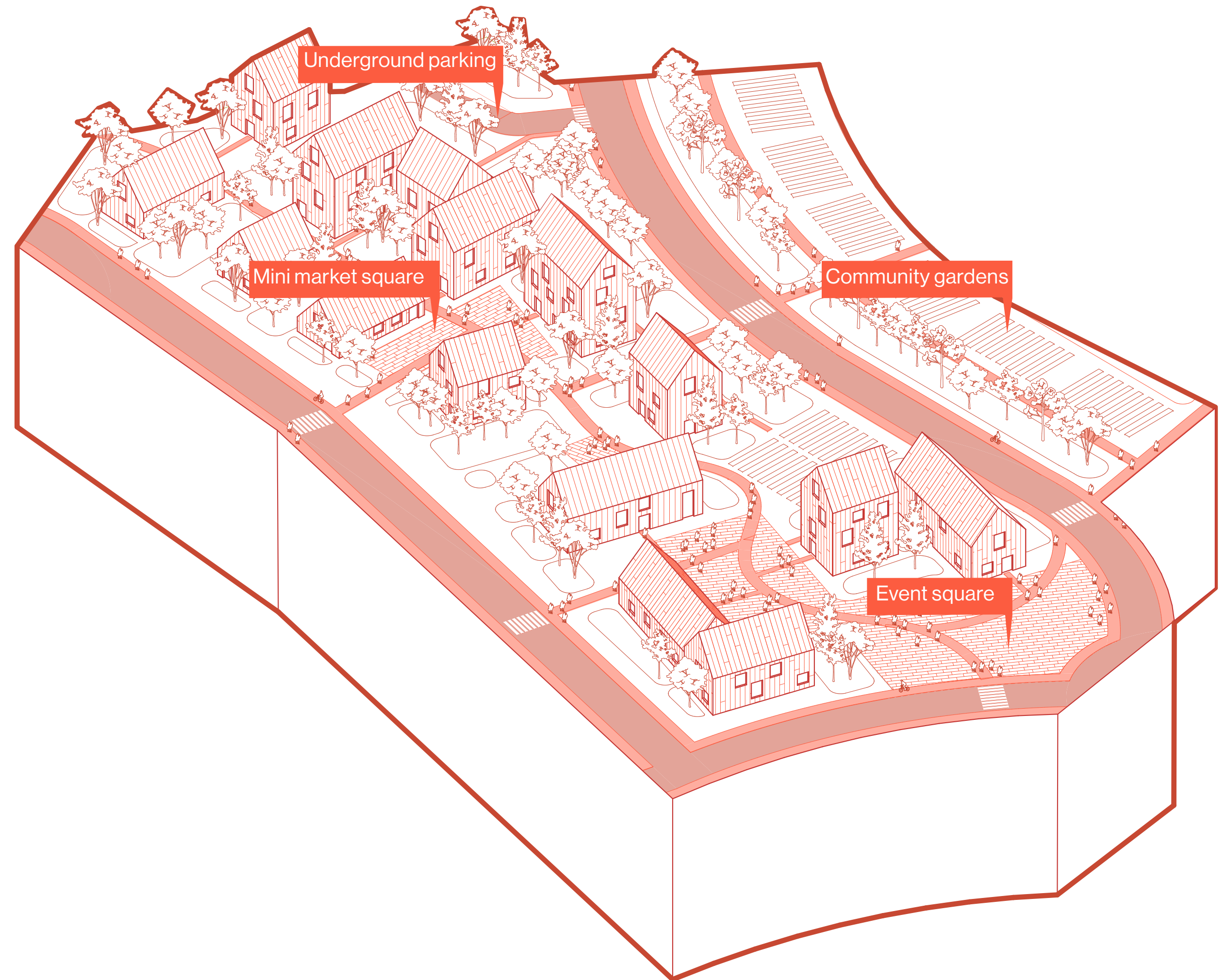
Urban planning 2

Mixed-use housing

The proposal is to have first floors of the buildings be of a commercial function. The upper floors are mixed with both private and social housing, ensuring no internal segregation.

3.15 >

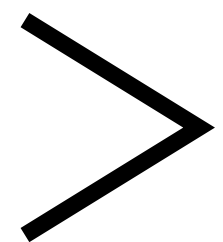
W



Mixed-use housing

The area has paths woven in between, lined with greenery, and gardens, belonging to the residents, to ensure a homely and cozy feel, while also presenting itself nicely to visitors.

3.15



Perspective visualization of the interior of the mixed-use housing area

Mixed-use housing

The area has paths woven in between, lined with greenery, and gardens, belonging to the residents, to ensure a homely and cozy feel, while also presenting itself nicely to visitors.

3.15 >

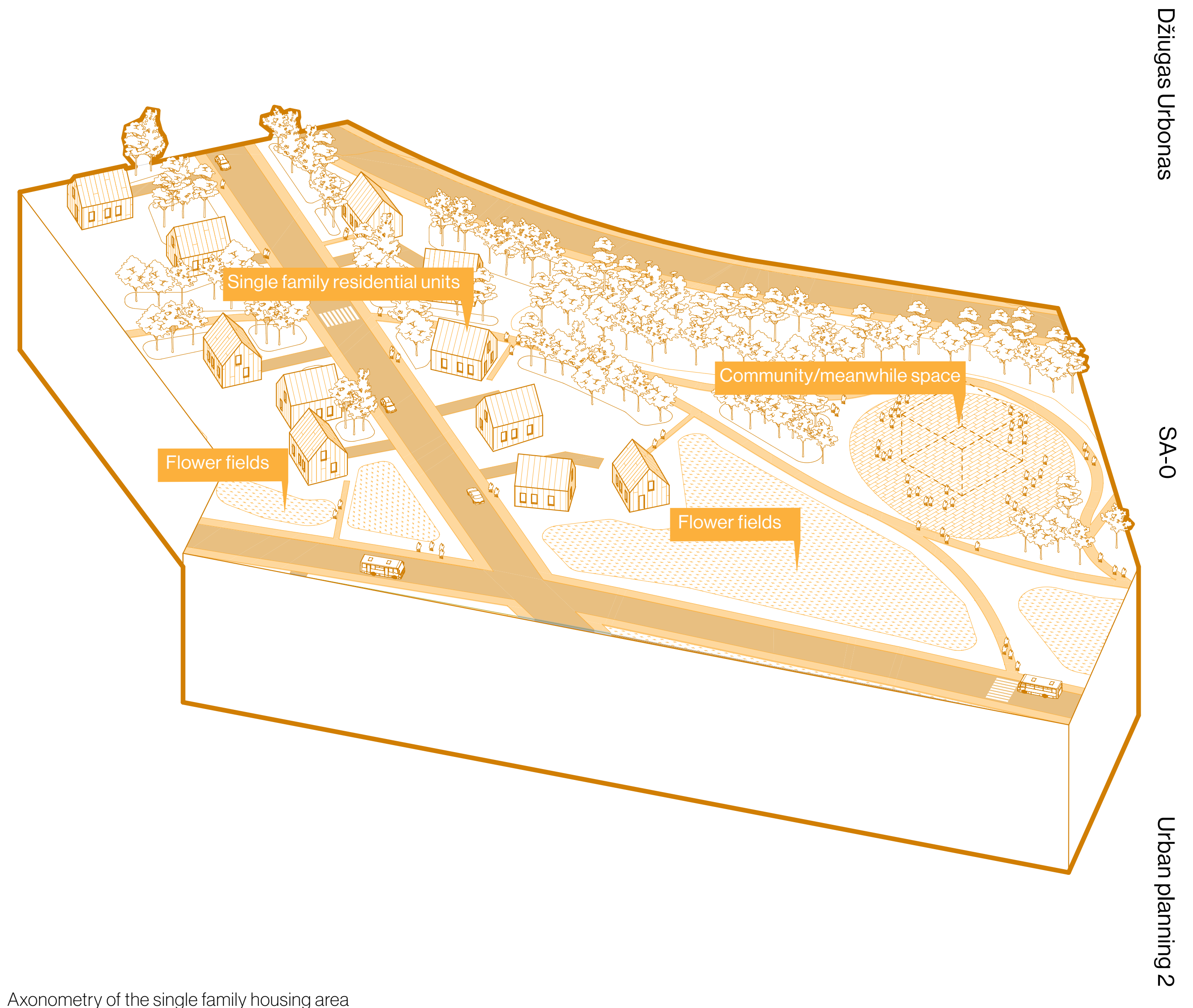
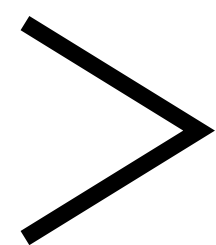


Perspective visualization of the mixed-use housing area, from the school's rooftop

Single-family housing

The single family housing units are proposed, because they connect the now torn urban fabric, by filling in the gaps with a morphotype that is dominant to the area. A public square which could be used as a meanwhile space is also made in the nearby park, to foster connections between all nearby residents.

3.16



Axonometry of the single family housing area

Single-family housing

The houses themselves are placed and distributed according to the pre-existing build up, they try to follow the scale materiality and morphotype of their context. The housing units are also surrounded by nature, so as to provide a more calm and serene atmosphere.

3.16 >



Perspective visualization of the single family housing area

New school

The school is proposed because there are none in the southern part of Birštonas. The roof of the school is green, and the idea behind its' shape is to follow the reoccurring theme of blending into the landscape. The rooftop is also a public space in and of itself - completely walkable and accesible by everybody .

3.17 >



Perspective visualization of the new school front

Masterplan

3.18



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3.19