

BRNO FACULTY
UNIVERSITY OF ARCHITECTURE
OF TECHNOLOGY

T

t?f

The Why Factory



Pasting Urbanism

On Palacký Hill

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Urban radical
by Faculty of Architecture
(Brno University of Technology)
and
The Why Factory
(TU Delft)

Nakladatelství Legia

This study is made by bachelor and master students of the BUT under the guidance of dean Radek Suchánek and academics Szymon Rozwalka, Michal Palašćák, Kristýna Smržová and Karel Havliš and supervised by visiting professor Winy Maas, architect, urbanist and landscape architect, who is the co-founder of the international acclaimed architectural office MVRDV in Rotterdam and other cities, he is the founder of The Why Factory, the think-tank on the future city in Delft. Also a professor at the TU Delft, at RMIT in Melbourne and at CVUT in Prague.

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Palacky Power

Winy Maas

Brno has two beautiful and famous universities: Masaryk and the Technical university. They both have quite some campuses and properties. Some of them truly wonderful. Some others more remote and less used.

In the upbeat for a new real estate strategy, the Brno universities want to look for a more progressive approach. A strategy with a possible masterplan for its properties. With the idea to keep the characteristic jewels, but sell the rest, universities are trying to acquire more budget for quality improvements for the existing and new properties, same as for the existing buildings and new buildings. By doing so, increasing the quality for students, staff and improving research and education. Therefore, inviting more people on its premises, aiming for a better relations with the city and overall aiming to inspire and enhance it. This requires a process of restructuring the

university's amenities. A special project organization is needed to make a masterplan and collaborative contracts with outside partners. This organization should be a part of the rector's office and have a strong relation with the university through participation and shareholderships. In addition, it should have a mandate and budget to deliver masterplans and buildings and hire both internal and external staff.

As a start to that, the department of architecture of BUT has been asked to make a studio with its students to dream about these potentials on one specific campus on Palacký hill. The results will be presented in an exhibition in the autumn of 2024 as an upbeat for that project organization.

The study analyses the universities' characteristics, and compares them with other universities in the world.

It shows the site of Palacký hill and places it within the context of one of Brno's remarkable specialties: its hills. It shows the possible beauty for its future development by comparing it to other cities.

It shows the current situation. Its beauty and its awkwardness.

It analyses Palacký hill itself. Through walks and observations. Leading to a photo reportage that summarizes it. Showing a campus full of cars, lacking public transport. More public transport and parking facilities are needed. With empty life and streets that need new programs. More life and other programs like housing are needed. With a spatial composition that is unclear, lacks character, direction and blocking views more than allowing them. More character is needed. With architecture that is enclosed and unwelcoming. More quality is needed.

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It analyses the site more precisely. It shows the changeable and non-changeable areas. Over time. It shows the desired changes. And it comes up with the available plots.

It shows comparisons with other campuses and their scale, that are montaged into the available land. Apple, Harvard, Tu Delft, Oxford, Cambridge, Yale, Heilbronn, Basel pharma campuses, ETH, CTU. And it compares the possible programs: university program, startups, housing.

It shows through a series of proportion tests, the possible typological characters and directions for the site, montaged in the empty maps, all based on the same scale.

The old existing parts are surrounded with offset of around 10 meter to provide for access and fire distances.

Within these empty maps different scenarios are developed, appropriating local laws and codes.

This shows a wonderful series.

The Prague castle shows how the university can be designed as a grand castle.

That shows its competition with Prague. I can see the posters on the airport.

The Pentagon shows a possible more American solution. A no go.

The Apple ring shows a corporate direction. A one liner.

Old blocks neighbourhood of Brno shows a more cute and contextual direction. Nice.

The Venice plan shows how we can make a cute masterplan.

New Babylon explores the potential of a park that is covered and bridged by cloudlike program. As a new monument. Beautiful.

The Ensanche in Barcelona shows a new grid like organization. The Barceloneta shows a mini grid organization. Not bad.

Valparaiso shows an informal direction that allows for individuality and small scale from which the old building arise as castles. Very good as it addresses individuality, small scale and phasability.

The Versailles park show the beauty of a grand park that attracts people. A good choice.

The Place d'Etoile shows the organization around a central square. An historical clash comes alive.

The Super Habitat shows the inhabitation through a vertical village like cloud. Rough and beautiful.

The Vineyard makes a new landscape on top of possible buildings. As a new or better said extruded hill. Gorgeous. Literally as the new roads are dug in as gorges.

Kowloon 2.0 shows a dense rock of program. Probably not wished by Brno.

The Manhattan blocks show a true new city on top of the hill. Good to compare as we know this part of New York so well.

The Copenhagen plan, that shows that we can add a Tivoli garden on the hill that attracts people. Interesting.

The New Plaza with a series of objects on top. A very nice one. One of the grandest plazas in the world.

The Spiders in the forest. A sensational one. Where the buildings form spiders moving

through an extended forest.

The Hyper Building on top of a forest. If we could do that then Brno would be on the list of world wonders.

It analyses these tests through possible GFA, zoning analyses and other. This leads to possible dreams and directions that are to be evaluated. They are shown as a pure list. To allow for comparisons and discussions.

So. What do we choose?

We know that without character there is no quality and attraction.

This can be the base for a next step. The possible masterplan. For a new Palacký hill. Palacký Power. That can inspire also the other hills and campuses of Brno..

Pasting Urbanism VS Genius Loci

Szymon Rozwalka

What is really radical about this project, this method. An experiment? Touching the limits of the original? Randomness? The frivolousness?

In what is this project heretical? What unwritten principles, what unwritten rules does it break and transgress? Why, for many, should it be rejected, forgotten, never to be brought into the light of a day again, hidden from the world in the bowels of academia?

It cannot be about results, after all, many of the scenarios presented here are over the top, surprising, against all odds normal. Streets remain streets, buildings remain buildings, parks remain parks? It cannot be about scale. Apart from the very few exceptions, the scale is balanced and almost identical to that of

Brno, but even the few scaled-up ones, such as New York, New Babylon or Spider, are eye-catching, well-acted, despite this overscaling. We can positively find ourselves in these scenarios.

Let us settle for a hypothesis. Unproven, almost arrogant in its naivety and in its lack of any preliminary research.

Radical Urban is radical because it rejects the foundations of our thinking about our profession. It rejects the illusion of the profound specialism of our profession. Its rationalism. Suddenly we are no doctors, no alchemists. Suddenly it appears that without lengthy analyses, without adhering to the supposedly immutable rules of a location, which we must first painstakingly find, without adhering to these immutable rules, we can. We can play with space, we can play with the city. We can throw ourselves into the deep waters of city design, without lengthy analyses, without the breakneck search for the perfect composition that fits in with the history of a place. You can forget about Genius Loci. With this notion understood as the principles that define a given space forever and have always

defined that given space. Understood as the spirit of a place, a concept with which one does not argue. Which ties our hands. Which is more than we are.

Suddenly we can reject the Genius Loci, and yet it works. Instead of analysis, one can copy, instead of detailed composition one can script, instead of a lasting, often ideological struggle for a vision of the whole, one may have no vision at all. One can try not single but dozens, who knows, maybe hundreds of variants. Suddenly urban planning becomes alluring, attractive, interesting. What a great freedom this opens up for us, what great possibilities, but also what great dangers.

A few months ago, Vaclav Bělohradský, the famous Czech political sociologist, in a lecture⁴ he had at our faculty, shared a number of important observations with us, one of which is perfectly applicable here. He said that in a world of over-information, information becomes cheap and concentration becomes expensive. Concentration that can work with the overload of information. This is the situation we faced at the very end of the semester. **What next? Which of the proposed, which**

of the other possible scenarios, should we choose? According to which criteria should we proceed?

One semester is not enough to get everything right. It should now be time to analyse, to check. Time for Belohradsky's concentration. Here. Now. We need rationality. The question is whether the rationality of the urban planner. Maybe it is enough to leave what the students have produced to the bureaucrats. To the traffic planners, the greenery planners, the fire safety officers and above all the economists and politicians, the developers but also the residents, whose opinion we could find out through sociological research, no single survey, no beauty contest.

We leave these questions unanswered. This project, thanks to Winy Maas, has for a moment opened up the possibility of a different approach to urban planning. For some it is unacceptable, for others quite the opposite. What we do with it next is on all of us. And only on us.

The new method

Kristýna Smržová

In collaboration with Prof. Winy Maas and students of the FA BUT, we present a form of reflection on urban structures in the context of city planning. We focused on the site of the BUT campus and the Technology Park in Brno below Palacký vrch. Its structure has never been fully completed and the public space here is currently non-functional, but it provides a whole **spectrum of possibilities**. Can we transform it into a place full of opportunities in the context of the university/city in response to the current demands we have to address?

We started a radical form of reflection on this locality with an unconventional find&paste approach, which allowed us to look at the issue of Palacký Hill and the creation of the city in general from many angles. We compared and examined simultaneously not individual designs, but urban structures from all over

the world (existing, utopian and combinations of forms).

This experimental procedure, different from what we are used to at the FA BUT (in the Czech Republic) in the context of urban design, allowed us to gain several fundamental insights during three months that we would not have gained in a „regular „ way. The opportunity to compare different types of density, population levels, height diversity of selected structures, etc. gives us, together with the traditional understanding of the site, a whole new dimension in understanding the scale and possibilities of development. Thus, paradoxically, in some cases, copying and trying to implement the existing brings far more freedom and variability of approaches than developing a completely „new“ design.

The urban structures that we are applying in this area are functional units that we did not deliberately invent, but selected and then shaped. This selection was made in the context of the Palacký hill site and the great diversity of the structures under study. Today, in the context of the dramatic speed of deve-

lopment and pressing ecological challenges, we are looking for other possibilities in urban planning. **We want to open the door to new, adaptable and variable forms of approach but often very radical ones.**

Palacký hill, this complex site, will need a comprehensive and professional approach if we want to succeed in the design of the strategy/form and subsequent implementation. This solution cannot be rushed, but at the same time we need to act now. Important issues need to be discussed and raised.

Certainly we could go much further and into greater detail within this method, but we have reached a certain level that can be managed in an academic semester in this area and yet it shows us a huge range of possibilities that are easily comparable in a few simple steps.

A wide, flat, brownish field under a cloudy sky. The field is mostly bare with some sparse, dry grass. The horizon is flat and distant. The sky is filled with heavy, grey clouds.

Part 1

**Brno,
city of hills**

The hills of Brno

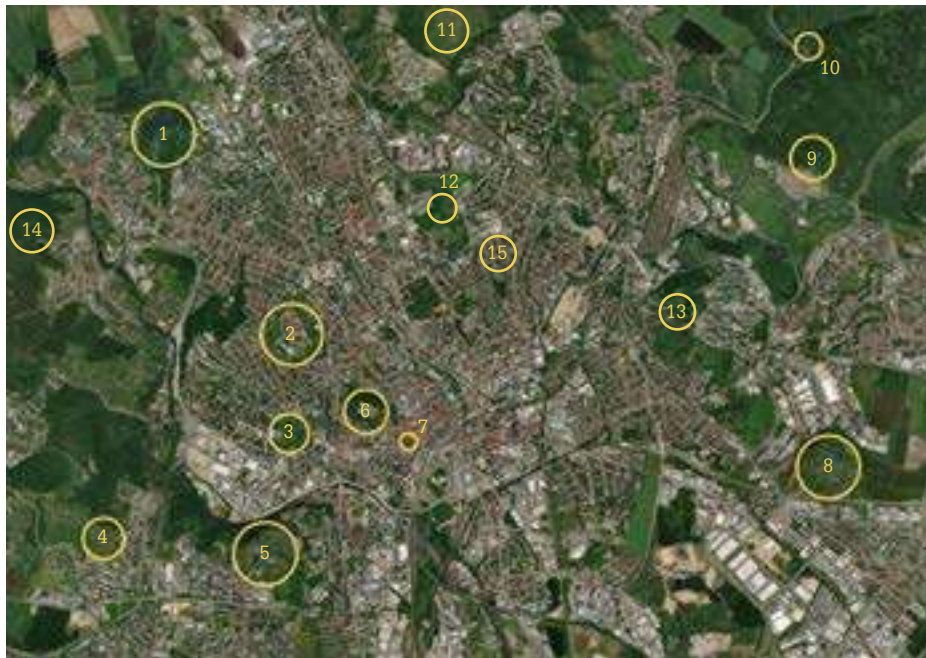
WTH - what the hill?

Brno, the second largest city of the Czech Republic, historically the capital of Moravia, is located in the south of the Czech Republic, at the confluence of the Svatava and Svitava rivers. The 230.2 km² city is a home to about 400,000 inhabitants. It is the seat of several important institutions and has also earned the name "student city" as there are 27 faculties of eleven universities and colleges.

The city is situated on the mountainous bedrock of the Bohemian Highlands. An interesting aspect of Brno's location is that the hills do not hinder the city's expansion; instead,

the city spreads over or encircles them. The way how the city spreads may remind one of another metropolis of Europe and the ancient world, Rome, a city on seven hills: Palatine, Aventine, Capitoline, Celius, Esquilinus, Viminal and the Quirinal.

In Brno, there are as many as fifteen significant hills: Kraví hora, Žlutý hill, Červený hill, Petrov, Špilberk, Kamenný hill, Hády, Stránská skála, Vrch Obřany, Žlutý hill, Planýrka, Židenický hill, Holedná, Černá pole and finally Palacký hill. Each one of these has its own significant function and characteristic, just as the Roman hills have their



The Hills of Brno 1 - Palacký hill, 2 - Kraví hora, 3 - Žlutý kopec, 4 - Kamenný vrch, 5 - Červený kopec, 6 - Špilberk, 7 - Petrov, 8 - Stránská skála, 9 - Hády, 10 - Vrch Obřany, 11 - Zaječí hora, 12 - Planýrka, 13 - Židenický kopec, 14 - Holedná, 15 - Černá pole



The hills of Rome (1 - Aventine, 2 - Caelian, 3 - Palatine, 4 - Capitoline, 5 - Esquiline, 6 - Viminal, 7 - Quirinal)

own specific features and numerous similarities can be found within the hills of Brno and the Roman hills.

Petrov, the landmark of Brno, is one of the most famous hills. Well-known neo-Gothic cathedral of St. Peter and Paul stands there. The hill is one of the smallest, almost its entire surface is built-up by the cathedral itself. The Roman Capitoline Hill could be described in a similar way. It is the most famous but also the smallest of the seven hills, and is also depicted as the centre and symbol of the power of ancient Rome. The Capitoline Hill consists of two hills, between which stands a trio of palaces with the famous trapezoidal square by Michelangelo Buonarroti. On Brno's "Capitol" stands the

cathedral by Moritz Grimm, Franz Benedikt Klínčík and August Kirstein.

Špilberk is a hill in the Brno city centre with a baroque fortress on top, surrounded by a city park. From the top of this hill there is probably the most beautiful view of the Cathedral of St. Peter and Paul, but also of the city skyline. This hill has a twin in Rome, the Aventine Hill, which is famous among locals and tourists for its view of the Vatican's St. Peter's Basilica and is also surrounded by gardens.

Stránská skála is one of the first inhabited areas in Brno. The remnants of the earliest settlements, dating back to the Stone Age, have been discovered at this location.

Palatine Hill, the most famous Roman hill, is associated with a similar feature. According to legend, this site is linked to the foundation of Rome. Today, the site encompasses extensive archaeological remains from ancient Rome, alongside artifacts and structures from Bronze Age settlements.

Červený hill, the Hill of opposites. At first glance, the hill appears to form the boundary of the city, yet on its southern slope lies another part of the city - Brno-Bohunice, a district with the Brno University Hospital and the campus of Masaryk University. Although Viminal Hill is much smaller than Červený kopec, commercial premises have also been built on its slopes, as well as

on the other side of Červený kopec. There is a Termini train station and many shops, residential units and restaurants.

Kamenný hill, the site of the famous Stone Workers' Colony. There are several such colonies in Brno. The reason for their creation was the industry development in the first half of the 20th century. Industrial areas began to emerge in the city that needed workers, but these people did not have sufficient finances to buy land in the city, so they created workers' colonies, places with very dense development, otherwise known as urban villages. Esquilin was in the past very similar to Kamenný hill, as it was considered a space for the poor. Nowadays, it is

the multicultural epicenter of the city, which is what the workers' colonies are gradually becoming too, as their inhabitants are dying out and people from different localities are moving into the area.

Kraví hora is a hill located in the middle of the city. Its surface is covered with houses, gardens, a forest park and on the top there is a famous observatory. In its vicinity lies the Masaryk Quarter, an area renowned for its historic villas. The Celio hill is covered with ancient town houses and these houses are on the part of the hillside exactly opposite to the Palatine. Thus, the ancient inhabitants had a view of the expensive palaces of the city's elite, similar to that of Kraví hora, coming into

contrast between the dwellings of the middle class and the aristocracy.

Finally, Palacký Hill, that is the primary focus of this book. Brno University of Technology (BUT) campus, lies here. Palacký hill is an area at the northern end of the city. In this aspect it resembles the Quirinal Hill, which is the most northern hill of all. To the east of Palacký Hill is a spur road to the highway that cuts the campus off from the rest of the city. The BUT campus on the hillside comes into contact with the gardening area in several places. Palacký hill's name is derived from František Palacký, a Czech politician, historian, and writer.

The Hills of Brno¹The Hills of Brno²



Part 2

Palacký hill

Palacký hill

Introduction

Palacký hill is a 339 metre high hill, overlooking the city of Brno to the south, Technology Park complex to the east and to the north-west lies the Medlanky aerodrome, offering natural walking paths, impressive panoramic views from the top; those views might be obscured only by the extensive and lush pine, oak and ash forest greenery.

Palacký hill, was called “Goats hill” in the past, owing it to the shepherds and their sheep in the middle ages, but today it bears the name after František Palacký (14 June 1798 – 26 May 1876), a Czech historian, politician, writer, organizer of public cultural and

scientific life; nicknamed the Father of the Nation, to whom a monument was erected on top of the hill in 1908.

Today Palacký hill is famous for housing a modern Technology Park complex which consists of office spaces, educational buildings for faculties of the Brno University of technology and student dormitories.

In this chapter, you will get to know Palacký hill from various angles, you will take a walk on Palackého hill, than also see the distribution of property and building potential.

Let's take a walk on Palacký hill

How do you like it?

This chapter is about a journey exploring the concept of the "Belgian Walk." But we won't be traveling to Belgium. The Belgian walk is far more than a geographical location; it's a unique approach to perceiving our surroundings through pictures and short comments.

As a summary of this project, we will try to present to you a visual meaning of this concept. Through our photographs and comments, we are showing the everyday scenes and

details that constitute our given environment, which is Palacký hill. You will be showed the result of our oppinions and create your own from them.

Throughout this study, we'll investigate how our perception of the environment can be shaped and reshaped by our experiences, emotions, and interactions. We will discover how the "Belgian Walk" becomes a tool for quick understanding, connecting, and interpreting the world around us.







WELCOME



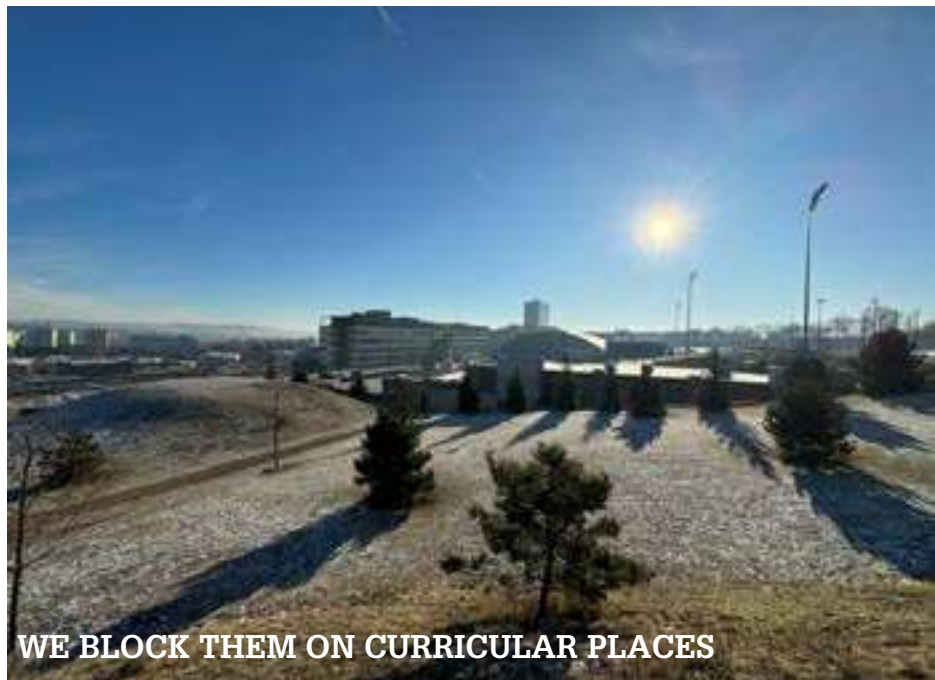
WE ARE ALSO PUNK



THESE ARE HOUSES



WE HAVE HILLS





DORMITORY DINNER



NEW LUMION TEXTURES



ICH BIN EIN BERLINER



WE ONLY GOT FAMILY



GRATER



(HE)ART ATTACK

(MONU)MENTAL



EXCALIBUR OF PALACKÝ



TAKE IT OR LEAVE IT



CLAUSTROPHOBIA



ENGINEERS VS ART



A BIT OF PROTEST

RIGHT IN POSITION



CONTRAST #1



CONTRAST #2



THE WAY TO GO



STAIRWAY TO HEAVEN



CONTRAST #3



USER EXPERIENCE #1



USER EXPERIENCE #4



USER EXPERIENCE #5



USER EXPERIENCE #2



USER EXPERIENCE #3



USER EXPERIENCE #6

SAY CHEESE



KAPLICKÝ WHO?



PUBLIC SPACE?



LAYERS



COLORING BOOK



FORUM ROMANUM

Zoning plan

Distribution of property

This map shows the zoning of Palacký hill. We simplified it into three ownership categories: BUT properties, private properties, and the properties of the city. This distribution helped us to understand our site better. As you can see, most of the properties are private, mainly used for housing. The blue colour indicates the properties of the university. That includes the faculties, dormitories, CEITEC research centre and the sports field. The rest of the properties belong to the city, for example, firms or the sports stadium. Later we considered this zoning when creating the empty map.

Our idea is to look at the zoning plan as a potential and not a limitation. The vision would be to improve each zone and merge them together, creating a dynamic neighbourhood supporting education and urban living. For the university we see the prospect of expanding the campus, with new academic buildings, modern student housing, research centres, using the vacant spaces around. To enrich the locality and foster sustainability, there could be a better integration of green spaces in the area of BUT on Palacký hill.

The development of the city properties could focus on improving infrastructure, minimizing cars and including

enhanced public transport links. Mixed-use developments will create a vibrant community, with affordable housing attracting diverse population. We can also apply smart city initiatives, such as using technology and data for urban planning to optimize city management and services. Strengthening the university-city partnership and engaging the local community in planning will provide a cohesive and inclusive growth, making Palacký hill a dynamic hub for education and urban living.

There are many things that could spoil the potential of Palacký hill. There is a lot of vacant places around our site, but they are mostly private properties. The potential of expanding the campus and city housing is limited by the ownership. The owners are the main obstacle in creating an innovative, expanded, and diverse neighbourhood. Because many buildings are properties of the university, the space also lacks many facilities that would be needed in a functional neighbourhood. Nevertheless, the area is very secluded from the city centre and the connection is not very practical, so the access to the services is very limited. Changing that would benefit the locality and bring it to life. This is primarily limited by the obstacles already mentioned.

- VUT property
- Private property
- Property of the city



Empty plan

Building potential

After establishing the property distribution, we defined the boundaries of the site and started working on the empty map, which was the first step to create the scenarios. When deciding which areas are suitable for new ideas, we focused on “dead zones”, which were suitable for further development of the BUT campus. For the sake of the environment, we tried to keep every functioning building, which was more than 1 story high. Most of the cutout objects were storage units, parking garages or simply wide parcels with no usage. Another large commodity,

which was cutout, were parking lots taking up a lot of space and making it less user friendly. From the east side of the site we kept a larger residential area. Buildings closer to the main road, which sections off the southeast part of our site, were cutout to a greater extent due to its mainly storage and parking character. The west side of the empty plan is largely defined by the geomorphology of Palacky hill and the cottage area, which borders the campus from north to the south. Parcels on the north, mainly used for agriculture, determine a clear edge of our given site.

Dead zones:

■ Parking.....	77 860 m2
■ Grassed area	198 440 m2
■ Greenery.....	202 780 m2
■ Pathways.....	128 870 m2
Used area.....	205 639 m2
Overall area.....	813 589 m2



1 **Removing parking space**
As a first step, we removed parking that is easily relocated to another area of the property and takes up potential open space..



2 **Removing grassed area**
We selected unused areas that included grassed areas and fields. These lands were either without function or could be omitted or placed elsewhere. This step was one of the greatest measures we took to achieve the opening of the site.



3 Removing greenery

Since outside of our chosen borders are vast areas of greenery, we decided, that the greenery can also be removed.



4

Removing unnecessary

Then, we also focused on the selection of walking paths and low-class roads, that would not benefit the empty map ase we created it.



Scale campus studies

Palacký hill.. a campus?

Comparing campuses like Harvard, TU Delft, Bohunice, Cambridge with Palacký hill is an interesting way to understand different approaches to the campus development. In this comparison, we focused on a few key aspects such as the number of dormitories, faculties, canteens, the overall scale of the campuses, etc. We also looked at how the campuses grew. Some were created gradually in

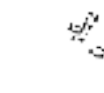
city centres, while others were built more rapidly outside urban areas. This comparison will allow us to better understand how different universities adapt to the needs of students and how their campuses function. Like this, we analyzed 24 campuses, in this overview we are comparing 10 of these campuses to Palacký Hill to see how this campus differs or resembles the world-famous ones.



Apple park
Silicon Valley



ETH Zentrum
Zurich



HHN
Heilbronn



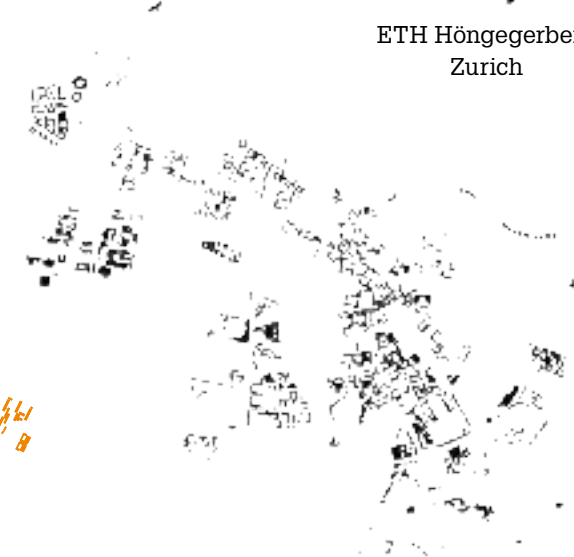
ETH Hönggerberg
Zurich



Yale
New Haven



Palacký hill
Brno



University of
Cambridge



Yale
New Haven



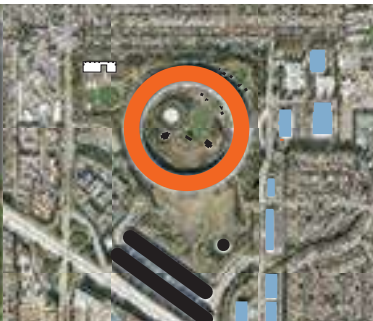
University of
Oxford



TU
Delft



ETH Hönggerberg Campus



Apple Park



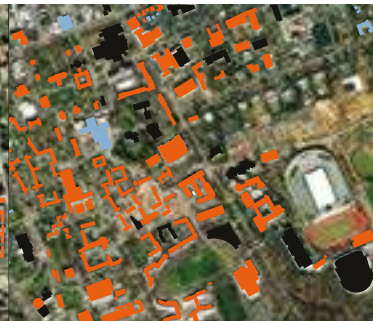
NTUA Athens



BUT Brno



UPV Valencia



Princeton University



University of Cambridge



CTU Prague



ETH Zurich 1.0



Royal institute of technology



Trinity Collage Dublin



TU Delft



ETH Zurich 2.0



Singapore Tech University



Harvard University



MUNI Brno



UNIBL



VŠB - TUO Ostrava



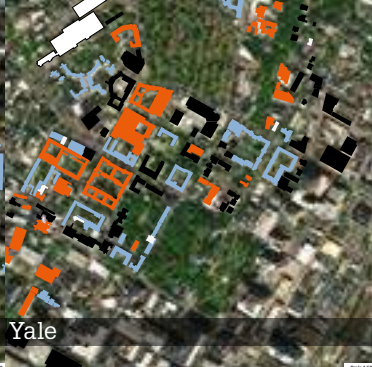
HHN Heilbronn



JČU Budweiss



Oxford



Yale



ZZU - Zhengzhou University



TU Warsaw

Palacký hill

Info:

Population of the city: 380 000

Number of students: 16 000

Size of campus: 507 012 m²

Size per student: 31,7 m²/prsn

Dorms occupancy: 6 019



Legend:

- 39,1% Faculties: 198 242 m²
 - 17,4% Dormitories: 88 220m²
 - 8,7% Sport facilities: 44 110 m²
 - 34,8% Other: 176 440 m²
- Campus outside the city



ETH Hönggerberg Campus

Info:

Population of the city: 1 488 000

Number of students: 24 534

Size of campus: 268 990 m²

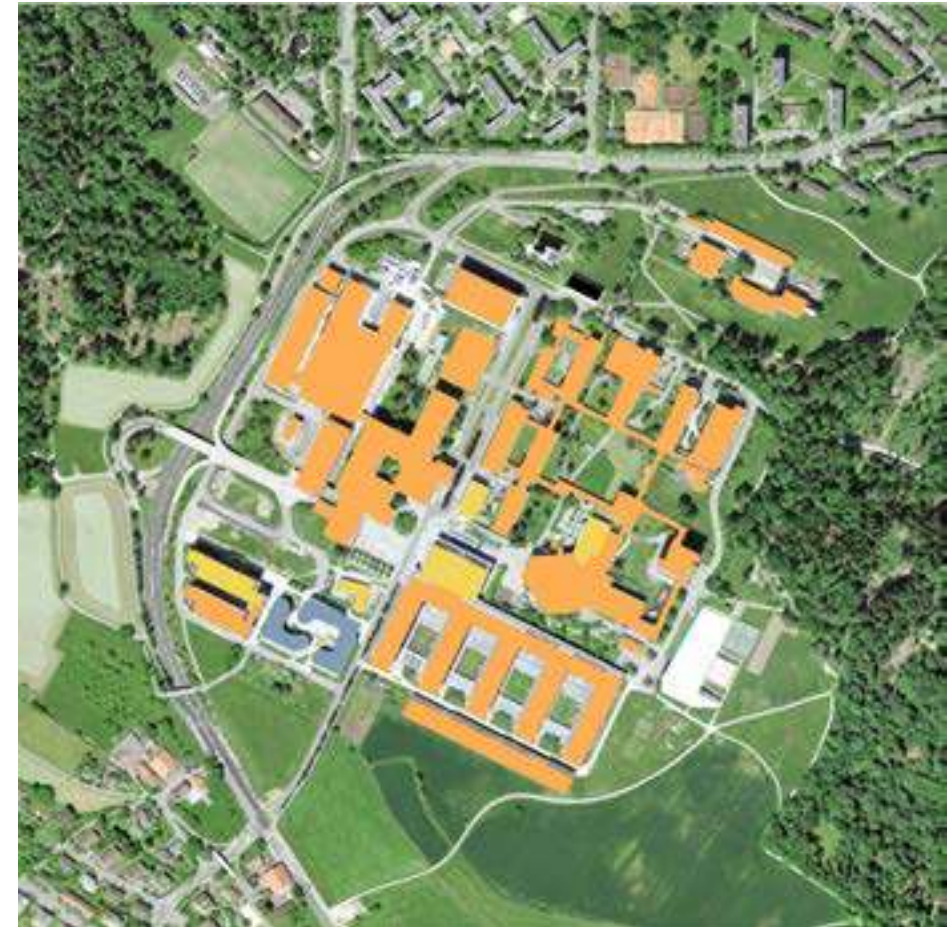
Size per student: 11 m²/prsn

Housing provided only for foreigners



Legend:

- 84% Faculties: 73 988 m²
 - 4% Dormitories: 3409 m²
 - 4% Sport facilities: 3452 m²
 - 8% Other: 6998 m²
- Campus outside the city



ETH Zentrum Campus

Info:

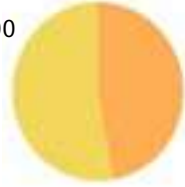
Population of the city: 1 488 000

Number of students: 24 534

Size of campus: 268 990 m²

Size per student: 11 m²/prsn

Housing provided only for foreigners



Legend:

- 47% Faculties: 48 430 m²
- Dormitories
- Sport facilities
- 53% Other: 54 303 m²
- Campus inside the city



Heilbronn

Info:

Population of the city: 125 960

Number of students: 8 300

Size of campus: 23 034 m²

Size per student: 2,8 m²/prsn

Dorms occupancy: no owned dorms



Legend:

- 86,7% Faculties: 19 962 m²
- Dormitories
- Sport facilities
- 13,3% Other: 3 072 m²
- Campus inside the city



TU Delft

Info:

Population of the city: 101 030

Number of students: 24 703

Size of campus: 161 000 m²

Size per student: 6,5 m²/prsn

Dorms occupancy: 11 116

Legend:

- 67% Faculties: 107 620 m²
 - Dormitories
 - 13% Sport facilities: 21 602 m²
 - 19% Other: 72 438 m²
- Campus inside the city



Apple Park

Info:

Population of the city: 57 856

Number of employees: 12 000

Size of campus: 92 230 m²

Size per student: 7,7 m²/prsn

Legend:

- 55,6% Faculties: 79 000 m²
 - 2,6% Dormitories: 3 728 m²
 - Sport facilities
 - 41,8% Other: 59 502 m²
- Campus inside the city



Cambridge

Info:

Population of the city: 145 700
 Number of students: 20 000
 Size of campus: 6 170 000 m²
 Size per student: 308,5 m²/prsn
 Dorms occupancy: 10 500



Legend:

- 90% Faculties: 5 491 300 m²
- 8% Dormitories: 555 300 m²
- 1% Sport facilities: 61 700 m²
- 1% Other: 61 700 m²

City campus



Harvard

Info:

Population of the city: 118 500
 Number of students: 25 266
 Size of campus: 850 000 m²
 Size per student: 33,6 m²/prsn
 Dorms occupancy: 12 000



Legend:

- 68% Faculties: 333 948 m²
- 9% Dormitories: 45 428 m²
- 9% Sport facilities: 42 546 m²
- 14% Other: 68 754 m²

City campus



Yale

Info:

Population of the city: 600 000
 Number of students: 14 806
 Size of campus: 1 509 477 m²
 Size per student: 101,9 m²/prsn
 Dorms occupancy: 11 844



Legend:

- 41,7% Faculties: 493 000 m²
- 9,9% Dormitories: 117 600 m²
- 6,5% Sport facilities: 72 000 m²
- 41,9% Other: 826 877m²

City campus



Oxford

Info:

Population of the city: 152 450
 Number of students: 26 455
 Size of campus: 317 891 m²
 Size per student: 12 m²/prsn
 Dorms occupancy: 22 984



Legend:

- 14,1% Faculties: 44 983 m²
- 73,8% Dormitories: 234 656 m²
- 1% Sport facilities: 3 178m²
- 11,1% Other: 35 074 m²

City campus



Campus outside the city

Palacky Hill

Info:

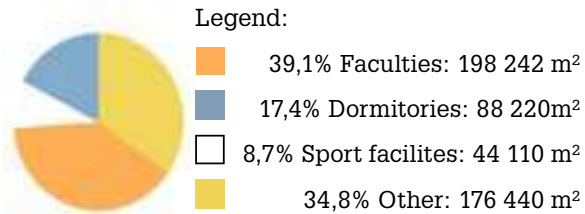
Population of the city: 380 000

Number of students: 16 000

Size of campus: 507 012 m²

Size per student: 31,7 m²/prsn

Dorms occupancy: 6 019



ETH Hönggerberg Campus

Info:

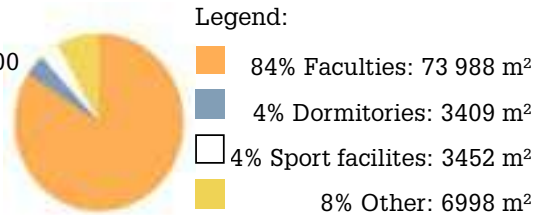
Population of the city: 1 488 000

Number of students: 24 534

Size of campus: 268 990 m²

Size per student: 11 m²/prsn

Housing provided only for foreigners



Campus inside the city

ETH Zentrum Campus

Info:

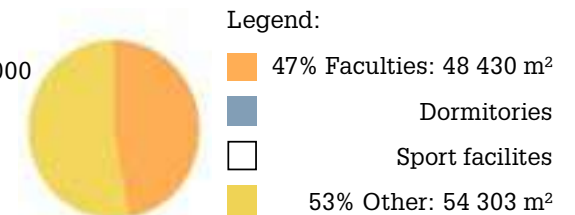
Population of the city: 1 488 000

Number of students: 24 534

Size of campus: 268 990 m²

Size per student: 11 m²/prsn

Housing provided only for foreigners



Heilbronn

Info:

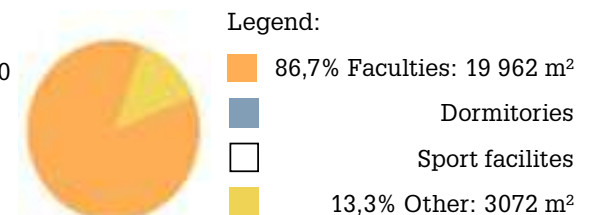
Population of the city: 125 960

Number of students: 8 300

Size of campus: 23 034 m²

Size per student: 2,8 m²/prsn

Dorms occupancy: no owned dorms



TU Delft

Info:

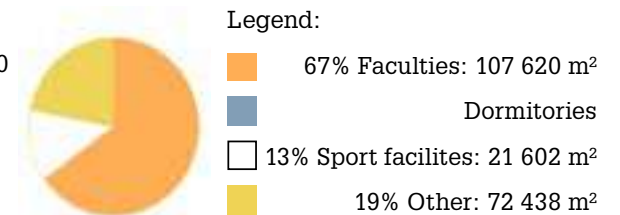
Population of the city: 101 030

Number of students: 24 703

Size of campus: 161 000 m²

Size per student: 6,5 m²/prsn

Dorms occupancy: 11 116



Apple Park

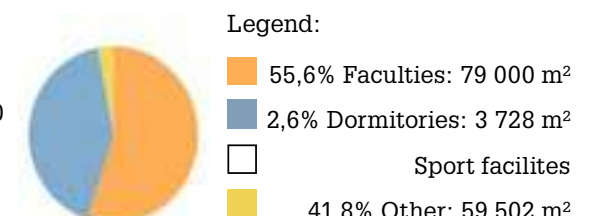
Info:

Population of the city: 57 856

Number of employees: 12 000

Size of campus: 92 230 m²

Size per student: 7,7 m²/prsn



Campus city

Cambridge

Info:

Population of the city: 145 700

Number of students: 20 000

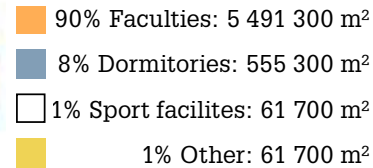
Size of campus: 6 170 000 m²

Size per student: 308,5 m²/prsn

Dorms occupancy: 10 500



Legend:



Harvard

Info:

Population of the city: 118 500

Number of students: 25 266

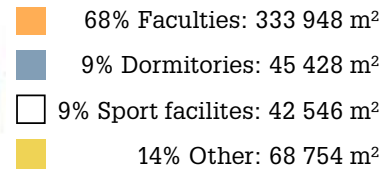
Size of campus: 850 000 m²

Size per student: 33,6 m²/prsn

Dorms occupancy: 12 000



Legend:



Yale

Info:

Population of the city: 600 000

Number of students: 14 806

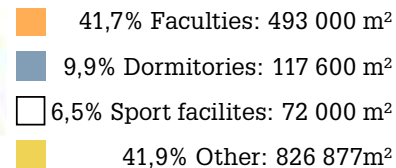
Size of campus: 1 509 477 m²

Size per student: 101,9 m²/prsn

Dorms occupancy: 11 844



Legend:



Oxford

Info:

Population of the city: 152 450

Number of students: 26 455

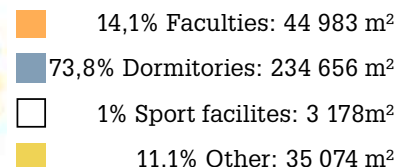
Size of campus: 317 891 m²

Size per student: 12 m²/prsn

Dorms occupancy: 22 984



Legend:



Conclusion

From the analysis, we figured that we can categorize the university into three groups: those outside cities, inside cities, and campus cities. This classification helps us better understand the character of the campus, which in turn serves as an important source for comprehending the issues surrounding Palacký hill.

One conclusion from this analysis is that campuses located within cities often lack dormitories. These campuses typically do not require this function because students find accommodation within city buildings. An exception in our examples is Apple Park, which, despite being in a city, creates its own area independent of its surroundings.

From the data compared, we realized that Palacký hill has many similarities with Yale University. Interestingly, Yale is fundamentally different from Palacký hill. Yale University embodies both tradition and community, with roots dating back to the 18th century in New Haven. It is known for its Old Campus, reminiscent of Oxford or Harvard. Conversely, Palacký hill is situated outside the city center. It expanded rapidly as new faculties were needed for the BUT Brno Institute. Despite these differences, the campuses share similar features. They offer students a wealth of amenities such as libraries, sports areas, dormitories, and catering establishments. Even the percentage of function per area is comparable. A significant difference is the square meterage per student. Although Yale's campus is almost 50% larger than Palacký hill, it offers

12 m² per student, whereas Palacký hill provides 31 m² per student. This demonstrates the comparatively large area of Palacký hill.

Another campus comparable to Palacký hill is the ETH Hönggerberg Campus. Both are located outside the main city center, next to a forest, and have limited connections with the city. In comparison, ETH is noticeably smaller than Palacký hill. However, this contrasts with the number of students; despite its smaller area (268,990 m²), ETH serves for one third more students than Palacký Hill. Another major difference is that ETH faculties make up the majority (84%) of the university's functions. Palacký hill has a more even distribution of functions and also provides more rooms for student accommodation.

This indicates that despite the size of the campus, ETH University can still hold a large number of students. In comparison, Palacký Hill feels vacant, and the unused space could use some more development, filling the space with life. There are already enough faculties, but rather than filling the site with more functions such as shops, restaurants, and theaters can help to bring the university closer to the image of the functioning University of Yale, making it more like a campus city. We can also decide if we want to make Palacký Hill more private, creating an enclosed community, or bringing the city to the campus and connecting it more to the public.



Scenarios

Scenarios

INTRODUCTION

In this chapter, we present to you the very core of our research and this book - the find and paste method. What is the find and paste method? We will take you through its meaning and steps so that you can use it yourself. The find and paste method is a new approach to solving urban planning based on finding existing urban maps and pasting them to the given area. With this method, we get infinite possibilities from which we can collect data individually very fast. We call them scenarios. They don't need to be put into practice. The goal is to open up to new approaches, data,

and possibilities. 22 scenarios were processed using this method. Both realistic, starting from cities like Paris, Barcelona and Venice, and unrealistic, ending with structures like New Babylon, spiders in the forest and the hyper building. Individual scenarios will be presented more in detail in this chapter. From them, we can conclude how a certain city/structure/idea works in our given area. We can take into account the spatial layout, and together with the collected data, compare them and see the potential of each scenario on our site next to each other.

Finding the method

The first workshop

This chapter shows the exploration of urban design fundamentals while using only paper and scissors. The goal was to conceptualize different urban structures through hands-on, creative methods.

The workshop started by cutting out the shape of an empty map from an orthophoto of Palacký Hill and placing different urban structures from various cities underneath it. Using only paper maps, we arranged cut-out pieces representing buildings, parks, roads, and public spaces to create functional and appealing layouts. There was no need for these plans to be realistic so the layouts also incorporated real objects like a cup, a box of tea, and even a banana peel.

On the other hand, we also needed to think about relationships between all of these elements, such as the placement of residential areas and the integration of green spaces. Real challenges, like limited space of the empty map, accessibility or sunlight needed to be taken into account.

The workshop concluded with presentations of the different layouts, showing diverse solutions to the urban plan of Palacký hill and these solutions are the basis for our whole research. This hands-on approach allowed us to engage directly with urban design, while also just having fun with it.



Having fun with it



At the Brno market place



Connections



Favelas close up needed



Trying out vancous hill



Trying out Barcelona



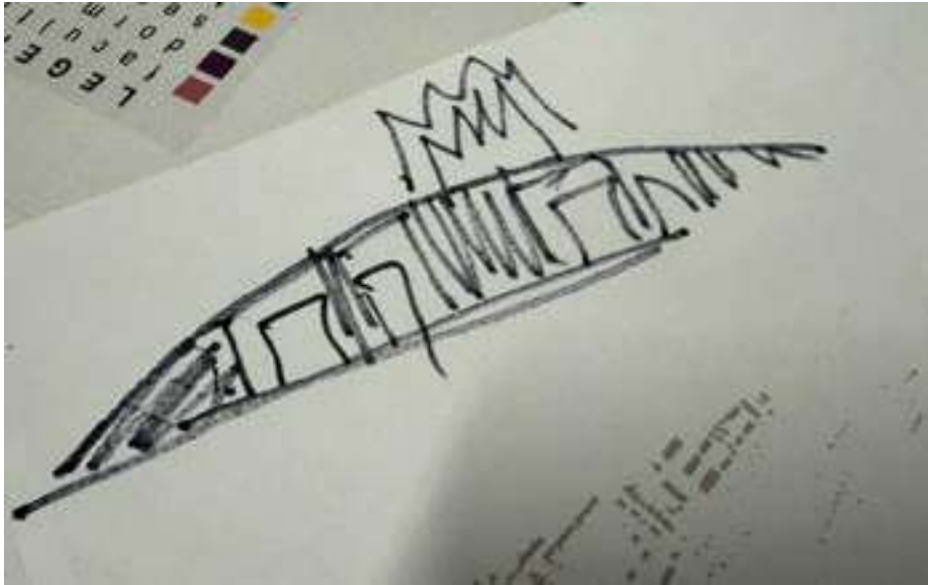
Trying it all out at the same time



Pondering



"Cut it up"



Prague castle on Palacký hill



FEKT drowned in Favelas



Concentration is key



Tea o'clock



Trying of Gagarin Plaza



Good vibes



01. Venice



05. Grid



01. Venice - detail



05. Grid - detail



06. Spider



11. Versailles



06. Spider - detail



11. Versailles - detail



06. Vancoush hill



21. Leonidov plaza



17. Vancoush hil - detail



21.. Leonidov plaza - detail

Manual

The steps we made

In this chapter, we will provide you with a comprehensive, step-by-step guide on the find and paste method. This technique allows for the creation of numerous possible scenarios, each integrated into any given site. We will introduce you to some key terminology, such as radical scenarios, developed scenarios, and the find and paste method itself. These terms form the foundation of the concept and will help you better understand the process as we move forward. Next, you will learn how to adjust these structures to suit specific needs and preferences, ensuring that the area is functional. We will guide you through the process of modifying the layout and design to optimize the use of space and enhance the overall functionality of the environment. Additionally, we will cover the crucial aspect of data gathering. You will learn how to collect and

analyse the necessary data to inform your design decisions, ensuring that your urban structures are not only visually appealing but also practical and sustainable. This chapter aims to equip you with the skills and knowledge required to effectively apply the find and paste method, ultimately enabling you to create dynamic and adaptable urban environments. By the end of this chapter, you will have a solid understanding of how to blend various scenarios into a cohesive and functional site. We will introduce you to the terms *radical scenarios*, *developed scenarios*, *find and paste*. We will show you how to create many different urban structures for any given site, adjust them, make the area functional and how to gather necessary data.



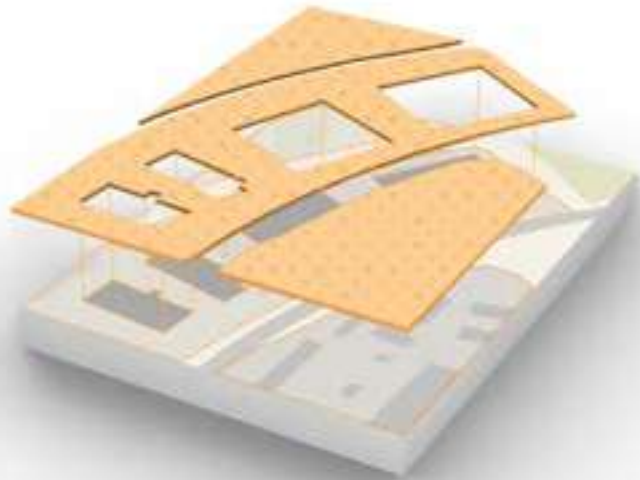
O **Choosing a site**
Choose your site and define its boundary by geomorphology, natural elements, zoning, urban units or roads.



1

The empty plan

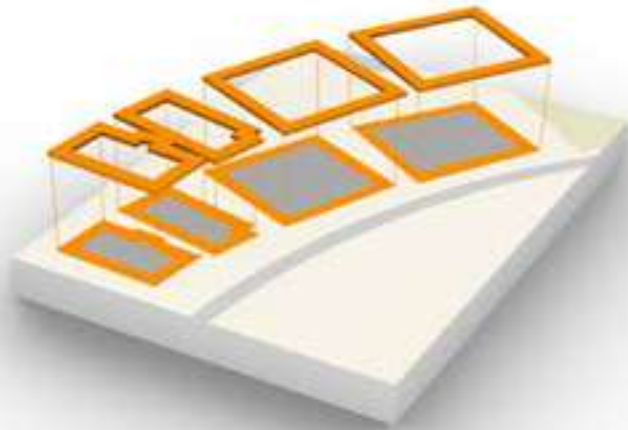
Select the area, which is not currently suitable and can be easily changed. Cutout this area to create the empty map.



2

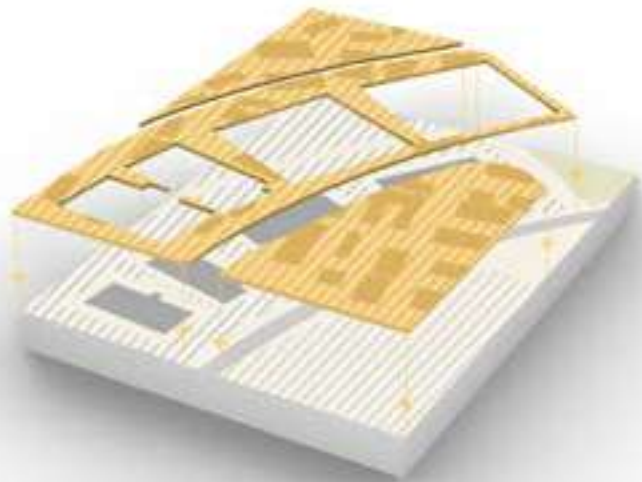
The offsets

Define an offset area around the buildings remaining in the empty map. The offsets should range from 5 to 15 meters, depending on the lighting circumstances and fire safety.



3 The copy paste

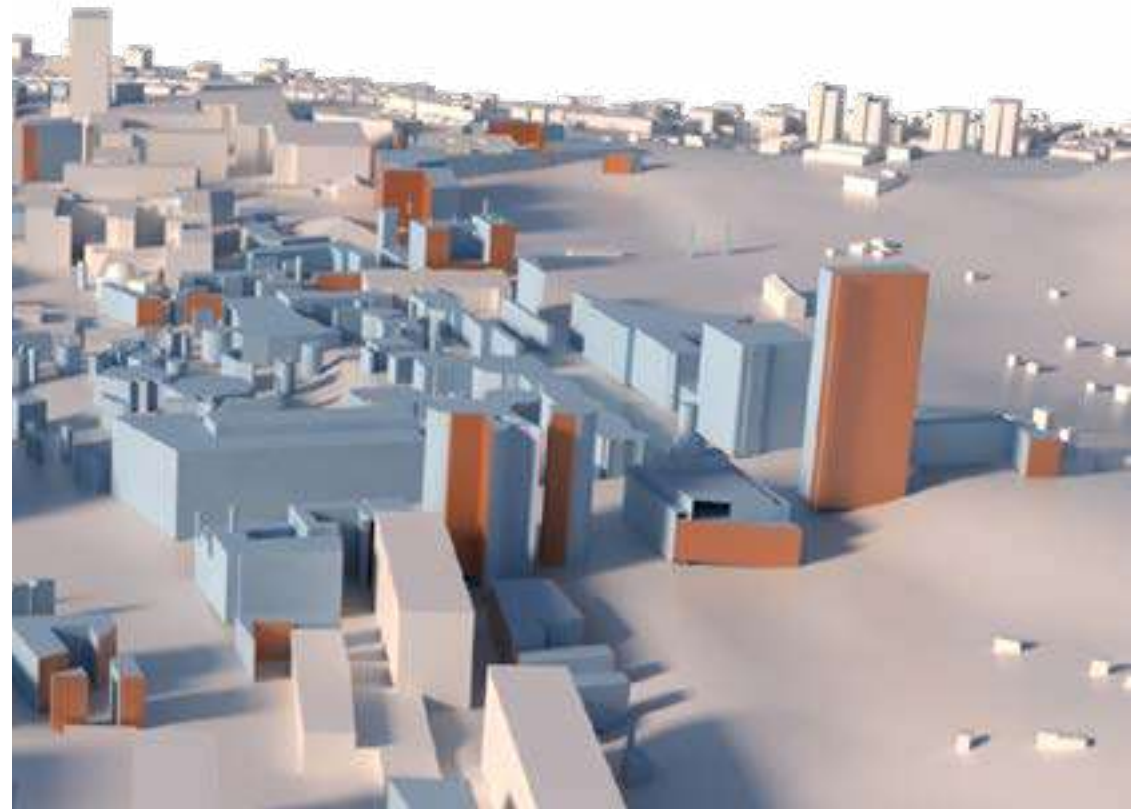
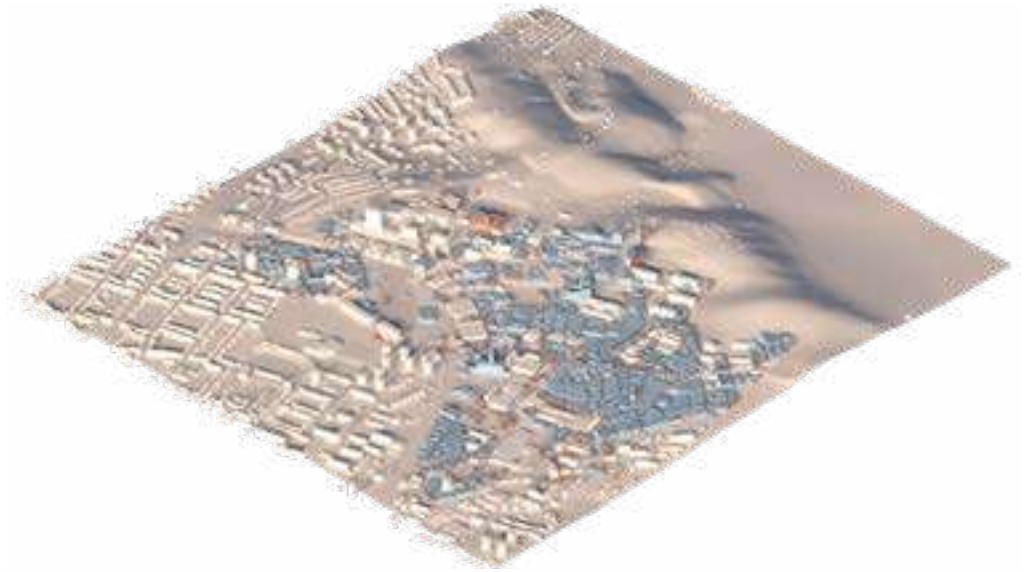
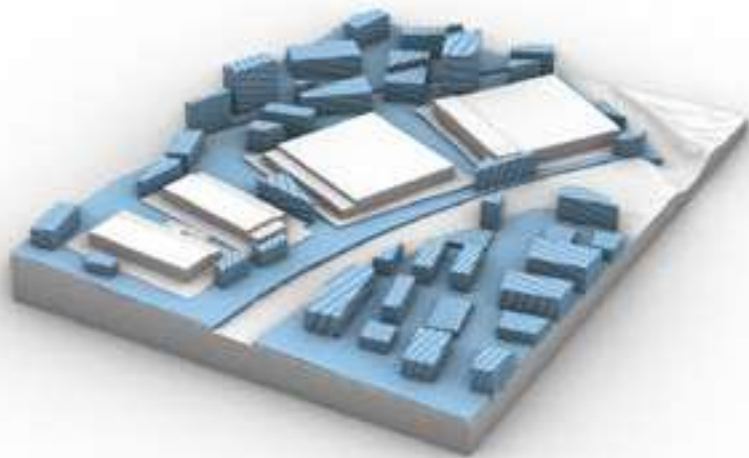
Find and paste a map of your choice onto the map of the original site. By doing so, you will fill up the empty space from step 1.



4

The 3D model

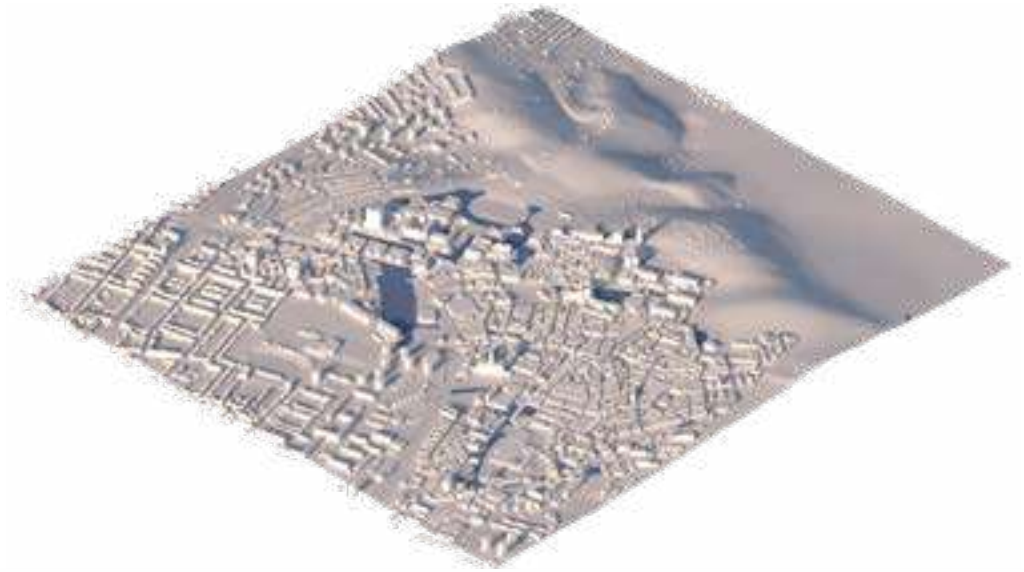
Create a 3d model with the original buildings and newly inserted buildings from another map.



5

The 3D model development

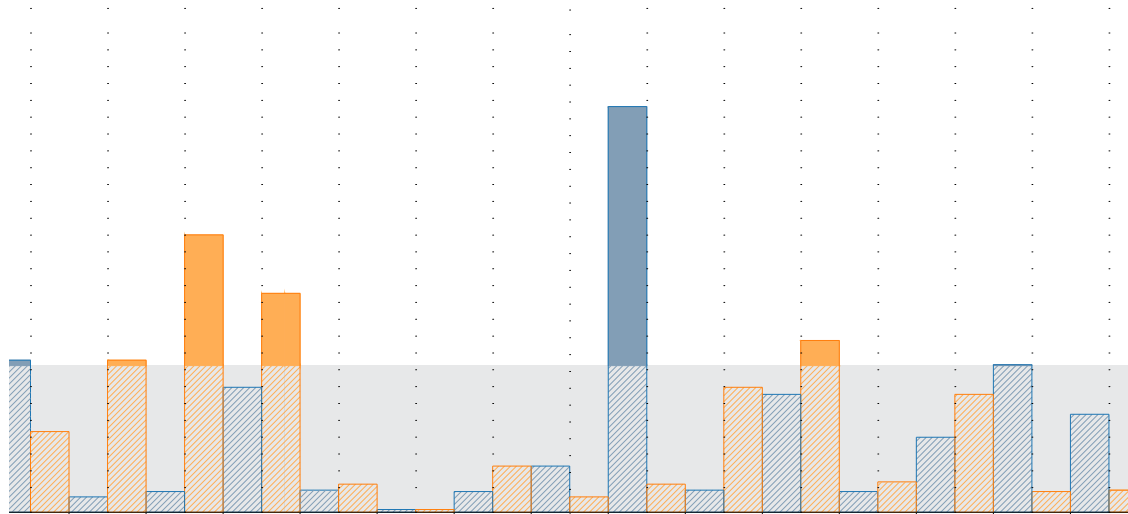
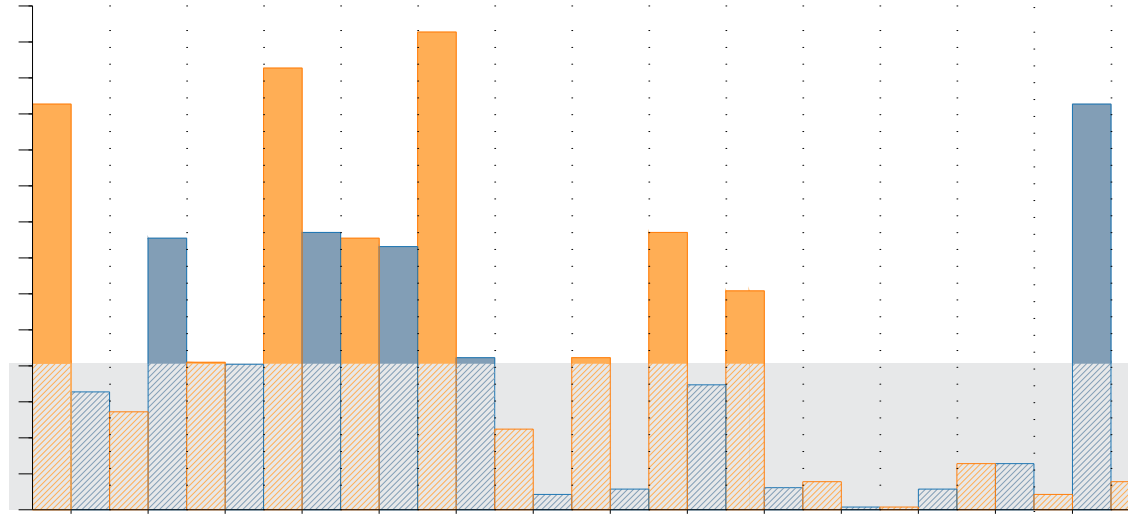
Clean up the newly created model by removing or transforming the problematic or contradicting parts of the map. Mainly focusing on lighting conditions, connections and fire access, as with the offsets.



6

The data

Obtain data for both the 4th and 5th step such as built-up area, population density, building footprint. Gross floor area can be calculated by a grasshopper script using a set of planar surfaces vertically offset 3,4 meters from each other.



Data gathering

How to do it

By writing a Grasshopper script, we obtained a pair of data points from the 3D models we created: the footprint and the gross floor area, which are crucial for further calculations. This script can calculate the footprint area of entire structures or their individual floors. It achieves this by dividing the structures into fragments 3.4 meters high, which corresponds to the average construction height of one floor, and summing their individual

areas to obtain the square meters of “gross floor area.”

We supplemented this pair of data with the calculation of the “empty map” area of Palacký Hill and the population density of individual urban structures. Their combinations allow us to compare a broader range of data and complete the overall picture of the possibilities for the new forms of Palacký Hill.



Gross floor area (GFA)

the total floor area contained within the building measured to the external face of the external walls

footprint area x number of floors



Average number of floors

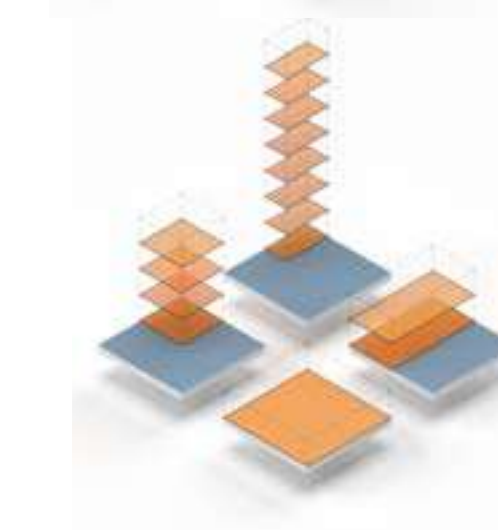
gross floor area
lot area



Population

the ratio of a building's total floor area (GFA) to the size of the plot area

population density x lot area



Floor area ration (FAR)

the ratio of a building's total floor area (GFA) to the size of the lot area (the property upon which the building is built). It is a measure used to discern the intensity of a development.

footprint area x number of floors



Lot area

area of the land

area of the empty map of Palacký hill: 813 589,68 m²



Footprint area/Built up area

the relation between built and lot area

an area of one floor
lot area

Radical scenarios

Find and paste

This chapter examines the transposition of an urban structure of specific cities or even unrealistic concepts into a different geographical and cultural context, specifically on Palacký hill. This investigation brings up several questions: Can two distinct urban structures be combined into a functional part of a city? What adaptations of the transplanted urban composition might be necessary to make?

In this chapter, you will encounter various merged urban structures, the scenarios.

We have already showed all the necessary steps that need to be made to create such scenarios. Now, you will follow the initial phase of the find and paste method for 22 different scenarios, referred to as radical scenarios. In this phase, no modifications were made to the urban structures; they were simply found and pasted onto an empty map of Palacký hill. We then collected data to evaluate the potential of each scenario and conducted comparisons.



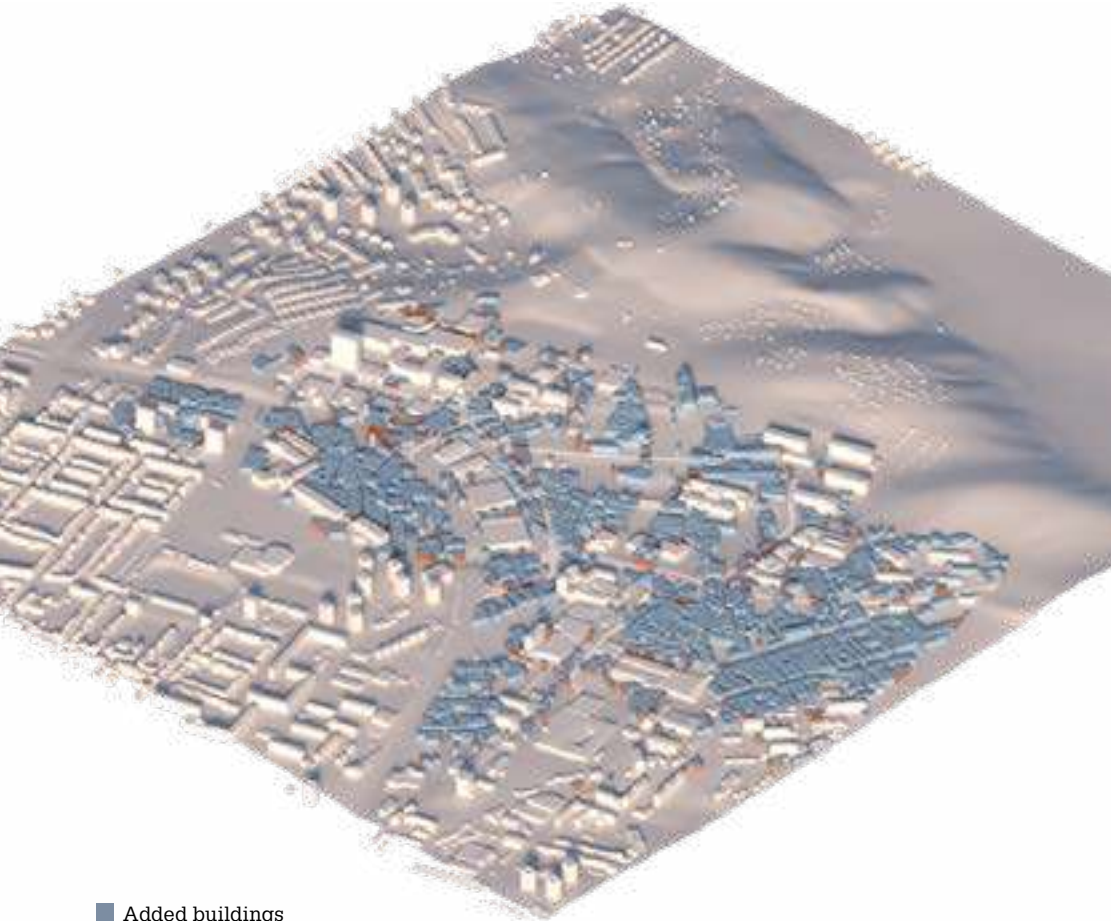
Venice

„The Venice plan shows how we can make a cute masterplan.“

Winy Maas



Footprint area:	348 632 m ²
Built up area:	42,85 %
Gross floor area:	819 818 m ²
Average num. of floors:	2,45
Floor area ratio:	1,01
Population:	504



■ Added buildings
■ Sectioned parts of buildings

We chose to use the urban plan of Venice, known for its narrow streets and tall buildings. We placed it on Palacký hill, where larger buildings and many empty spaces are located to create diversity in the area. The densely built Venice, where many people can be accommodated, will bring variety into the school campus.





South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■



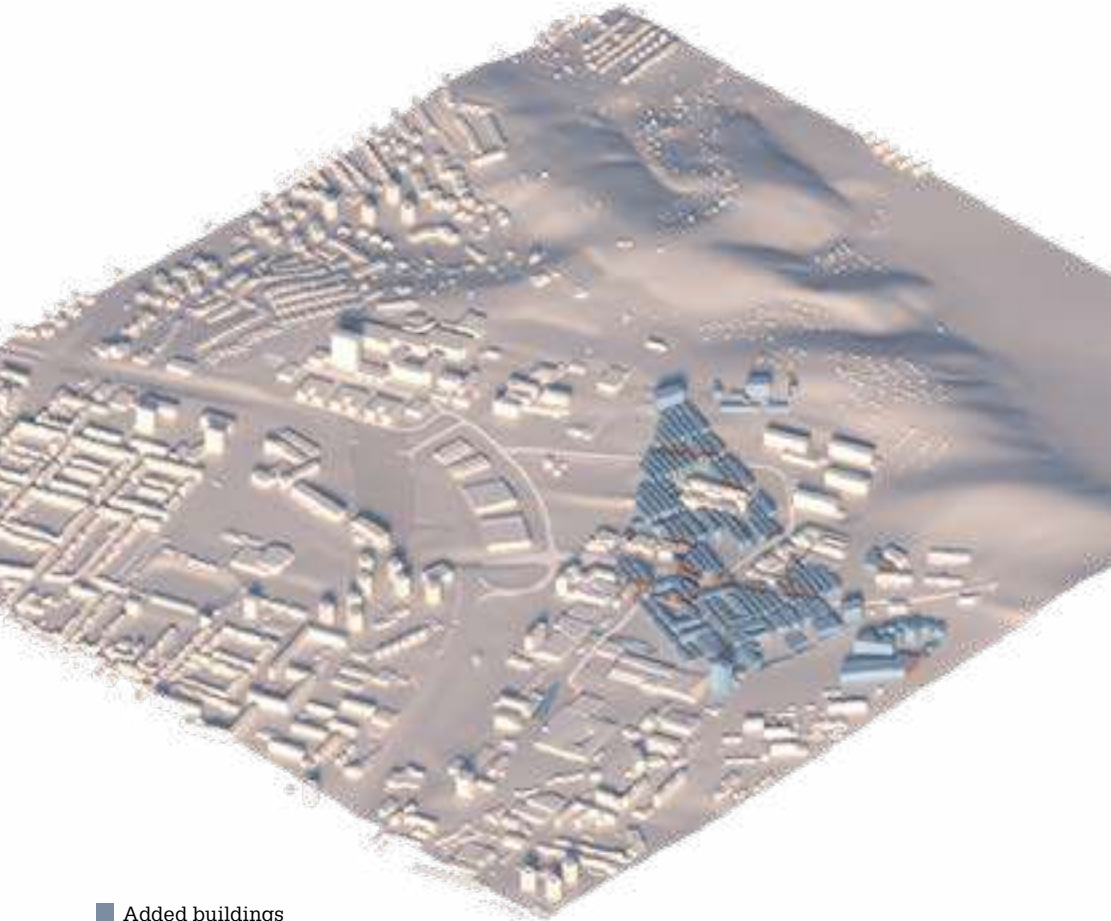
Barceloneta

„The Barceloneta shows a mini grid organization.“

Winy Maas



Footprint area:	104 641 m ²
Built up area:	12,86 %
Gross floor area:	578 485 m ²
Average num. of floors:	5,53
Floor area ratio:	0,71
Population:	15 112



- Added buildings
- Sectioned parts of buildings

Talking about Barceloneta, the beach showcases a mix of traditional and modern architecture, and with that, it's offering a visually appealing landscape. Because of the variety in building styles, it helps in shaping the neighborhood's unique identity. Basically, because of Barceloneta's strategic location and pedestrian friendly design, it is the perfect location to connect with Palacký Hill, considering these are some of the hill's biggest flaws.





South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■

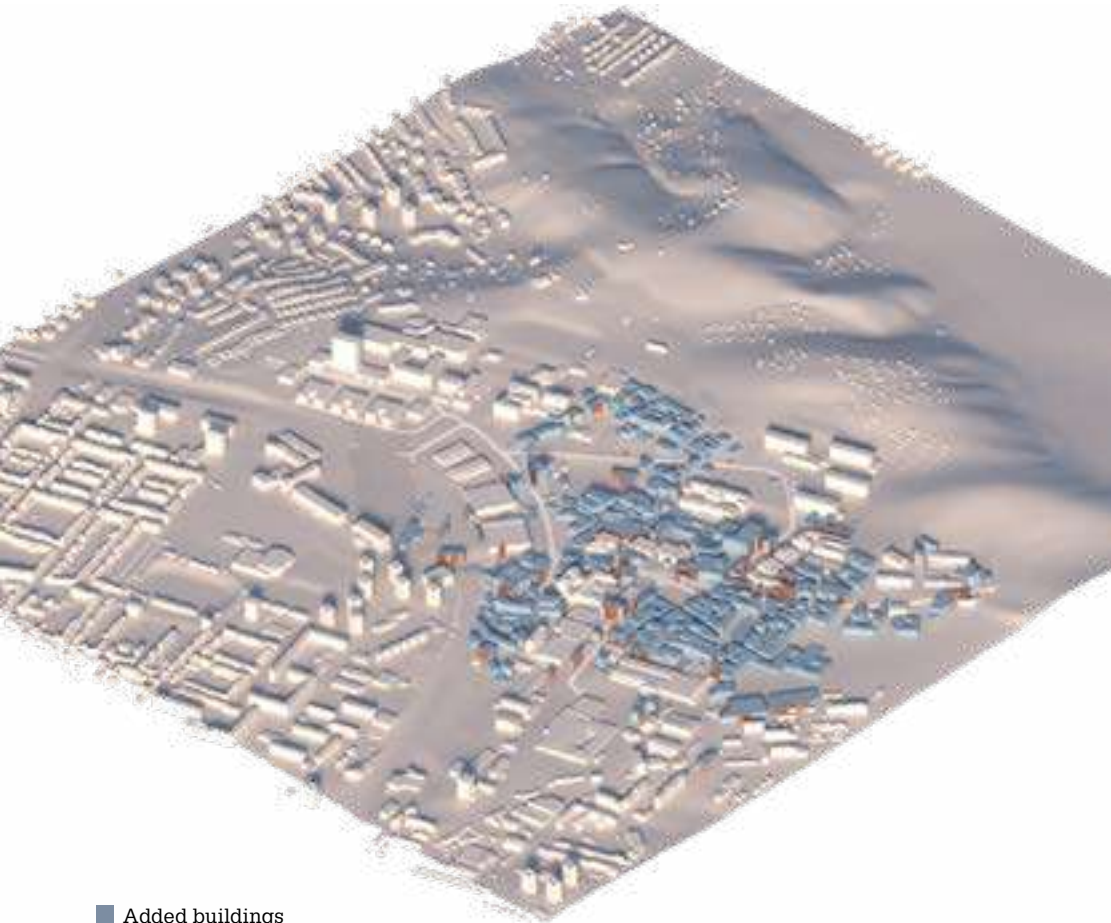
Brno old town

„Old blocks neighbourhood of Brno shows a more cute and contextual direction. Nice.“

Winy Maas



Footprint area:	188 235 m ²
Built up area:	23,14 %
Gross floor area:	828 207 m ²
Average num. of floors:	4,40
Floor area ratio:	1,02
Population:	1359



- Added buildings
- Sectioned parts of buildings

The main intention was to compare the area of the campus with the historical center of a city, where the campus is located. The city center of Brno and Palacky Hill are approximately similar in size, offering an interesting comparison of building density and public spaces. In Brno's city center, plazas are found every two to three blocks, indicating a high density of public spaces. This frequent occurrence of plazas contrasts with the layout of Palacky Hill, providing valuable insights into urban planning and the distribution of public areas.





South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■

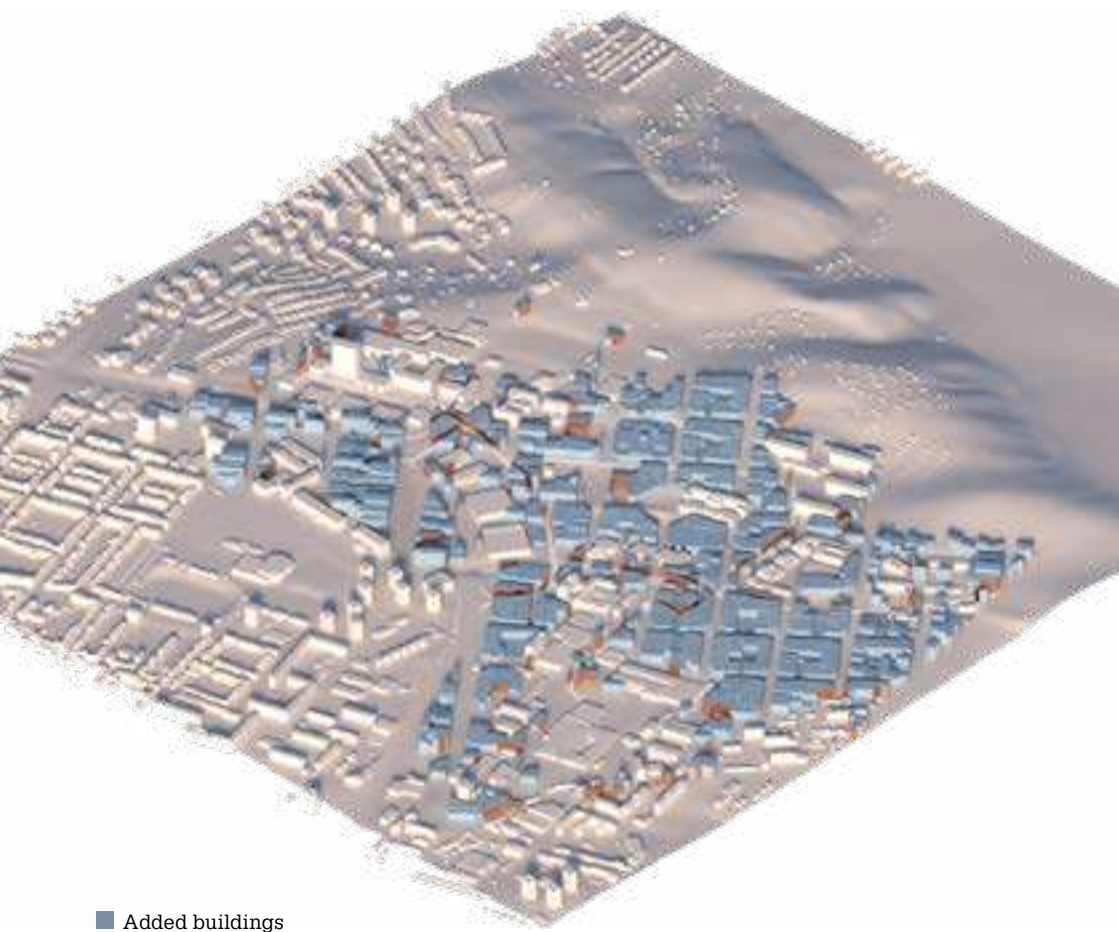
Barcelona

„The Ensanche in Barcelona shows a new grid like organization. Not bad.“

Winy Maas



Footprint area:	114 960 m ²
Built up area:	14,13 %
Gross floor area:	1 654 874 m ²
Average num. of floors:	14,40
Floor area ratio:	2,03
Population:	13 010



■ Added buildings
■ Sectioned parts of buildings

The biggest advantage of the Barcelona city plan is the number of people who can live there. Space is utilized to the maximum - a typical Barcelona block has an average of 6 floors and can accommodate nearly 700 people. The layout of the streets is well-organized and everything is within reach. The utilization of this system on Palacký hill could effectively connect the space that is currently there.





South elevation



West elevation



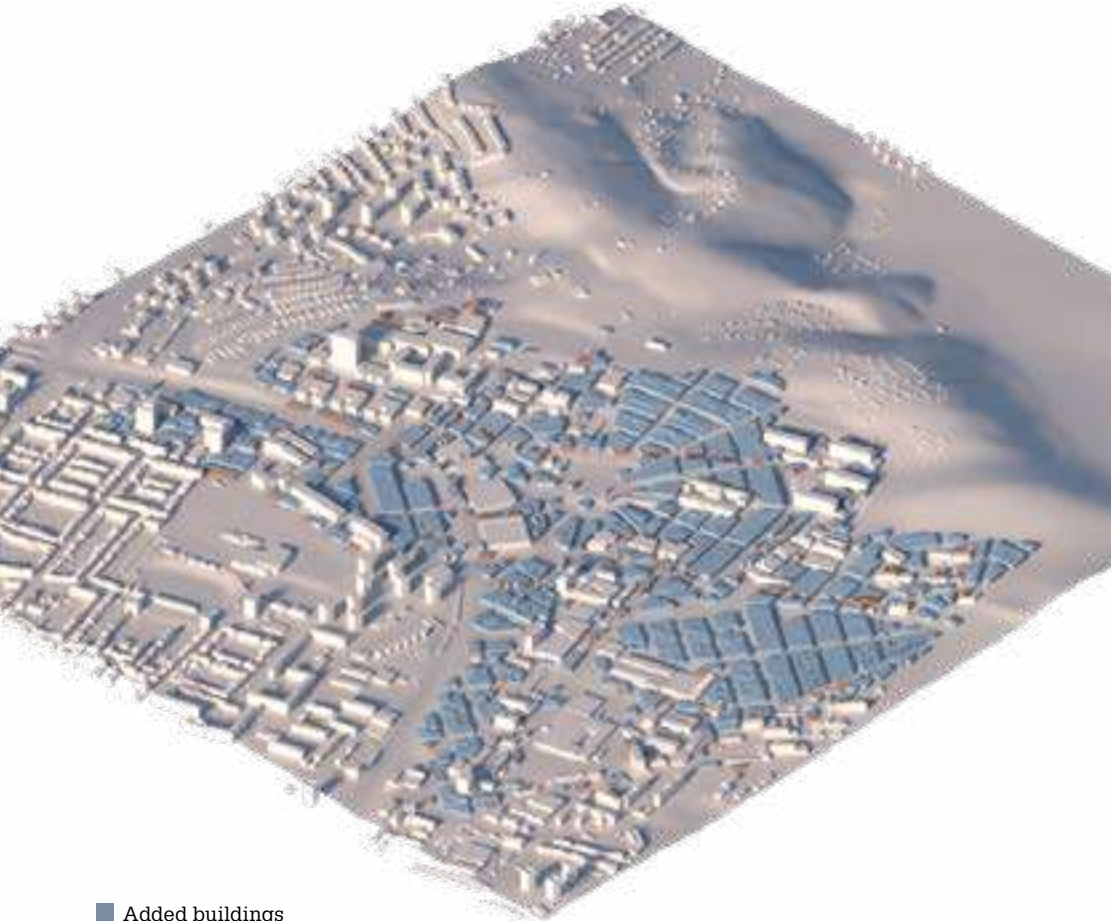
Added buildings ■
Sectioned parts of buildings ■

Colonia Federal

Colonia Federal's circular structure stands out amidst the grid, spinning.



Footprint area:	183 235 m ²
Built up area:	22,56 %
Gross floor area:	932 497 m ²
Average num. of floors:	5,08
Floor area ratio:	1,15
Population:	8791



■ Added buildings
■ Sectioned parts of buildings

Colonia Federal is a neighborhood located in Mexico City, near the International Airport. It is composed by radial streets that create an octagonal shape. In its center, there is a square with a park and public buildings that we located in the center of Palacky hill, as a way to connect all the buildings and amenities. The whole neighborhood mostly consists of small, 2-floor buildings.

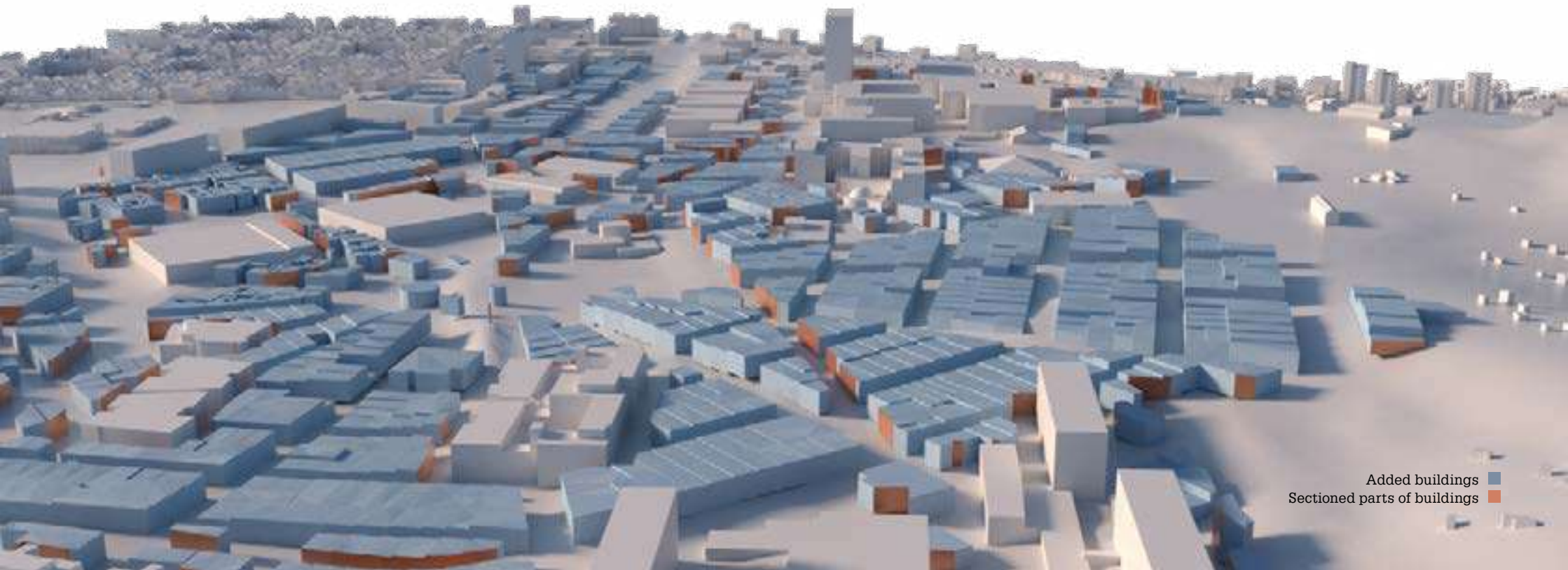




South elevation



West elevation



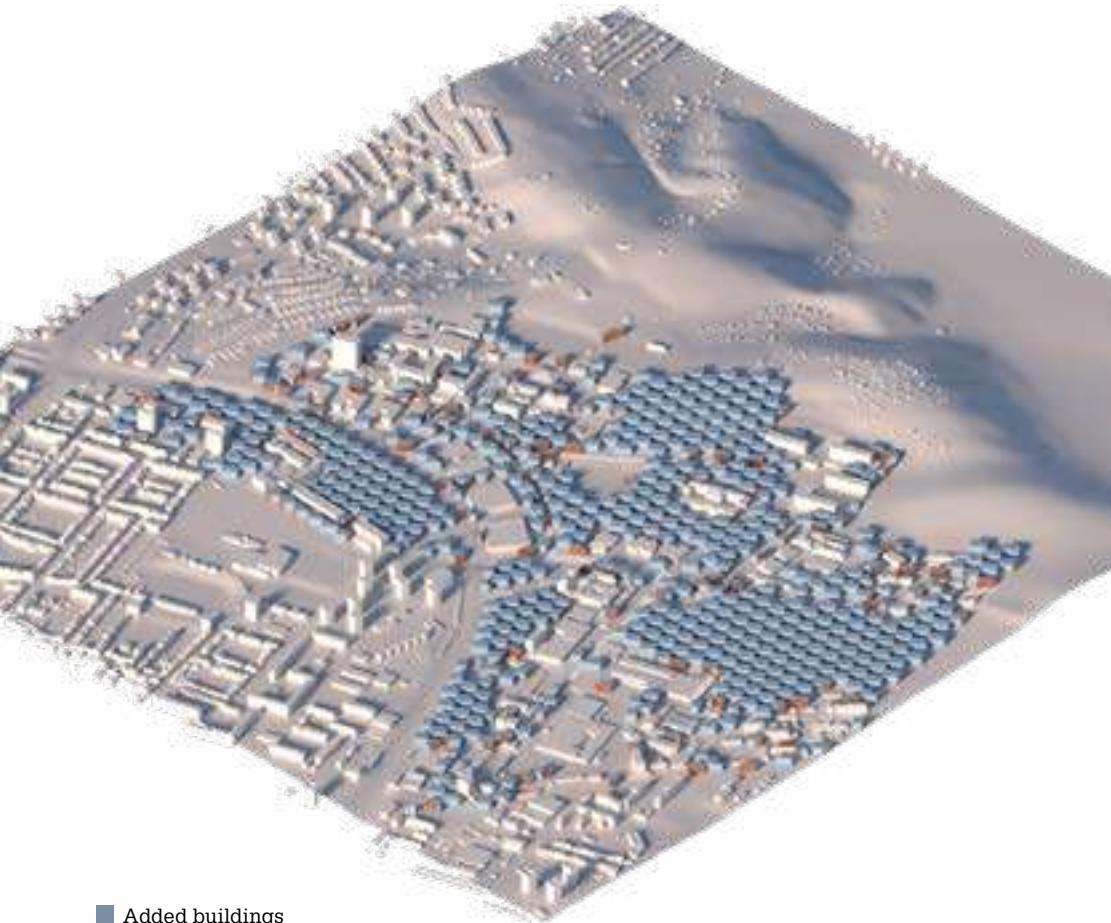
Added buildings ■
Sectioned parts of buildings ■

Grid

The grid scenario shows a totalitarian approach. Madness.



Footprint area:	337995m ²
Built up area:	41,54 %
Gross floor area:	2025217m ²
Average num. of floors:	5,99
Floor area ratio:	2,49
Population:	x



- Added buildings
- Sectioned parts of buildings

With reference to studio OMA's Mangalem 21 Housing Estate project in Tirana⁶, this project fills the area of Palacky Hill with buildings arranged in a checkerboard-like grid. The buildings touch each other at the corners and are interrupted by roads or other already existing buildings. There are passages created through the buildings, so that there are no barriers. The whole structure is passable and the courtyards enclosed by houses are therefore semi-private.





South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■

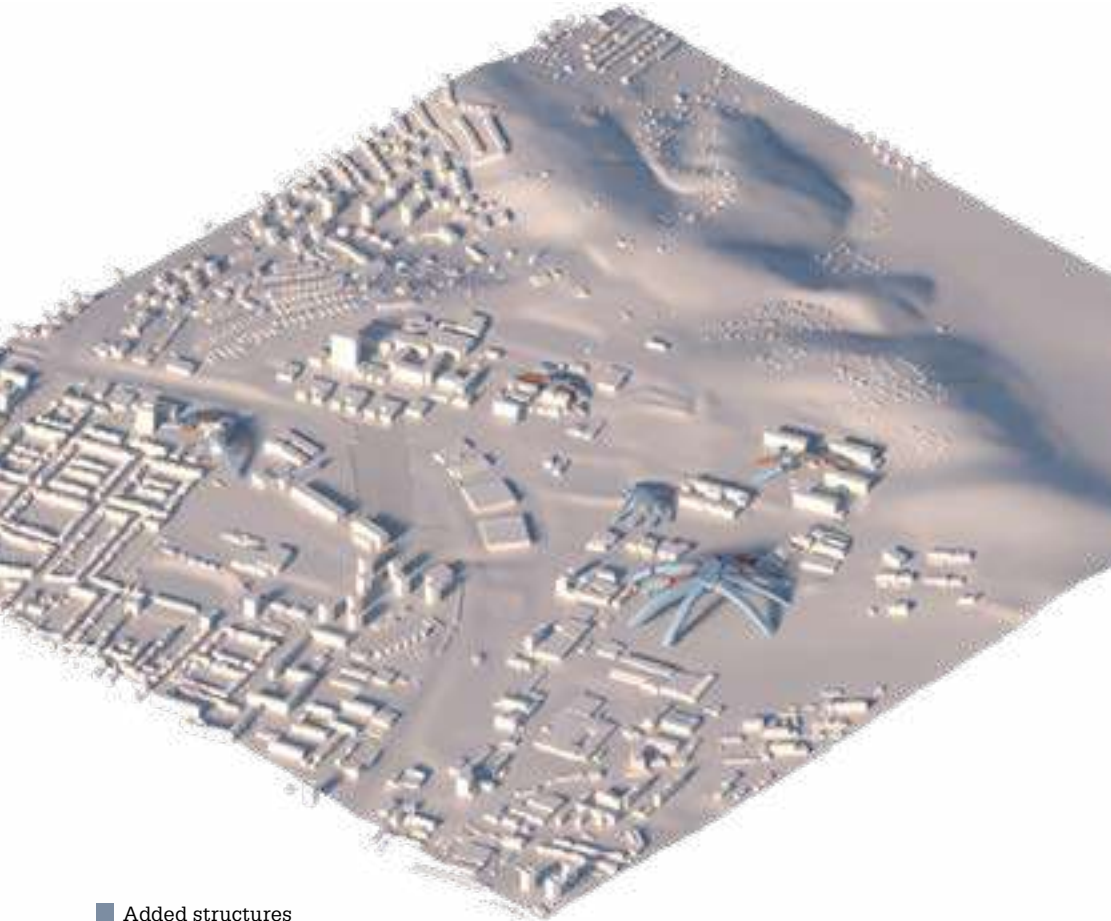
Spider

„The Spiders in the forest. A sensational one. Where the buildings form spiders moving through an extended forest.“

Winy Maas

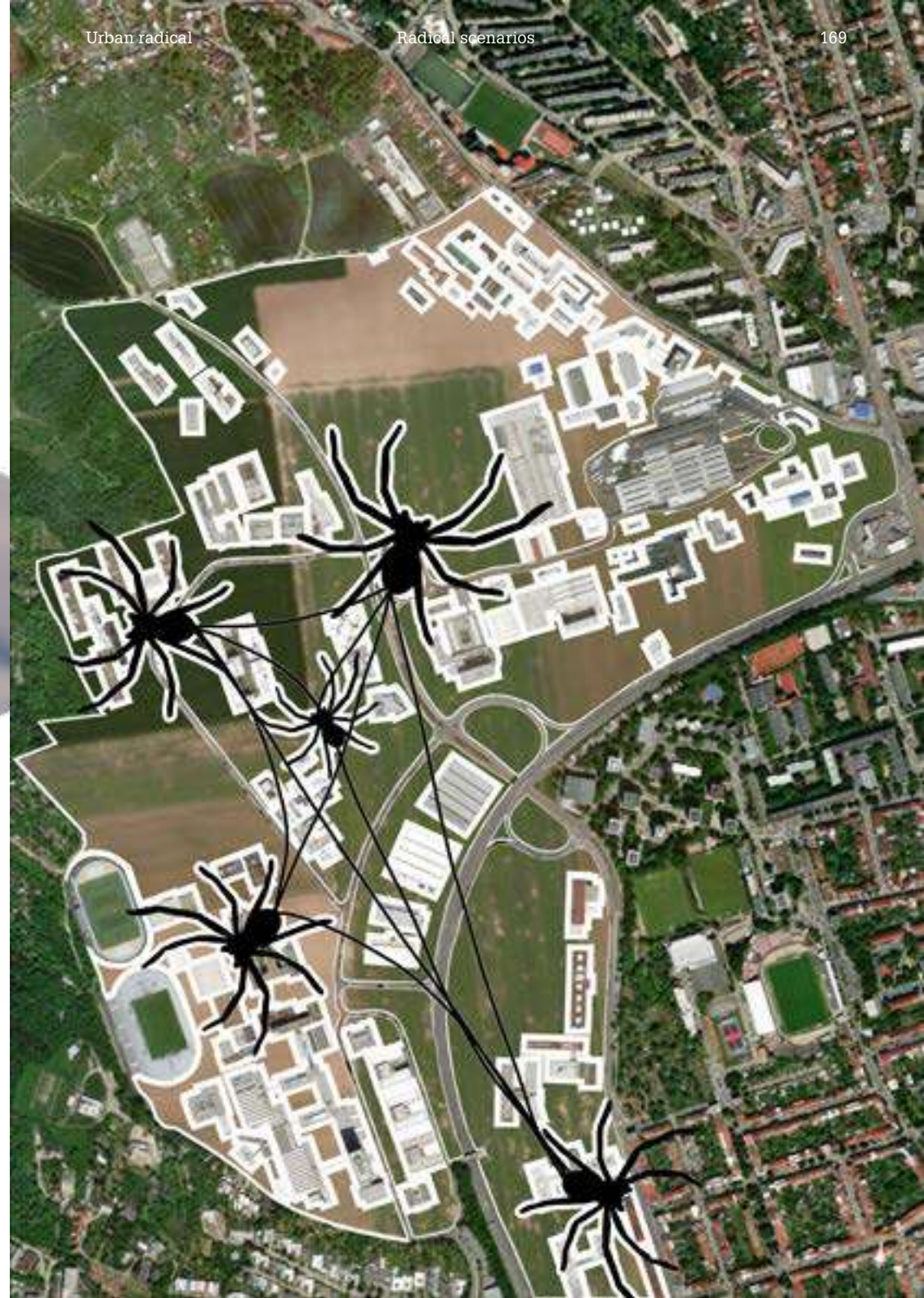


Footprint area:	35 014 m ²
Built up area:	4,30 %
Gross floor area:	127 213 m ²
Average num. of floors:	3,63
Floor area ratio:	0,16
Population:	x



- Added structures
- Sectioned parts of structures

These structures are inspired by the sculptures of Louise Bourgeois. The oversized spider structures are placed at strategic locations on Palacky Hill and the BUT campus. These constructions could accommodate all functions related to transportation between the different areas of Palacky Hill, as well as social spaces for students and the public. Thus, there is no need to create any additional urban compositions under and between the structures, we placed fields, one of the most used typology in the Czech Republic, under the “spiders.”

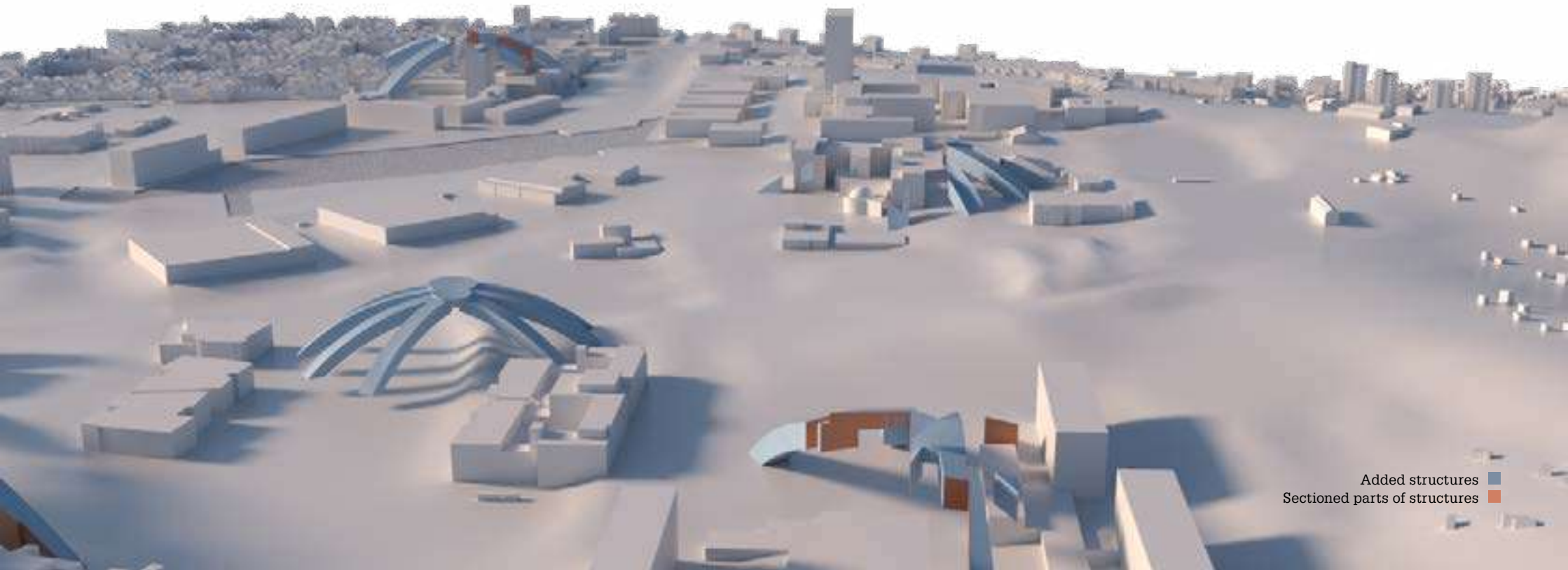




South elevation



West elevation



Added structures ■
Sectioned parts of structures ■



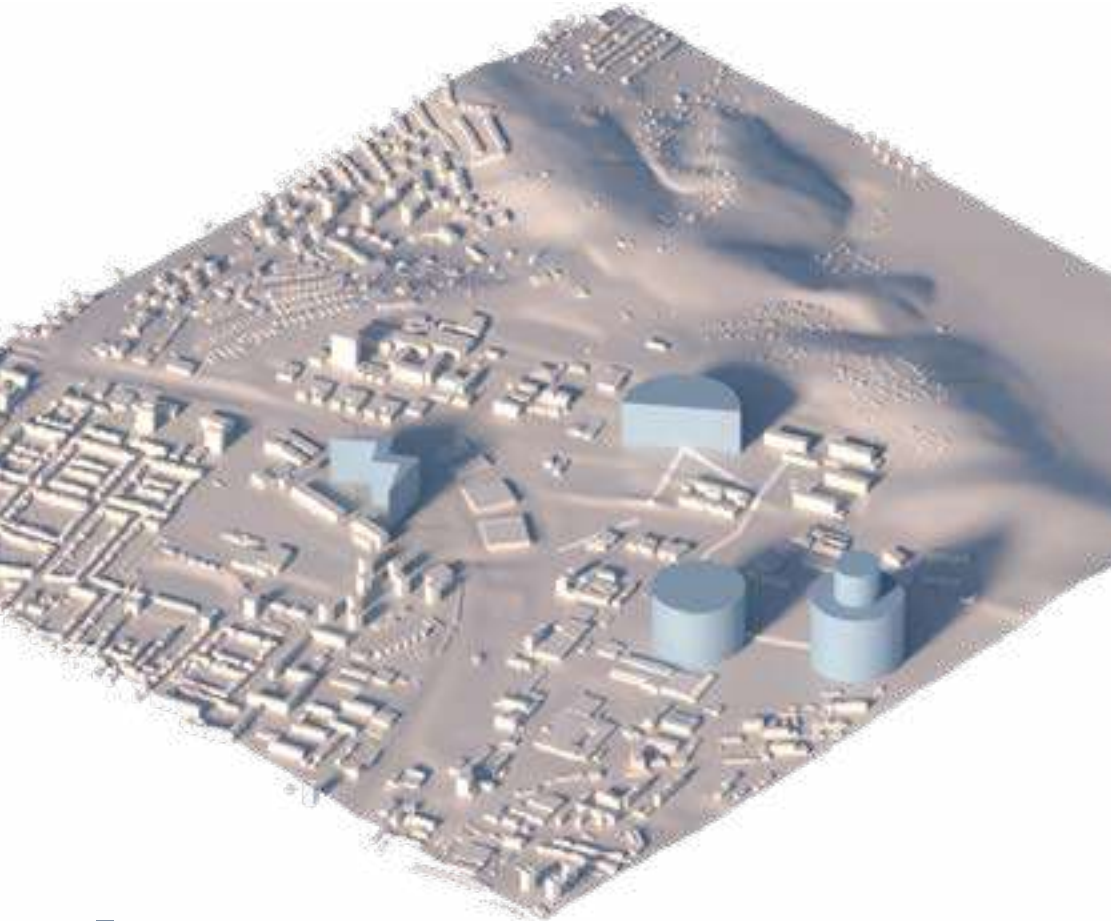
The New plaza

„The New Plaza with a series of objects on top. A very nice one. One of the grandest plazas in the world.“

Winy Maas

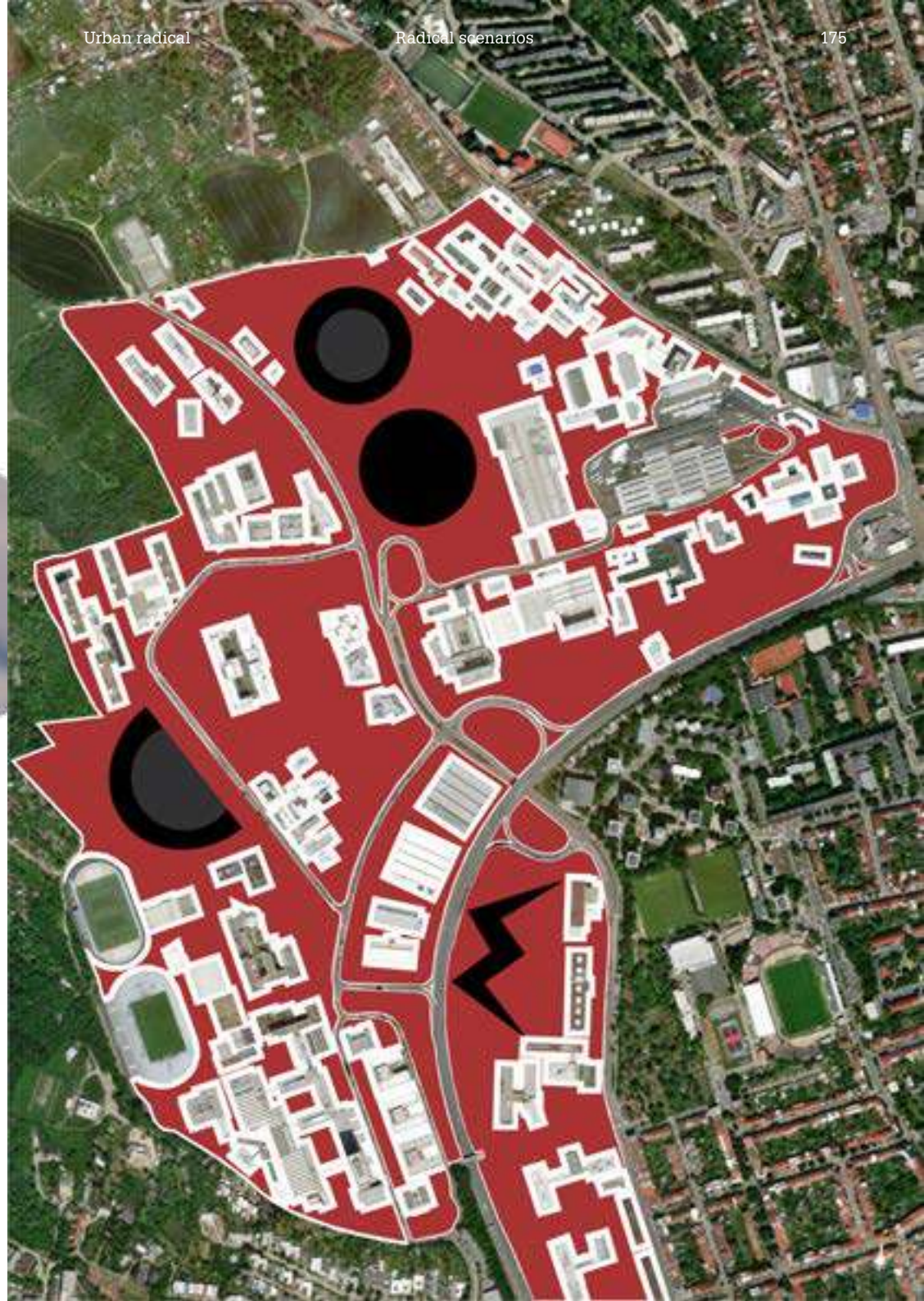


Footprint area:	162 469 m ²
Built up area:	19,97 %
Gross floor area:	3 089 056 m ²
Average num. of floors:	19,01
Floor area ratio:	3,80
Population:	x



■ Added buildings

Leaning into the extensive MVRDV development of the Gagarin Valley and finding similarities in the Technologický Park on Palacký hill, there was free-flowing imagination to create iconic representative buildings that would shape the new future. Where the unbuilt space is saved and nurtured while new buildings fill up special spaces to enrich the urban fabric. Thereby becoming the way indicator of the city and landscape highlights.

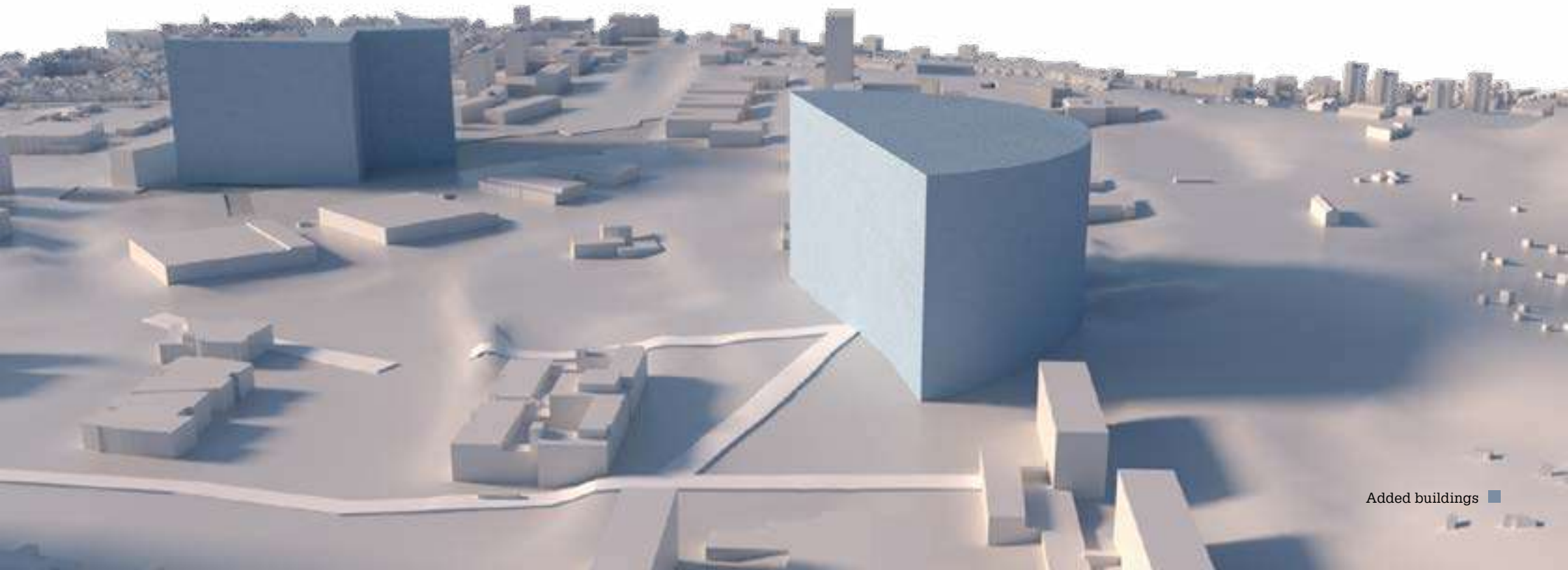




South elevation



West elevation



Added buildings



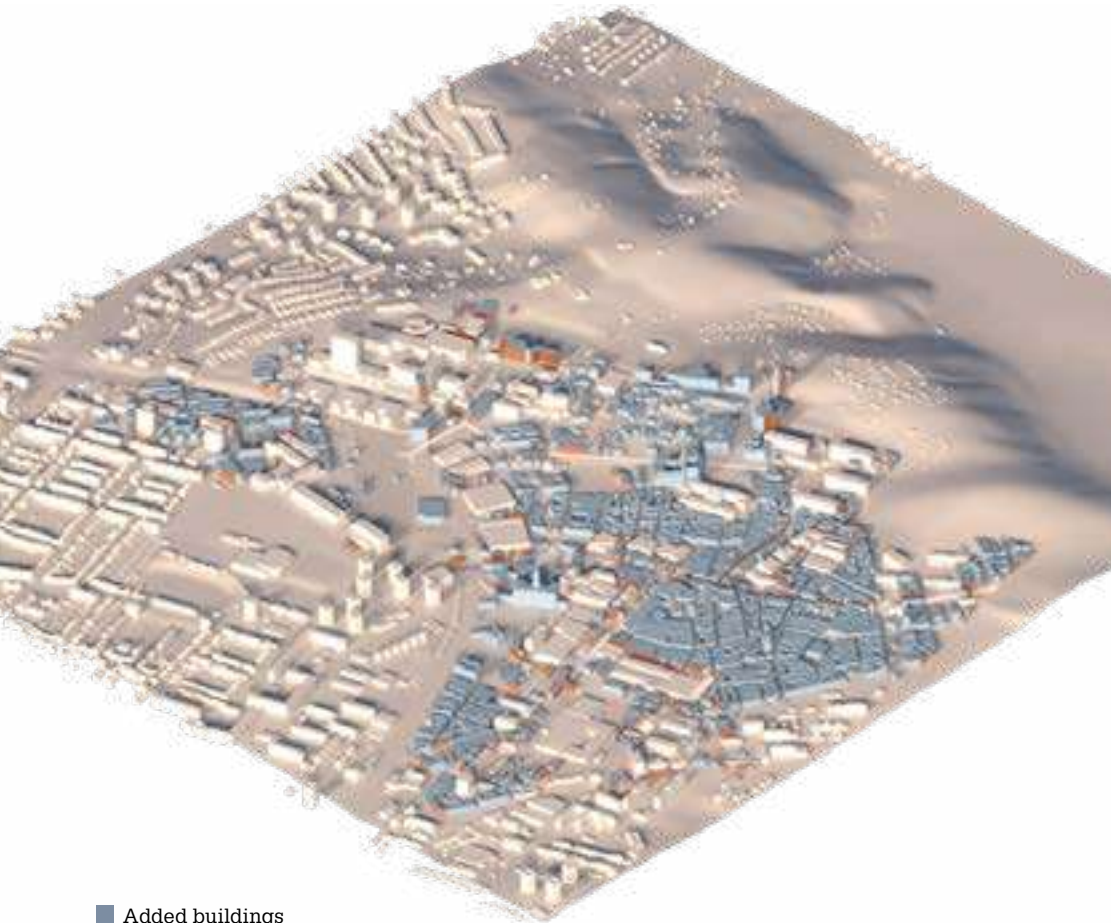
Strøget

„The Copenhagen plan, that shows that we can add a Tivoli park on the hill that attracts people. Interesting.“

Winy Maas



Footprint area:	483 758 m ²
Built up area:	59,46 %
Gross floor area:	1 509 255 m ²
Average num. of floors:	3,12
Floor area ratio:	1,86
Population:	7725



- Added buildings
- Sectioned parts of buildings

When formulating the radical plan, the primary focus was on strategically positioning the Tivoli amusement park. After careful deliberation, it was decided to place the park in close proximity to the sports fields. This placement serves a dual purpose: expanding the recreational area and drawing visitors to the existing BUT campus. Furthermore, this layout facilitates the creation of a boulevard running from the Management faculty to the dormitories. Ultimately, leveraging Copenhagen's unique characteristics offers an effective means of densifying the city and establishing a cohesive urban environment complete with essential public amenities.





South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■

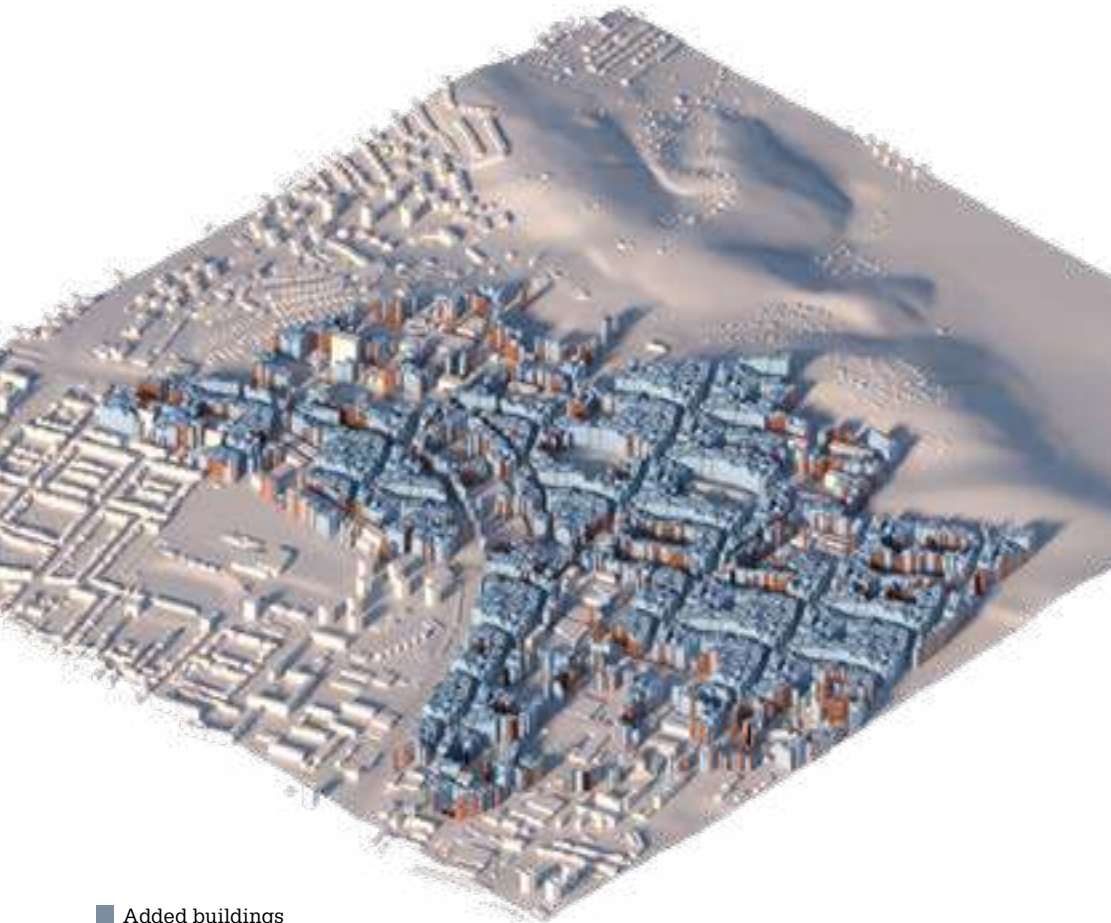
Kowloon

„Kowloon 2.0 shows a dense rock of program. Probably not wished by Brno.“

Winy Maas



Footprint area:	321 079 m ²
Built up area:	39,46 %
Gross floor area:	6 528 973 m ²
Average num. of floors:	20,33
Floor area ratio:	8,02
Population:	35 011



■ Added buildings
■ Sectioned parts of buildings

The main concept behind the Kowloon walled city on Palacký hill is trying to find out how many of these, 'walled cities' we need to add to the hill. Kowloons density was about 0,6m² per person. If we build a structure with the density of Kowloon, we could fit the entire population of Brno on Palacký hill. 12 Kowloons would fit the whole Brno and a bit, while only taking a quarter of the Brno area.



Kowloon model plan³



South elevation



West elevation

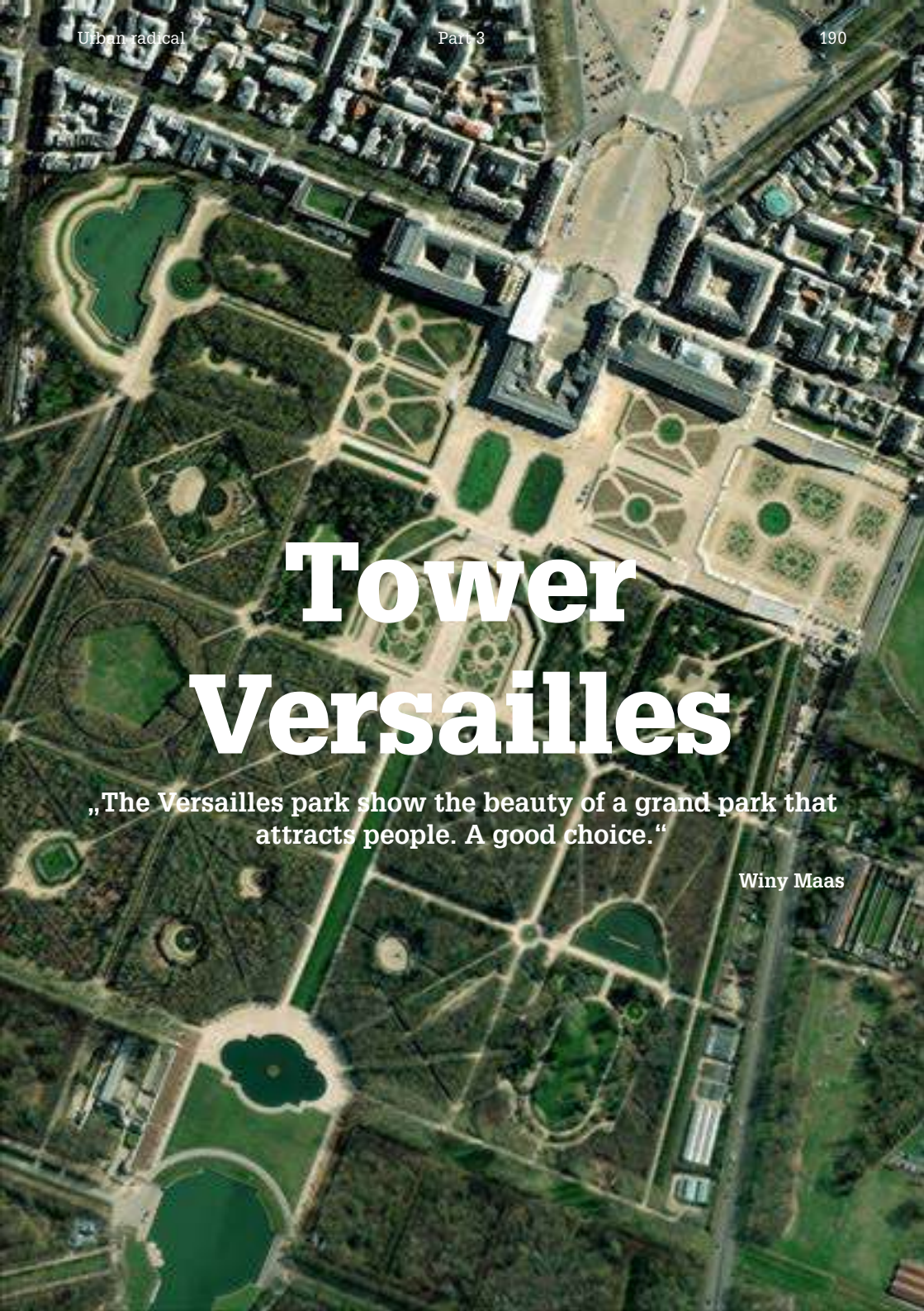


Added buildings ■
Sectioned parts of buildings ■

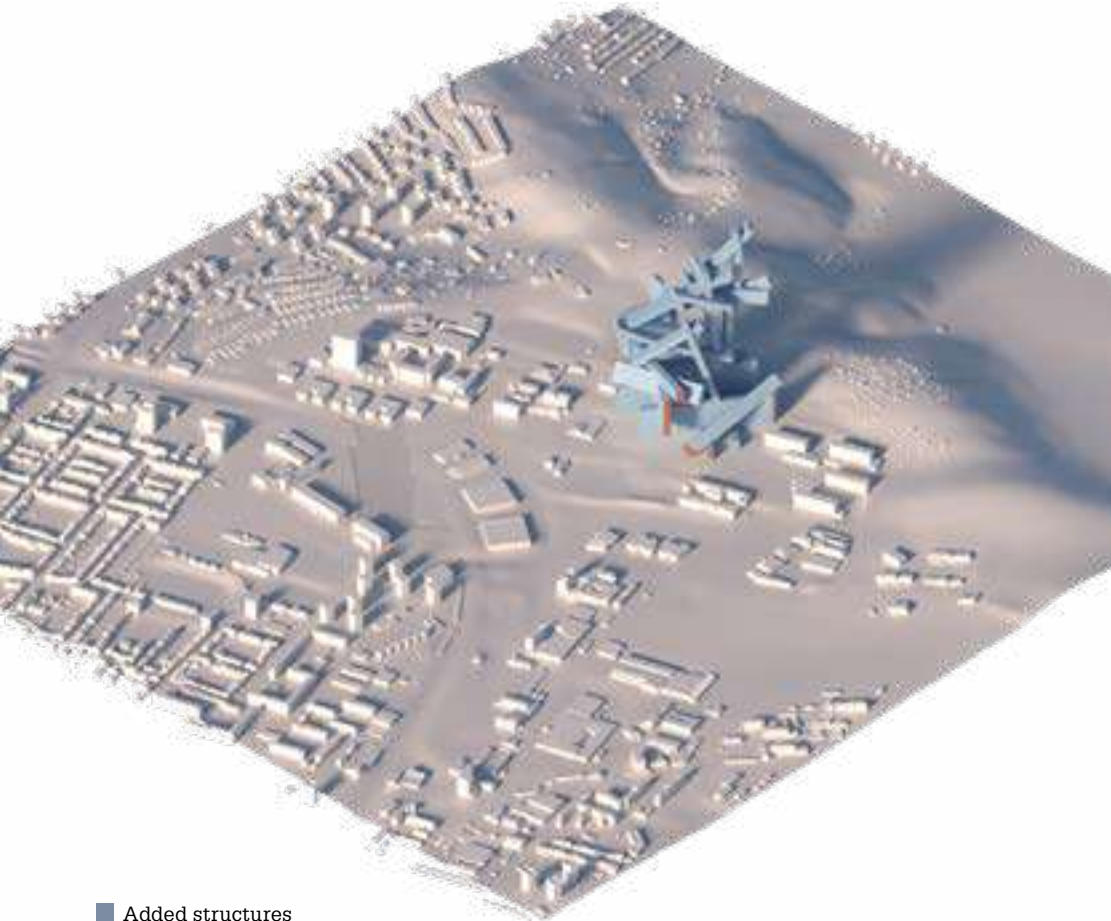
Tower Versailles

„The Versailles park show the beauty of a grand park that attracts people. A good choice.“

Winy Maas



Footprint area:	574m ²
Built up area:	0,07%
Gross floor area:	817954m ²
Average num. of floors:	1425
Floor area ratio:	1,01
Population:	2665



- Added structures
- Sectioned parts of structure

The urban design proposal introduces an innovative tower superstructure that combines modern vertical architecture with the beauty and elegance of the gardens at Versailles. This approach brings a new dimension to urban planning, maximizing the use of vertical space while integrating green areas into high-rise buildings.

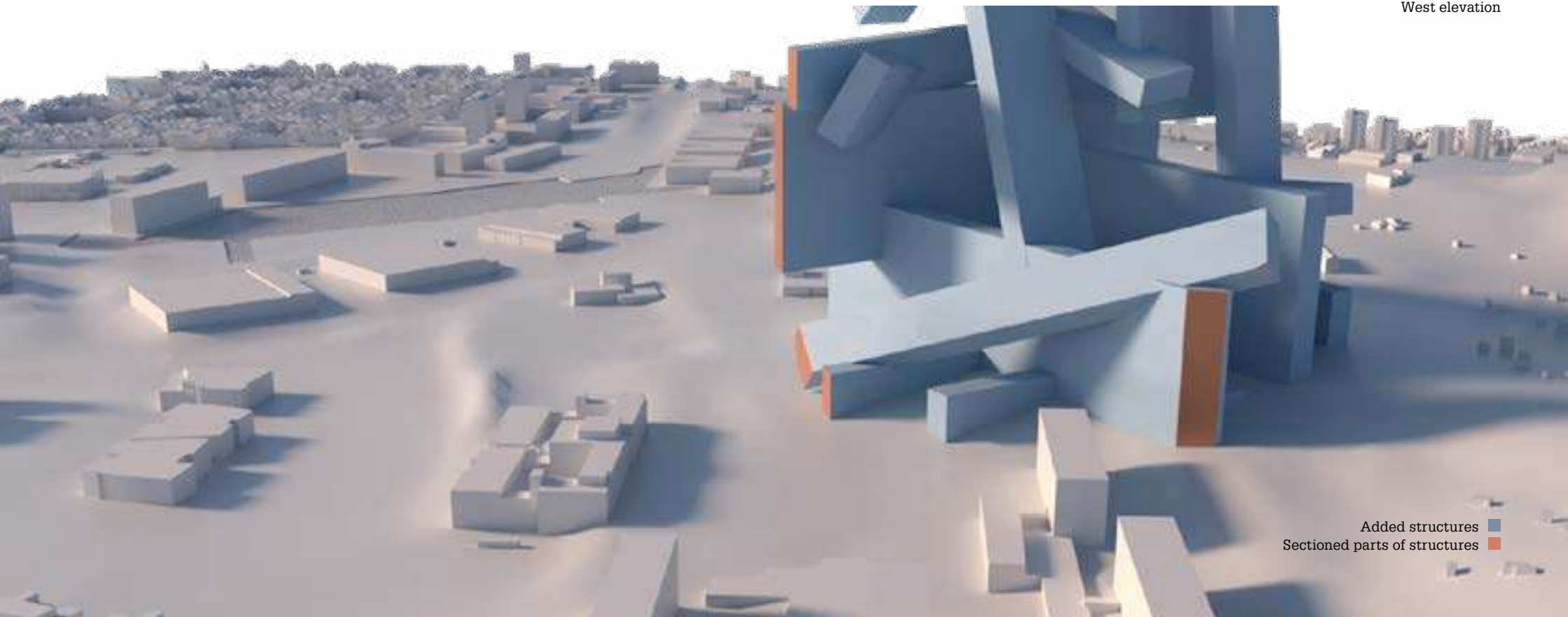




South elevation



West elevation



Added structures ■
Sectioned parts of structures ■

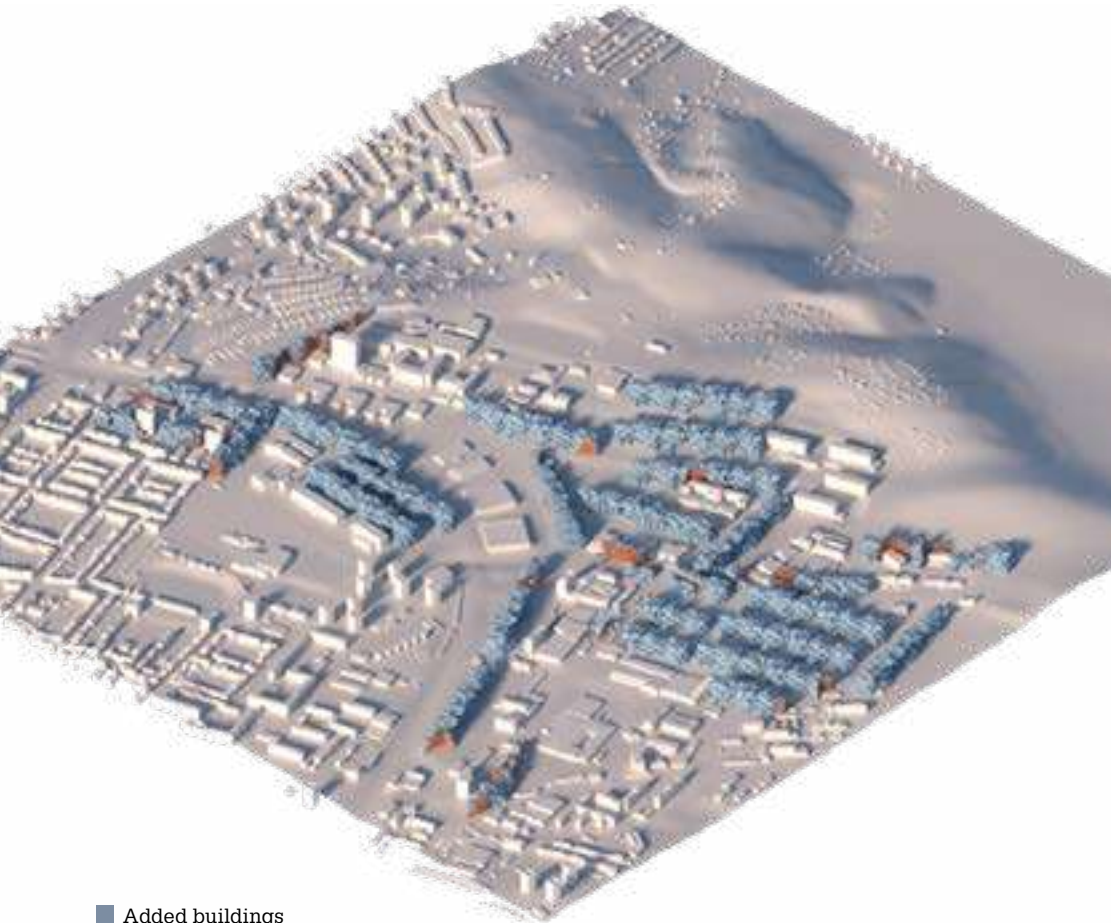
Habitat

„The Super Habitat shows the inhabitation through a vertical village like cloud. Rough and beautiful.“

Winy Maas



Footprint area:	308 858 m ²
Built up area:	37,96 %
Gross floor area:	2 162 006 m ²
Average num. of floors:	7
Floor area ratio:	2,66
Population:	26 726



- Added buildings
- Sectioned parts of buildings

The urban design proposal „Habitat“ presents a revolutionary approach to urban planning, reshaping traditional concepts of housing and public spaces. Inspired by the iconic project Habitat 67⁷, designed by architect Moshe Safdie for Expo 67 in Montreal, this proposal aims to create residential environments that combine the advantages of dense urban development with the quality of life typically found in single-family homes. By combining dense urban development with high quality of life, ecological sustainability, and social inclusion, this proposal offers a model that could inspire future urban projects not only in Brno but also in other cities around the world.

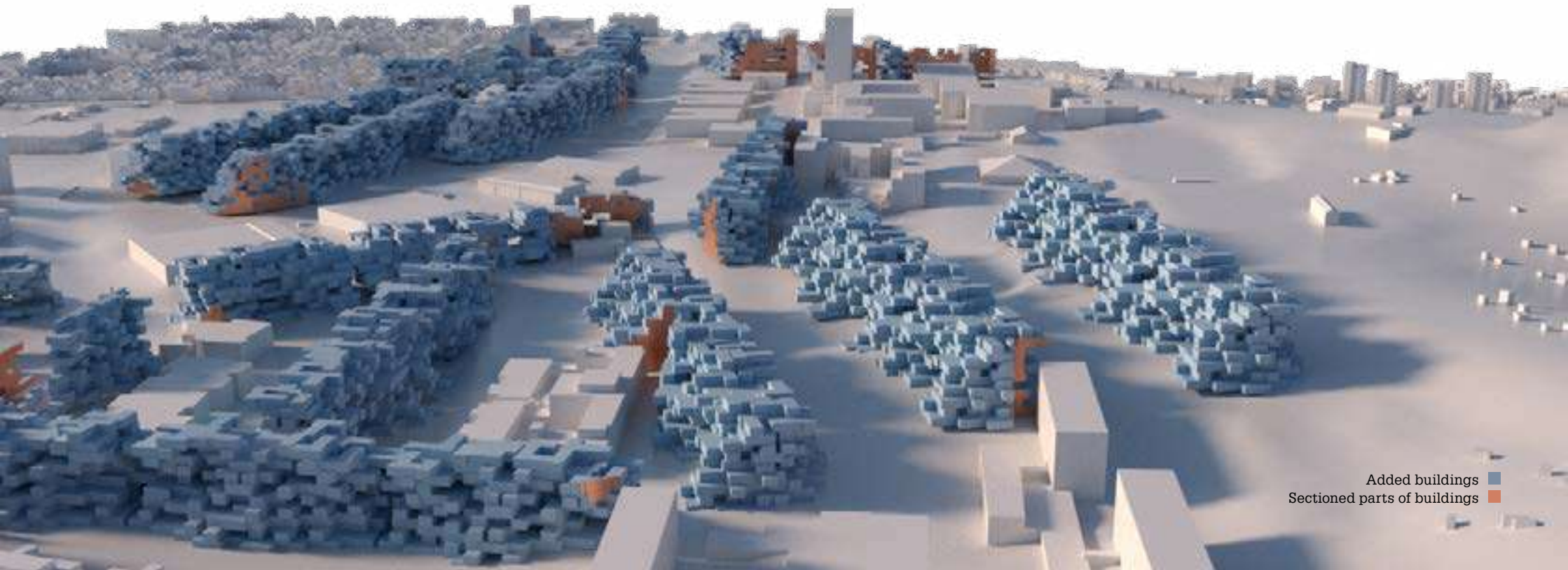




South elevation



West elevation



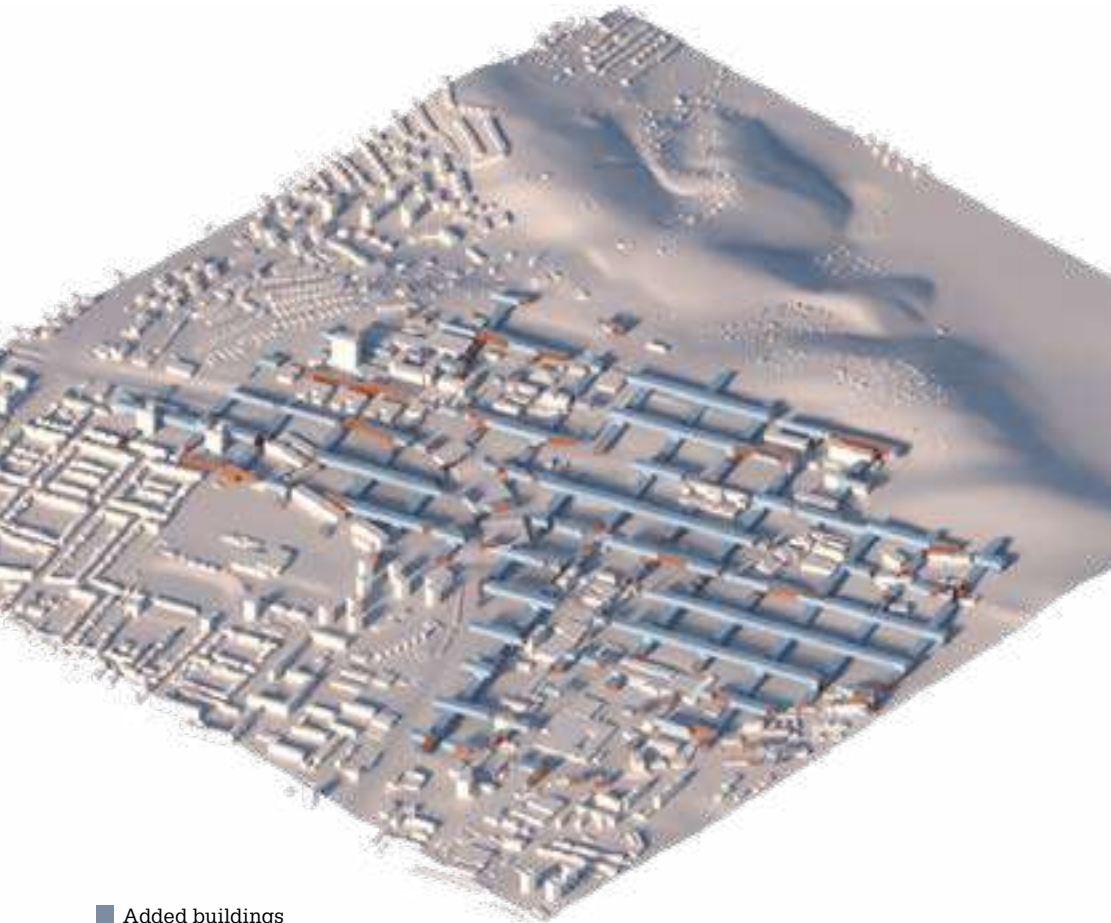
Added buildings ■
Sectioned parts of buildings ■

Pleskot's Ostrava

The bars of Ostrava.



Footprint area:	552 100m ²
Built up area:	67,86 %
Gross floor area:	2 711 100m ²
Average num. of floors:	4,91
Floor area ratio:	3,33
Population:	17 638



- Added buildings
- Sectioned parts of buildings

The urban design proposal „PLESKOT“ introduces an innovative concept of a superstructure inspired by the architectural principles of Josef Pleskot and the aesthetic grandeur of the gardens at Versailles. This proposal combines robust, modern architecture with extensive green areas, creating a harmonious space that blends technological progress with natural beauty.





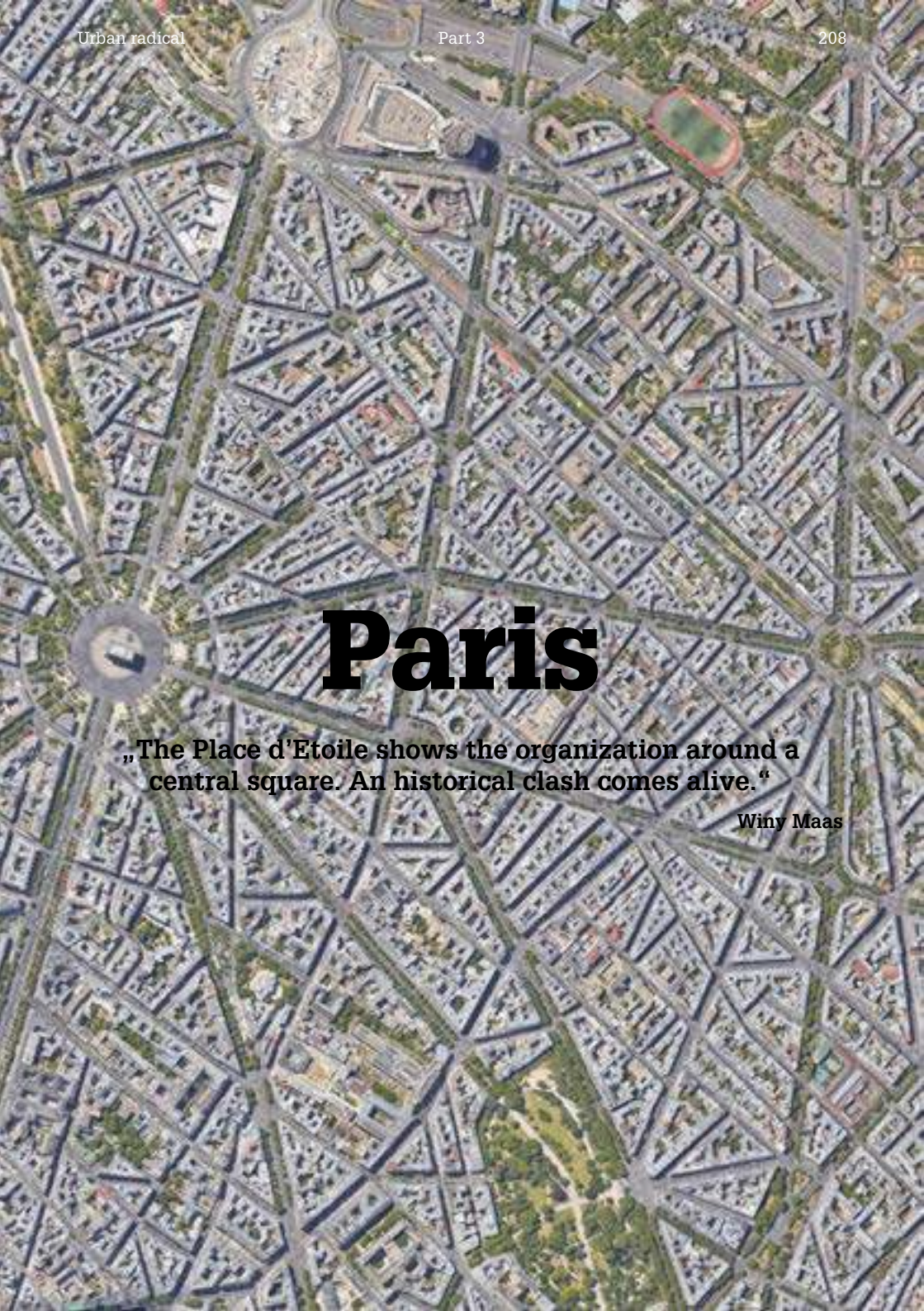
South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■



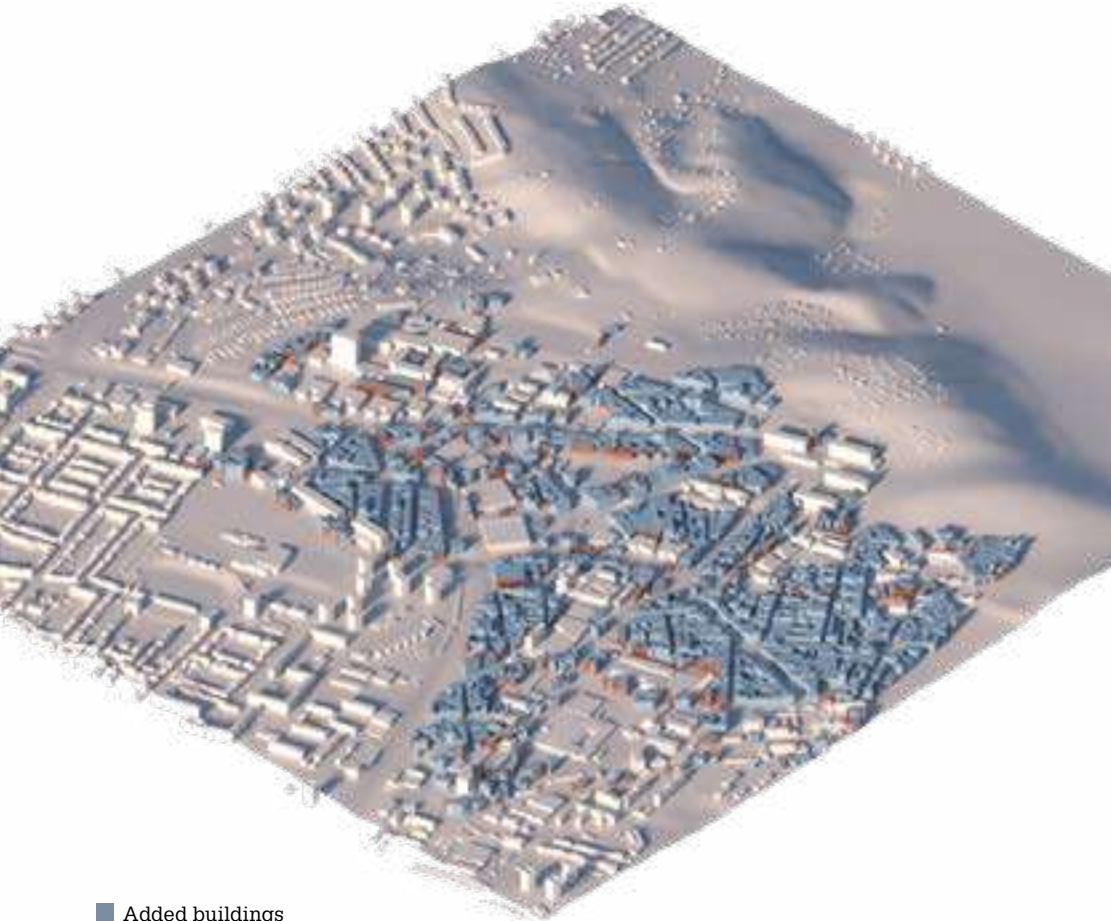
Paris

„The Place d'Etoile shows the organization around a central square. An historical clash comes alive.“

Winy Maas



Footprint area:	199 674 m ²
Built up area:	40,16 %
Gross floor area:	4 665 107 m ²
Average num. of floors:	14,28
Floor area ratio:	5,73
Population:	22 905



- Added buildings
- Sectioned parts of buildings

Our project focuses on La Place de l'Etoile including the Arc de Triomphe and its surrounding. The city has a radial plan and a network of piazzas. In Palacky hill there are a lot of places that have the potential to become vibrant piazzas. The campus buildings are also disconnected from each other, so there is a need for connection between different subcenters of the campus. In Paris, they connected these small piazzas with large boulevards hosting buildings with different functi-





South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■

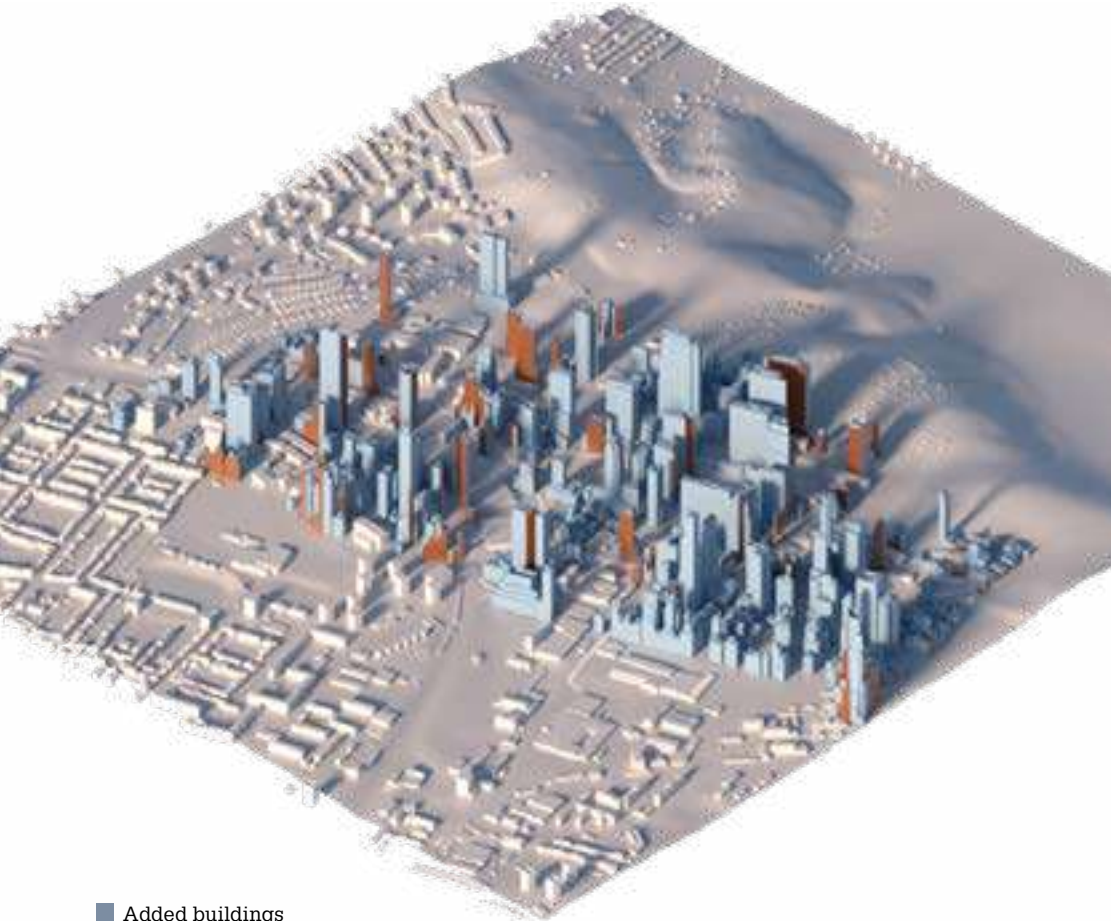
Manhattan

„The Manhattan blocks show a true new city on top of the hill. Good to compare as we know this part of New York so well.“

Winy Maas



Footprint area:	326 741 m ²
Built up area:	40,16 %
Gross floor area:	4 665 107 m ²
Average num. of floors:	14,28
Floor area ratio:	5,73
Population:	22 905



- Added buildings
- Sectioned parts of buildings

The reason why we chose Manhattan was because of an interesting structure of the main avenues that caught our eye. We wanted this structure to connect with the base of Palacký hill. Choosing the area that had the most suitable network of streets helped us to link the new to the old. We tried to rotate the map so it fluently follows up with the existing streets of Palacký hill and connects the main points.

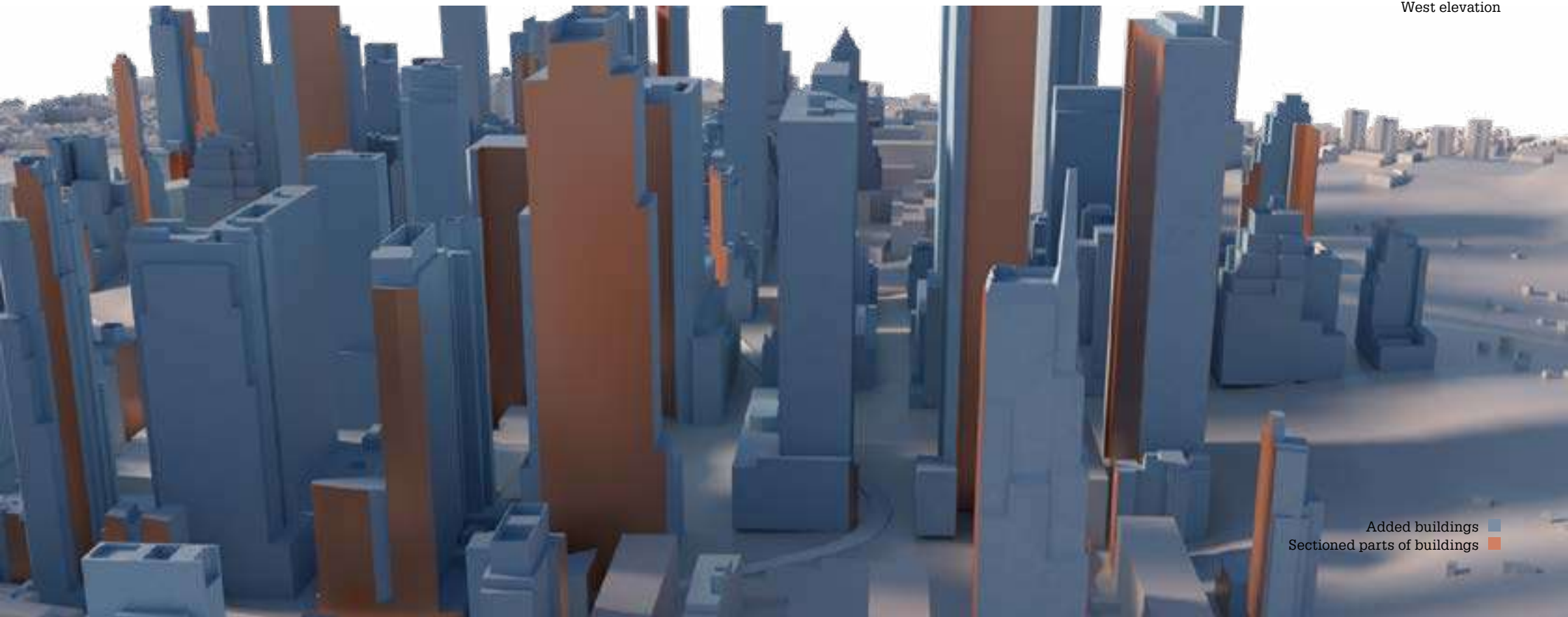




South elevation



West elevation



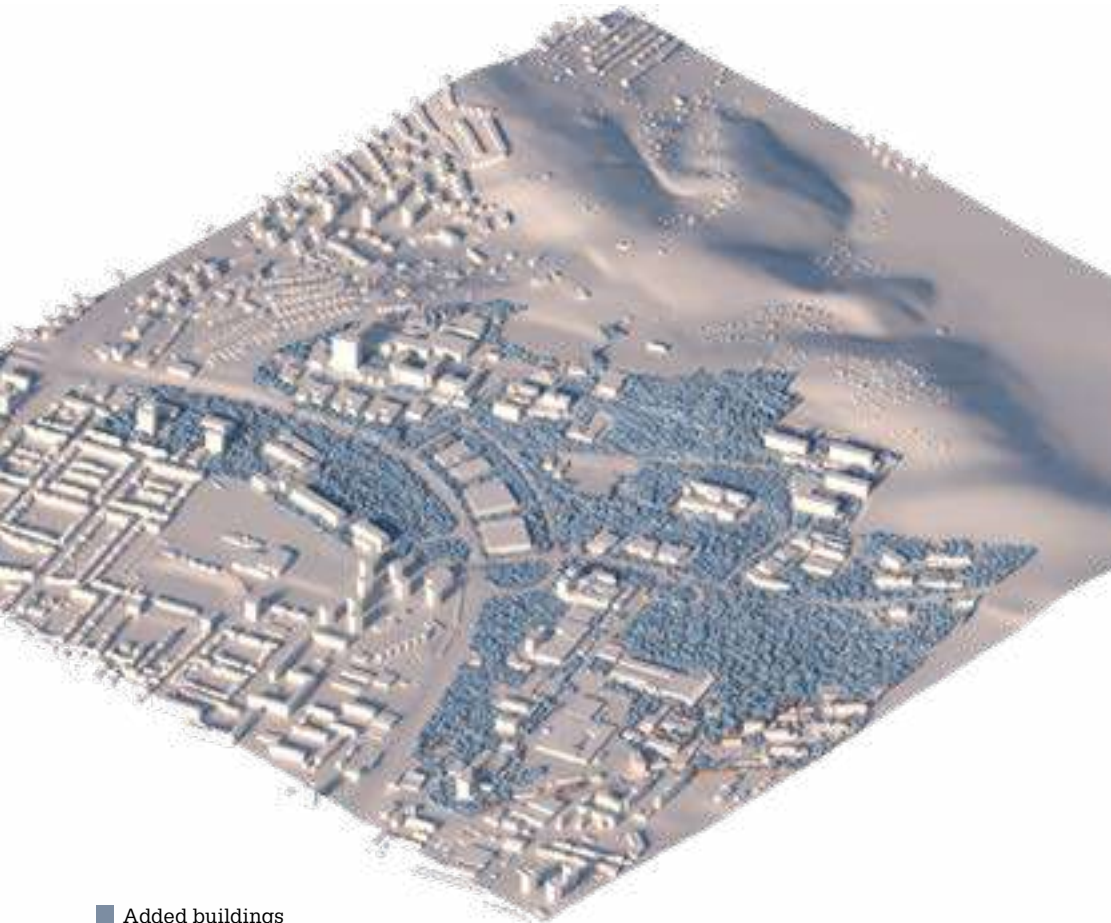
Added buildings ■
Sectioned parts of buildings ■

Favelas

A free growing structure of Favelas. Fungi colony.



Footprint area:	672 711 m ²
Built up area:	82,68 %
Gross floor area:	1 595 983 m ²
Average num. of floors:	2,37
Floor area ratio:	1,96
Population:	83 799



- Added buildings
- Sectioned parts of buildings

The choice of studying favelas came from the organic and chaotic urban structure. We are analyzing one of the largest favelas in Brazil – Rocinha, part of Rio de Janeiro. Because of its poverty and extreme density, the implementation creates a conflict. The Palacký hill faculty buildings are organized with big distances between with focus on car utilities contradicting the highly dense favelas with a few main roads. The metaphor of parasites illustrates well the form which we are

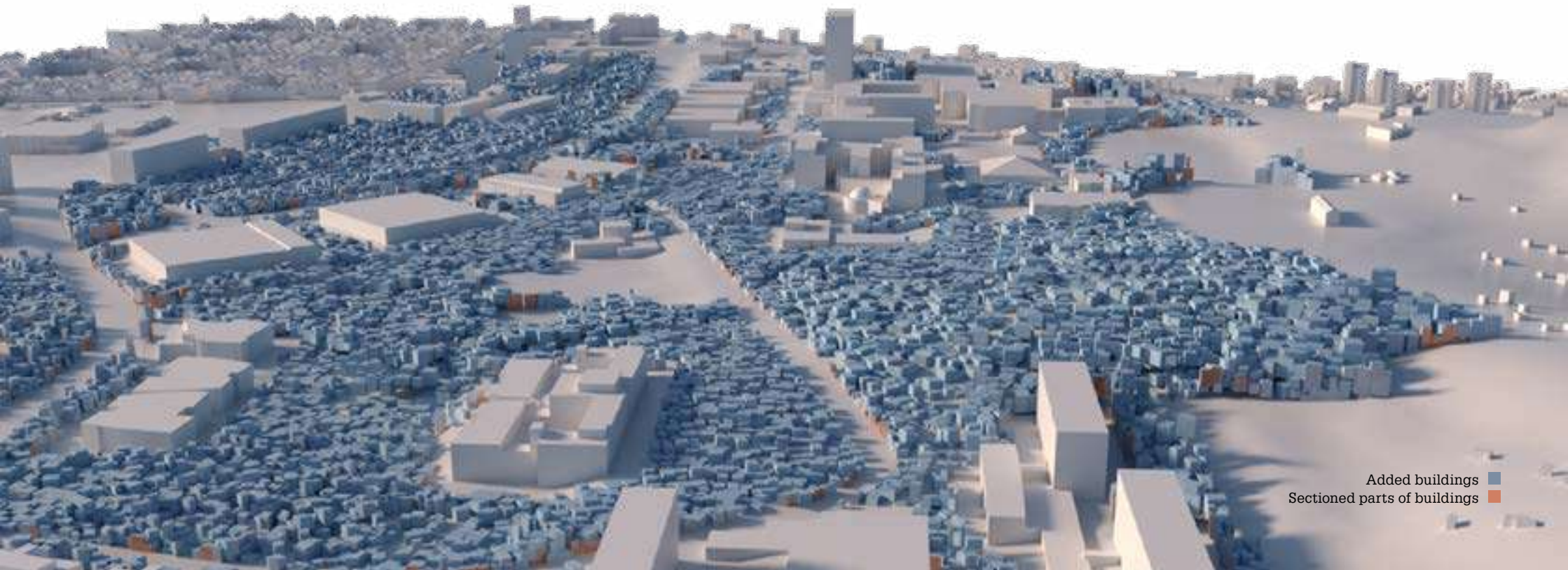




South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■



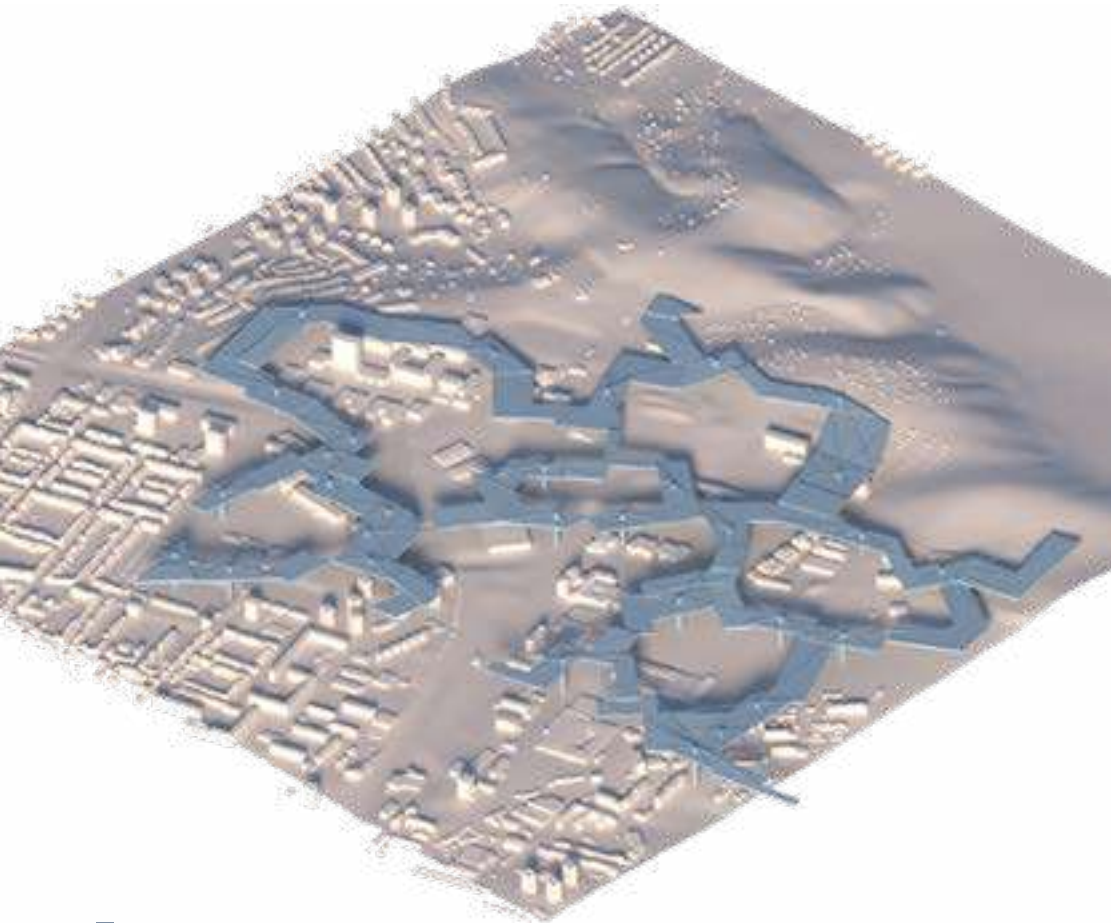
New Babylon

„New Babylon explores the potential of a park that is covered and bridged by cloudlike program. As a new monument. Beautiful.“

Winy Maas



Footprint area:	621 480 m ²
Built up area:	76,39 %
Gross floor area:	621 480 m ²
Average num. of floors:	1
Floor area ratio:	0,76
Population:	x



■ Added structures

We aimed to construct an elevated structure that would create new connections between the buildings of Palacký hill and a place for accommodation inaccessible by car. To create this scenario, we used the concept of New Babylon⁵, an anti-capitalist city designed as a future potentiality by visual artist Constant Nieuwenhuys. New Babylon was a series of linked transformable structures, some of which were the size of a small city. Perched above ground, the megastructures would leave the Palacký hill below.

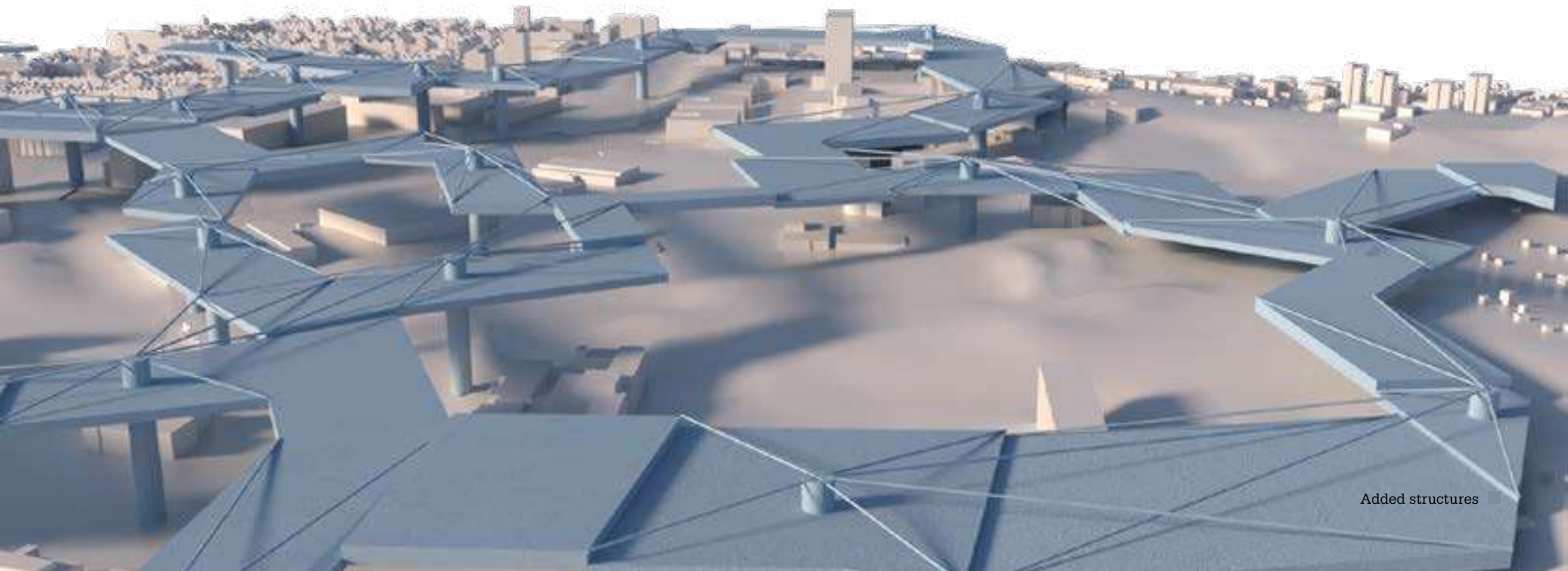




South elevation



West elevation



Added structures

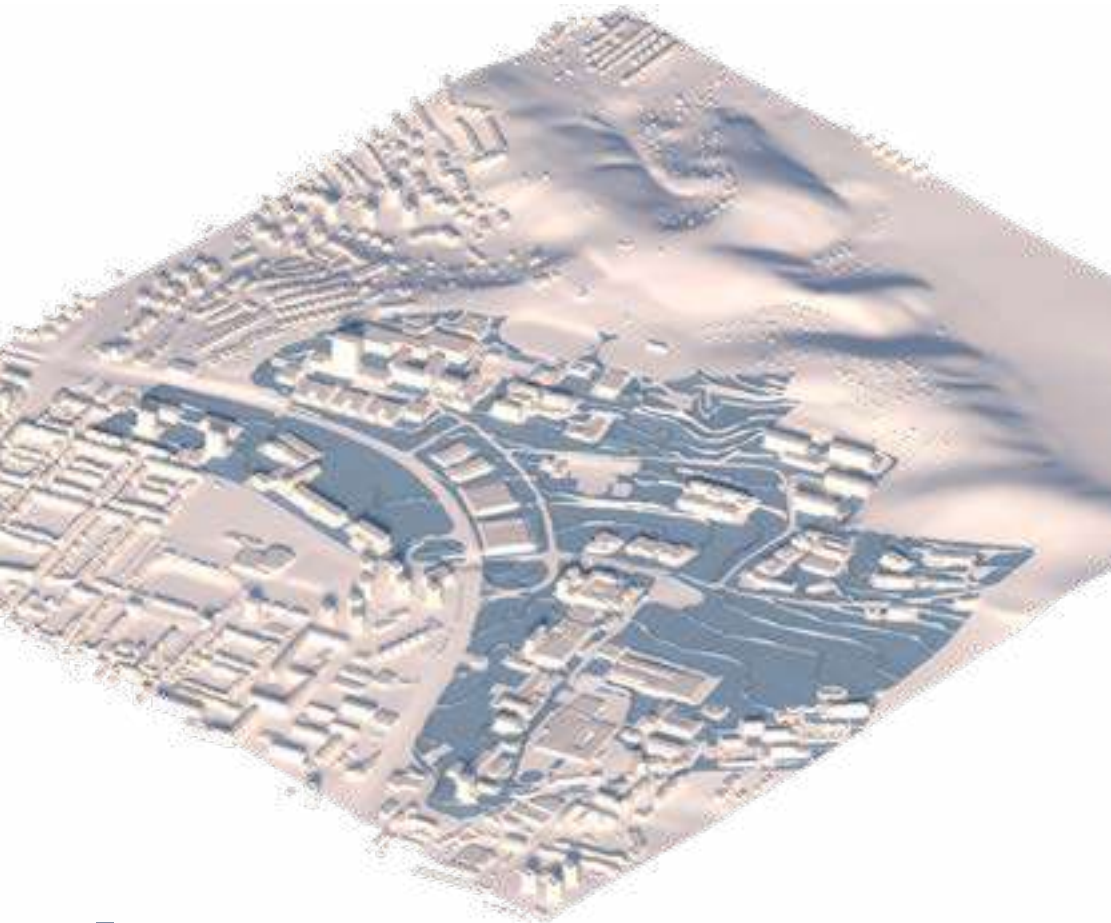
Vancush

„The Vineyard makes a new landscape on top of possible buildings. As a new or better said extruded hill. Gorgeous. Literally as the new roads are dug in as gorges.“

Winy Maas



Footprint area:	168 815 m ²
Built up area:	20,75 %
Gross floor area:	168 815 m ²
Average num. of floors:	1
Floor area ratio:	0,21
Population:	2888



■ Added structures

Our vision is to use the terrain of the Palacký hill for the placement of terraced houses and find possibilities for their roof areas. The location of the vineyard structure on Palacký hill indicates the placement and adaptation of their forms according to the terrain. This creates the potential for a variety of rooftop uses - from pathways to public spaces and gardens. As a reference, we used ancient and Iranian cities such as Catalhoyuk and Masuleh, known for their unusual architecture. Their interconnected buildings are built into the surrounding mountain and the roofs serve as courtyards and streets for the buildings above.

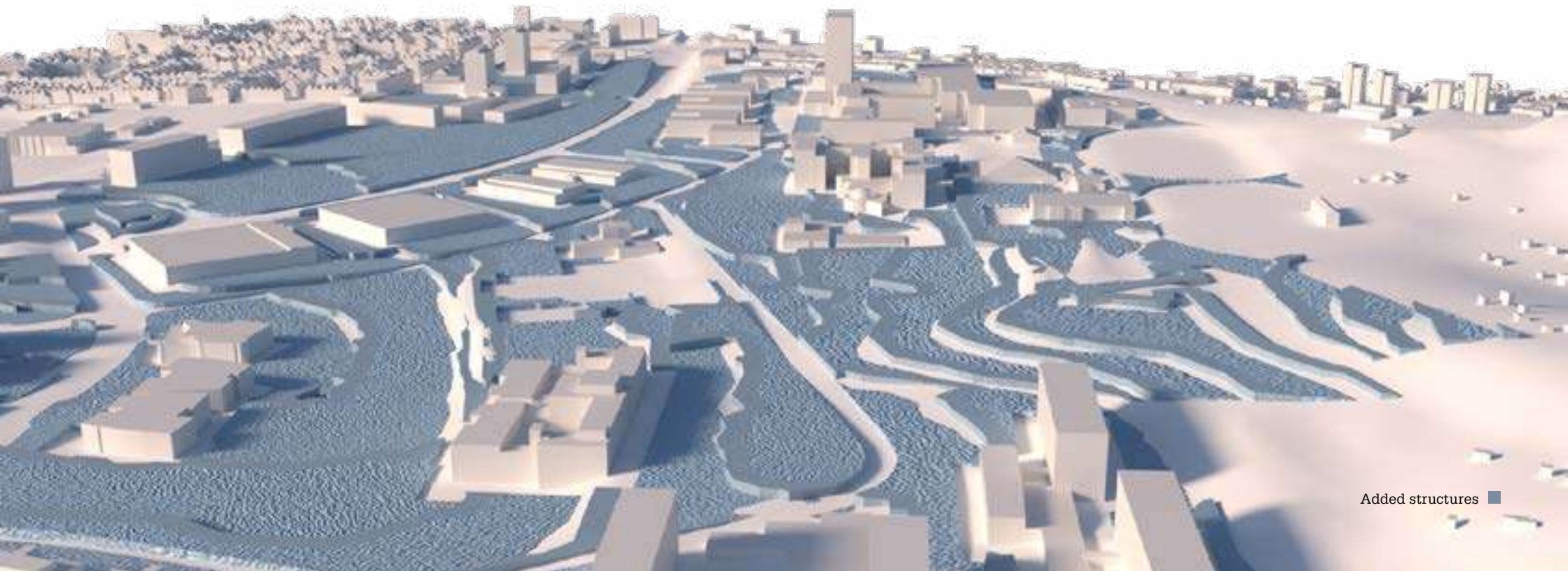




South elevation



West elevation



Added structures ■

Prague castle

„The Prague castle shows how the university can be designed as a grand castle.“

Winy Maas



Footprint area:	205 501 m ²
Built up area:	25,26 %
Gross floor area:	963 136 m ²
Average num. of floors:	4,69
Floor area ratio:	1,18
Population:	2225



- Added buildings
- Sectioned parts of buildings

Our project focuses on Prague Castle and its surroundings. This scenario has many similarities with our site, Palacky hill. Our project is also located on a hill and includes two types of buildings, more residential ones and those, which are more open to the public, like Prague Castle. Its surroundings are full of nature and green spaces. Our idea is to locate the castle next to the dormitories and the sports center, where the vegetation is and leave the rest of the old residential buildings next to the tram station, creating a contrast between the technological park and the 3 story high historical buildings.

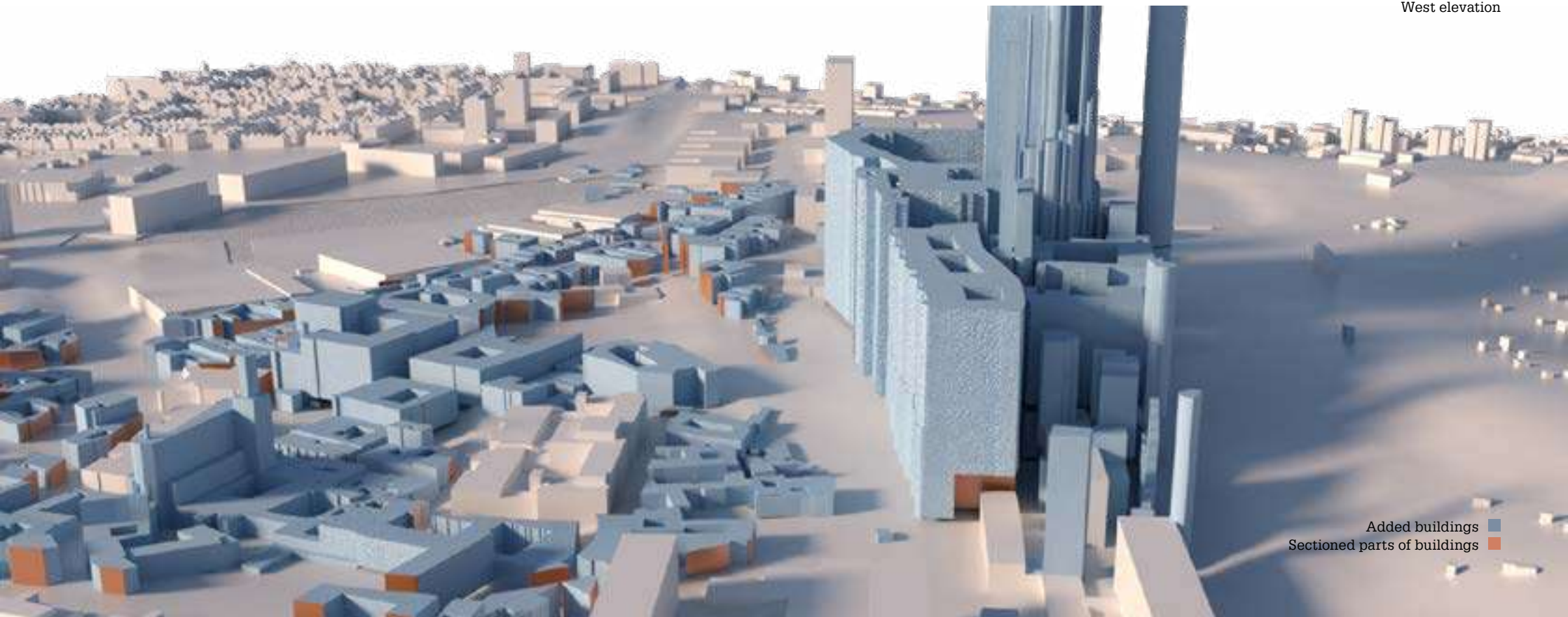




South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■

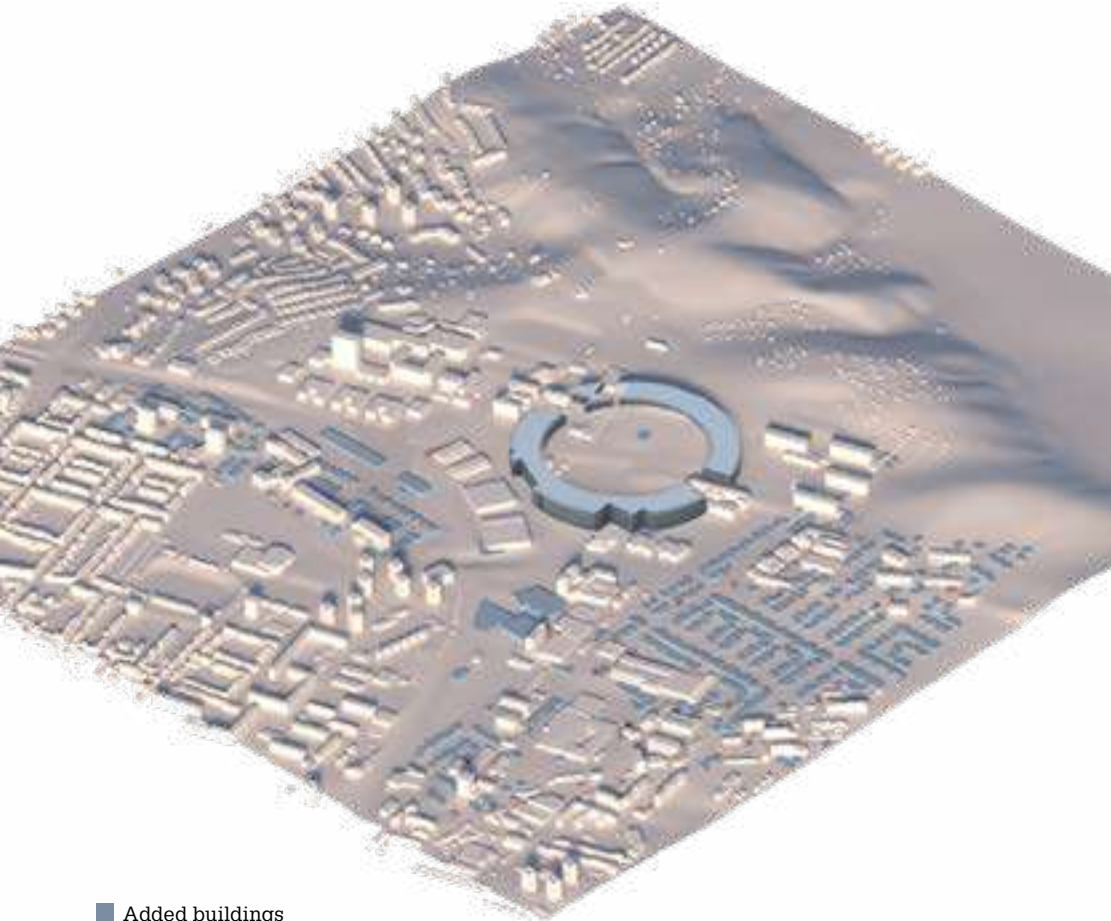
Apple ring city

„The Apple ring shows a corporate direction. A one liner.“

Winy Maas



Footprint area:	132 476 m ²
Built up area:	16,28 %
Gross floor area:	208 441 m ²
Average num. of floors:	1,57
Floor area ratio:	0,26
Population:	x



- Added buildings
- Sectioned parts of buildings

Apple Campus in Cupertino shows how good the workplace can be. Creating many green spaces for employees and residents provides not only a place for rest, but combining it with so many different facilities creates almost a new, green town. Building a campus with many pavilions on the way, naming the places and giving them a purpose could create a liveable and vibrant area, that Palacky Hill is missing. Campus, offices, homes inside a green, pedestrian friendly town would create a completely different kind of space.

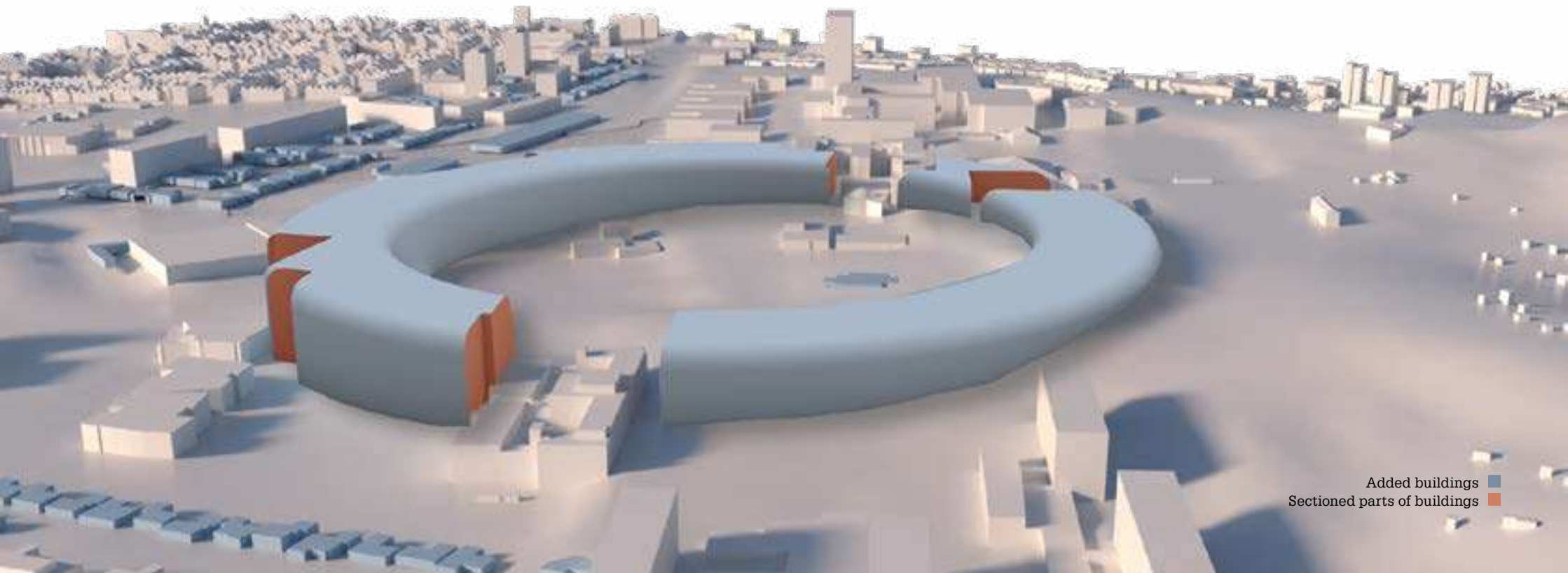




South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■

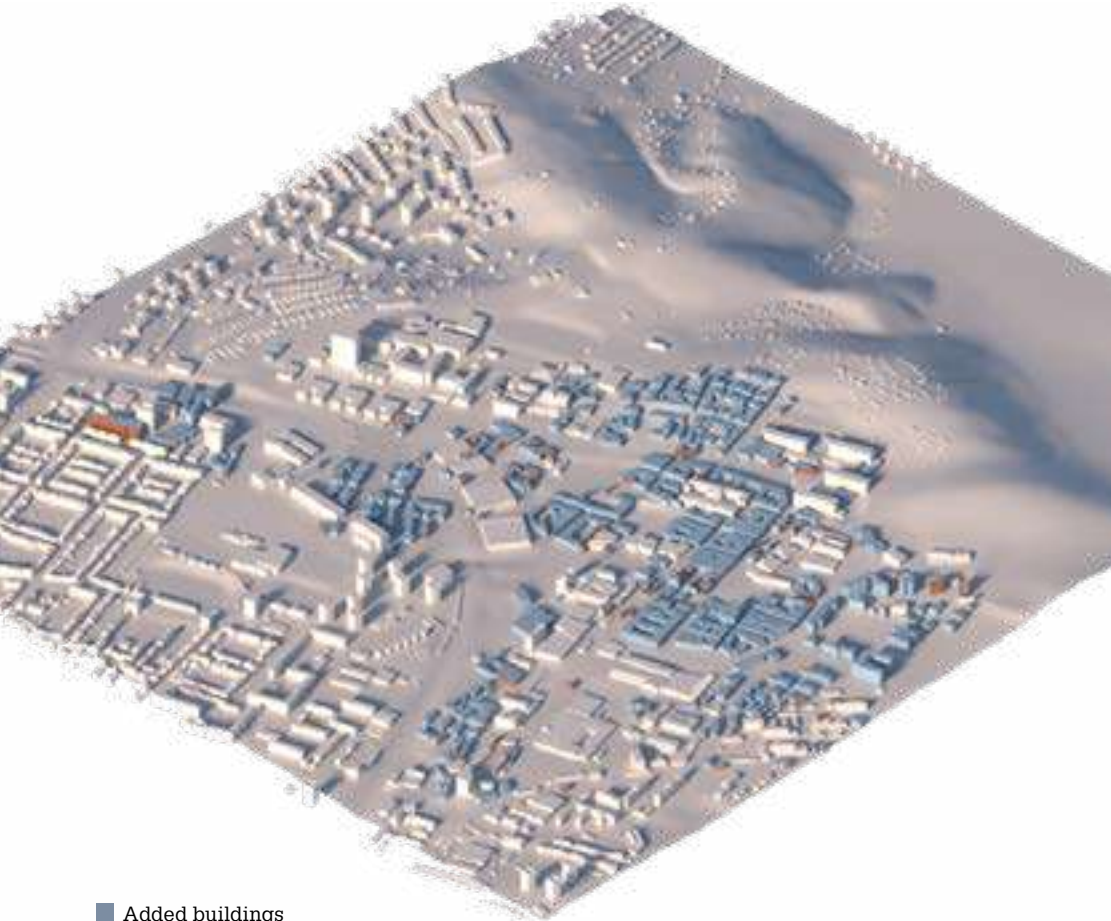


Timisoara

The timisoara introduces a rectangular system.



Footprint area:	208 394 m ²
Built up area:	25,61 %
Gross floor area:	893 008 m ²
Average num. of floors:	4,29
Floor area ratio:	1,10
Population:	1563



■ Added buildings
■ Sectioned parts of buildings

The cute cities, like Timisoara, are making a comeback. And having a walkable, cozy, and familiar neighborhood makes all the difference for students. The well-defined grid layout of the city, illustrating the organized and structured urban planning could enhance the city's infrastructure. Together the combination of Timisoara and Palacký hill could create a pleasant environment.

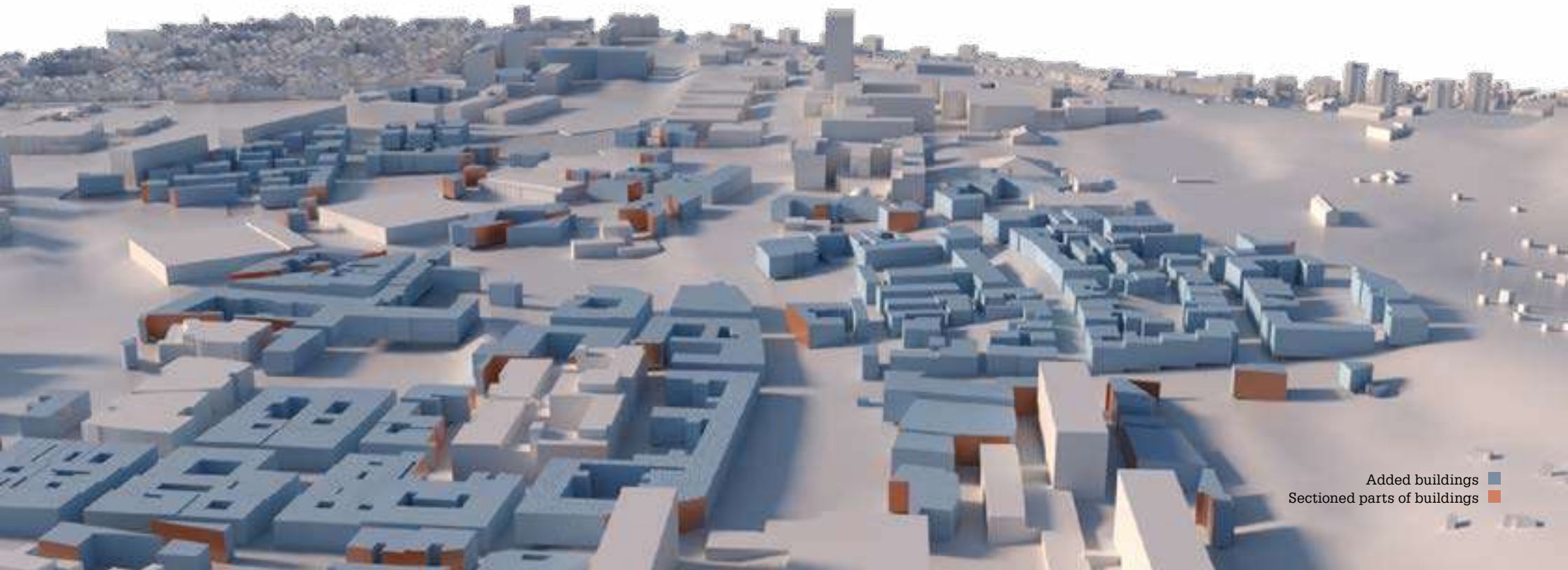




South elevation



West elevation



Added buildings ■
Sectioned parts of buildings ■

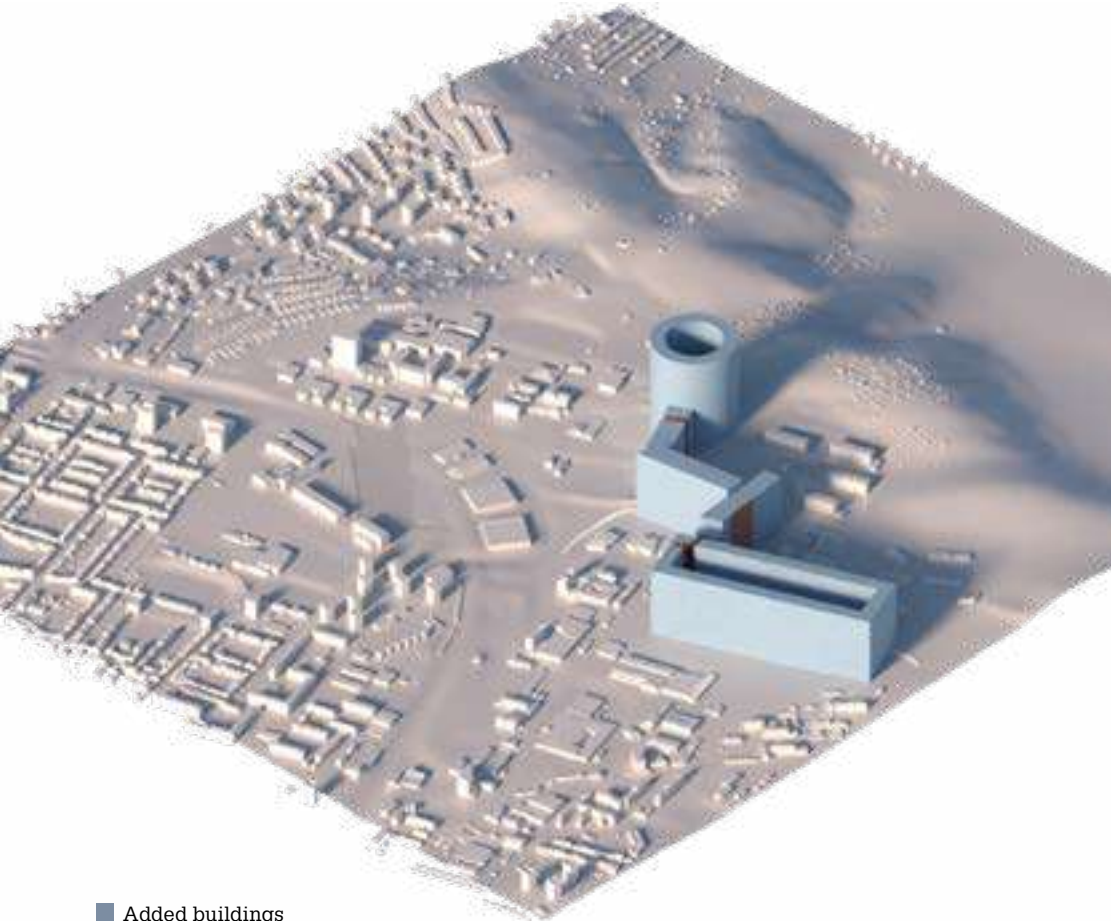
Leonidov plaza

„The Hyper Building on top of a forest. If we could do that
then Brno would be on the list of world wonders.“

Winy Maas



Footprint area:	218 667 m ²
Built up area:	26,88 %
Gross floor area:	4 436 683 m ²
Average num. of floors:	20,29
Floor area ratio:	5,45
Population:	x



- Added buildings
- Sectioned parts of buildings

Big monumental buildings as a theme in the technologically park, times 10. Making the area stand out from far and making representative buildings that will give new landmarks to Brno and propel it into its own Silicon Valley area. Caring for natural paths and untouched green areas, and seeing them as areas of use and not just “unbuilt areas”, while building higher and greener. The proportions are yet for a further research.

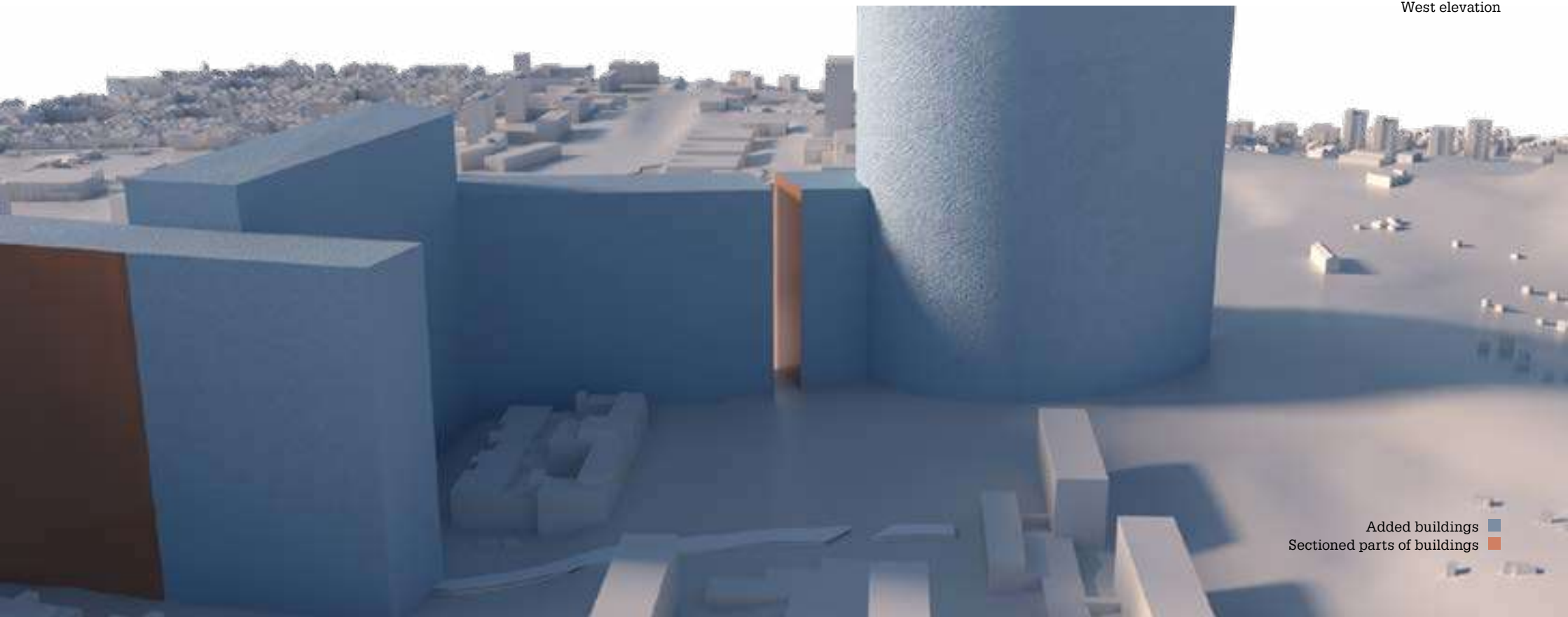




South elevation



West elevation



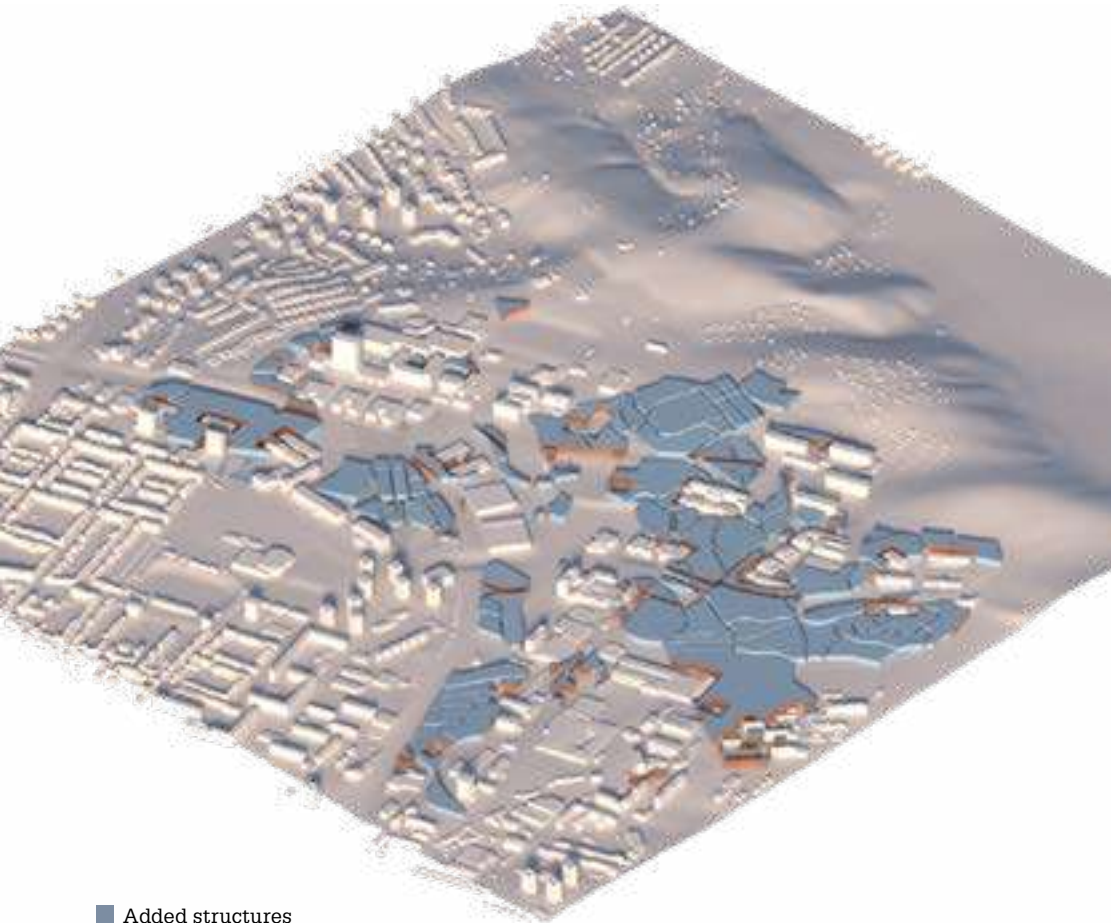
Added buildings ■
Sectioned parts of buildings ■

Central Park

Central Park's paths show a way to create new connections.



Footprint area:	439774m ²
Built up area:	54,05 %
Gross floor area:	1776251m ²
Average num. of floors:	4,04
Floor area ratio:	2,18
Population:	x



- Added structures
- Sectioned parts of structures

Palacký Hill evidently lacks a quality communication system, which can be opposed to that found for example in Central Park. Its pathways intersect several times in various directions. We placed the Central Park model under the Palacký Hill campus and found that it would beautifully solve the problem of transport while also shaping the landscape. By extruding grassy areas, we created residential and multifunctional spaces with green roofs.

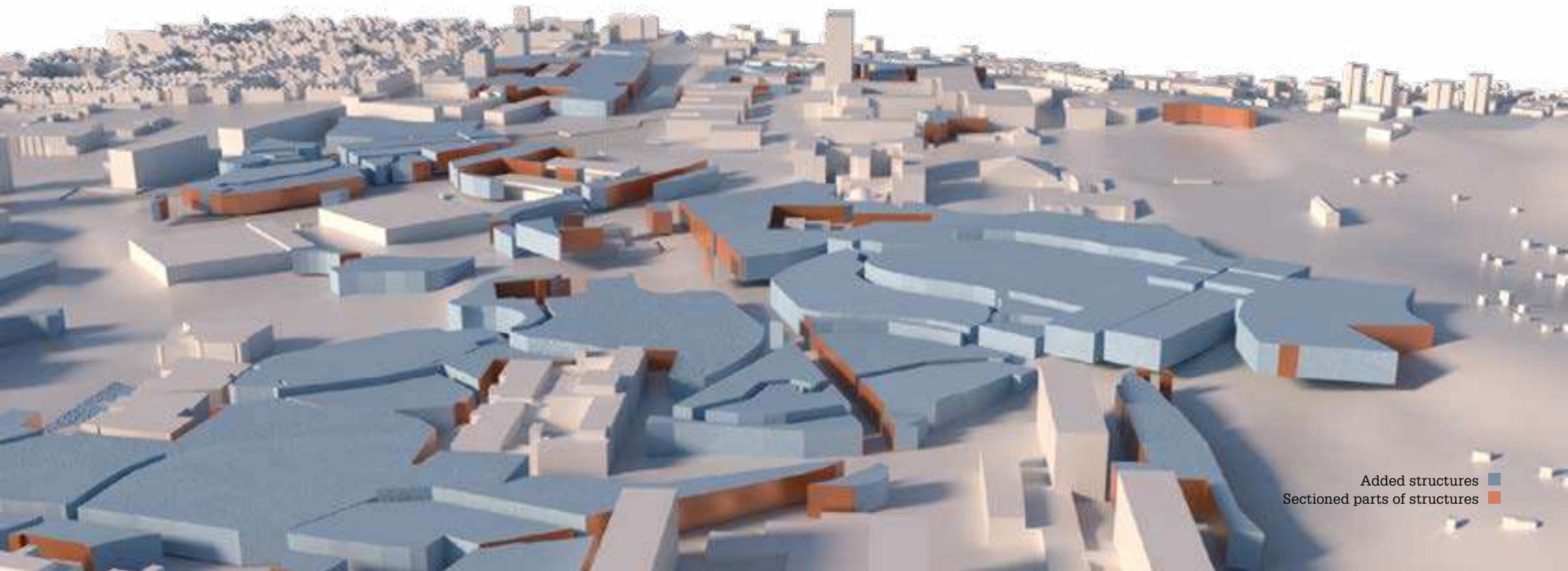




South elevation



West elevation



Developed scenarios

Adapting to Palacký hill

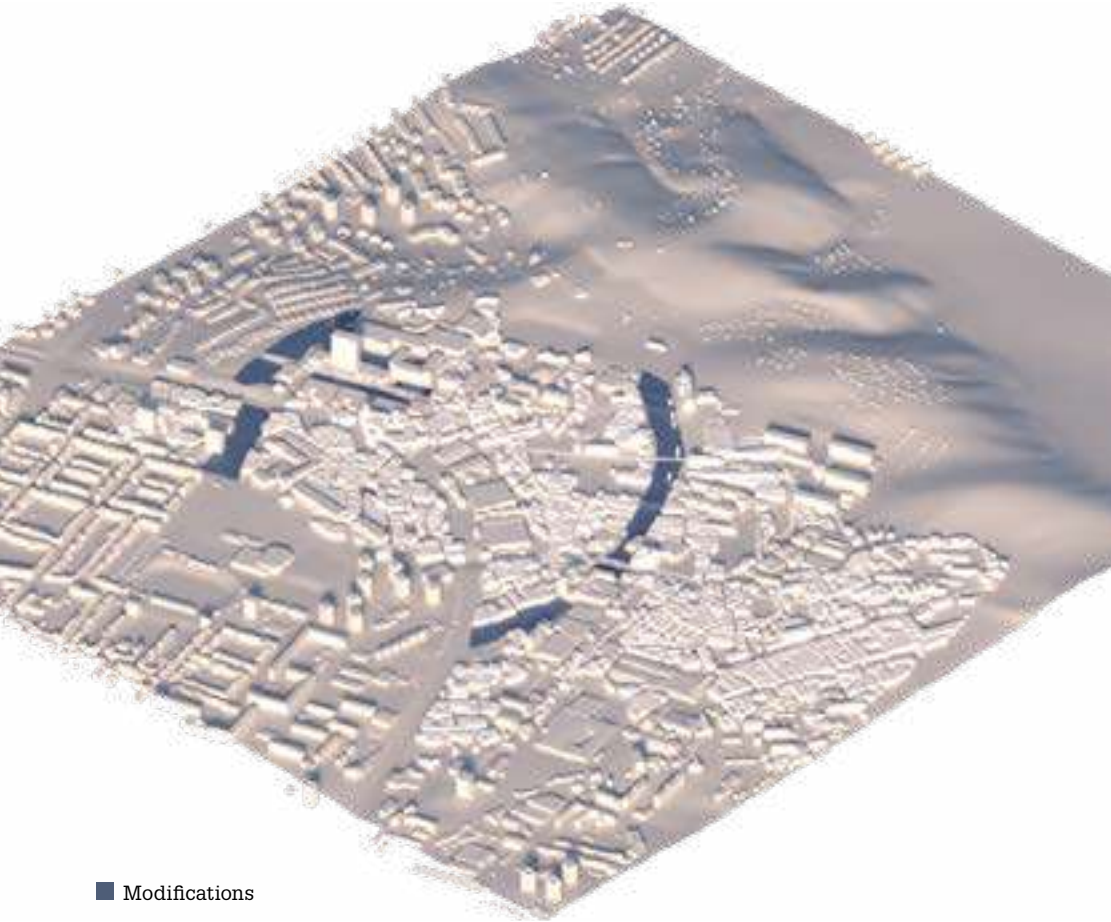
In this chapter, we will address whether adaptations to the transplanted urban composition are necessary. Urban planning must consider numerous factors, such as fire access, connections and sunlight. Upon examining the radical scenarios, we observed that the merged urban structures did not always fulfill these aspects accurately. Therefore, we created the developed scenarios.

In this phase, essential modifications were implemented to ensure the combined structures functioned effectively. Adjustments included widening of streets, reducing buildings' sizes, adding parks and squares, and connecting roads. Each of the 22 scenarios required unique changes, which will now be shown in detail.

Venice

Developed

Footprint area:	345 770 m ²
Built up area:	42,50 %
Gross floor area:	1808 599 m ²
Average num. of floors:	3,2
Floor area ratio:	0,99
Population:	504



■ Modifications

Rather than water canals, we established parks strategically located near bus and tram stops, aiming to enhance connectivity and provide pleasant pathways from public transport to academic buildings or dormitories. Additionally, parks replace smaller canals, introducing more green spaces into densely built areas. Given the narrow streets and high building density, a few squares were also incorporated.

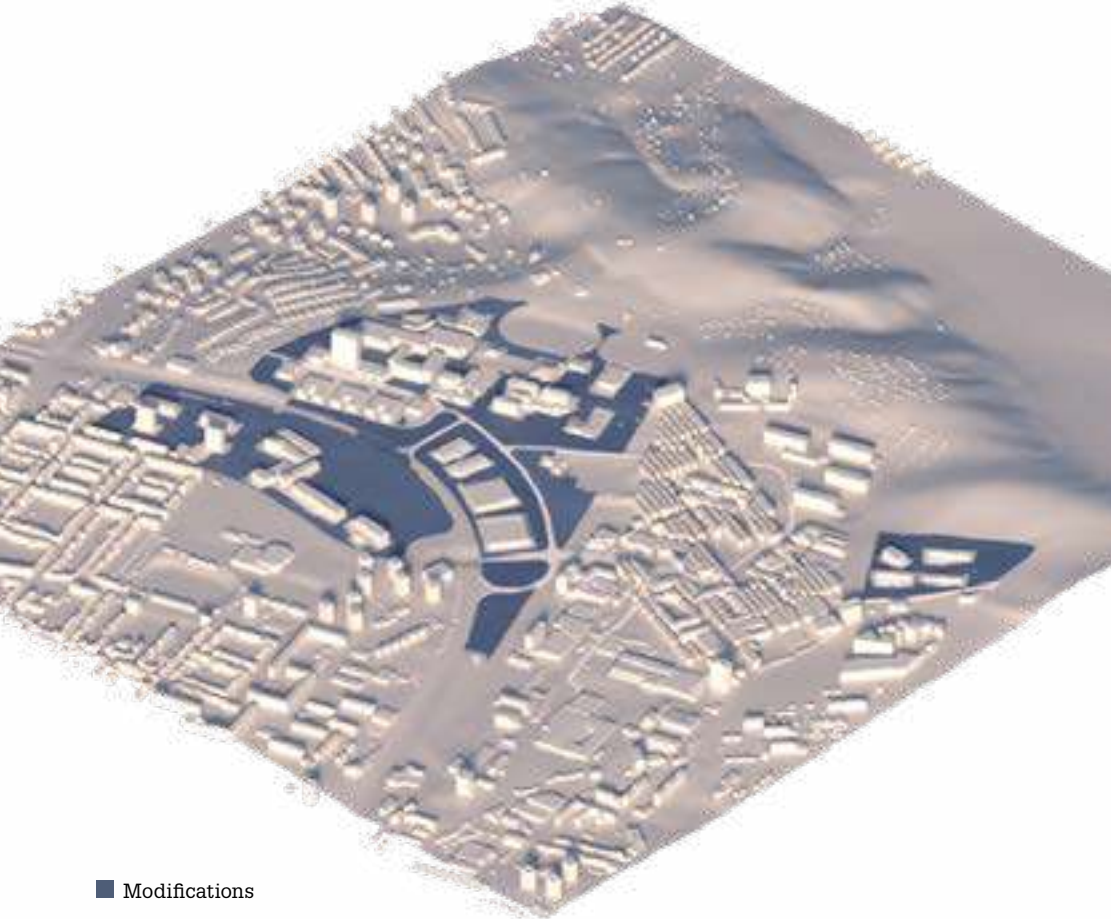




Barcelonetta

Developed

Footprint area:	103 027 m ²
Built up area:	12,66 %
Gross floor area:	572 029 m ²
Average num. of floors:	5,6
Floor area ratio:	0,7
Population:	15 112



■ Modifications

In our developed idea, we tried to connect the existing parts of Palacký hill with the structure of Barcelonetta. We created more pleasant transitions between the two structures by adjusting the streets and incorporating more public spaces. We replaced the sea and beaches that surround Barcelonetta with an area of greenery to benefit the space and the environment.

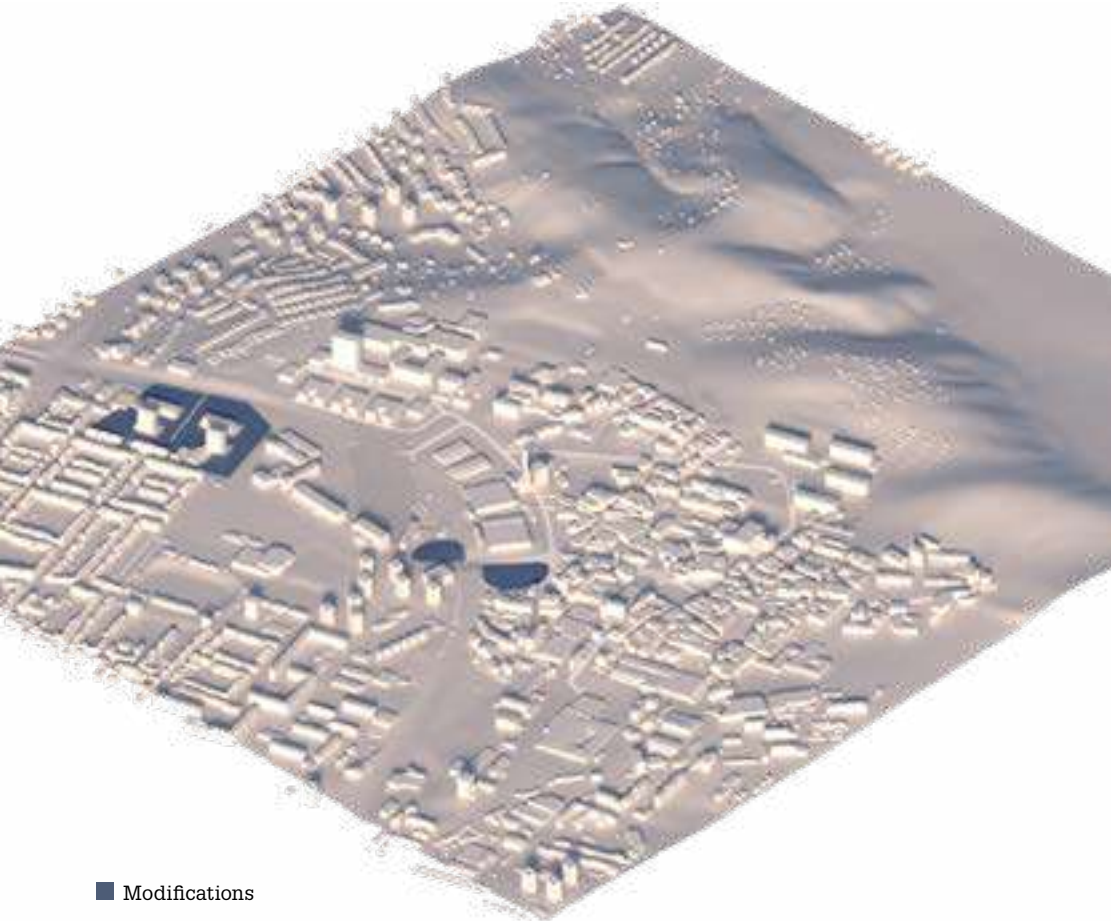




Brno city center

Developed

Footprint area:	182 032 m ²
Built up area:	22,37 %
Gross floor area:	797 477 m ²
Average num. of floors:	4,4
Floor area ratio:	0,98
Population:	1359



■ Modifications

Our method of radical copy + paste city or other structures into existing and somehow malfunctioning district created various conflicts. The process of development consisted of finding local problems and providing a solution. For example, the decision to put dense greenery in the main axis junction could reduce traffic noise. Other conflicts created naturally interesting ensembles - the square of Liberty with tram loop in it. But in general, the communication system fitted well in Palacký hill.

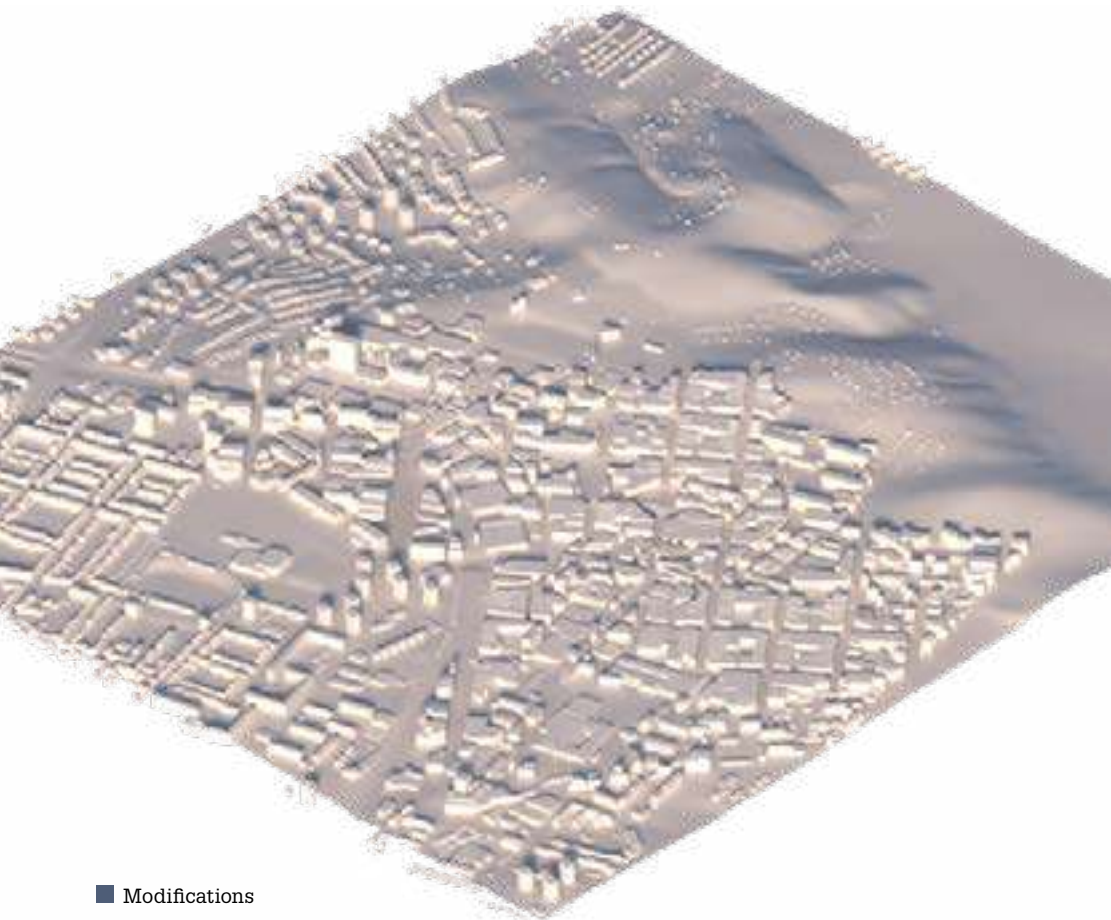




Barcelona

Developed

Footprint area:	114 960 m ²
Built up area:	14,13 %
Gross floor area:	1 654 874 m ²
Average num. of floors:	14,4
Floor area ratio:	2,03
Population:	13010



■ Modifications

The scenario of Barcelona did not need much further adjusting. Everything was in order according to the fire safety and other regulations. Our main goal was to blend the new structure with Palacký hill, so that each street integrates with the existing structure better. To support that, we had to search for additional functions to the created offsets.

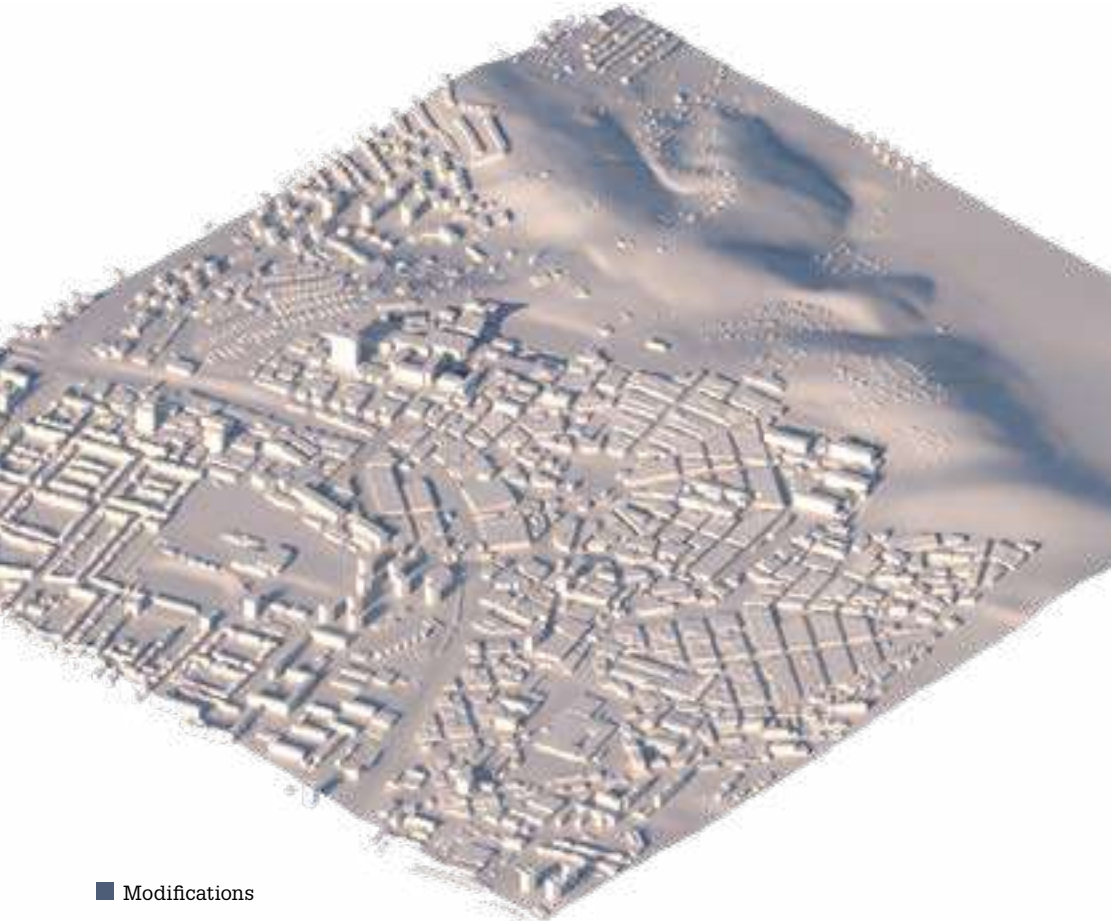




Colonia federal

Developed

Footprint area:	180 177 m ²
Built up area:	22,15 %
Gross floor area:	918 357 m ²
Average num. of floors:	5,10
Floor area ratio:	1,13
Population:	20,87



■ Modifications

In the development of Colonia Federal we enlarged the number of octagonal rings to create a larger composition. We also redesigned the center in each of the parcels. Instead of having dense plots with buildings, we added green patios inside. The radial grid of streets in the Mexico City neighbourhood allowed us to make only a few changes within its structure to design a functional communication system.

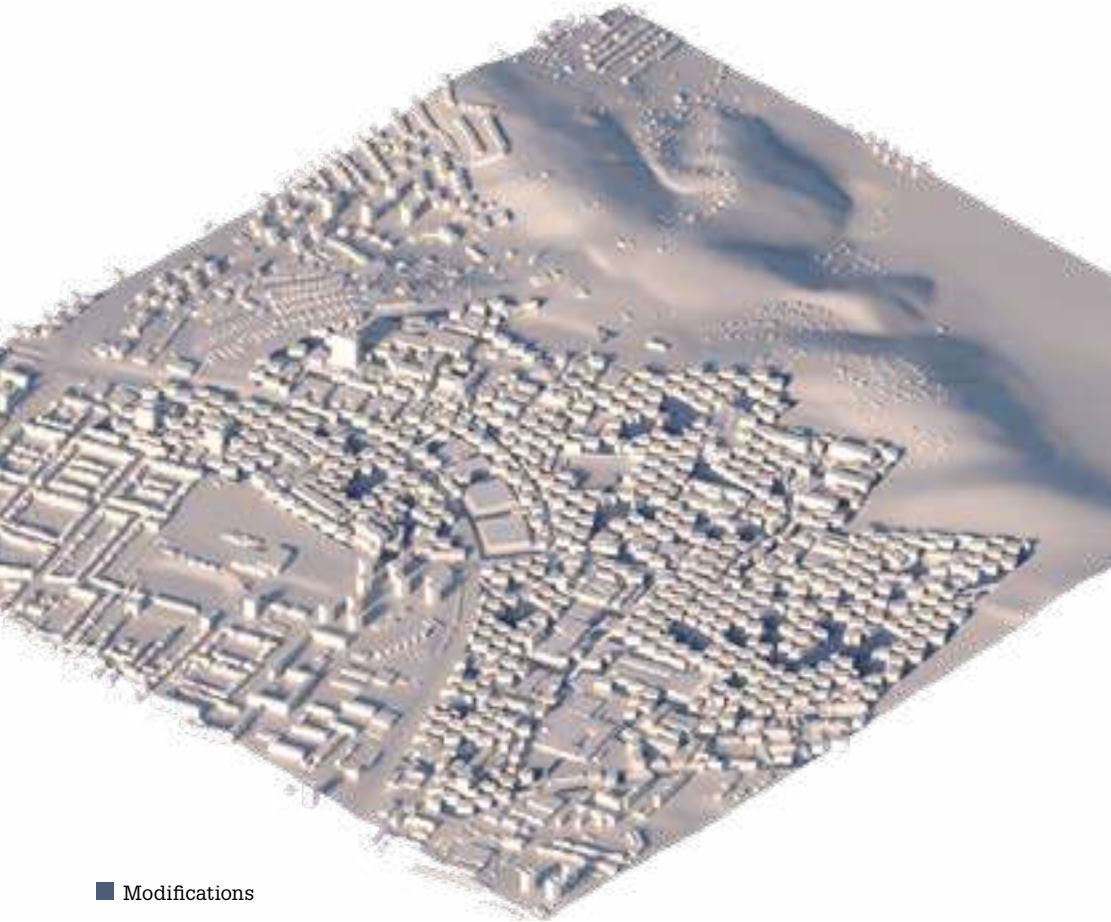




Grid

Developed

Footprint area:	325 675 m ²
Built up area:	40,0 %
Gross floor area:	1 941 668 m ²
Average num. of floors:	6,0
Floor area ratio:	2,39



■ Modifications

The grid structure is further modified by adding different urban elements and structures. For better accessibility also by cars, new roads and streets are created. Some of the buildings were deleted or cut in order to create these new connections for social activities and relaxation – plazas, larger areas of greenery, and parks.

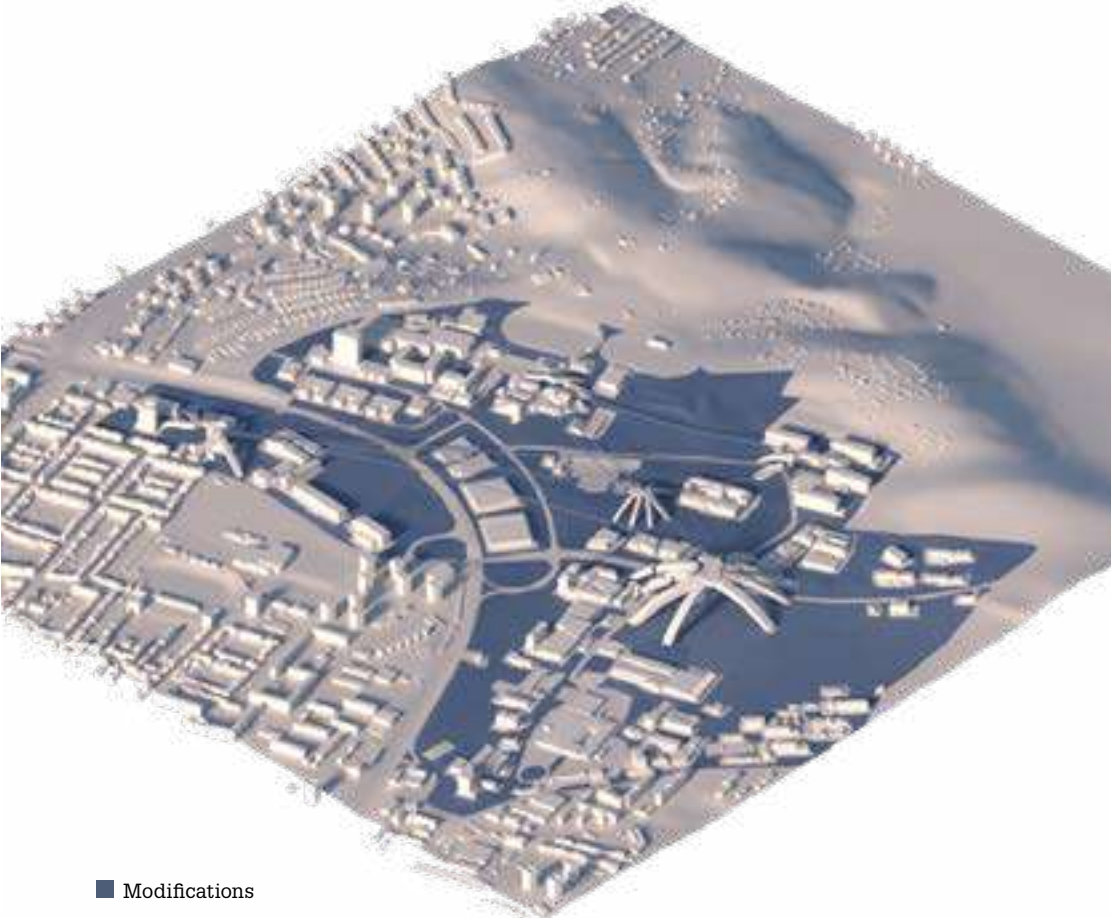




Spider

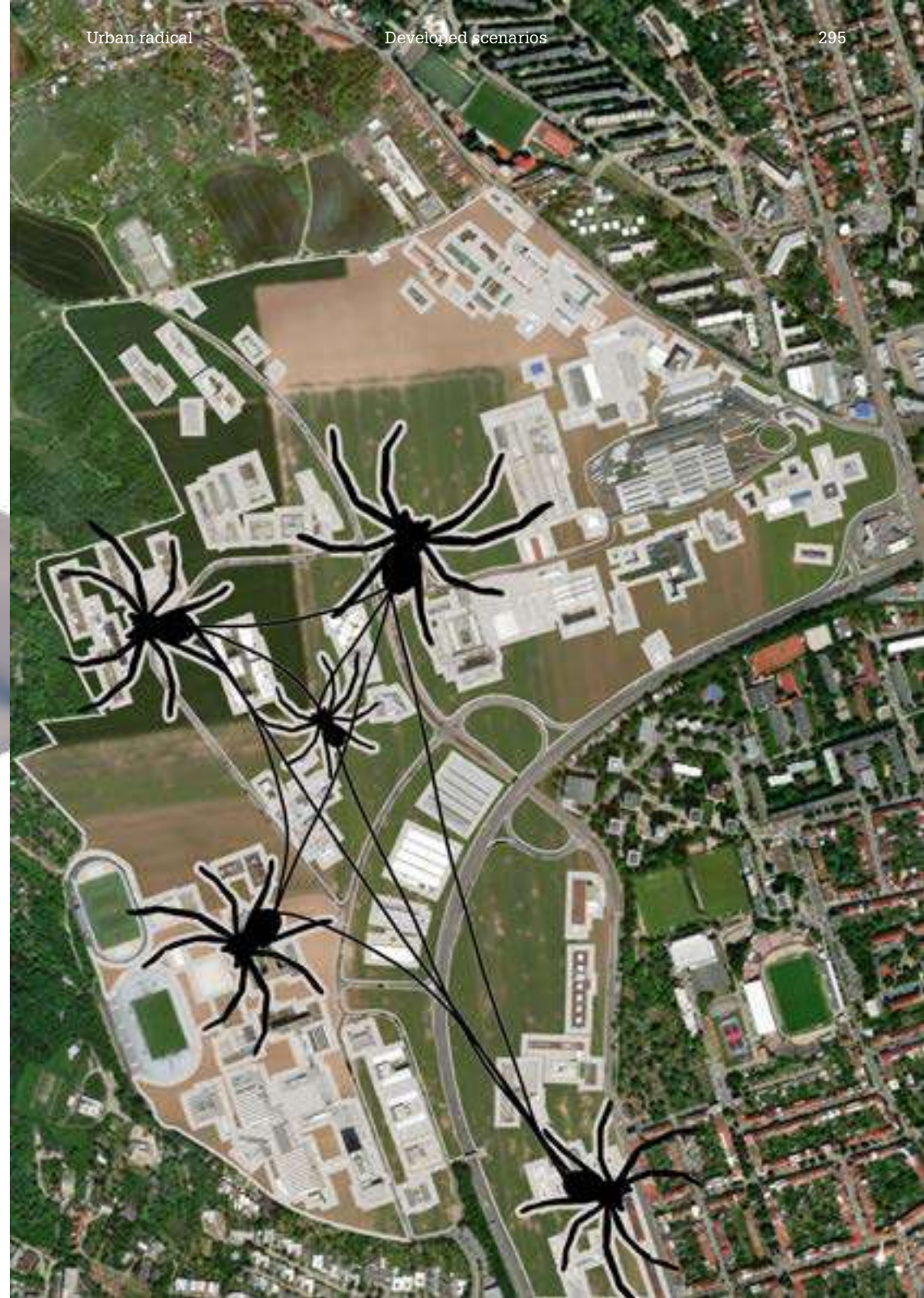
Developed

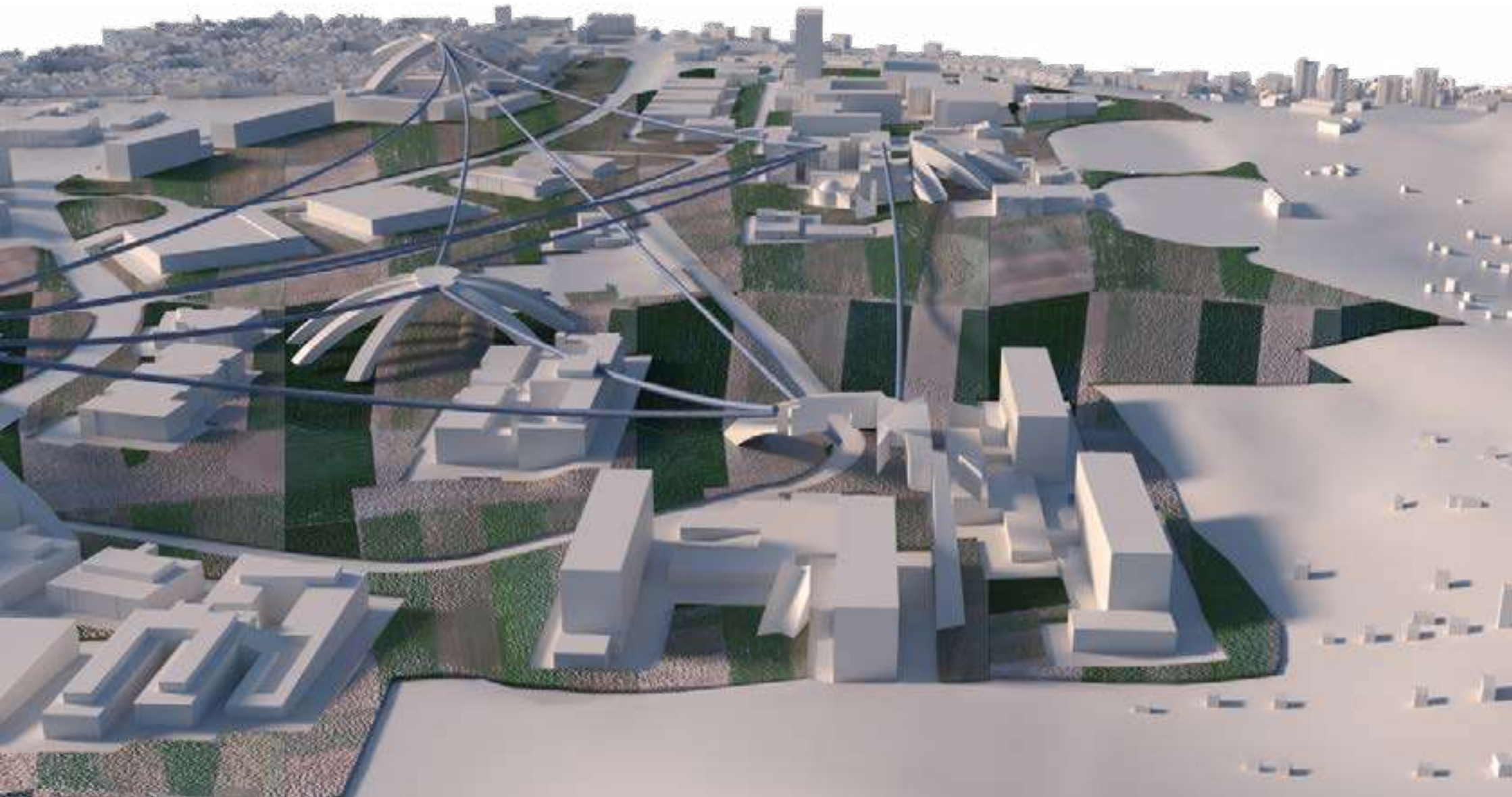
Footprint area:	35 014 m ²
Built up area:	4,30%
Gross floor area:	127 213 m ²
Average num. of floors:	3,63
Floor area ratio:	0,16



■ Modifications

In order to finalize the transport possibility and function of the spider structures, we stretched rope nets between the structures, which serve as a connection between the spiders and therefore the most important places of the BUT campus, such as dormitories, faculties, and the final stop of public transport. The overall structure of the spiders is simplified, with the 'legs' of the spider being wider - it is where the floors and vertical communication across the structure are located.

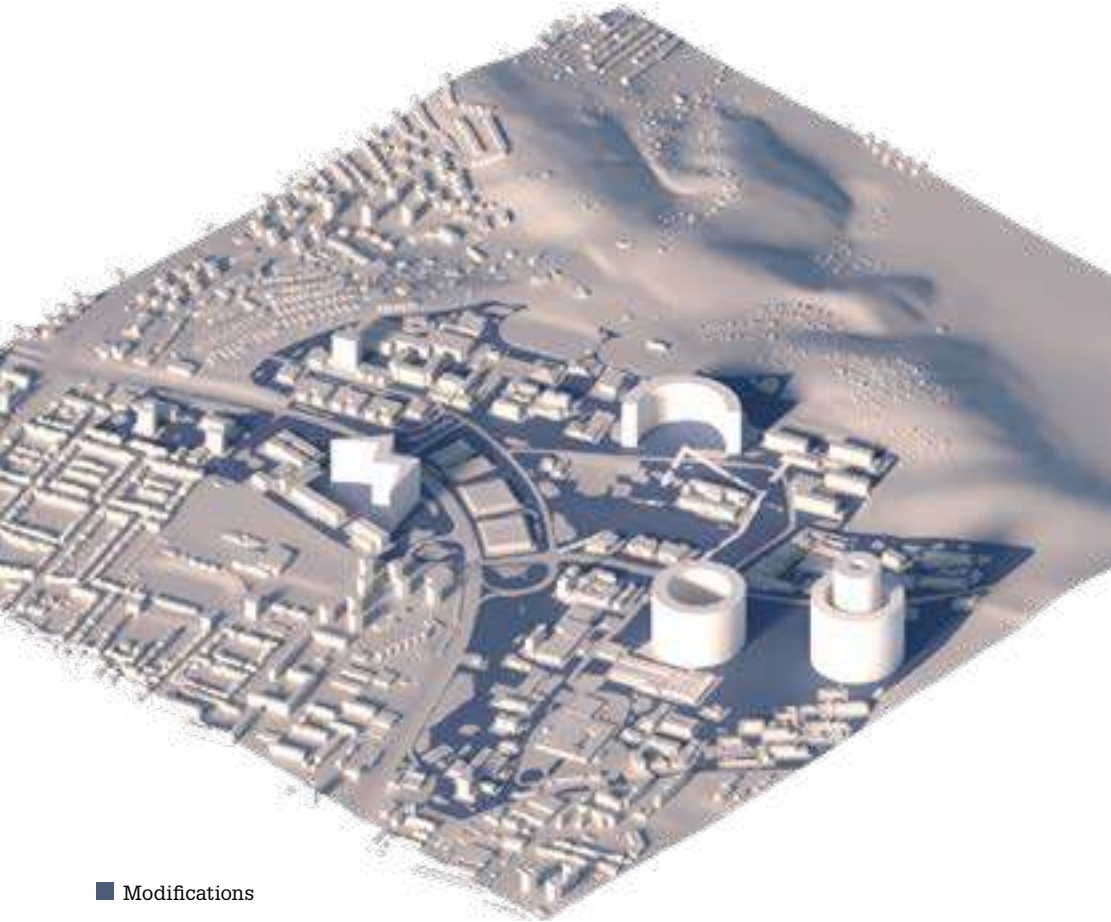




New plaza

Developed

Footprint area:	206 080 m ²
Built up area:	25,33%
Gross floor area:	4 158 746 m ²
Average num. of floors:	20,2
Floor area ratio:	5,11



■ Modifications

While trying to find balance between the built up area of the new buildings and making the connection to the nature that the residents are used to, semi-public spaces are proposed including courtyards and squares, between high rise monumental buildings, that would become landmarks of Brno, that would attract the incoming and old community and create space for events and manifestations.

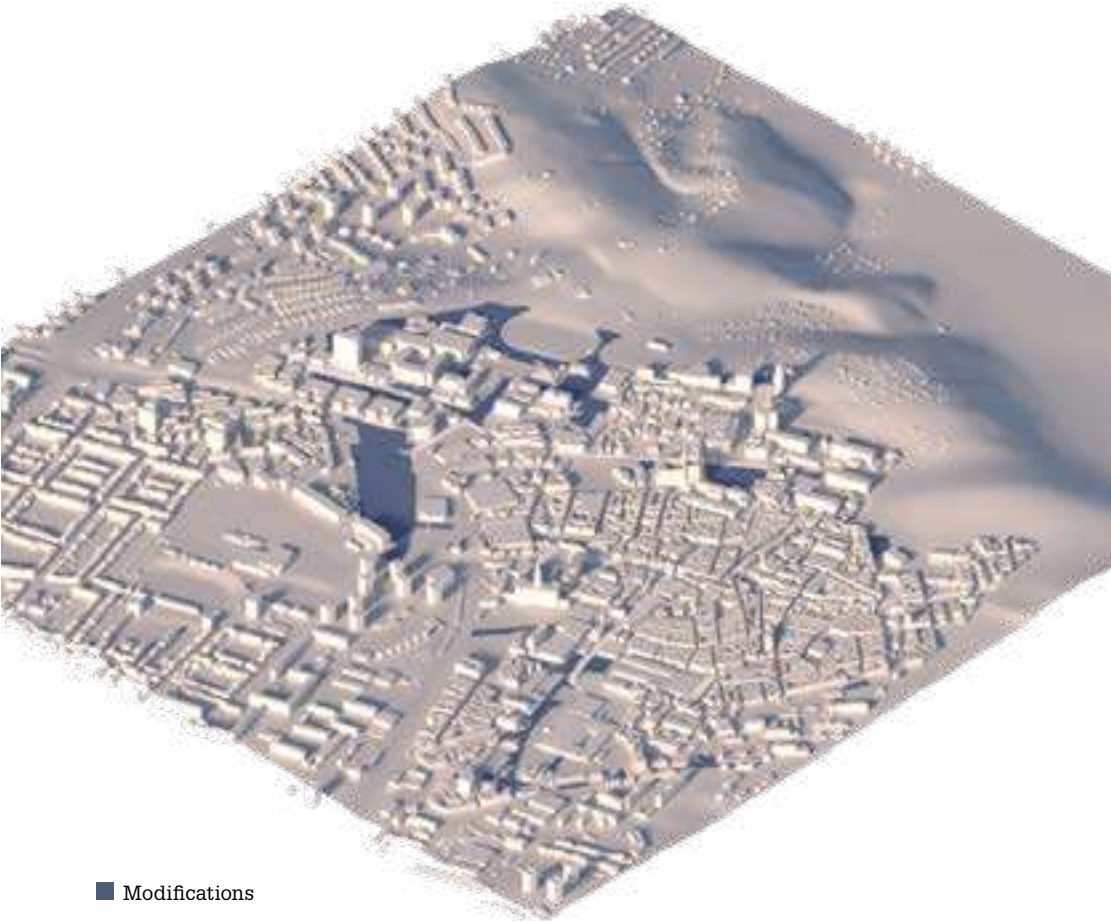




Strøget

Developed

Footprint area:	385 161 m ²
Built up area:	47,34 %
Gross floor area:	1 192 084 m ²
Average num. of floors:	3,10
Floor area ratio:	1,47
Population:	7725



■ Modifications

When developing our radical maps we focused on better connectivity, fixing some of the non-functioning roads or replacing some of them with greenery. Moreover we elongated an existing square near the Palacký hill dormitories. Part of the Copenhagen's water canal and spots with dysfunctional density were replaced with parks for a more user friendly spaces.

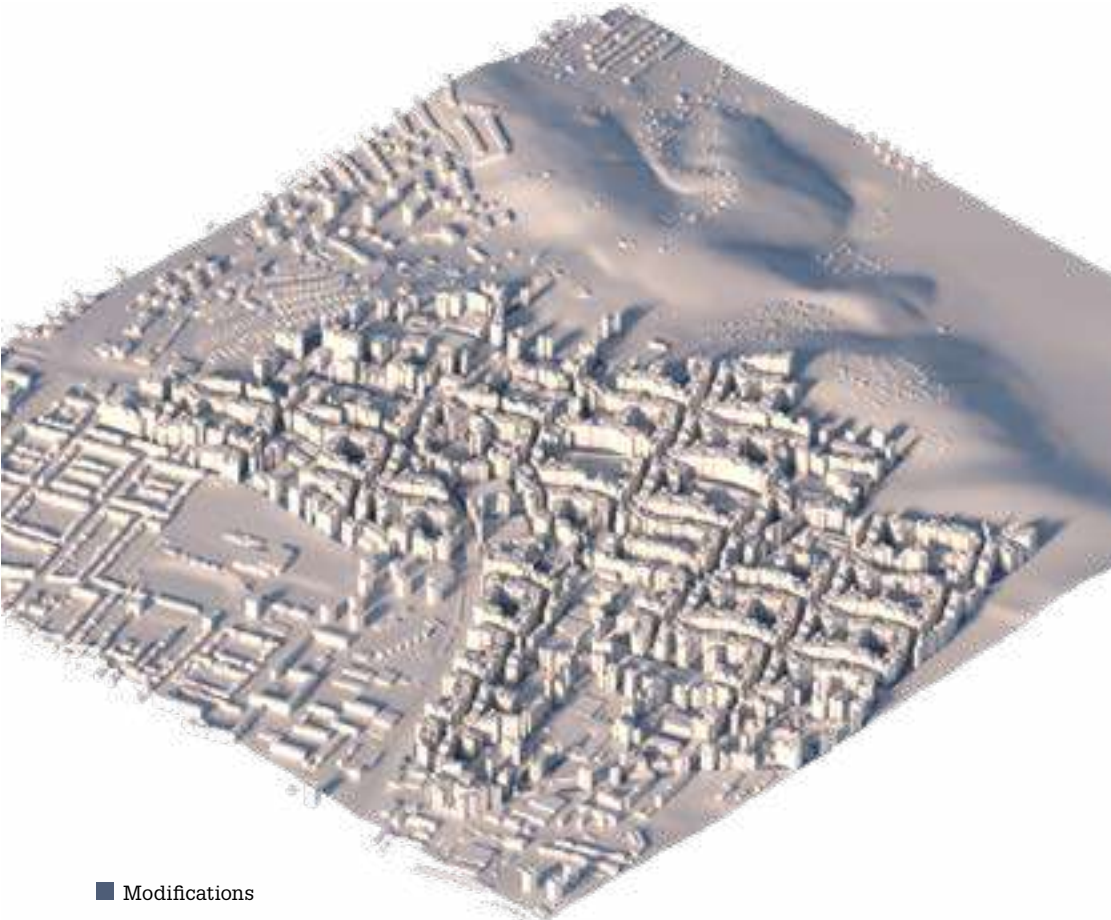




Kowloon

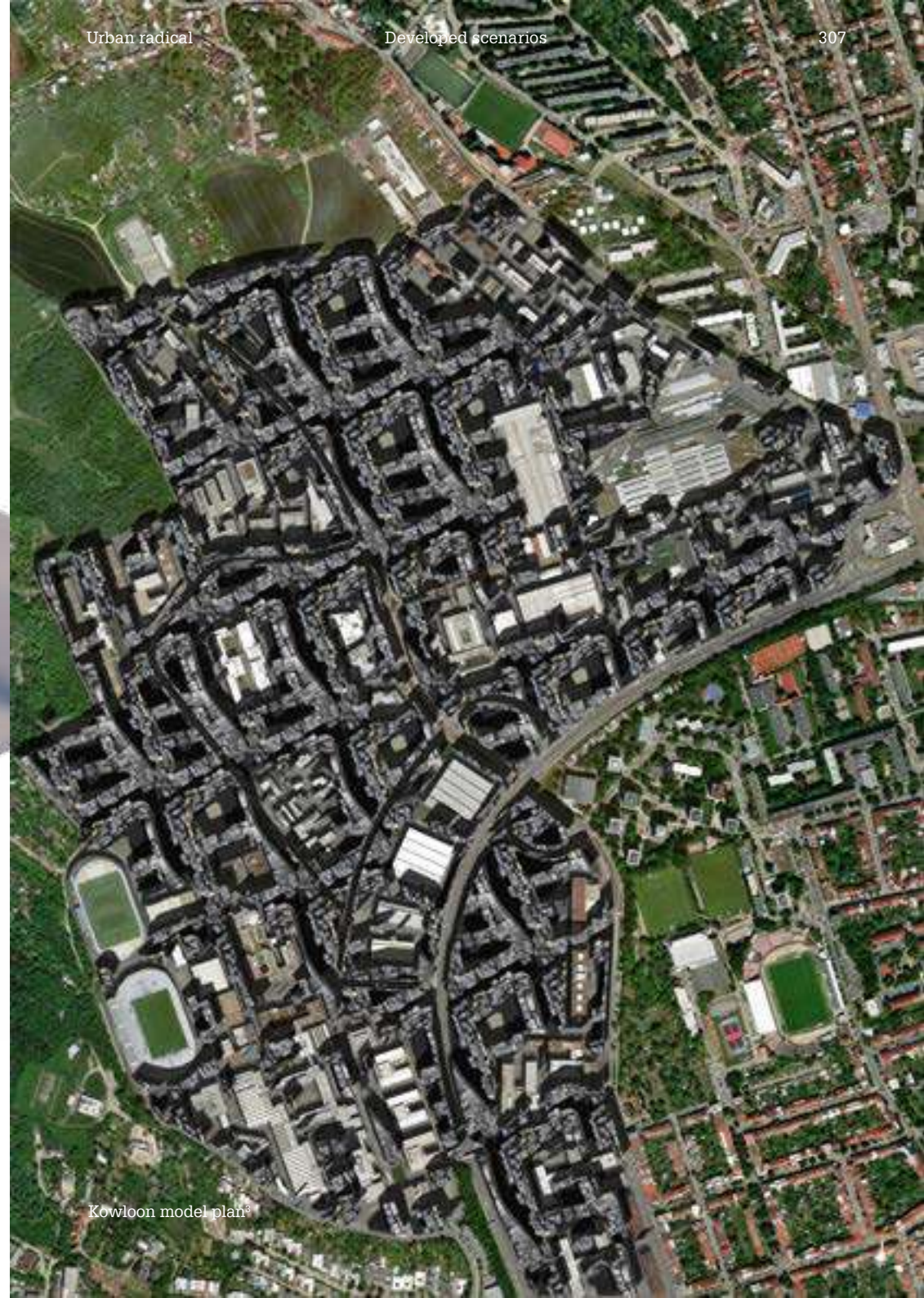
Developed

Footprint area:	196 410 m ²
Built up area:	24,14%
Gross floor area:	4 135 638 m ²
Average num. of floors:	21,06
Floor area ratio:	5,08
Population:	35 011



■ Modifications

In the developed version of Kowloon Walled City, we provided the structure with more daylight by adding more courtyards. We wanted to keep the same spirit of the Kowloon walled city, therefore the courtyards are simply paved, with no greenery. In this developed scenario we also defined streets, parks, and plazas. The parks help the city with water management and create healthier living space. The plazas are placed throughout the city. They provide gathering spaces used for trading and connecting with people. The streets are meant for both car and pedestrian transport. They connect the already existing functions of Palacký hill with the Kowloon buildings.



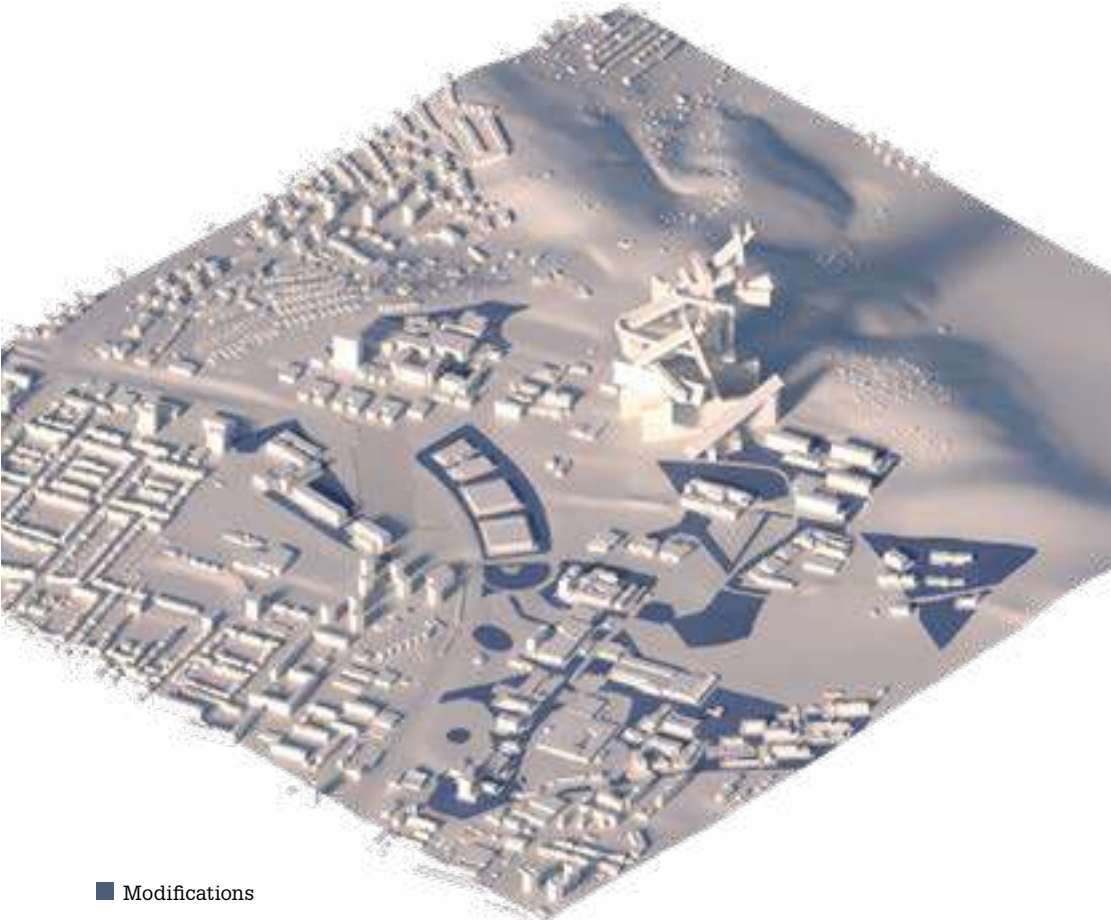
Kowloon model plan⁹



Tower Versailles

Developed

Footprint area:	53 098 m ²
Built up area:	6,53 %
Gross floor area:	817 954 m ²
Average num. of floors:	15,40
Floor area ratio:	1,01
Population:	2 665

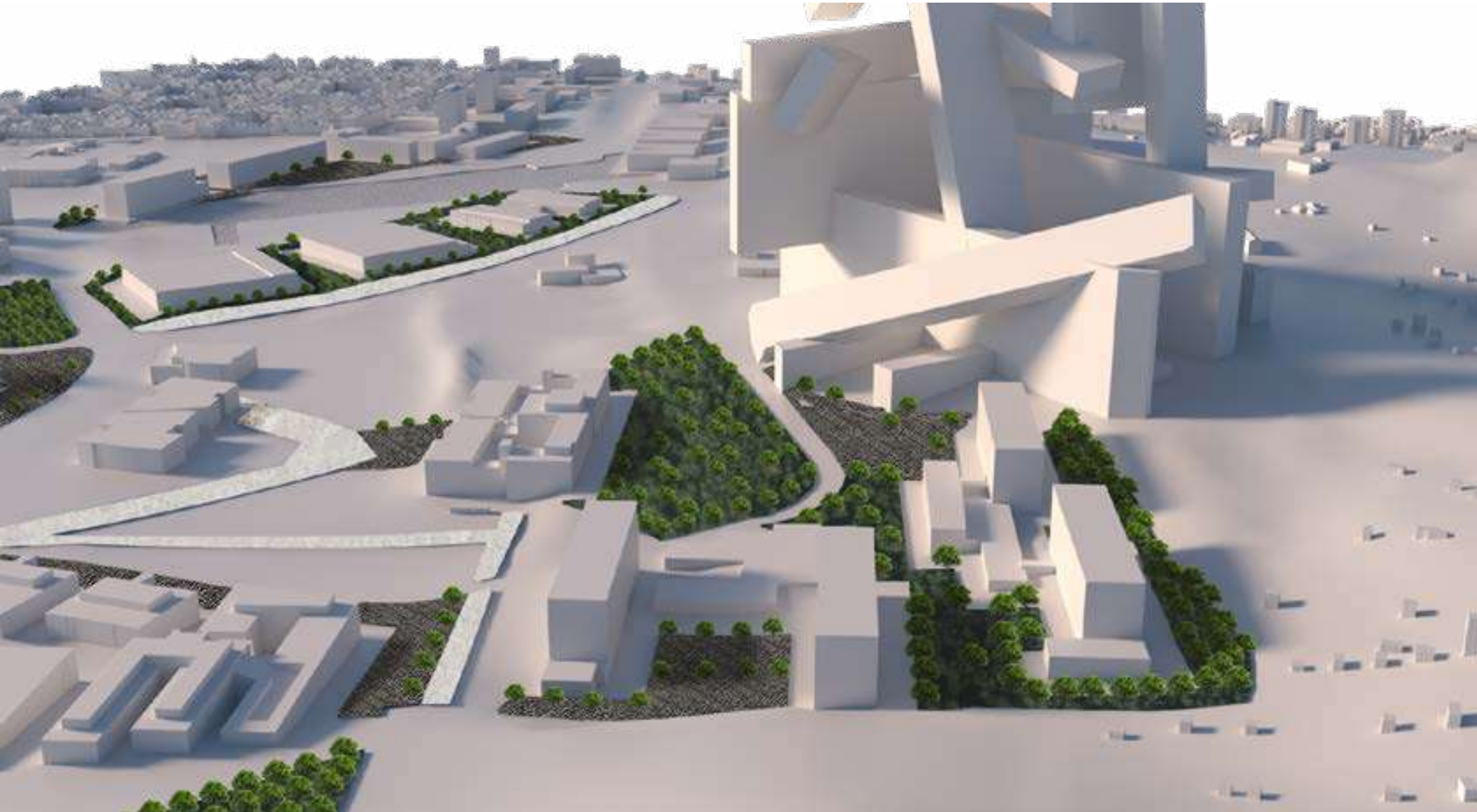


■ Modifications

The proposal focuses on creating high-rise buildings that encompass residential, commercial, and cultural spaces. This vertical integration allows for efficient use of limited space and promotes high population density. The gardens at Versailles are integrated into the design of the towers, not only at ground level but also at various levels of the buildings.

The creation of the Tower superstructure and gardens at Versailles on Palacký Hill has positive social and economic impacts. It enhances the attractiveness of the area for investors, tourists, and residents, contributes to the economic development of the region, and strengthens social cohesion.

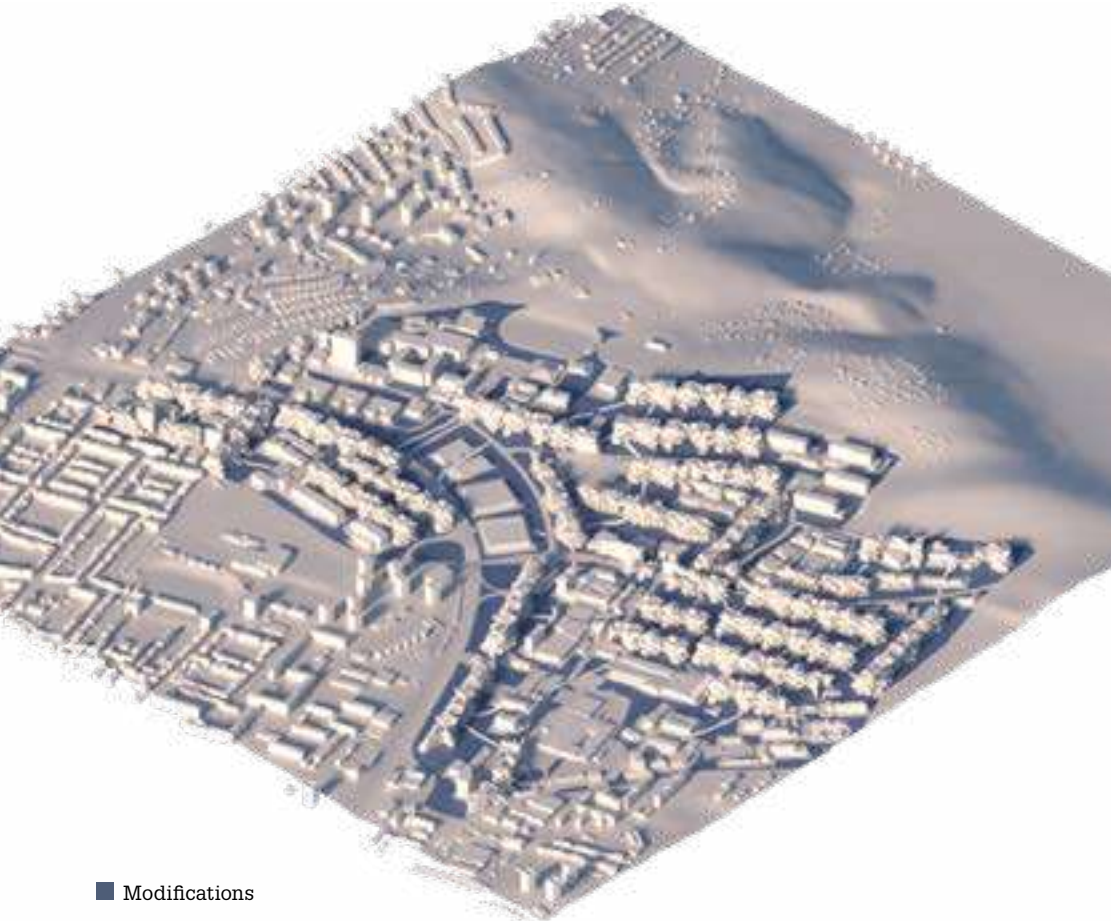




Habitat

Developed

Footprint area:	284 167 m ²
Built up area:	34,93 %
Gross floor area:	1 506 657 m ²
Average num. of floors:	5,30
Floor area ratio:	1,85
Population:	26 726



■ Modifications

The developed Habitat proposal is designed to promote social cohesion and economic stability. Modular and affordable housing allows various groups of residents, including families, individuals, and seniors, to find suitable housing, promoting diversity and inclusion in the community. Implementing this developed proposal on Palacky hill in Brno would require integrating new housing units into the existing urban and natural environment. The plan would involve strategically placing modular units that respect the terrain and historical aspects of the locality. Green spaces and public parks would be crucial for connecting new and existing structures.

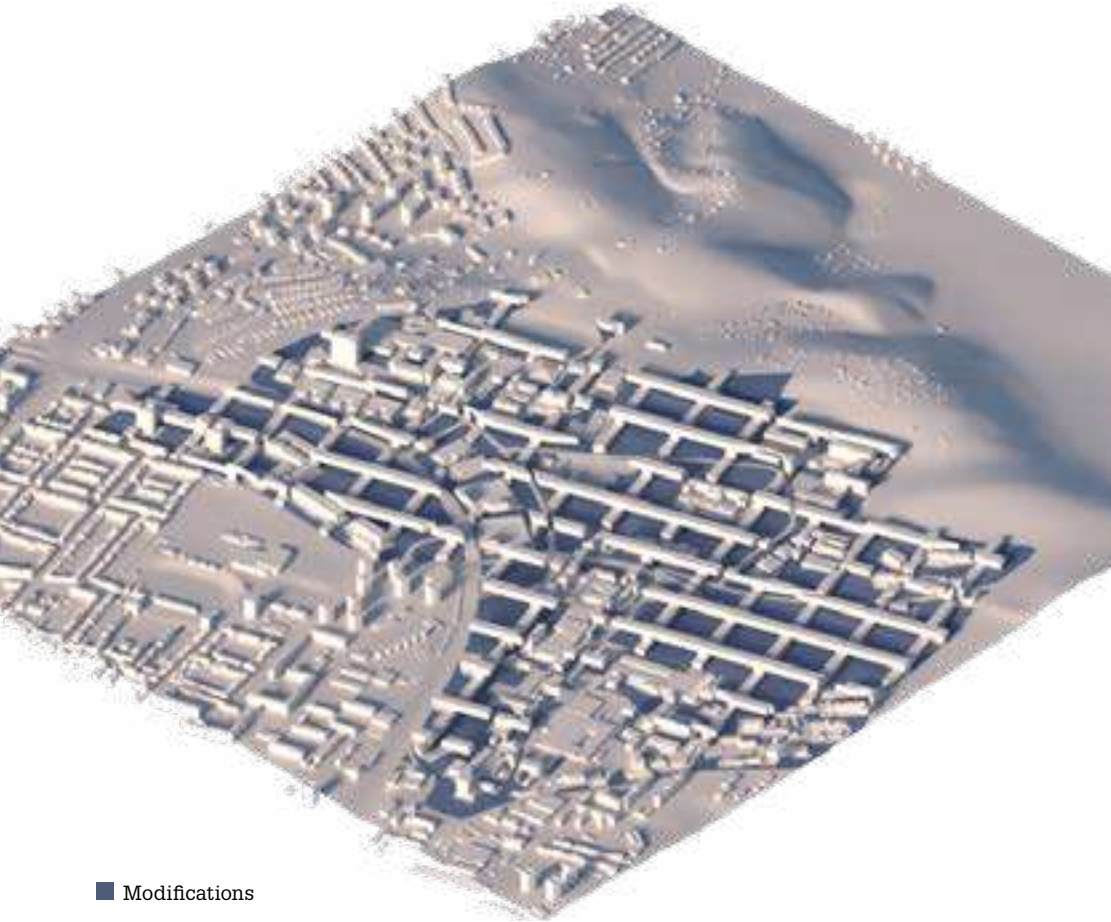




Pleskot's Ostrava

Developed

Footprint area:	366 829 m ²
Built up area:	45,09 %
Gross floor area:	1 364 453 m ²
Average num. of floors:	3,72
Floor area ratio:	1,68
Population:	17 638



■ Modifications

The proposal encompasses three interconnected parts of the city, forming a coherent superstructure. Each part is designed with specific functions in mind – residential, commercial, and cultural. The structures are characterized by bold lines, large open spaces, and innovative materials that reflect Pleskot's style. The gardens at Versailles serve as inspiration for the layout of green areas in the project. Carefully designed parks, flower beds, and water features are distributed among the buildings, creating aesthetically appealing and relaxing environments for residents and visitors.

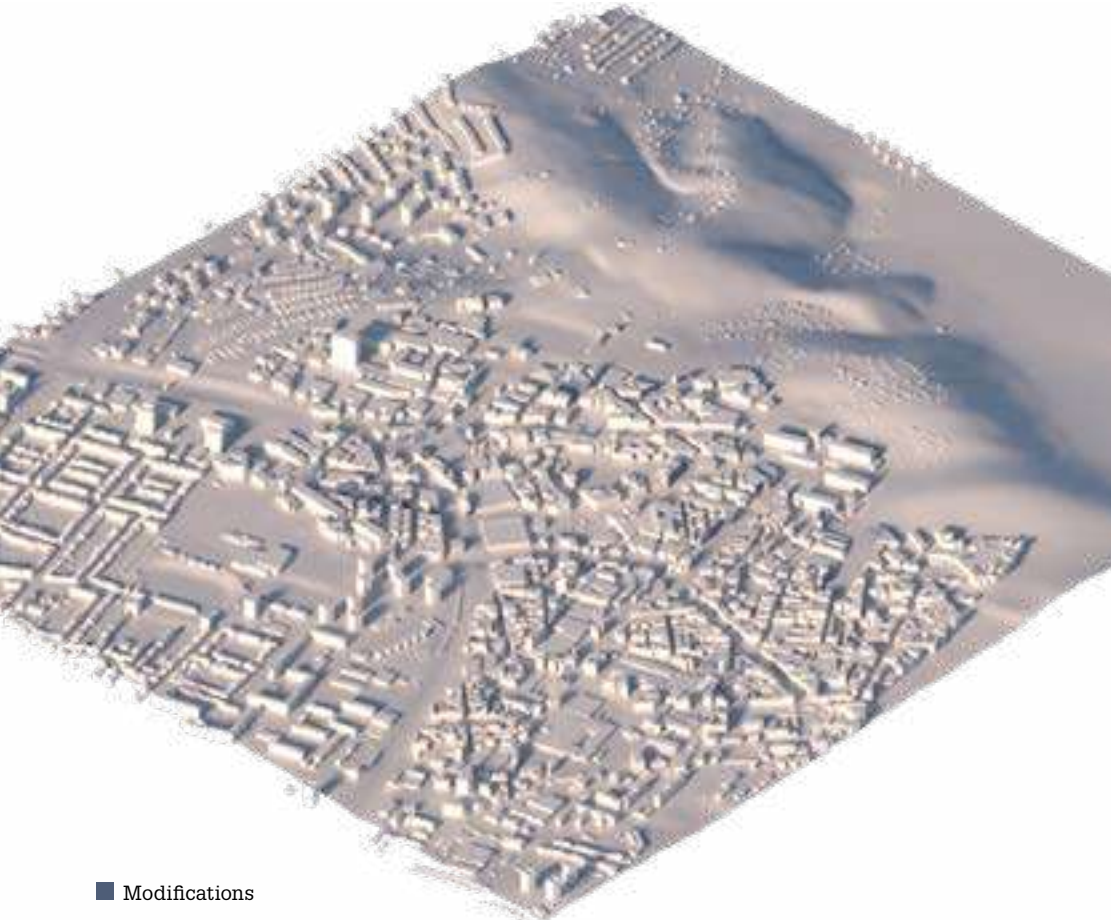




Paris

Developed

Footprint area:	312 808 m ²
Built up area:	38,45 %
Gross floor area:	1 513 345 m ²
Average num. of floors:	4,84
Floor area ratio:	1,86
Population:	13 445



■ Modifications

The main piazza is located between the dormitory buildings of BUT where many students live, and has a potential to be a vibrant public space. Boulevards are created radially to connect and have a network between different parts of the campus and the tram station.

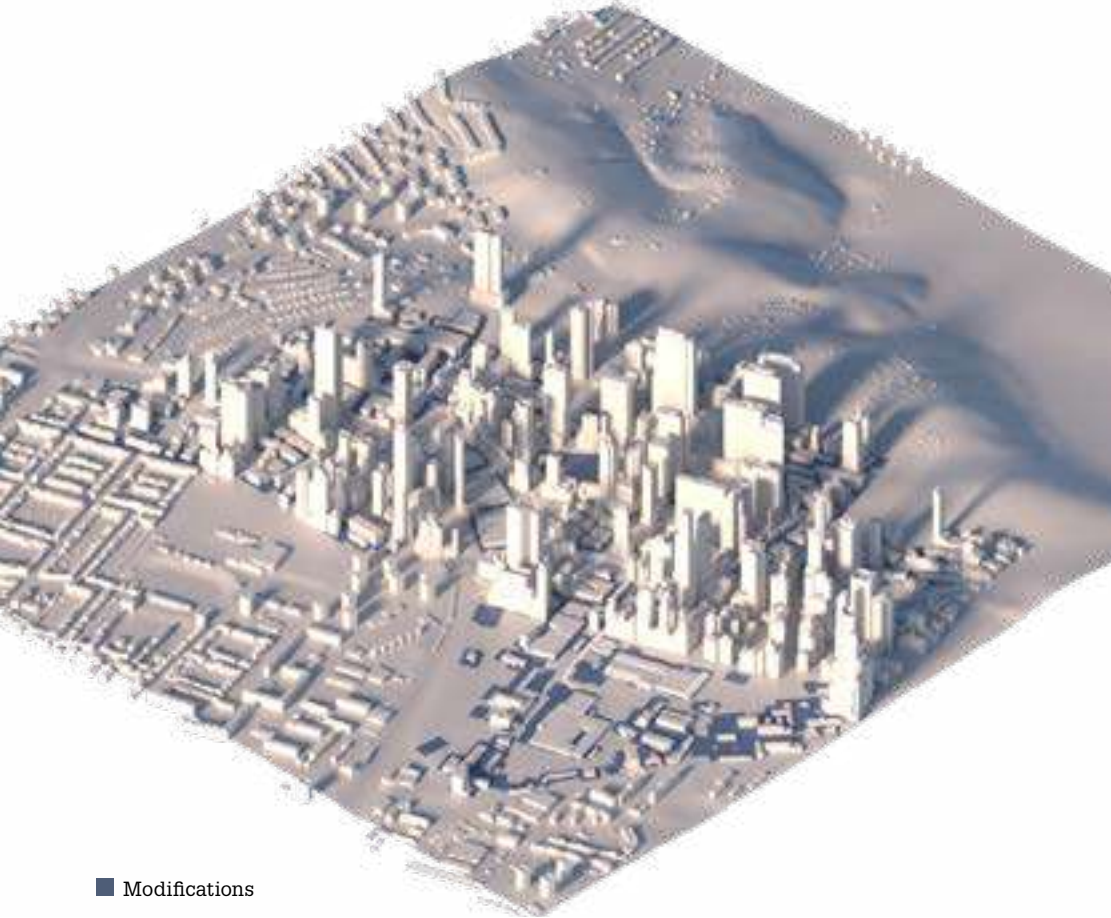




Manhattan

Developed

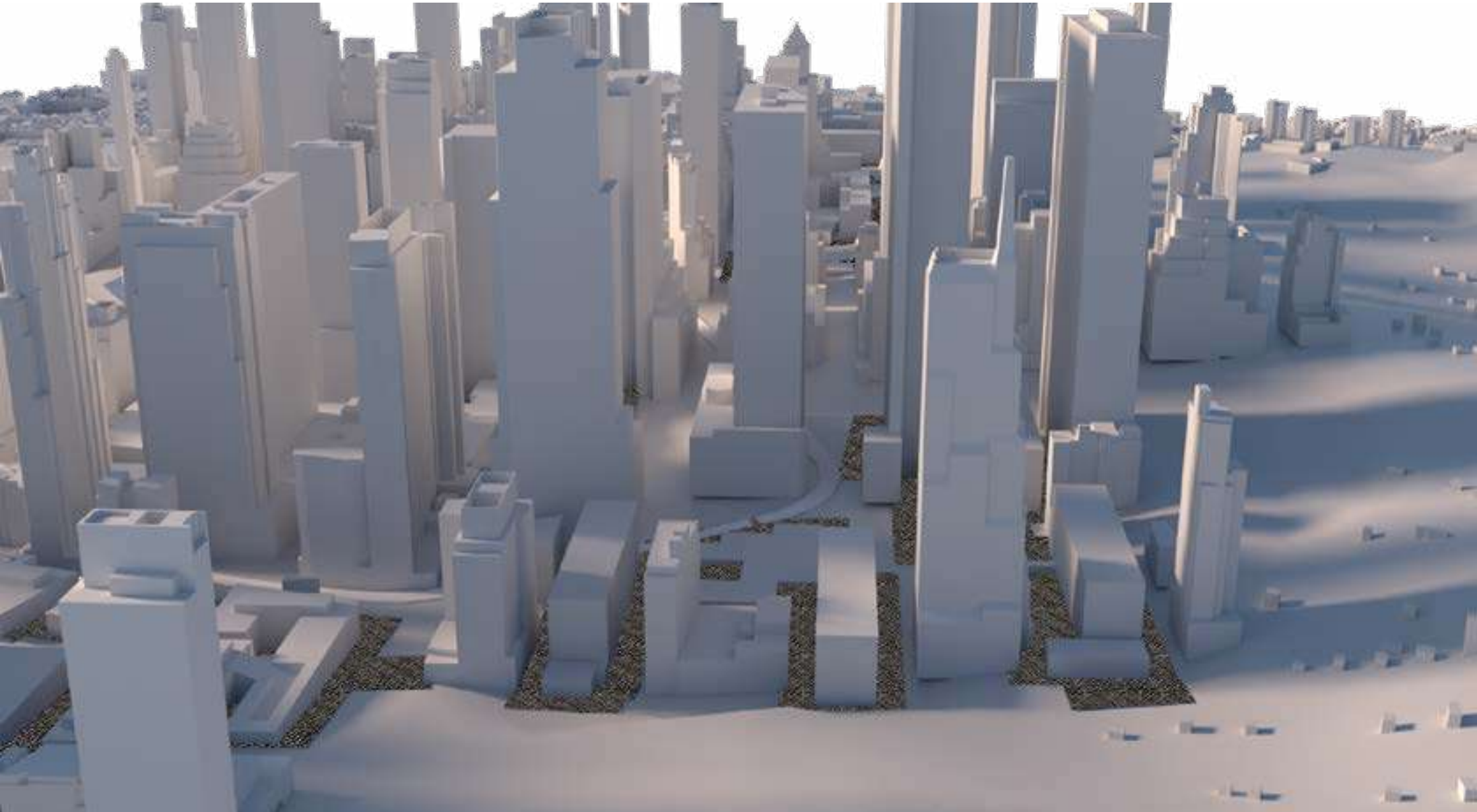
Footprint area:	272 948 m ²
Built up area:	33,55 %
Gross floor area:	4 665 107 m ²
Average num. of floors:	17,09
Floor area ratio:	5,73
Population:	22 905



■ Modifications

The scenario of Manhattan did not need much further adjusting. Everything was in order according to the fire safety and other regulations. Our main goal was to blend the New York structure with Palacký hill, so each avenue integrates with the existing structure better. To support that, we had to search for additional functions to the created offsets.

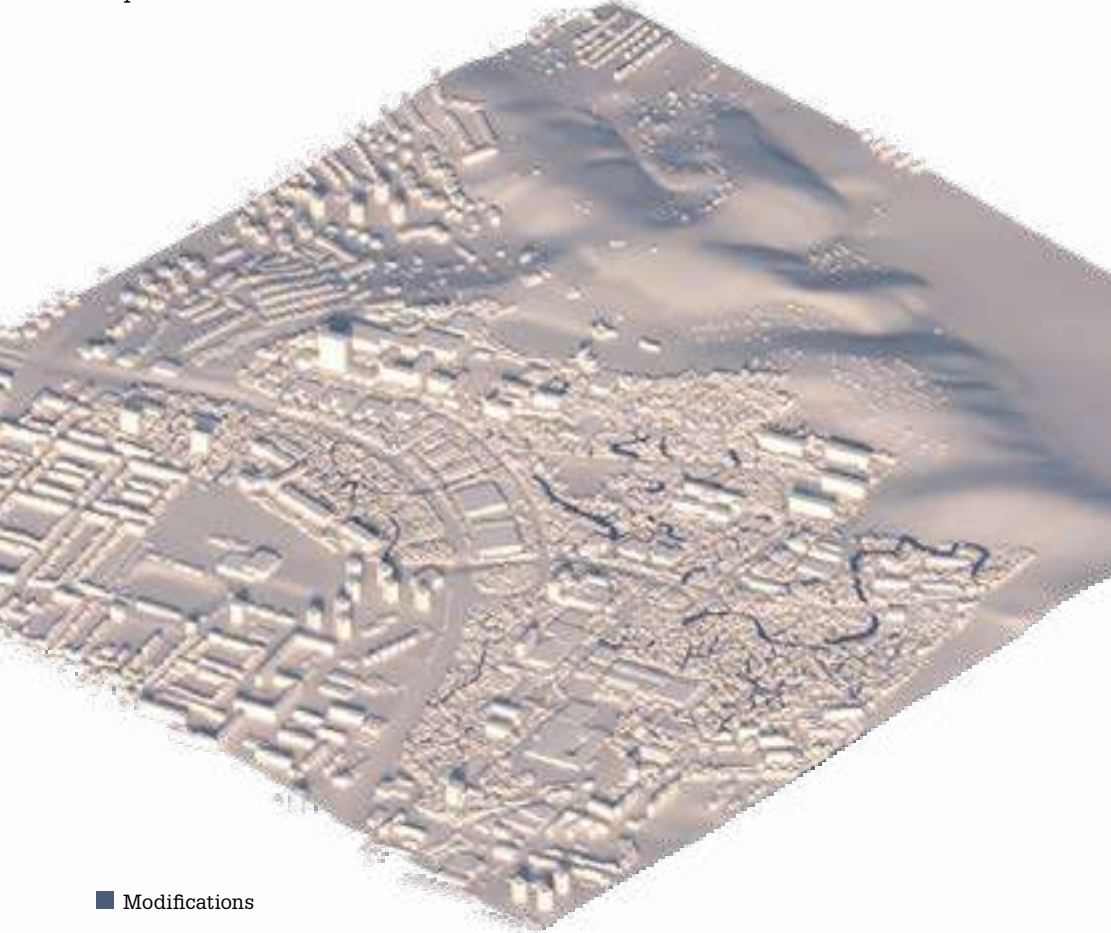




Favelas

Developed

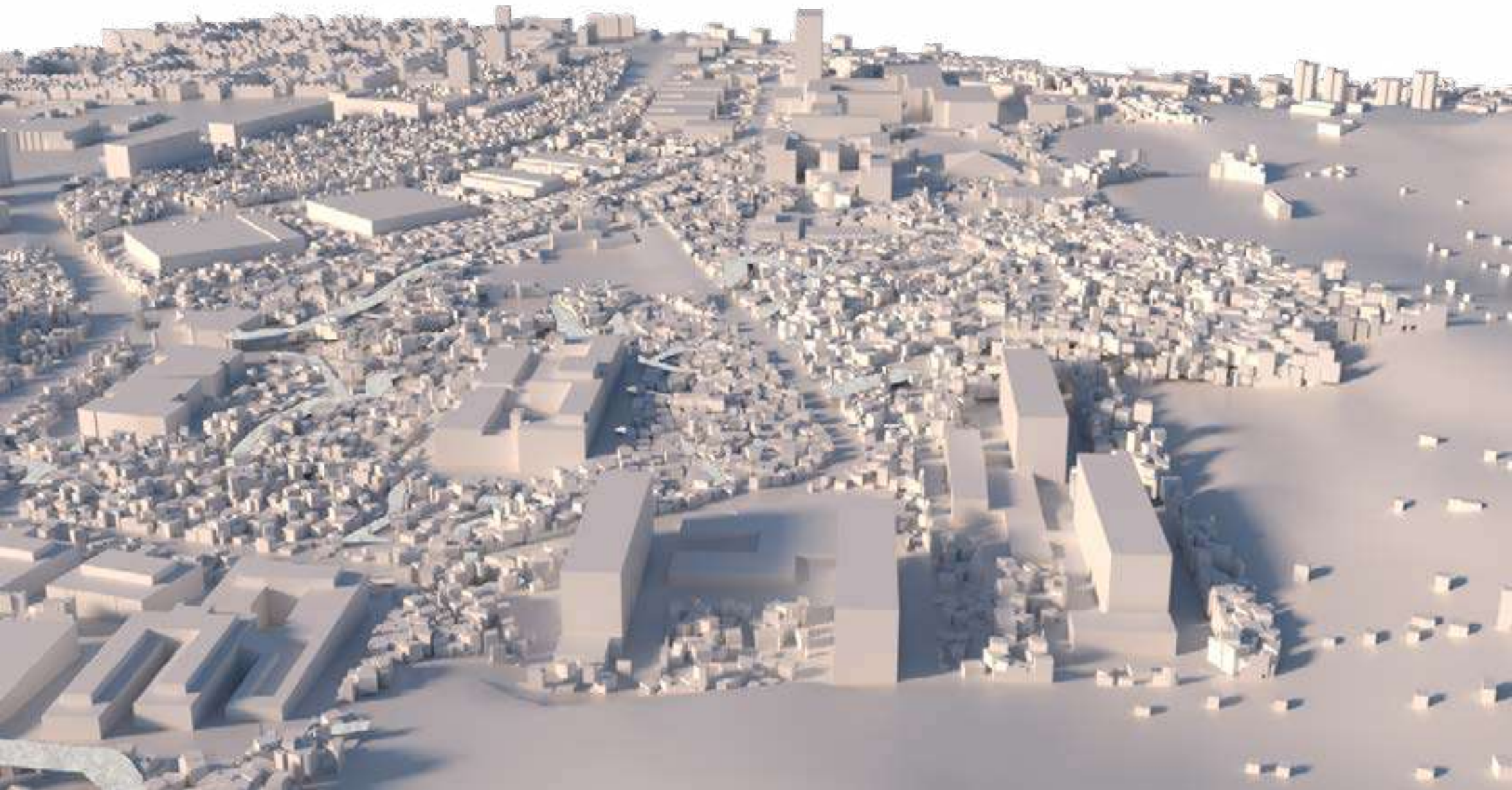
Footprint area:	511 260 m ²
Built up area:	62,84%
Gross floor area:	1 212 947 m ²
Average num. of floors:	2,37
Floor area ratio:	1,49
Population:	83 799



■ Modifications

The concept behind this development was to ensure that all areas are accessible to emergency services, including the fire department, ambulances, and rescue workers. There are three categories of roads in this plan: the first category includes roads between twelve and thirteen meters wide, the second category roads are between six and seven meters wide, and the third category are roads between 4.5 and 5.5 meters wide. Additionally, small plazas have been developed to serve as public gathering spaces, which can function as playgrounds for children or green areas, which are usually favela-type neighborhoods lacking.

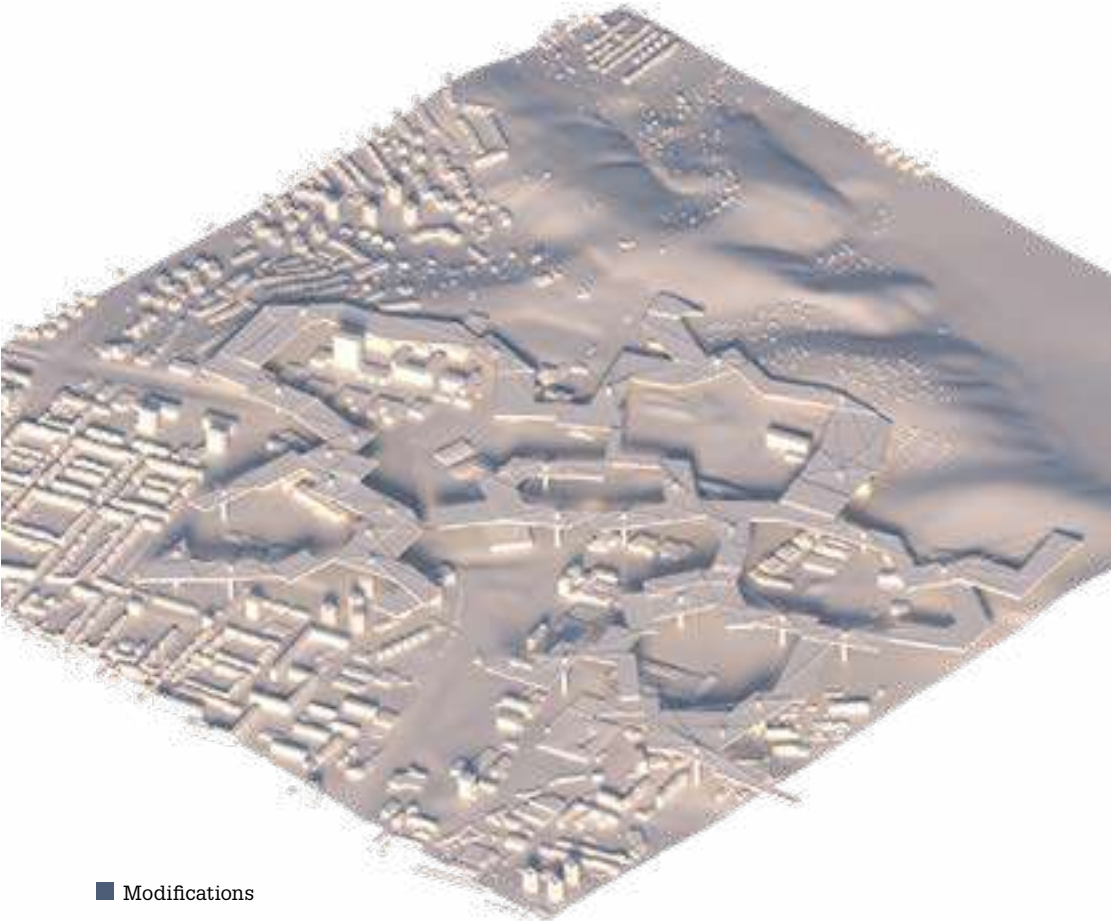




New Babylon

Developed

Footprint area:	544 871 m ²
Built up area:	66,97 %
Gross floor area:	544 871 m ²
Average num. of floors:	1
Floor area ratio:	0,67



■ Modifications

In our developed version we have created large green areas under our megast-
ructure. We created this to improve the environment and add more colour to the
campus. This makes the campus a more lively place and there is more space to
walk around and admire the greenery.

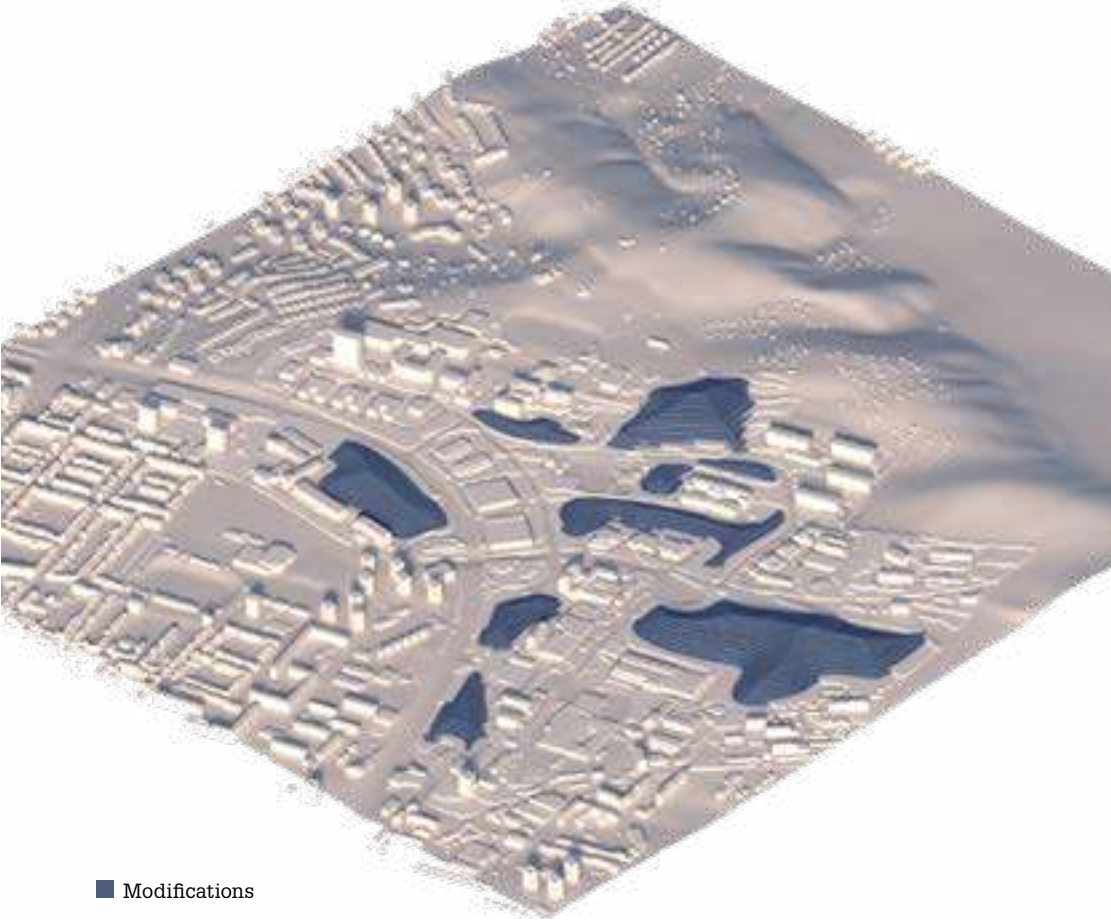




Vancush hill

Developed

Footprint area:	416 774 m ²
Built up area:	51,23 %
Gross floor area:	416 774 m ²
Average num. of floors:	1
Floor area ratio:	0,51
Population:	2888

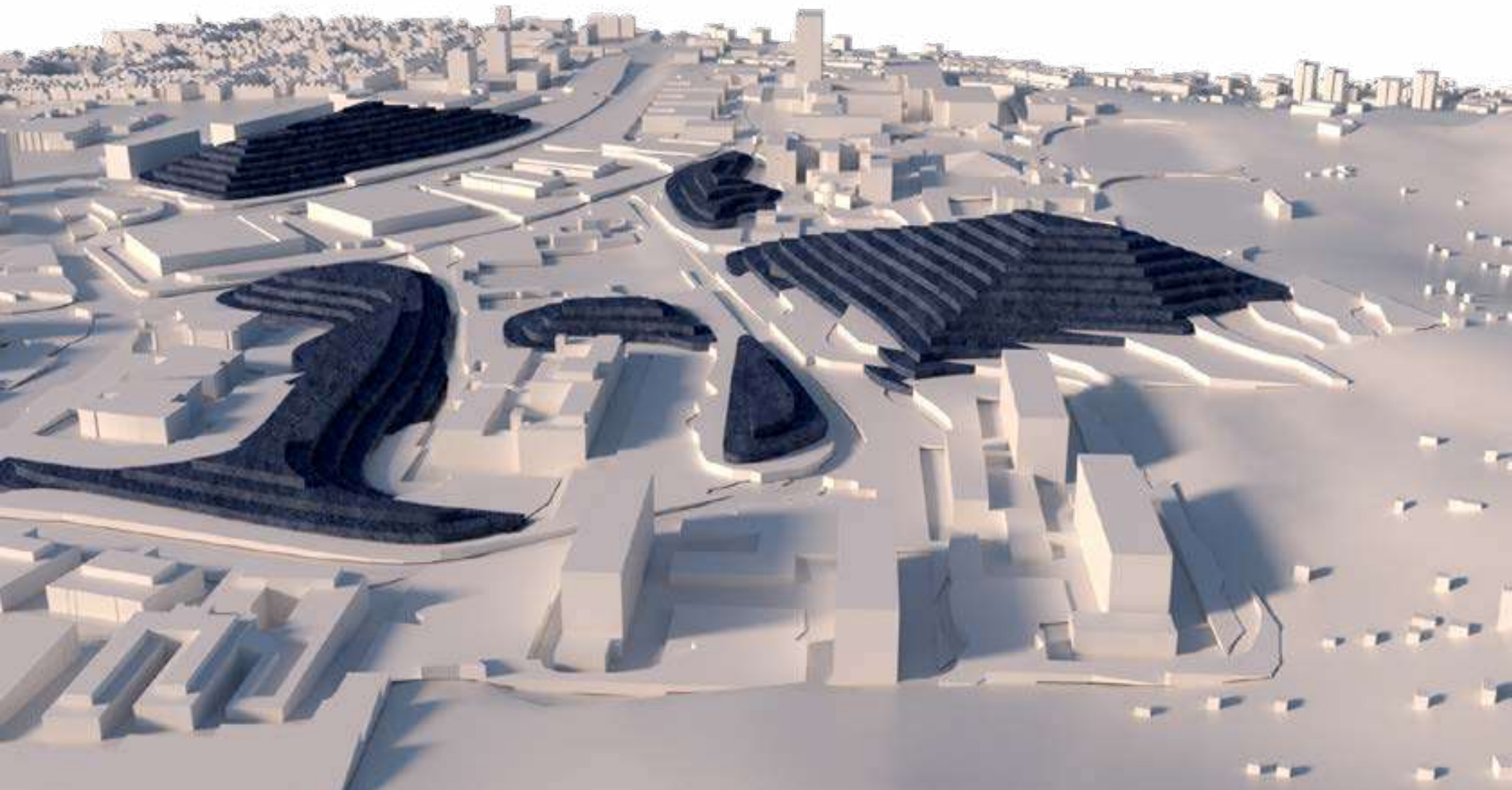


■ Modifications

The terrace houses, which were created by following the natural contours of Palacký Hill, are complemented by the addition of artificial hills with the same building system.

The density of the development is increased for the scenario and a new scenery of Palacký Hill is created. The hidden area within the artificial hills offers efficient use as parking, commerce, or services. Meanwhile, the roofs are used to accommodate not only roads but also private gardens or public spaces.

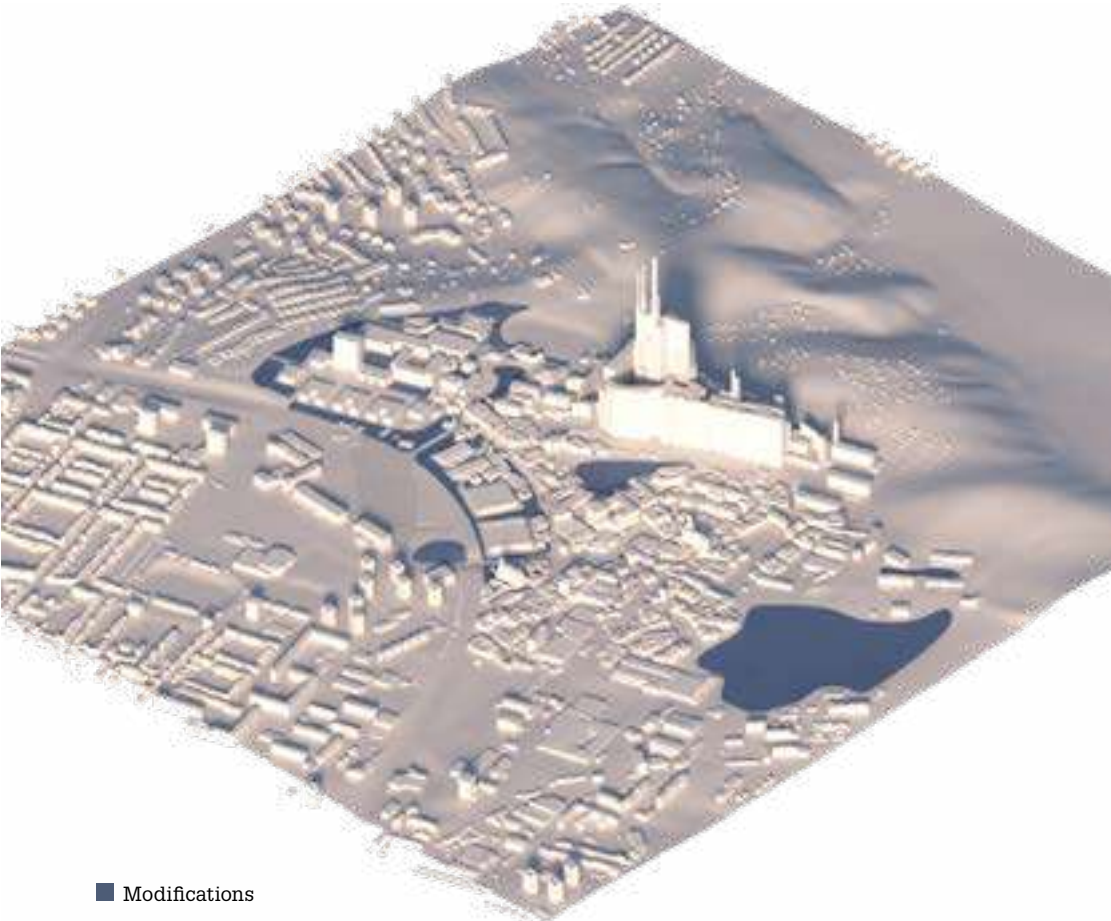




Prague castle

Developed

Footprint area:	205 501 m ²
Built up area:	25,26%
Gross floor area:	1 764 016 m ²
Average num. of floors:	8,6
Floor area ratio:	2,17
Population:	2225



■ Modifications

Following the concept of Brno City of Hills, the Enlarged Prague Castle creates a new visual repertoire for the city in the visual style of an Axis Mundi, as well as provides an immense floor gross area that can accommodate multiple functions. The rest of the site is developed as a variation of Malá Strana, which can, with its medieval urban matrices, mixed with green spaces, create a compelling urban experience that enriches the narrative of Palacký Hill.

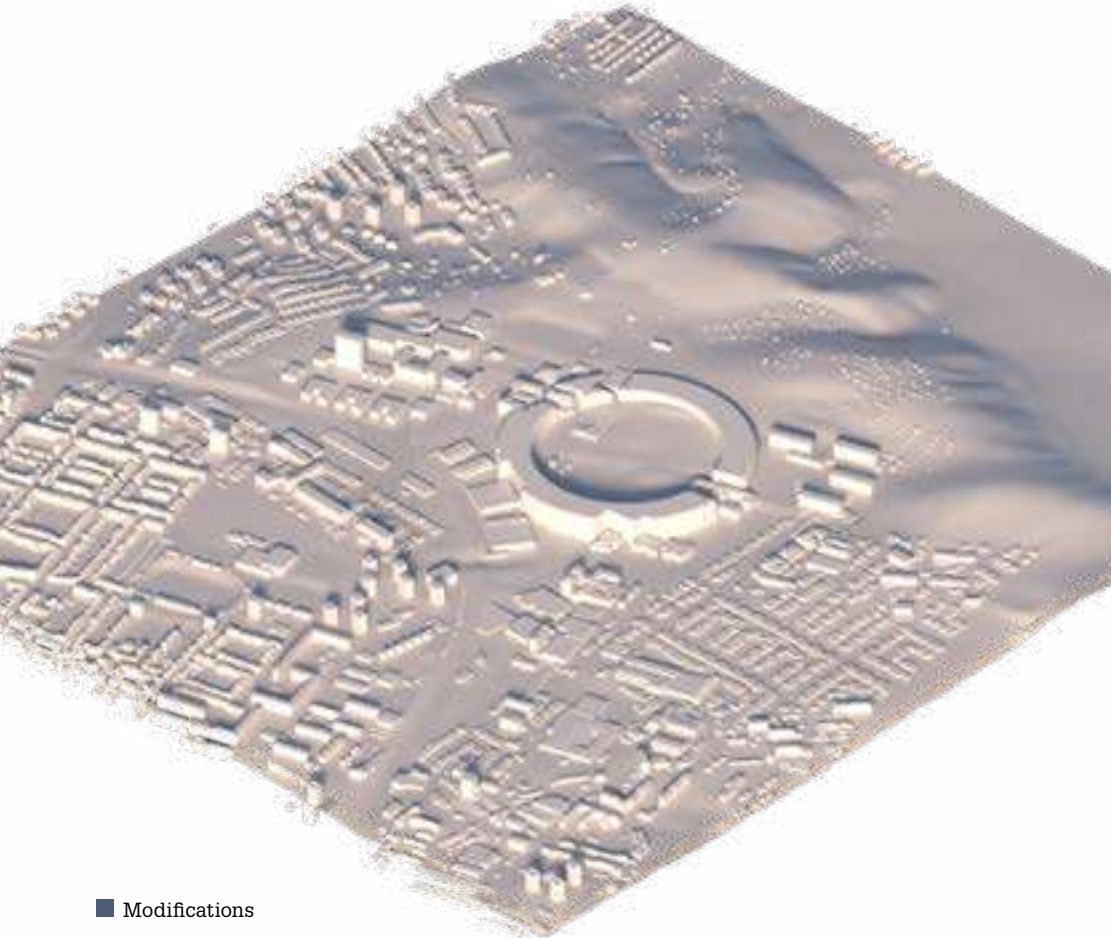




Apple ring city

Developed

Footprint area:	132 476 m ²
Built up area:	16,28 %
Gross floor area:	208 441 m ²
Average num. of floors:	1,57
Floor area ratio:	0,26



■ Modifications

By adjusting the Apple Campus to Palacky Hill we managed to create totally new spaces. The new green area is inviting people to spend their time here. Many new services won't let people be bored. Theater, coffeehouse, gym and many many more are placed in the park that actually functions as a small town.

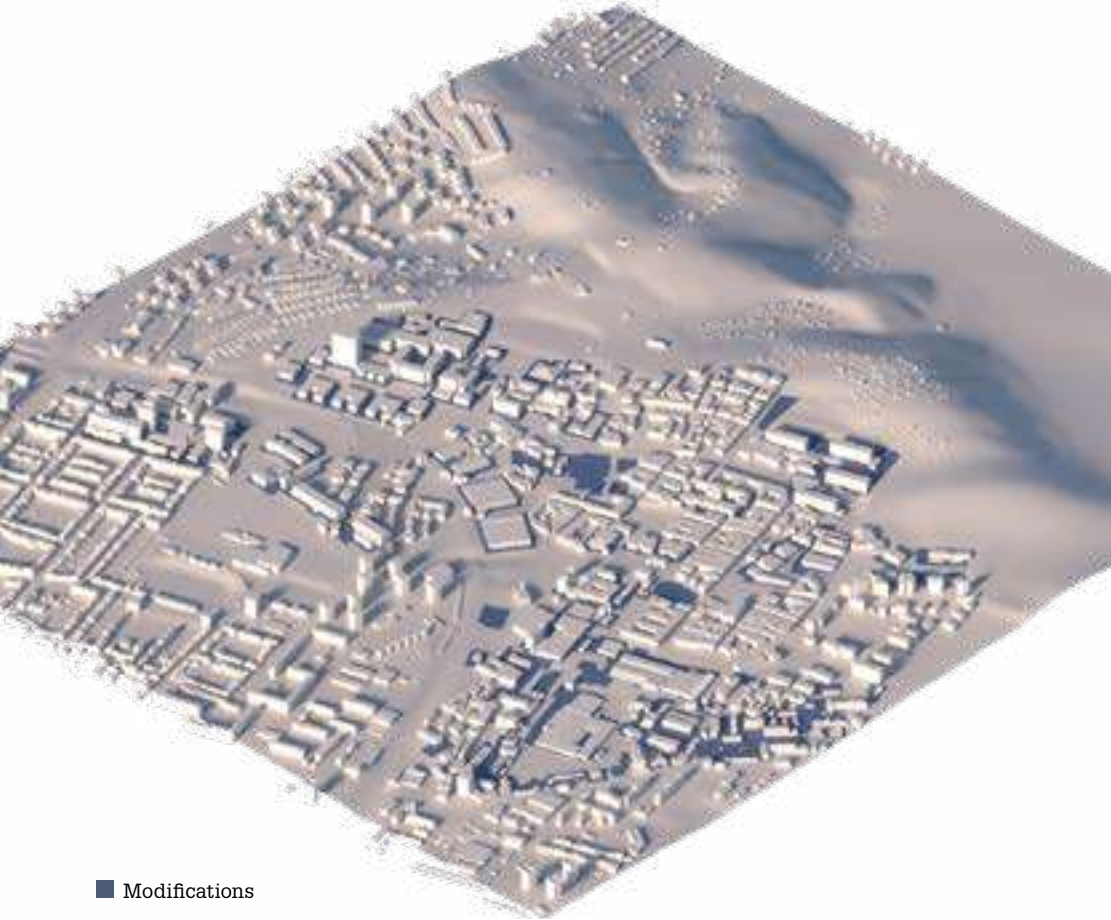




Timisoara

Developed

Footprint area:	203 531m ²
Built up area:	25,02 %
Gross floor area:	875 041 m ²
Average num. of floors:	4,3
Floor area ratio:	1,08
Population:	1563



■ Modifications

After adjusting the roads and green areas, Timisoara remains a cute city, with walkable streets and a scale that feels cozy and familiar. The plaza is functional and one is added to make the terminus of the train station into a desirable square in the city itself. The buildings that are cut can be imagined as having glass facades in the areas where they are cut. Minimize the demolishing of the city structure while showing off the old ways of building buildings.

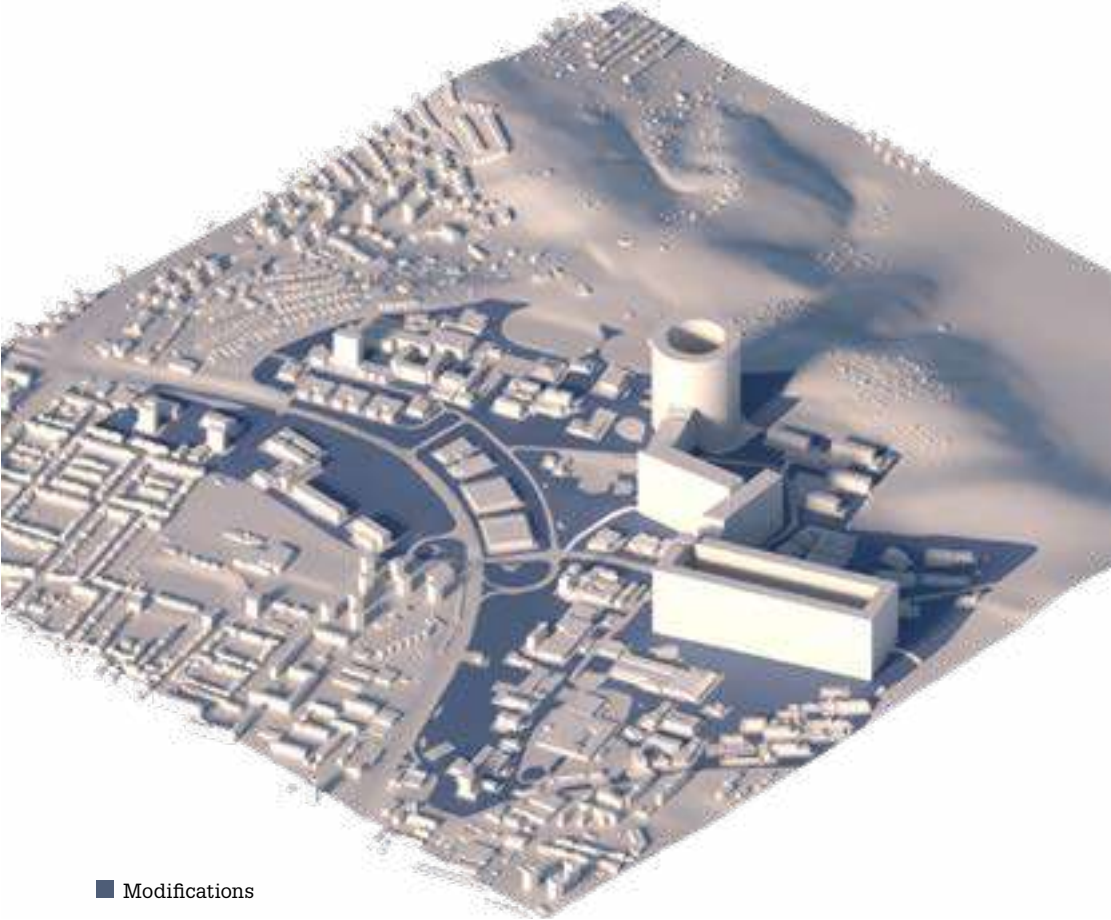




Leonidov plaza

Developed

Footprint area:	218 667 m ²
Built up area:	26,88%
Gross floor area:	4 436 683 m ²
Average num. of floors:	2,29
Floor area ratio:	5,45



■ Modifications

While the buildings still remain landmarks and are dominant with their simplicity, monumentality, and height, some elements were redesigned to be joint community spaces. Light was considered while making protrusions inside the volumes. The inner areas can be open or closed nad under a glass roof. That would create connections between inside and outside space This can lead to interesting proposals for the core of those spaces which would otherwise be considered dark and not desired.

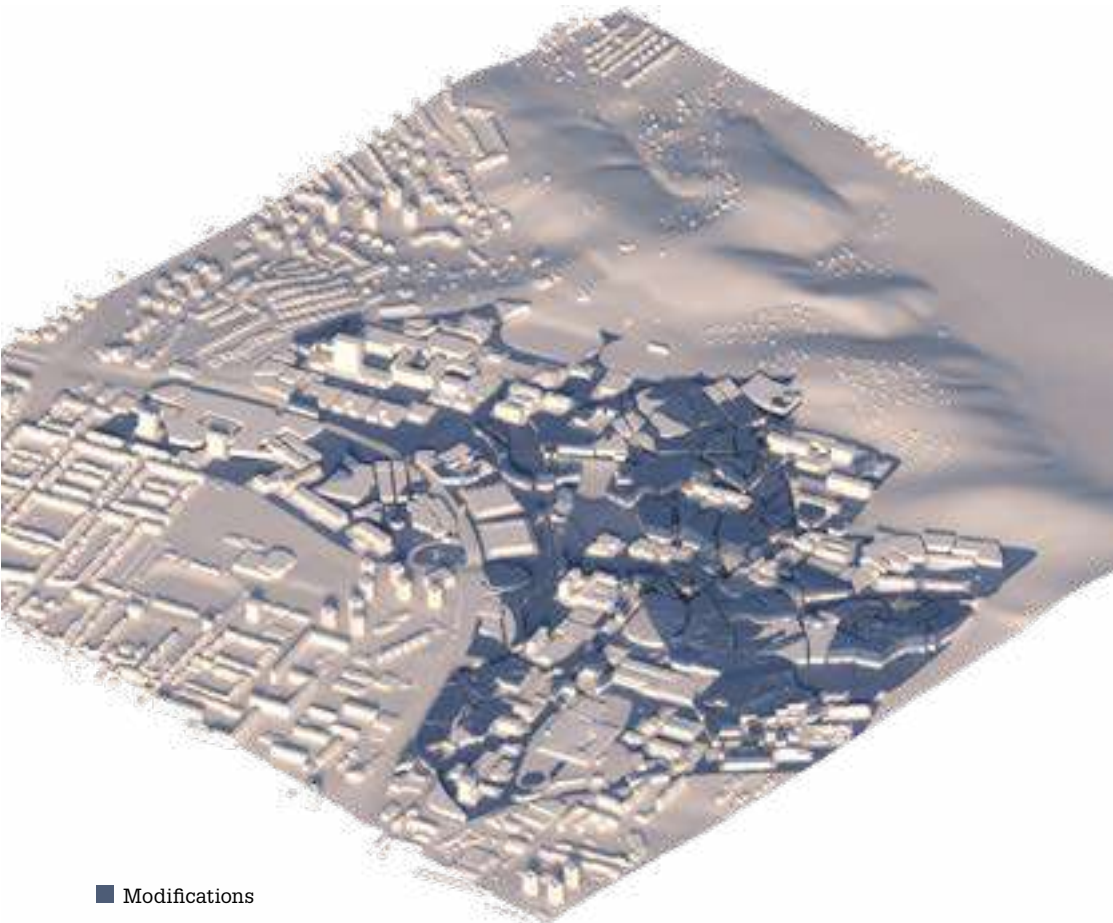




Central Park

Developed

Footprint area:	439 774 m ²
Built up area:	54,05 %
Gross floor area:	1 776 251 m ²
Average num. of floors:	4,4
Floor area ratio:	2,18



■ Modifications

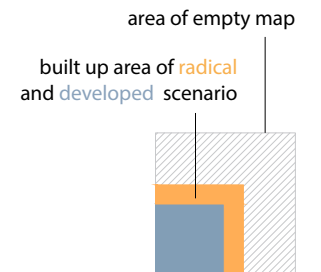
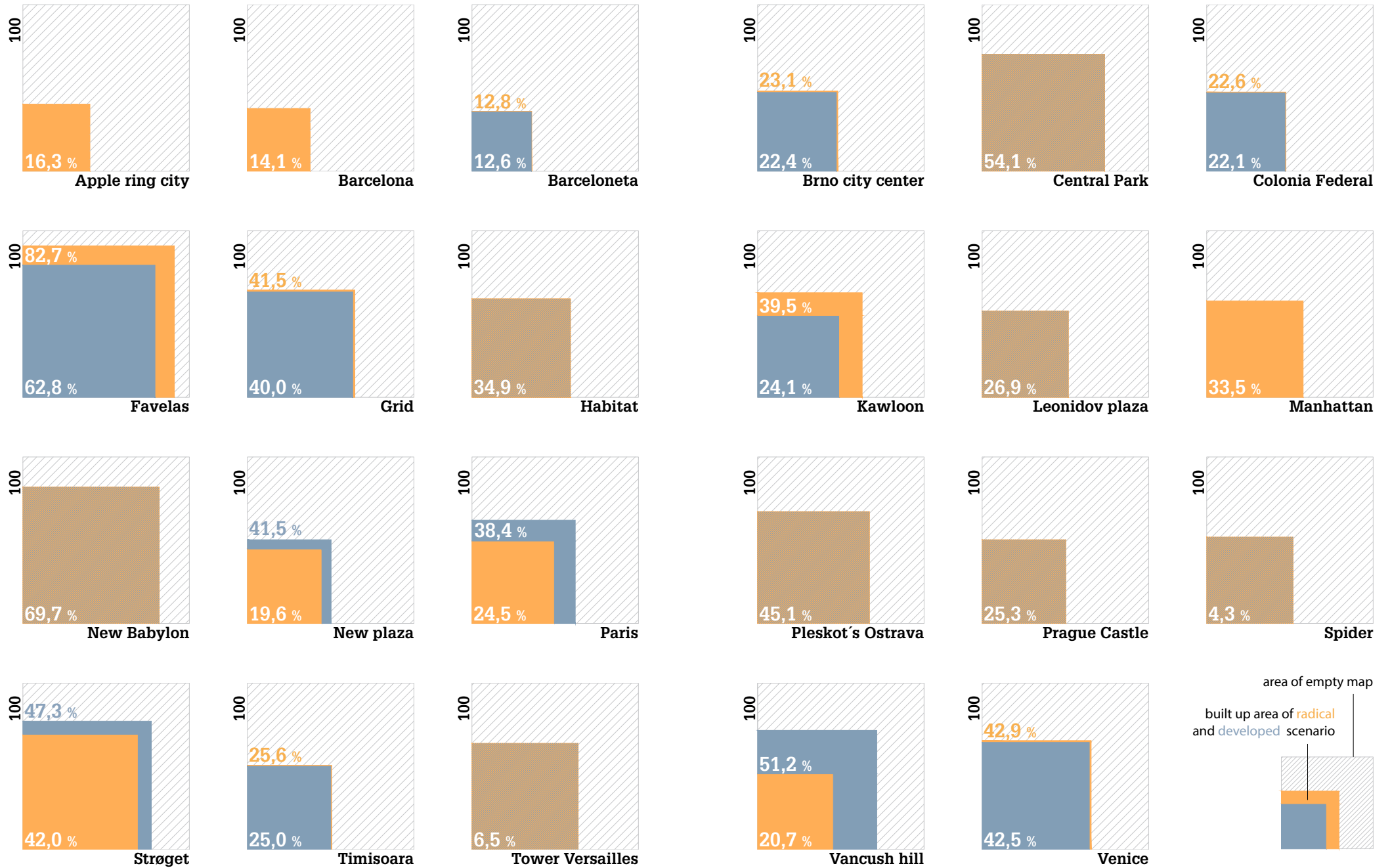
The buildings created in the radical part become the “hills of Brno” in the developed part. The shapes of the individual green roofs mimic the natural terrain of Brno and its hills. It is not a literal copy, but rather an interpretation and imitation of the terrain in this area. The original pathways of Central Park still serve as communication routes; in their current form, however, they are no longer park paths but streets in an urban setting.



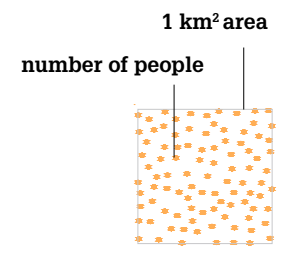


Data comparison

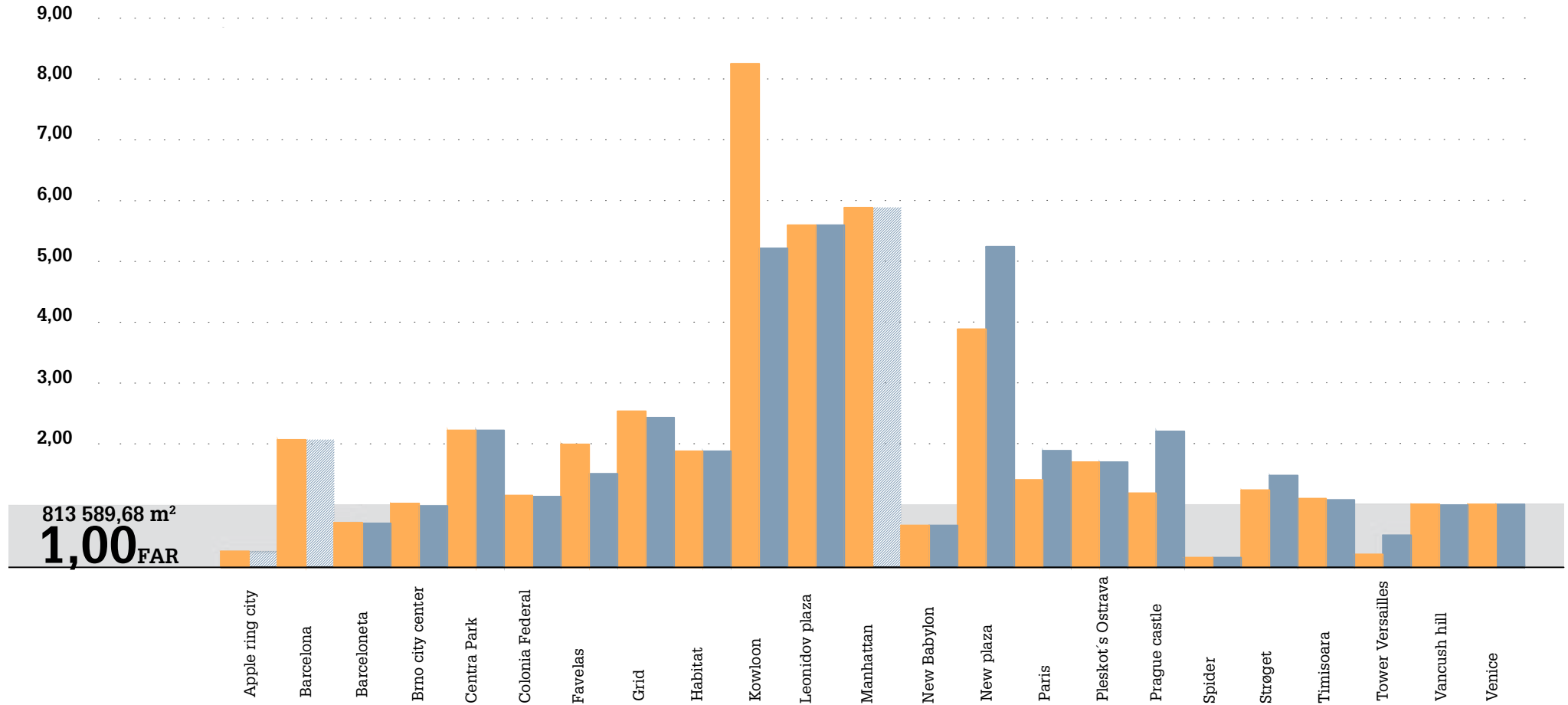
Footprint area



Population density



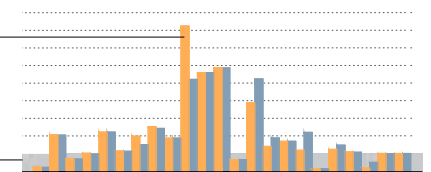
Floor area index



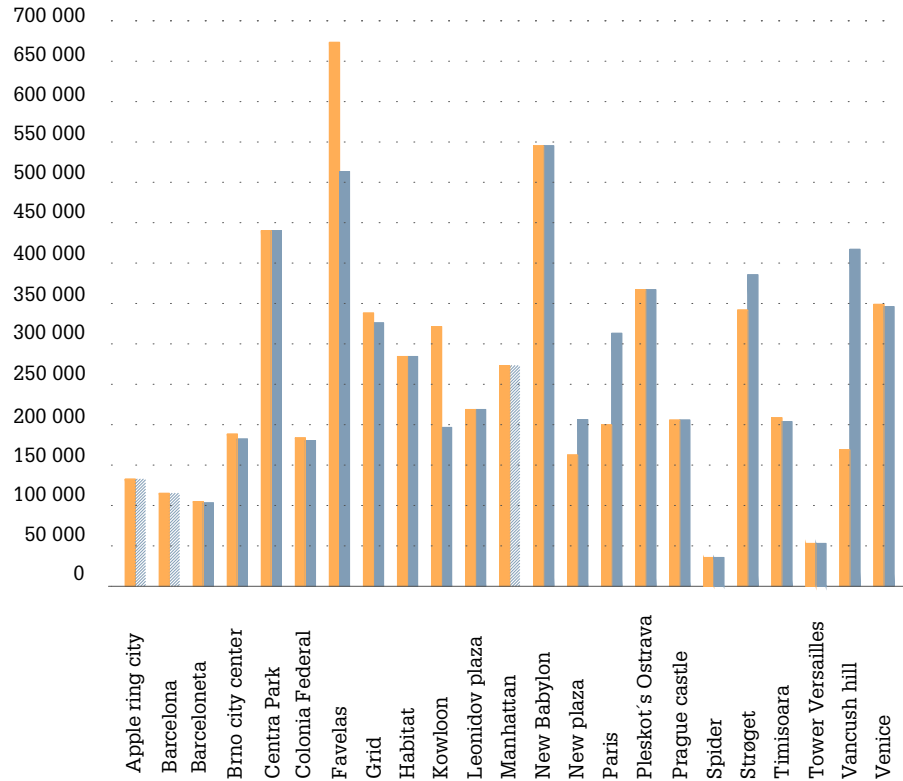
813 589,68 m²
1,00_{FAR}

gross floor area (GFA)
 for radical
 and developed

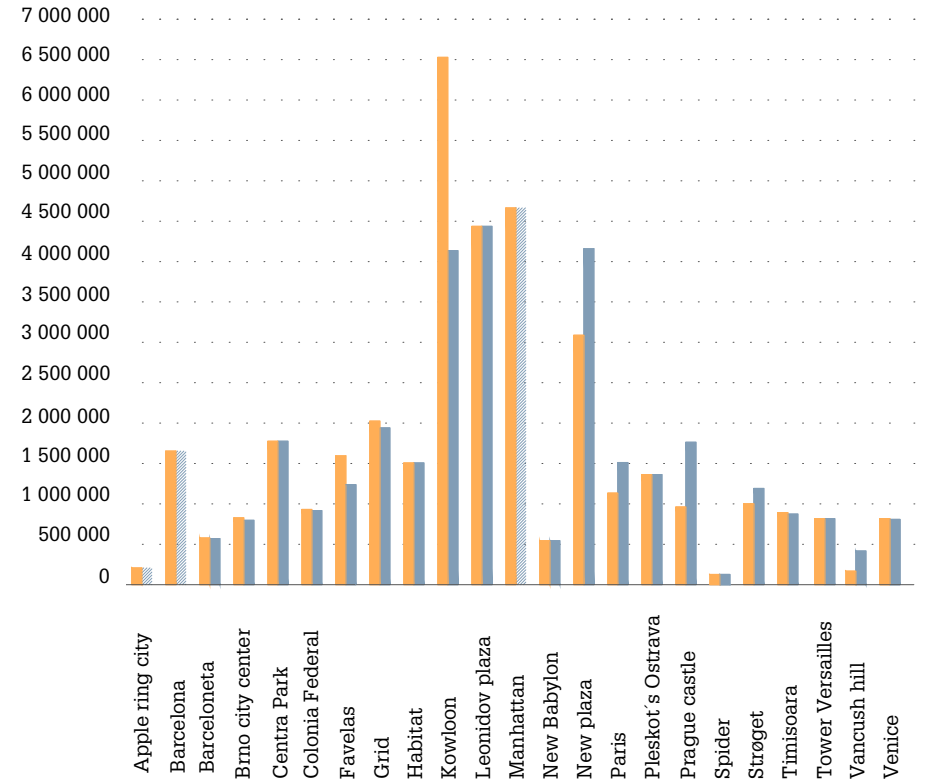
floor area index (FAR)
 ratio of built up area and
 lot area of Palacky hill



Footprint in m²



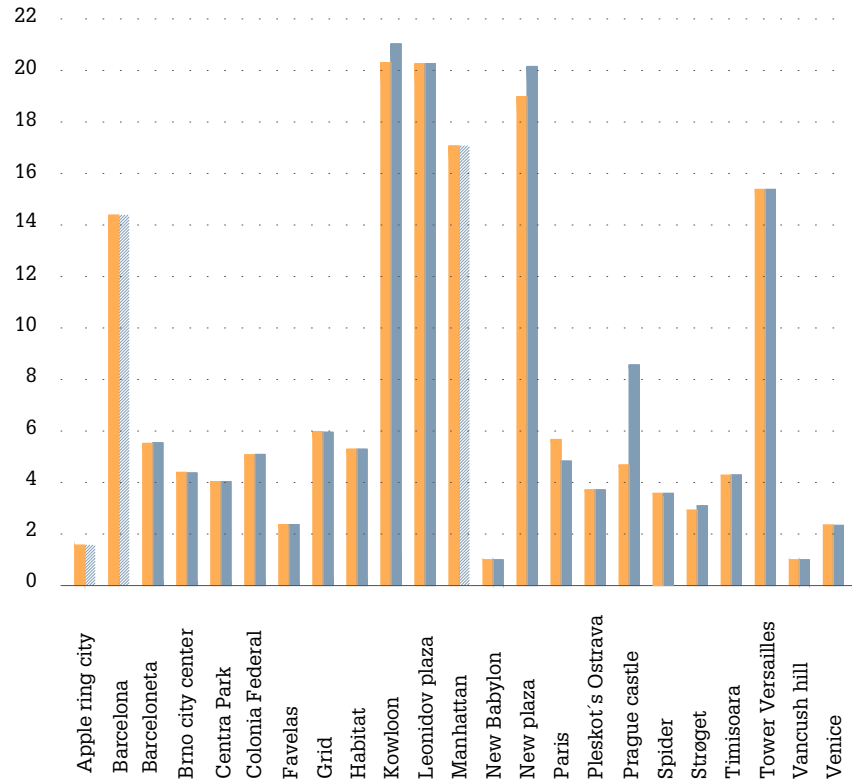
Gross floor area in m²



radical version ■
 developed version ■
 no data

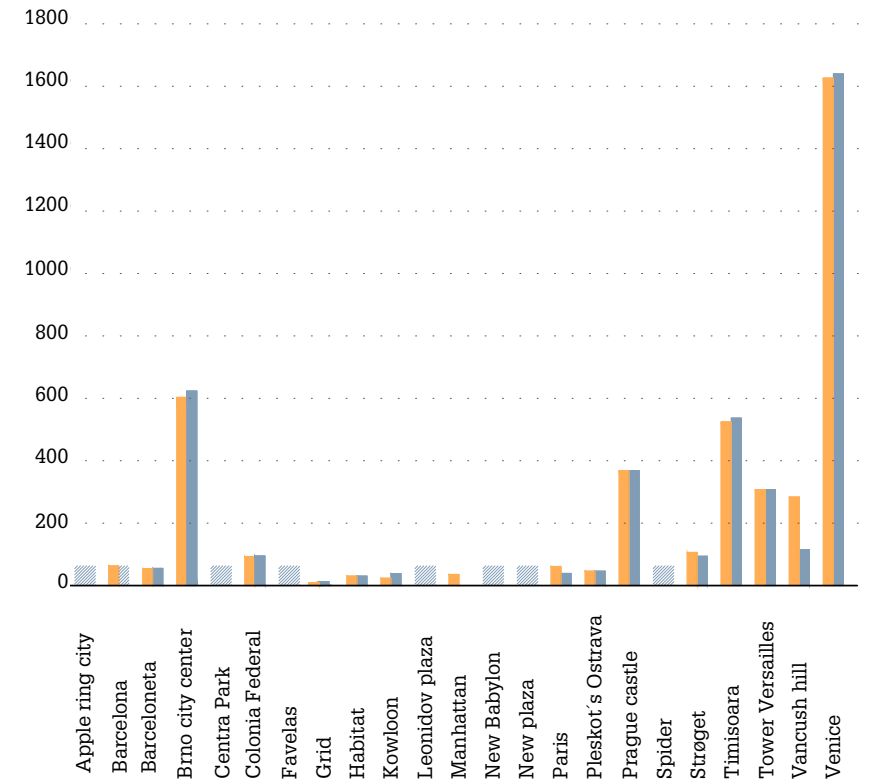
average number of floors

average number of floors



m² per person

m² per person



radical version ■
 developed version ■
 no data ▨

Urban adventure

Michal Palaščák

It's been an exciting few weeks working with Winy Maas on a new vision for the university campus at Palacký hill. His approach to design is very different from the standard understanding of urbanism in our country. It was not easy for everyone to step out of their comfort zone and look at the task from another angle. Neither was it easy to accept to work in a team where everyone worked on their part for the benefit of the whole. After an unconvincing start, before the students understood what was going on, the work took a good direction. Here I have to compliment everyone who worked on the project for their dedication. I am glad that Winy showed us that working with scale, structure and data can be one big **urban adventure**.

Thank you all for a fruitful semester.

What next?

Szymon Rozwalka

One semester, even with the cooperation of dozens of students and many academics, is not enough for this project to be completed but above all verified. To check its good (we hope) and bad (even more we hope of their absence) sides. We are aware that the method developed here should now be checked according to locally applicable standards and regulations. Perhaps this method should even be rethought in the context of local habits, traditions and dependencies, which often represent real constraints similar to physical ones such as gravity or climate.

In a future step, we plan to continue this project. Using scripting, and other contemporary design methods⁸, we will try to modify the results of the current semester using parameters from the local conditions base. For this purpose, in the next step, we will invite students to make individual modificati-

ons in which they can radicalise the original patterns to a greater extent or, conversely, calm them down. In this next step, we will try to collaborate in a wider group of experts, among whom we are happy to welcome our colleagues from the Department of Urban Design of our faculty, whose experience and knowledge will be a great support in this project. The next stage should not, of course, be locked within the walls of the architecture faculty, but should have the ambition of a broader collaboration in a transdisciplinary context.

Ideally, we would like to further collaborate with Winy Maas and his The Why Factory on this project. His experience but above all his open-minded approach was essential.

Thank you Winy.

Imagery sources

¹ WILLENBERGER, Johann. City of Brno, 1591. Online. In: Wikipedia. 2001. Dostupné z: https://cs.m.wikipedia.org/wiki/Soubor:Brno_Willenberg_1593.jpg. [cit. 2024-05-18].

² Panorama of city Brno in Czech Republic. Online. In: 123RF. 2005. Dostupné z: https://www.123rf.com/photo_7750370_panorama-of-city-brno-in-czech-republic.html. [cit. 2024-05-18].

³ Kowloon model plan. Online. In: The building arts notebook. Dostupné z: <https://buildingartisansguild.com/wp-content/uploads/2016/07/kowloon-model-plan.jpg>. [cit. 2024-05-19].

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All schwarzplans are sourced from OpenStreetMap.

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*the lecture was a part of the project Vektor chudoby

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⁸ During the past semester, architect Jan Pernecký from Bratislava introduced us to his software devs, and we would like to try out collaborating with him in the future.

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All satellite photos sourced from ArcGIS Pro.

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