Prague Planning Perspective
City and its Landscapes

Josef Smutný - architect
Martin Kloda - architect

NGO „Man and Space“ lecture about redirection of Prague´s planning system

Source of datas: with support from: Office of the Metropolitan Plan, Prague Institute for Planning and Development IPR Praha

Prague City

CITY AND ITS LANDSCAPES

Facts about Prague

Area: 496 km^2

Population: 1.25 mil.

Metropolitan population: 1.99 mil.

Nr. of Boroughs: 57

Density: 2.601 p./sq. km

GDP per capita: 42.900 € (171% of EU average, 2011)

Unemployment: 5,4 %

Tourism: min. 8 mil. visitors/ year

Legal framework

Other acts and bylaws:

Building Act (Act. Nr. 183/2006 Coll.)

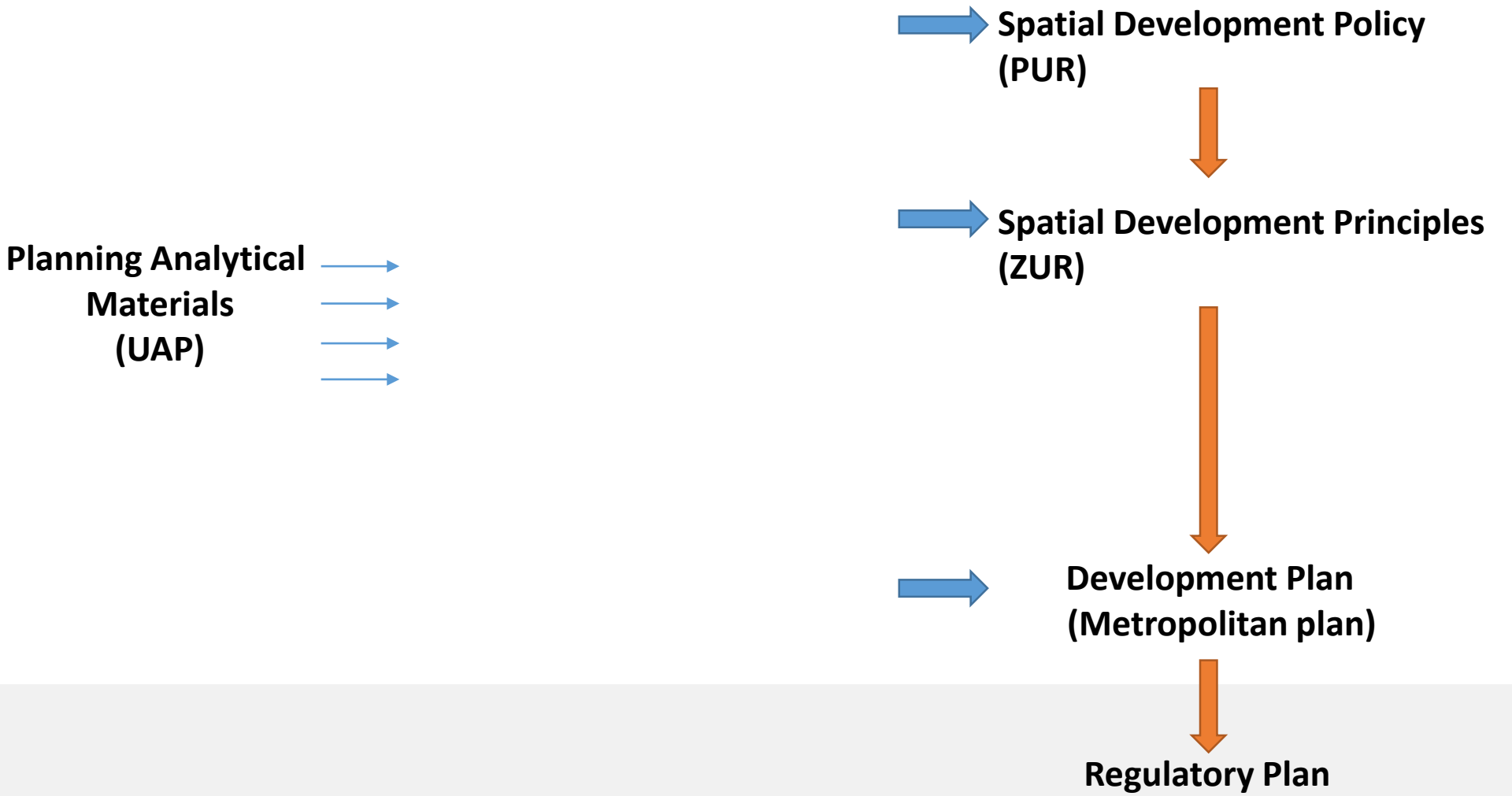
Prague Building Standards (valid from October 2014)

Act of Capitl City of Prague

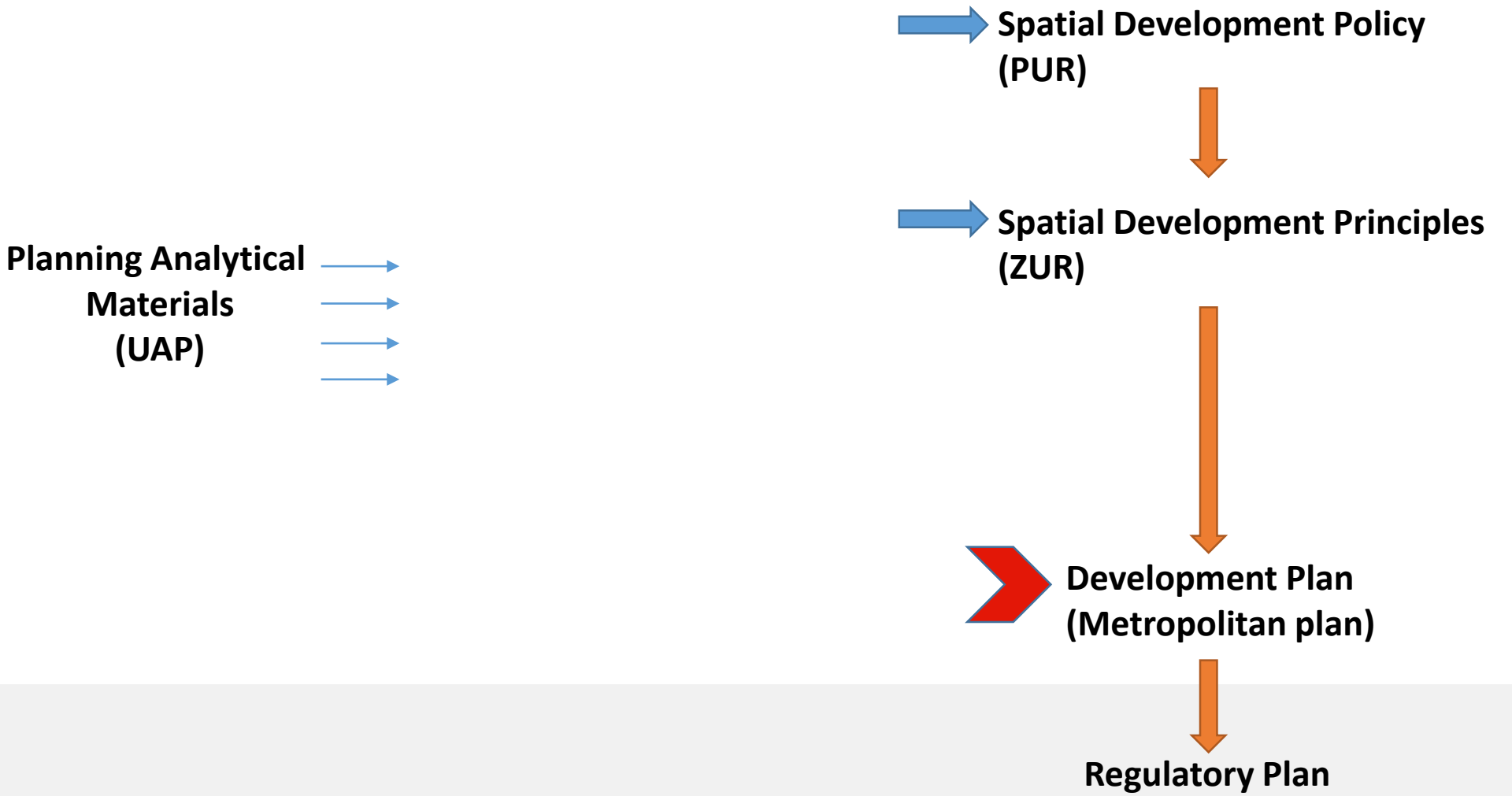
Prague City

HIERARCHY OF PLANS

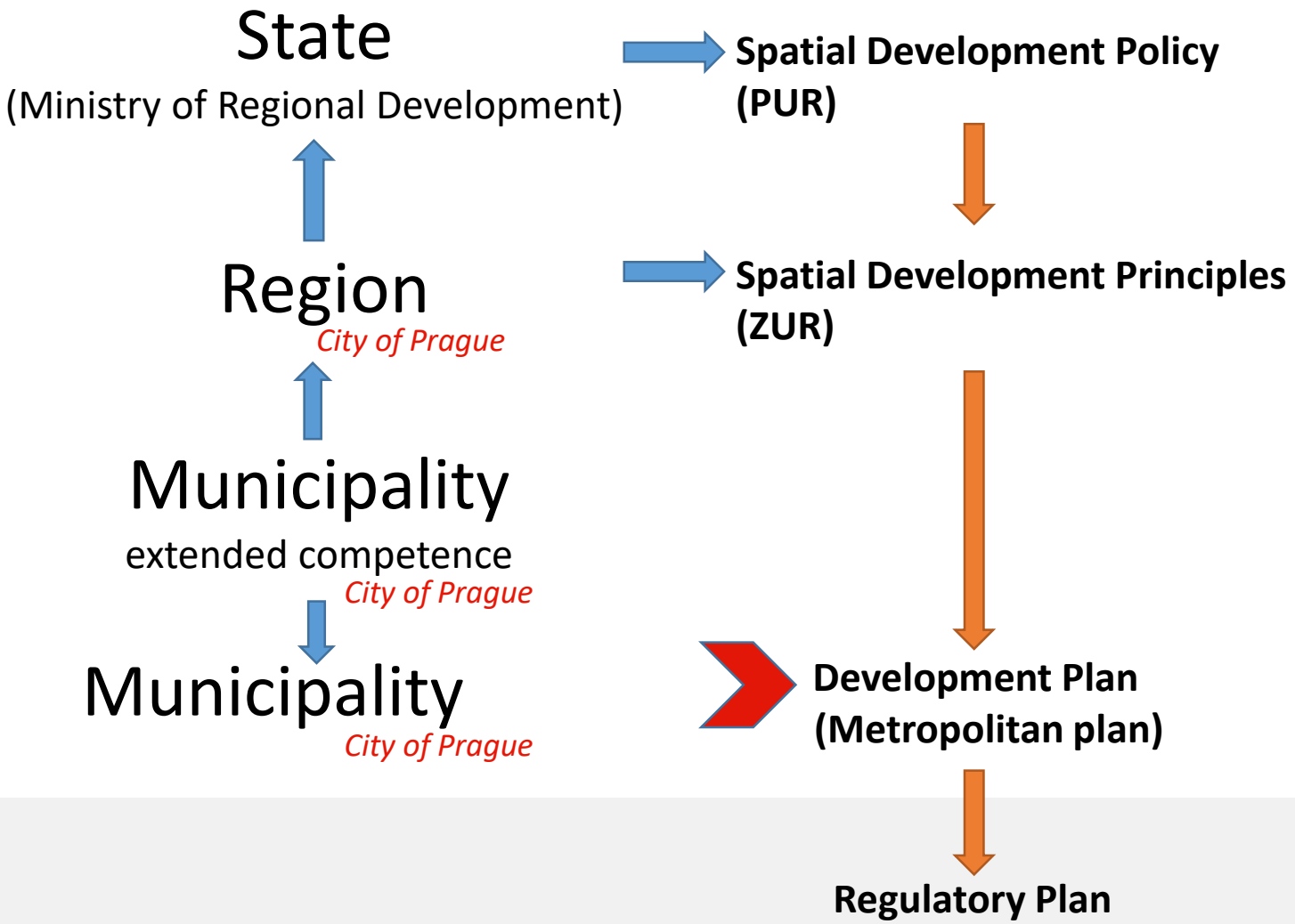
Hierarchy of plans



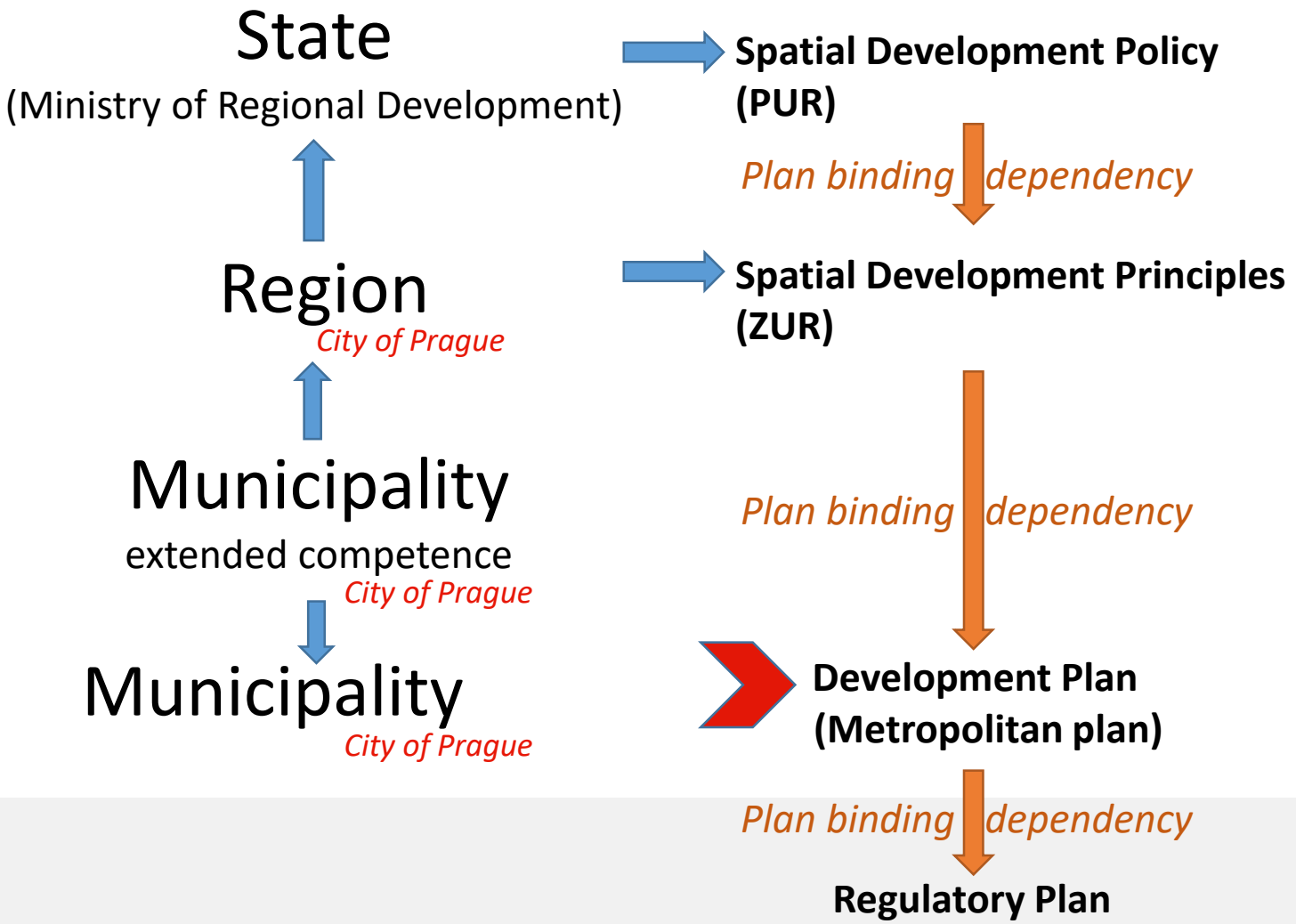
Hierarchy of plans



Hierarchy of plans

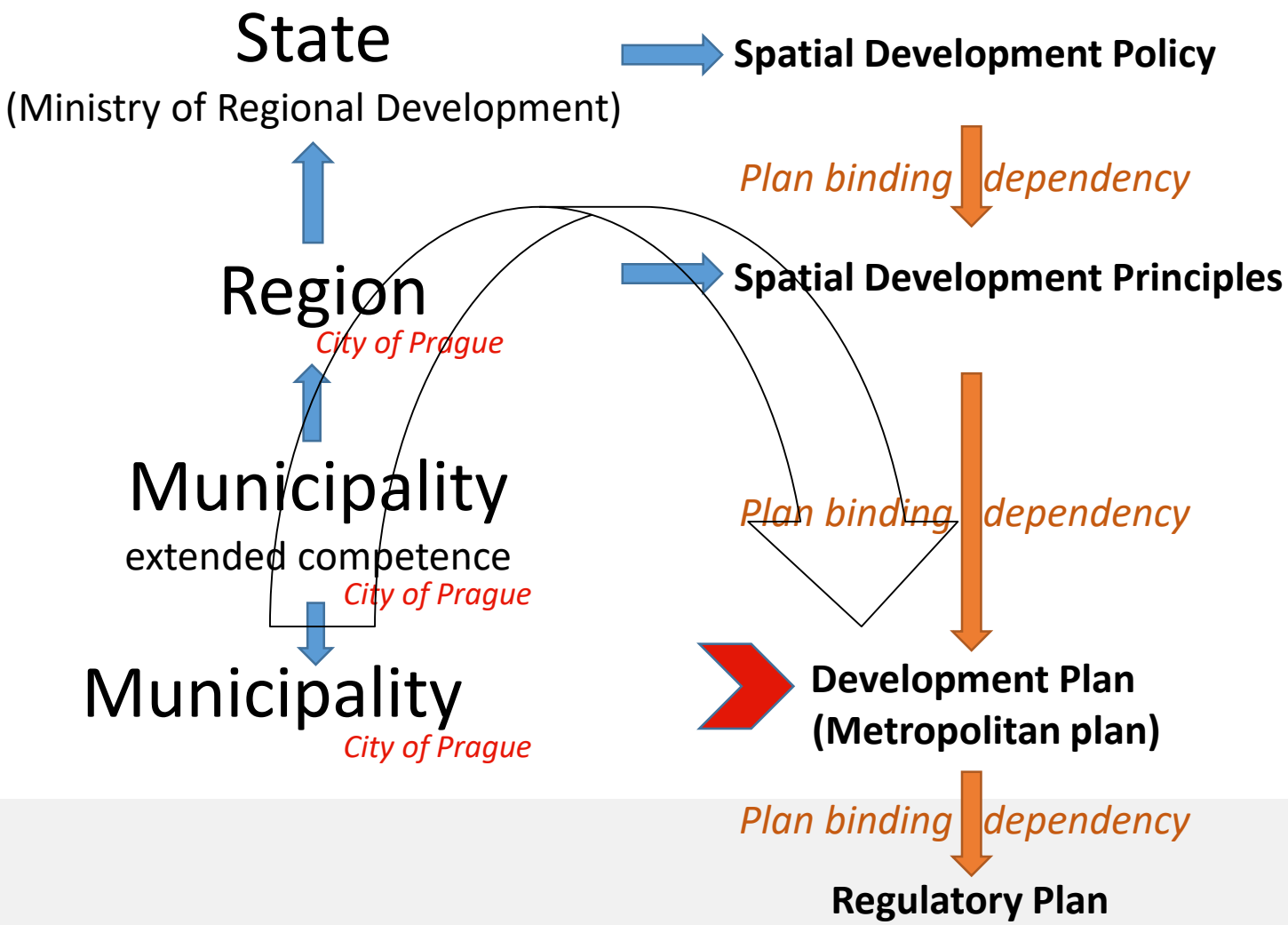


Hierarchy of plans



Hierarchy of plans

– in order to make changes while preparing Metropolitan plan, changes in binding document ZUR necessary - (changes in transport system etc)



PRAGUE IS A VERY GREEN CITY

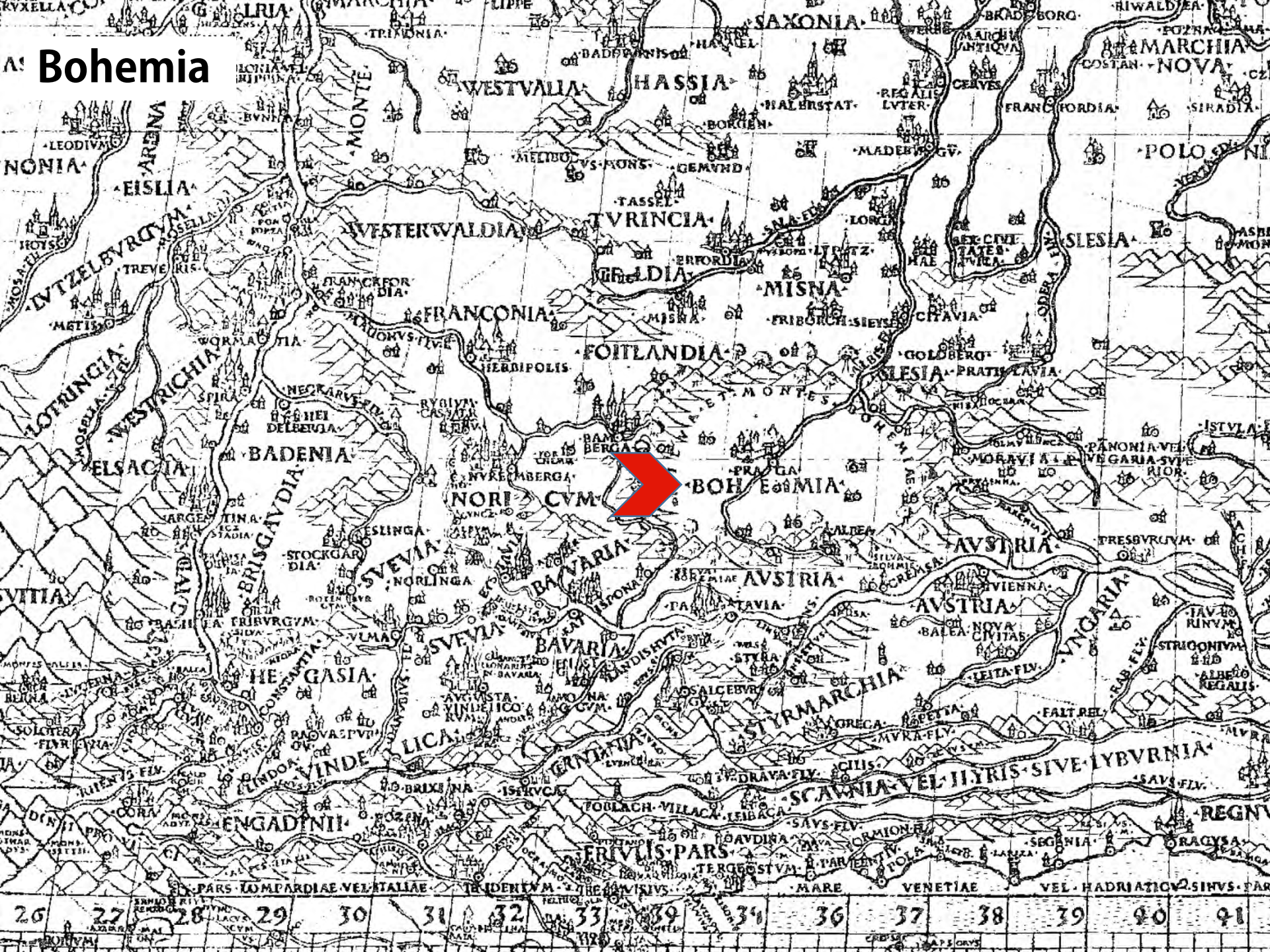
Prague City

EUROPE - BOHEMIA - PRAGUE

Bohemia

is situated in the middle of Europe

Bohemia



SAXONIA
WESTVALIA
HASSIA
MARCHIA NOVA
POLO
EISLIA
WESTERWALDIA
TVRINCIA
MISNA
FRANCONIA
FOITLANDIA
SLESIA
LOTRINGIA
WESTRICHIA
BADENIA
ELSACIA
BRISGAVDIA
NORICVM
BOHEMIA
SVEVIA
BAVARIA
AVSTRIA
VNGARIA
HEGASIA
STYRMARCHIA
VINDELICA
ENGADINII
FRIVLIS PARS
SCAVNIA VEL ILYRIS SIVE LYBVRNIA
MARE VENETIAE VEL HADRIATICVM SINVS
26
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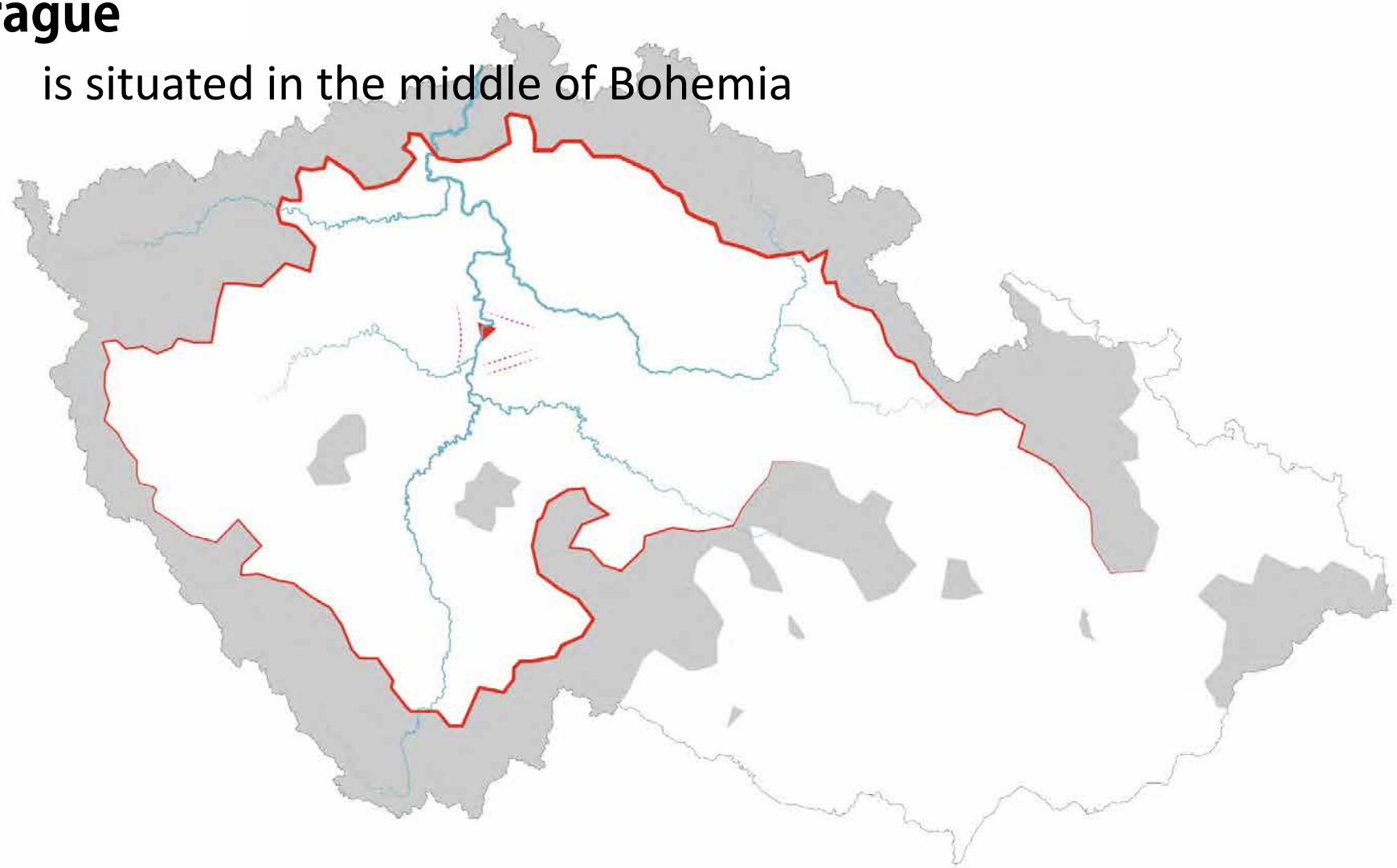
40
41

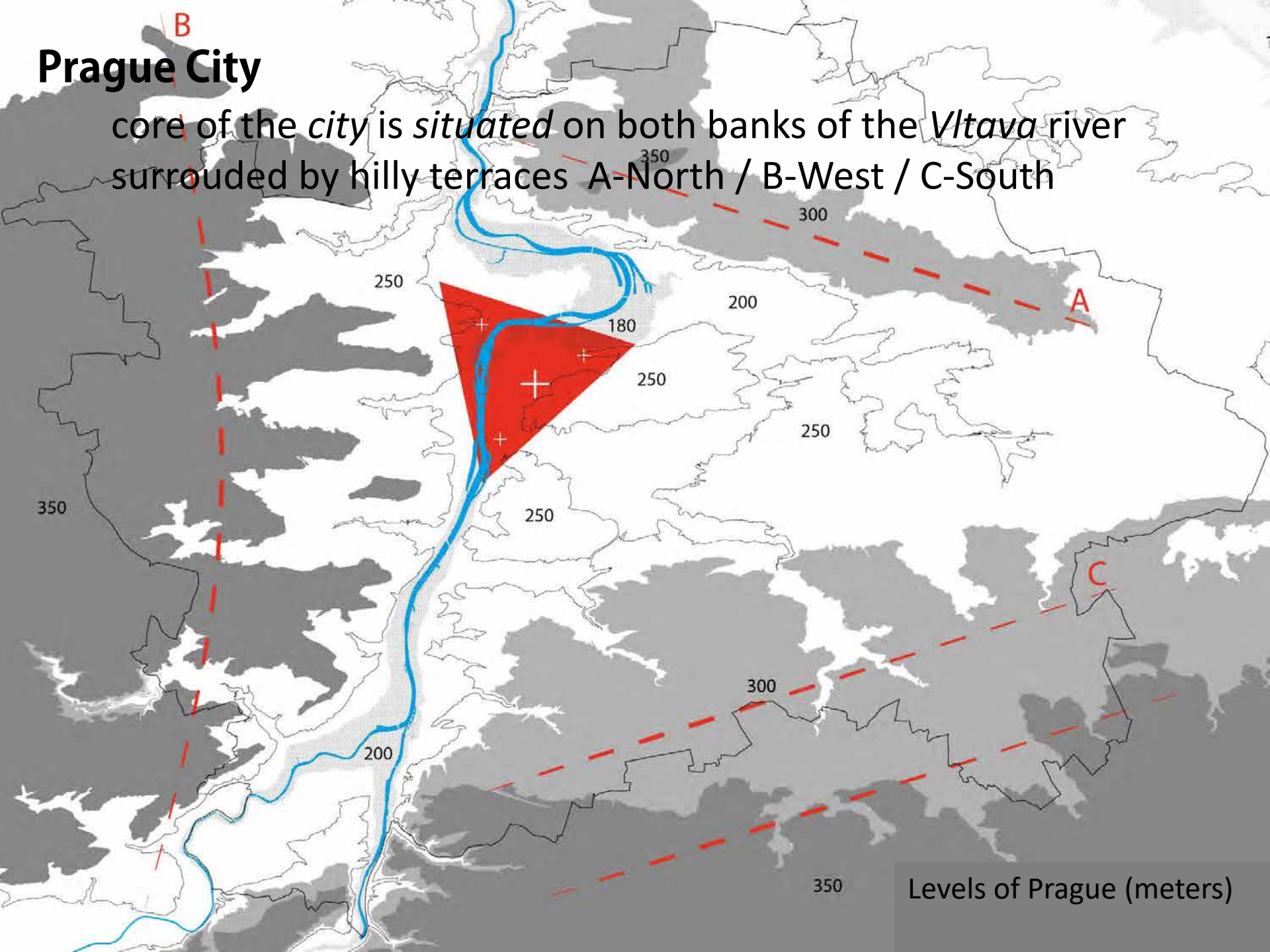
Prague

is situated in the middle of Bohemia

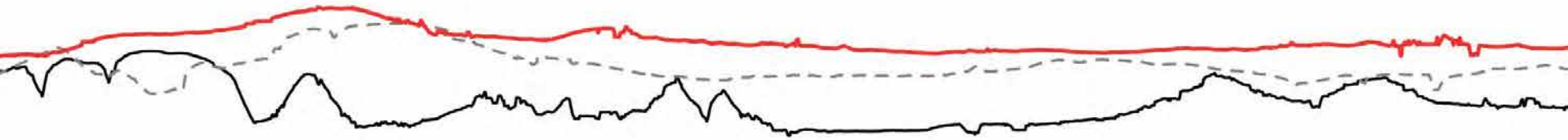


Prague City

core of the *city* is *situated* on both banks of the *Vltava* river surrouded by hilly terraces A-North / B-West / C-South

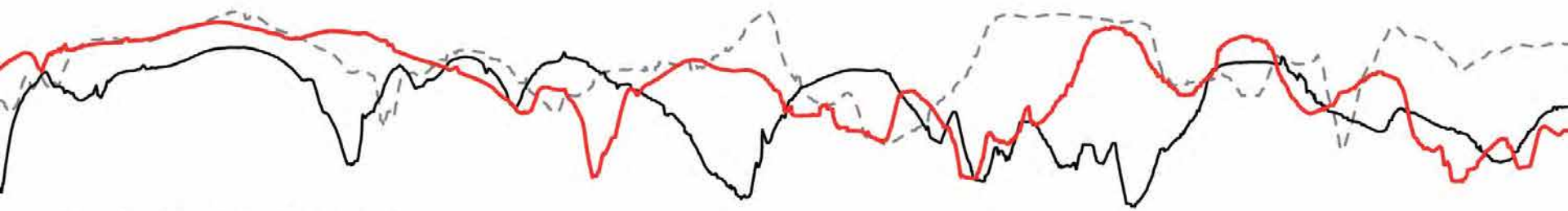


Levels of Prague (meters)



A / Northern terrace

C / Southern terrace



B / western terrace

Prague City

City is characterised by its Landscapes

Prague City

Composition of the City of Prague is characterised by different types of Landscapes

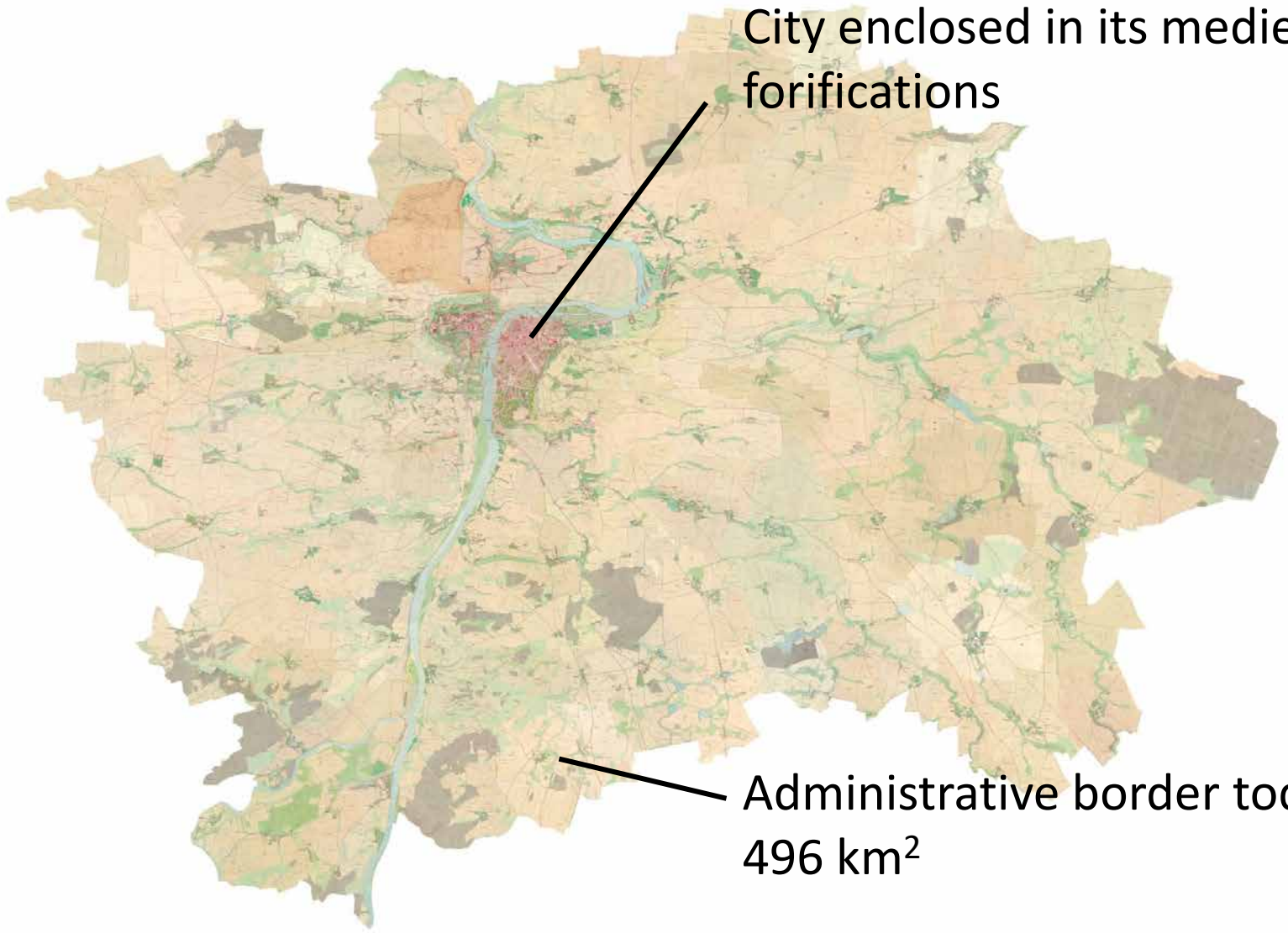
Prague is located into certain morphological and topographical situation

City and Landscape are not opposing terms but they create one unit

(European Landscape Convention)

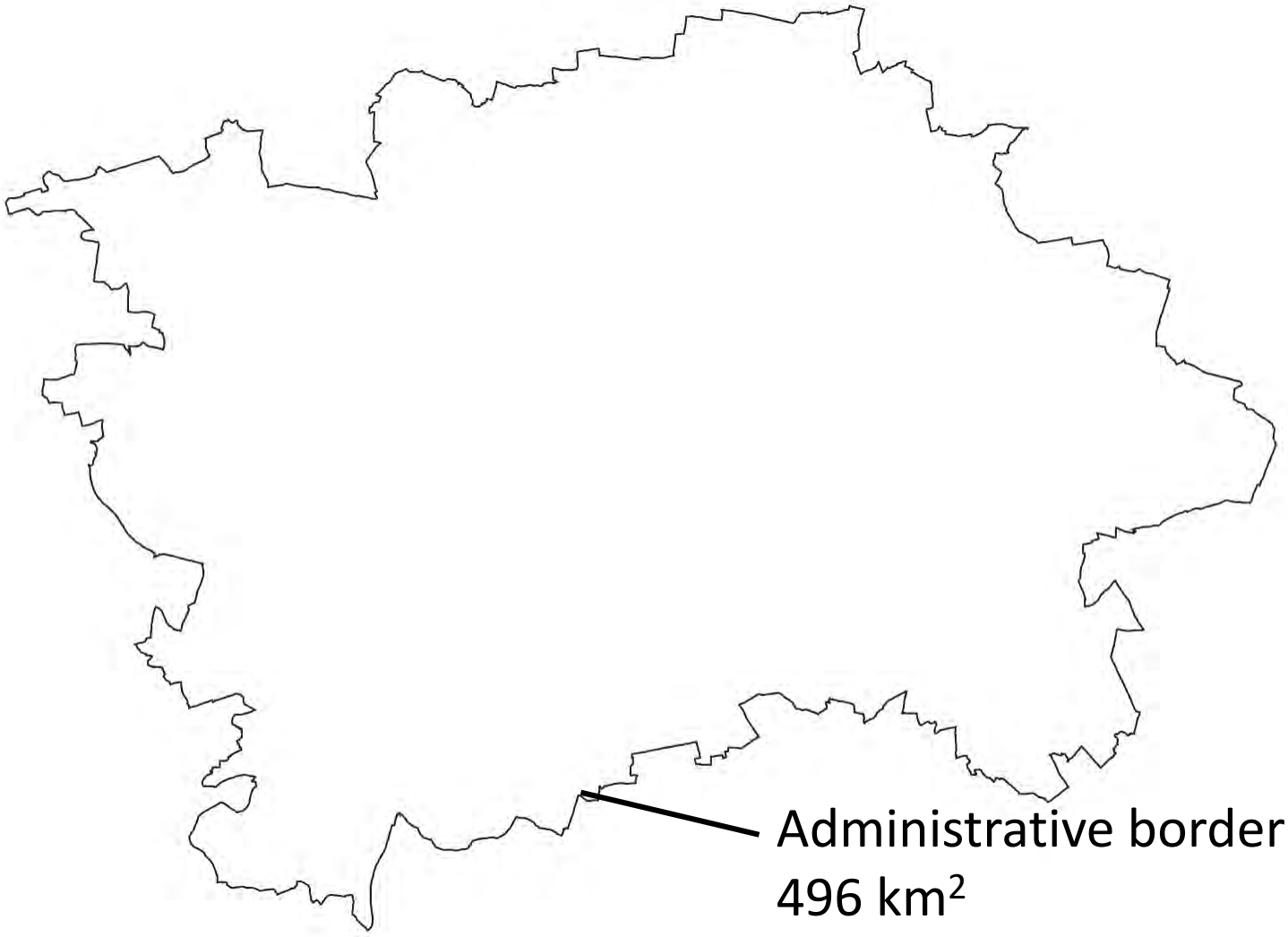
Prague City

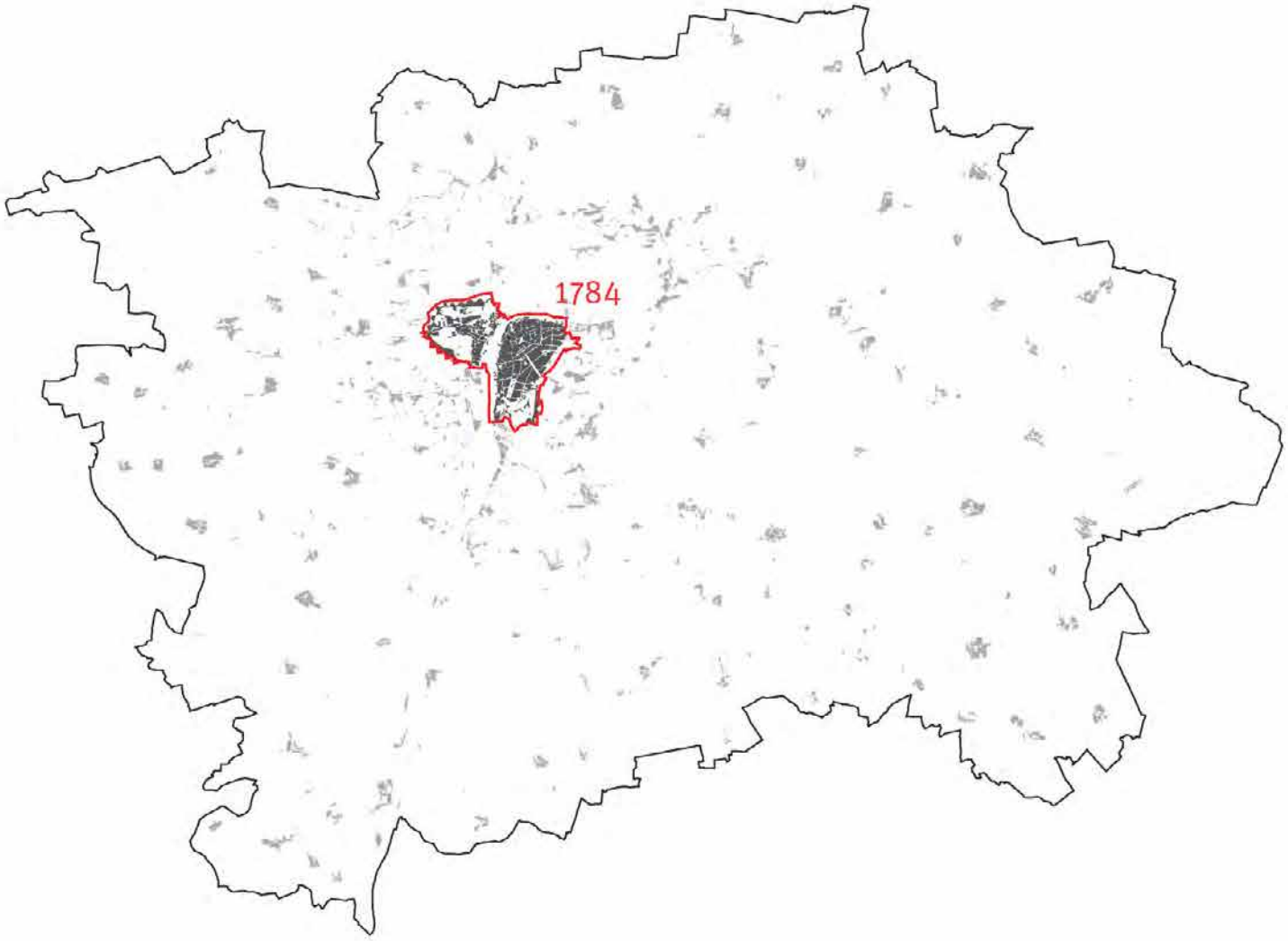
History



1842 - Print out of the stabilized cadaster

Source: IPR Praha, 2014, copyright ČÚZK


Administrative border today
496 km²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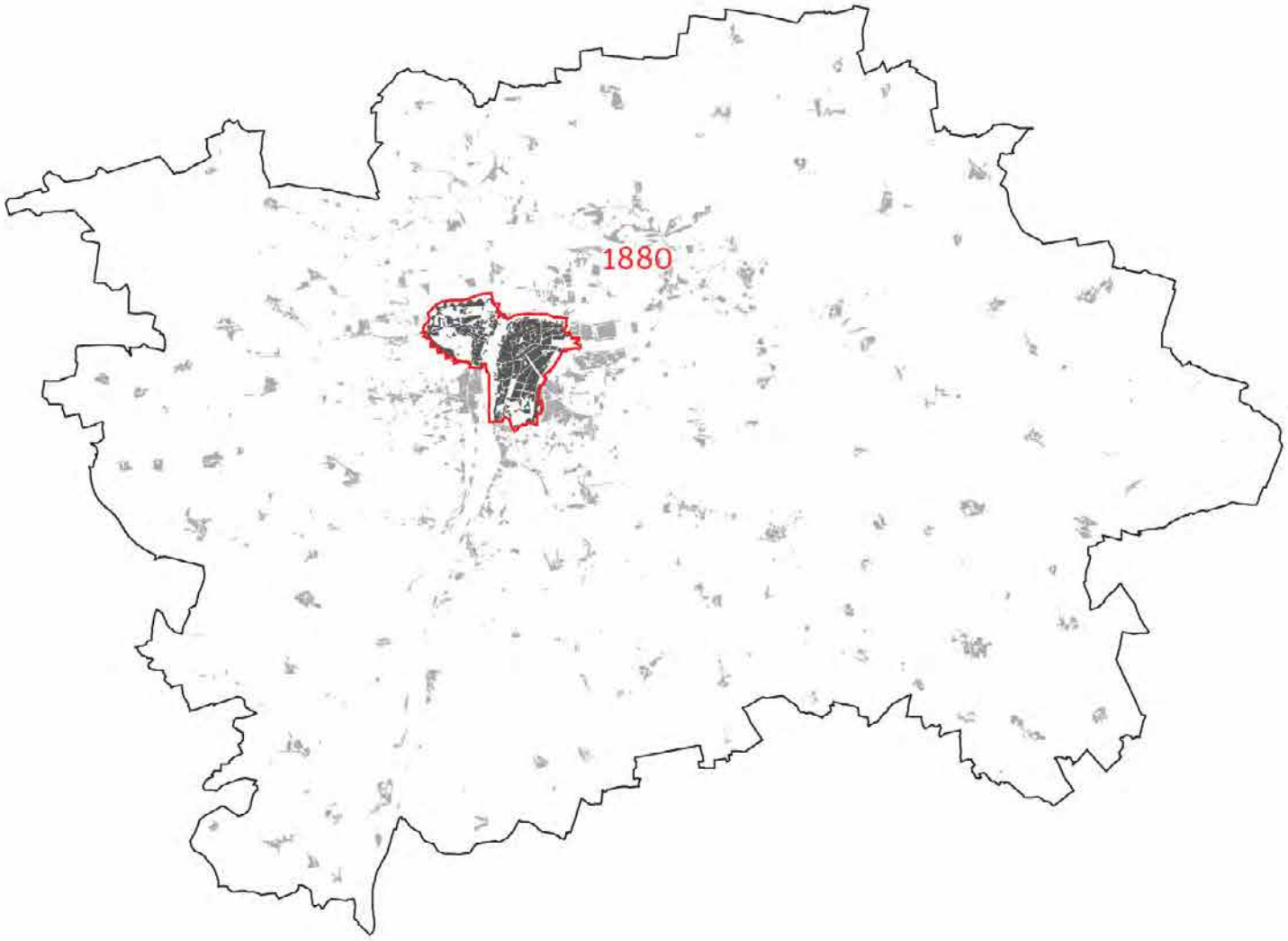
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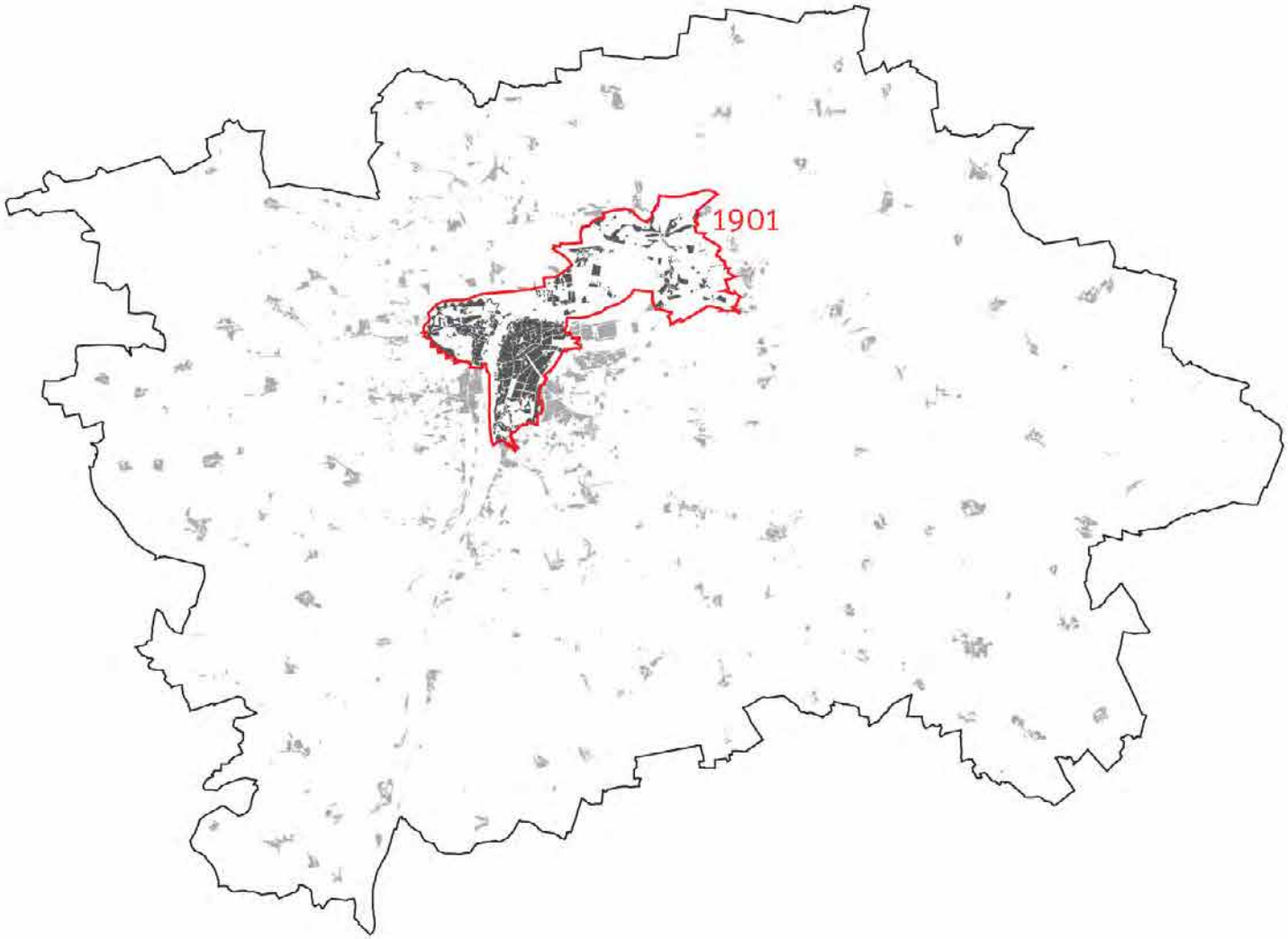
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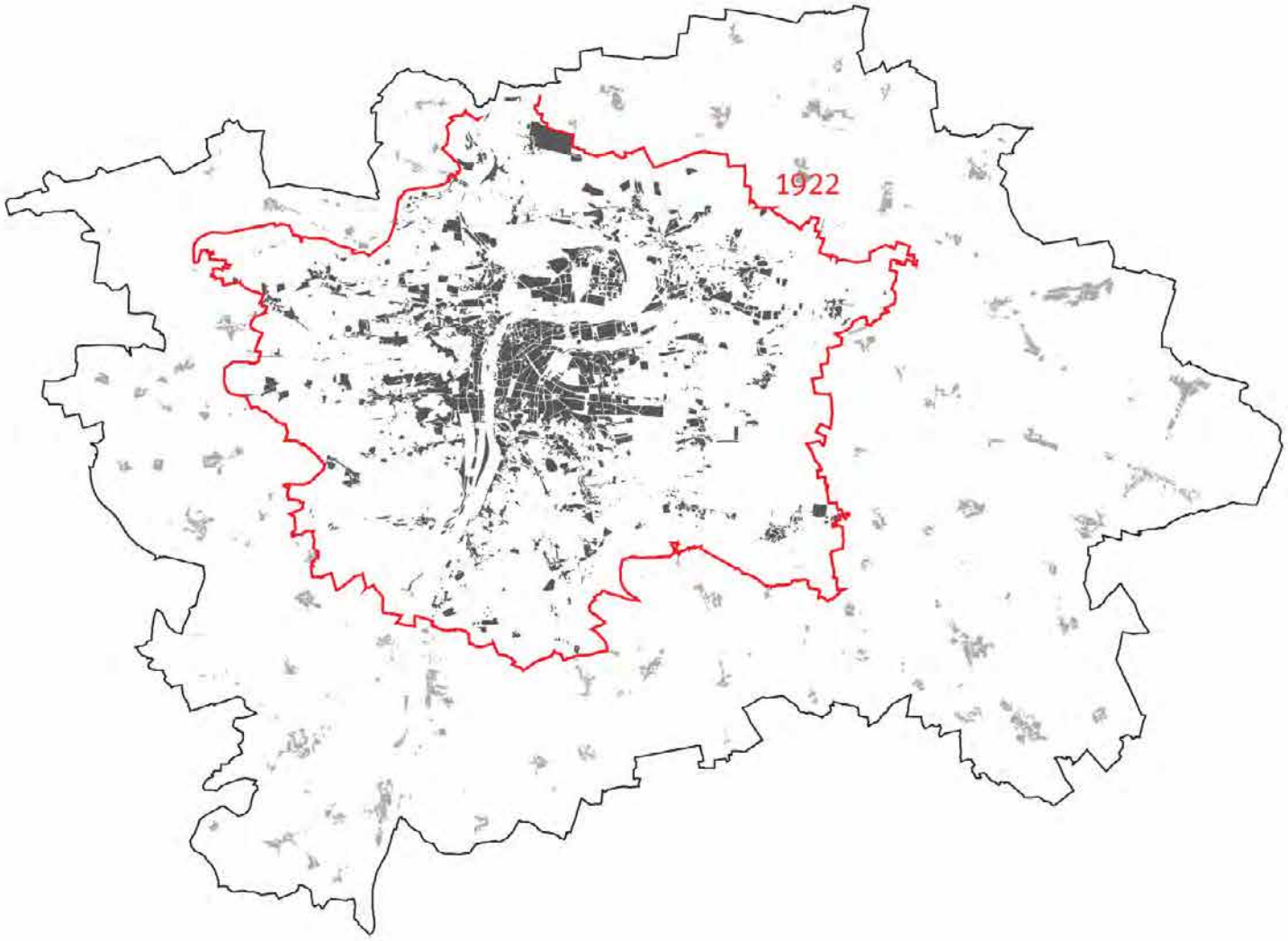
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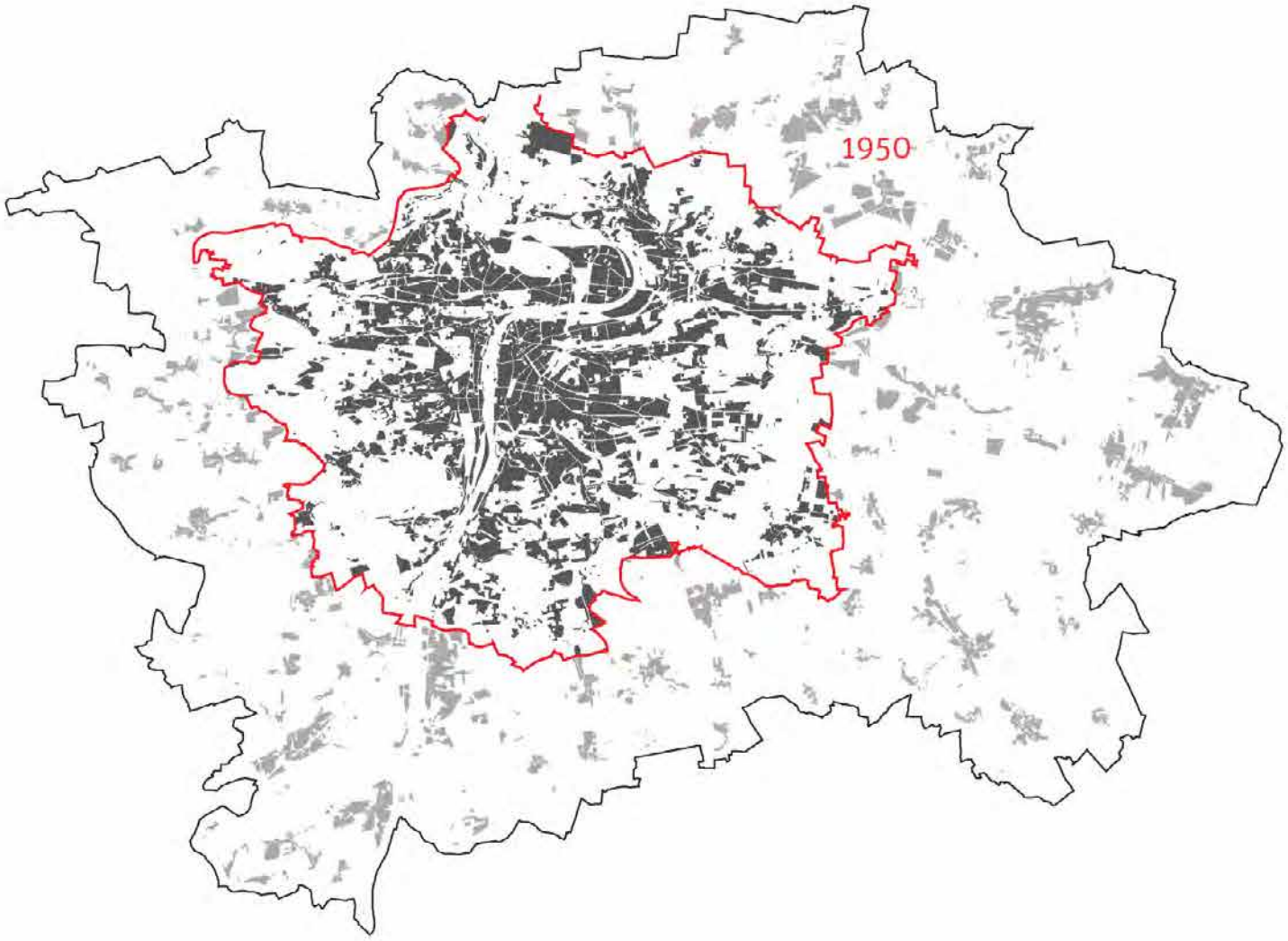
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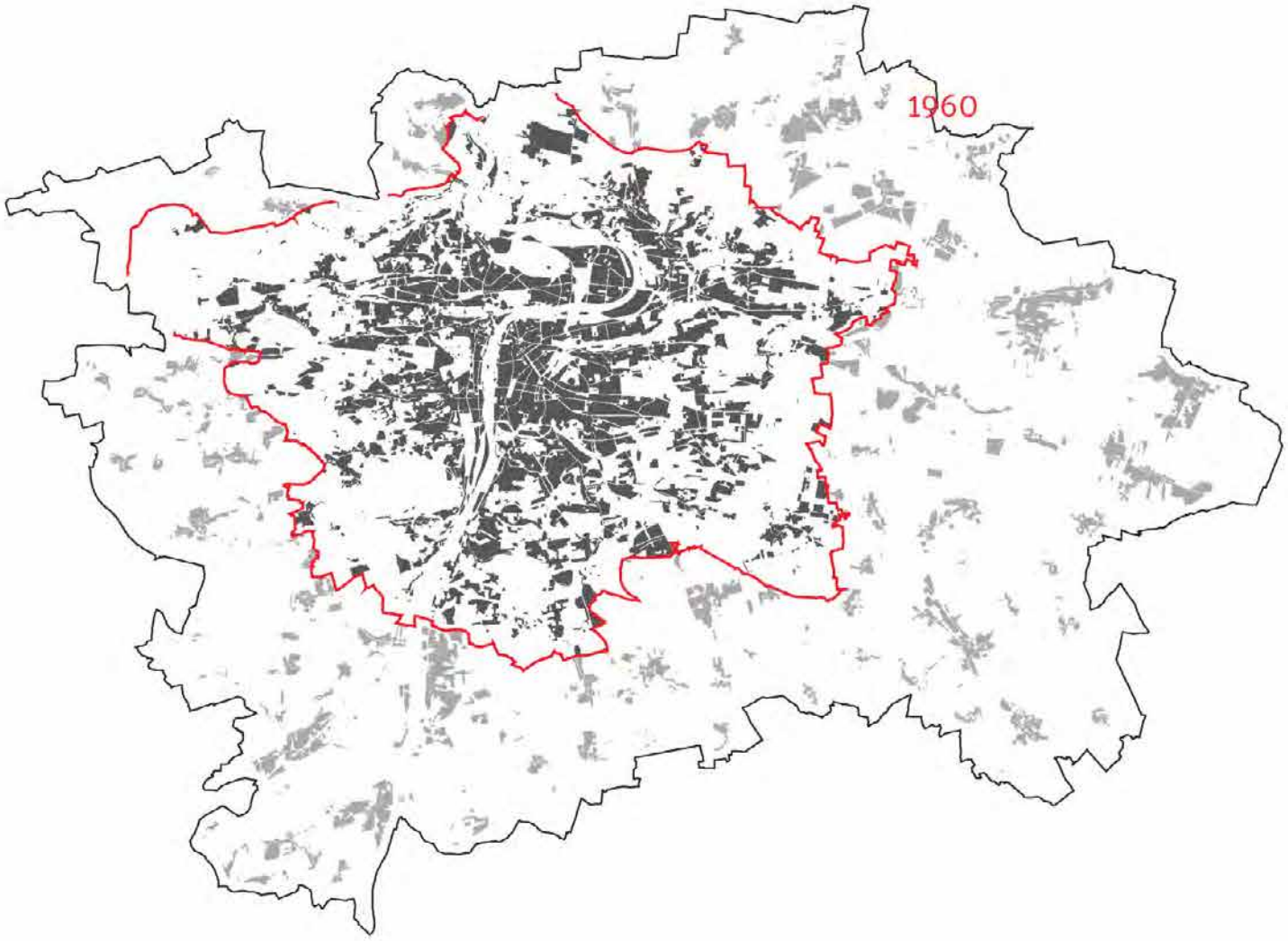
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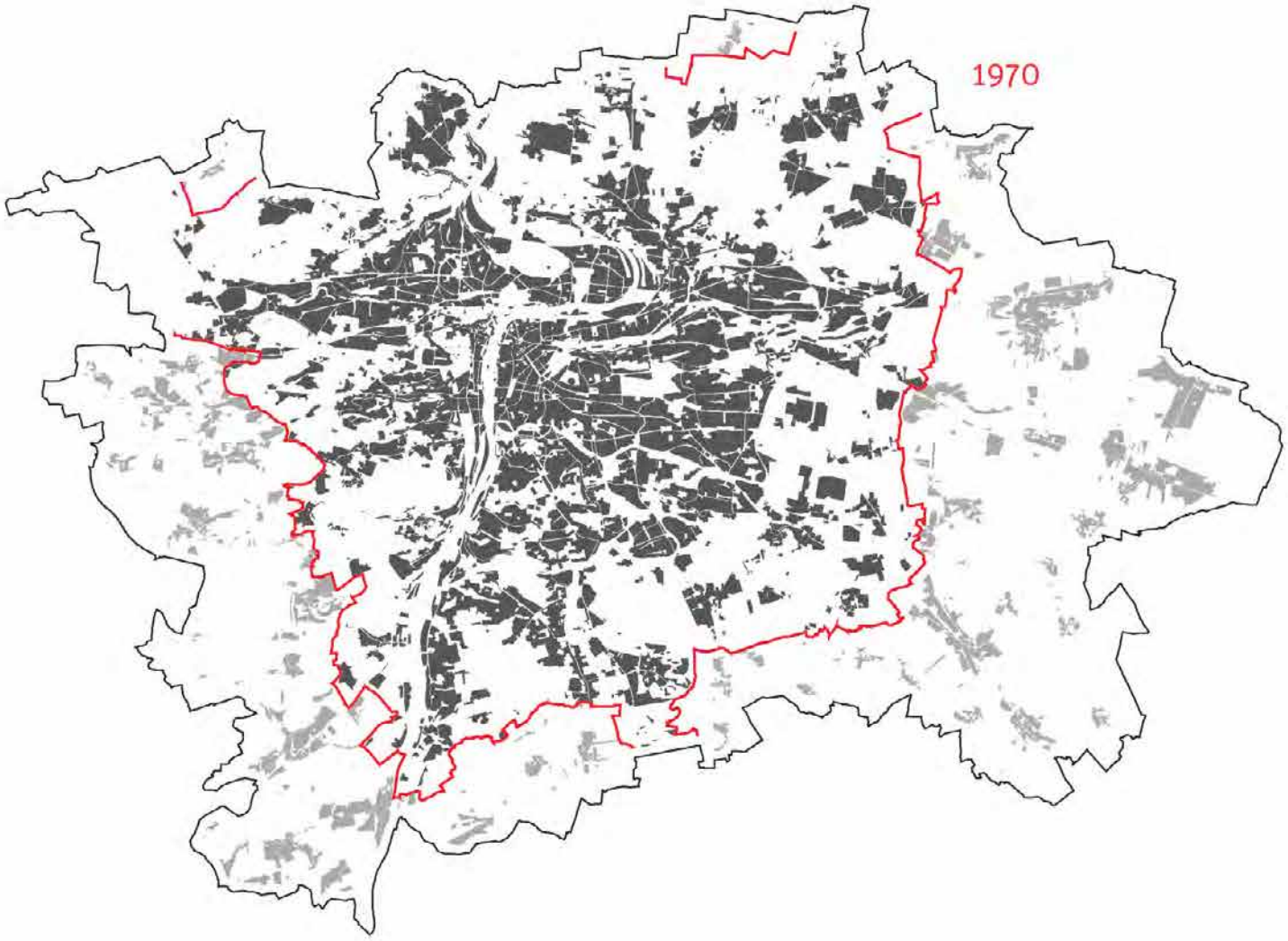
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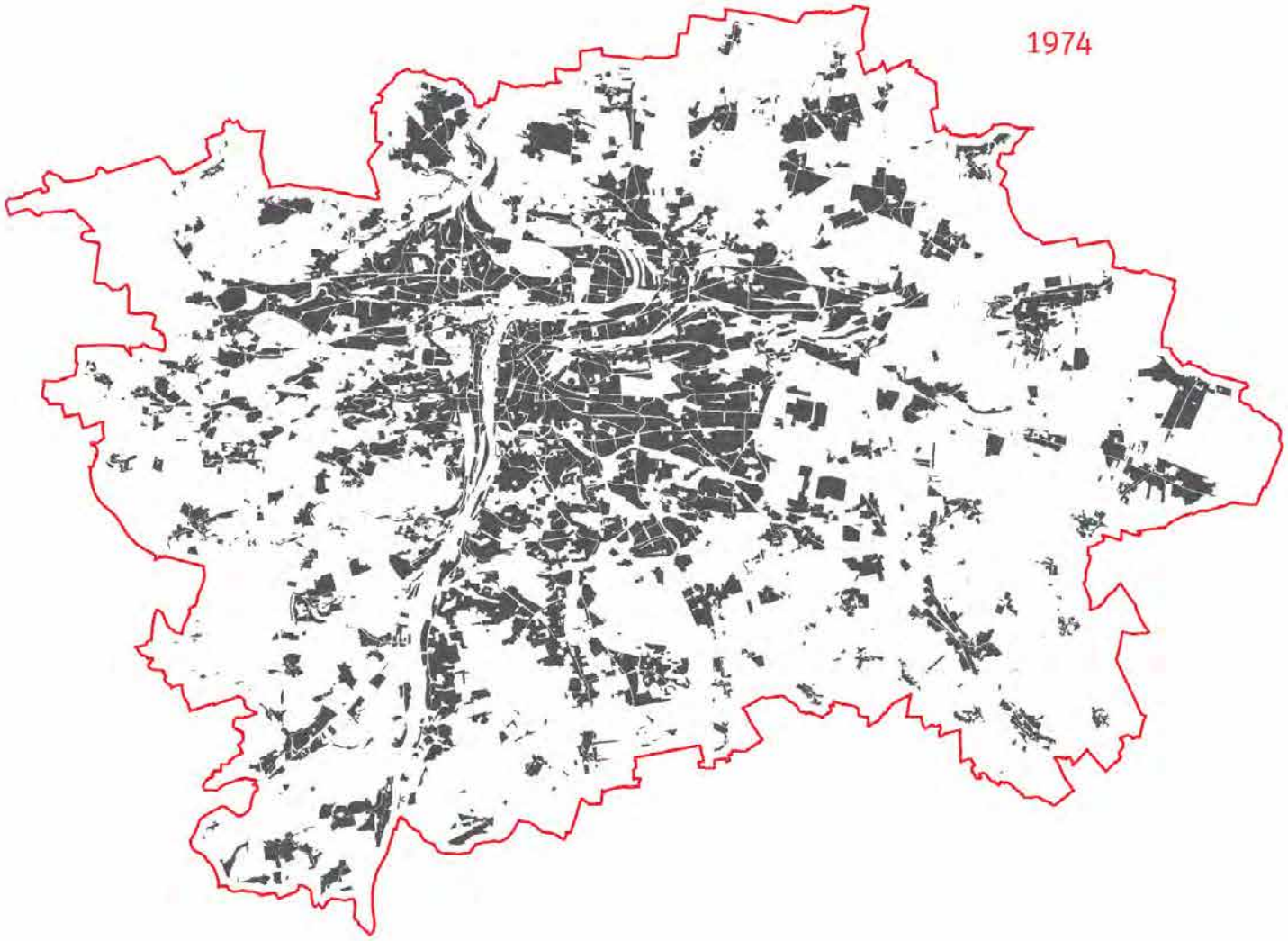
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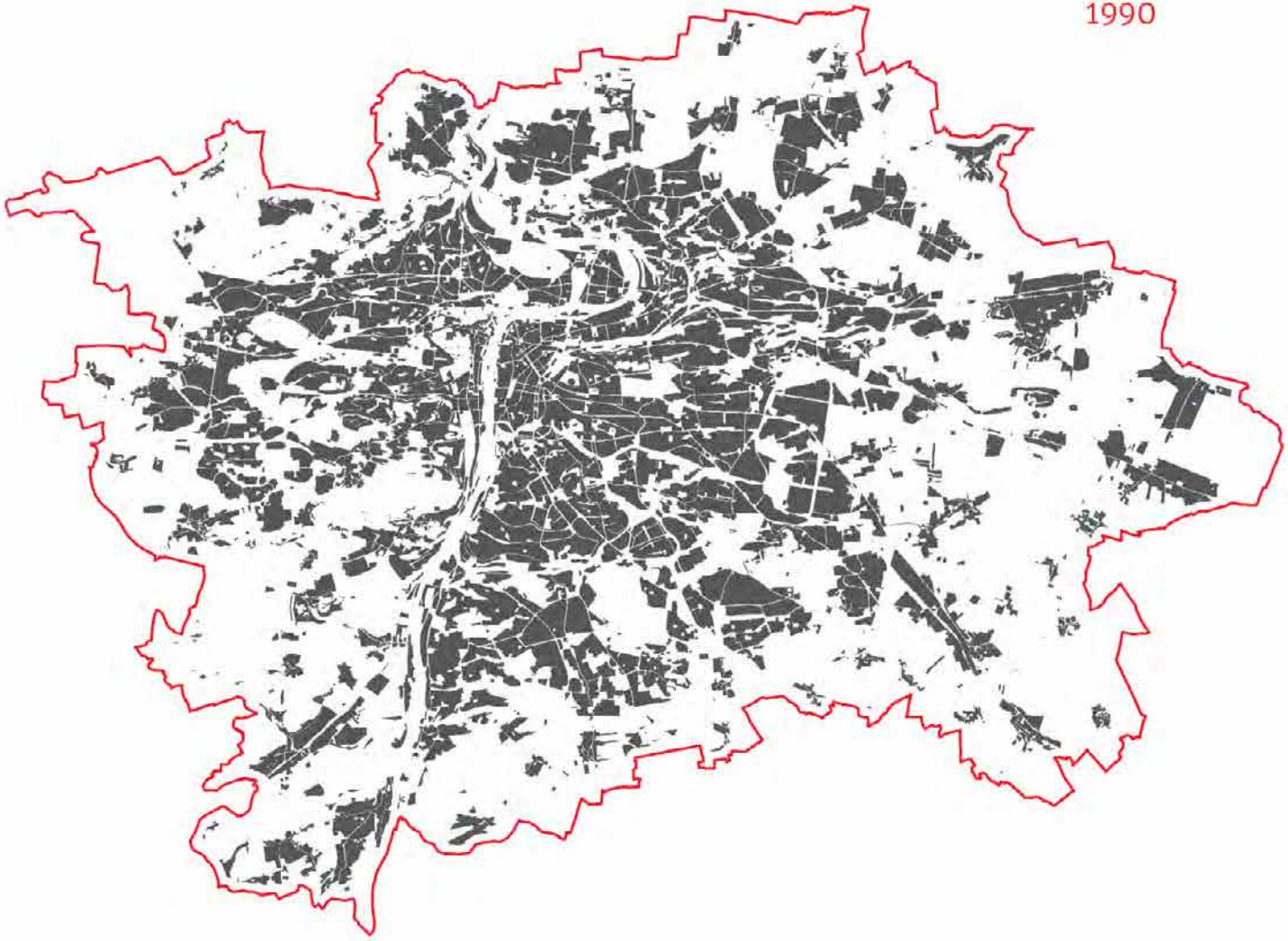
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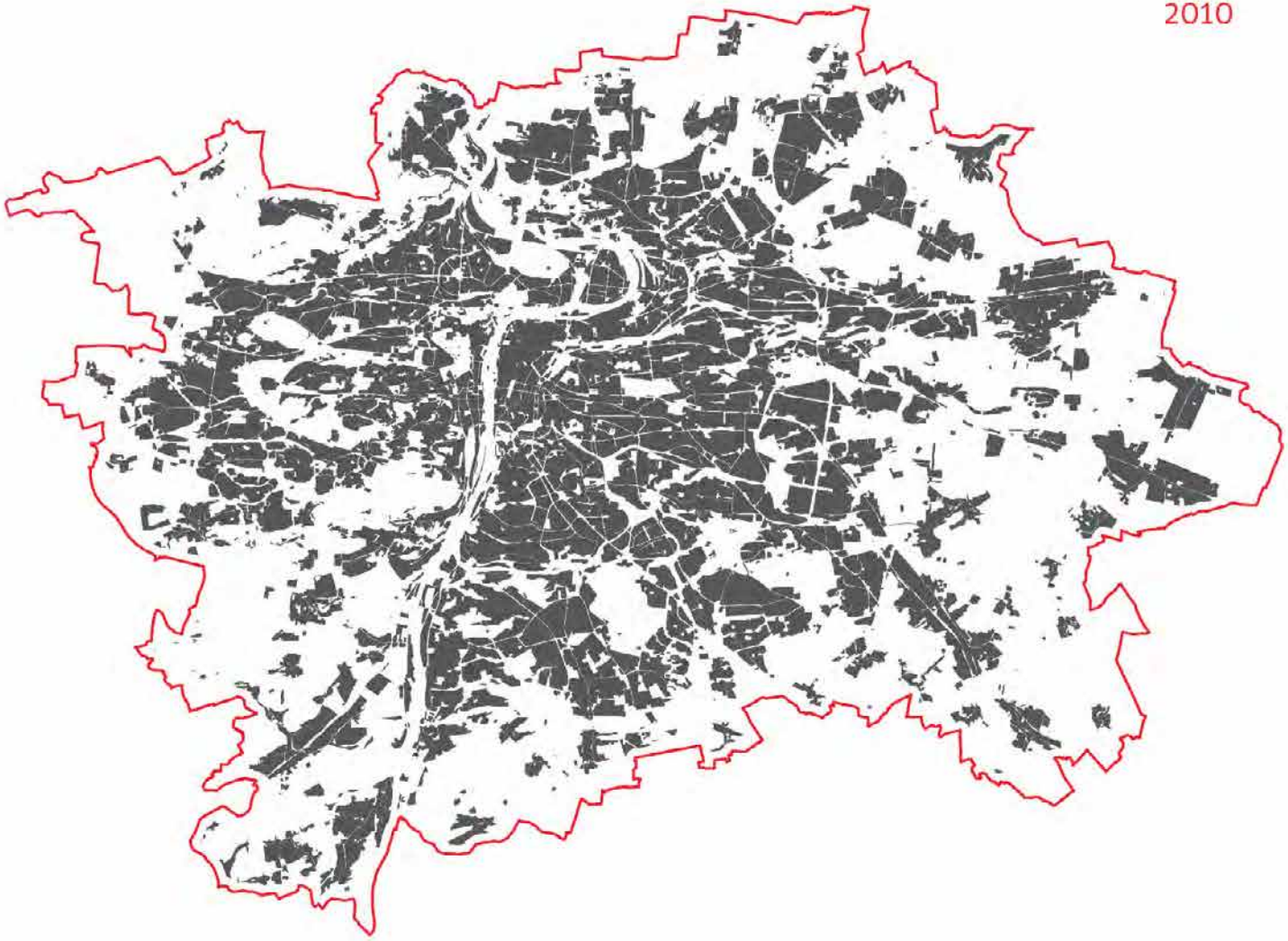
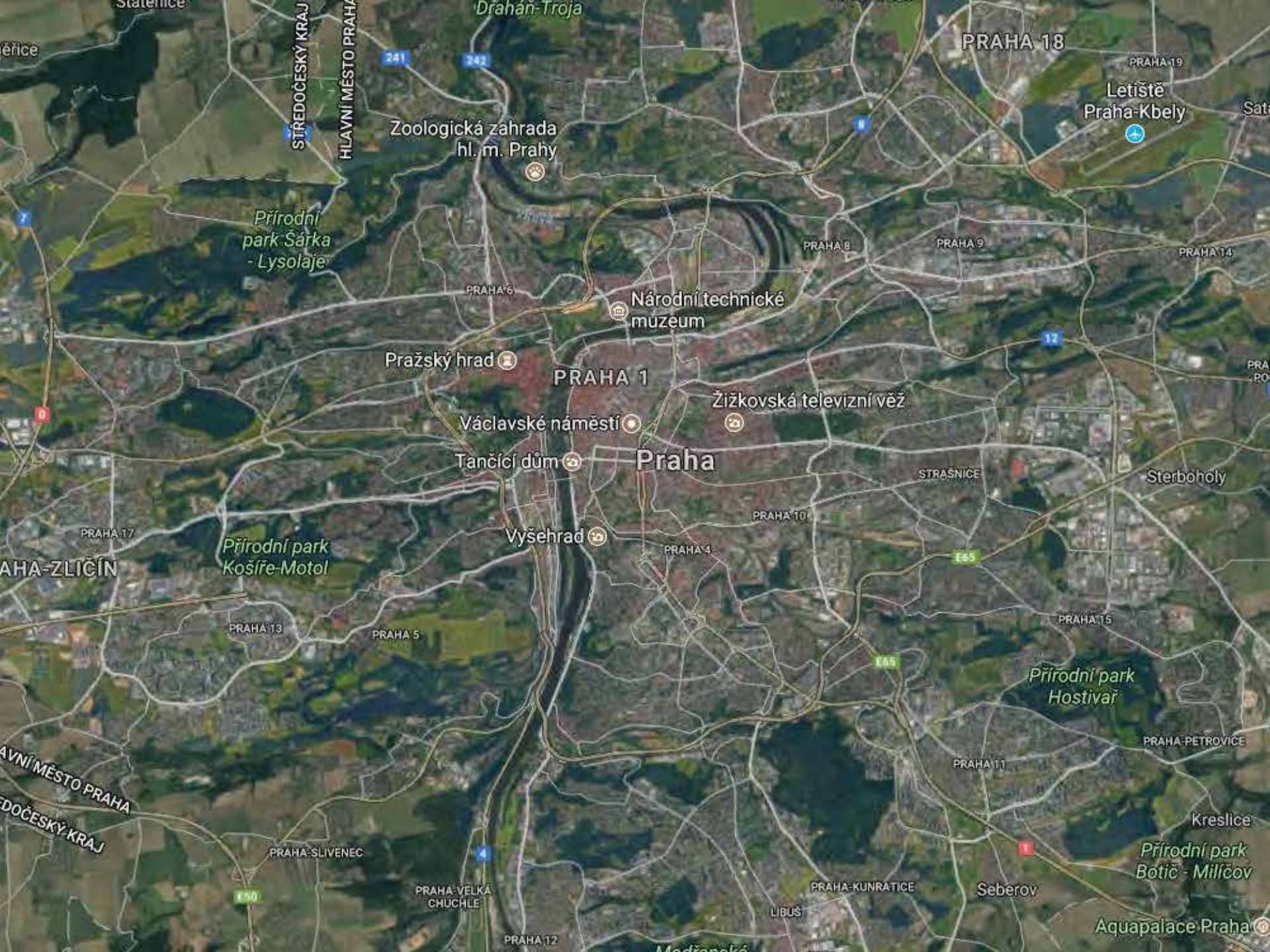
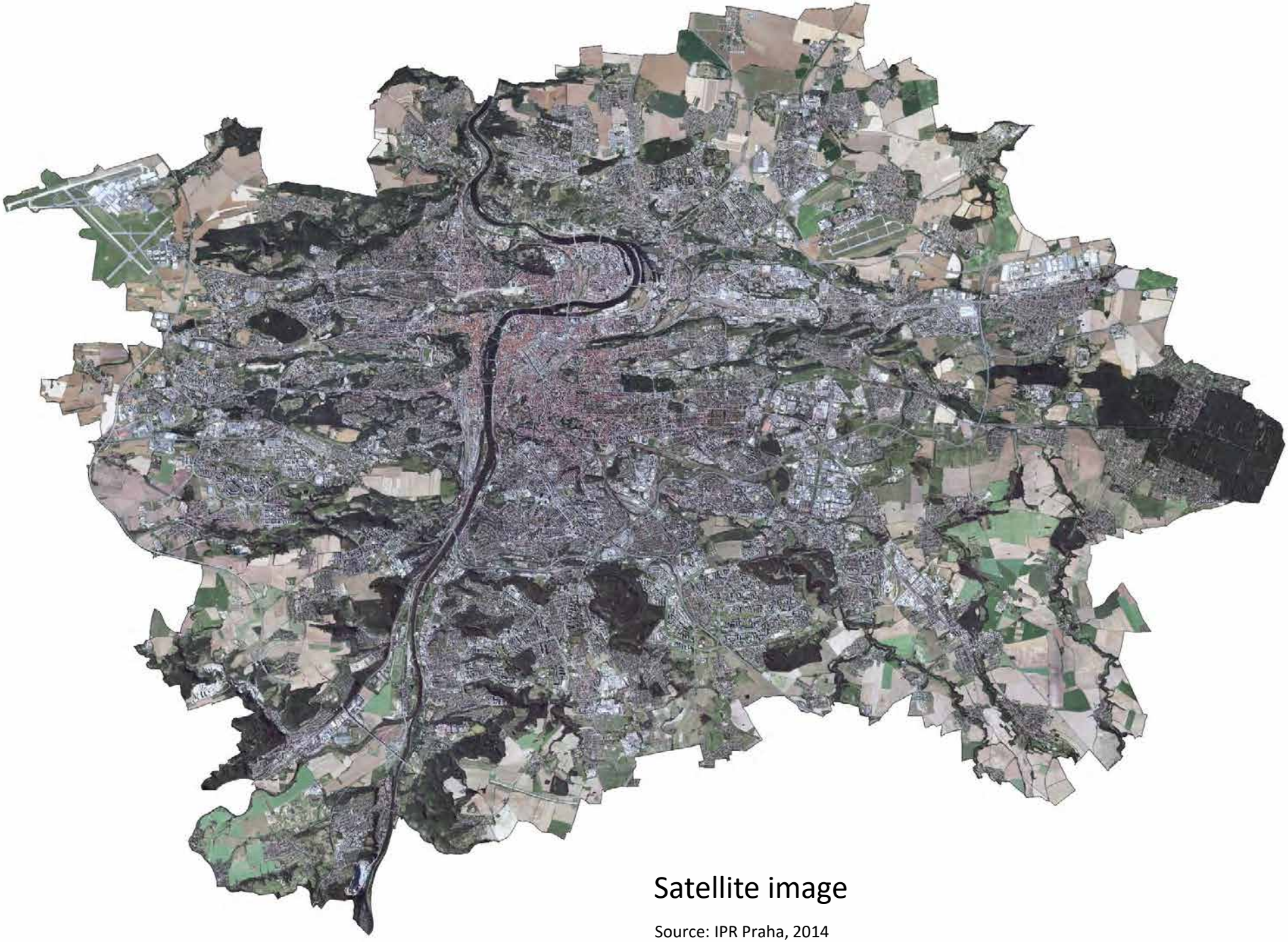

2010

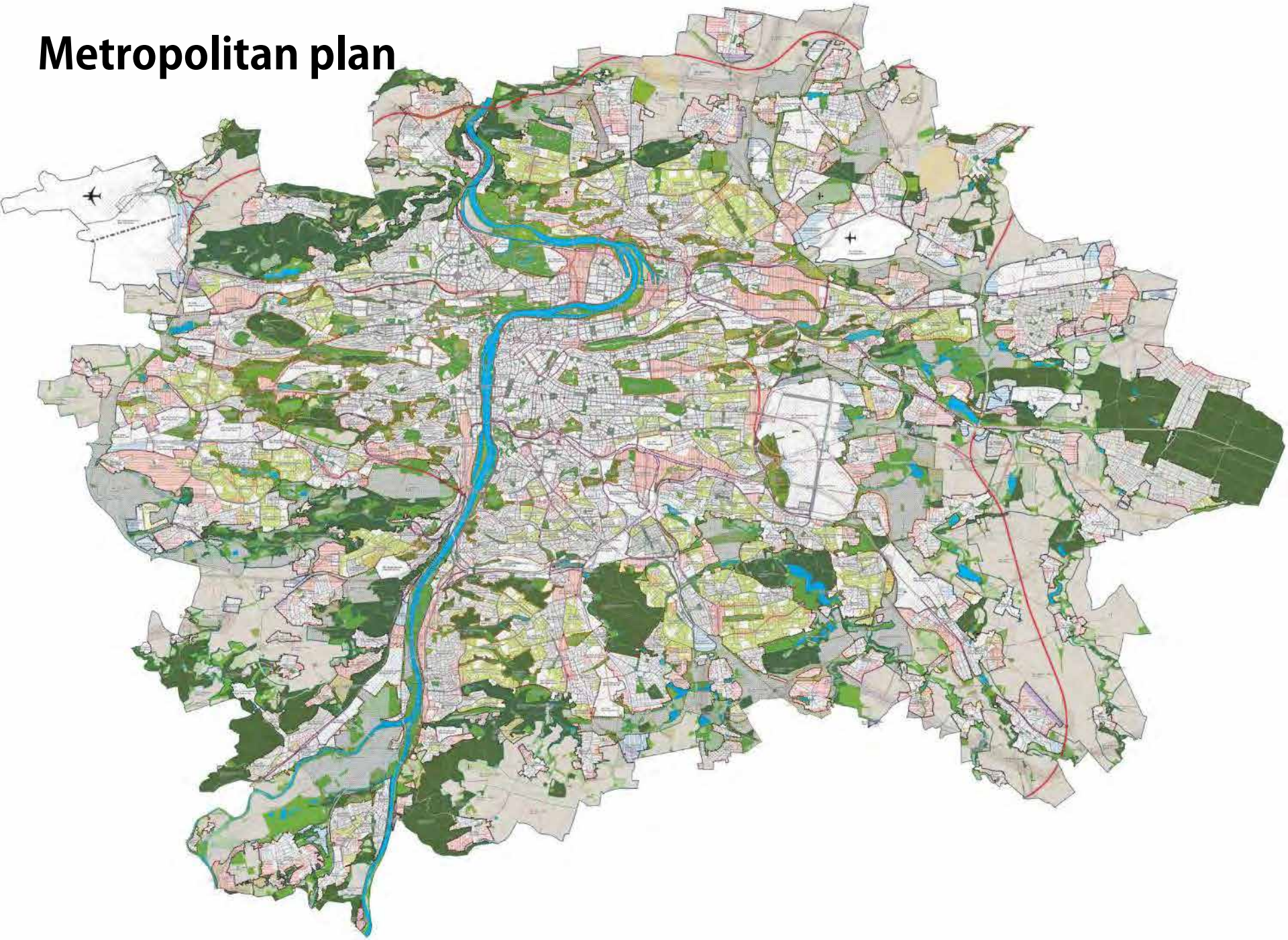

Statenice
Drahaň-Troja
PRAHA 18
PRAHA 19
Letiště
Praha-Kbely
STŘEDOČESKÝ KRAJ
HLAVNÍ MĚSTO PRAHA
241
242
Zoologická zahrada
hl. m. Prahy
Přírodní
park Šárka
- Lysolaje
PRAHA 8
PRAHA 9
PRAHA 14
PRAHA 6
Národní technické
muzeum
Pražský hrad
PRAHA 1
Žižkovská televizní věž
Václavské náměstí
Tančící dům
Praha
STRAŠNICE
Sterboholy
PRAHA 10
PRAHA 17
Vyšehrad
PRAHA 4
Přírodní park
Košíře-Motol
E65
PRAHA 13
PRAHA 5
PRAHA 15
Přírodní park
Hostivař
PRAHA-PETROVICE
PRAHA 11
Kreslice
Přírodní park
Botič - Milíčov
PRAHA-SLIVENEC
PRAHA-VELKÁ
CHUCHLE
PRAHA-KUNRATICE
Seberov
LIBUŠ
Aquapalace Praha
PRAHA 12



Satellite image

Source: IPR Praha, 2014

Metropolitan plan

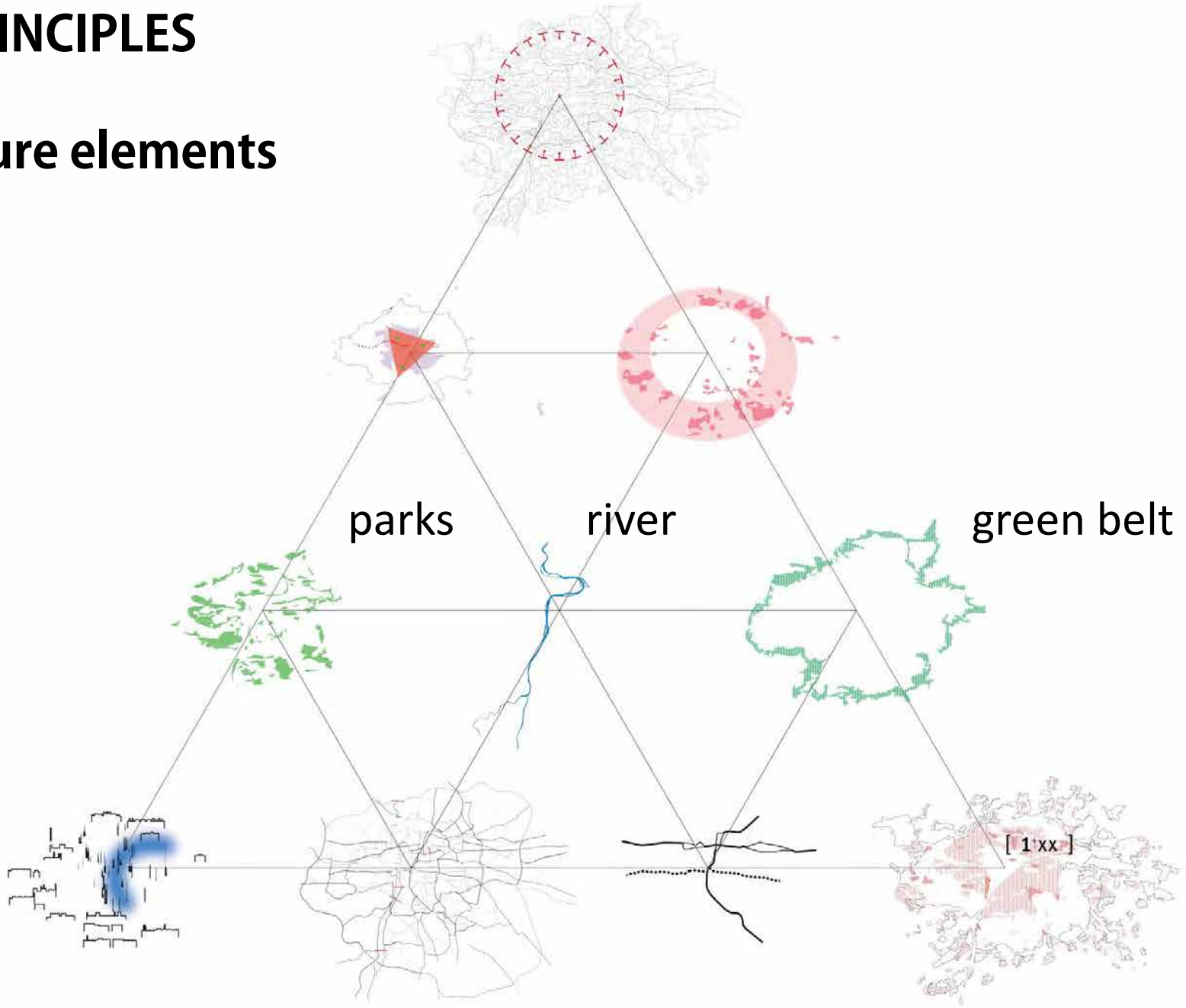


Prague City

10 PRINCIPLES

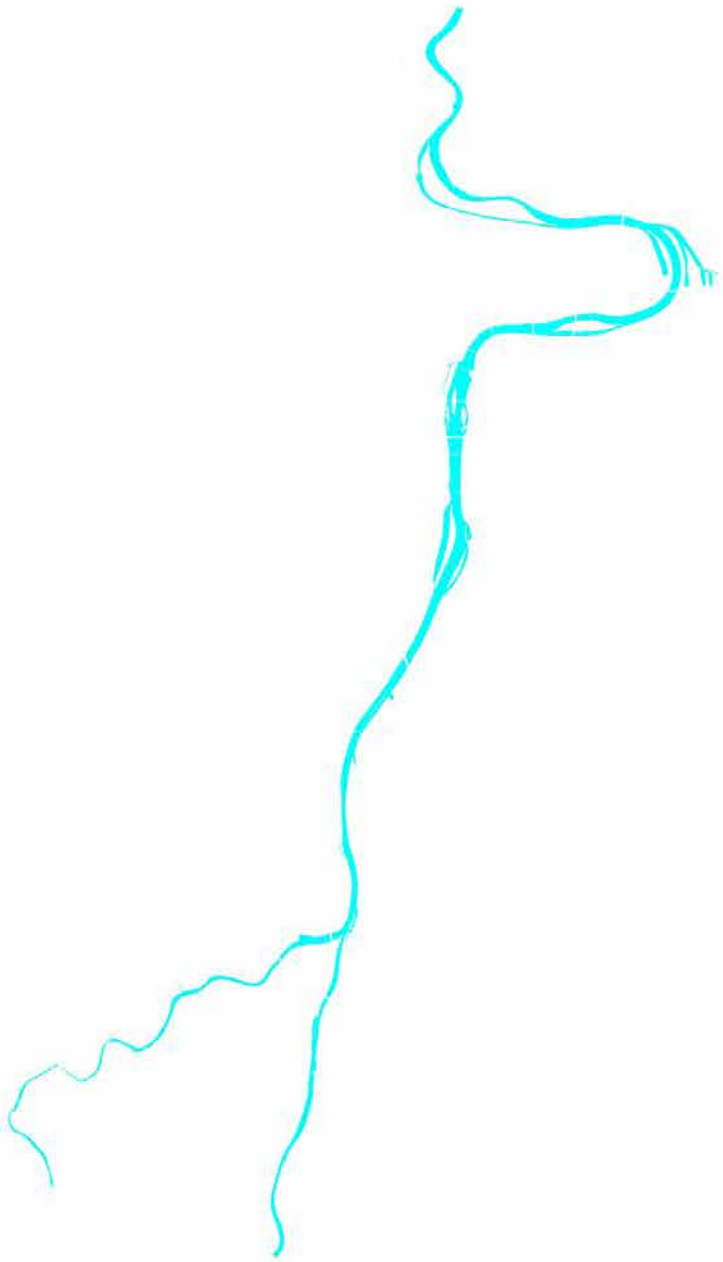
10 PRINCIPLES

3 nature elements

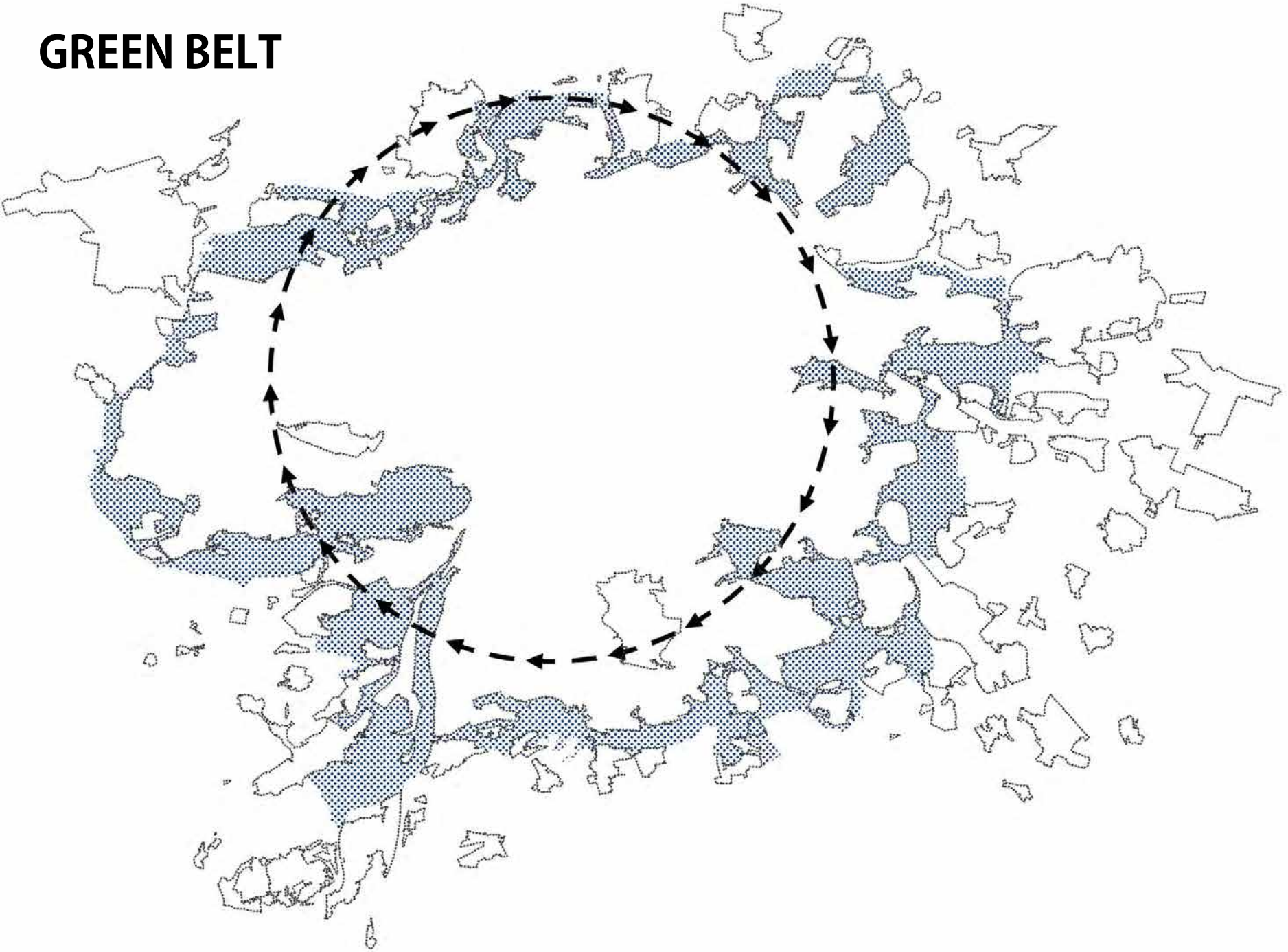


PARKS

RIVER



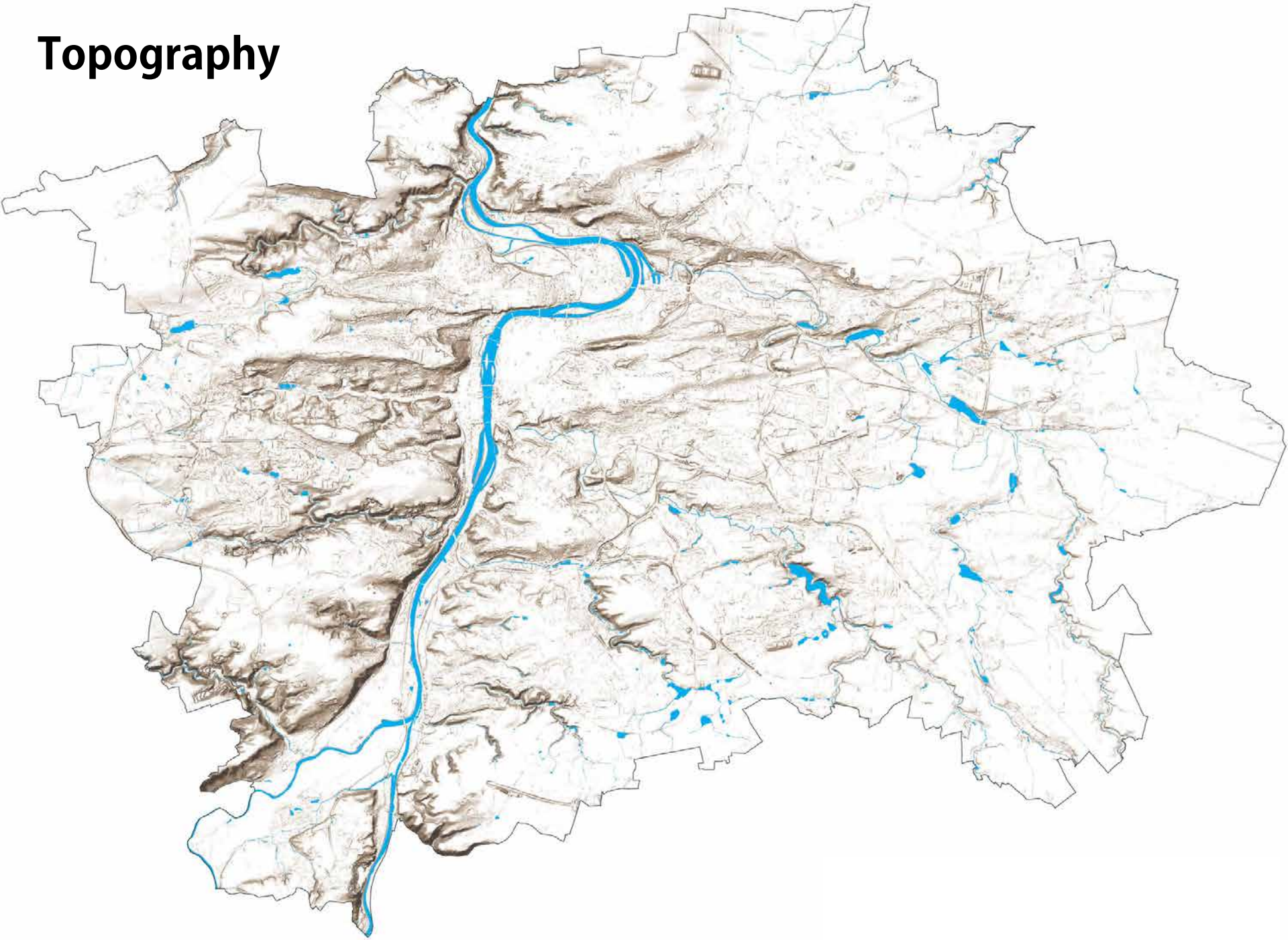
GREEN BELT



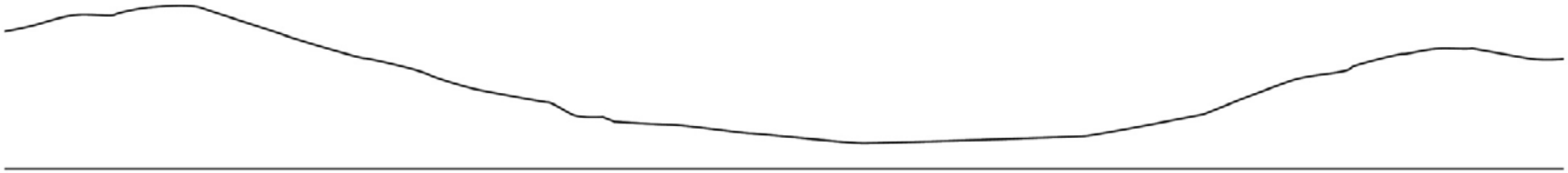
Prague City

TOPOGRAPHY

Topography

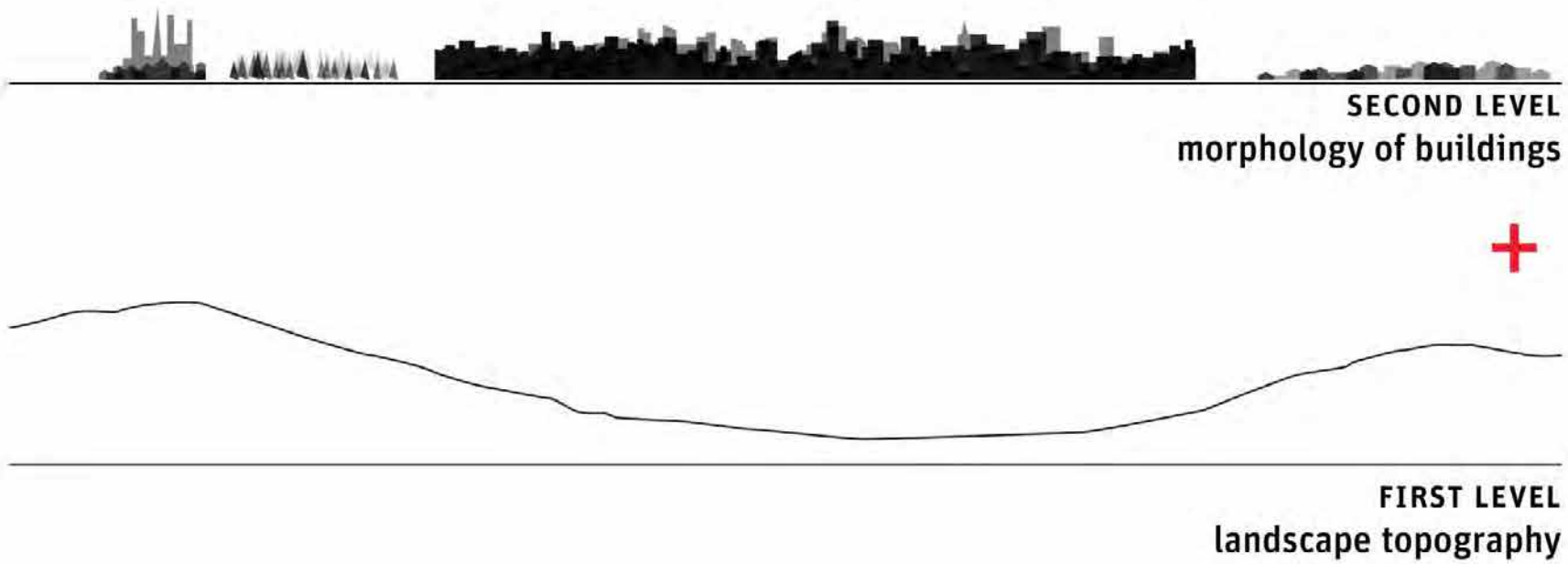


How to work with landscape - topography?

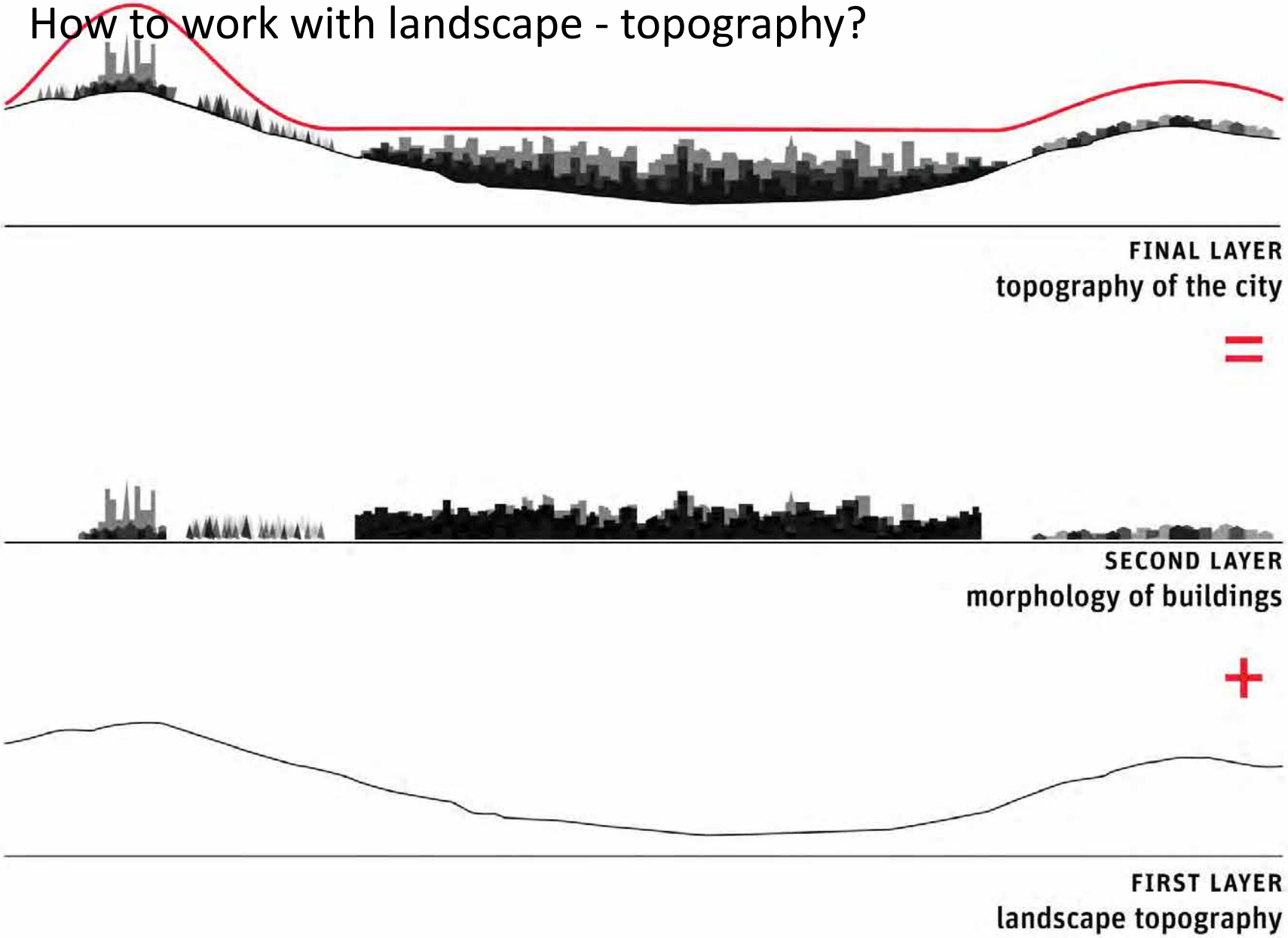


FIRST LINE
landscape topography

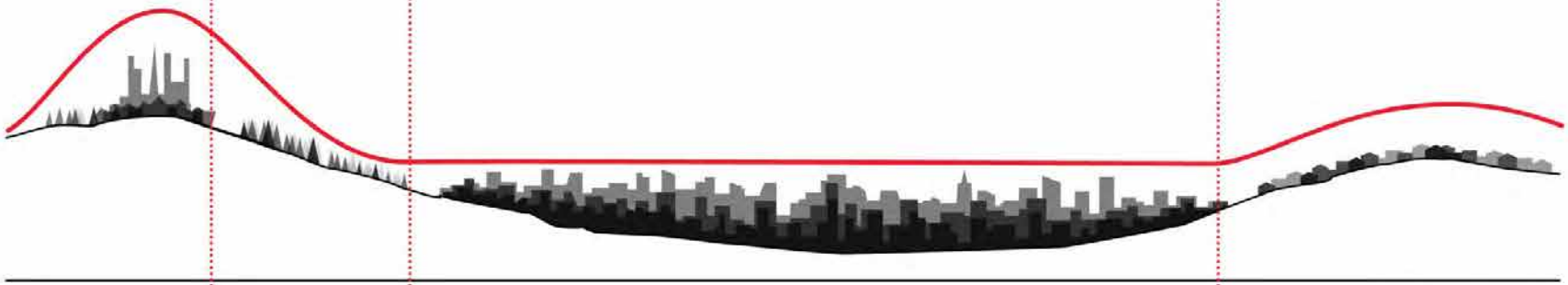
How to work with landscape - topography?



How to work with landscape - topography?



PRINCIPLES OF COMPOSITION



FINAL LAYER
topography of the city

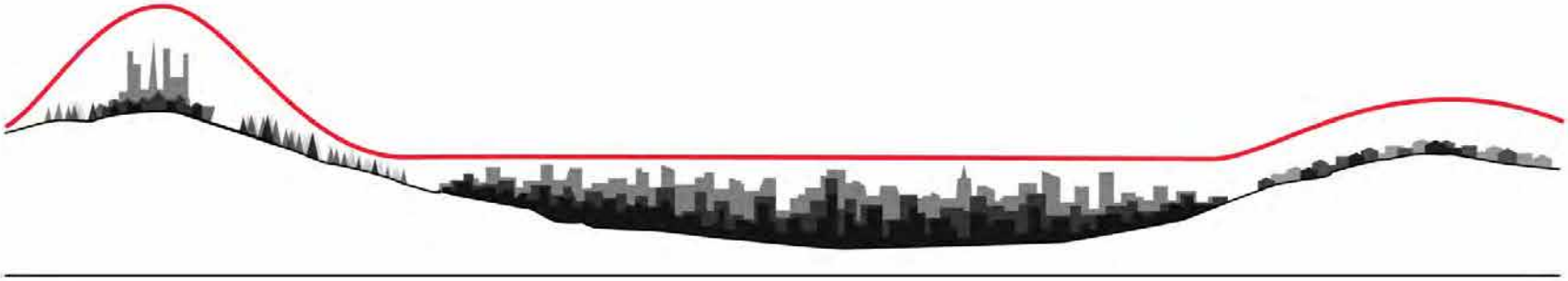
accent by buildings

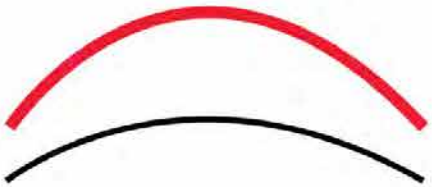
copy without buildings

filling by buildings

copy by building

PRINCIPLES OF COMPOSITION





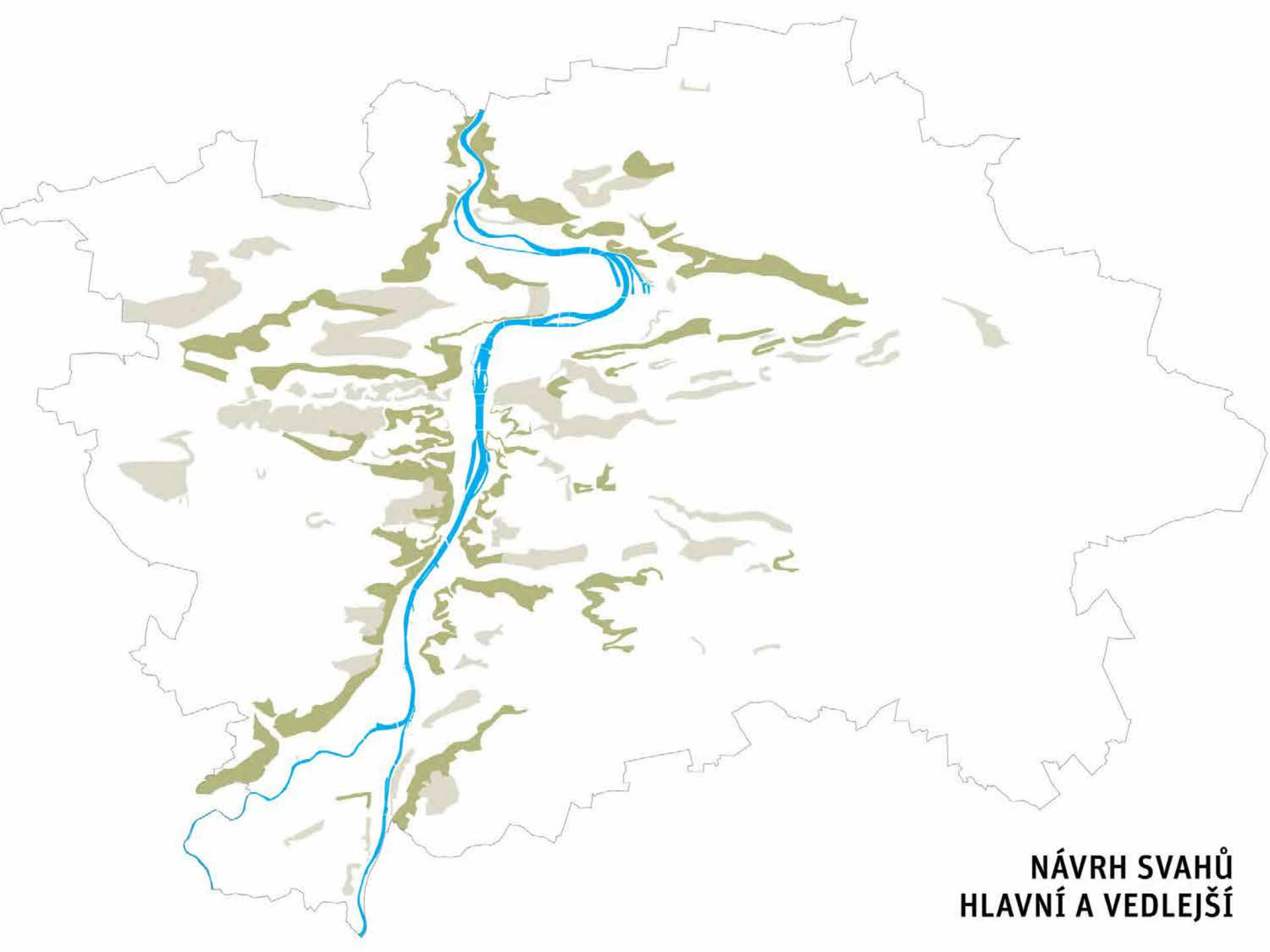
ACCENT OF TOPOGRAPHY
(Hradčany)

FILLING OF TOPOGRAPHY
(Malá Strana, Nusle)

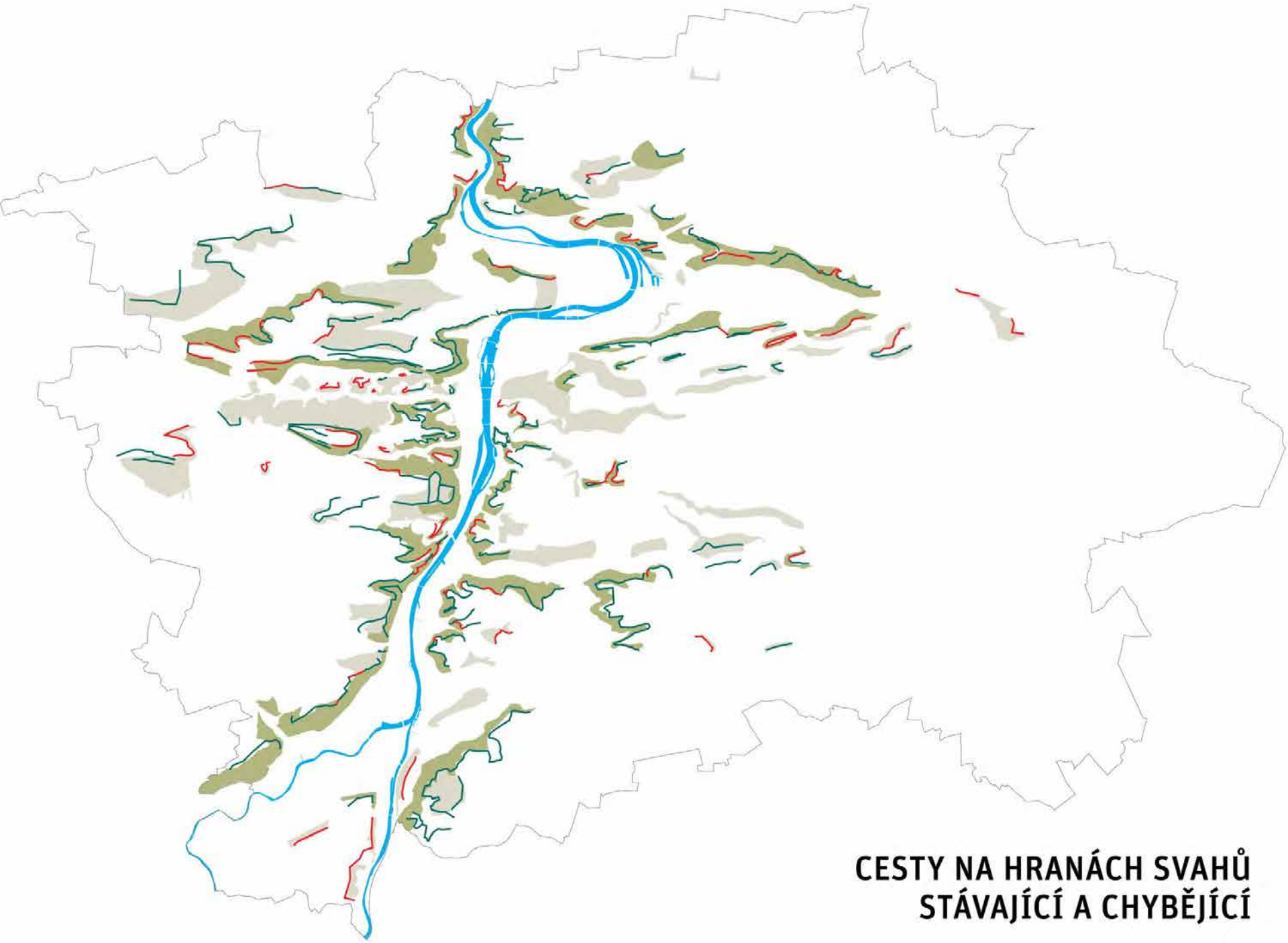
COPY OF TOPOGRAPHY
(Staré Město,garden city)

Prague City

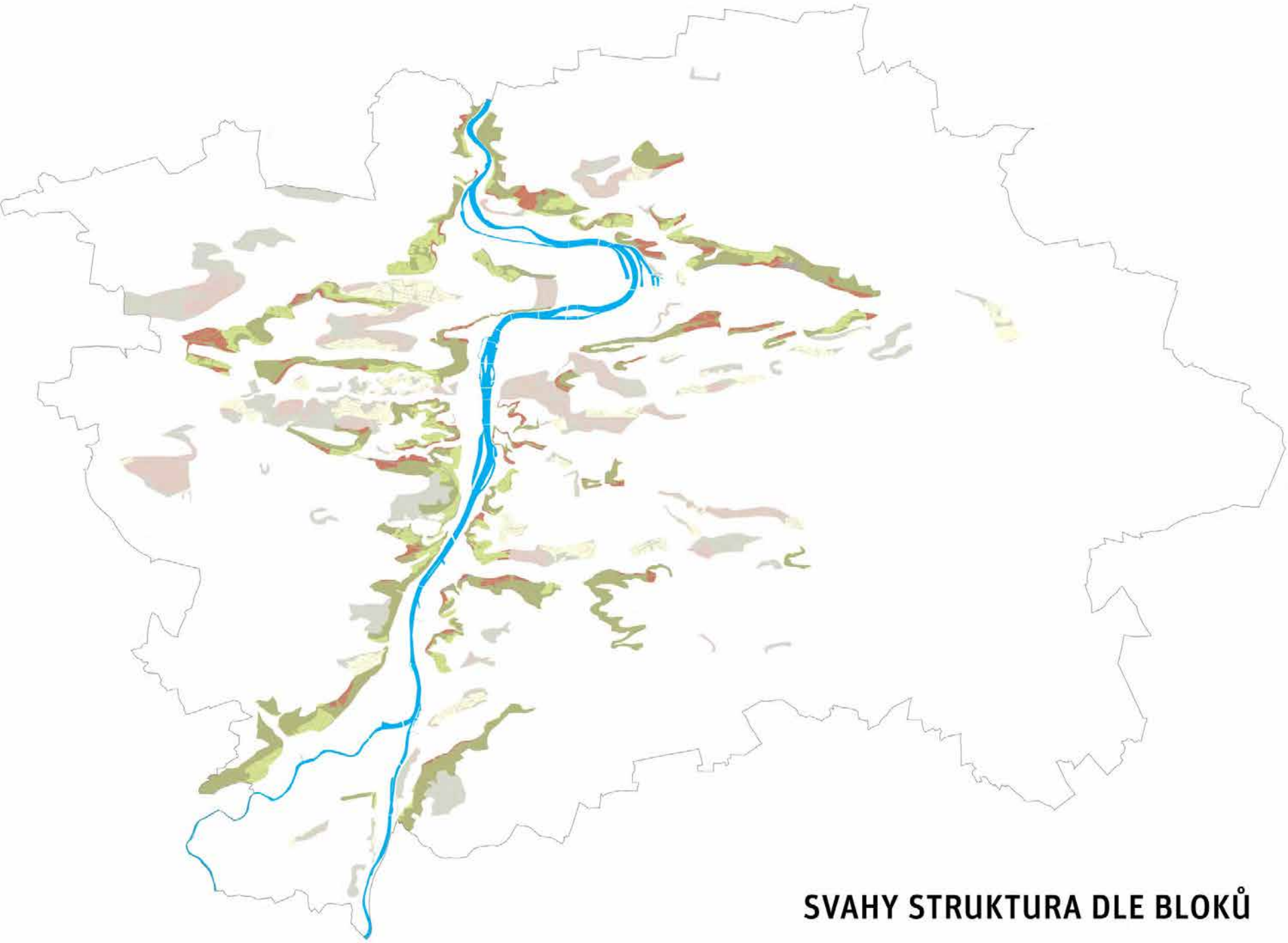
GREEN SLOPES



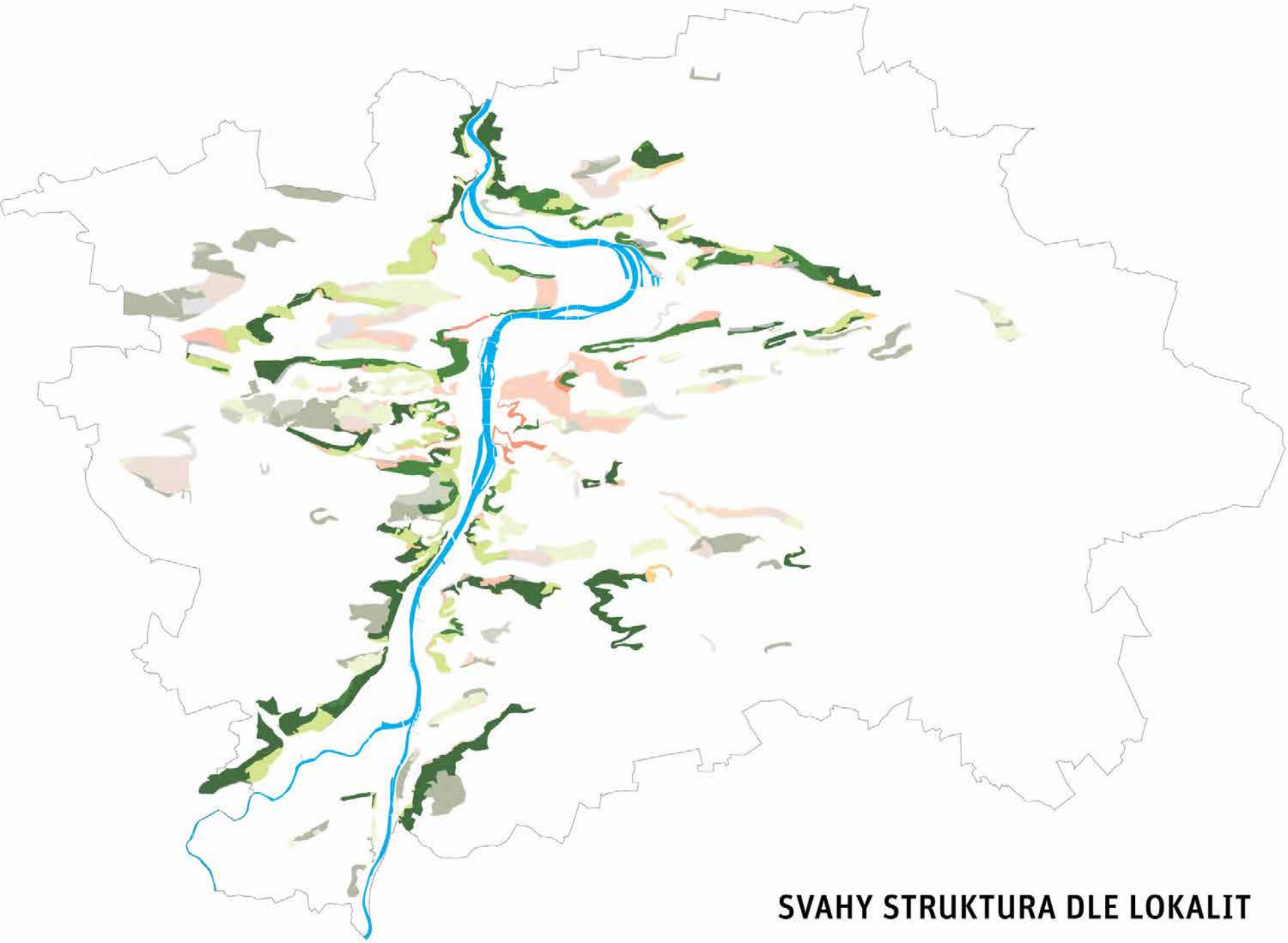
NÁVRH SVAHŮ
HLAVNÍ A VEDLEJŠÍ



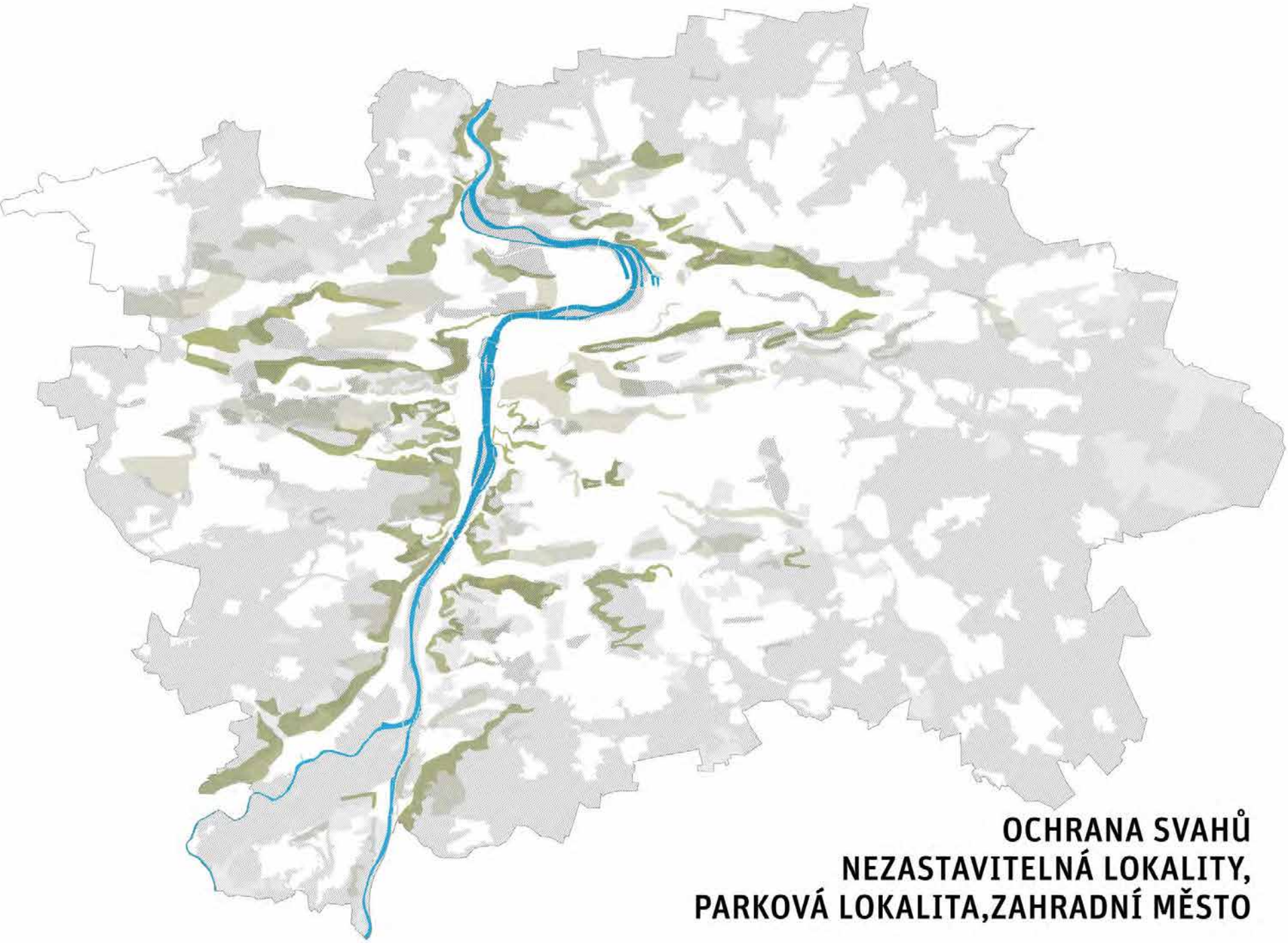
CESTY NA HRANÁCH SVAHŮ
STÁVAJÍCÍ A CHYBĚJÍCÍ



SVAHY STRUKTURA DLE BLOKŮ



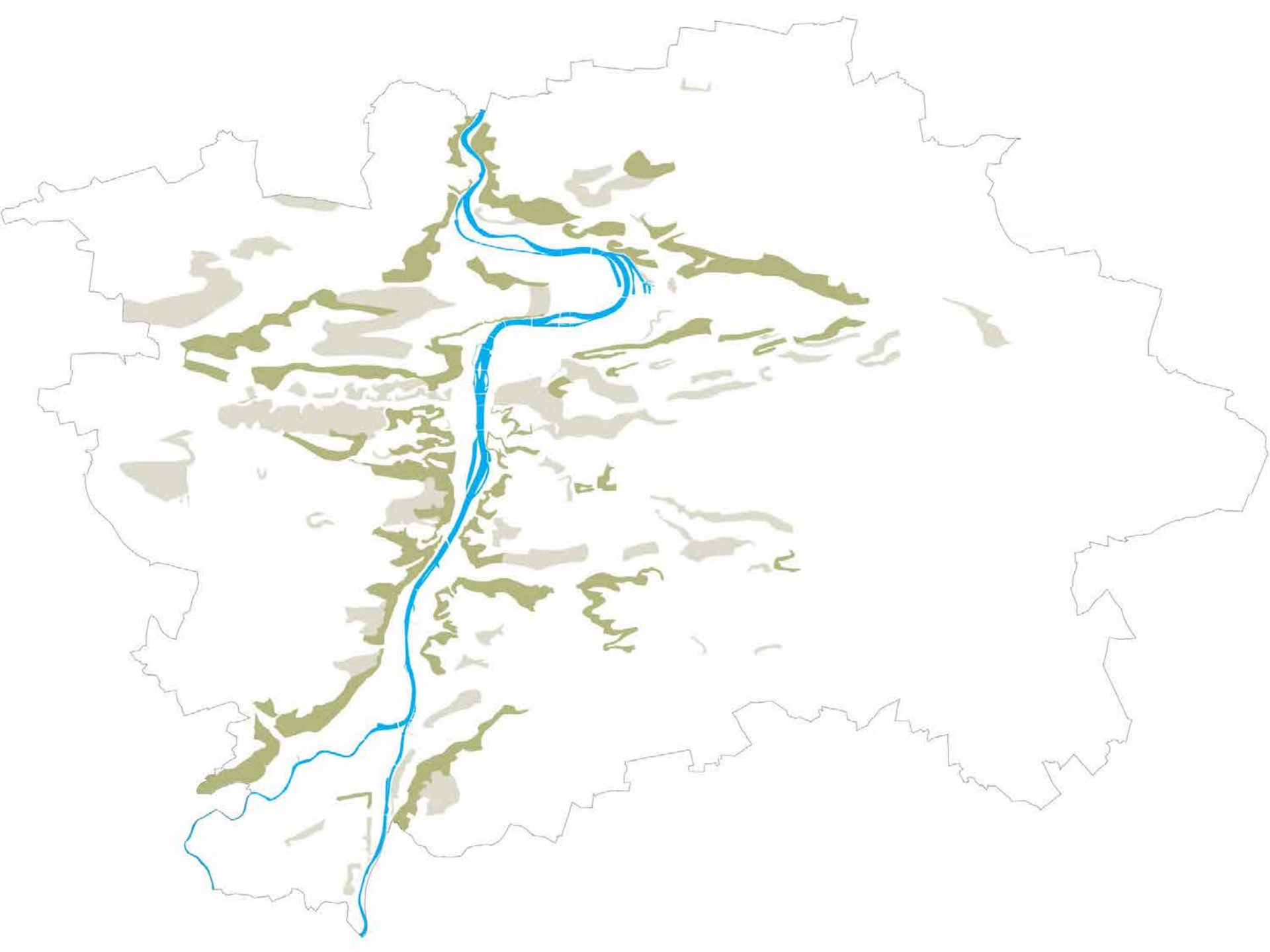
SVAHY STRUKTURA DLE LOKALIT

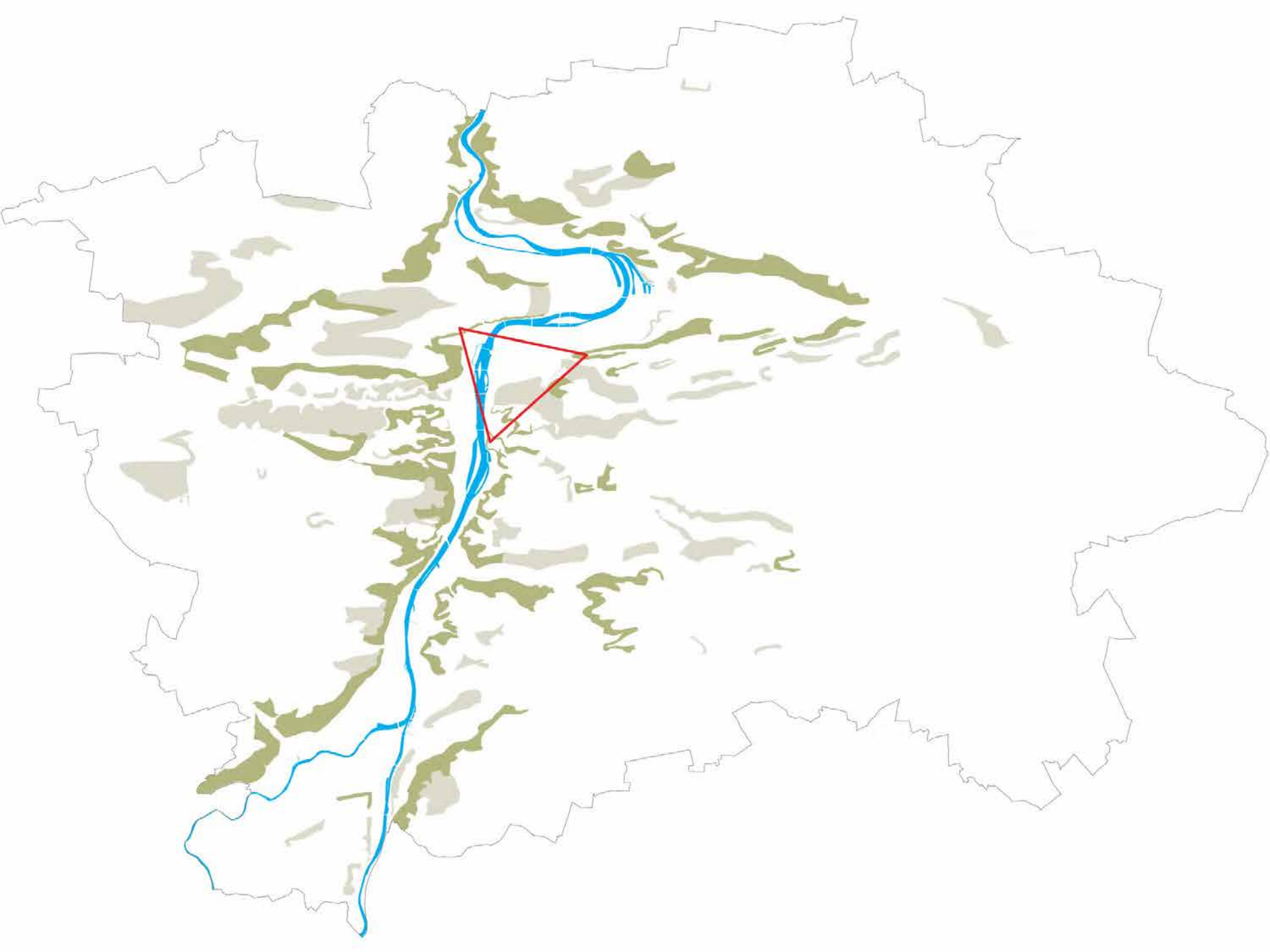


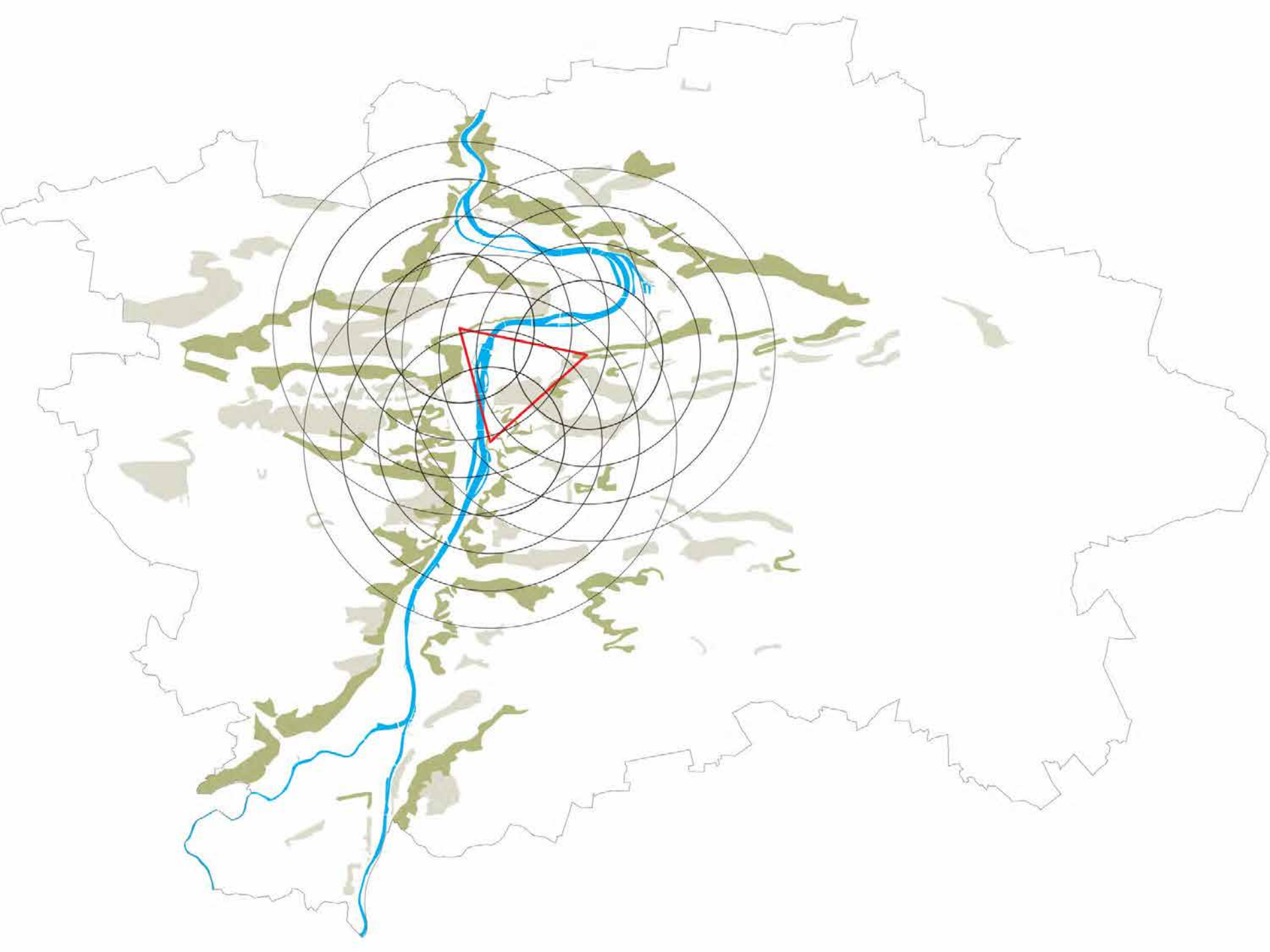
OCHRANA SVAHŮ
NEZASTAVITELNÁ LOKALITY,
PARKOVÁ LOKALITA,ZAHRADNÍ MĚSTO

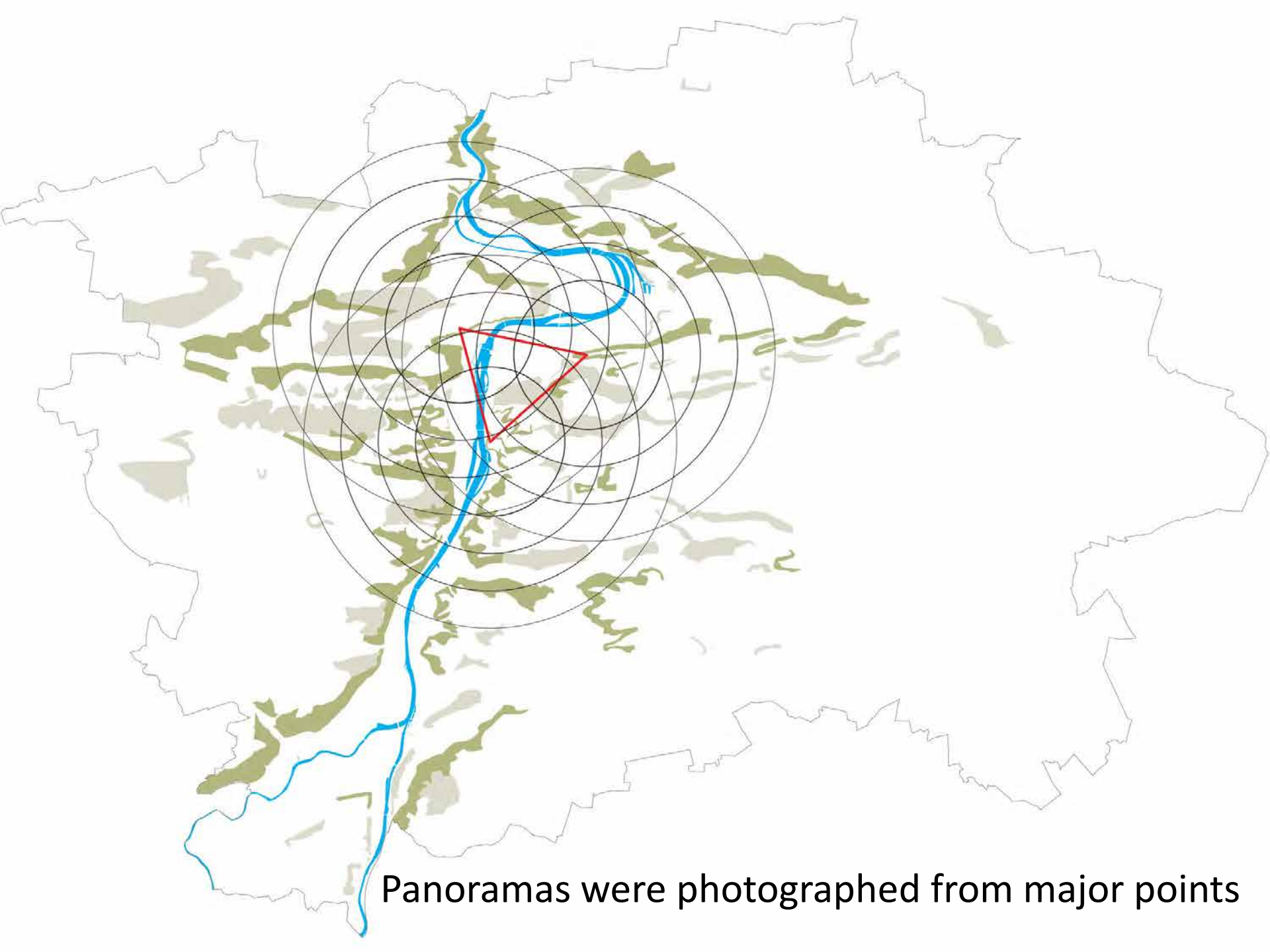
Prague City

VIEWS
On Prague Landscape
Composition

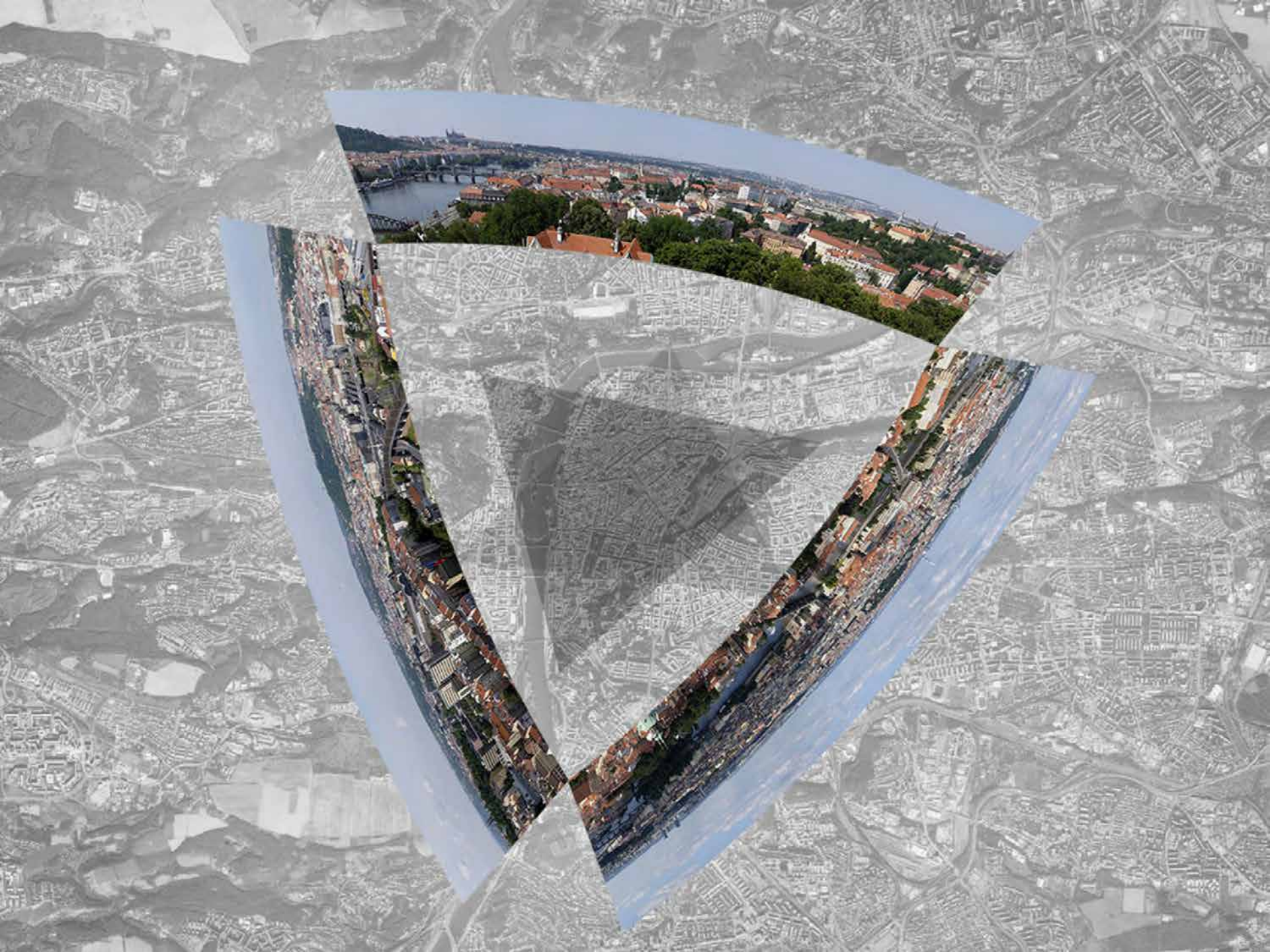


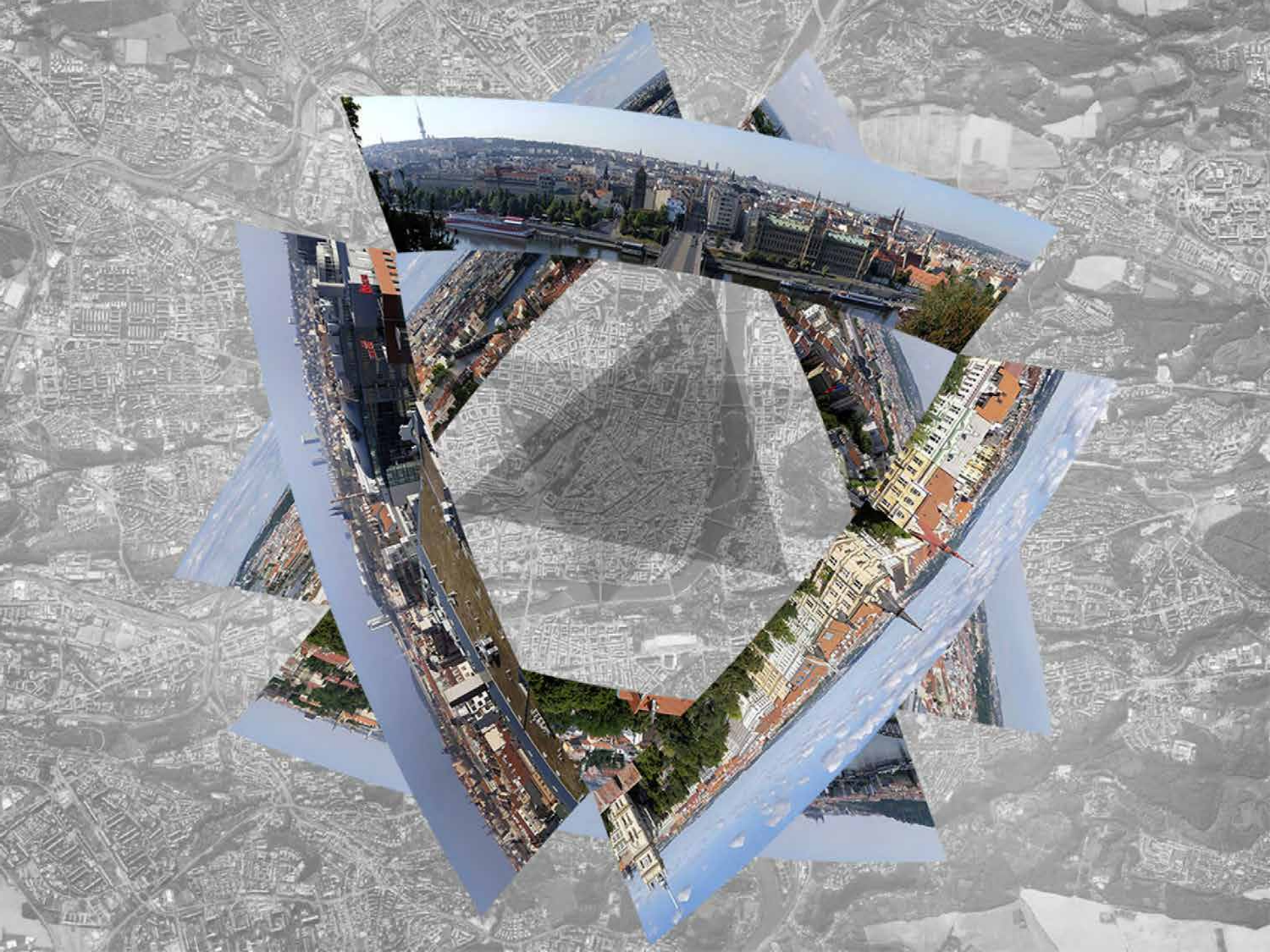






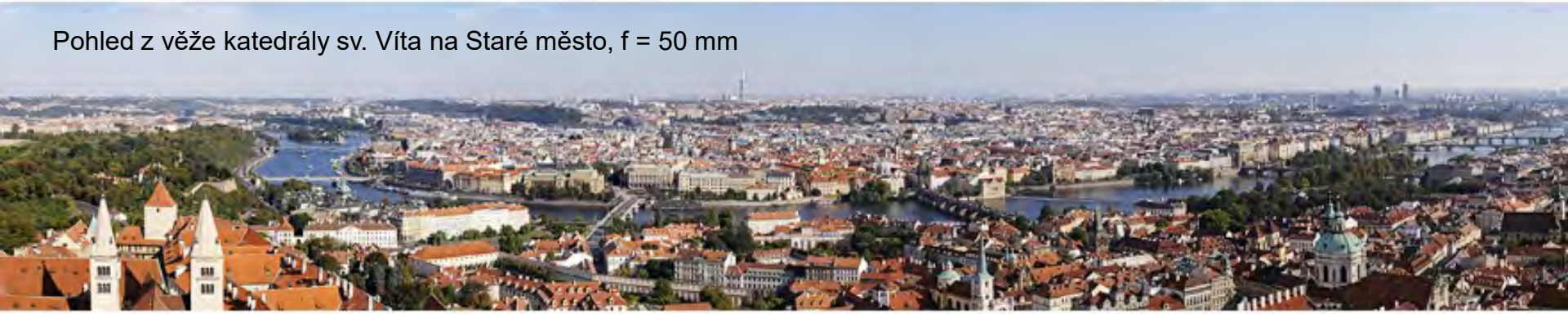
Panoramas were photographed from major points





Pohled z památníku na Vítkově, f = 50 mm

Pohled z věže katedrály sv. Víta na Staré město, f = 50 mm



Pohled z věže baziliky sv. Petra a Pavla na Vyšehradě, f = 50 mm

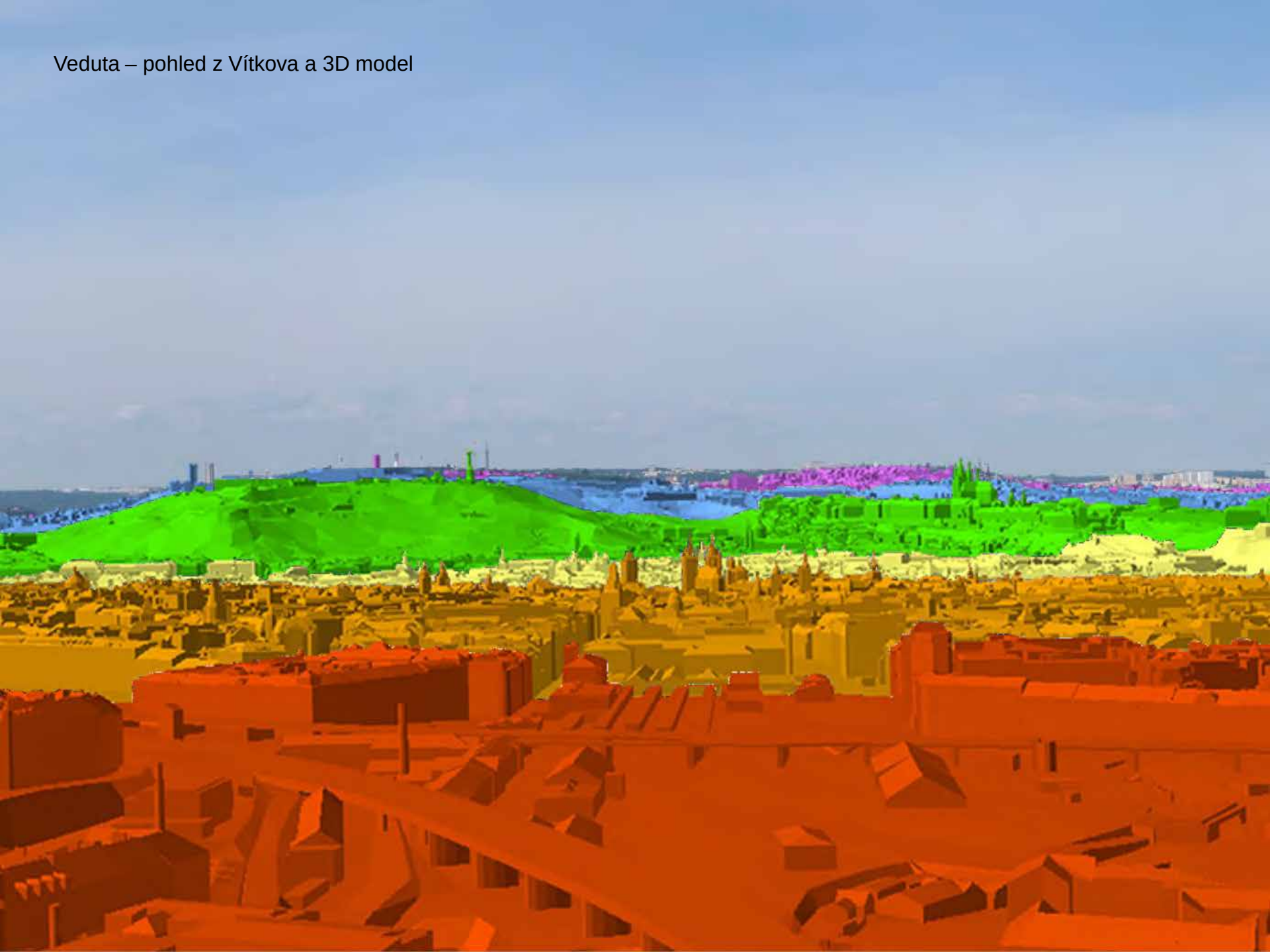
Pohled z věže Husova sboru na Vinohradech, f = 50 mm

Pohled z parku Sacré Coeur, f = 50 mm

Pohled z hrany Letenských sadů, f = 50 mm

Veduta – pohled z Vítkova

Veduta – pohled z Vítkova a 3D model

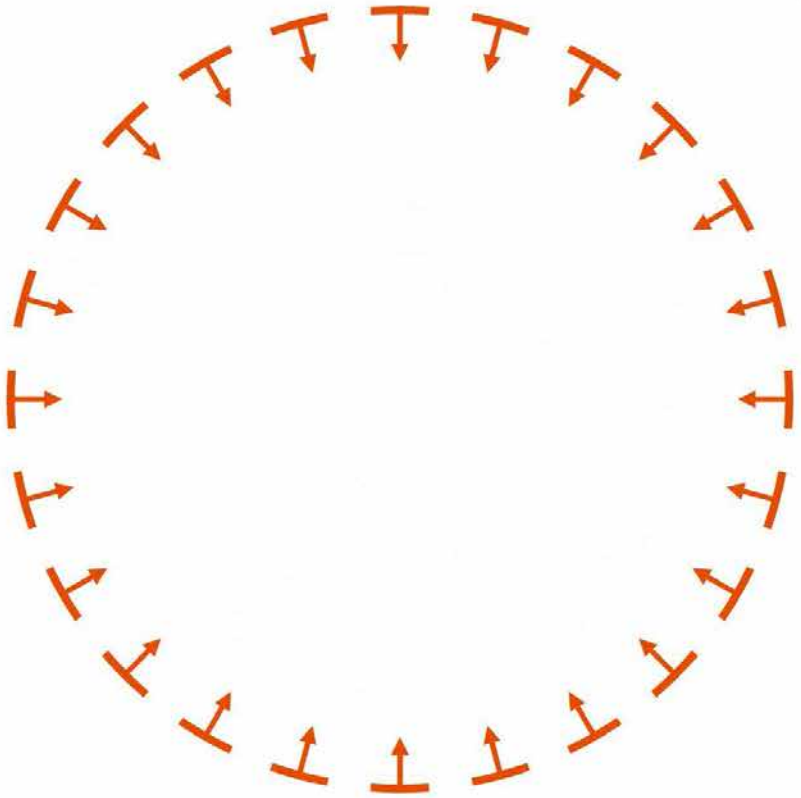


Veduta – pohled z Vítkova, zobrazení vzdáleností

Veduta – pohled z Vítkova, zobrazení hranice PPR

PPR-core zone of UNESCO

PRAGUE IS A VERY LOW-DENSITY CITY



Prague City

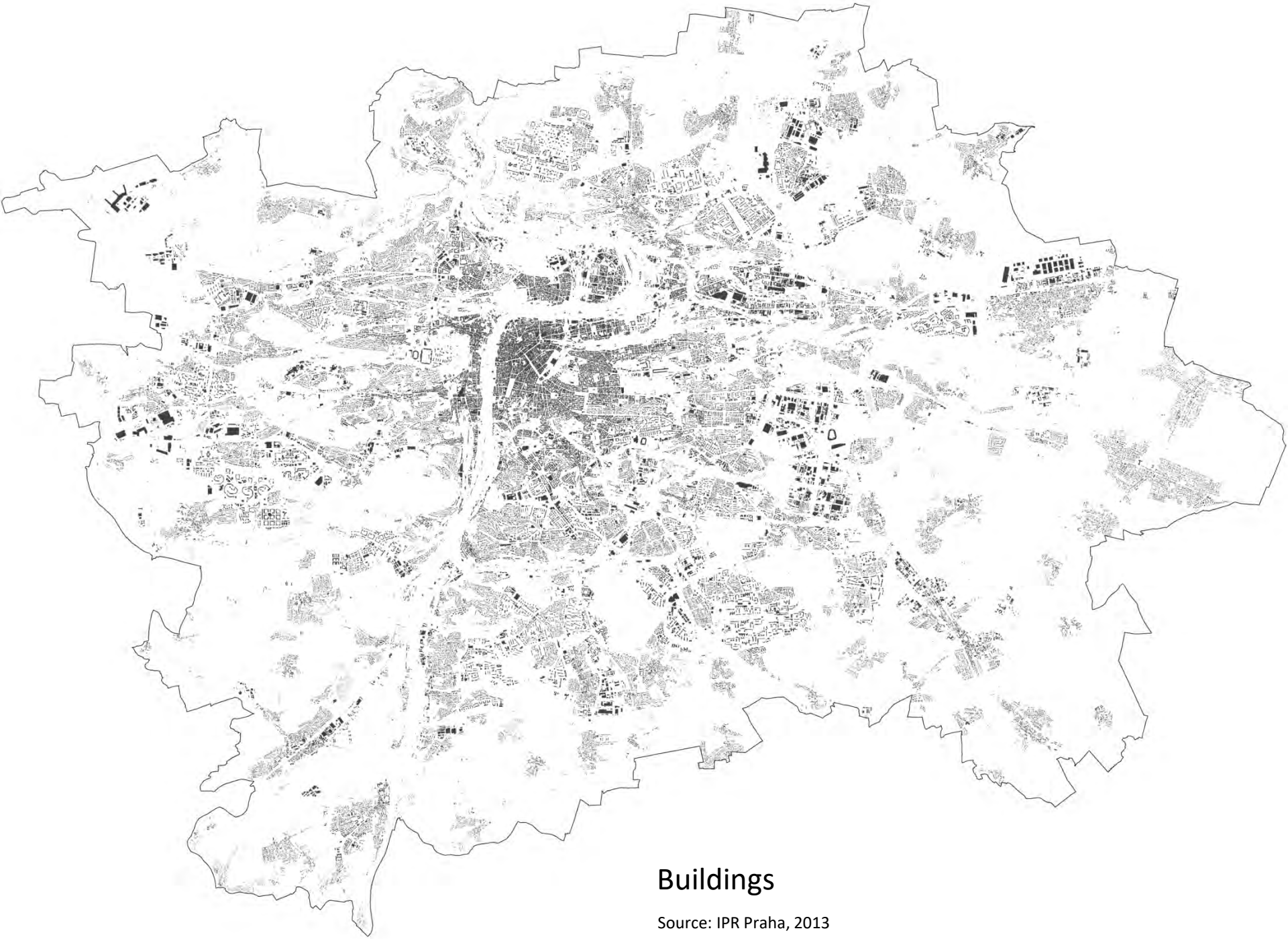
The city can develop normally only beeing enclosed by it‘s city walls. That is the only way to find a balance between real needs and a waste.

Actual boundaries of nowadays cities were set by the profligate twentieth century. It is the task for the responsible twenty-first century to hold those boundaries and meaningfully fill them.

Prague City

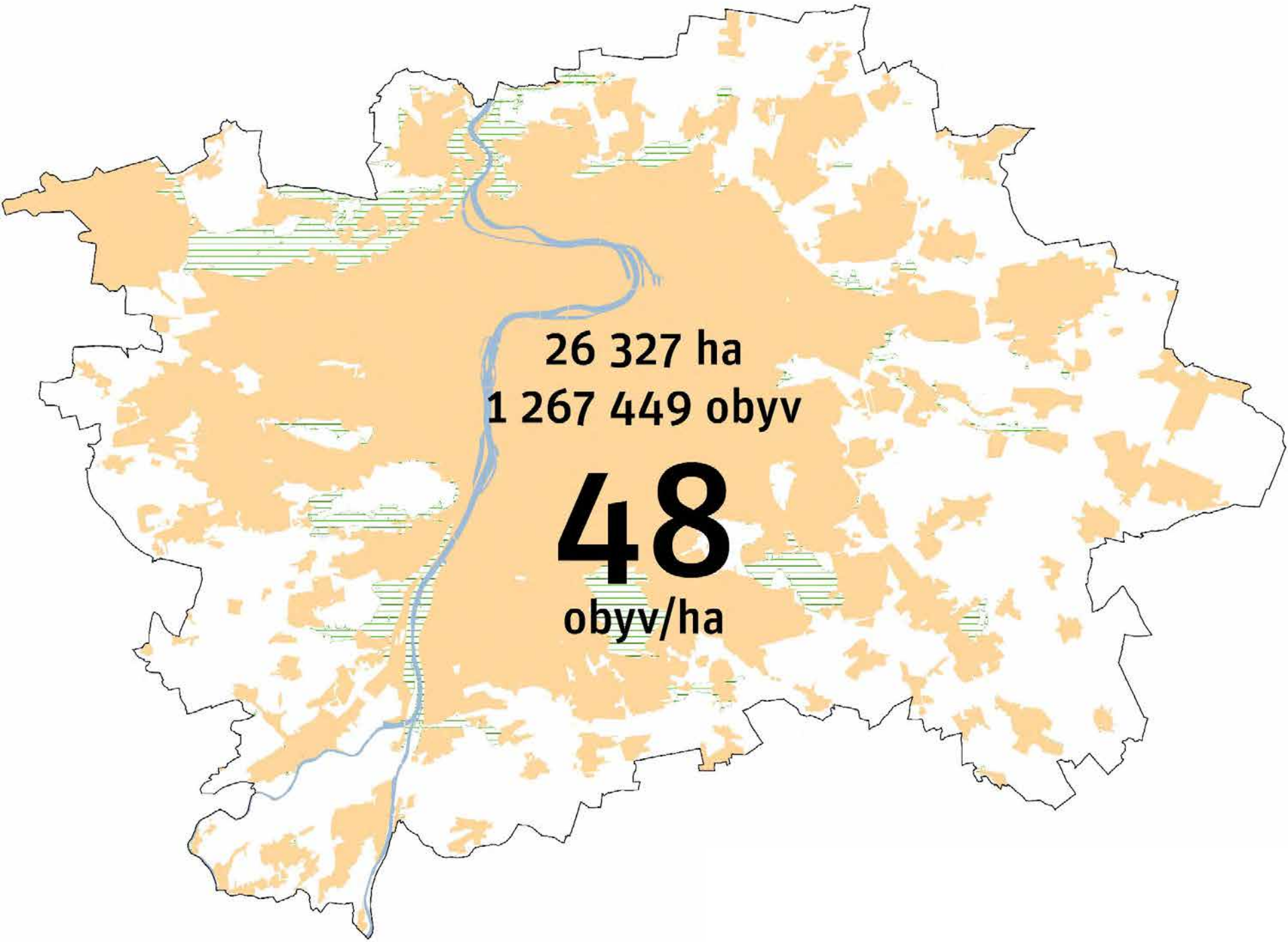
PRAGUE IS A VERY LOW-DENSITY CITY

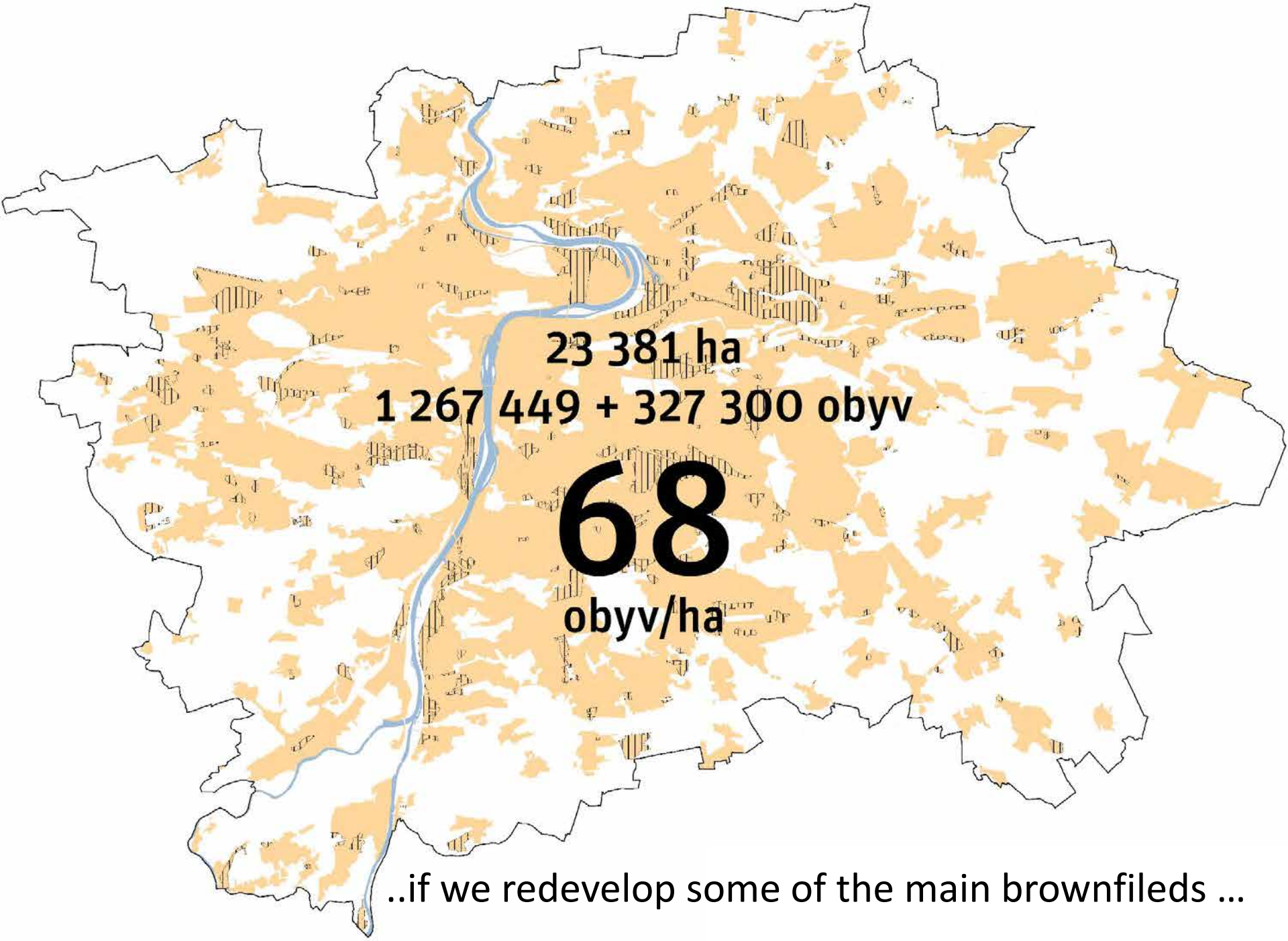
With a lot of empty abandoned spaces of no use



Buildings

Source: IPR Praha, 2013


26 327 ha
1 267 449 obyv
48
obyv/ha

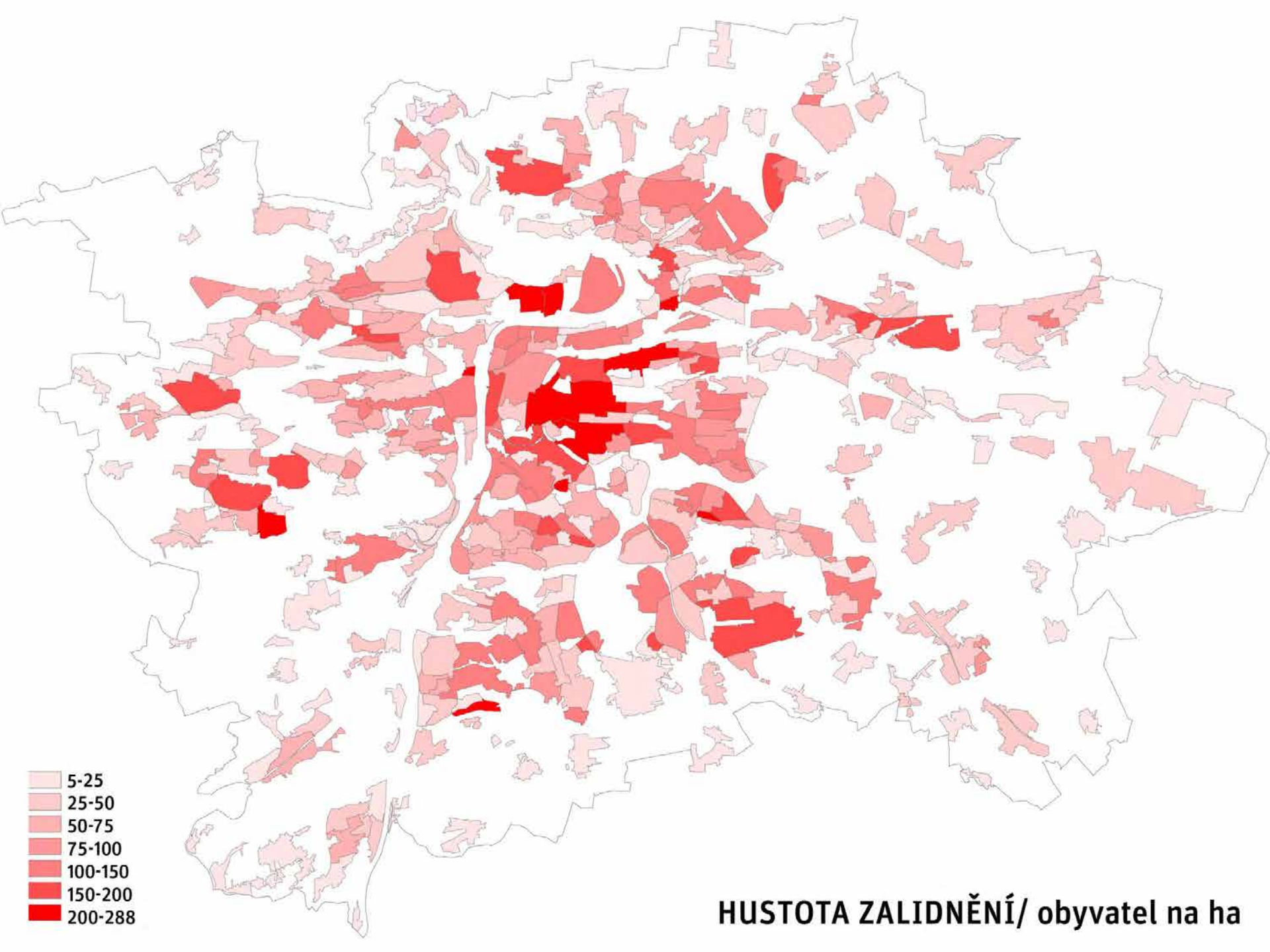


..if we redevelop some of the main brownfileds …

Prague City

PRAGUE IS A VERY LOW-DENSITY CITY

Prague needs densification


5-25
25-50
50-75
75-100
100-150
150-200
200-288
HUSTOTA ZALIDNĚNÍ/ obyvatel na ha

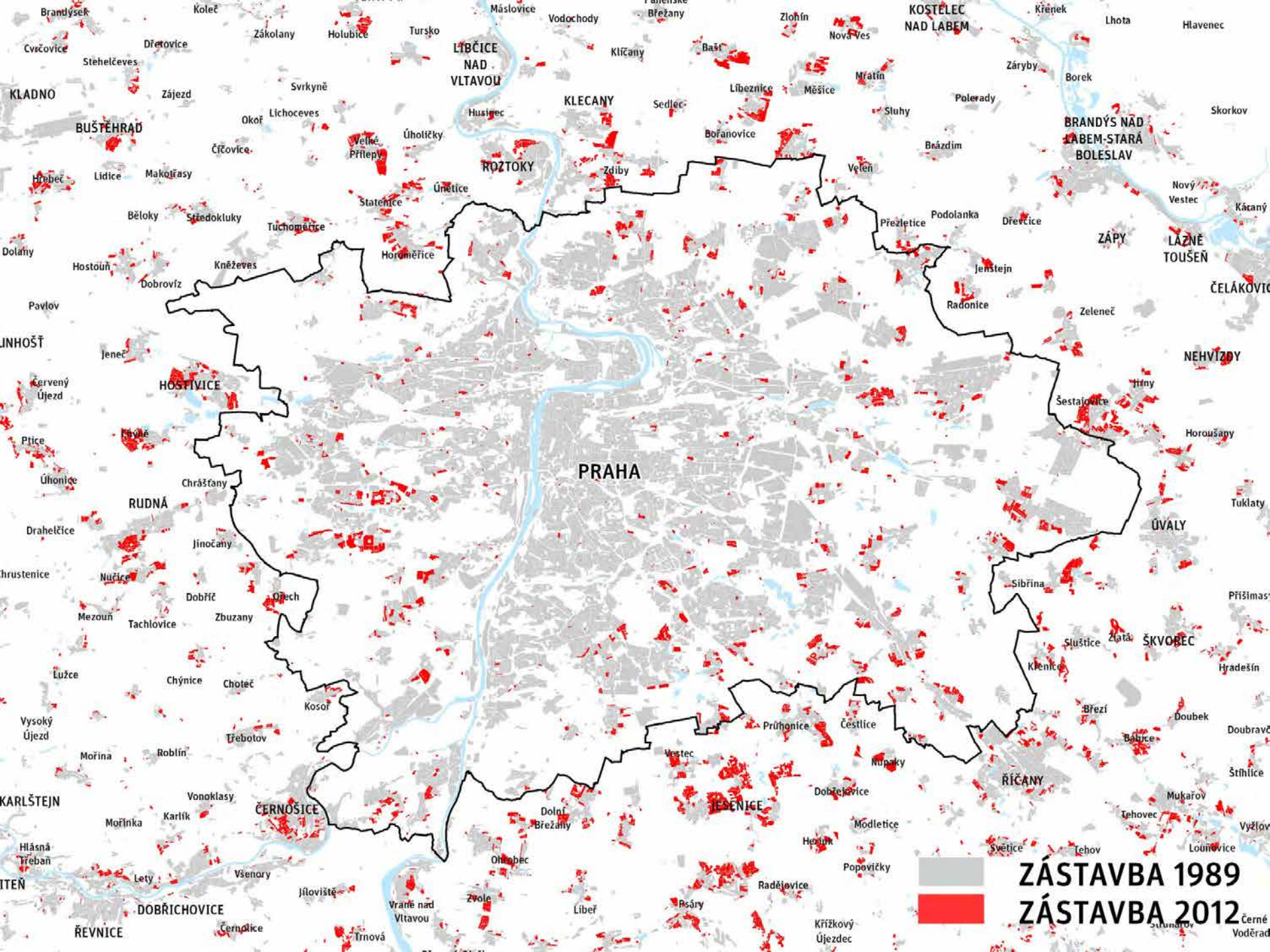
before

after

Prague City

PRAGUE IS A VERY LOW-DENSITY CITY

No more urban sprawl !



PRAHA
ZÁSTAVBA 1989
ZÁSTAVBA 2012
KLADNO
BUŠTĚHRAD
LIBČICE NAD VLTAVOU
KLECANY
ROZTOKY
KOSTELEC NAD LABEM
BRANDÝS NAD LABEM-STARÁ BOLESLAV
ZÁPY
LÁZNĚ TOUŠEŇ
ČELÁKOVIC
NEHVÍZDY
HOSTIVICE
RUDNÁ
ÚVALY
ŠKVOREC
ŘÍČANY
JESENICE
ČERNOŠICE
DOBŘICHOVICE
ŘEVNICE
KARLŠTEJN
Brandýsek
Koleč
Máslovice
Vodochody
Zlonín
Křenek
Lhota
Hlavenec
Cvrčovice
Dřetovice
Zákolany
Holubice
Tursko
Klíčany
Bašť
Nová Ves
Stehelčeves
Záryby
Borek
Zájezd
Svrkyně
Líbeznice
Měšice
Mratín
Polerady
Okoř
Lichoceves
Husinec
Sedlec
Sluhy
Skorkov
Číčovice
Velké Přílepy
Úholičky
Bořanovice
Brázdim
Hřebeč
Lidice
Makotřasy
Zdiby
Veleň
Únětice
Statenice
Nový Vestec
Káraný
Běloky
Středokluky
Tuchoměřice
Přezletice
Podolanka
Dřevčice
Dolany
Horoměřice
Hostouň
Kněževes
Jenštejn
Dobrovíz
Radonice
Pavlov
Zeleneč
Jeneč
Červený Újezd
Jirny
Šestajovice
Ptice
Horoušany
Úhonice
Chrášťany
Tuklaty
Drahelčice
Jinočany
Nučice
Sibřina
Dobříč
Ořech
Mezouň
Tachlovice
Zbuzany
Slušticе
Zlatá
Křenice
Hradešín
Lužce
Chýnice
Choteč
Kosoř
Březí
Doubek
Vysoký Újezd
Průhonice
Čestlice
Třebotov
Babice
Mořina
Roblín
Vestec
Nupaky
Štíhlice
Vonoklasy
Dobřejovice
Mukařov
Karlík
Dolní Břežany
Tehovec
Mořinka
Modletice
Hlásná Třebaň
Herink
Světice
Tehov
Louňovice
Ohrobec
Popovičky
Lety
Všenory
Jíloviště
Radějovice
Zvole
Vrané nad Vltavou
Líbeř
Psáry
Křížkový Újezdec
Černolice
Trnová
Černé Voděrad

RECYCLING !

Prague City

Challenges of Metropolitan plan:

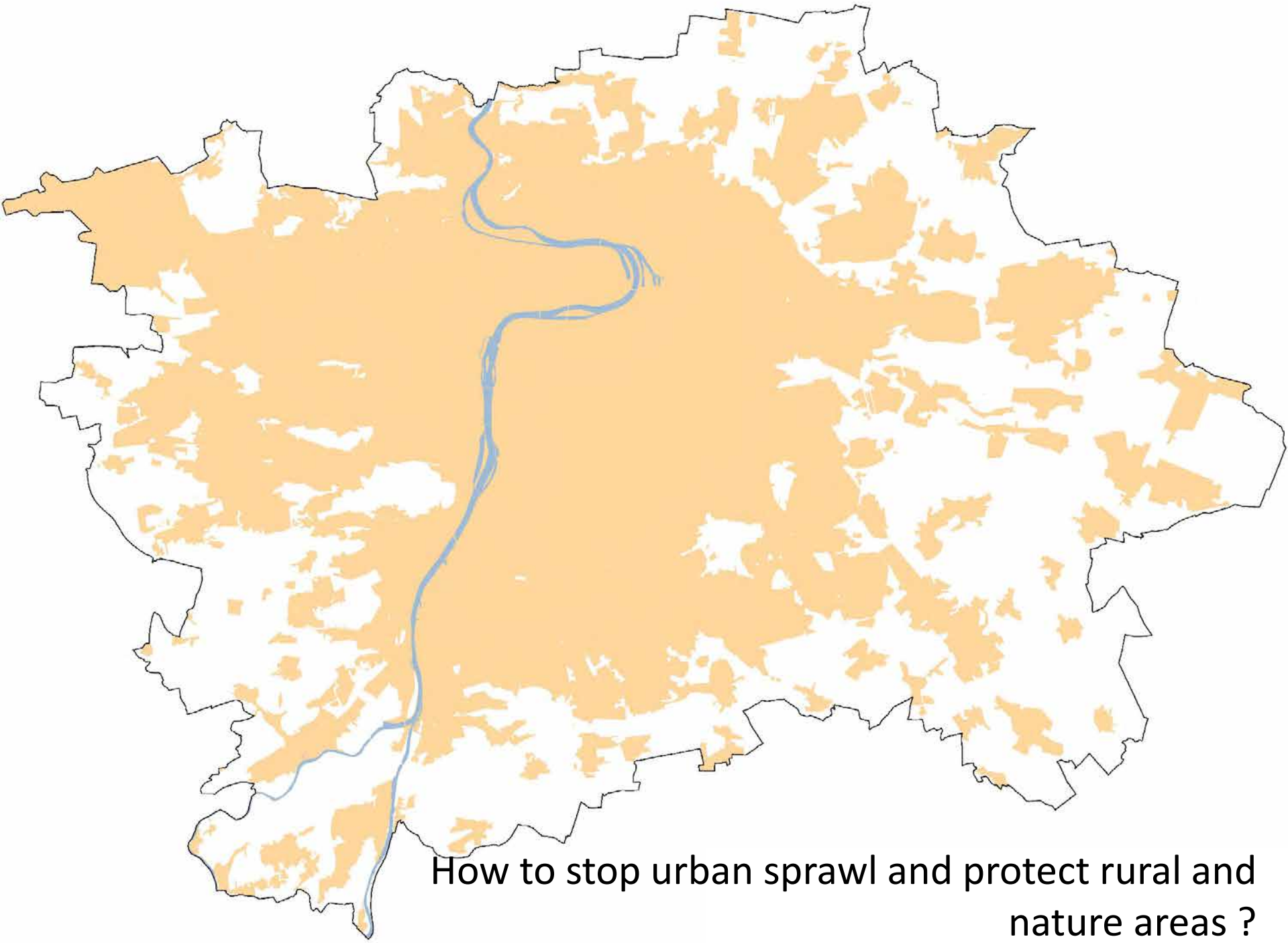
1/ limit the expansion of the City with the **LINE** separating built and un-built areas. LINE is accompanied with the **Green belt**

Prague City

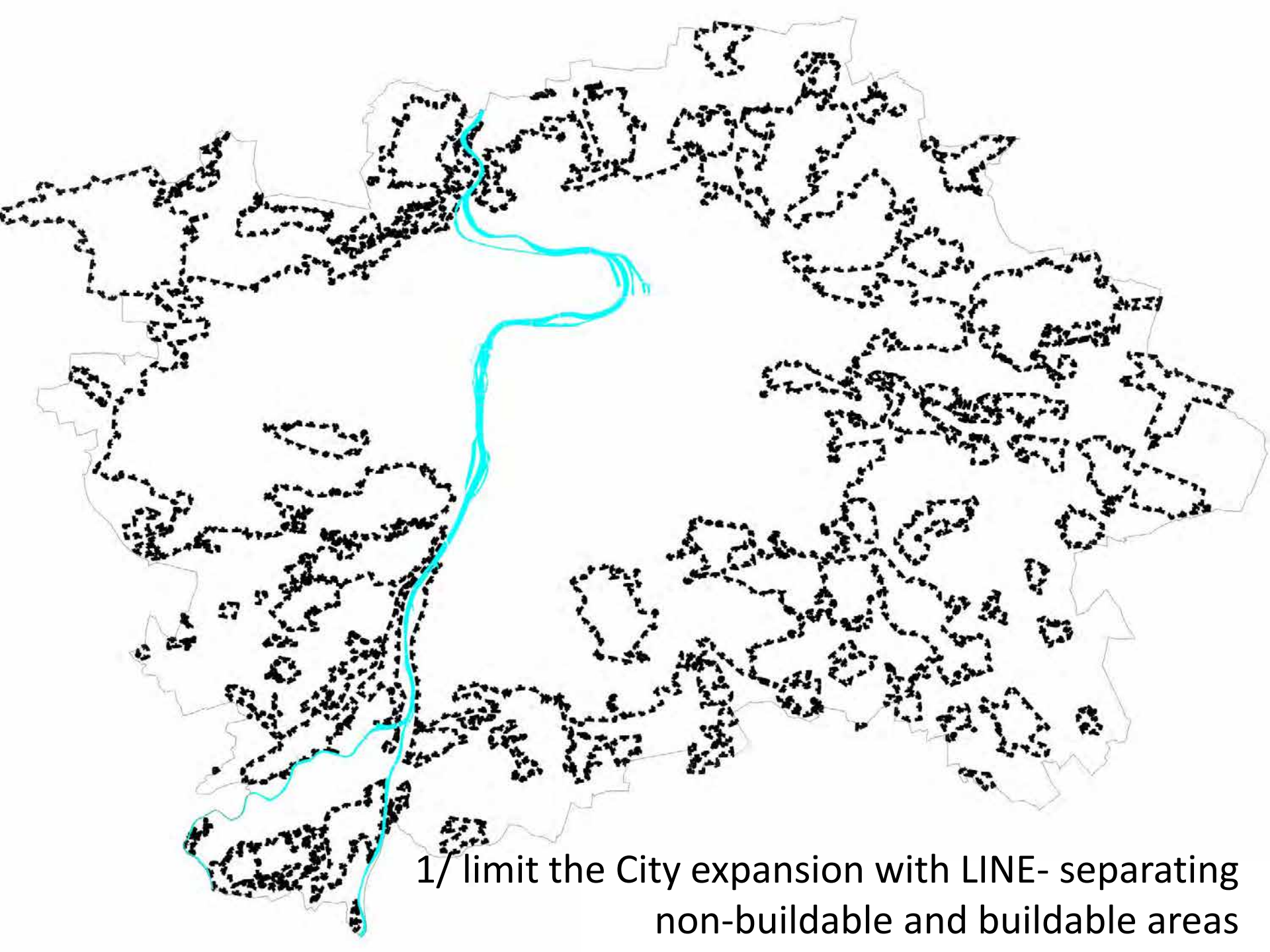
Challenges of Metropolitan plan:

1/ limit the expansion of the City with the **LINE** separating built and un-built areas. LINE is accompanied with the **Green belt**

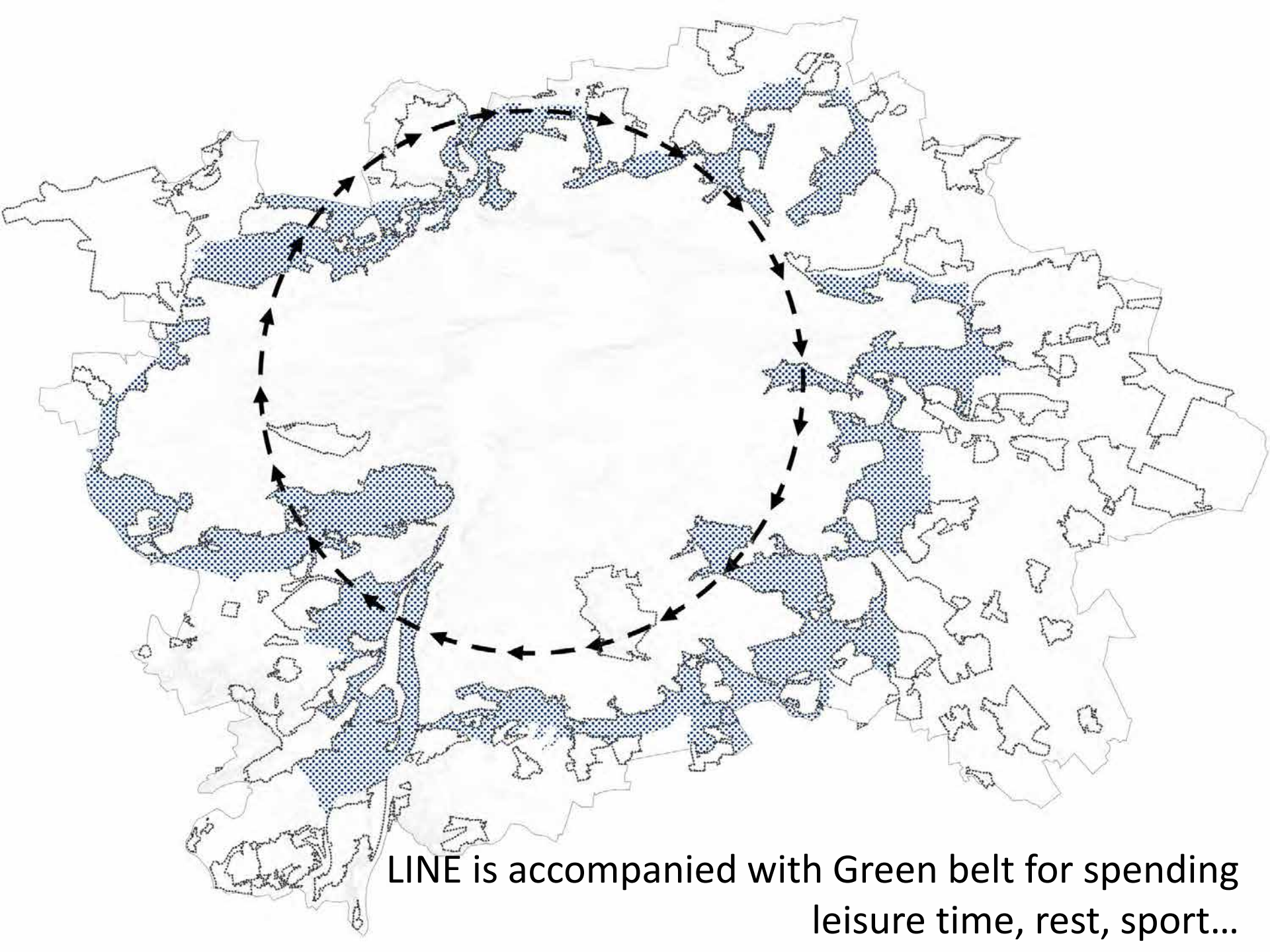
2/ respect for Unesco protected area and buffer zone (in height composition, vistas and vedutas)



How to stop urban sprawl and protect rural and nature areas ?



1/ limit the City expansion with LINE- separating non-buildable and buildable areas

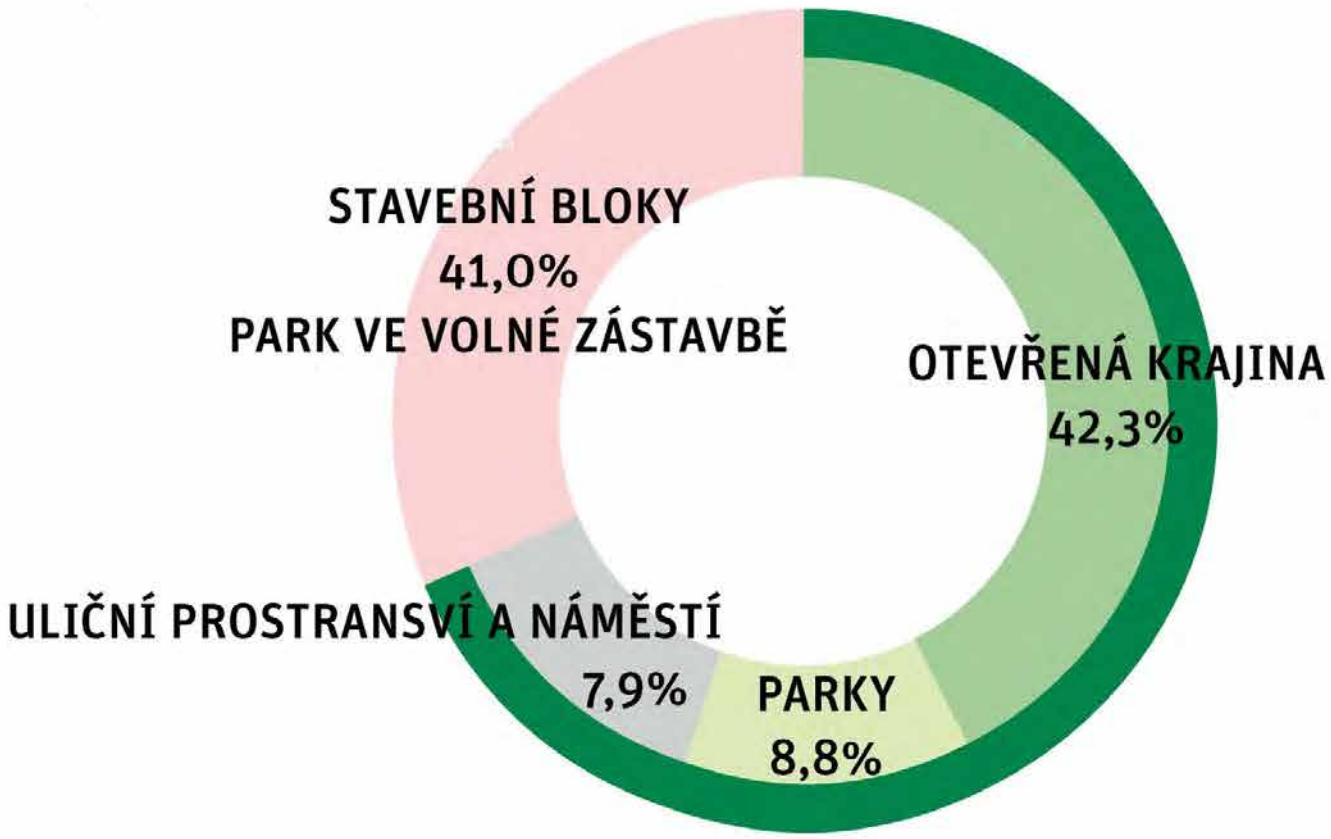


LINE is accompanied with Green belt for spending leisure time, rest, sport…

% OF AREA OF LOCALITIES

Prague is a very green city …

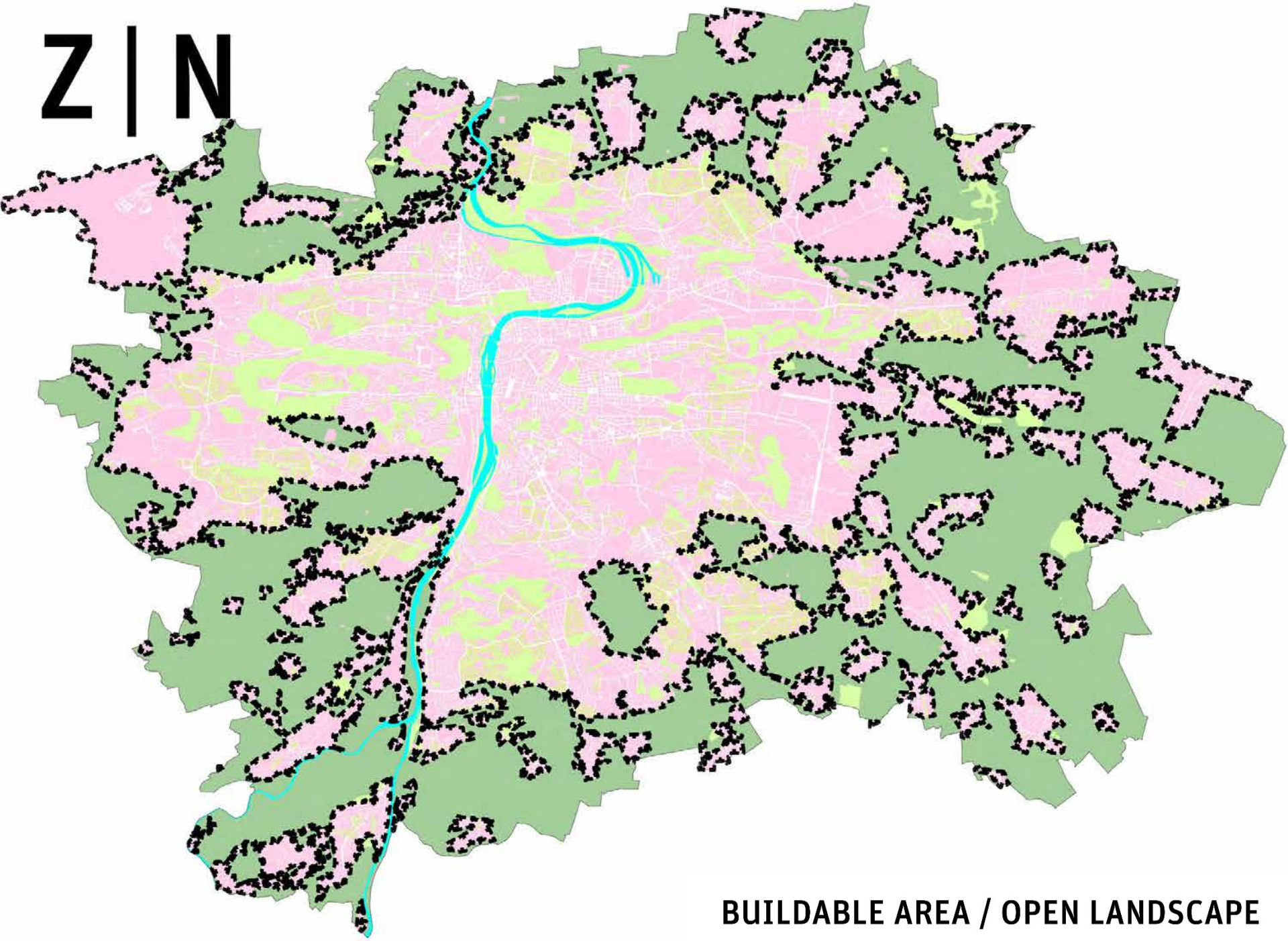
% OF AREA OF LOCALITIES



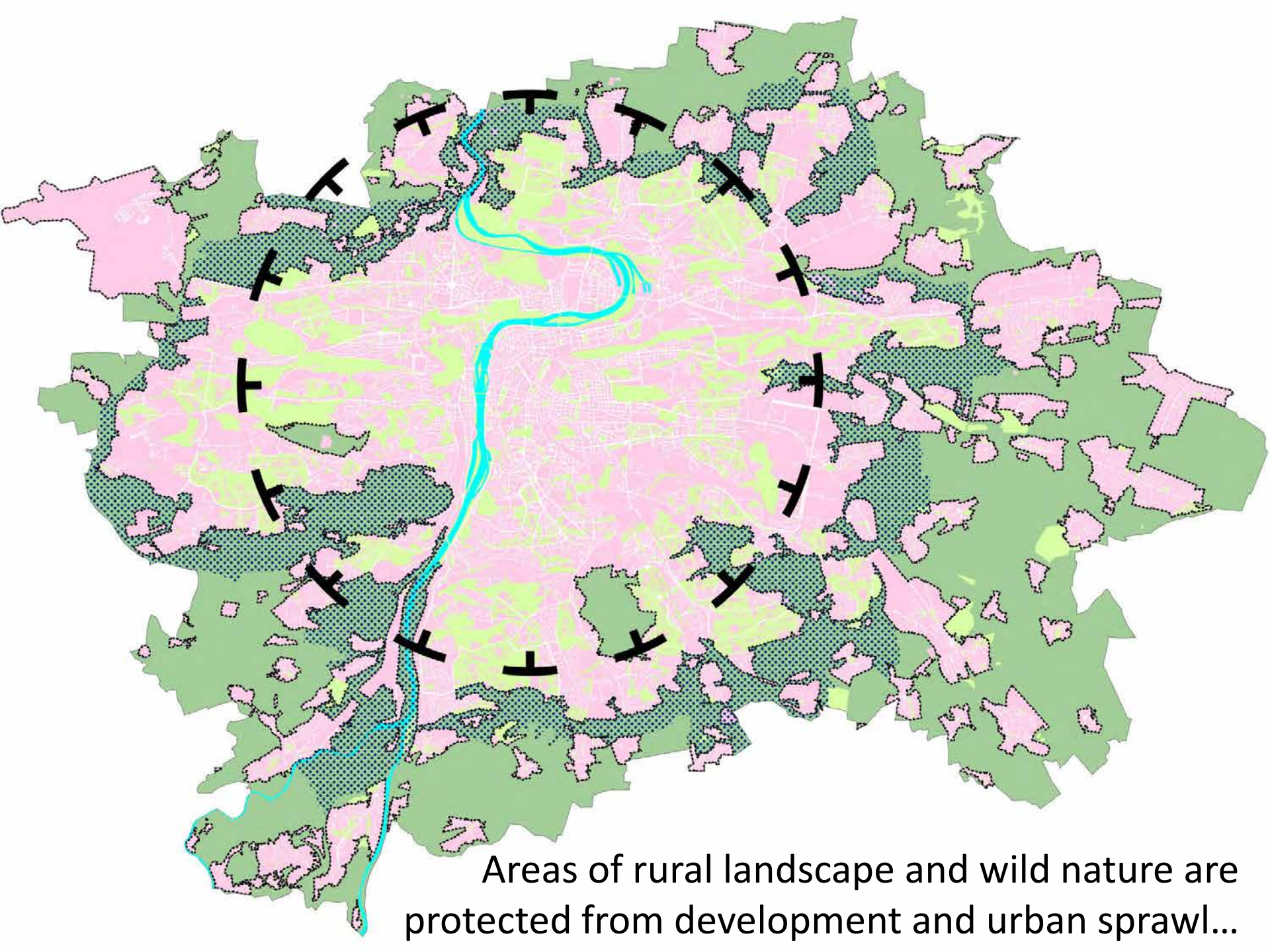
% OF AREA OF LOCALITIES

59% area consists in non buildable and open spaces such as parks and public spaces …

Z|N



BUILDABLE AREA / OPEN LANDSCAPE



Areas of rural landscape and wild nature are protected from development and urban sprawl…

IES

Open Landscape in Prague Covers 42,3% of area

.. These areas are with specified degree of ecological stability
Index of ecological stability (IES) is defined

IES

Index of ecological stability represents ecological stability of Landscape (area or Locality)

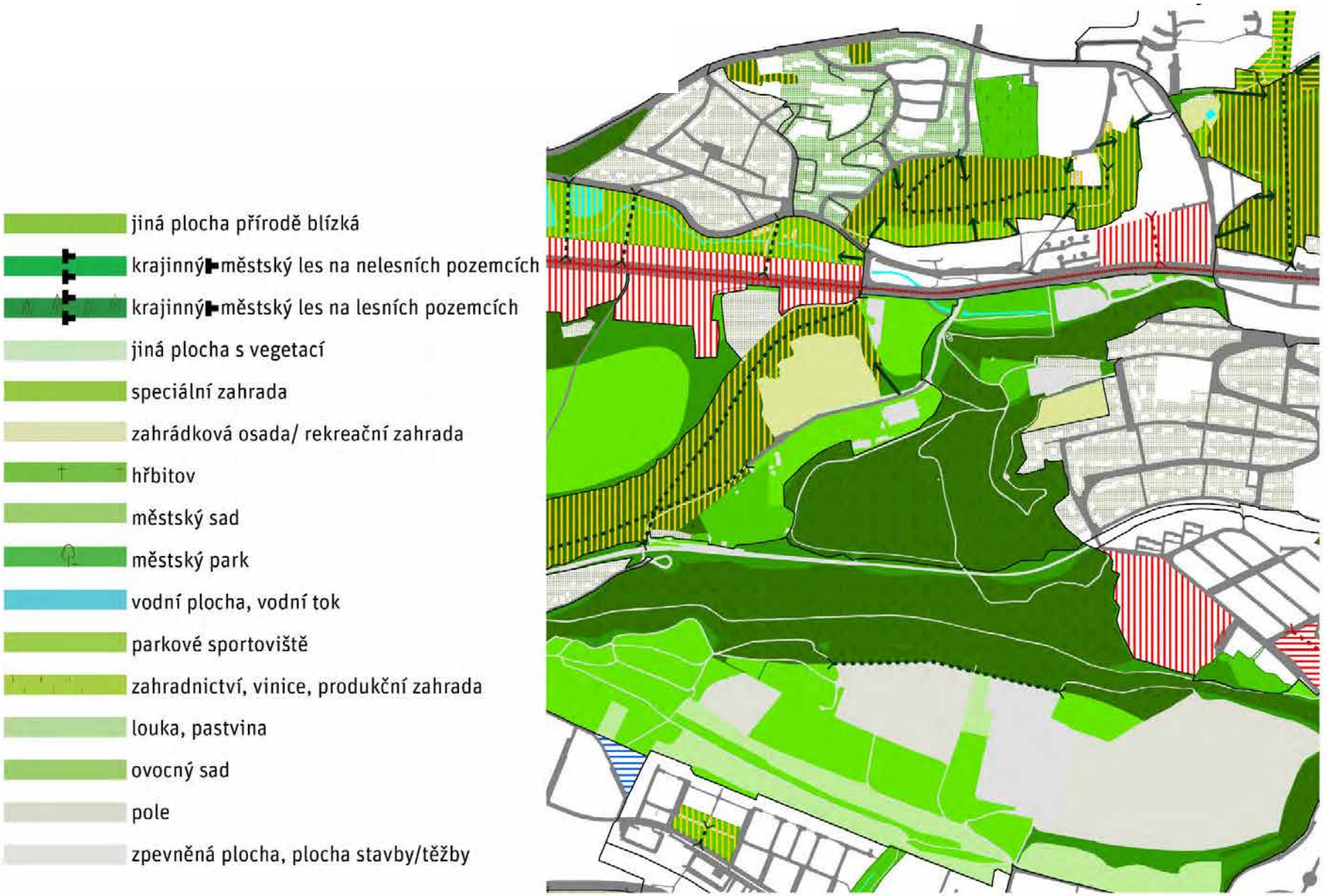
IES

Index of ecological stability

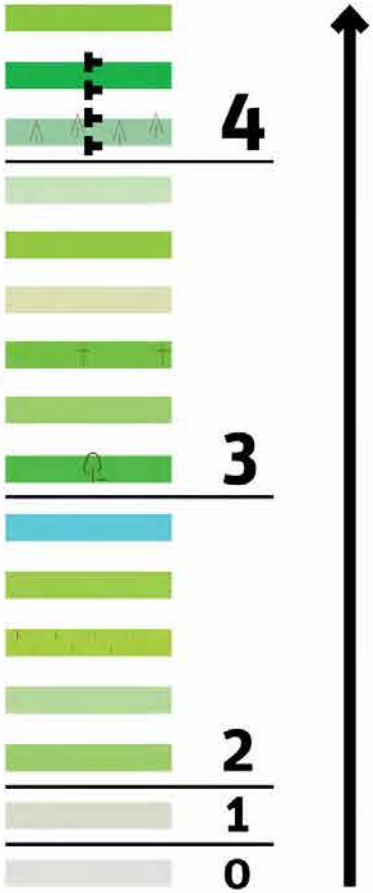
865/Šárka

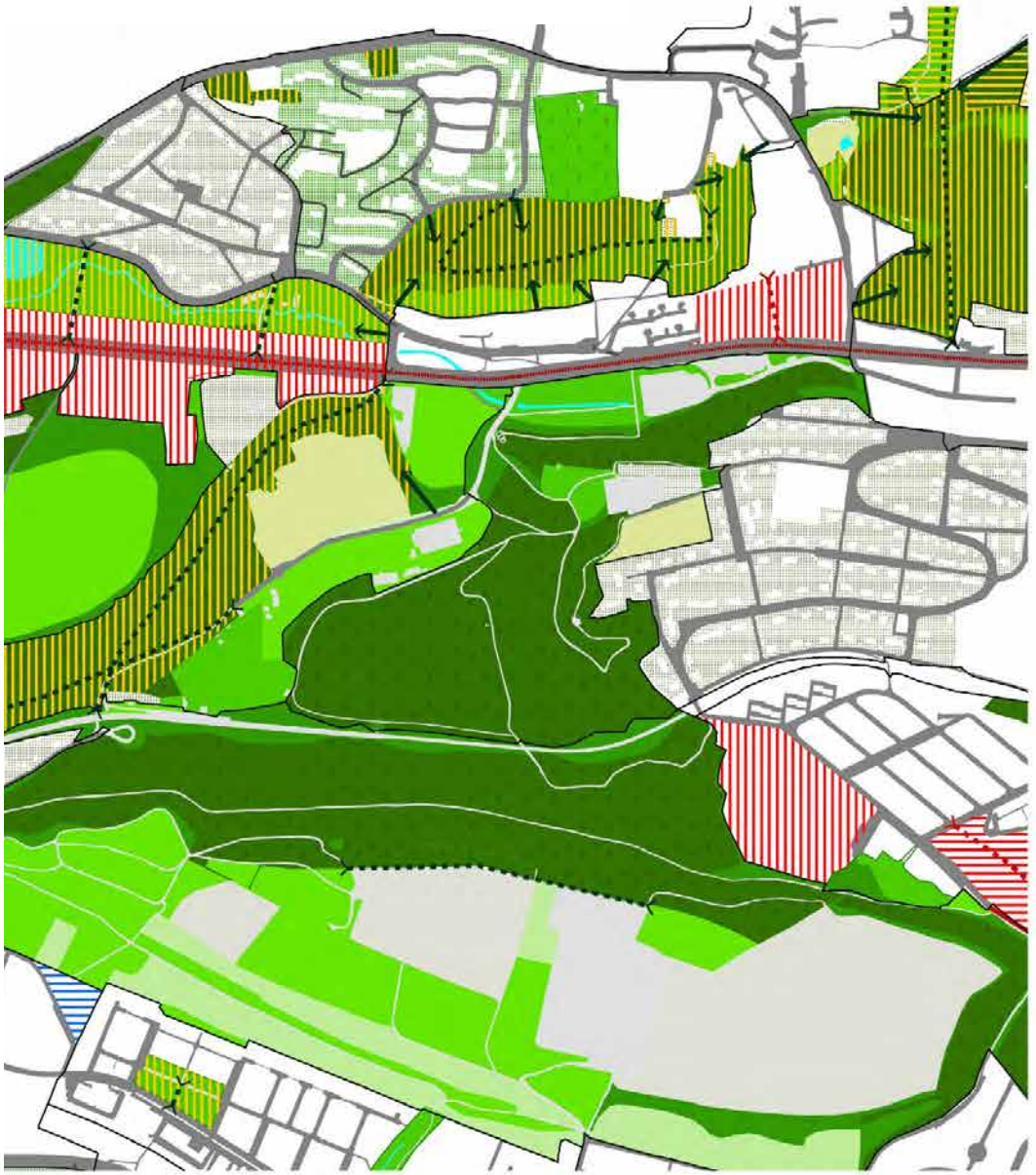
N(19) K [S] **3,62**

Landscape - types of structure:

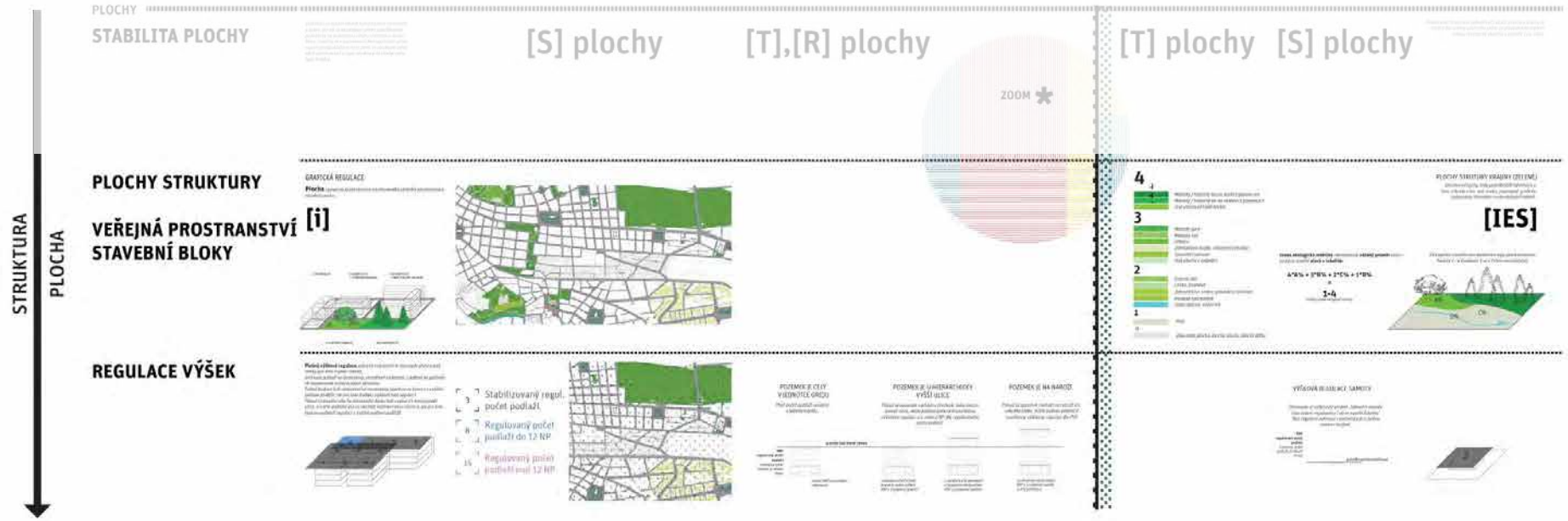


IES Degree of ecological stability

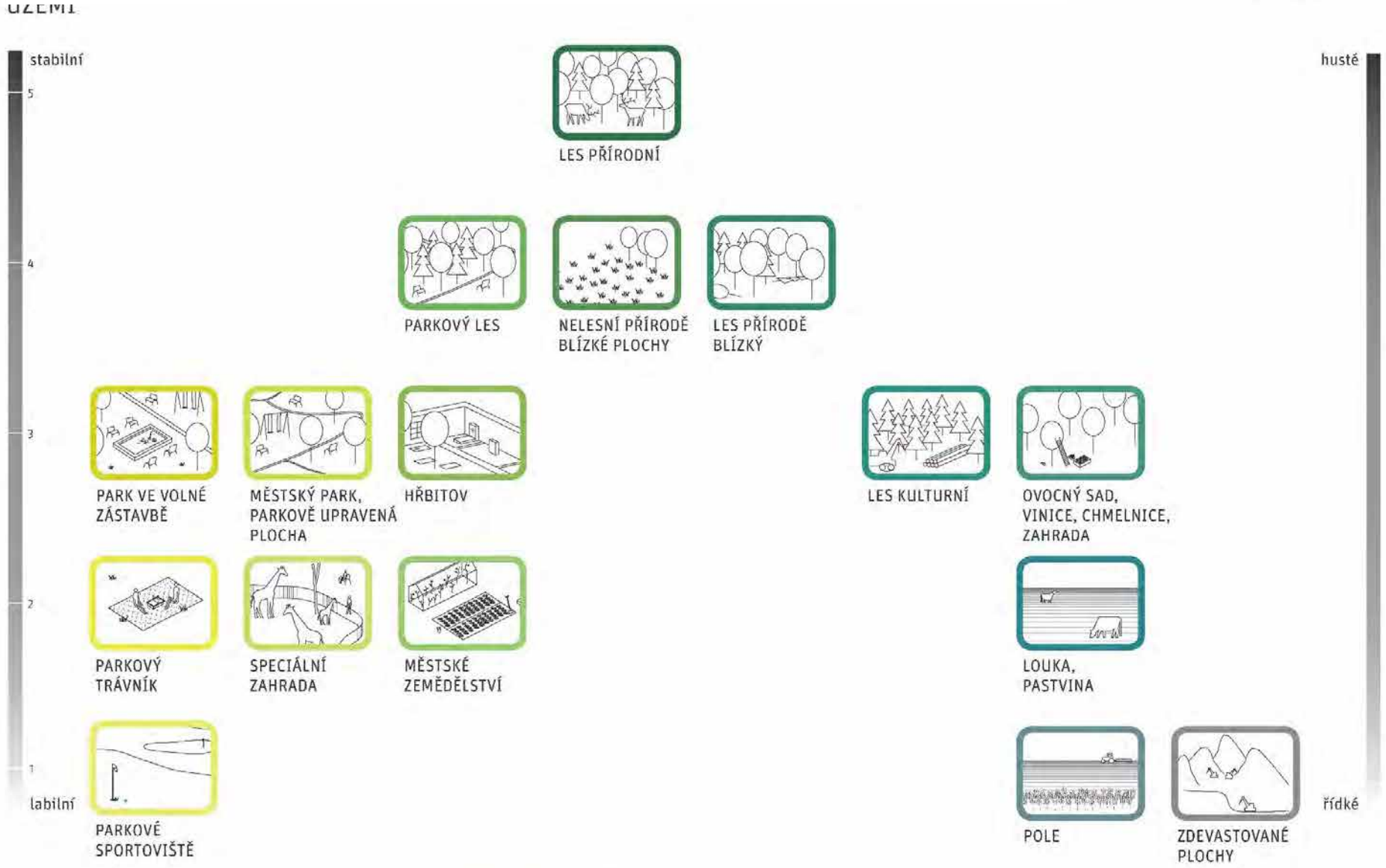




IES


PLOCHY
STABILITA PLOCHY
[S] plochy
[T],[R] plochy
[T] plochy
[S] plochy
ZOOM
STRUKTURA
PLOCHA
PLOCHY STRUKTURY
VEŘEJNÁ PROSTRANSTVÍ
STAVEBNÍ BLOKY
REGULACE VÝŠEK
[i]
[IES]
Stabilizovaný regul. počet podlaží
Regulovaný počet podlaží do 12 NP
Regulovaný počet podlaží nad 12 NP

Landscape - types of structure:

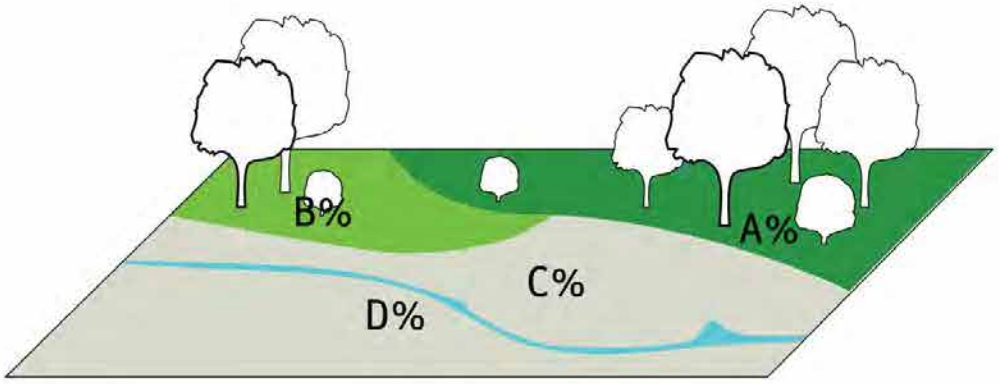


IES

Index of ecological stability

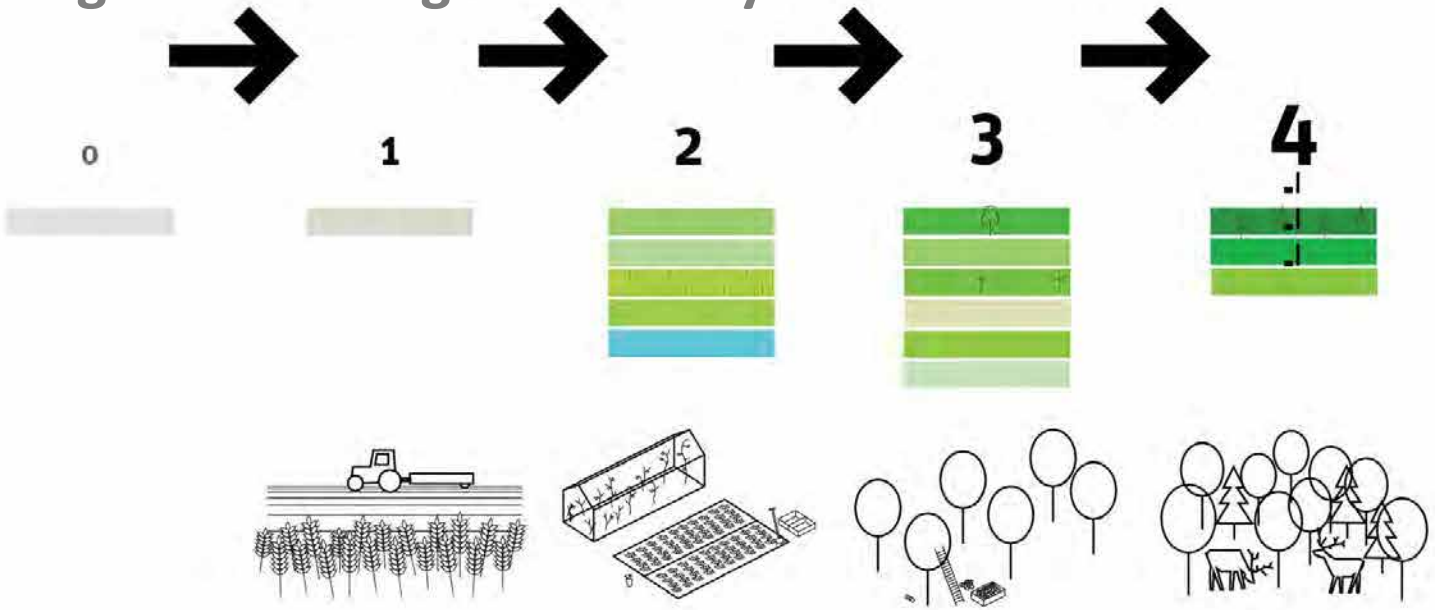
1*D% + **2***C% + **3***B% + **4***A%= 1,00-4

(vážený průměr stupňů ekologické stability ploch)



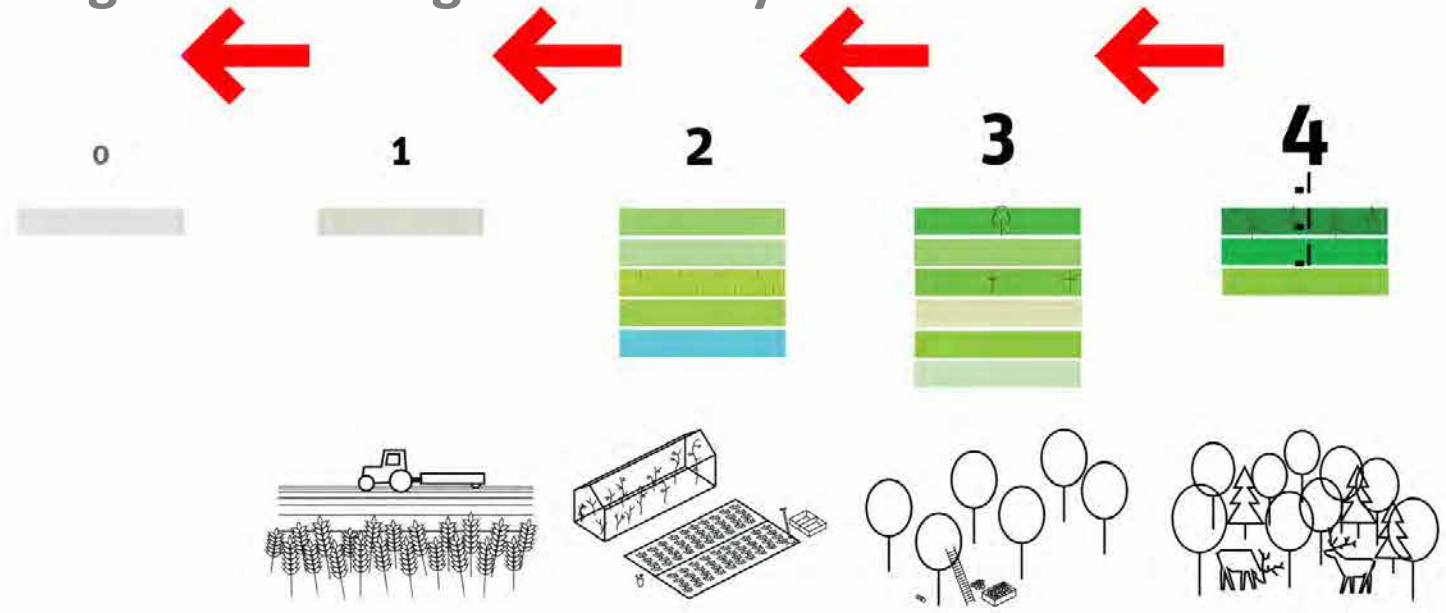
IES

Different type of structure of Landscape characteristics
The degree of ecological stability can be increased



IES

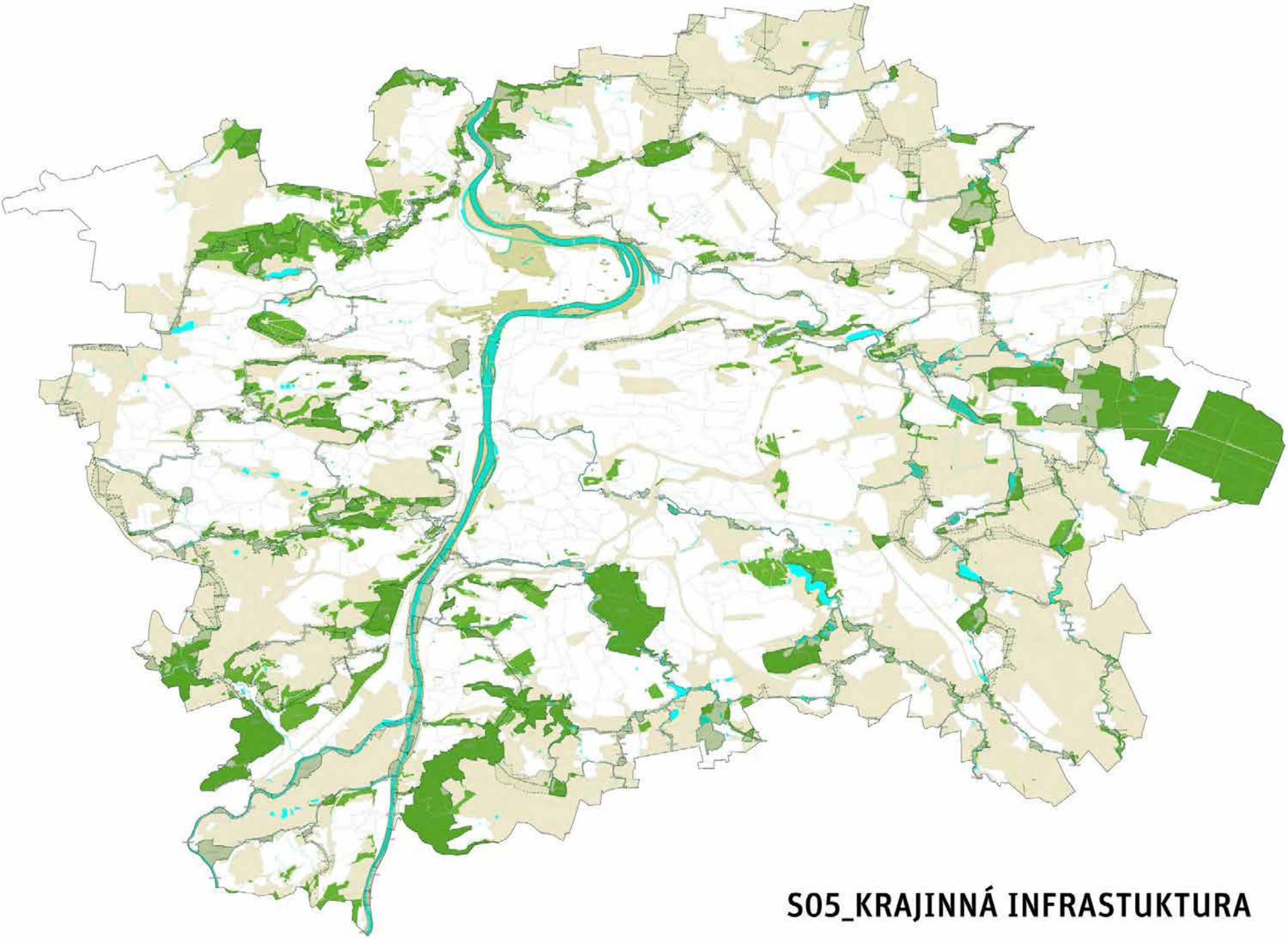
Different type of structure of Landscape characteristics
The degree of ecological stability cannot be decreased



Territorial system of ecological stability (TSES)

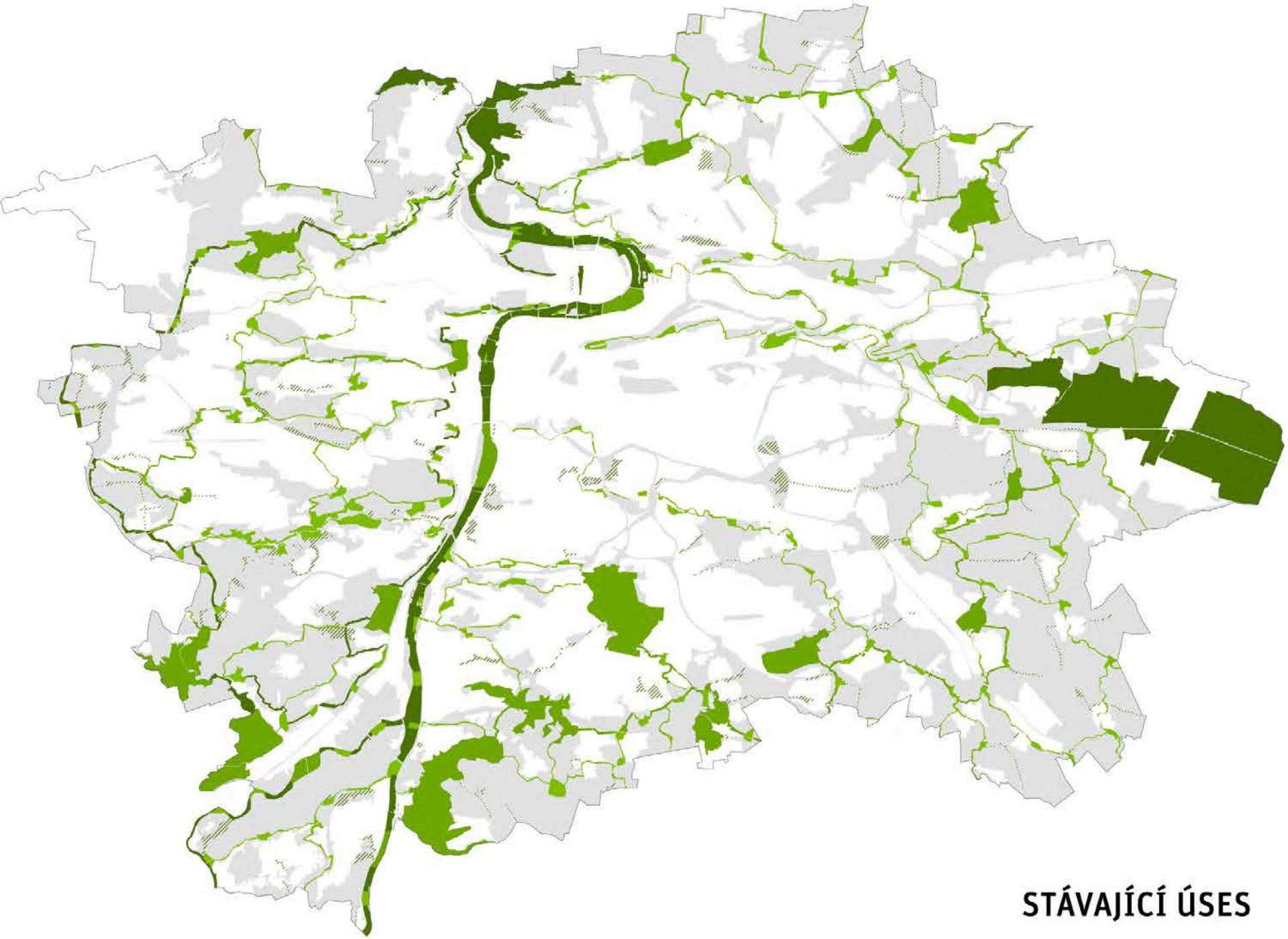
(TSES)

The Territorial System of Ecological Stability (TSES), as defined in Czech act No. 114/1992 Gazette, section 3, article a), is a mutually interconnected complex of both natural and near-natural, altered ecosystems that maintain natural balance. Its main purpose is to reinforce ecological stability of the landscape by conservation or restoration of ecosystems and their mutual interconnection.

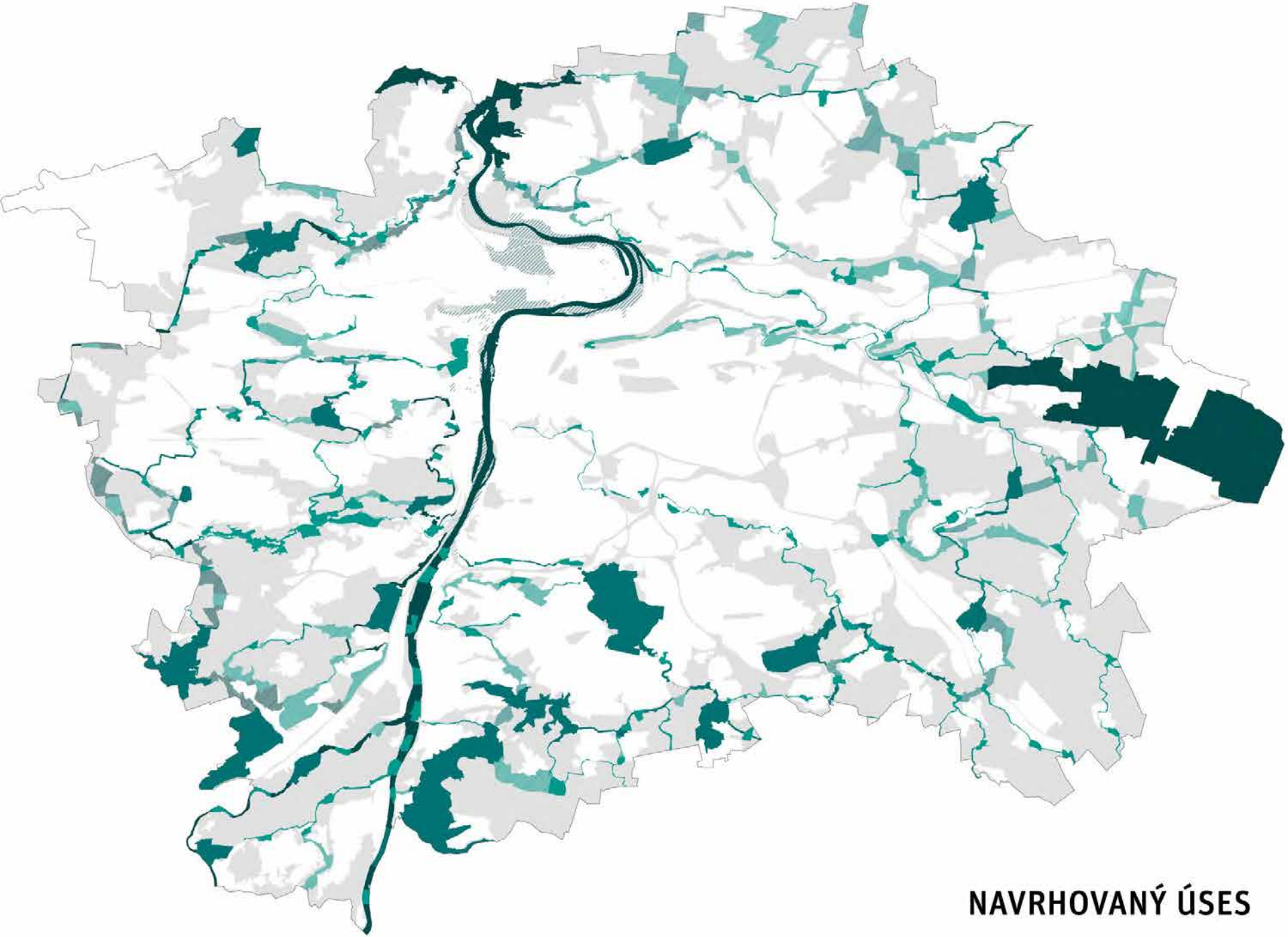


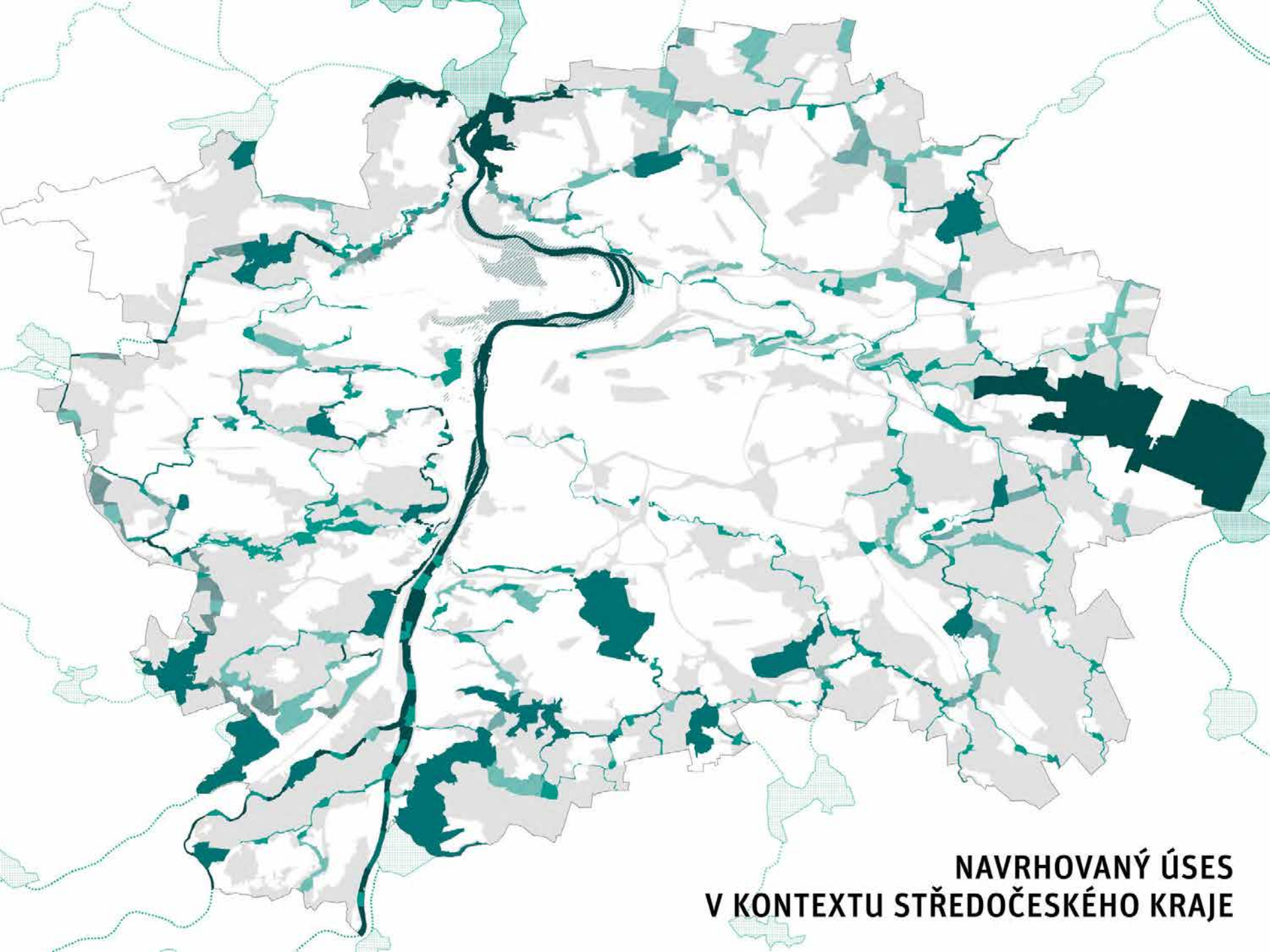
S05_KRAJINNÁ INFRASTUKTURA

VÝŘEZ S05_KRAJINNÁ INFRASTUKTURA



STÁVAJÍCÍ ÚSES

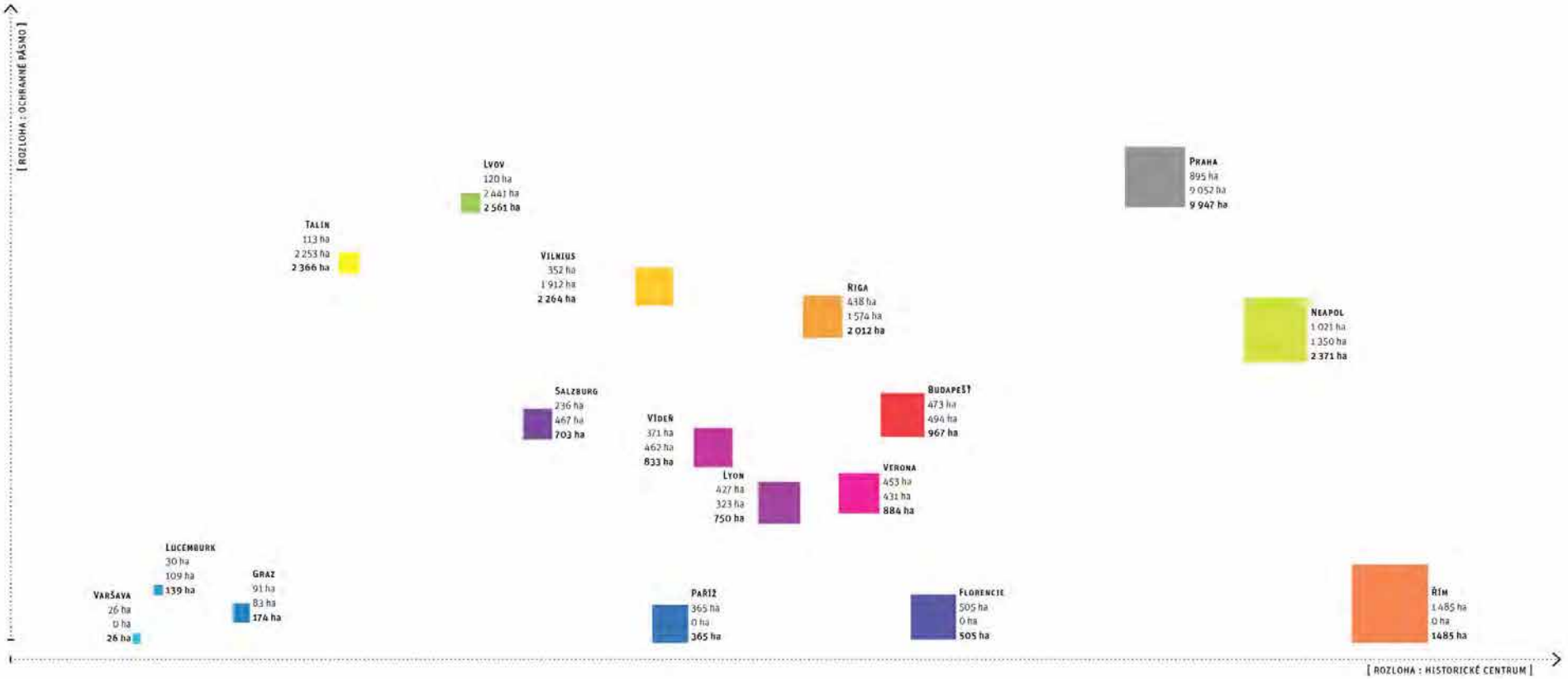

NAVRHOVANÝ ÚSES



NAVRHOVANÝ ÚSES
V KONTEXTU STŘEDOČESKÉHO KRAJE

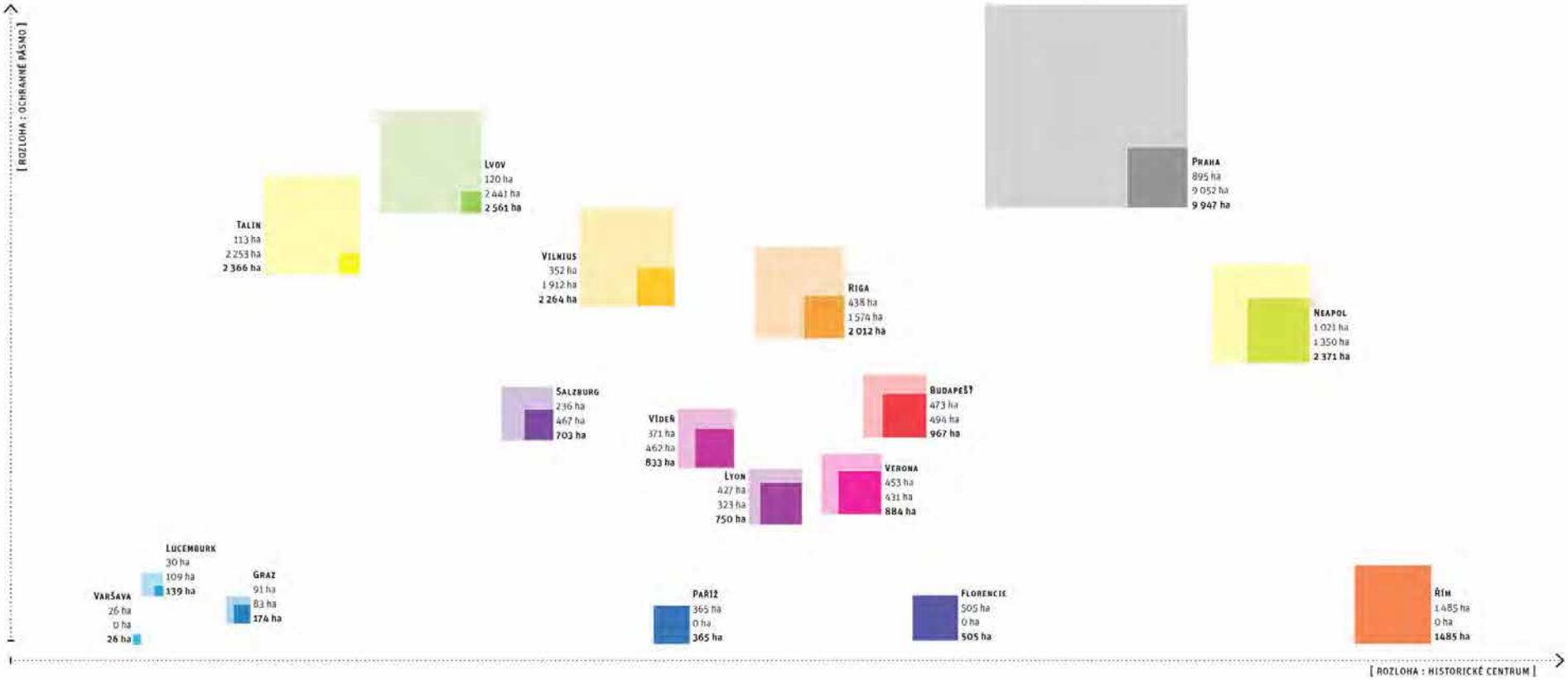
· WELTERBE ·
WORLD HERITAGE · PATRIMOINE MONDIAL

Limit- UNESCO world heritage City

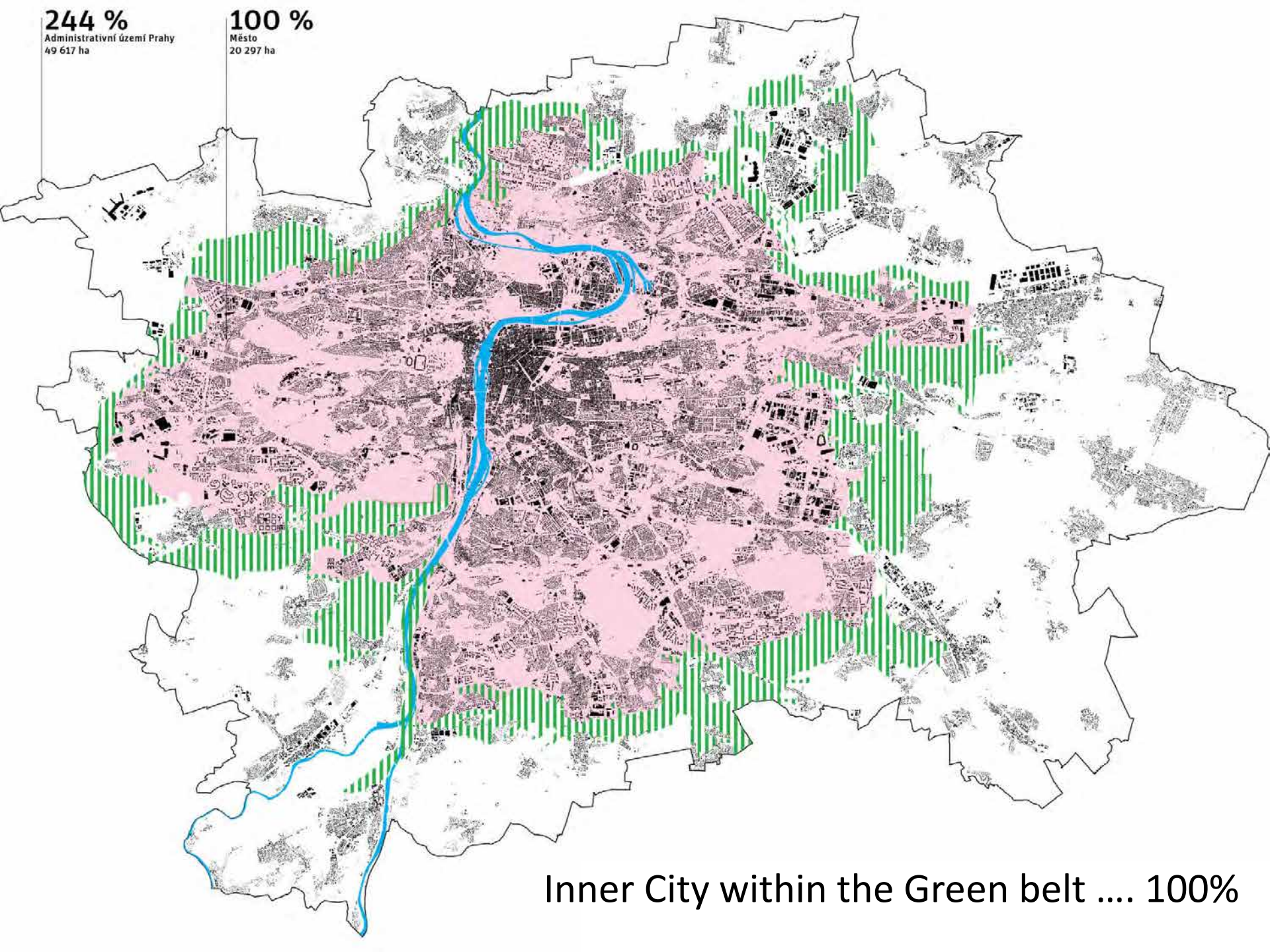


Schématický graf porovnání velikosti historického centra u měst pod ochranou UNESCO

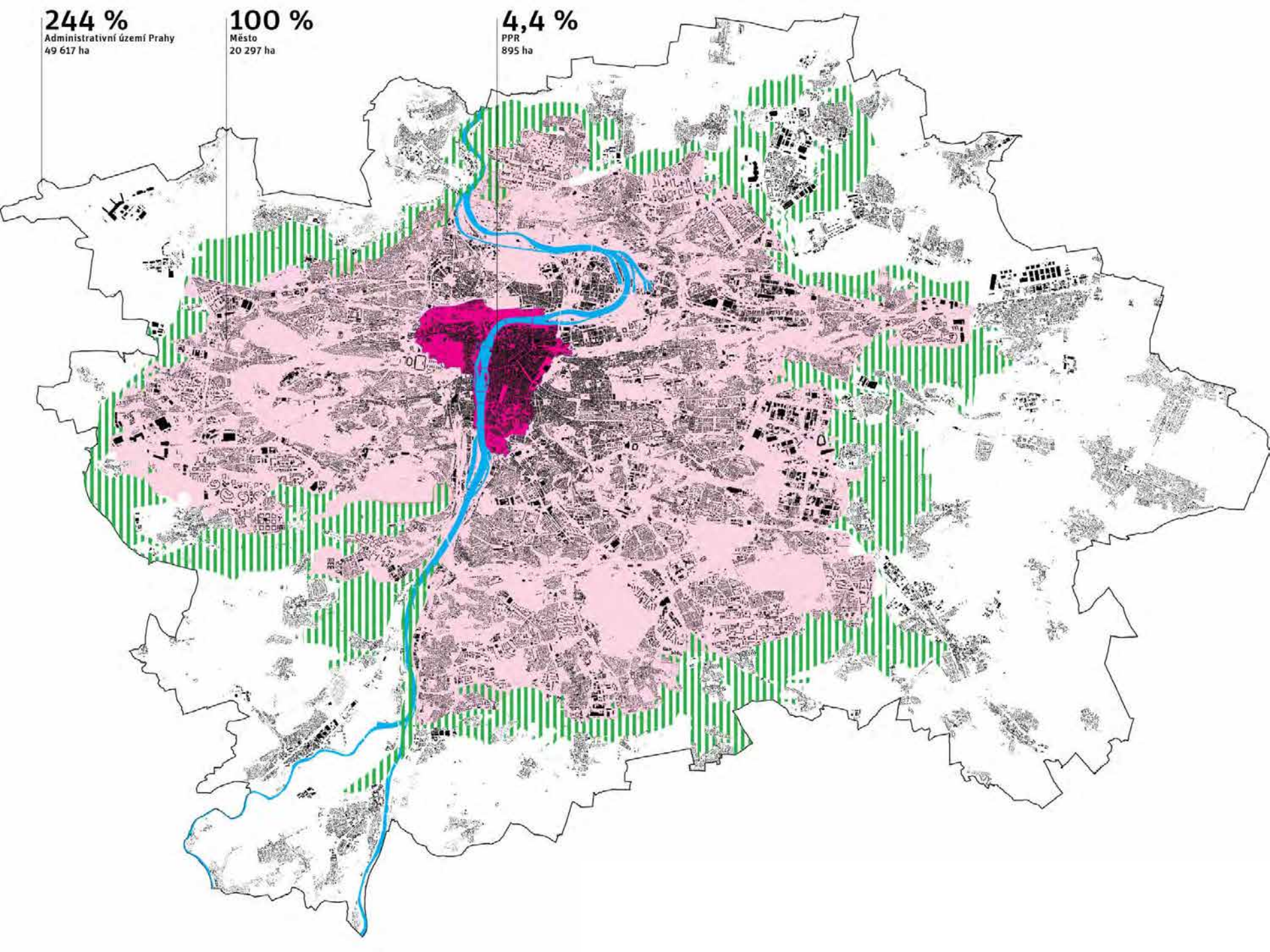
Prague´s UNESCO buffer zone is one of biggest in the world …

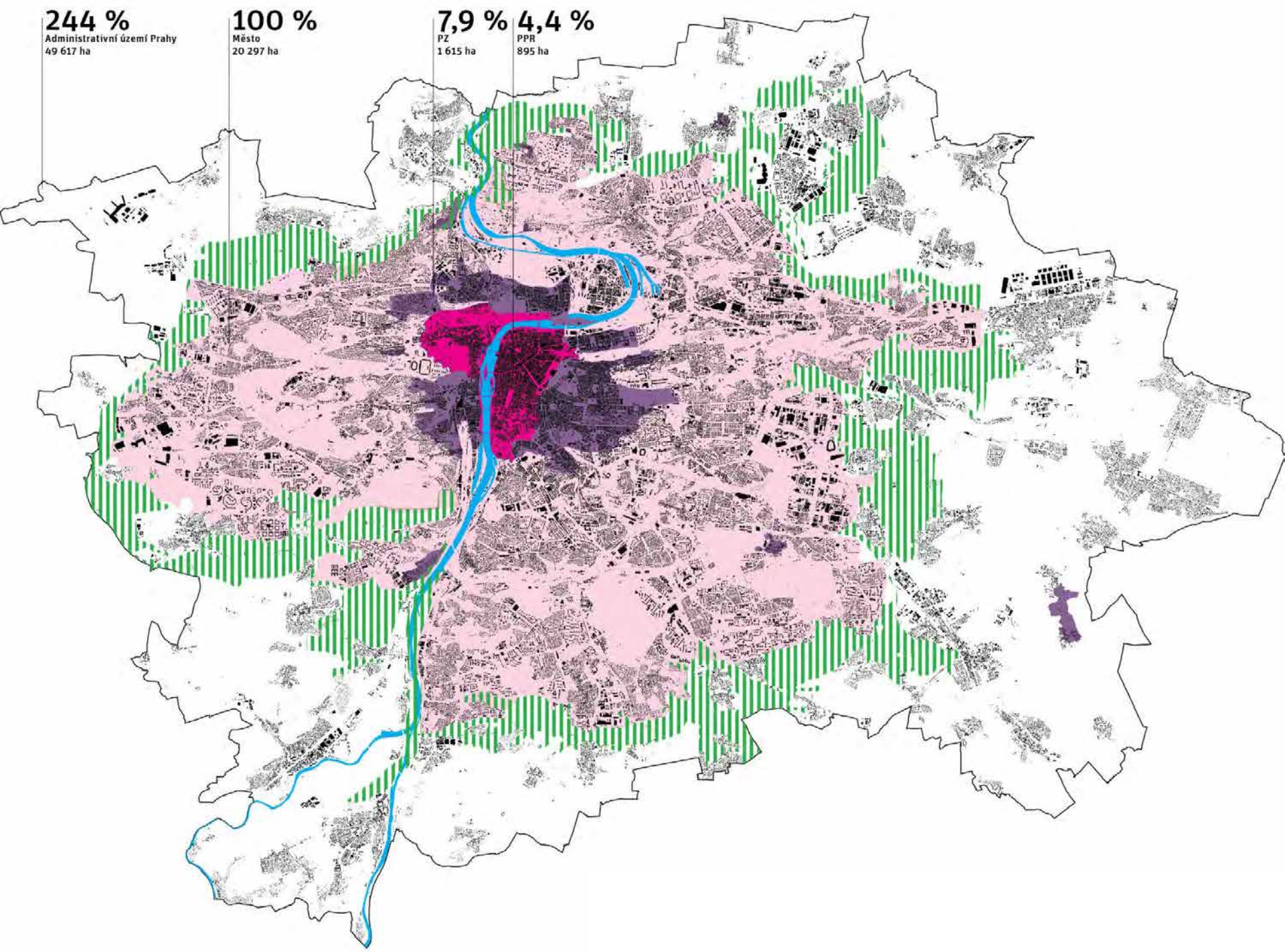


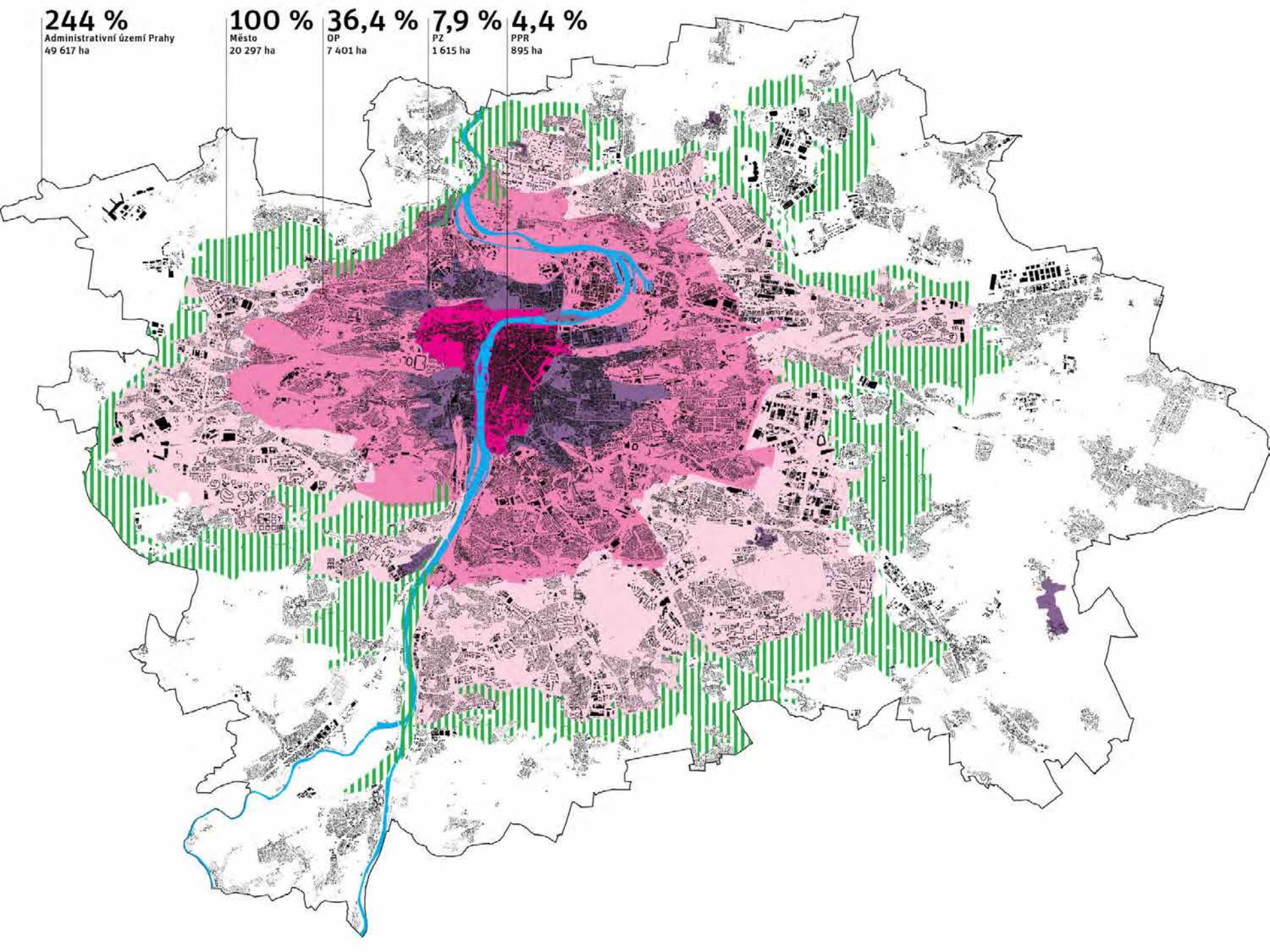
Schématický graf porovnání velikosti historického centra a jeho ochranného pásma u měst pod ochranou UNESCO

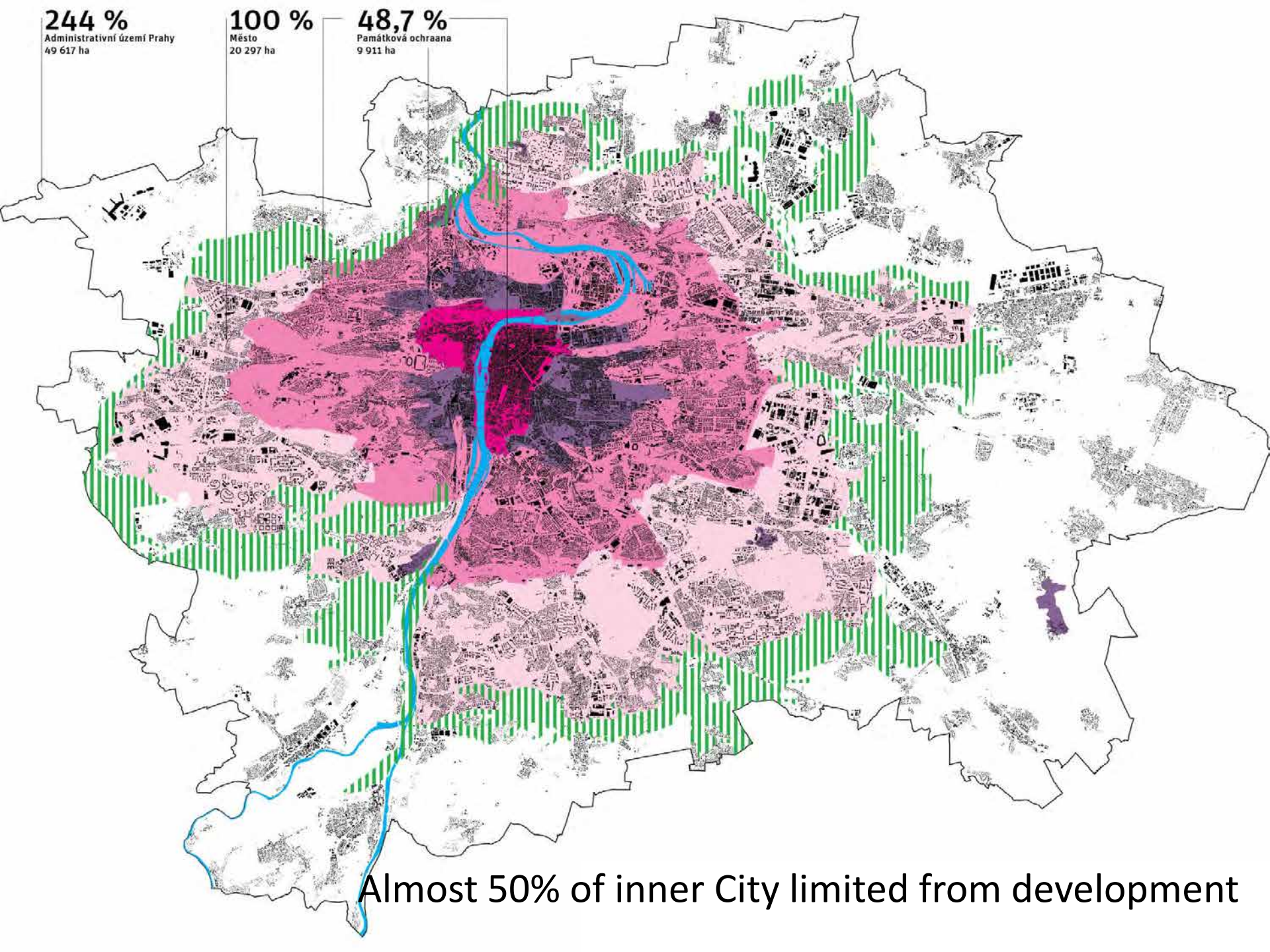


Inner City within the Green belt …. 100%


244 %
Administrativní území Prahy
49 617 ha
100 %
Město
20 297 ha
4,4 %
PPR
895 ha


244 %
Administrativní území Prahy
49 617 ha
100 %
Město
20 297 ha
7,9 %
PZ
1 615 ha
4,4 %
PPR
895 ha

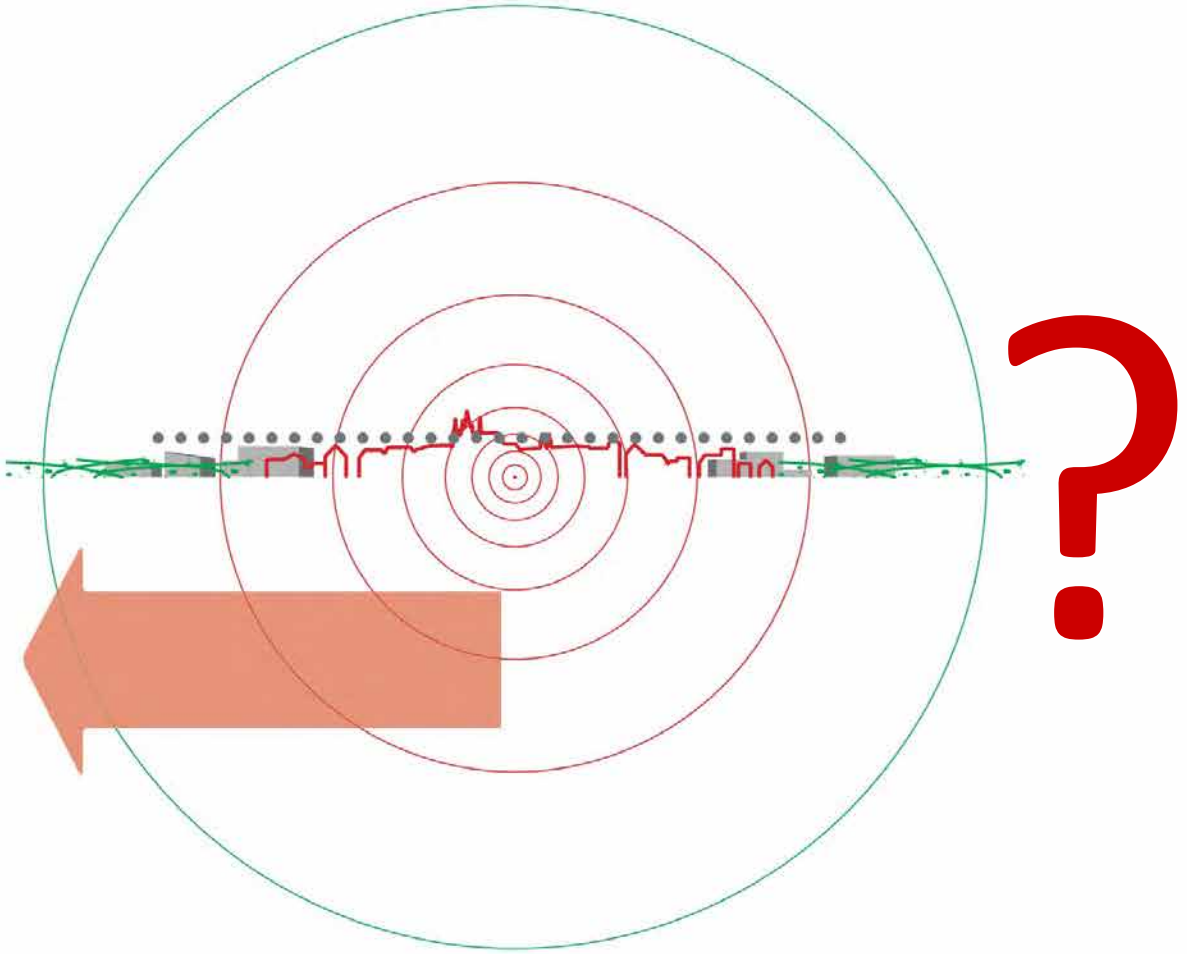

244 %
Administrativní území Prahy
49 617 ha
100 %
Město
20 297 ha
36,4 %
OP
7 401 ha
7,9 %
PZ
1 615 ha
4,4 %
PPR
895 ha



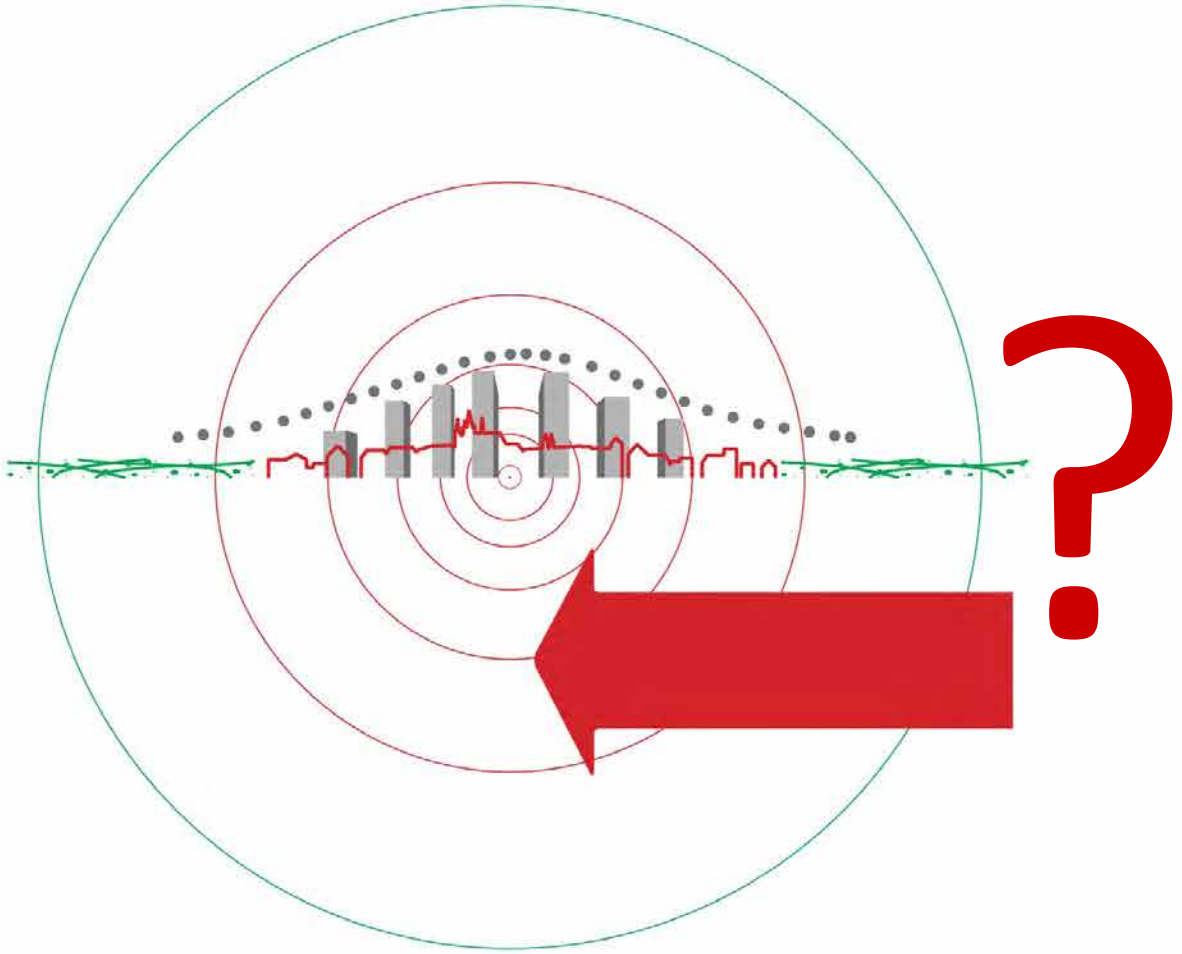
Almost 50% of inner City limited from development

HOW TO USE PRINCIPLE of RECYCLING in the UNESCO City?

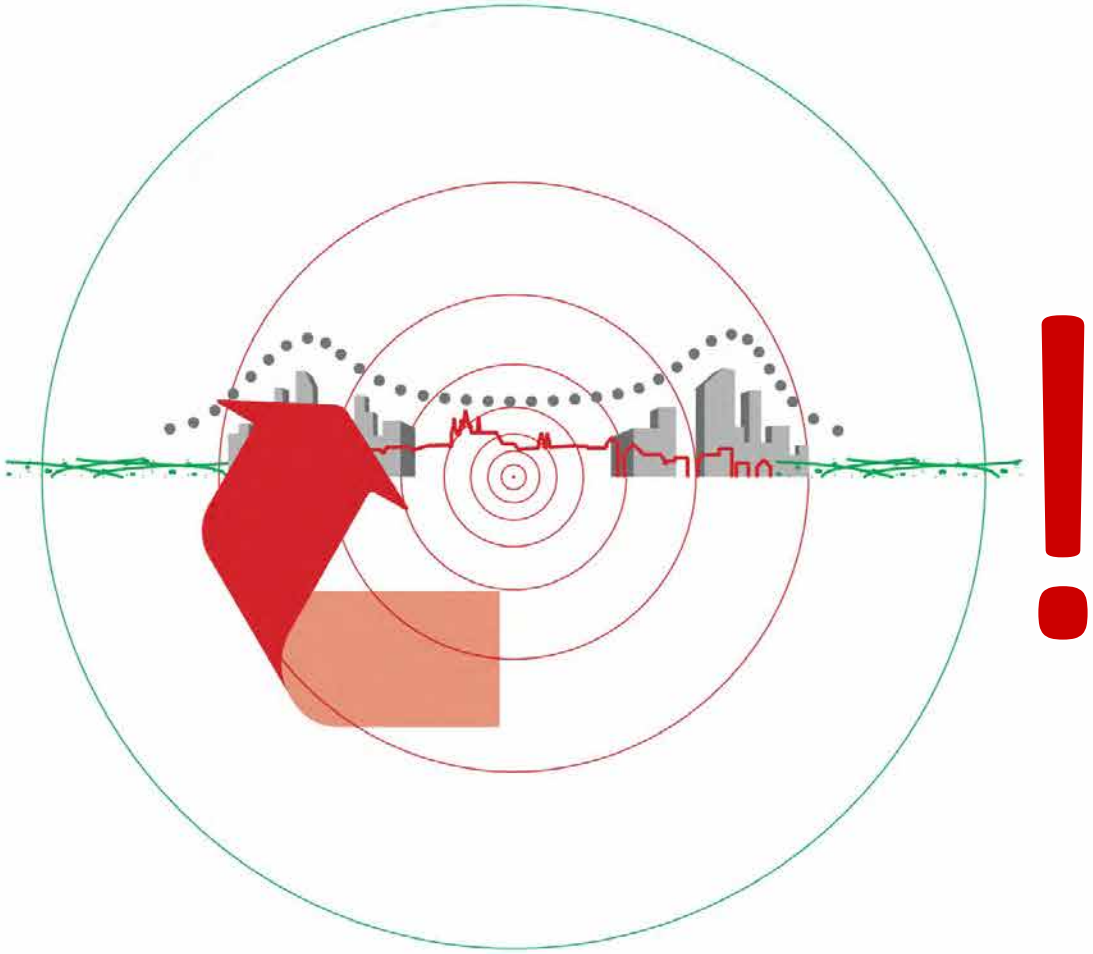
RECYCLING



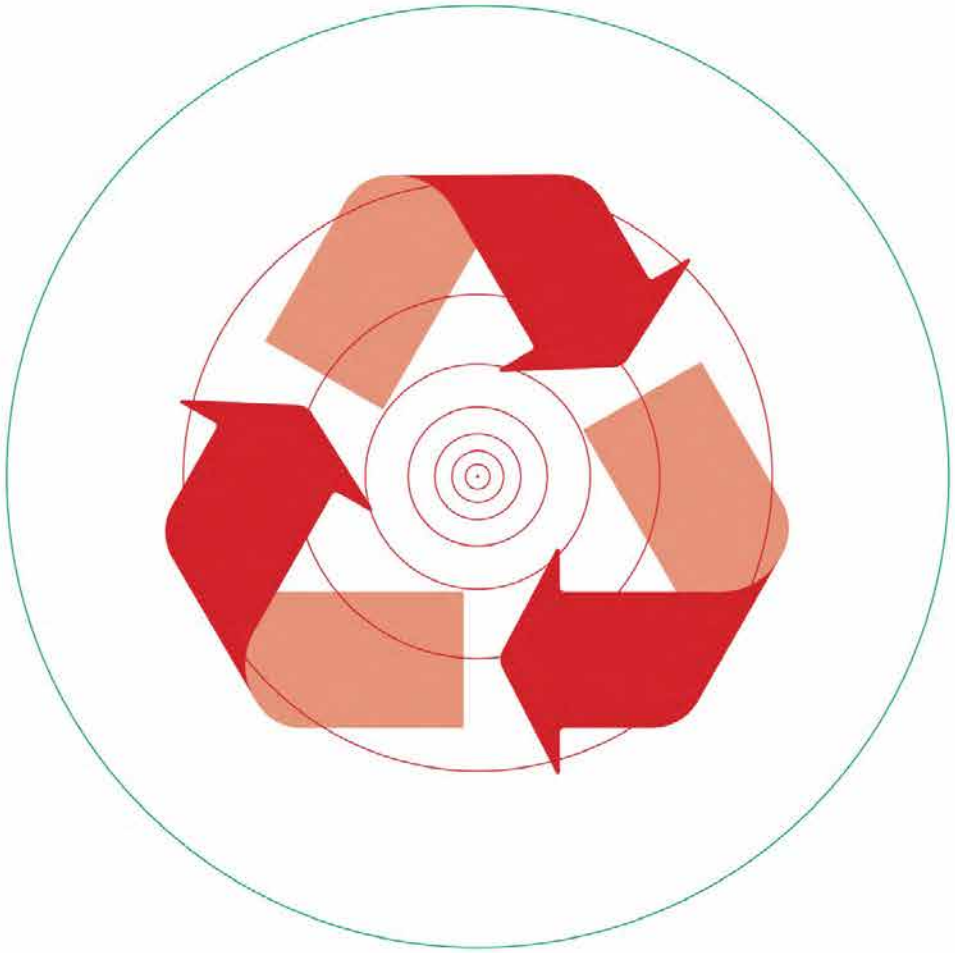
ex - tenzive



in - tenzive



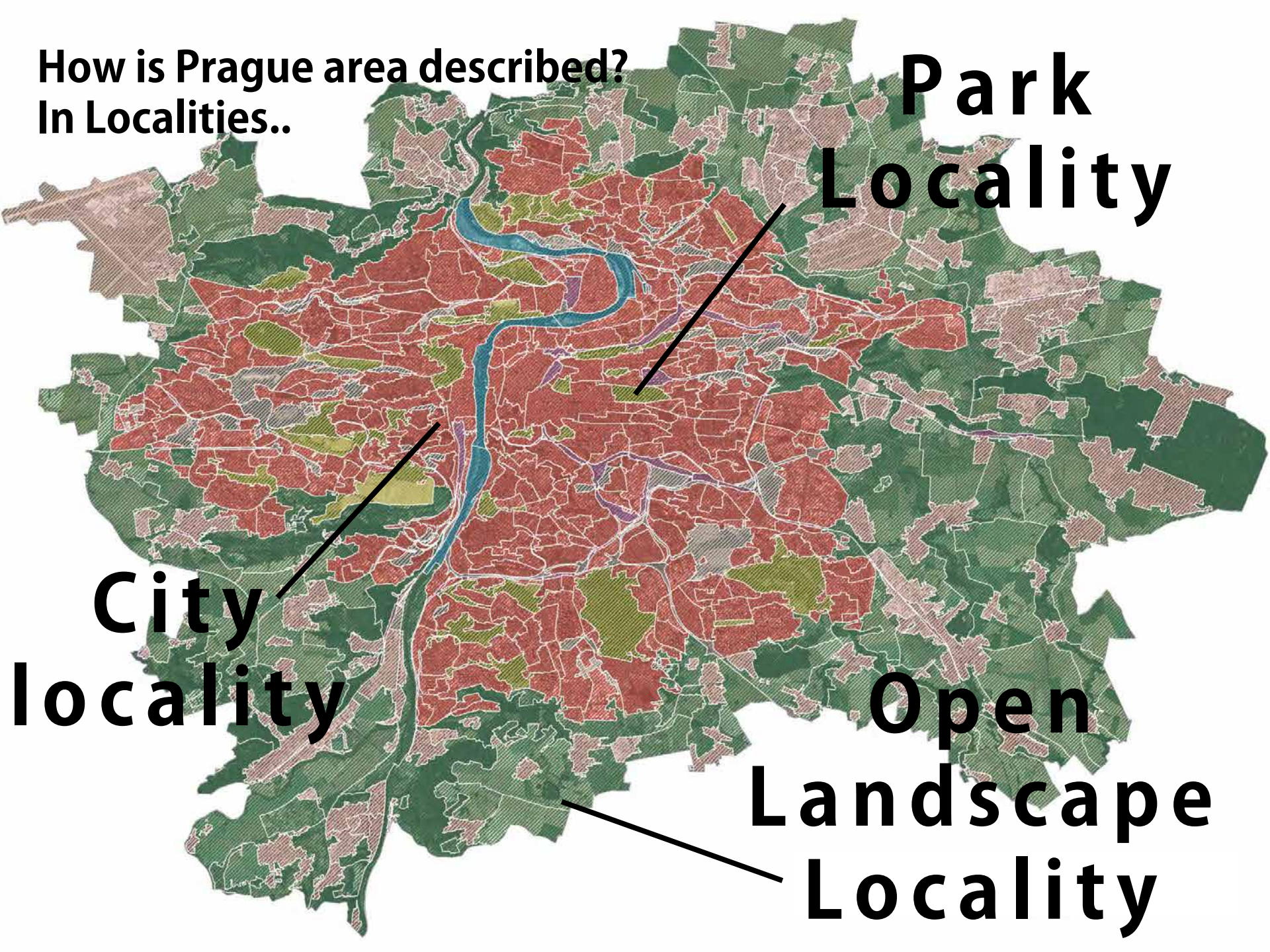
re - cycling



re - cycling

Prague City

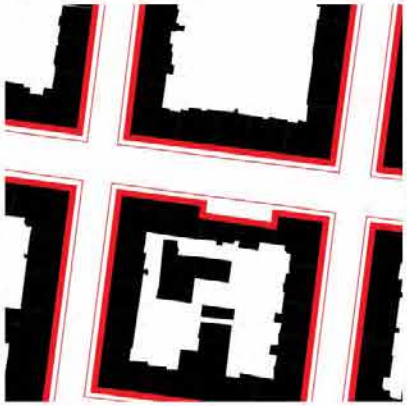
Respect for Structure of Cityscape and open Landscape


How is Prague area described?
In Localities..
Park
Locality
City
locality
Open
Landscape
Locality

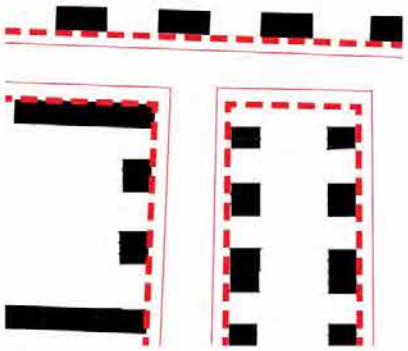
Cityscape structure

1/ Centre

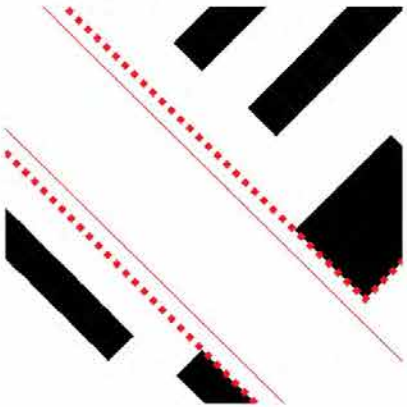
2/ Inner City



3/ Suburbs

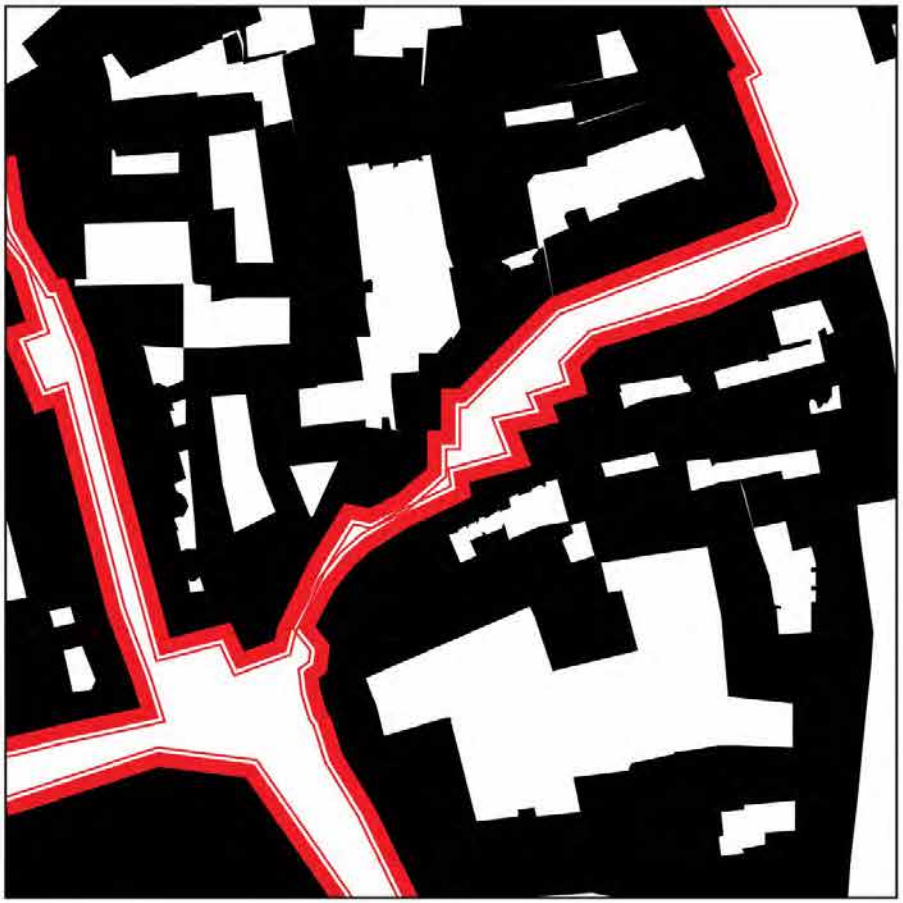


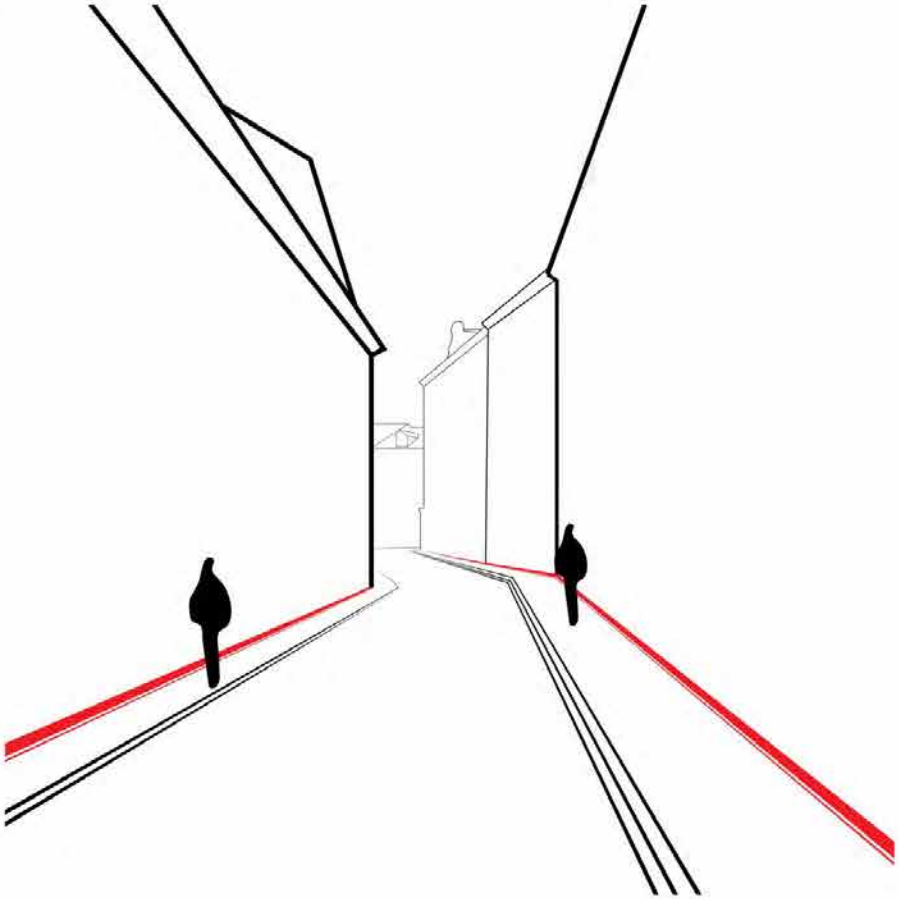
4/ Periphery

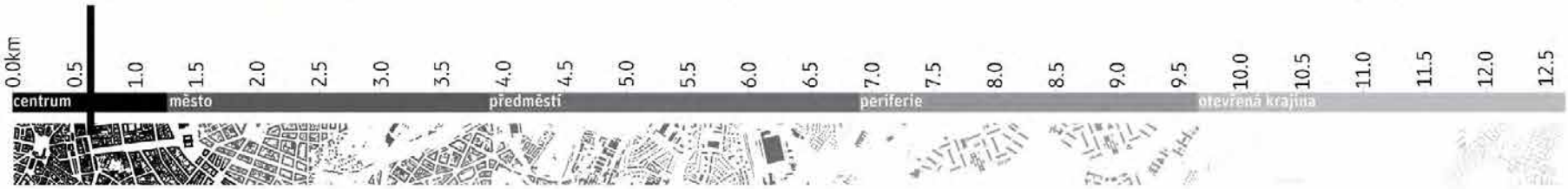


Cityscape structure

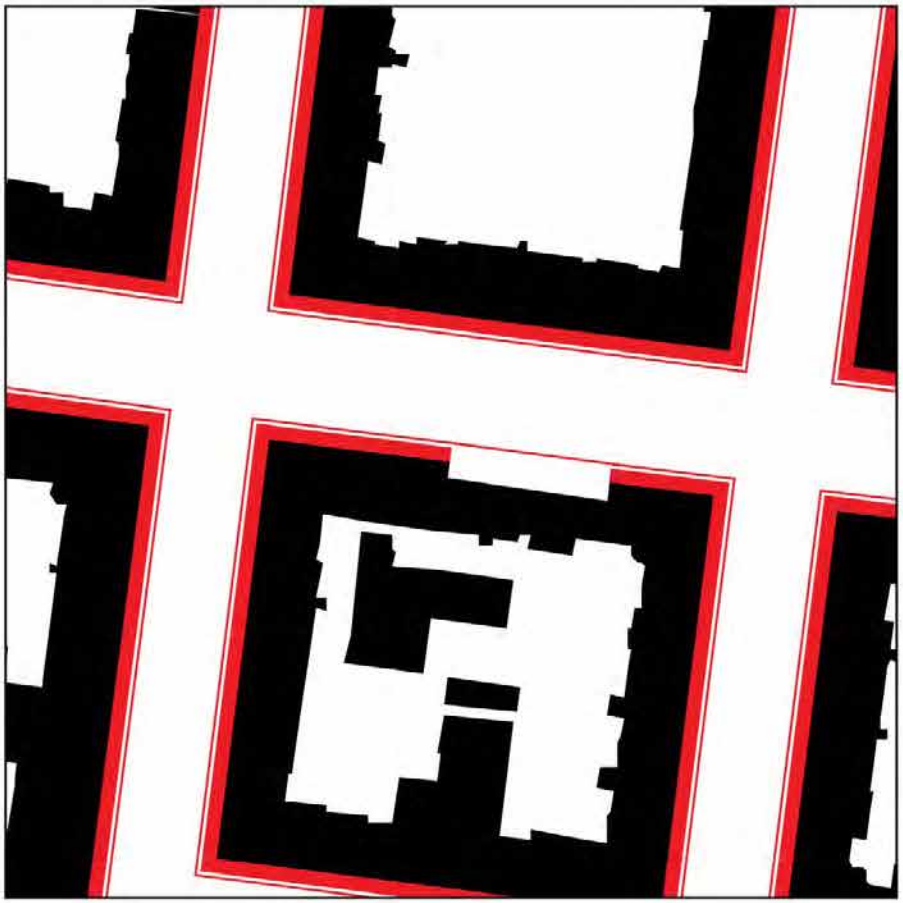
MESTSKA KRAJINA - CENTRUM

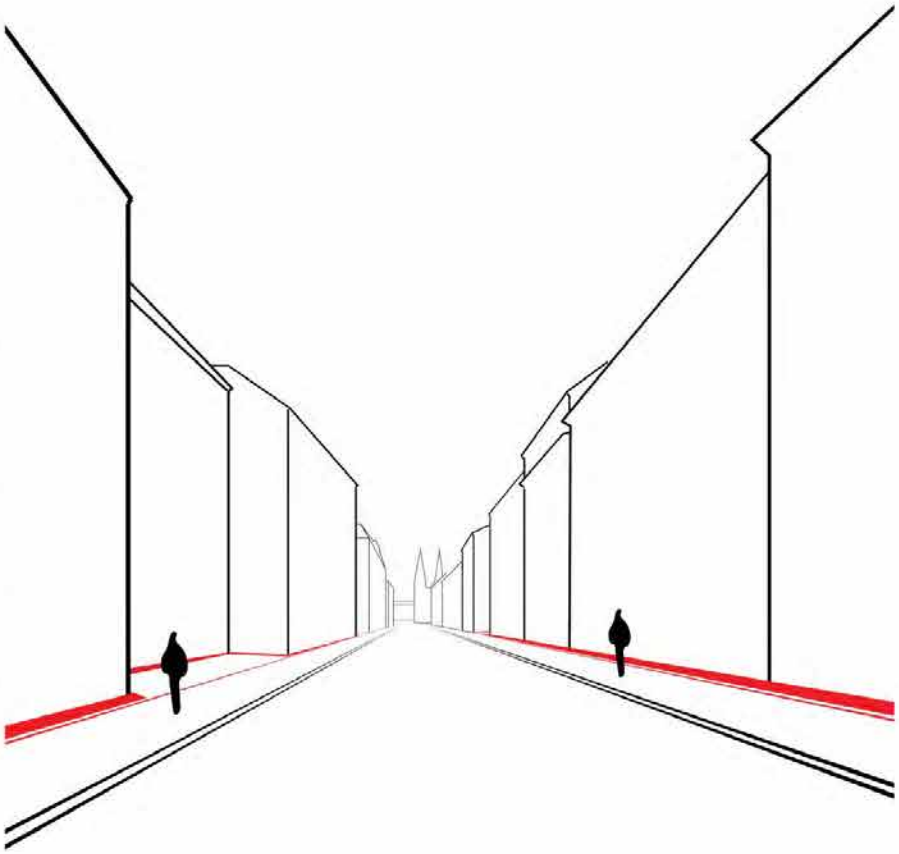


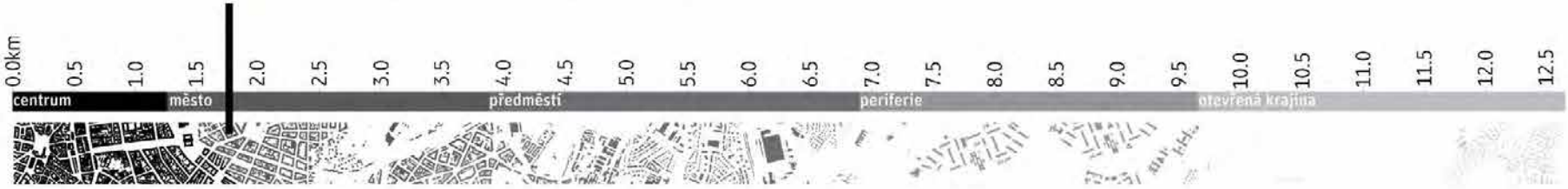




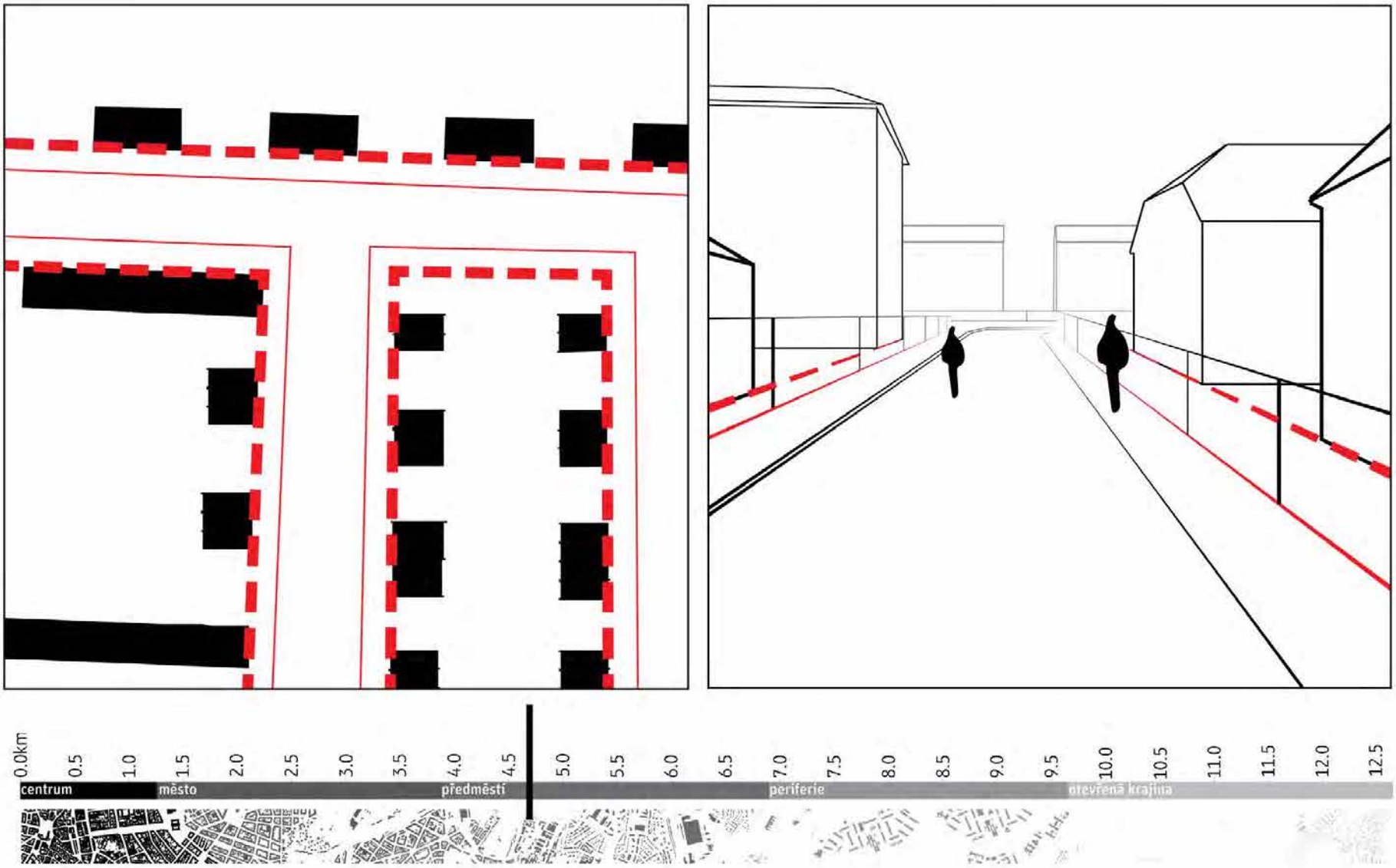
Cityscape structure
INNER CITY



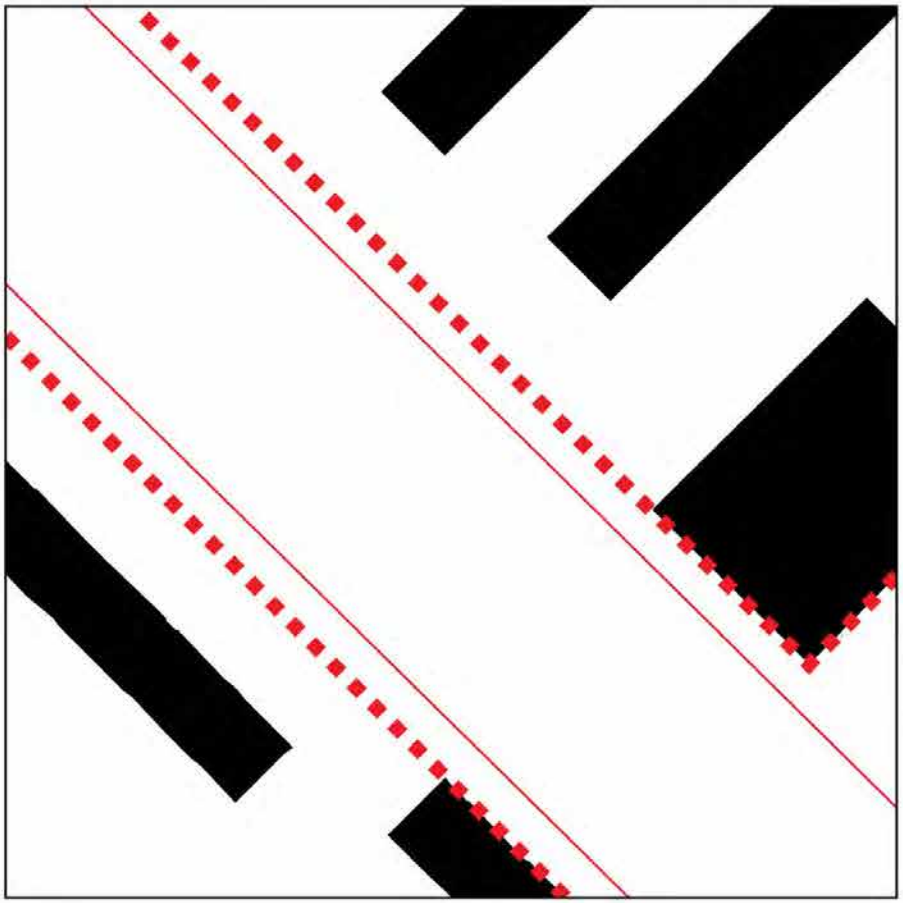


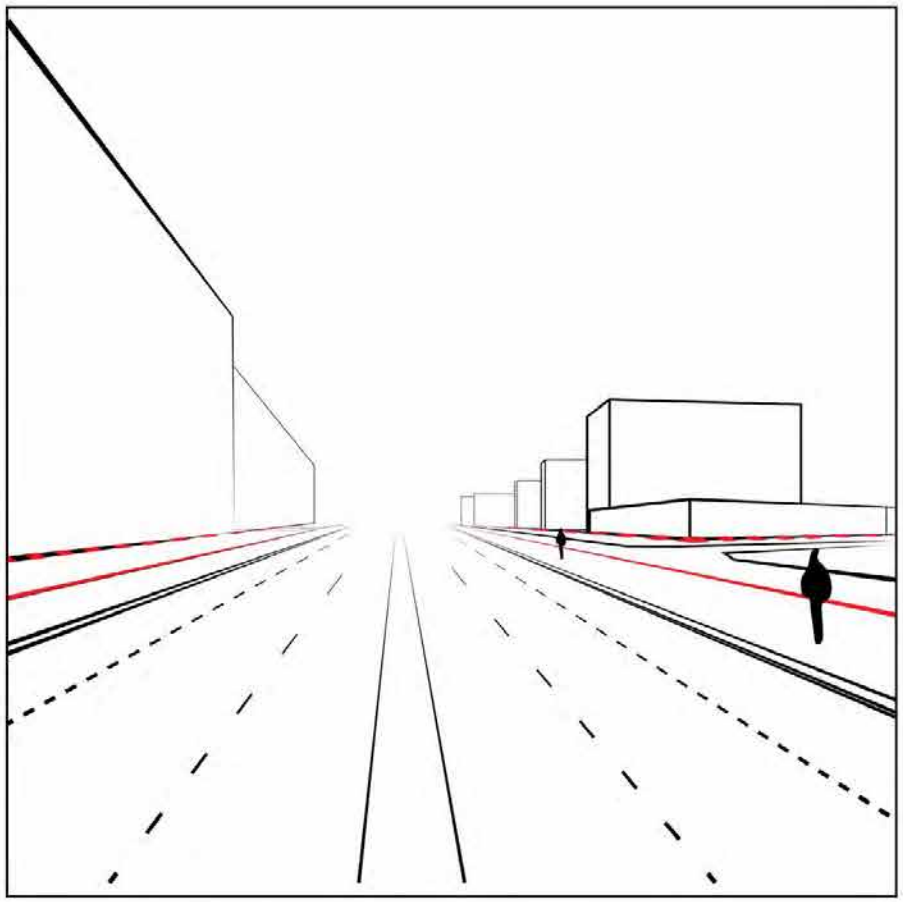


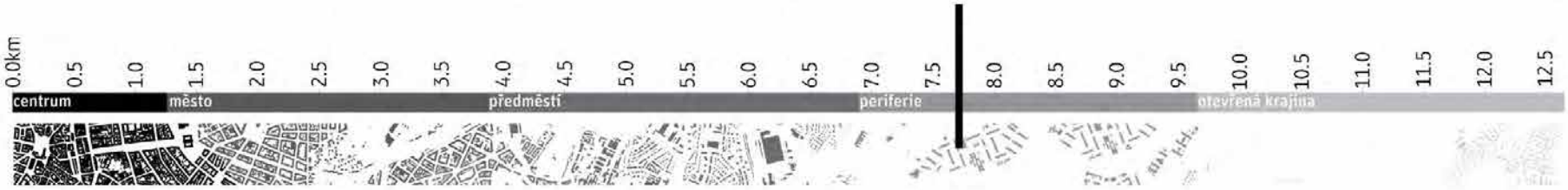
Cityscape structure
SUBURB



Cityscape structure
PERIPHERY







Cityscape structure

CITY LANDSCAPE - PARC

CITY LANDSCAPE - PARC

(11) parkový areál

(12) parkové prostranství

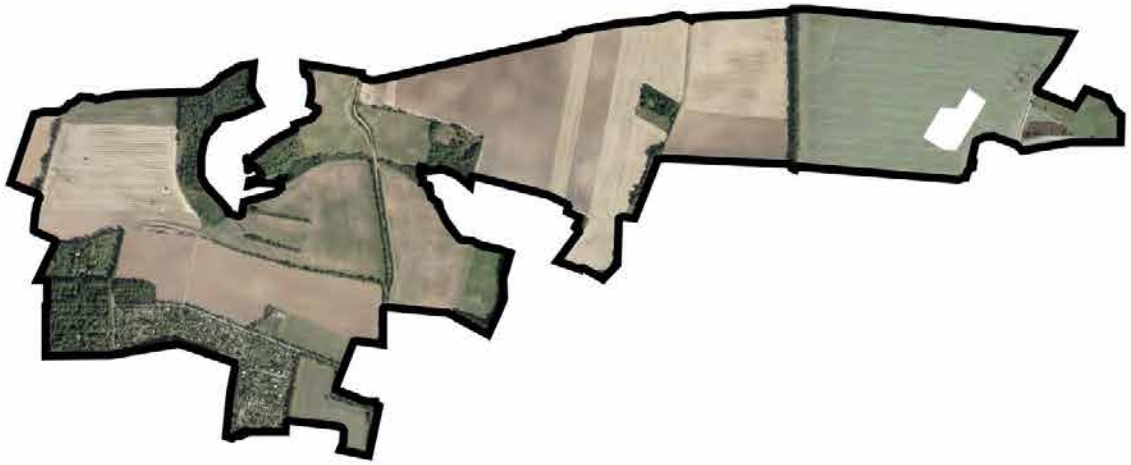
(13) parkový les

Landscape structure
OPEN LANDSCAPE

Landscape structure
OPEN LANDSCAPE

(14) lesní krajina v rovině

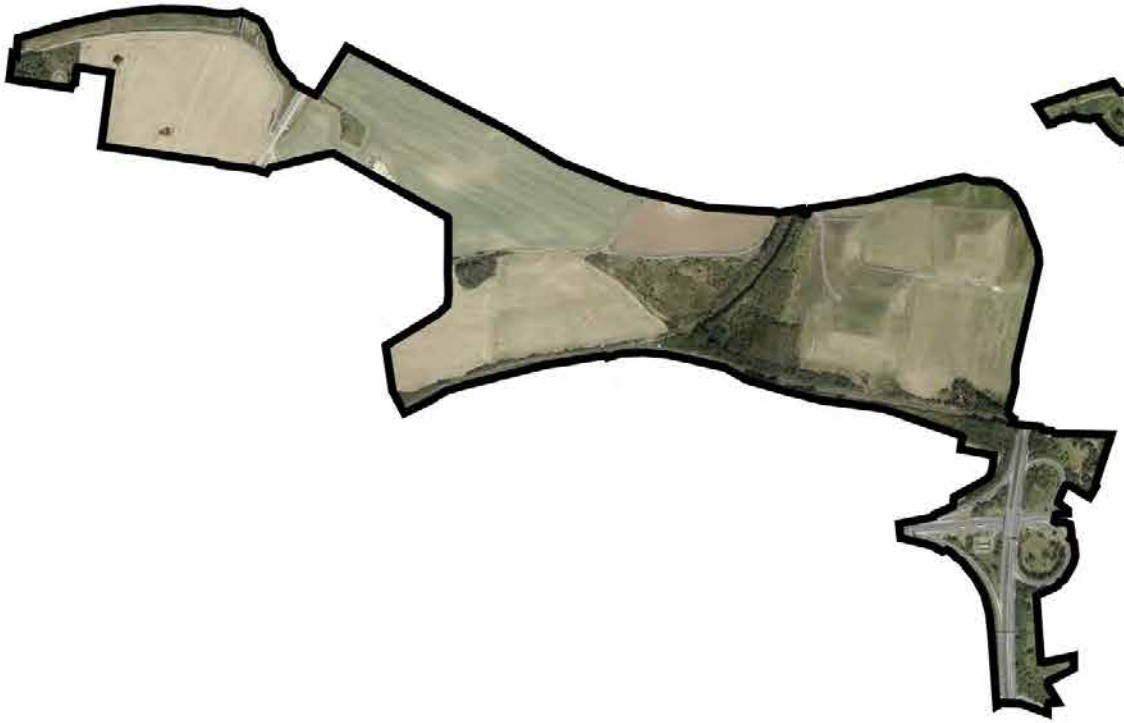
(15) leso - zemědělská krajina



Landscape structure
OPEN LANDSCAPE

(16) zemědělsko - rybniční krajina

(17) zemědělská krajina v rovině

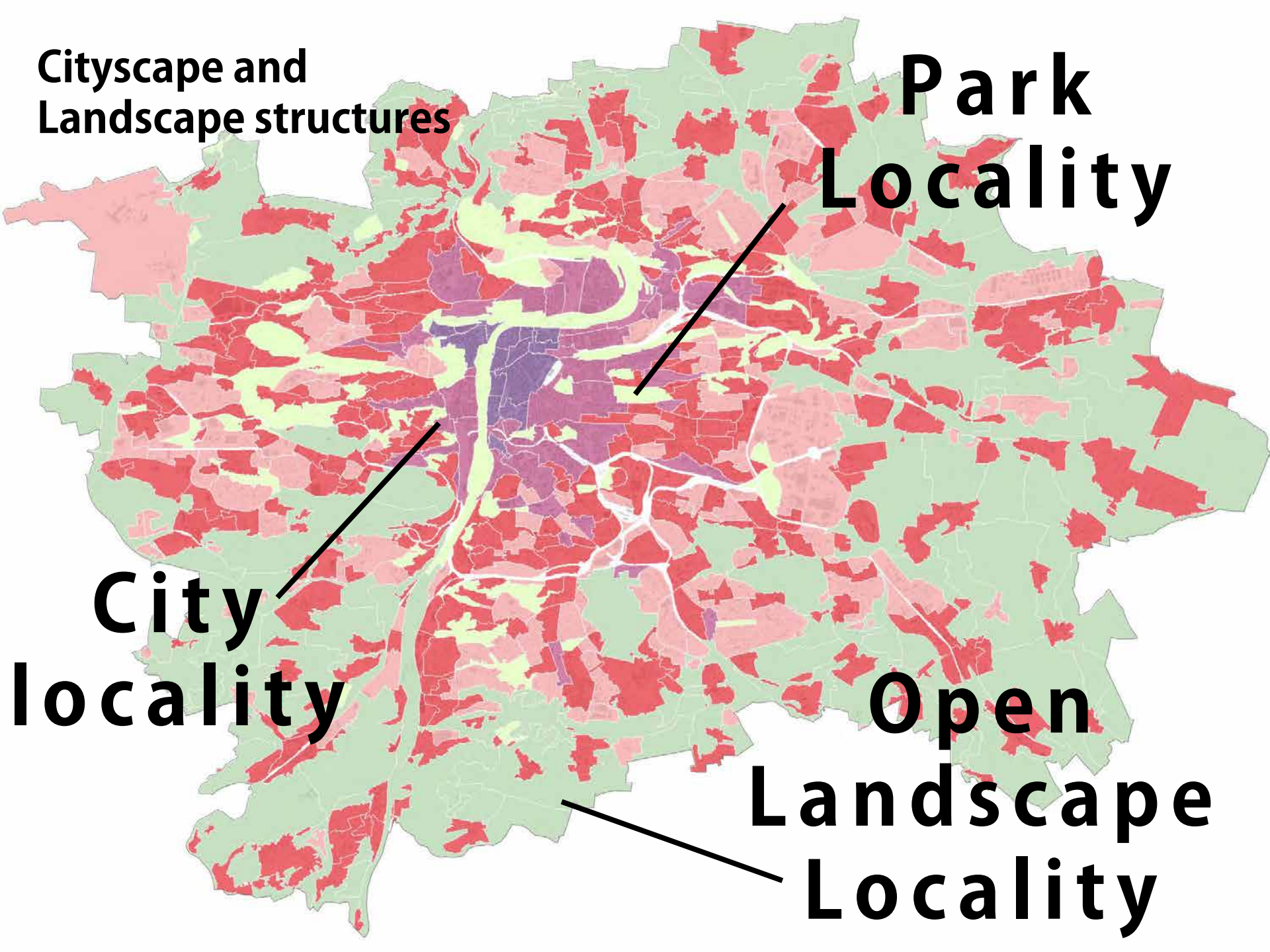


Landscape structure
OPEN LANDSCAPE

(18) krajina úzkých zaříznutých údolí v plošině

(19) krajina výrazných údolí

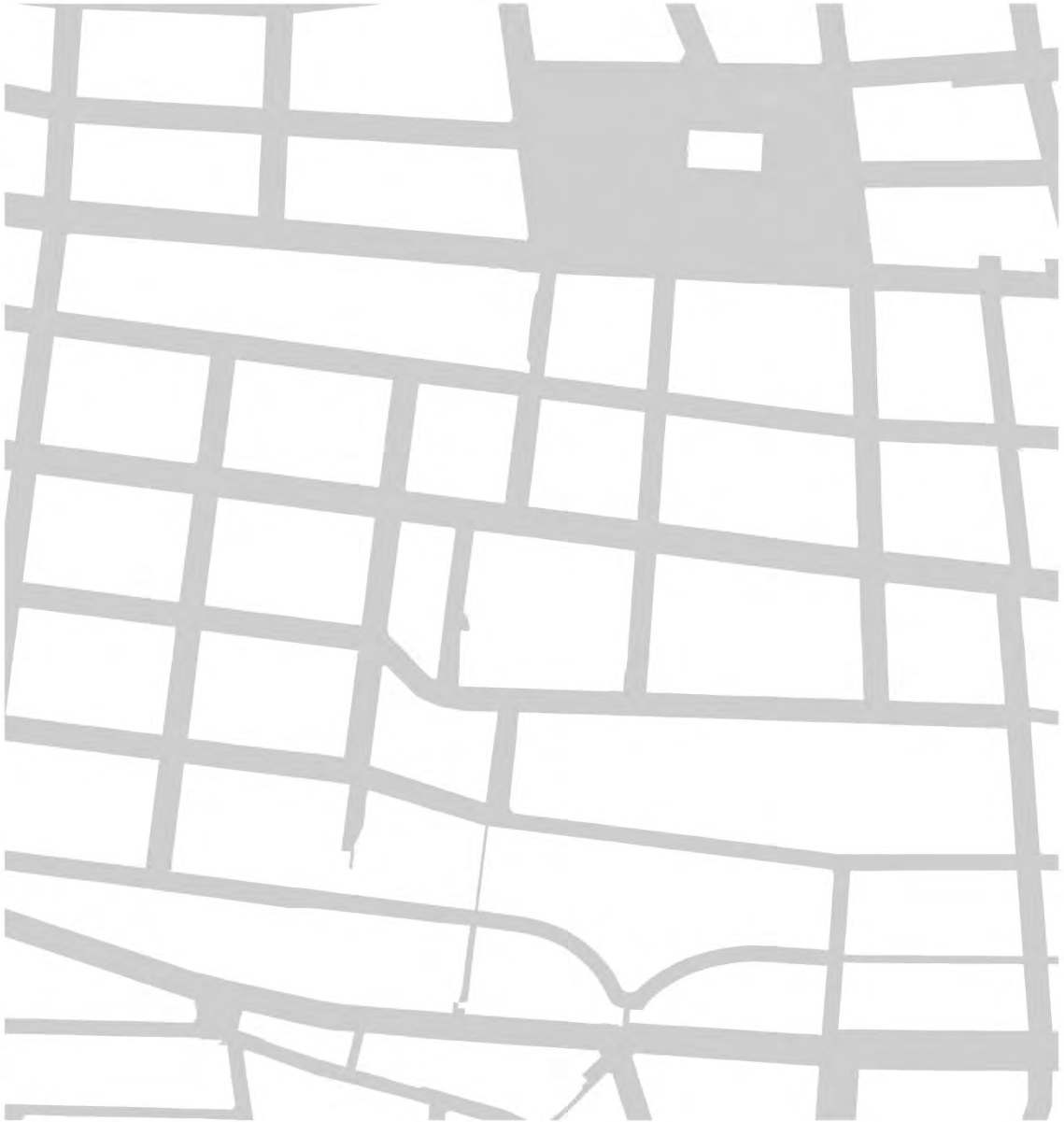
(20) krajina výrazných vrchů


Cityscape and
Landscape structures
Park
Locality
City
locality
Open
Landscape
Locality

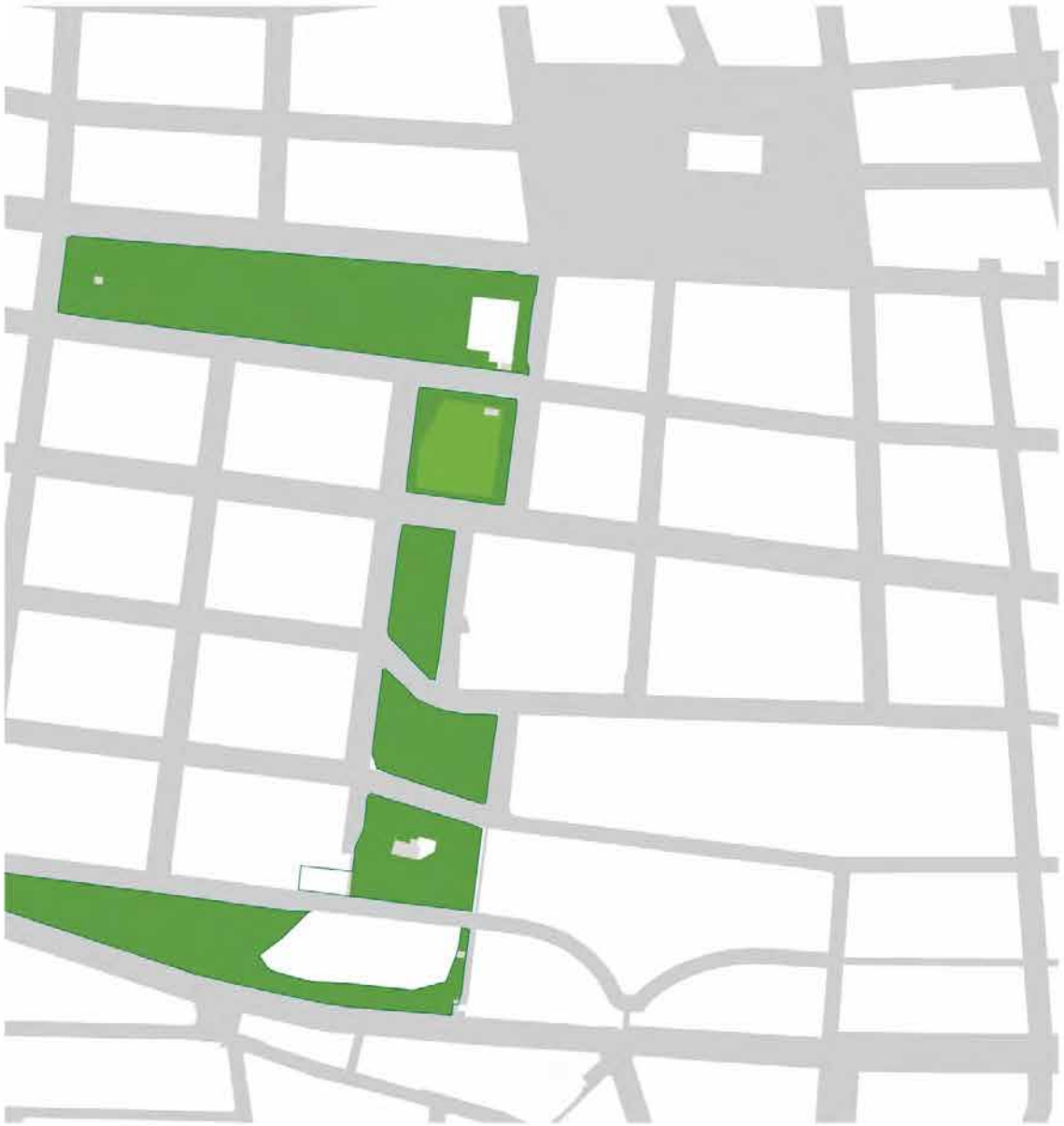
Prague City

WHAT DETAIL?

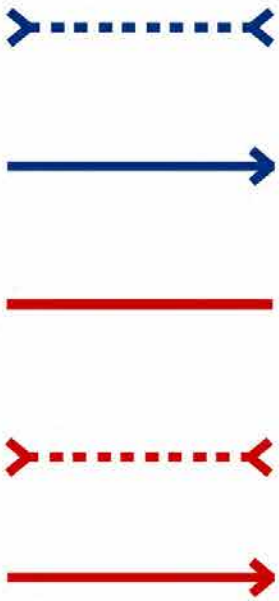
What detail ?



Park description

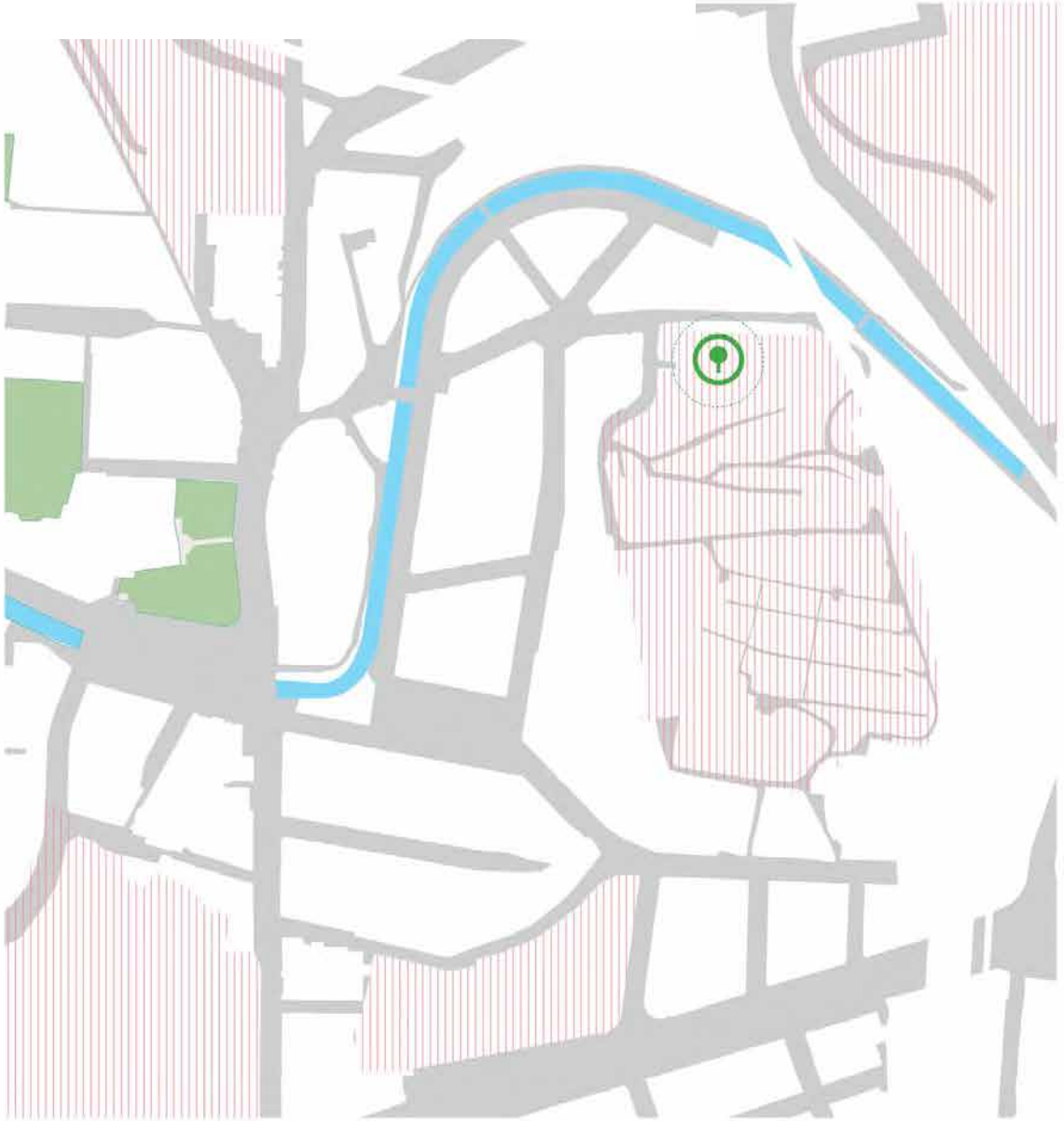


Connections

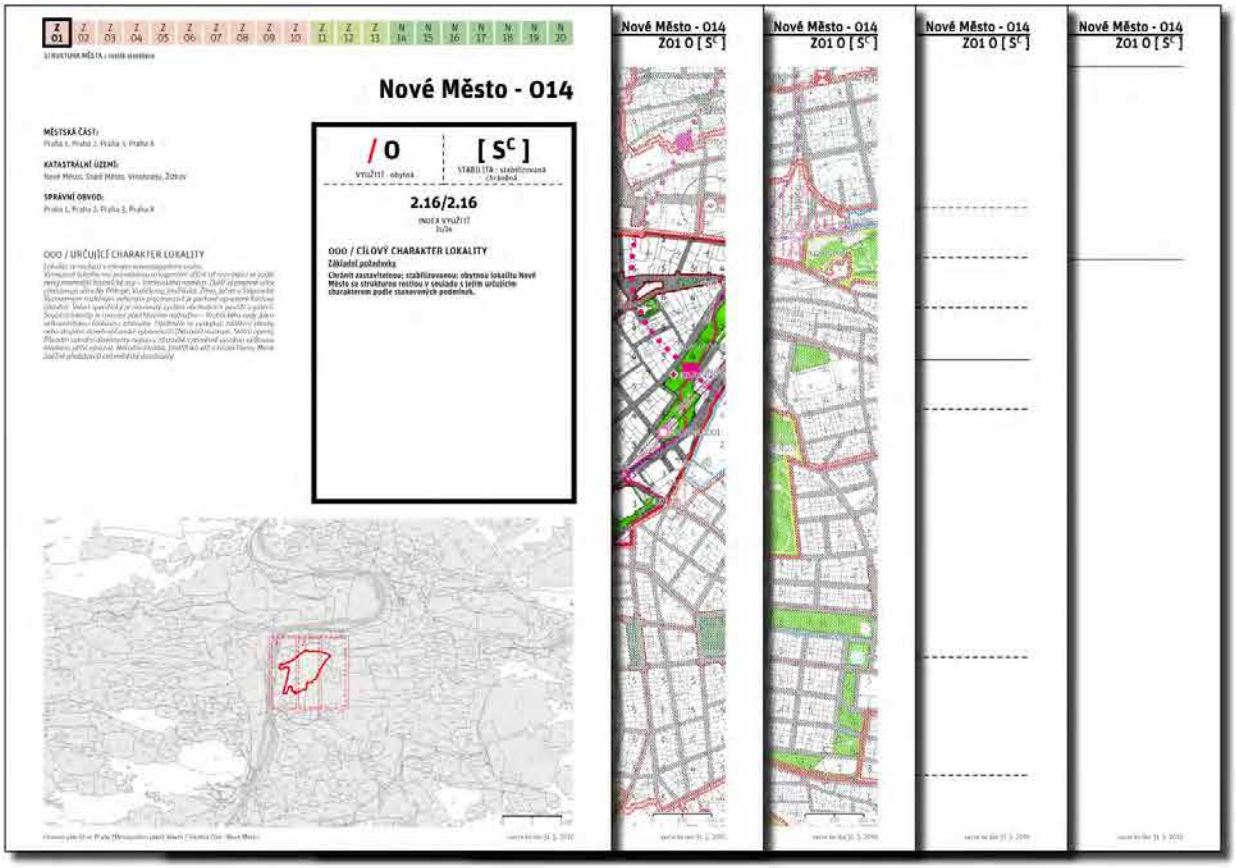


Accesibility of green areas

Point sign - new park to emerge



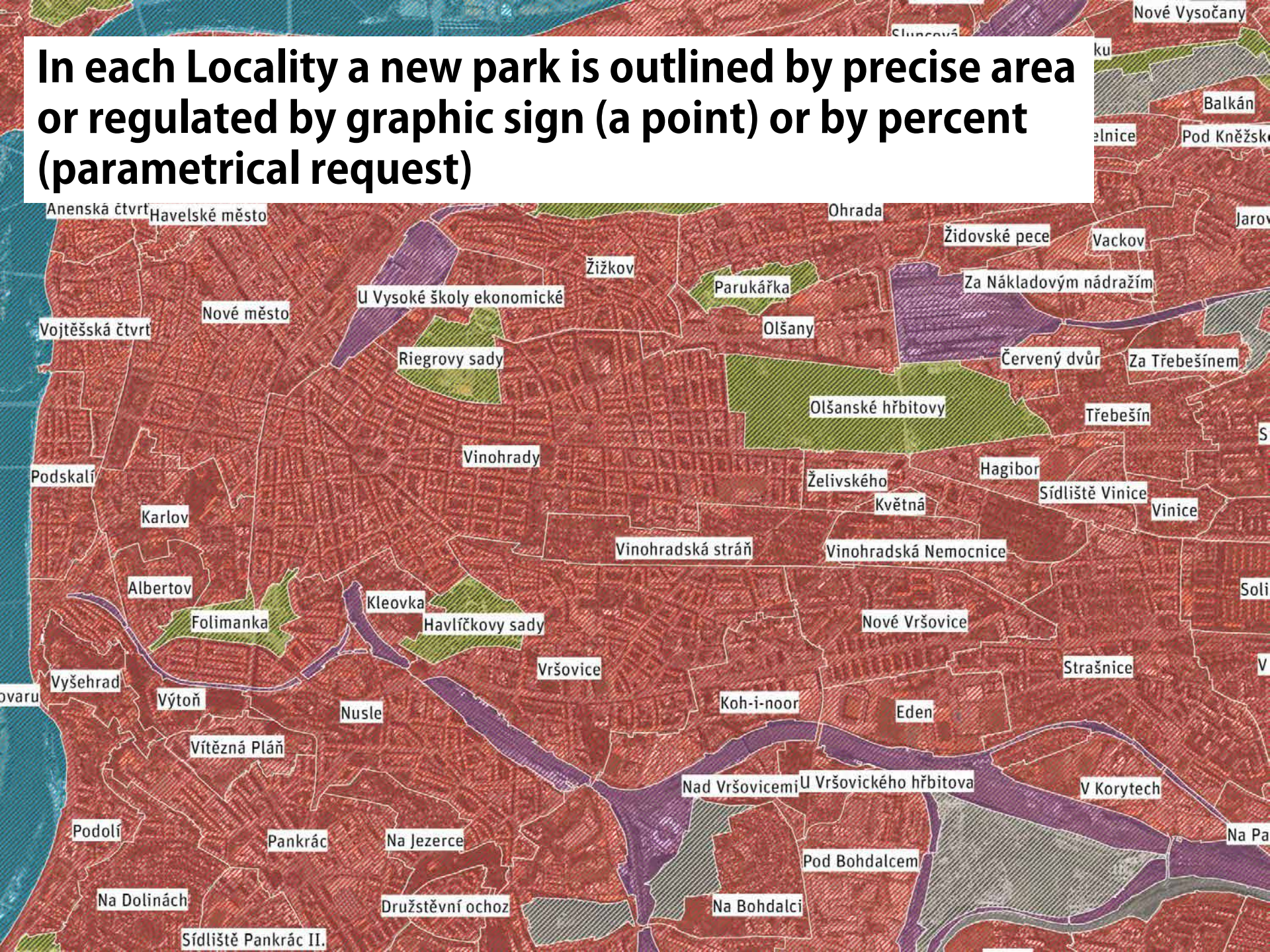
In each Locality a new park is outlined by precise area or regulated by graphic sign (a point) or by percent (parametrical request)



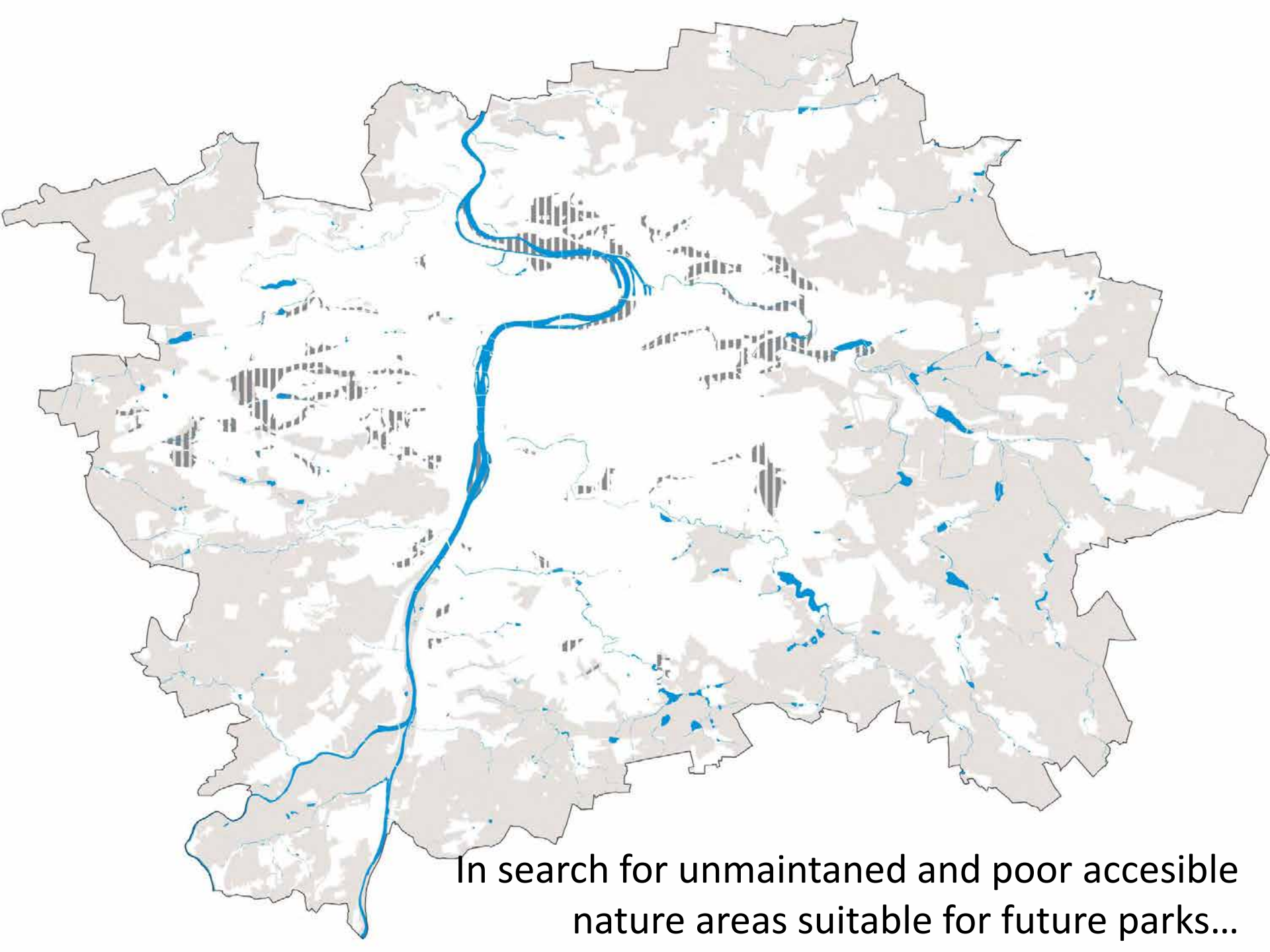
%

KRYCÍ LIST LOKALITY

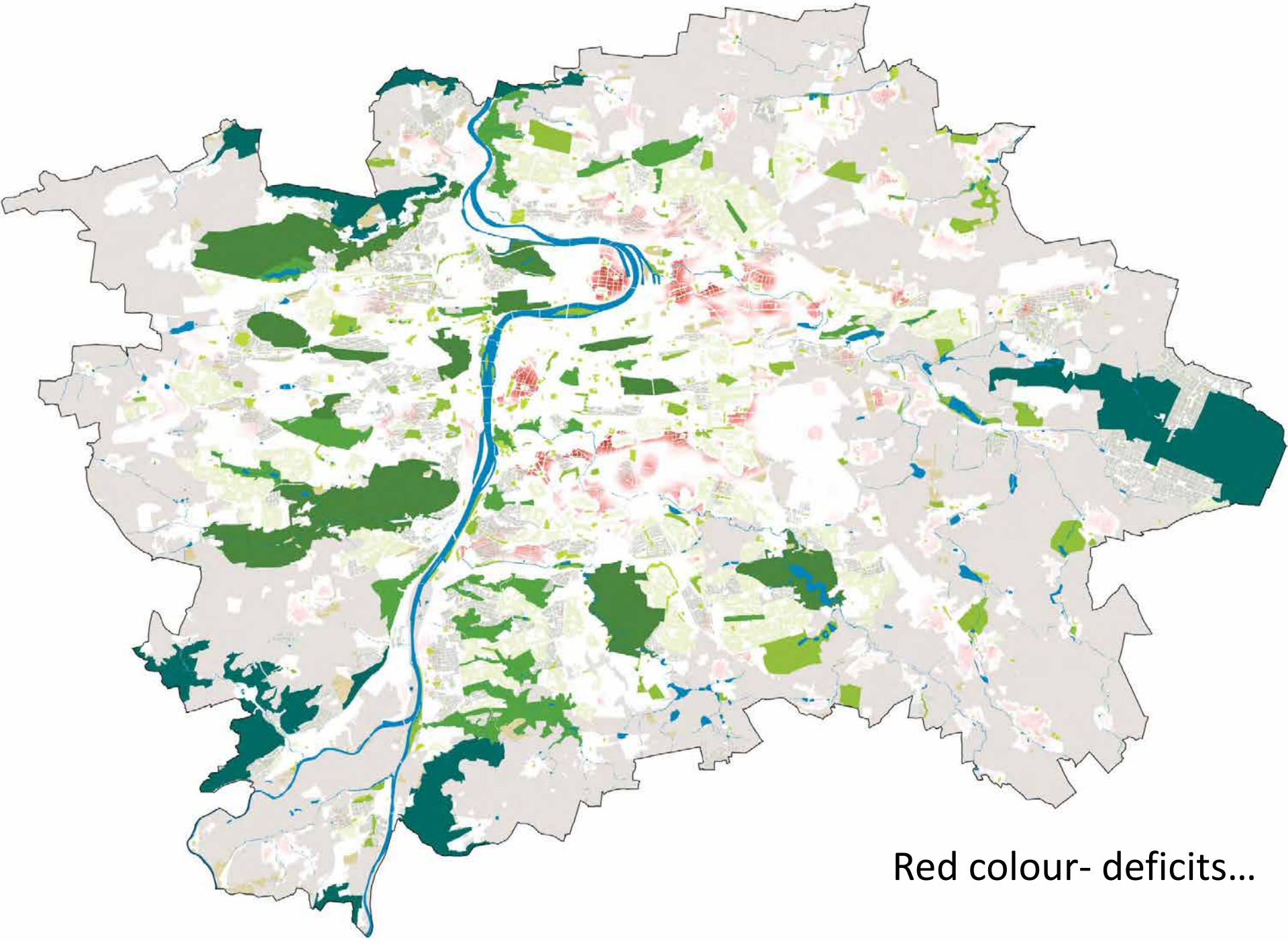
In each Locality a new park is outlined by precise area or regulated by graphic sign (a point) or by percent (parametrical request)



City jungle
-Uncultivated green areas

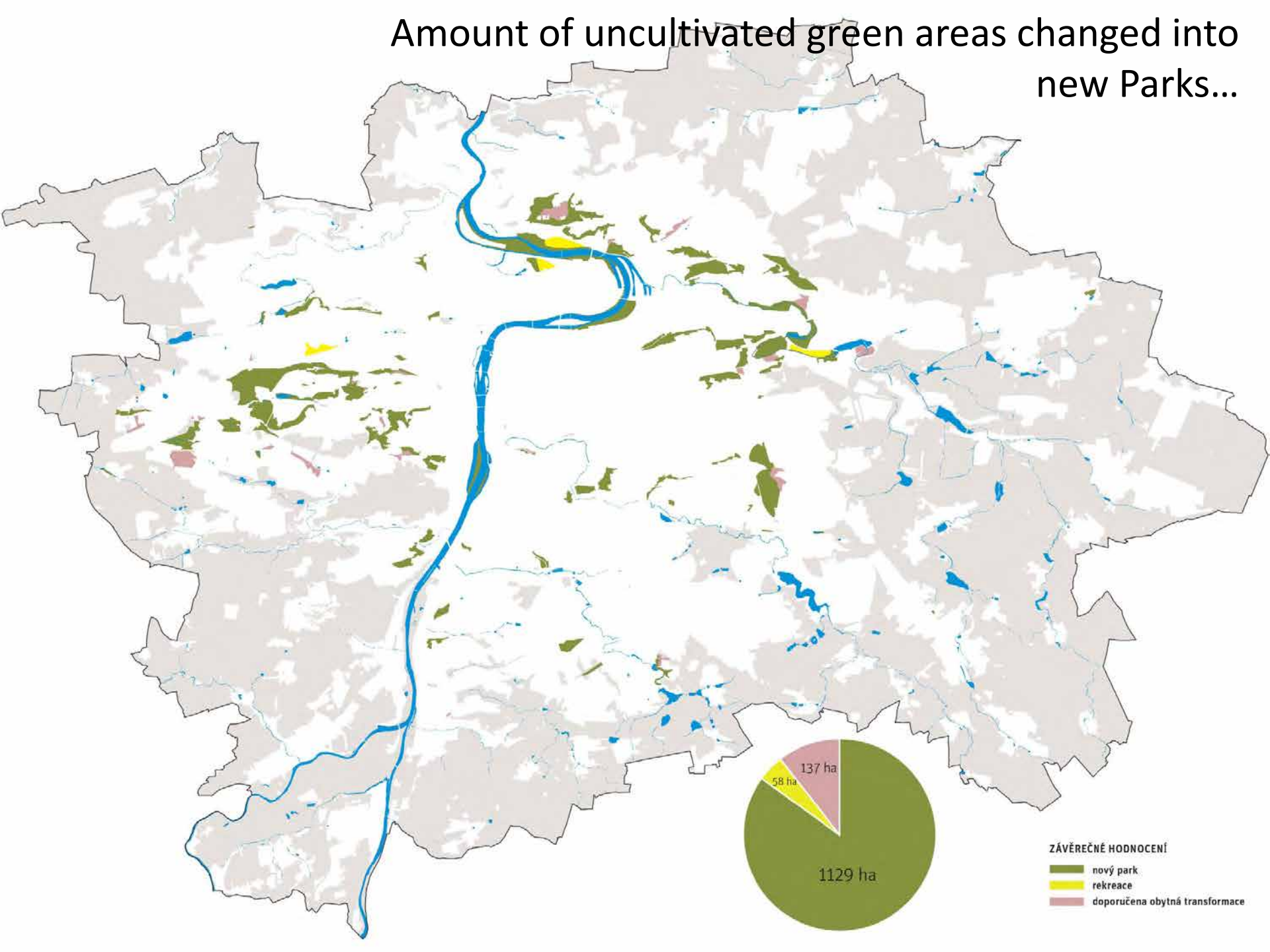

In search for unmaintaned and poor accesible
nature areas suitable for future parks…

Parks accesibility analysis

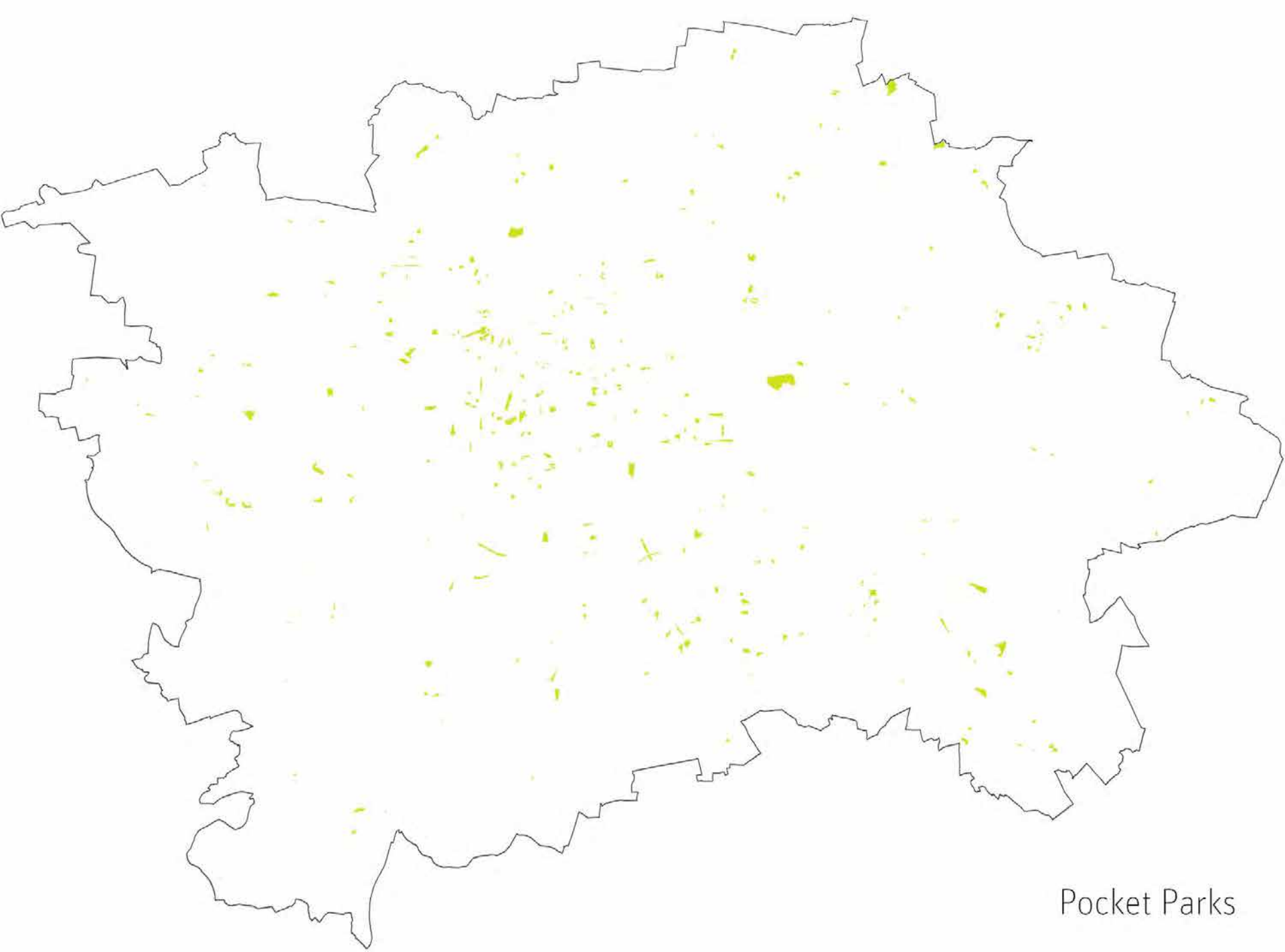


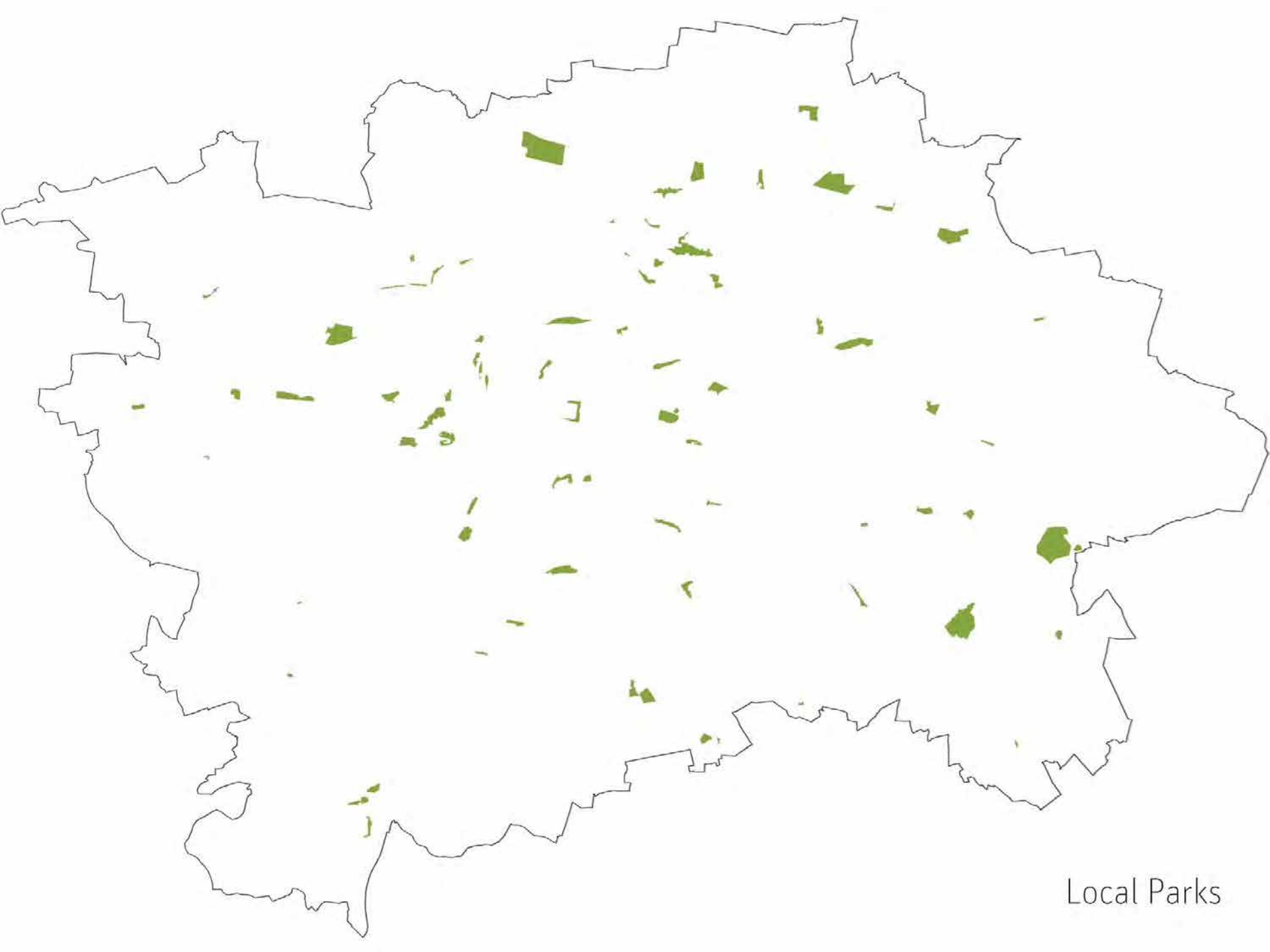
Red colour- deficits…

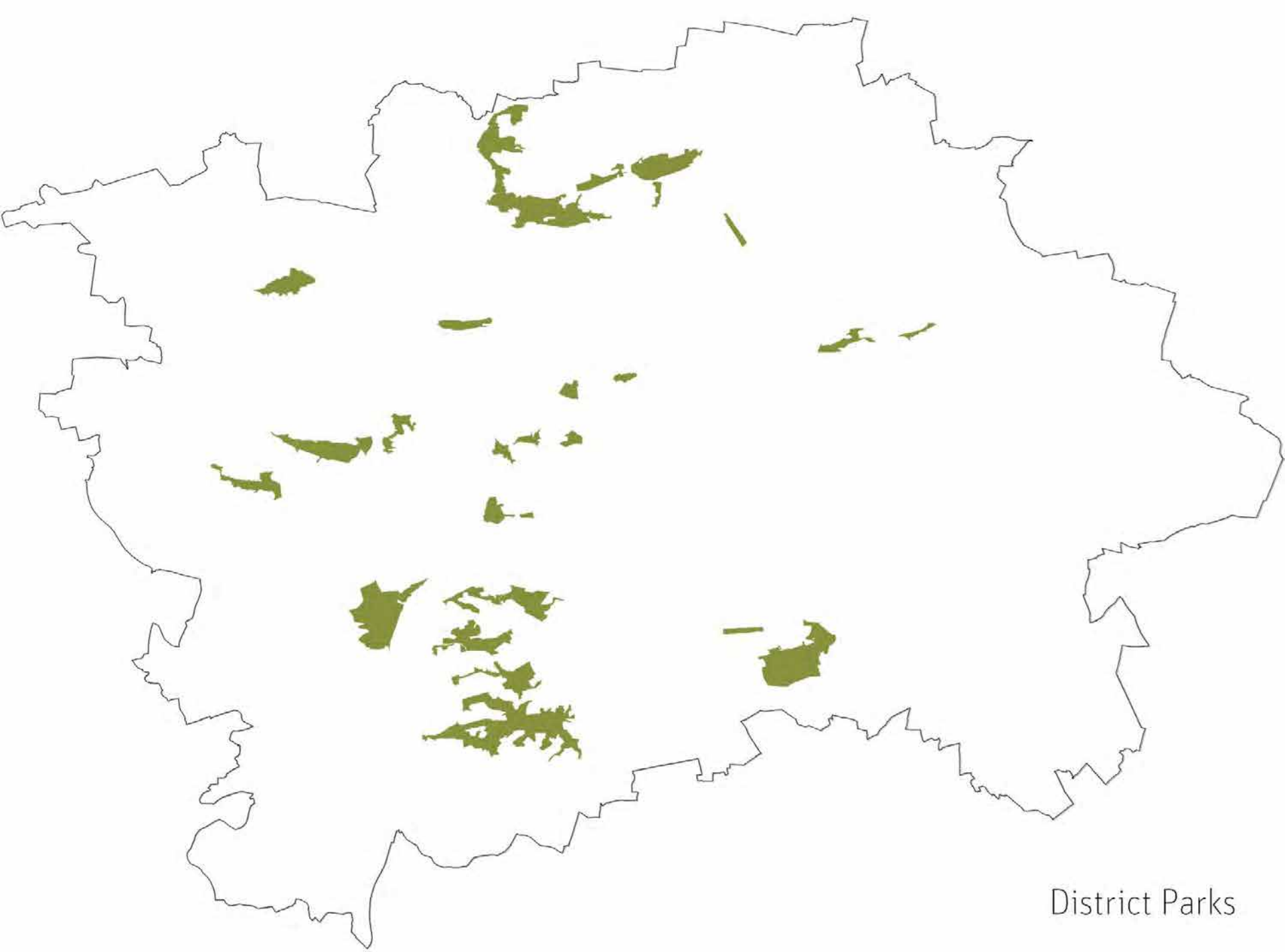
Amount of uncultivated green areas changed into new Parks…

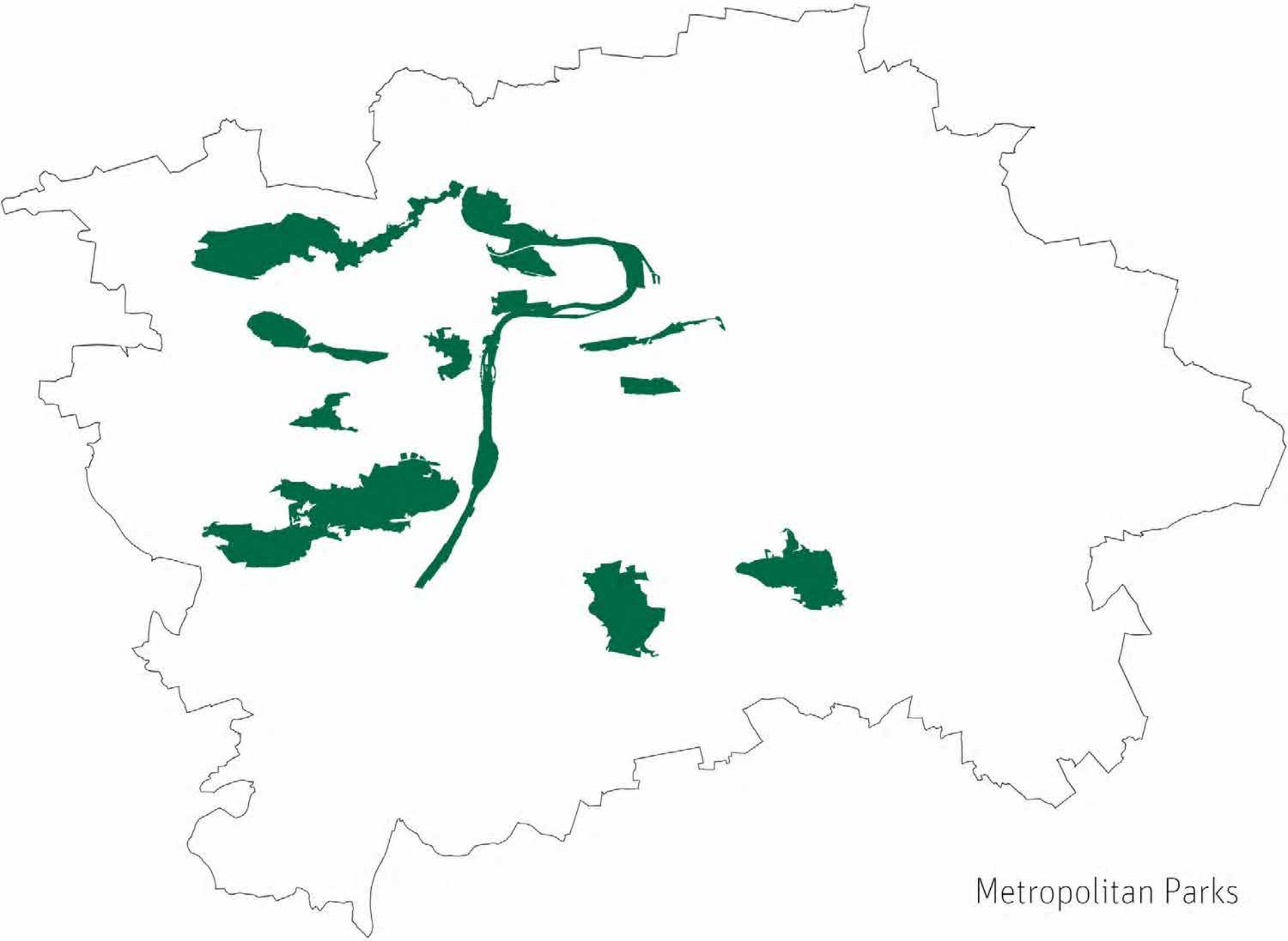


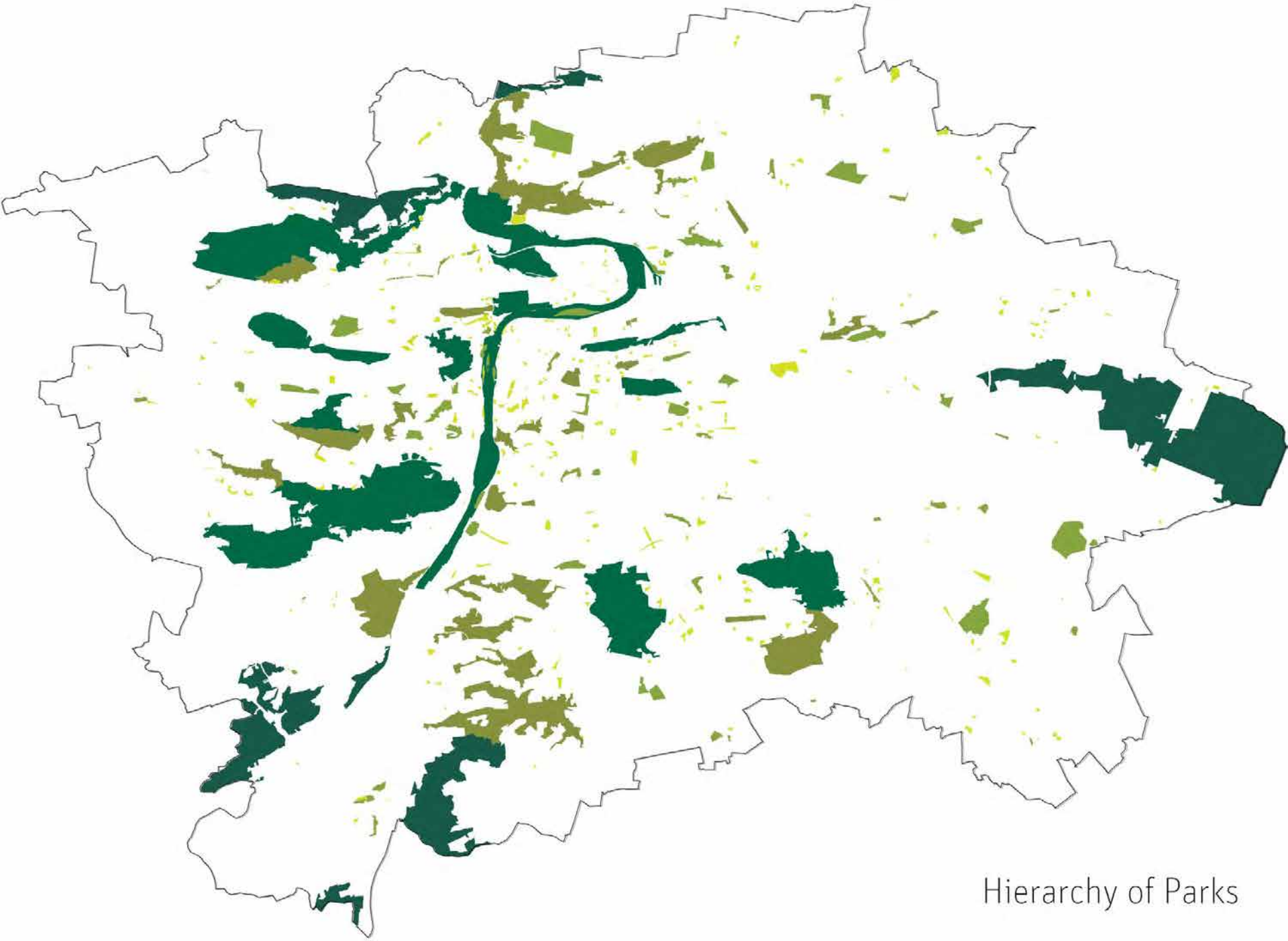
The hierarchy of parks


Pocket Parks

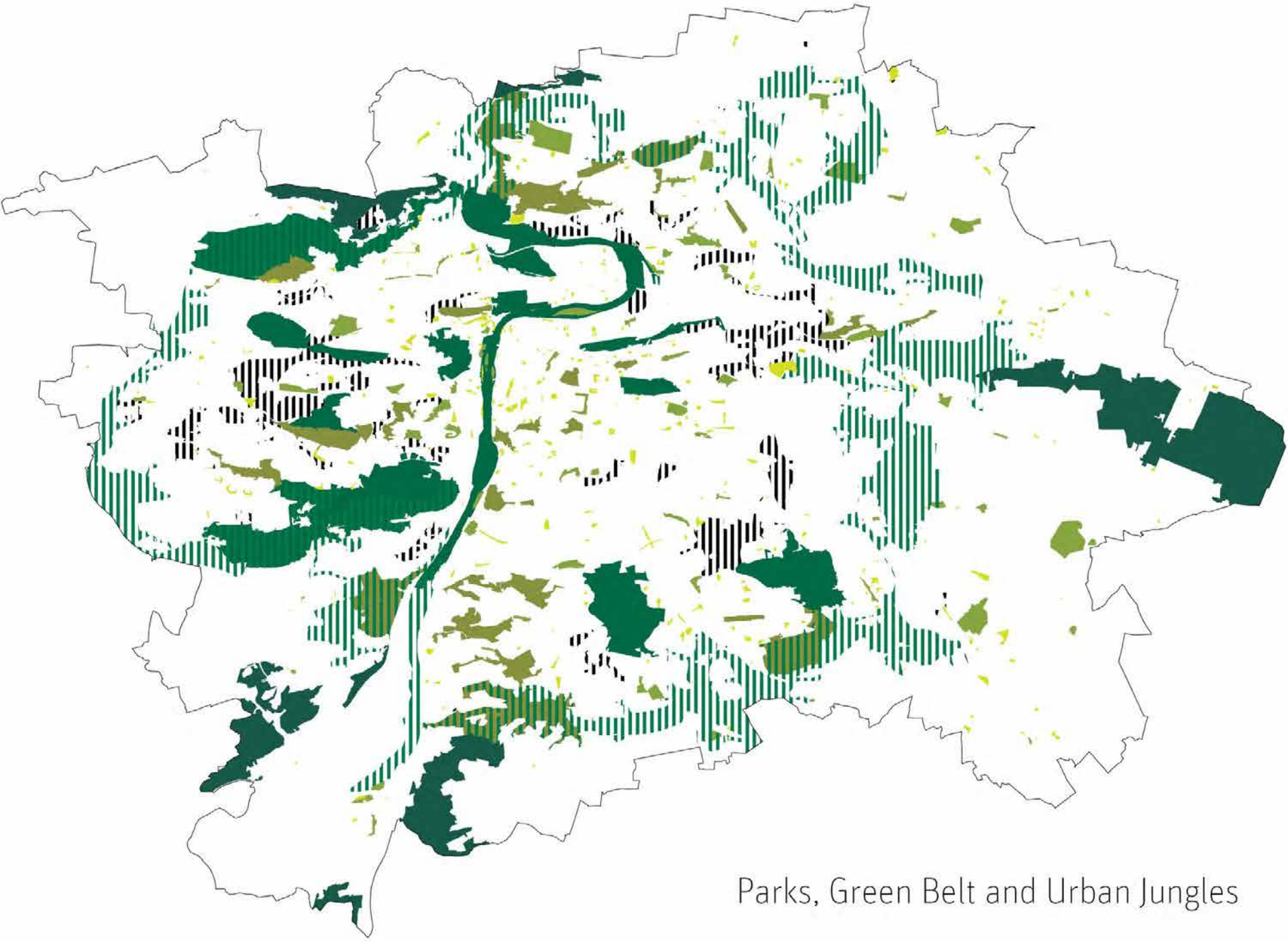

Local Parks

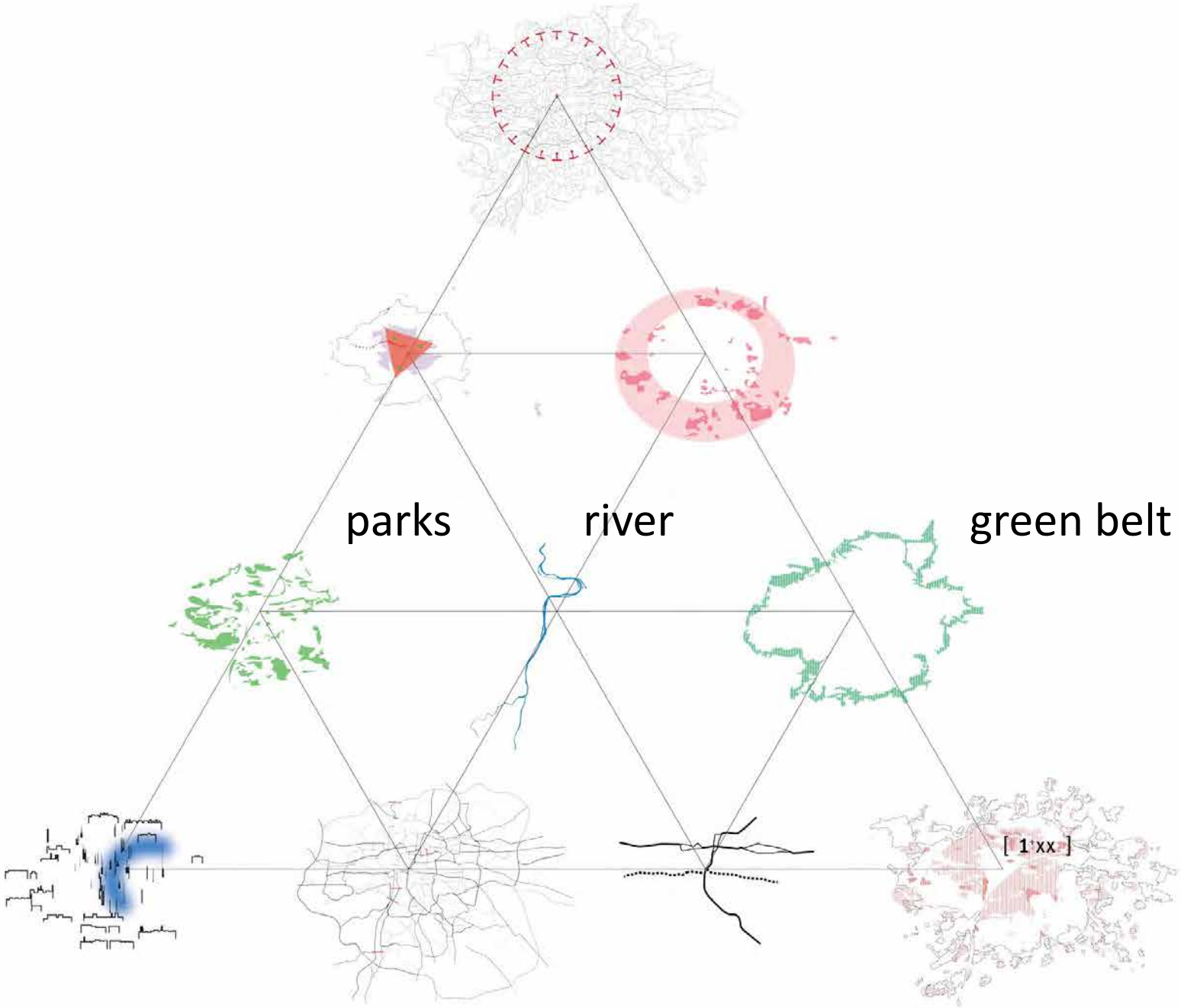

District Parks


Metropolitan Parks



Hierarchy of Parks


Parks, Green Belt and Urban Jungles

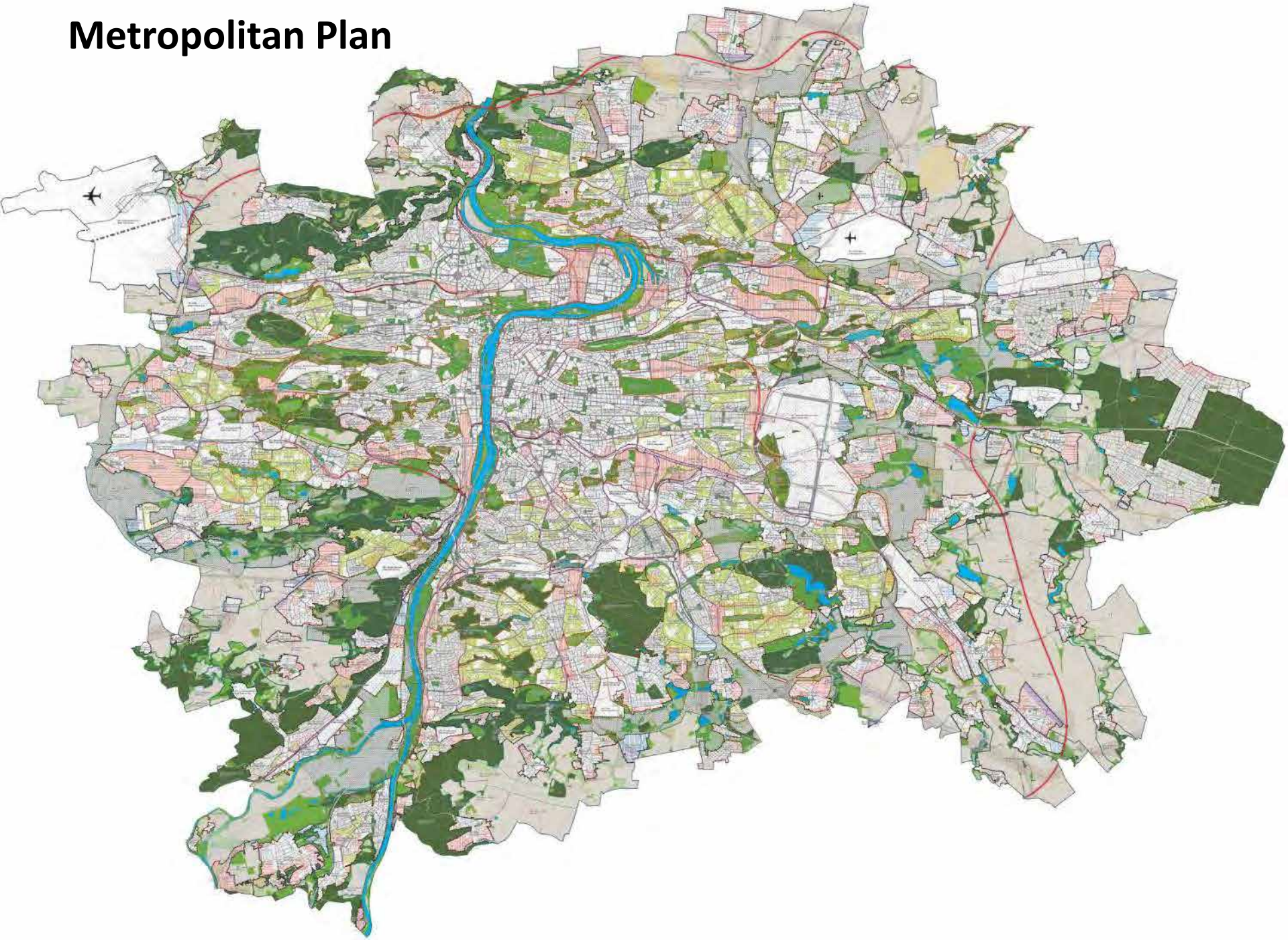

parks
river
green belt
[1'xx]

Prague City

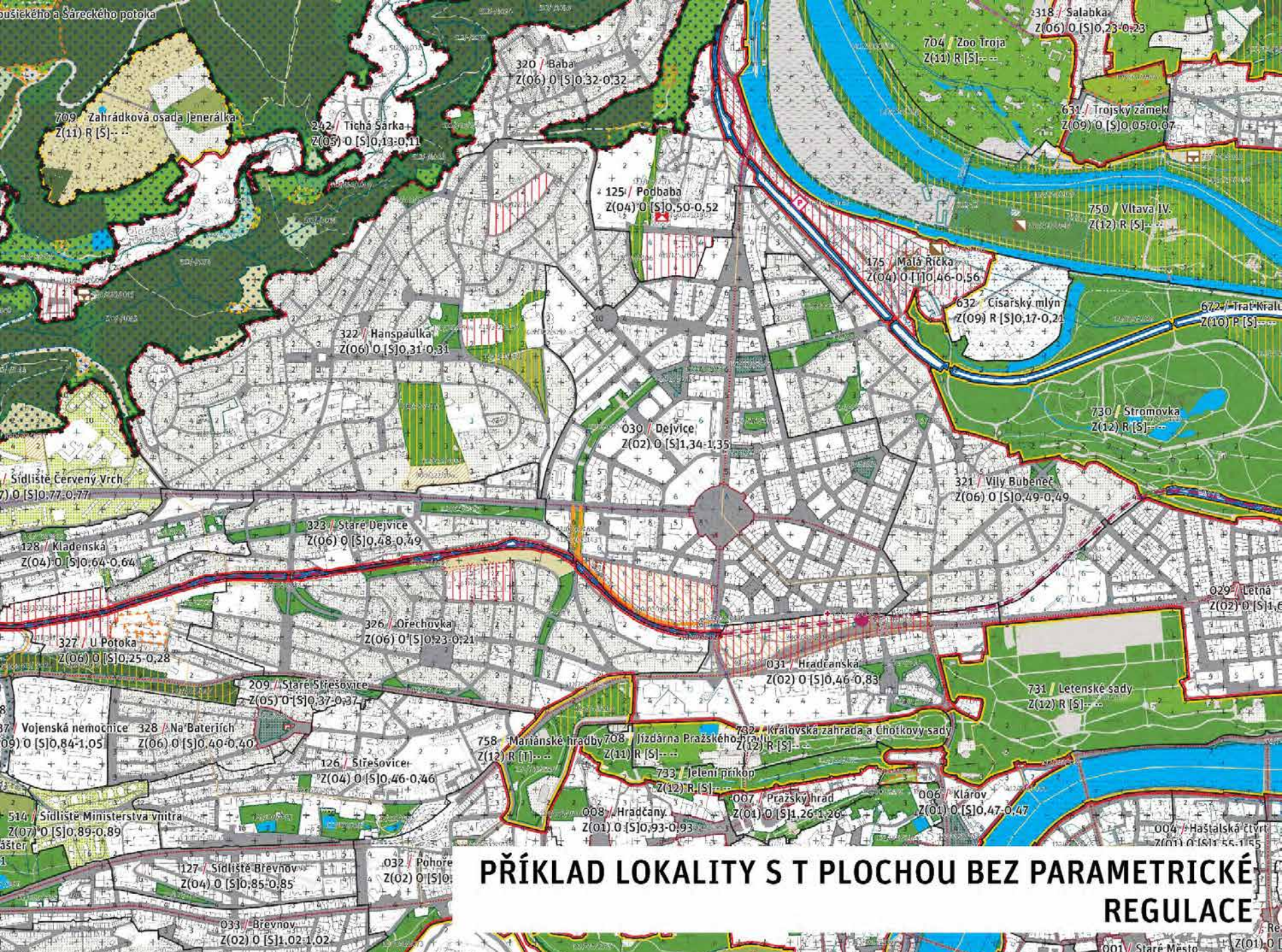
METROPOLITAN PLAN

Planning level

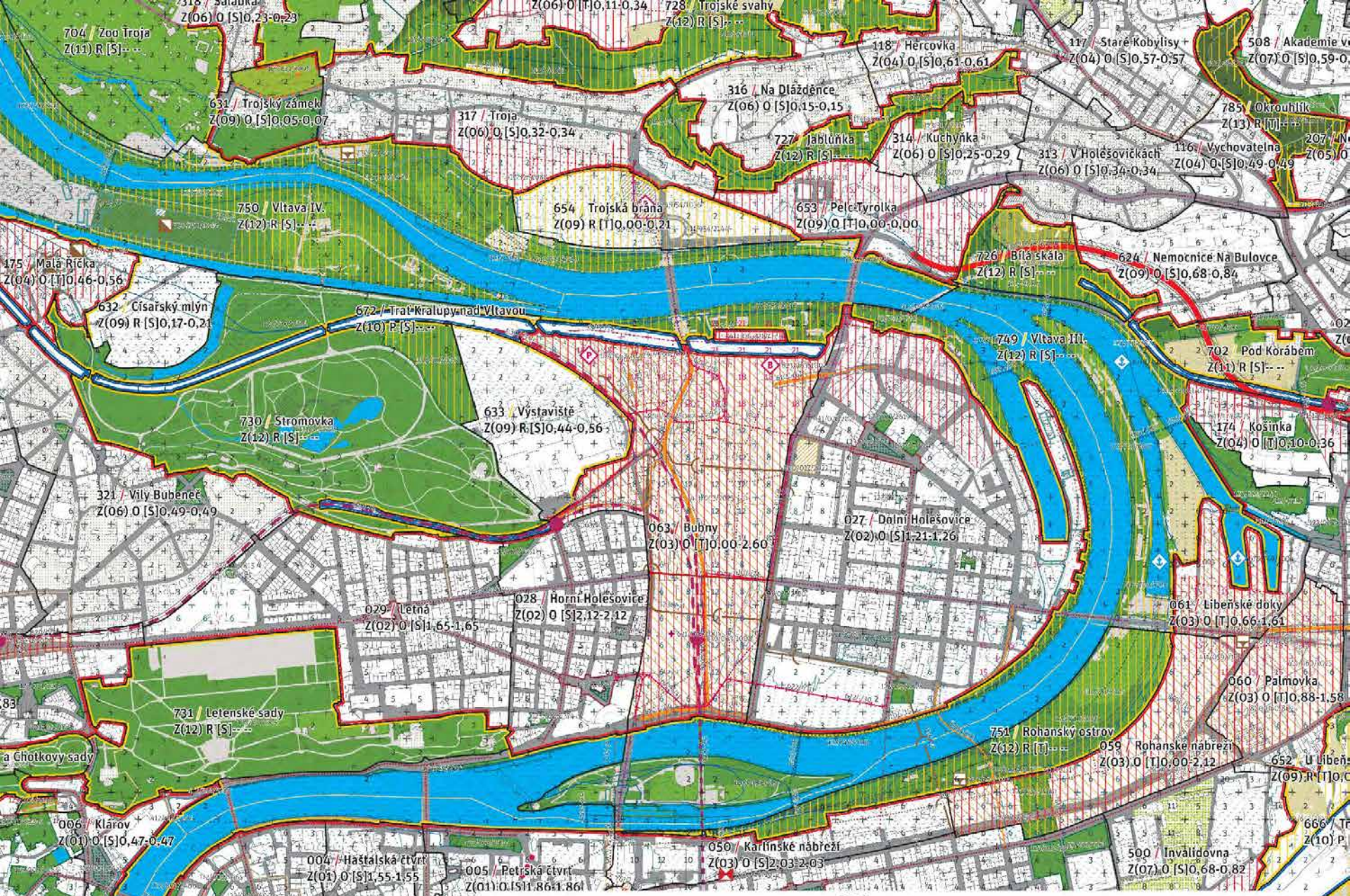
Metropolitan Plan



731 / Letenské sady
006 / Klárov
004 / Haštalská čtvrť
005 / Petrská čtvrť
750 / Karlínské nábřeží
003 / Josefov
023 / Karlín
500 / Invalidovna
001 / Staré Město
015 / Revoluční
722 / Vítkov
002 / Anežská čtvrť
022 / Ohrada
303 / Židovské pece
501 / Jarov
502 / Chmelnice
304 / Balkán
622 / Na Balkáně
573 / Na Šancích
113 / Nové Vysočany
112 / Pod Višňovkou
111 / Spojovací
110 / Vackov
021 / Žižkov
721 / Parukářka
014 / Nové Město
058 / Nákladové nádraží Žižkov
109 / Olšanská
168 / Červený dvůr
720 / Riegrovy sady
700 / Olšanské hřbitovy
723 / Park Malešice
302 / Třebešín
557 / Sídliště Malešice
020 / Vinohrady
057 / Habibor
100 / Želivského
013 / Karlov
301 / Vinohradská stráň
620 / Vinohradská nemocnice
108 / Zborov
107 / Sídliště Solidarita
040 / Albertov
300 / Kleovka
742 / Havlíčkovy sady
741 / Folimanka
683 / Pražská spojovací dráha
101 / Nové Vršovice
103 / Strašnice
044 / Vršovice
102 / Kodňanka
106 / V Rybníčkách
043 / Nusle
649 / Eden
556 / Sídliště Skalka
041 / Podolí
042 / Pankrác
370 / Na Jezerce
634 / Nádraží Vršovice a Strašnice
070 / V Korytech
105 / Skalka
187 / Pod Bohdalcem
188 / Slatiny
356 / Děkanka
528 / Sídliště Pankrác
648 / Reitknechtka
157 / Trnkov
552 / Sídliště Zahradní Město západ
373 / Zahradní Město
055 / Kavčí hory
606 / Plynárna a teplárna Michle
154 / Michle
554 / Nad Zahradním Městem
553 / Sídliště Zahradní Město východ
746 / Centrální park Pankrác
685 / Odstavné nádraží Michle



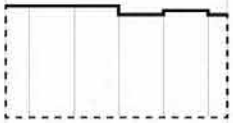
PŘÍKLAD LOKALITY S T PLOCHOU BEZ PARAMETRICKÉ REGULACE



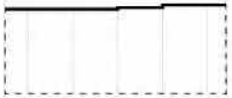
PŘÍKLAD LOKALITY S T PLOCHOU REGULOVANOU PARAMETRICKY

(DIGITAL) VISTAS

řez celé linie



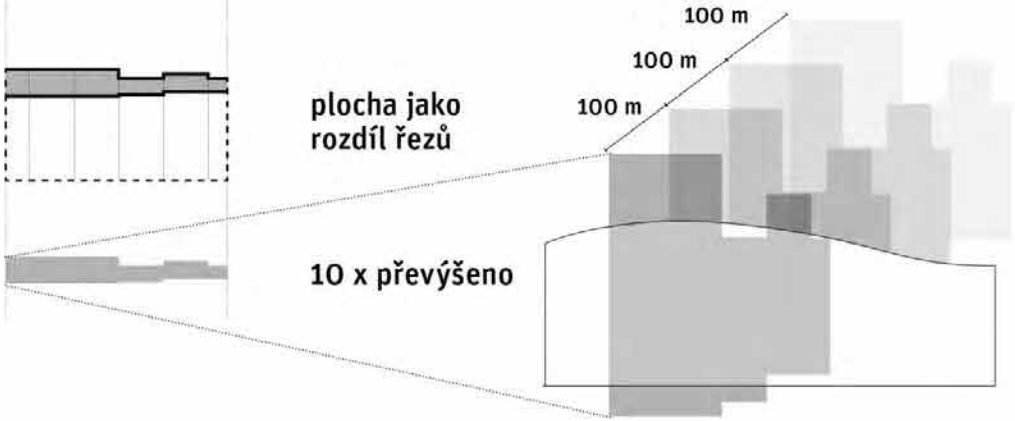
řez max. výšky zástavby



řez min. paty zástavby

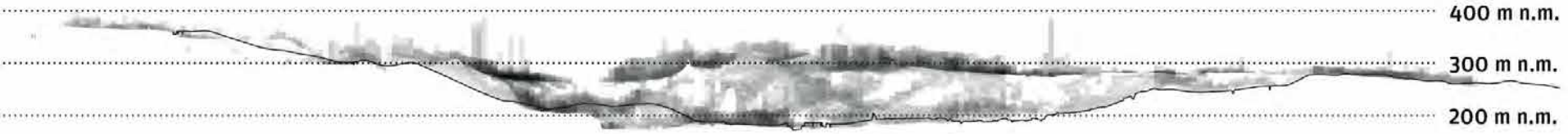
plocha jako rozdíl řezů

10 x převýšeno



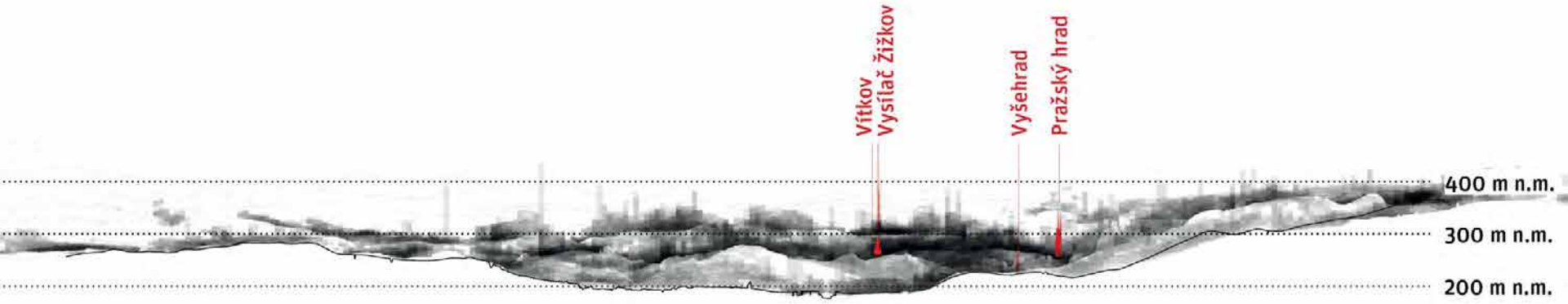
seřazení jednotlivých řezů v kroku 100 m za sebe doplněné neprůhlednými plochami terénu v kroku 1 km

DIGITAL VISTAS



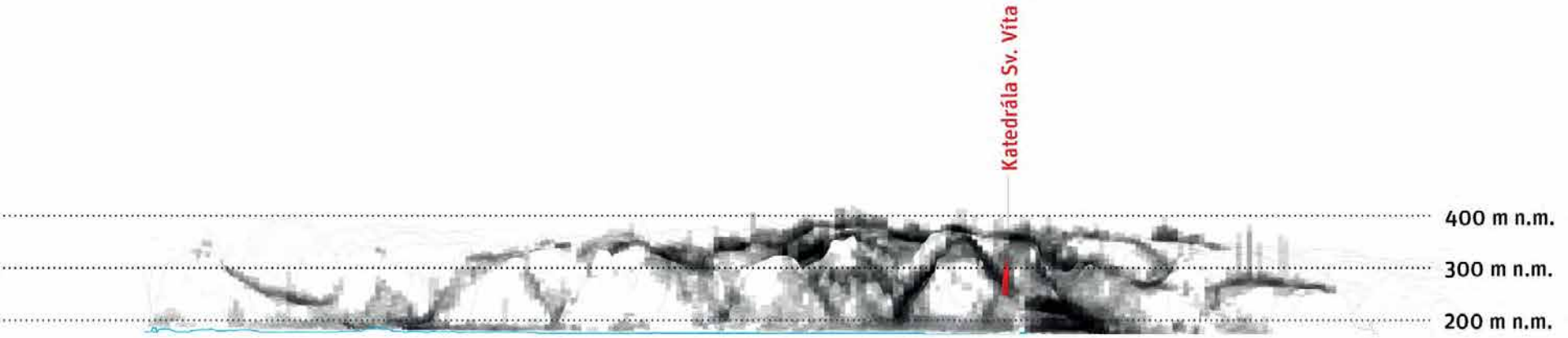
10x North Diametr S

DIGITAL VISTAS



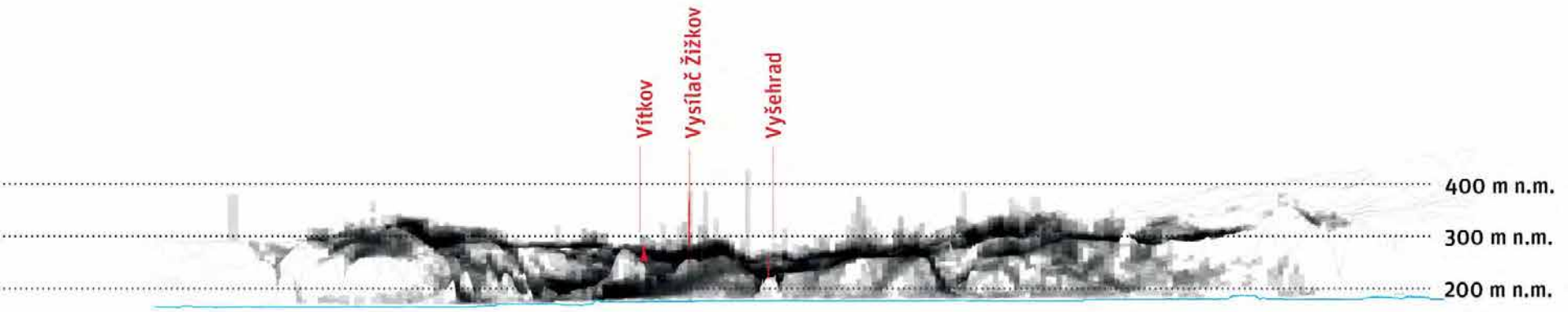
10x North Diametr J

DIGITAL VISTAS

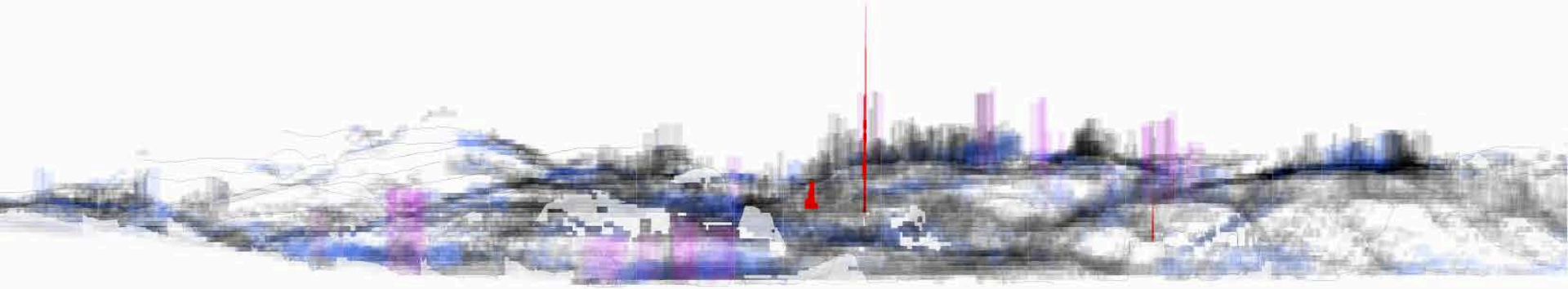


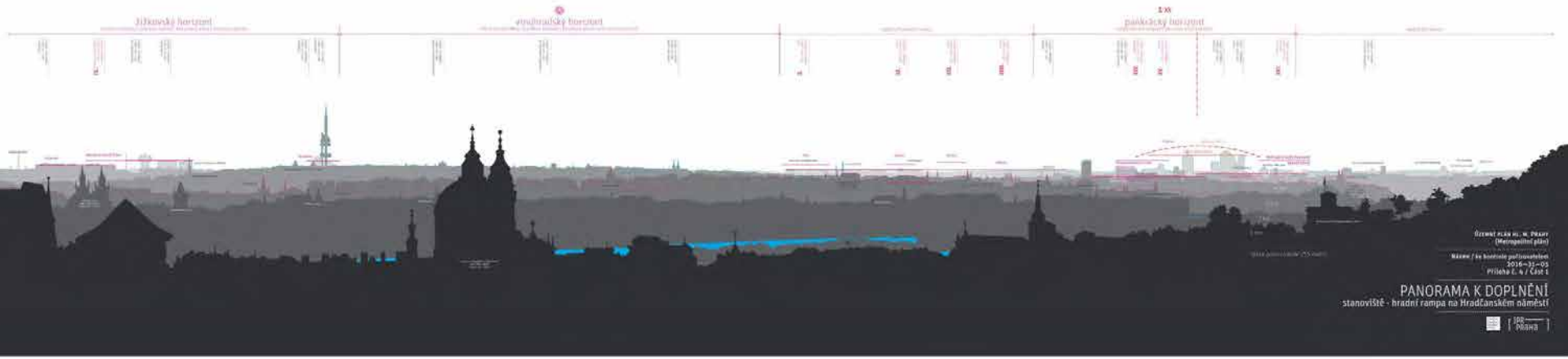
10x left bank

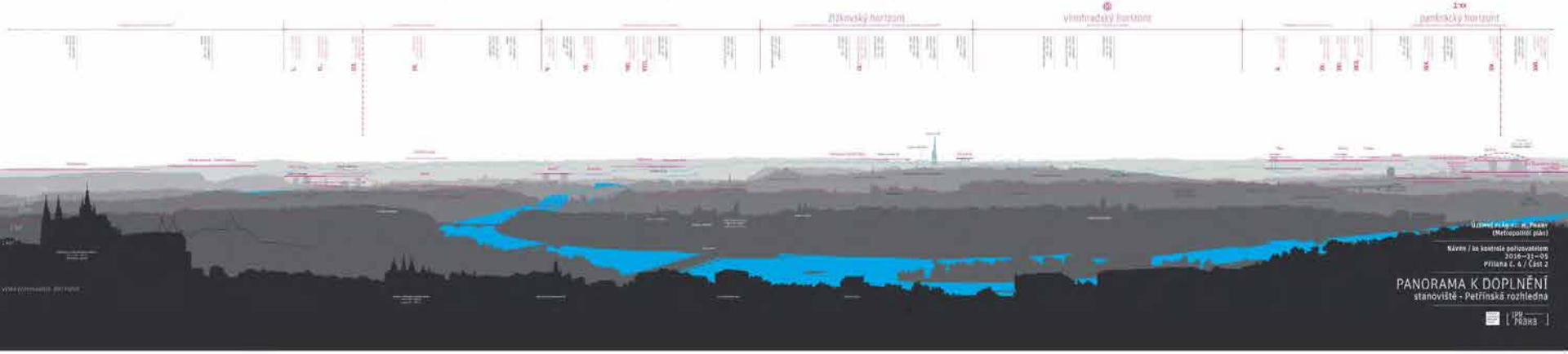
DIGITAL VISTAS



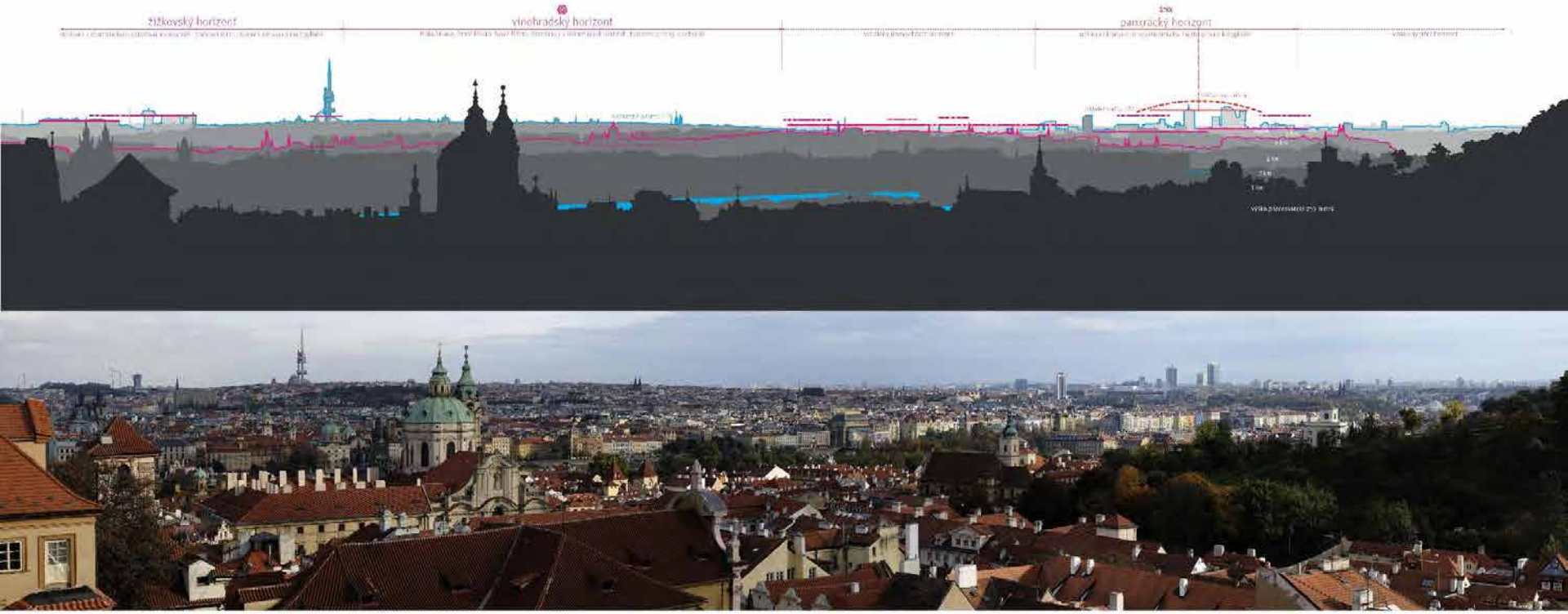
10x right bank







PANORAMA K DOPLNĚNÍ
ZÁVAZNÁ ČÁST MPP


žižkovský horizont
vinohradský horizont
panský horizont

vinohradský horizont

Malá Strana, Staré Město, Nové Město, Vinohrady v jednotlivých plánech, horizont určený k ochraně

1+xx

pankrácký horizont

ubíhající horizont modernistického města určený k doplnění

Filadelfie
255 + 65 = 320 m
vzdálenost = 6000 m

Enterprise Office Center
265 +40 = 305 m
vzdálenost = 5150 m

Budějovická
270 + 100 = 370 m
vzdálenost = 6200 m

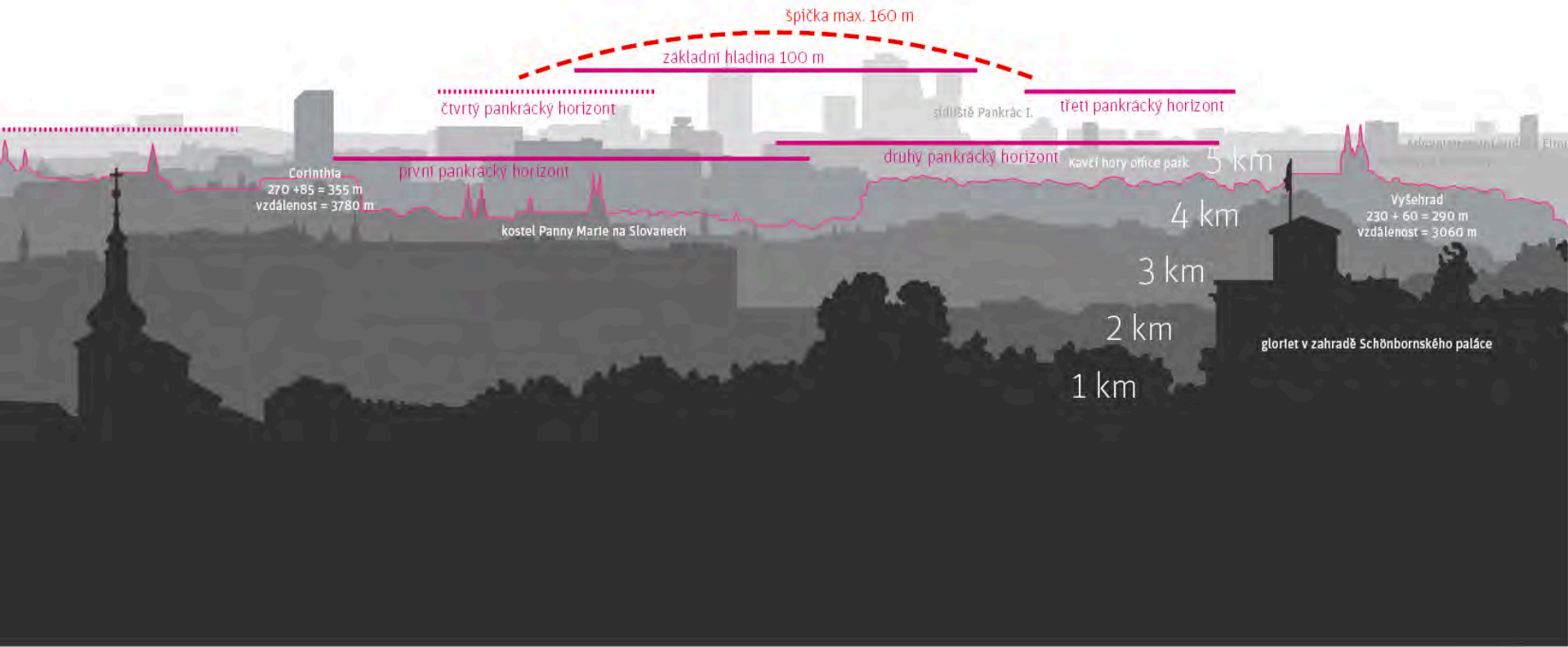
Pankrác
270 + 100 = 370 m
vzdálenost = 5200 m

City Tower
270 + 110 = 380 m
vzdálenost = 5070 m

V Tower
270 + 105 = 375 m
vzdálenost = 5200 m

Central Group Pankrác
265 + 80 = 345 m
vzdálenost = 4900 m

Česká televize na Kavčích horách
265 + 45 = 310 m
vzdálenost = 4800 m



Prague City

Where to find more informations?

IPR Praha — Územní plán hl. m. Prahy

METROPOLITNÍ PLÁN

NÁVRH / ke kontrole pořizovatelem

ÚVOD | PROHLÍŽENÍ | KE STAŽENÍ | KONTAKT

Metropolitní plán je inovativním dokumentem – přichází se změnou paradigmatu v plánování města. Namísto dosavadního plánování města na základě funkčního využití ploch se navrací k předsocialistickému způsobu územního plánování: základním principem Metropolitního plánu je vymezování veřejných prostranství, struktury a kompozice zástavby či stanovení výškové regulace. >>>

Jak Metropolitní plán číst?

Metropolitní plán tvoří soustava navzájem provázaných vrstev, ve kterých jsou zakotvena pravidla. Pro komplexní přehled o regulaci území hlavního města je vždy potřeba porozumět všem vrstvám – od vlastností jednotlivých lokalit po pravidla stanovená pro konkrétní plochy. Proto vám přinášíme na obecném příkladu návod, jak návrh Metropolitního plánu číst. >>>

Jaké regulativy Metropolitní plán přináší?

Ke každé vrstvě plánu se váží konkrétní regulativy – od vlastností lokalit po pravidla

http://plan.iprpraha.cz/cs/metropolitni-plan

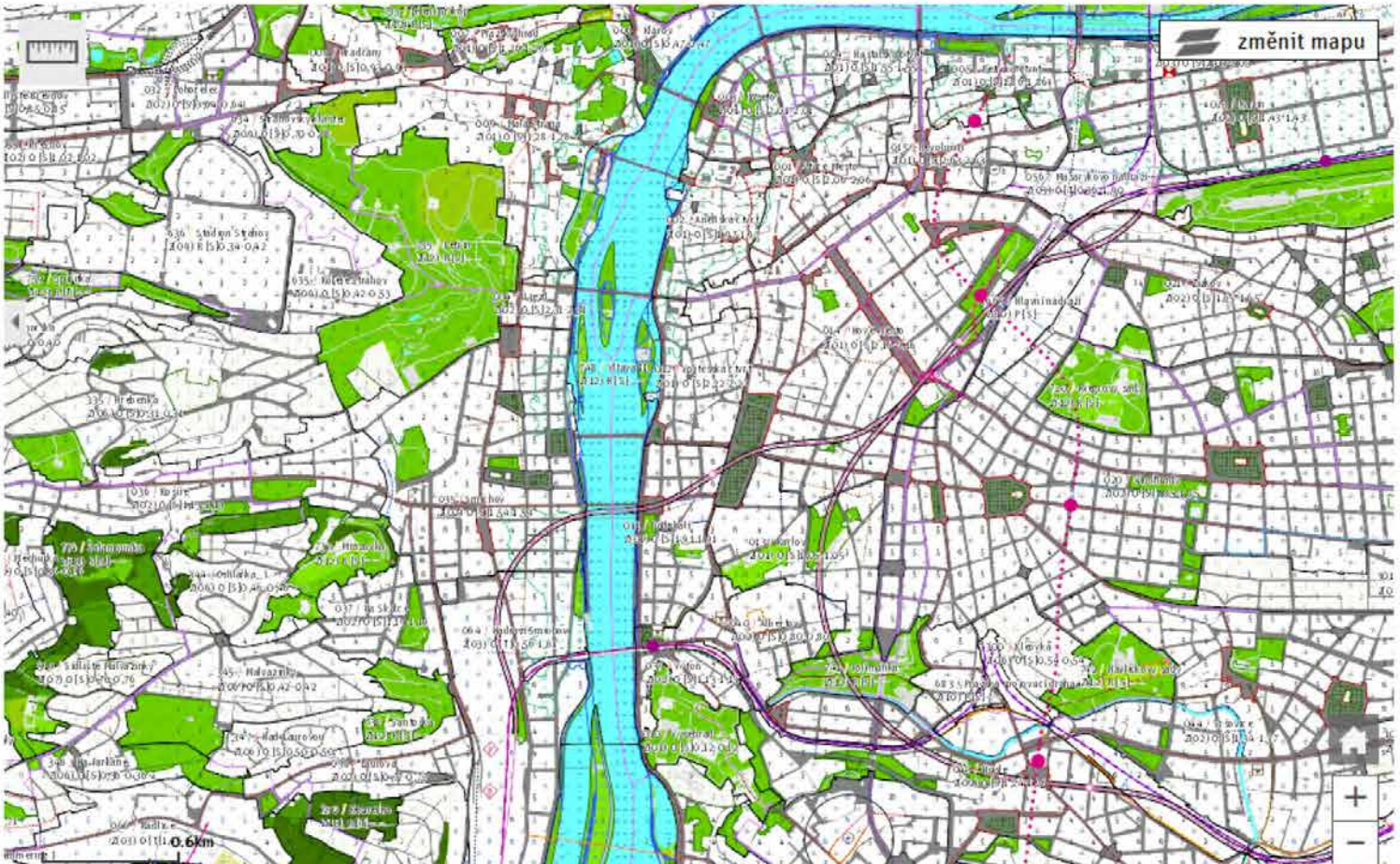
Metropolitní Plán Prahy

Výkres základního členění území | Hlavní výkres | Výkres VPS, opatření a asanací

Vyhledávání

Vrstvy | Legenda

Hlavní výkres



ČASTÉ DOTAZY

Fullscreen

tní Plán Prahy

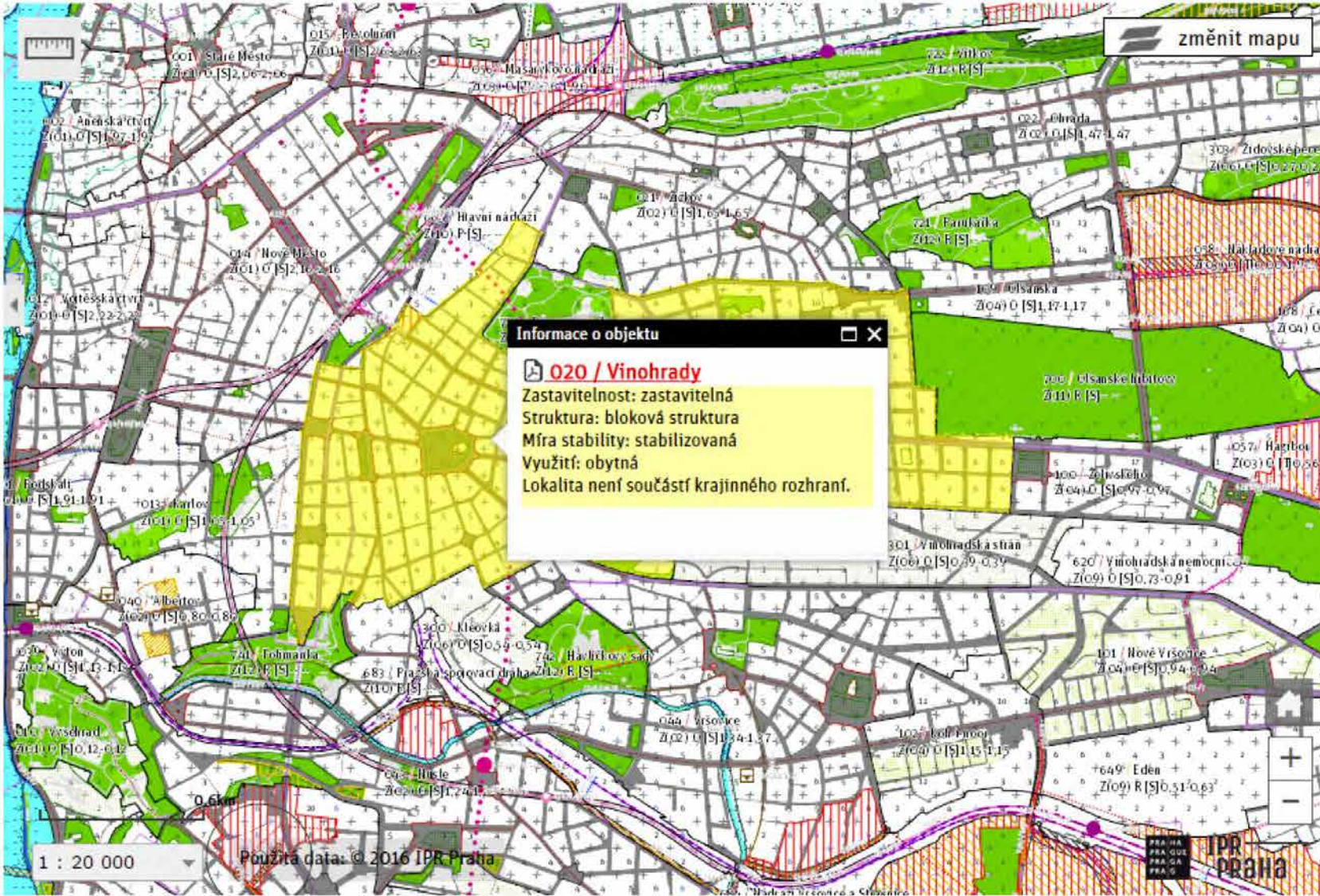
Výkres základního členění území

Hlavní výkres

Výkres VPS, opatření a asanací

Vyhledávání

Legenda



Thanks for your attention!