



Thematic Landscape Master Plan

– Climate-resilient, permeable, and culturally informed Landscape Master Plan for Hostivice Municipality, Czechia

Vojtěch Kettner

Independent project • 30 credits

Swedish University of Agricultural Sciences, SLU

Faculty of Natural Resources and Agricultural Sciences

Department of Urban and Rural Development

Landscape Architecture for Sustainable Urbanisation – Master's Programme

Uppsala 2021



Thematic Landscape Master Plan – climate-resilient, permeable, and culturally informed Landscape Master Plan for Hostivice Municipality, Czechia

Vojtěch Kettner

Supervisor:	Mari Kågström, SLU, Department of Urban and Rural Development
Examiner:	Lena Steffner, SLU, Department of Urban and Rural Development
Credits:	30 credits
Level:	second cycle, A2E
Course title:	Independent Project in Landscape Architecture, A2E – Landscape Architecture for Sustainable Urbanisation – Master’s Programme
Course code:	EX0945
Programme/education:	Landscape Architecture for Sustainable Urbanisation – Master’s Programme
Course coordinating dept:	Department of Urban and Rural Development
Place of publication:	Uppsala, Sweden
Year of publication:	2021
Cover picture:	Collage by Vojtěch Kettner, background picture: KUČERA, J. (2015). <i>Mlékárna v roce 1946: Stalo se před 80 lety</i> . [historical photo]. hostivickahistorie.cz/stalosepred/87.html [2020-06-17].
Copyright:	All featured images are used with permission from copyright owner.
Online publication:	https://stud.epsilon.slu.se
Keywords:	<i>landscape, thematic plan, master plan, municipality, comprehensive planning, urban ecology, landscape architecture, connectivity, Hostivice, Czechia</i>

Swedish University of Agricultural Sciences

Faculty of Natural Resources and Agricultural Sciences
Department of Urban and Rural Development
Division of Landscape Architecture

Publishing and archiving

YES, I hereby give permission to publish the present thesis in accordance with the SLU agreement regarding the transfer of the right to publish a work.

NO, I do not give permission to publish the present work. The work will still be archived and its metadata and abstract will be visible and searchable.

Acknowledgements

Above all, I would like to thank my supervisor, Mari Kågström, for keeping my thinking on track and giving valuable feedback along with the whole process.

I am thankful to the both vice-mayors of Hostivice Municipality, Mr. Koňářík and Mr. Kučera, for their insights and help with data sources.

Not merely the least, I would want to thank my whole family for standing by my side despite the distance, and I cannot forget the ‘Skrindvägen 13 family’, who were a priceless psychological support to me.

Abstract

The Master thesis investigates urban as well as open landscape in the Hostivice Municipality, Prague-West District, Czechia.

The introduction presents the current state of landscape planning in the Hostivice Municipality, and unveils the concept of landscape within geography and its position in Czech Republic. A selected lens of three themes – Climate Resilience, Transport, and Heritage – is presented as a red thread for processing the whole thesis. Under the respective themes, background information is presented consisting mostly of regional environment publications, historical books, and scientific papers.

The method is established according to the concept of landscape as a body of layers in an analysis combining both theoretical sources (contained in the background information), image (historical maps, comprehensive maps sports analytics), and embodiedness (cartographic activity, meetings with municipal representatives).

The analysis concludes statements about the Hostivice Landscape respective to each theme. To the Climate Resilience theme, they assert how the landscape is used only for production purposes, split significantly between rural and urban landscape, how the landscape lacks multi-functionality for its users/inhabitants, and how the ecological services are conducted. The Transport theme concludes a low permeability for both pedestrians and cyclists in both urban and rural landscape. The Heritage theme deduces a low appreciation for the agricultural landscape of Hostivice, pinpoints a low care for significant heritage sites including the Hostivice Ponds.

As a result, the conclusions are interpreted in articulating an informed set of measures in the Thematic Landscape Master Plan, which is assigned in the three colours for the three themes. The stress is put on connectivity and multi-functionality of the public spaces for the people in Hostivice.

The discussion reflects upon the data sources as well as stimulating topics that were generated by the process. It raises arguments for the three selected themes and compares them with Schein's discourse materialized. The discussion argues for a transformability of the landscape and an essential urge to accustom the role of landscape to our contemporary needs. The Czech landscape legislation is suspected for propelling the urban/rural divide witnessed in the case of the Territorial System of Ecological Stability.

Keywords: landscape, thematic plan, master plan, municipality, comprehensive planning, urban ecology, landscape architecture, connectivity, Hostivice, Czechia

Popular Summary

The thesis analyzes the agricultural landscape of Hostivice in order to conclude statements hindering the potential in ecological, recreational, and heritage aspects for the inhabitants. Analyzing the conclusions, brief measures challenge the current state and are depicted in the Thematic Landscape Master Plan for Hostivice Municipality.

The study area is closely neighbouring with the capital of Czechia, Prague, and comprises landscape dominated by agriculture. Fertile soils found in this region, have been a reason for food production since centuries. The current situation is characterized by vast arable plains interwoven with vehicle roads and rather low number of trails and linear vegetation features. Just next to the town of Hostivice, the system of Hostivice Ponds stretches out and provides the biggest green area for daily recreation and acts as the most important agent of (storm) water retention. The Hostivice Municipality has experienced a quick rise in inhabitants in 2000s and the hinterlands behind all the urban areas and sparse green spaces became insufficient for both ecological, and recreational proposes of the locals.

As witnessed in historical sources and district environmental assessments, local landscape has never been associated with a tourist destination or a lovely open-air leisure venue. The landscape was overlooked not only for the agricultural dominance, but also for inability to appreciate the vernacular qualities, and lack of landscape mediation for the inhabitants. As a matter of fact, Hostivice landscape is fundamental for daily recreation of both pedestrians as well as cyclists.

In regard to the limited contact of people with the landscape, the current discourse of landscape studies within Czech geography indicates that the physical understanding of the landscape prevails. The concept of landscape itself is important to argue since different professionals tend to use the term while generating confusion. Some claim that a landscape is inherently tangible, can be sorted into elements and areas (as a synonym to environment), while some claim that a landscape is only a social construction that enables us to control power relations posed on the land. In Hostivice, such tension between material and immaterial might hinder the landscape planning and silence some minor groups of society.

Following the landscape's multi-disciplinary nature, various layers of both history, material and meaning, the method of the landscape research in this thesis comprises of a study of multiple data sources. These data sources are studied under three constructed themes, which aim to access the research in particular boundaries – Climate Resilience, Transport, and Heritage. Naming those themes, a chosen palette of the data sources can be described and summarized.

For local overview and regional visions, the documents describing the whole landscape of Prague-West District (that is Hostivice a part of) were studied. General visions for the District include environmental goals as well as landscape permeability objectives and landscape maintenance.

Multiple scientific articles contributed on both Climate Resilience and Transport theme. For instance, the articles involve problems of recreation planning in peri-urban areas, employing green infrastructure between the rural and urban areas, the trending importance of urban ecology or the multi-functionality of urban spaces.

The historical maps of various age were studied and stimulating details were spotted. The maps are beautiful historical heritage themselves, however they have to be assessed critically. Albeit old documents from 18th and 19th century, the nearest history can be identified and reinterpreted from the maps.

Strava Global Heatmap was analysed for monitoring the permeability through the both urban and rural landscape. Being an application for collecting and tracking sport activities of Strava users, the intensity use of routes can be viewed. However limited by the registered users only, the Strava Heatmap mirrors the actual network of connections.

Meetings with both vice-mayors of the Hostivice Municipality, Mr. Koňářík and Mr. Kučera, enriched the theoretical knowledge already gained from the municipal planning documents or historical sources. Mr. Kučera provided me with additional info about the history in the region, whereas Mr. Koňářík forwarded an architectural student project over Hostivice, and the new railway cycle path project to me.

For all three themes, particular conclusions were wrapped up.

The Climate resilience gets more attention in the proposal for the new Comprehensive plan by expanding the spaces for a system of ecology (TSES) through and outside the town of Hostivice. The scientific articles support the multi-functionality of such spaces and closer contact of the landscape with the public is desired. The Brooks flowing through the municipality are great potentials for water-management measures combined with public space life

contribution. Especially the very central green areas in Hostivice, the *Jan Hus Square* and the *Hostivice Mansion Park*, would be perfect places for showcasing the increased interest for multifunctional spaces within the Municipality.

The Landscape Thematic Master Plan welcomes the expansion of the local ecological system (TSES) and sees potential in the northern park belt along the railway as an antipole to the forest park around Hostivice Ponds. Spatially modest storm water managements and linear plantations, creating divisions between fields, would contribute strongly to the climate resilience in the rural landscape. Similar projects should be supported in the urban areas with the potential of raising awareness about the urban ecology among all age groups.

Transport conclusion is associated with a generally low permeability both in the urban and rural areas. As a pedestrian or a cyclist, you have a limited number of paths to choose from if you need to avoid joining the road traffic.

In the Landscape Thematic Master Plan, the increase of connections of various capacities, and development of the cycle path system around Hostivice town would benefit the transport situation notably. A marked circular trail through the green belt around Hostivice might be a great source of open-air recreation as well as new municipal image. Positioned at a cyclist crossroads, a cycling hub at *Na Pískách* might become a gate to Hostivice for cyclists on the way to the west. In the new industrial area next to the Prague Airport to the north of Hostivice, experimental landscaping techniques might be used in order to decrease the noise from the Airport.

The heritage in Hostivice, featuring the Litovice Fortress, Pilgrim Trail from Prague Loreta to Hájek, and the Hostivice Ponds, doesn't seem to get neither adequate attention nor care.

From the perspective of landscape, the Pilgrim Trail is a significant linear ensemble and its chapels are visually prominent. A change in the course of the trail and a contemporary renovation of the missing chapels would level the importance of the Pilgrim Trail. At the same time, it might serve as a tourist attraction and a source of local pride. A renovation of the Litovice Fortress surroundings should underline its majestic middle ages history. The particular Ponds in the pond system might be celebrated as objects of heritage, giving the life to the whole area since the 14th century. Contemporary statues or installations on reminiscence of those existing as well as those devoured by the time could be

planted and create a sense of unity and uniqueness. The water could be celebrated more at the Jan Hus Square symbolically, since it is the conflux area of *Jeneč Brook* and *Litovice Brook*, that are both crucial ecological corridors along its streams.

In the discussion, the inherent conflict between food production, recreation and ecology, possibly present in every inhabited area, is raised. Customizing the site specific need of every municipality (or a household depending on the scale perspective), this research attempted to scrutinize some aspects in site specific manner. Finding the limits of the Municipality is a common goal – more themes (e.g. Economy, Sociology) would be needed to complete the full picture of the Hostivice landscape. The thesis acknowledges the limit of data accessed, since especially the data from history seem limitless, however the goal was to give meaning to multiple forms of data in a limited time.

The planning for ecology is also raised, since there is a legally working system of ecology, however its contact with people is questionable since it seems to detach from the people instead of trying to learn to co-exist with them. This division between nature and culture, or rural and urban, seems to hinder the planning for sustainable systems.

Preface

Hostivice, Central Bohemia, Czechia, was a perfect childhood playground of infinite possibilities to me. A world of its own. My hometown.

The more I was earning knowledge through my life, the more interesting the whole town got in my eyes. The process of exploring seemed to peak at the Faculty of Architecture at CTU in Prague during my bachelor studies. However, that would not be entirely correct.

During my student years at SLU, I happened to return to my hometown in thoughts when addressing some of the sustainability and planning issues in various courses of the LASU master module. When thinking about the topic for the Master thesis, one of the most tireless voices in my brain advised me to turn back to Hostivice once again. Agreed, I thought.

So it happened that these lines open the following pages where I try to challenge the Thematic Landscape Master plan for Hostivice Municipality, and thus accomplish the return to my hometown. Many years of intensive youth life spent in the area were a helping factor when figuring out which themes to focus on the most in the final Plan.

Table of contents

Publishing and archiving	4
Acknowledgements.....	5
Abstract.....	6
Popular Summary.....	7
Preface	11
List of figures.....	17
Abbreviations	21
1. INTRODUCTION / Czech Landscape in Hostivice	22
1.1. Agricultural Landscape of Hostivice	23
1.2. Structure	24
1.3. The Thesis Objective – The Research Question	24
1.4. Statistical division	26
1.5. Hostivice Municipality	26
1.6. The Concept of Landscape	28
1.7. Landscape in Physical and Human Geography	28
1.7.1. Materialistic (realistic) concept.....	29
1.7.2. Human geography	29
1.7.3. Urban Landscape.....	29
1.7.4. The new human geography	30
1.7.5. The life of cultural landscapes	31
1.7.6. Czech Scene.....	31
1.8. The Czech ‘Krajina’	32
1.8.1. Landscape Changes in 20 th century	32
1.9. History of the Czech Landscape	33
1.9.1. Czech History Summary	34
1.9.2. Agricultural Landscape in Czechia and Sweden	34
1.9.3. Landscape Planning in Hostivice Municipality	36
2. METHOD / Reaching the Hostivice landscape.....	38
2.1. Academic Background.....	39
2.1.1. SLU University articles.....	39
2.1.2. Landscape Analysis of Prague-West District.....	39

2.1.3.	Scientific articles	39
2.2.	Historical Context	40
2.2.1.	Historical maps	40
2.3.	Present Context.....	41
2.3.1.	Strava Global Heatmap	41
2.3.2.	Soil Protection Map.....	43
2.3.3.	Cartographic activity	44
2.3.4.	Historian Jiří Kučera.....	45
2.3.5.	Vice-mayor Mr. Koňářík	46
2.3.6.	Land Ownership.....	47
2.3.7.	Participation Meeting for the Strategic Plan	47
2.4.	Future Context.....	48
2.4.1.	Municipal planning documents	48
2.4.2.	Documentation of the upcoming projects	50
2.4.3.	Student projects – Hostivice Urbanism.....	52
3.	Background to the Three Themes	54
3.1.	The Climate Resilience Background	54
3.1.1.	From the Rudolf II. Era to the Territorial System of Ecological Stability (TSES)	55
3.1.2.	Territorial System of Ecological Stability (TSES) and Significant Landscape Element.....	55
3.1.3.	TSES in the Comprehensive Plan (2005).....	56
3.1.4.	Green Belt and Infrastructure	56
3.1.5.	Estimated Pedolic-Ecological Unit.....	57
3.1.6.	Water management	57
3.1.7.	Everyday Landscape	62
3.1.8.	Planting within Hostivice	66
3.1.9.	Landscape Architects	67
3.1.10.	Landscape Quality Objective from ELC.....	68
3.2.	Transport Background.....	69
3.2.1.	Cycling – ecological and fast mode of transport.....	69
3.2.2.	Connectivity within the open landscape.....	70
3.2.3.	Connectivity (permeability) within the urban landscape	72
3.3.	Heritage Background.....	73
3.3.1.	Historical Heritage Sites in Hostivice	74
3.3.2.	Hostivice Ponds	75
3.3.3.	The Pilgrim Trail.....	77
4.	Conclusions of the Themes Background	80
4.1.	Climate Resilience Conclusion.....	80
4.2.	Transport Conclusion	81

4.3.	Heritage Conclusion	81
5.	RESULT / The Landscape Master Plan for Hostivice Municipality.....	82
5.1.	Climate resilience Key Proposal Elements.....	85
5.2.	Transport Proposal	86
5.3.	Heritage Proposal.....	86
6.	DISCUSSION / How much has been left unsaid?	88
6.1.	Framework: Discourse Materialized	88
6.2.	Material collected.....	89
6.3.	Complexity	90
6.4.	Landscape Limitation.....	90
6.5.	Food production, recreation, and ecology	91
6.6.	Isn't the Territorial System of Ecological Stability (TSES) illustrating the rural-urban, nature-culture division?	92
	References	93
	Appendix 1	101

List of figures

- Figure 1: Study area overview / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [topographic map]. <https://en.mapy.cz/> [2020-06-17].
- Figure 2: Aerial photo over Hostivice / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17].
- Figure 3: Aerial view over Hostivice / MĚSTO HOSTIVICE (2021). *Statistické údaje: Letecký pohled na Hostivici v roce 2011*. [aerial view]. <http://www.hostivice.eu/statisticke-udaje/d-409944/p1=4419> [2021-06-17]
- Figure 4: Historical development of ortophotos over Hostivice / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17].
- Figure 5: The Three Themes / own illustration
- Figure 6: Third Military Survey map / ©LABORATOŘ GEOINFORMATIKY UNIVERZITA J.E. PURKYNĚ <http://www.geolab.cz> and © MINISTERSTVO ŽIVOTNÍHO PROSTŘEDÍ ČR - <http://www.env.cz> and FACULTY OF SCIENCE UK (2001-2017). *3rd Military Survey, Section No. 3952_4*, UK Map archive, Prague. [historical maps]. http://oldmaps.geolab.cz/map_viewer.pl?lang=cs&map_root=3vm&map_region=25&map_list=3952_4 [2021-06-17].
- Figure 7: Second Military Survey map / ©LABORATOŘ GEOINFORMATIKY UNIVERZITA J.E. PURKYNĚ <http://www.geolab.cz> and © MINISTERSTVO ŽIVOTNÍHO PROSTŘEDÍ ČR - <http://www.env.cz> (2001-2017). *2nd Military Survey, Section No. 18*, Austrian State Archive/Military Archive, Vienna. [historical maps]. http://oldmaps.geolab.cz/map_viewer.pl?lang=cs&map_root=2vm&map_region=ce&map_list=O_8_I [2021-06-17].
- Figure 8: Strava Global Heatmap: cycling activities / STRAVA and MAPBOX and OPEN STREET MAP (2018). *Global Heat map*. [analytical map]. <https://www.strava.com/heatmap> [2021-06-17].
- Figure 9: Strava Global Heatmap: running activities / STRAVA and MAPBOX and OPEN STREET MAP (2018). *Global Heat map*. [analytical map]. <https://www.strava.com/heatmap> [2021-06-17].
- Figure 10: Soil map around Hostivice / GEPRO (2021). GEPRO, spol. s r.o. (2021). *Geoportál GEPRO*. Version 15.20.137502. [geoportal]. ©ČÚZK CENIA. <https://hostivice.gepro.cz/#/> [2021-06-17.]

- Figure 11: Orienteering map of Hostivice / specialized map for orienteering of own production / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17].
- Figure 12: Pedestrian Permeability / own illustration / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17].
- Figure 13: Hostivice Municipality Ownership / GEPRO, spol. s r.o. (2021). *Geoportál GEPRO*. Version 15.20.137502. [geoportal]. ©ČÚZK CENIA. <https://hostivice.gepro.cz/#/> [2021-06-17.]
- Figure 14: Hostivice Strategic Plan 2019 / ONPLAN LAB s r.o. (2019). *Strategický plán Hostivice 2020-2035 – návrhová část* [Hostivice Strategic Plan 2020-2035 – proposal part], accessible at <http://hostivice.eu/strategicky-plan-hostivice/ds-24696/p1=26625> [2021-04-07].
- Figure 15: The Comprehensive plan proposal, 2021 / KOCOUREK et al. (2021). *Územní plán Hostivice – hlavní výkres* [The Comprehensive Plan of Hostivice – the general drawing] . Royal HaskoningDHV Czech Republic. http://www.hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=436363 [2021-05-12].
- Figure 16: Prague-Kladno Railway Modernisation / SPRÁVA ŽELEZNIC (2021). *Modernizace trati Praha-Ruzyně – Kladno*. [map]. <https://www.spravazeleznice.cz/zeleznice-na-letiste/useky/modernizace-trati-praha-ruzyne-kladno> [2021-06-17].
- Figure 17: New Cycle Path along the railway Prague-Kladno / SPRÁVA ŽELEZNIC (2021). *Modernizace trati Praha-Ruzyně – Kladno*. [map]. <https://www.spravazeleznice.cz/zeleznice-na-letiste/useky/modernizace-trati-praha-ruzyne-kladno> [2021-06-17]. and CACH, T. (2019). *Kladenská drážní cesta z města (Praha-Bubny – Kladno)* [Renovation of the Kladno no. 120 Railway]. Technical drawing to a project covered by Metroprojekt.
- Figure 18: New Cycle Path along the railway Prague-Kladno / SPRÁVA ŽELEZNIC (2021). *Modernizace trati Praha-Ruzyně – Kladno*. [map]. <https://www.spravazeleznice.cz/zeleznice-na-letiste/useky/modernizace-trati-praha-ruzyne-kladno> [2021-06-17]. and PROJEKTIL ARCHITEKTI (2021). *Studie širšího prostoru hostivického nádraží* [Architectural study of the Hostivice Railway Station surroundings], Město Hostivice, accessible at <http://prednadrazi.hostivice.eu/> [2021-05-03].
- Figure 19: Student Project from CTU Prague, 2017 / !!!
- Figure 20: Water courses network within Hostivice / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17].
- Figure 21: Jeneč Brook / own pictures
- Figure 22: Litovice Brook, pt. 1 / own pictures
- Figure 23: Litovice Brook, pt. 2 / own pictures

- Figure 24: Spatially modest changes in the landscape / ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ (2021). *Voda ve městě* [Water in the City]. ISBN 978-80-01-06817-5, accessible at <https://vodavemeste.cz> [2021-06-15].
- Figure 25: Rain water management within the peri-urban areas / ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ (2021). *Voda ve městě* [Water in the City]. ISBN 978-80-01-06817-5, accessible at <https://vodavemeste.cz> [2021-06-15].
- Figure 26: Examples of rather conservative planting within the Municipality / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17].
- Figure 27: Forest Maintenance Map / GEPRO, spol. s r.o. (2021). *Geoportál GEPRO*. Version 15.20.137502. [geoportal]. ©ČÚZK CENIA. <https://hostivice.gepro.cz/#/> [2021-06-17.]
- Figure 28: Schiphol-Amsterdam Airport Landscape Project / H+N+S LANDSCHAPSARCHITECTEN (2011). *Land art + Soundscape, Buitenschot park*. [visualisation picture]. <http://www.hnsland.nl/en/projects/land-art-park-buitenschot> [2021-04-12].
- Figure 29: Schiphol Project Principle / H+N+S LANDSCHAPSARCHITECTEN (2011). *Land art + Soundscape, Buitenschot park*. [diagram]. <http://www.hnsland.nl/en/projects/land-art-park-buitenschot> [2021-04-12].
- Figure 30: Cyclists by the Břve Pond / own picture
- Figure 31: Permeability through Hostivice / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17].
- Figure 32: Hostivice Centre Re-urbanisation / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17]. and ZAKOPCEM ARCHITEKTI (2017). *Reurbanizace centra Hostivice* [Central Hostivice Re-urbanisation]. [axonometry], <http://www.zakopcem.com/architektura/hostivice> [2021-04-15].
- Figure 33: The Müller Survey / ©LABORATOŘ GEOINFORMATIKY UNIVERZITA J.E. PURKYNĚ <http://www.geolab.cz> and HISTORICKÝ ÚSTAV AV ČR - <http://www.hiu.cas.cz> (2021). *Müllerovo mapování – Čechy, Section No. 13*. [historical maps]. http://oldmaps.geolab.cz/map_viewer.pl?lang=cs&map_root=mul&map_region=ce&map_list=c013 [2021-06-17].
- Figure 34: Litovice Fortress / own picture
- Figure 35: The plan of the Ponds from Antonín Leopold František Klose, 1723 / KUČERA, J. (2021). *Hostivická historie – Hostivické rybníky* [History of Hostivice – Hostivice Ponds]. [scanned map]. <http://www.hostivickahistorie.cz/pamatky/rybniky.htm> [2021-05-14].
- Figure 36: Comparison of the current state with the Klose survey from 1723 / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map]. <https://en.mapy.cz/letecka> [2020-06-17].
- Figure 37: The Pilgrim Trail in the Third Military Survey / ©LABORATOŘ GEOINFORMATIKY UNIVERZITA J.E. PURKYNĚ

<http://www.geolab.cz> and © MINISTERSTVO ŽIVOTNÍHO PROSTŘEDÍ ČR - <http://www.env.cz> and FACULTY OF SCIENCE UK (2001-2017). *3rd Military Survey, Section No. 3952_4*, UK Map archive, Prague. [historical maps].
http://oldmaps.geolab.cz/map_viewer.pl?lang=cs&map_root=3vm&map_region=25&map_list=3952_4 [2021-06-17].

Figure 38: The Pilgrim Trail / SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [topographic map]. <https://en.mapy.cz/zakladni> [2020-06-17].

Figure 39: Pictures from the Pilgrim Trail / own pictures

Figure 40: The Landscape Master Plan Proposal for Hostivice / own plan / background: SEZNAM.CZ, a.s. (2021). *Mapy.cz*. [ortophoto map].
<https://en.mapy.cz/letecka> [2020-06-17].

Figure 41: Idea sketch of the peri-urban landscape permeability enhancement / GOOGLE, CNES / AIRBUS, GEODIS BRNO, GEOCONTENT , MAXAR TECHNOLOGIES (2021). *Google maps 3D*.
<https://www.google.com/maps/@50.0611693,14.2527257,347a,35y,26.57h,73.62t/data=!3m1!1e3> [2021-06-17].

Figure 42: Mood sketch of the urban solution for Jan Hus Square / GOOGLE, CNES / Airbus, GEODIS Brno, GeoContent , Maxar Technologies (2021). *Google maps 3D*.
<https://www.google.com/maps/@50.0776315,14.257661,103a,35y,340.5h,70.66t/data=!3m1!1e3> [2021-06-17].

Abbreviations

ELC	European Landscape Convention
EPEU	Estimated Pedolic-Ecological Unit
EU	European Union
LAPD	Landscape Analysis of the Prague-west District
LASU	Landscape Architecture for Sustainable Urbanisation
LAU	Local Administrative Unit
SLU	Swedish University of Agricultural Sciences
TSES	Territorial System of Ecological Stability

1. INTRODUCTION

/ Czech Landscape in Hostivice

The Czech landscape is fascinating – there are monumental sand stones, cliffs, stone labyrinths, lovely open landscape and scattered forests with alluring ponds, castles, manors, and lookout towers. Though, there are also landscapes that aren't blessed with any such self-evident centre of attention. Moreover, it is the majority of the Czech landscape that is somewhat overlooked, yet full of surprising beauty. As a matter of fact, such is the area of interest for this thesis.

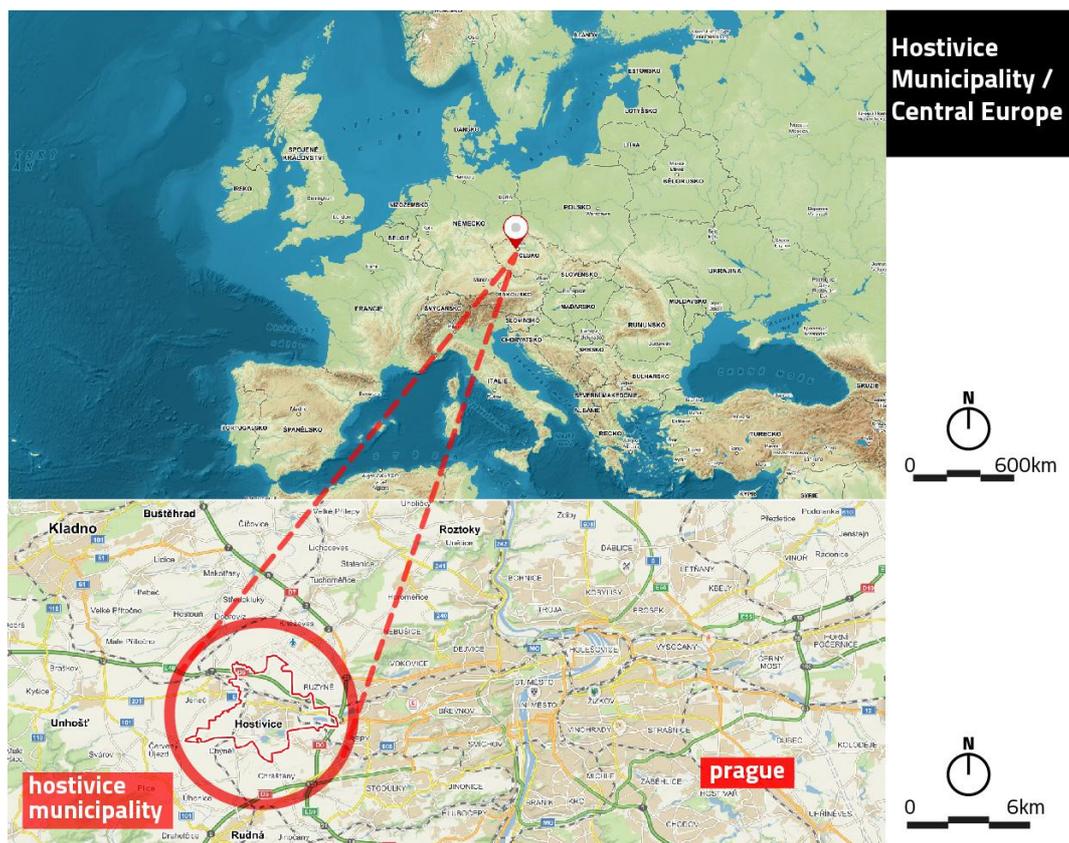


Figure 1: Study area overview

Source: Seznam.cz a.s., edited by Vojtěch Kettner.

1.1. Agricultural Landscape of Hostivice

At the first look, the landscape of Hostivice is a tedious series of vast agriculture plains, interrupted at some places by a narrow stride of bushes or a modest island of a glade. Long rows of trees along the roads give sense the frighteningly infinite horizon.

It is even more fascinating to uncover what did this particular landscape go through – to resurrect its spiritual majesty as a home of the Franciscan Monastery with a Pilgrim Trail from Prague. Similarly, the rich history with many old houses along the brooks or the technological rarity from the 17th century – Hostivice Ponds, taken for granted as if created by nature, asks for a serious attention. Topped at each other, many generations left their marks in modelling the land to one's best need. Historical, social, as well as ecosystem aspects are in overlay creating an image of a town in fields that Hostivice is today.

The town board showed interest in a landscape master plan that would pay an honest tribute to all its history. Respectful as well as contemporary, a landscape research and a plan providing an informed proposal for the landscape in the Municipality is the goal of this thesis.

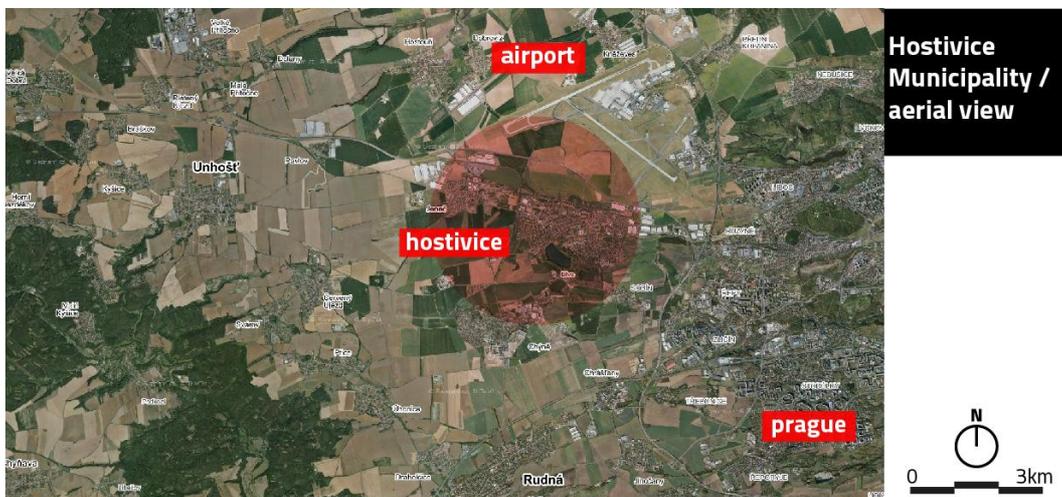


Figure 2: Aerial photo over Hostivice
Source: Seznam.cz a.s.; edited by Vojtěch Kettner.

When I came to analyze the landscape of Hostivice, not much has been written about the Prague suburbs in terms of landscape history and interpretation. Nevertheless, different landscape (environmental) analysis documents (Kyzlík et al. 1995, Šindlerová et al. 2019) were great sources. In addition, I have used the territory of Hostivice Municipality when attending courses at SLU Uppsala as a research area for writing a few articles targeted on planning. Those papers were adapted and edited in fragments into this thesis.

1.2. Structure

The introduction is dedicated to a brief geographical context as well as the current status of the planning in Hostivice. An excursion into landscape studies provides the dimension of the treatise, and anchors the research in the region of Czechia. Research questions are stated at the end of the introduction.

In the method section, a strategy of advancing the research questions is illuminated. Different sources of data were obtained and analyzed in order to result in a complex picture of the current state of landscape in the Hostivice Municipality. This analysis serves as a basis for conclusions that challenge the Thematic Landscape Master Plan that is included in the Result part.

Mostly positive form of language is used in the Introduction, Method, and Result, since the matter is presented as it stands. Normative form is applied in the Proposal part since the conclusions aspire to be lifted, used, and expressed to challenge the current state. Critical, reflective tone is employed in the Discussion to reflect upon the thesis.

1.3. The Thesis Objective – The Research Question

The introduction exposes the context of landscape and planning practices in the Prague suburbs, Czechia. It is described how the suburban location is ingrained in the landscape perception in the Prague-West District. The current position of landscape conceptualization within the Czech geography is argued. Together with background information of the three selected themes it is hinted what is the current state of landscape planning in the region like. The goal of the thesis is to combine the knowledge from the introduction with a mix of active research tools in the method. Conclusions from the result are basis for the Thematic Landscape Hostivice Master Plan.

In this thesis, the Thematic Landscape Master Plan is understood as a tool for future detail planning. The Plan aims to include all the relevant information presented later in the analysis. Local limits are defined, the appropriate argumentation is fundamental. The Master Plan offers a schematic solution, that is expected to be followed by detail project over respective smaller project areas.

In order to give relevant answers on a research question, the goal of this thesis, the Master Plan, is assigned three themes: *Climate Resilience*, *Transport*, and *Heritage*. All the themes can be dealt with separately, however, their proximity is calling for their combination in the Thematic Landscape Master Plan. This

division is somewhat of generalisation yet it is a frame work, that gives sense of the landscape's layer and multidisciplinary character as discussed in the 1.3 The Concept of Landscape. Yet, it does not simplify the landscape in a misleading measure, since planning for recreation is intrinsically dependent on people's movement, ecological services that the paths go along, and the cultural heritage, that gives sense of particular places.

The themes, *Climate Resilience*, *Transport*, and *Heritage*, lead the red thread all the way from the Introduction to the Discussion.

In particular, the Climate Resilience regards combating the climate change as an important planning aspect and deals mostly with ecology. By ratifying the Paris Agreement, the Countries within the European Union, which Czechia is a member of, agreed to take up measures to limit the annual global temperature increase and carbon dioxide emissions (UN 2015). Particular measures combating the climate change are hitherto understood as in the *Landscape Architecture and the challenge of the climate change*, striving for designs not compromising the aesthetic nor the sustainability aspect, thorough rain water management, planting resilient plant communities, striving for research, and the education of the public (Landscape Institute 2008:2).

The Transport theme regards all modes of people's movement within the Municipality with a dominant interest in pedestrians and cyclists, since it is believed that these modes of the transport will be most sustainable in the future. The Heritage theme encompasses the architectural as well as historical qualities – the hallmarks of culture within the Municipality.

The access to quality nature and cultural heritage is highly contributing on the human wellbeing, especially on stress reduction, and thus the design and planning of landscape architecture strives for such goals (Landscape Institute 2008). By employing the combinations of the Themes such change is achieved – a well functioning (urban)ecology along the vibrant trails and bike paths appears in the well recognised landscape aware of its cultural heritage.

The thesis scrutinizes

» how can the Landscape Planning in Hostivice be challenged within the selected themes of Climate Resilience, Transport and Heritage?«

1.4. Statistical division

In the Czech context, the authority subdivision of local Municipal Boards is respective to the Local Authority Unit level 2 (LAU2) of the EU statistical system (Eurostat 2010). The whole Czechia is divided into 14 counties (NUTS3), which are later divided into districts (LAU1). A district is composed of a number of municipalities – LAU2. In particular, *Hostivice Municipality* (LAU2) is part of the *Prague-West District* (LAU1), which is subordinate to the *Central Bohemian Region* (NUTS3). For the readability of the text, only the name ‘*Hostivice*’ or the word ‘*Municipality*’ with capital ‘*M*’ is sometimes used instead of the complete and official ‘*Hostivice Municipality*’.

1.5. Hostivice Municipality

Hostivice Municipality, occupying area of 14,47 km² (Smrčková 2019:28), is located in an agricultural landscape slightly buried in a shallow valley of two brooks – Litovice and Jeneč Brooks (Šindlerová et al. 2019a). From the satellite photos, the town of Hostivice is pinned to the biggest green island, the Hostivice Ponds, amid the umber fields. The Municipality borders right on the Czech Capital, Prague, which had been and still is fundamental for Hostivice development.



Figure 3: Aerial view over Hostivice
Source: Město Hostivice

Currently, the Municipality has 8 788 inhabitants (Město Hostivice 2021c). In 2000s, Hostivice underwent an upswing in population as an extensive urban sprawl development occurred on both fringes of the town. The population has risen by 70% since 2003 to 2017 (Soukup 2018:3). According to a demographic study commissioned by the Municipality, steady growth of population is expected - by the year 2032, the number should reach over 10 600 inhabitants (Soukup 2018:3).



Figure 4: Historical development of ortophotos over Hostivice
Between the years 2000 and 2006, urban sprawls occurred both at the edges as well as in the urban structure of Hostivice. Industrial store halls at the edges of the Hostivice town occur in great measure in the 2015 ortophoto.
Source: Seznam.cz a.s.; edited by Vojtěch Kettner.

In the local landscape, that favours high quality agricultural soils (see Soil Protection Map 2.3.2), both rural and urban ecology collide with high requirements of industrial and agricultural production. In between, the Municipality is solving a puzzle of maintaining good business conditions as well providing acres of necessary recreational area (see 3.1. Climate Resilience Background).

In terms of car and public transport, Hostivice is extremely well-positioned between the important D6 and D0 highways as well as railway. Therefore, Hostivice is bound to Prague regarding work opportunities, schools, social amenities as well as leisure activities (Šindlerová et al. 2019). In the landscape, the transport flows are deeply imprinted and create barriers to both natural and social development. (see 3.2. Transport Background)

In Hostivice, various historical eras left their traces. It is proved by rich pre-historic findings (Kučera & Kučerová 2016:41-52), gothic and baroque architecture within the town (Kučera 2021c) as well as a grand landscape work of Hostivice Pond system from 14th century (Kučera 2021a) can be still appreciated up to now. (see 3.3. Heritage Background)

1.6. The Concept of Landscape

The thesis operates in a suburban, middle European landscape. The term '*landscape*' shows up frequently, therefore it is fundamental to make it clear right at the start what is understood under the term in this thesis. Furthermore, the Czech expression for landscape, *krajina*, has its own historical context naturally. With the help of Czech geographers Kučera nad Mácha, brief history of landscape studies is given as an essential piece of the puzzle that anchors the theoretical position of this thesis.

The landscape is a multidisciplinary term and is an important topic in many fields of science: physical- and human geography, geology, history, architecture, planning, ecology, and biology. They all use landscape as a medium for lifting various phenomena, not only of the human behaviour and perception. This thesis attempts to demonstrate the landscape's multi-disciplinal nature by employing the geography discourse, and attempts to enrich the analysis of this landscape architecture project.

1.7. Landscape in Physical and Human Geography

'Why does the humanity (and this thesis) care for the landscape after all?' would be a great question to start with. Based on a Czech discussion article from Kučera, the peril is in the emptying of the term that could mean anything when used uncritically and without context (2009:152). At the same time, it happens not only in academia that the term *landscape* is taken as a synonym for expressions as *region*, *place* and *environment* (2009:152). Such mixing is not only unscientific but also confusing for the public. As argued by the human geography, it is first the human perception that creates landscape from the environment (Kučera 2009:151).

In the Anglo-American research tradition of geography that is closest to the world current (Mácha 2013), there are two concepts of landscape. 1) The materialistic tradition understands landscape as a series of physical objects that creates different combinations and thus different landscapes. 2) The humanistic concept

of landscape believes landscapes to be human inventions and that they are created first through the eyes of the observer.

1.7.1. Materialistic (realistic) concept

The term landscape has been contested throughout the times. In the materialist tradition, the first remarkable work comes from **Sauer** (see 1963), a well respected American geographer writing his most important books in 1960s. He scrutinized landscape mainly in the physical forms, that inhabit acts of a human. He has pioneered the method of field work.

1.7.2. Human geography

In 1980s, grounding the beginning of the human geography, **W.G. Hoskins** and **J.B. Jackson** contributed strongly on bringing forward the importance of the human engagement with landscape on the everyday basis. According to Jackson, landscape is a 'shared reality', it did not mean 'the view itself, it meant a picture of it, an artist's interpretation' (Jackson 1984:3) and the projects of his time happened to 'produce stylized picturesque landscape, leaving out the muddy roads, the ploughed fields, the squalid villages of the real countryside' (1984:3).

As asserted by Mácha, in the roman language family, the 'landscape' (*paisaje, paysage, paesaggio*) stems from the term *pagus* (a rural district) and thus used to describe the countryside. Such adaptation of the landscape is present in the Czech geography and is often associated with nostalgia, rural vegetation and home intimacy (2013:4). At the same time, such adaptation hints that there cannot be anything as 'urban landscape', characterized by all its industrial halls, urban sprawls and billboards. Mácha finds such identification with the countryside misleading because of its normative narrative and lack of scientific evidence (2013:4).

1.7.3. Urban Landscape

Landscape architects, as one of the groups of professions claiming landscape as an important concept in their practice, strive for producing landscapes relevant for every particular site, including urban landscape. According to how Mácha argues for irrelevant identification of landscape with the countryside (Mácha 2013:4), *urban landscape* can be supported in both materialistic as well as immaterial concepts. A lot has been written about the urban ecology (see Douglas, I. et al. 2011) that must embrace the unique and synthetic nature of urban ecosystems by integrating the human and natural components, and by merging science with design and policy (2011:12).

Even if not explained convincingly enough, the European Landscape Convention, ratified by Czech republic, defines also the ‘natural, rural, urban and peri-urban areas’ under its scope of the landscape quite clearly. ‘It concerns landscapes that might be considered outstanding as well as everyday or degraded landscapes’ (Council of Europe 2000).

Goal of the ELC: to integrate landscape into its regional and town planning policies and in its cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape (Council of Europe 2000)

1.7.4. The new human geography

In 1980s and 90s, the materialistic and human geography was confronted with sharp critique. Pioneering the so called *new human geography*, **Cosgrove** and **Daniels** scrutinized landscape in aspects of power (Cosgrove & Daniels 1988). A full iconography was identified via landscape paintings and pictures that illustrate how imagery and symbology helped to convey propagandistic view over the minor groups e.g. during colonialism or class segregation. Deliberately trying to hide the dirt and labour of the lived reality, the tendency to conceal the poor segment of society or objectify can be identified (ibid).

In another influential approach, **James Duncan** understands the landscape as a text which is a metaphor evoking the process of writing and reading, thus engaging with the landscape (Duncan 1990). The term *new human geography* is used to evoke the continuation of the human geography yet communicated by multiple lenses – for instance lens of power (see D. Cosgrove & Daniels 1988), politics (see K. Olwig 2002), feminism (see G. Rose 1993) or phenomenology (see Ingold 2000).

With regard to the *new human geography* approaches, Mácha warns before uncritical adaptation of any of the concepts. Falling for the visual ideology of the landscape may result in a state of *landscape fetishism*, identified by misinterpretation of an object for a social representation. Similarly, overestimating one’s ability to read in the landscape may result in *landscape narcissism*, giving conflicting versions of interpretation dependent on who thinks what and whose thought is right and whose false. Employing phenomenology to research the landscape with all senses alert close to a transcendental state of becoming one with the landscape can lead to a resignation on any meaningful conclusion. Such seduction can be metaphorically called *landscape mysticism* (Mácha 2013).

1.7.5. The life of cultural landscapes

Schein argues that ‘no two cultural landscapes will be exactly alike’ (Schein 1997:675). With his understanding of cultural landscape, he balances at the edge between physical and immaterial landscape concept and connects it in what Schein calls discourse materialized. According to Schein, people practice ‘individual landscape contributions that individually appear as seemingly minute increments of landscape change (1997:675) – through the little pieces a bigger change is achieved.

He observed, how various social debates - discourses (in his case landscape architecture, zoning, insurance mapping, historic preservation, neighbourhood associations and consumption) modified the tangible world, how did they materialize in the area he lives in.

However, Schein stresses the instability of a cultural landscape. Instead of presenting ‘a totalizing, naturalized, and concretized (i.e. unchanging) image of a particular scene – the landscape as a sum of history’ (1997:676), the understanding is hinted to be a process and ability to assess new interpretation.

1.7.6. Czech Scene

In the Czech geography discourse, the materialistic understanding of the landscape is prevailing, as discussed by both Kučera and Mácha. The dominant acceptance of the materialistic approach hinders a balanced discussion of such important documents as the European Landscape Convention (Council of Europe 2000: *"Landscape" means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*). Many Czech authors within geography or planning seem to employ the part of the definition where landscape is described as the *‘result of the action and interaction of natural and/or human factors’*, whereas the first part *‘an area, as perceived by people’* seems not to be stressed. The materialist approach has many pros in certain situations – featuring tangible, measurable and countable format, it is suitable for ecology or landscape management. However the (accidental) lack of recognition of other perspectives does not imply much credibility to these works (Kučera 2009). As mentioned earlier, the over usage of the term *‘krajinna’* and substitution of it for other terms (especially *region* and *environment*) is a consequence of such simplification. The landscape includes natural, cultural, objective as well as subjective, and physical objects as well as immaterial values – and as Kučera argues, it would be good to normalize such plurality (Kučera 2009).

In this thesis, the landscape is understood in the constructivist concept similar to Mácha's own attempt of overarching the materialistic and humanistic division with a concept of landscape as a *socially relevant environment* (2013:9-11). In this framework of his, he asserts how the old landscapes can be restored from historical materials, literature as well as other artistic objects and fruitfully combined with the new concepts. In similar context, the concept of landscape as *palimpsest* mentioned by Hynek in Mácha, stratified both in materialistic as well as social aspect (Mácha 2013:5), seems relevant for the thesis as well as a landscape architect who is interested in the ultimate physical landscape forms.

1.8. The Czech 'Krajina'

From my perspective as a native speaker, Czech is a very flexible and creative language. It features very rich vocabularies for describing both senses and feelings. One can play with piles of combinations while accidentally creating new words. Originality and creativity are often found in the Czech prose or poetry, which got especially closely related to the Czech landscape, language and culture in the era of national cultural resurgence (see Mácha 1836, Erben 1853, Němcová 1862).

In spite of the language complexity, the clarity of Czech terminology in landscape studies is far from perfect. As summarized by Mácha, the origin of the expression 'krajina' [landscape] stems from *kraj* [district], *okraj* [edge], *vykrojit* [to carve out], giving a hint of an exclusion from an environment (Mácha 2013).

Compared to the broadly formulated European Landscape Convention including both materialistic and social view on the landscape (Council of Europe 2000), the Czech Act no. 114/1992 (The Nature and Landscape Protection Act) has a clear materialistic background and does not comprise the human perception. The Act in question introduces landscape as 'a part of the earth surface with a characteristic relief featured by interconnected ecosystems and man-made elements'. The stress is put on countable objects rather than relations. Both The Czech Act and the ELC focus on policy, quality, protection, management and planning of the landscape.

The Czech 'Nature and Landscape Protection Act' plays an important role also later in the text. (see 3.1. Climate Resilience Background)

1.8.1. Landscape Changes in 20th century

During the communist era in the second half of 20th century, the Czech landscape underwent a dark era when all the development had been planned centrally by the

state with limited space for critical public discussion. The relicts of this time can be spotted in the landscape even now. From my personal experience by having lived for 20 years in various Czech landscapes, many valuable monuments and heritage sites were neglected and poorly valued. Majority of the subtle environmental elements were devoured, little fields were united in vast units, ‘during the land reforms of the second half of the 20th century, the 100 – 120-fold field enlargement was not exceptional’ (Hanousková et al. 2003:310). Linear vegetation along the fields as well as the historical path network through the landscape were ploughed (Šindlerová et al. 2019a:206). The indigenous wetlands and littorals were disregarded. The natural water streams were often straightened and even provided either with a concrete bed or buried underground (Šindlerová et al. 2019b:6).

Together with the agro intensification and lands reforms, there was ‘a sharpening distinction between managed, economically productive areas, and economically marginal areas. Designation of protected areas and smaller conservation areas proceeded quickly. By 1997, 16% of the Czech Republic was under some type of nature protection regime’ (Hanousková et al. 2003:310).

Since 80s of the 20th century, ecology was brought into planning as a fundamental part of landscape in form of *Territorial System of Ecological Stability* (TSES). Rooted within the Czech Act. 114/1992, TSES is a ‘set of interconnected natural- or semi-natural ecosystems, which maintain the environmental stability’. It is a subject to comprehensive planning where the environment (landscape) can be influenced. More to the TSES comes under 3.1. Climate Resilience Background.

1.9. History of the Czech Landscape

As quoted by Thompson, ‘no two cultural landscape are ever the same, even when they look the same’ (1999). Interpreting the quote, one can never know to which extent a particular historical circumstance could have affected the social and materialistic aspect of any landscape. Such thought makes the landscape research both fascinating and overwhelming. In this sense of landscape as palimpsest (see 1.7.6. Czech Scene), I consider the history an important factor that is deeply influencing the thinking of a nation. Even if I don’t put any grand stress on findings about the landscape from the particular historical events, I am convinced that an overview is contributing for the thesis context as well as for possible further research.

1.9.1. Czech History Summary

The Czechs have experienced a turbulent history at least in the previous century. As a country in the middle of Europe, it was affected by the European history with an interesting mixture of eastern and western influences since the first European civilization.

According to a legend, the *Father Čech* had chosen just this land (of the future Czechia) for his folk because it was *abundant with milk and honey*. The historical sources report the first Celtic tribes to inhabit the region before Christ, the famous Czech Přemyslid dynasty in the early middle age came later, and from 14th century, the land was patrolled by Luxembourgs (incl. Charles IV.). The dynasty of Habsburgs began its long rule over the country in 16th century, becoming later a part of the Austrian-Hungarian empire. Since the middle ages, the country kept its land and traditions, however strongly influenced by the Germans and Austrians. After the WW1 in 1918, Czechs and Slovaks founded the democratic Czechoslovakia. It was not until 1938, when conflicts against Germans living in the border areas grew into a German violent occupation of Czechoslovakia. It resulted in a short period of gloomy years under the Nazi regime, associated with wiping out the regime's enemies, especially minorities. After the WW2, Czechoslovakia was re-established. However, it didn't take long till the communists took over the country and practiced a totalitarian regime in close contacts on the Soviet Union (see Čornej 2010).

Oppressed by the two hegemons (Germans and Russians) from late 30s, the Czech society would celebrate freedom after the Velvet revolution in 1989. The nation has undergone a lot of moral damages and, forced or voluntarily, even Czechs oppressed other Czechs when some obeyed the regime and misused the power over their peers who did not obey (see Kuklík and Kuklík 2002).

From my personal experience, such tension, between those who were servile and those who stood up, still remains within the society. Shortly mentioning the history gives a sense of how the conditions for the national intelligence looked like, especially in the 20th century and how what legacy does the country carry along.

1.9.2. Agricultural Landscape in Czechia and Sweden

The leisure use of a peri-urban landscape in Hostivice is a subject of this paper. Qviström (2010) has investigated a similar topic in Scania region, southern Sweden, with focus on the recreational potential and accessibility shift specially at the urban fringe landscapes. He describes the landscape timeline of a region as

where the ‘urban expansion inevitably conflicts with agriculture’ (Qviström 2017:225). In aspects of fertility and urbanity, the Czech agricultural landscape is similar to the landscape of southern Sweden (Qviström 2010:225) which means they can be compared.

Argued by Qviström, Sweden has experienced a promising attempt to discuss landscape within the society [by the Leisure Time Inquiry from 1937] in the 1930s which resulted in *allemansrätten*, a right of access to forests and shores, a right to the landscape in the legal system. Nothing similar was happening in the area of today’s Czechia at that time. There was an ongoing process of massive mechanisation in both industry and agriculture in early 1920s followed by the global economic crisis in 1929-1933. Since 1936 to 1944, German occupation made any intellectual development impossible, the Czech population was tyrannized. All the industry and agriculture production was controlled by the Nazi Germany, and the number of enterprises diminished dramatically. After the WW2, Czechoslovakia has experienced no intellectual relieve when communists took over the country and continued with another totalitarian management (Kuklík & Kuklík & Čornej 2010).

Just like South Sweden, Hostivice is located in an agricultural landscape (Šindlerová et al. 2019b). Romell describes the pure Swedish landscape as having ‘proportionate combinations of ‘some hills, some forest, some fields, some meadows, some lakes, some river and some islands’ (1928:1671 see Qviström 2010:226) in which the region of Scania, southern Sweden, doesn’t meet such demands. In Czechia however, instead of coasts and lakes, there are other popular tourist attractions advertised and recommended for open-air leisure activities in general – marvellous view points, stone formations, hill tops, inns or lookout towers in the Prague-West District (Šindlerová et al. 2019a:116), none of such is to be found in Hostivice. Neither Hostivice does meet the common idea of a perfect Czech landscape embraced by forests and meadows bursting with life.

As found in the Swedish Leisure Time Inquiry (LT Inquiry) from 1930s, ‘cultivated land seems to have been considered the antithesis of open-air leisure’ (Qviström 2010:227). At that time, the agricultural landscape was not considered suitable for recreation in Czechia either. Instead, weekend cottages at various forested places (in great measure in the Prague-West District, by the Vltava river) were popular (Kyzlík 1995:33-34, Šindlerová 2021a:116) possibly just the same as in Sweden (Qviström 2010:226).

As argued by Qviström, municipalities within the LT Inquiry mentioned forests and shores as a resource for open air leisure (2010:227). Later, followed by turbulent environmental discussion in the 1960s, the ‘*landscape*’ was replaced by

the term ‘*environment*’ and became protected by the Environmental Code driven by the newly established Swedish Environmental Protection Agency. Qviström argues, that the transfer of landscape under the environment deepened the urban-division as the towns were subject to the Planning and Building Act whereas the landscapes to the Nature Protection Act (2010:230). The agricultural landscape of southern Sweden was dominating the similar way as in Czechia during the past 50 years with fields growing dramatically in size, and decreasing linear elements (dirt roads and hedges), point elements, grassland and wetland (Qviström 2010:232). In recent years however, Sweden has taken many steps (Lerman 2007) to include ELC (European Landscape Convention) in the planning legislative.

Pleasing for Hostivice, as described in Šindlerová (2019a:116), the agricultural landscape around Hostivice is considered fundamental for the daily leisure of locals even if not possessing any of popular tourist attractions.

Qviström comments on his paper on peri-urban planning in southern Sweden stressing the need to ‘explore the importance of shadows in the planning history for the contemporary development’ (2010:233).

Generally, Czechia has a strong tradition in national tourism with many trails marked over the country when it comes to open-air leisure. However, there is no trail in or through Hostivice as it cannot connect onto the surroundings, the accessibility by foot is very poor. Since 1960s, the Hostivice Ponds have once been a strong tourist attraction for recreation purposes (Baroch 2013). People from broad surroundings including Prague came used to come to sandy beaches of *Břve-* and *Litovice Pond* to have a swim. After the revolution in 1989, amenities fell into despair. The change of the owner meant a change into a productive function of the Ponds. The water quality became significantly worse – the cause was insufficient sewage treatment plant capacity from the excessive development up the stream in *Chýně* as well as the fish farming and intensive agriculture (Kyzlík 1995:28). The dingy fame of those recreational places can still be sensed at some of the banks or at the former camping site that was turned into a junkyard. Because of the owner and the economy of the ponds, a return to a bathing venue is rather unlikely (Baroch 2013, see Kučera 2021a).

1.9.3. Landscape Planning in Hostivice Municipality

In the current Comprehensive Plan, the surroundings of Hostivice are described as a valuable and rich cultural landscape (IKP Consulting Engineers 2011a:15), however, the stress on landscape planning is rather driven by the conservation (IKP Consulting Engineers 2011a:53) than a humanistic approach, denoting a potential use for people’s open-air leisure. The understanding of landscape seems

to be rather displaced from everyday life – the fields, floodplain forest, marshes, and tiny patches of marginal vegetation don't seem to represent any potential for residents' contact or recreation. In the plan (2011b), there is no vision for path network connectivity, nor a vision for proposing multiple forms of nature targeted at residents.

As it will be presented later under 2.4.1 Municipal planning documents, the planning got a spirit recently. In 2019, the Strategic plan (ONplan lab 2019b) opened a journey towards a new Comprehensive Plan (Kocourek et al. 2021a) to be ratified at the end of 2021. Concerning landscape and public space planning, the Strategic plan introduces a vision for 2035: 'The Green belt embraces the city in the full circumference and protrudes to the city centre employing quality public spaces that enable new connections and multiple recreational uses' (ONplan lab 2019b:13).

2. METHOD

/ Reaching the Hostivice landscape

Each of the three themes (Climate resilience, Transport, and Heritage) captures respective knowledge from the research questions. The material from the Introduction is lifted and extended. The scope of selected data sources corresponds with the complexity of the landscape mentioned in the introduction – both because of the landscape multidisciplinary character as well as historical strata (see 1.6. The Concept of Landscape). Data of various forms, fields of study and forms enable the thesis to get multiple perspective on the studied landscape.

First, the studied sources are sorted into a category of either academic documents or context of Hostivice. The context is then subdivided according to the temporal logic – the context of history, presence, and future.

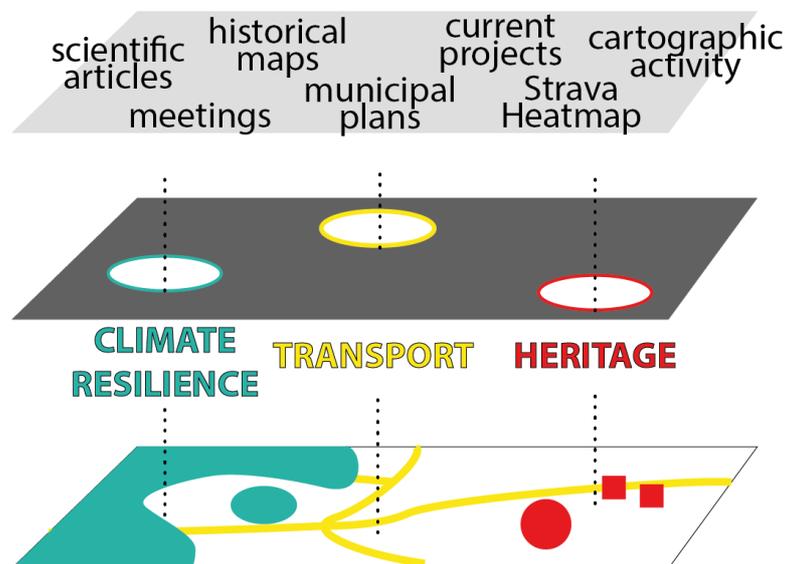


Figure 5: The Three Themes
Source: Vojtěch Kettner

2.1. Academic Background

2.1.1. SLU University articles

My own articles written at SLU dealing with various issues within landscape planning (see Appendix) were adapted and incorporated in the introduction of the thesis.

Particularly, *The Uneasy Position of Landscape Architecture in Czech Republic* argued the relation between the practice of landscape architecture and the semantic capacity of the Czech translation for ‘landscape’. *The Role of the Landscape in Comprehensive Plans of Four Small-scale Municipalities Around Prague* researched the attention in planning given to landscape and facilitated a comparison. *The Genealogy of Landscape Planning in the Prague Suburb, Hostivice Municipality* was already at the time of its origin (October 2020) intended as a base for this thesis project.

2.1.2. Landscape Analysis of Prague-West District

Couple of paragraphs from *The Nature, Environment and History of Prague–West District* from Kyzlik (et al. 1995) dealing with ecology and open-air leisure are appended and annotated by clear materialist terms. The environmental remarks with long validity were of valuable help. Additionally, a contemporary and ambitious *Landscape Analysis of Prague-West District* from Šindlerová (et al. 2019a, 2019b) and her many colleagues was an important source of landscape planning objectives within the District.

Both of the works provided proper basis information in the Introduction.

2.1.3. Scientific articles

A number of articles covering the topic of urban and open landscape planning was used. The field of study ranges from urban ecology and landscape planning to sociology. The articles served as additional theory sources and were lifted as a support for various claims in the Introduction.

2.2. Historical Context

2.2.1. Historical maps

Historical maps are a rich source of information possible to access at the *Municipal geoportal* (Gepro 2019). The maps were analysed graphically, being a relevant source for the historical paths, alleyways, water management network and old homesteads. Such elements can be a matter of inspiration within the contemporary planning. This way, historical values, that happened to be earthed up or completely erased by another era, can be identified, reinterpreted or restored.

Following details were spotted in the maps and considered relevant for the thesis:

Third Military Survey (1870s-1880s)

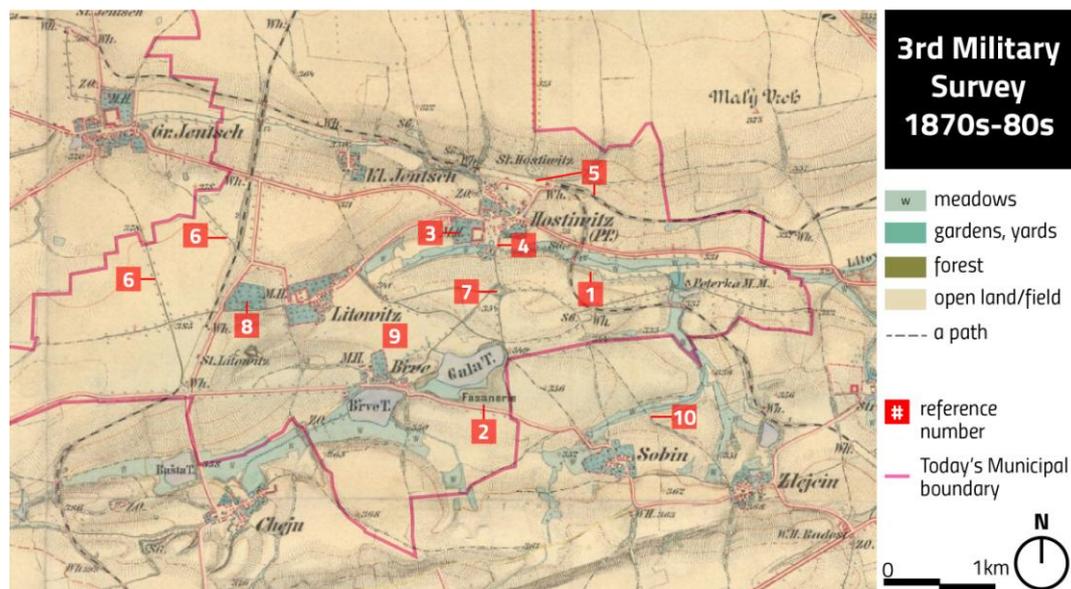


Figure 6: Third Military Survey map

A number of general observations was made.

- Four separate villages Litowitz (Litovice), Hostowitz (Hostivice), Břve, and Klein Jentsch (Jeneček)
- The Hostivice landscape is not that forested at all, dominated by the open land
- meadows along the brooks marked green with W (*die Wiese = a meadow; in German*)

A number of particular details of interest were spotted.

- 1** – a branch of the Litovice Brook going to the mill at Peterka Pond
- 2** – forested area of Fasanerie (Pheasantery)
- 3** – the Hostivice Mansion Garden
- 4** – the conflux of Litovice and Jeneč Brook with a small pond at the square

- 5** – the historical significance of the horse drawn carriage and then the railway
- 6** – paths from Litovice to Gross Jentsch (Jeneč)
- 7** – prominent cross roads at today's Na Pískách area
- 8** – the orchard behind the Litovice Fortress
- 9** – the absence of the cartographic sign for the Litovice Pond signaling a gap in use as a pond
- 10** – a direct path from Zlecín (Zličín) to Hostovice

Source: Gepro portal Hostovice, Cenia; edited by Vojtěch Kettner.

Second Military Survey (1806-1869)

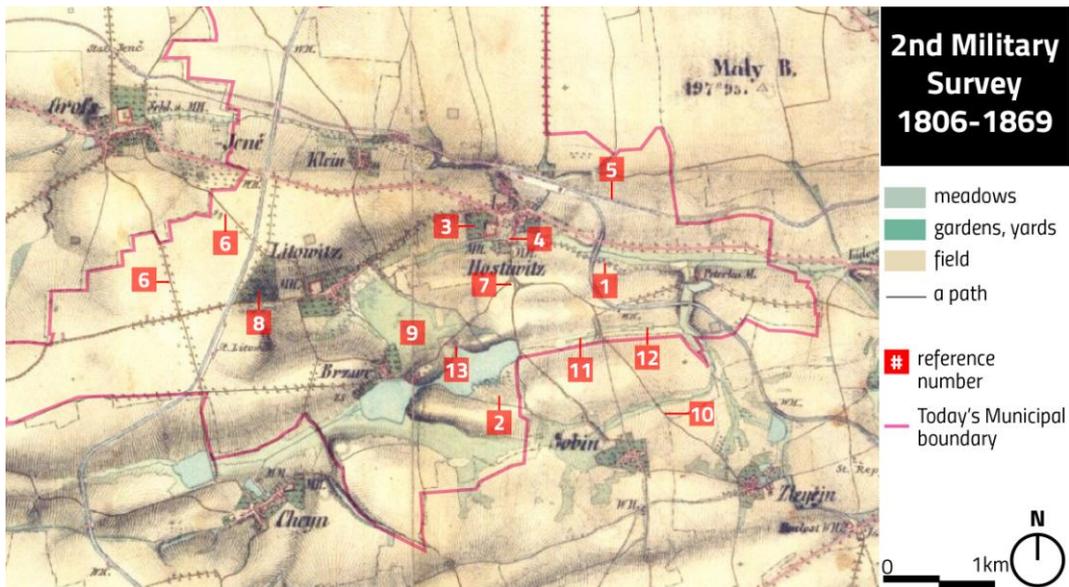


Figure 7: Second military survey

- 9** – Litovice Pond still in the water retention use
- 11** – the former Čížek Pond
- 12** – the former Pátek Pond
- 13** – a gloriette on a small hill overlooking the Kala Pond

Source: Gepro portal Hostovice, Cenia; edited by Vojtěch Kettner.

2.3. Present Context

2.3.1. Strava Global Heatmap

Strava is an American web service for monitoring your runs, cycle tours or workouts. Millions of user may upload their workout attached with GPS localisation. Strava Global Heatmap is a feature from 2018 that enables to

visualise the network of Strava users movements. The heat map is covering two years' data (see Drew 2017). In this case, the landscape is thus covered with a foil of pure connectivity given by the users activities. Under the Running and Cycling analysis, the recorded routes in the Heatmap give hint of the actual permeability through the Municipality. The more intense movement, the more luminosity is indicated.

In the Running analysis map, the intensive use of Hostivice Ponds area is significant. However, in the northern part, the density and intensity is rather poor. The most of the routes are kept within the town or around the Ponds. The paths leading out from the town (northward to the airport, eastward to Prague-Řepy, southward to Chýně, westward to Hájek) are assigned with high luminosity indicator (high intensity movement).

In the Cycling analysis map, the prevailing east-west flow is evident. The highest intensity is indicated on vehicle roads: road *Československé armády* (northern) and *Prague-Sobín – Břve* Road. Through the Hostivice Ponds area, the movement is rather moderate. There is a slightly disorderly movement at *Na Pískách* (*Komenského* and *Sadová* street crossing), where certain discontinuity is visible.



Figure 8: Strava Global Heatmap: cycling activities

- 1** – high intensity use of the vehicle road from Prague westwards
- 2** – a ramified crossroads at Na Pískách
- 3** – a missing connection from Jeneč southwards

Source: Strava.com, Mapbox, OpenStreetMaps, Maxar; edited by Vojtěch Kettner.



Figure 9: Strava Global Heatmap: running activities

- 1 – high intensity use of the vehicle road from Prague westwards
- 1 – Intensely used paths around the Kala Pond
- 2 – intensely used tunnel under the railway
- 3 – insufficient connectivity within the northern green belt
- 4 – Limited connectivity in the north-western
- 5 – Low connection in direction to Jeneč
- 6 – missing connection from Jeneč to Hostivice on the northern edge
- 7 – spatial obstacle, poor pedestrian connectivity through the industrial area
- 8 – Poor connectivity between Hostivice and Prague
- 9 – Poor connectivity between Hostivice, Sobín, and Chýně

Source: Strava.com; edited by Vojtěch Kettner.

2.3.2. Soil Protection Map

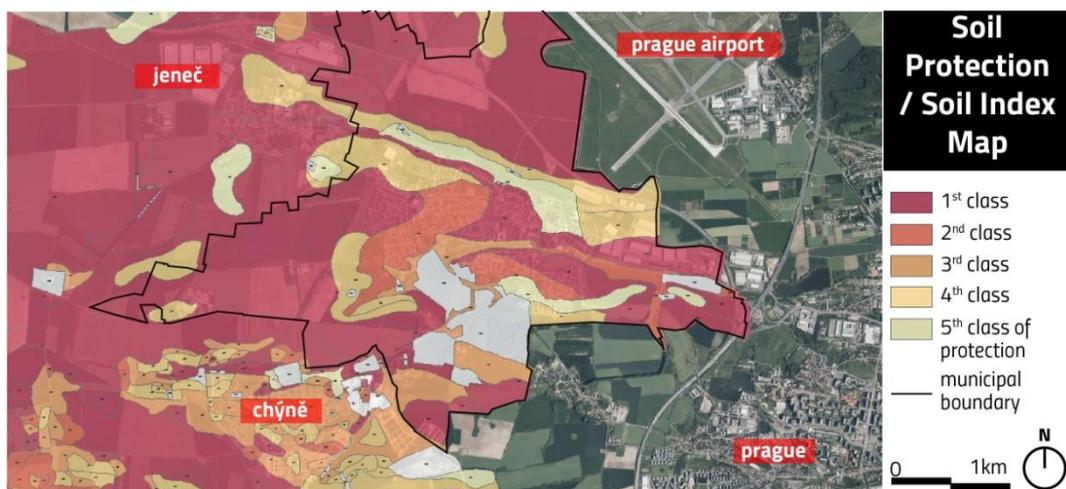


Figure 10: Soil map around Hostivice

The soil map delineates the soil suitability for agriculture. The darker the color (red), the higher class of protection is upon the respective area. The protection is established based on the Estimated Pedolic-Ecological Unit (see 3.1.5).

Source: *Gepro portal Hostivice, Cenia; edited by Vojtěch Kettner.*

2.3.3. Cartographic activity

Since 2016 until 2019, I have been active as a cartographer making maps for the orienteering club in Hostivice (ČSOS 2021). I have mapped both rural and urban areas at different seasons and times (both mornings and afternoons). The activity was limited to one to three hours sessions, often also shorter. I was moving around on foot with a mobile phone and a backpack. I rarely involved in an occasional talk with people, I didn't collect any relevant feedback.

During the process I was in many parks that often lacked life and had poor heterogeneity of visitors in terms of age. Those spaces felt unattractive with limited equipment and design of low distinction. The majority of visitors were young parents with small children or elderly people. Based on these observations as a mapmaker, it was the playground at the *Jan Hus square*, the playground in the *Hostivice Mansion park* in front of the Elementary and High School and the playground in *Okrajová street* that felt most visited. On the contrary, the park in *Broulova street*, *T.G. Masaryk park* and the park in *Ke Skále street* felt most deserted.

At the same time I encountered many well maintained places, that were quite populated – for instance the *Litovice Pond Dam Promenade*, *Břve Pond Shore*, *Višňovka park*, and *V Čekale park*.

Often, the pedestrian permeability was rather poor since some fenced areas are limiting the path system. Since a great stress is put on the runability and accessibility of an urban environment in orienteering maps, I created a black-and-white accessibility chart of Hostivice Municipality derived from the map I produced according to the Map Code (IOF Map Commission 2006).

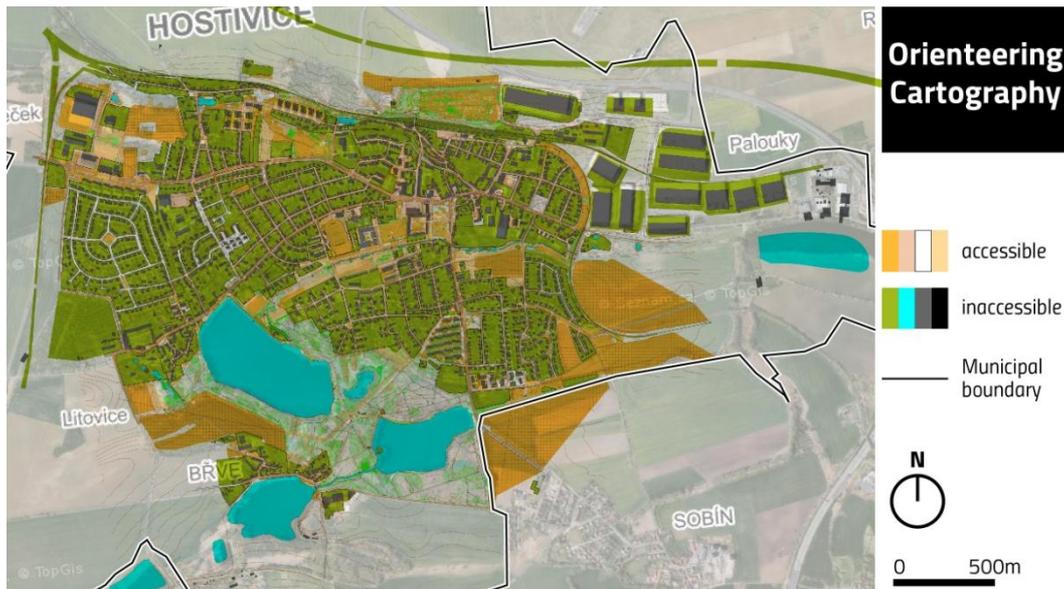


Figure 11: Orienteering map of Hostivice
 The map is using special cartographic symbols indicated by the International Orienteering Federation. Basically, the map is divided in areas of accessibility.
 Source: Seznam.cz a.s., edited by Vojtěch Kettner.



Figure 12: Pedestrian Permeability
 Big black blocks represent spatial obstacles for movement of a pedestrian.
 Source: Seznam.cz a.s.; edited by Vojtěch Kettner.

2.3.4. Historian Jiří Kučera

In March 2021, I was in contact with Mr. Kučera, the current vice-mayor of Hostivice Municipality, via an e-mail conversation and a ZOOM meeting. Mr Kučera, who is an expert on nature conservation and history of Hostivice, is has been living in Hostivice-Litovice for long time and involves himself in a broad range of activities within the Municipality: as a politician for ‘Hostivice 2006’, as

an amateur historian who established the *hostivickahistorie.cz* educational website (see Kučera 2021a) and as an author of history book *Litovice* (see Kučera and Kučerová 2016). He also founded a club for young rangers called *Kajky* in 1993 which is active until now (Město Hostivice 2021).

Besides the TSES in general, we discussed the origin of the current TSES fragmentation that was caused, as argued by Kučera, by the State Land Office issuing certain plots within TSES to the private owners in the 1990s.

In addition to the Hostivice history that has already been covered in other chapters, Mr. Kučera considers the *Jeneč brook's* corridor up the stream from the *Jeneč Pond* a great potential. In that part, the land is not urbanized yet, however, the new Comprehensive Plan defines some housing development in there (see Kocourek et al. 2021b). According to Kučera, such a corridor benefiting both urban ecology as well as human interaction would be a great success.

2.3.5. Vice-mayor Mr. Koňářík

In October 2020, I attended one personal meeting with the Hostivice vice-mayor and the Municipal agent for the matter of the Comprehensive Plan. It has been a source of specific insights as well as future intentions in the Municipality. The meeting was not recorded.

From the meetings with Mr. Koňářík, a set of topics was discussed and notes were written down accordingly:

- A planned cycle path from *Jan Hus Square* to *Strnad Pond* along the *Litovice Brook*
- The northern belt – great potential with good connections (under P09 in Kocourek 2021a, 2021b)
- Park in the north-western industrial part, *Floriánova street* (under K19 in Kocourek 2021a, 2021b)
- Forest around the Ponds is owned by Lesy ČR with their own management, production forest
- The Hostivice Ponds are owned by the *Rybářství Mariánské Lázně* with a management strategy of their own, the Municipal Board keeps contact with the owner but the influence is limited
- Industrial halls to the north of *Višňovka* (Město Hostivice 2021b) (under Z08, Z09, Z60, Z69 in Kocourek 2019a, 2019b)

2.3.6. Land Ownership

In cadastre map (see GEPRO 2021), every plot within an area is assigned a land use tag – a countable, classed facet of industrial-, built-, or open area etc. Numerous owners are a crucial precondition for the municipal development. The Municipality owns just a limited share of plots (see Figure 12), however it has ambitions to organize the municipal infrastructure (ONplan lab 2019a,b). As a tool for such management, a comprehensive plan delineates the possibilities of every respective plot so even if the Municipality does not own the plots, it regulates them (see Kocourek et al. 2021a,b). The process of regulation involves exhaustive negotiations with both public and stakeholders. In the municipal geoportal (GEPRO 2021), the share of the land owned by the Municipality is possible to display.

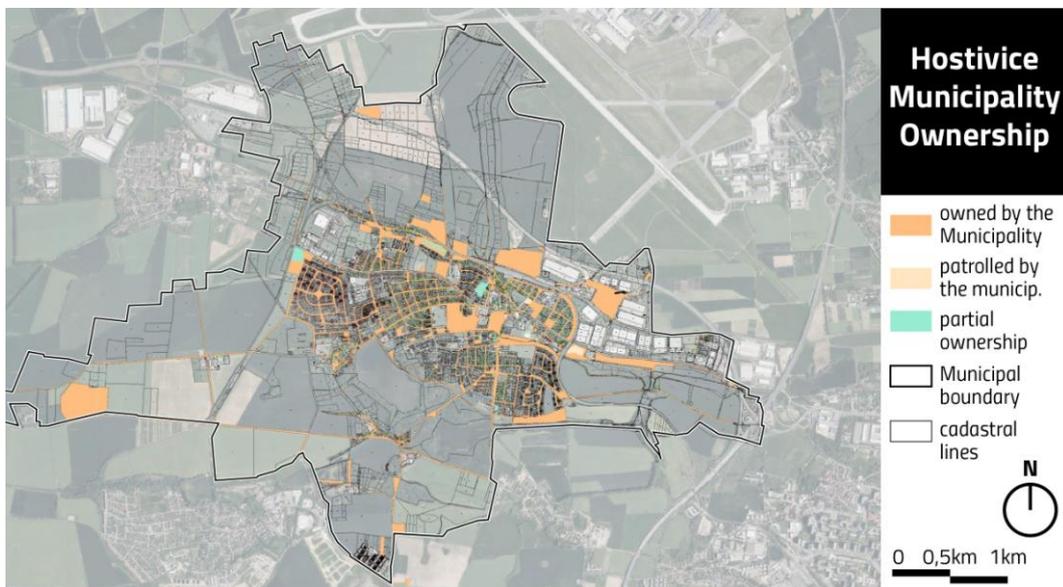


Figure 13: Hostivice Municipality Ownership
Source: Gepro portal Hostivice; edited by Vojtěch Kettner.

In the cadastre, the plots have quite a long temporal memory – many of the plots follow the shapes from the 19th century imperial maps. Such bureaucratic layer of landscape is not always visible in the terrain as the forms often don't correspond the current use. Old infrastructure are maintained within the lines of the cadastre map, however, historical maps served better in the historical research (see 2.2.1 Historical Maps).

2.3.7. Participation Meeting for the Strategic Plan

In May 2019, I was attending a participation meeting with the Municipal representatives as well as the planners from ONplan lab. We were asked to express our opinions concerning both positive and negative aspects we perceive

within the Municipality. We were about 40 people divided into 4 working groups. The different perception of each of us at that meeting were displayed in the map and served as a background in the process of designing the Strategic plan (ONplan lab 2019a:76-87).

2.4. Future Context

2.4.1. Municipal planning documents

Municipal Planning Documents delineate the future regulation, and vision, thus offer a work frame for all the respective projects. Two versions of the Comprehensive Plan and the Strategic plan were compared both graphically and by means of text documents. Considerable part of the knowledge from the planning documents were already mentioned in the Introduction.

Comprehensive plan 2021

Emerging already in 2017 at the Municipal board ready for an update but eventually adjourned for sake of more evidence, the new version of the Comprehensive Plan is planned for the endorsement in 2021. In 2017, the Board decided to first commission the Demographic study followed by the Strategic plan in 2019 in order to obtain relevant information about the future Hostovice. That way, the Municipality could collect respective information to take the complex future seriously, include as many stakeholders as possible and patrol the delivery of an informed proposal from the company Royal HaskoningDHV Czech Republic.

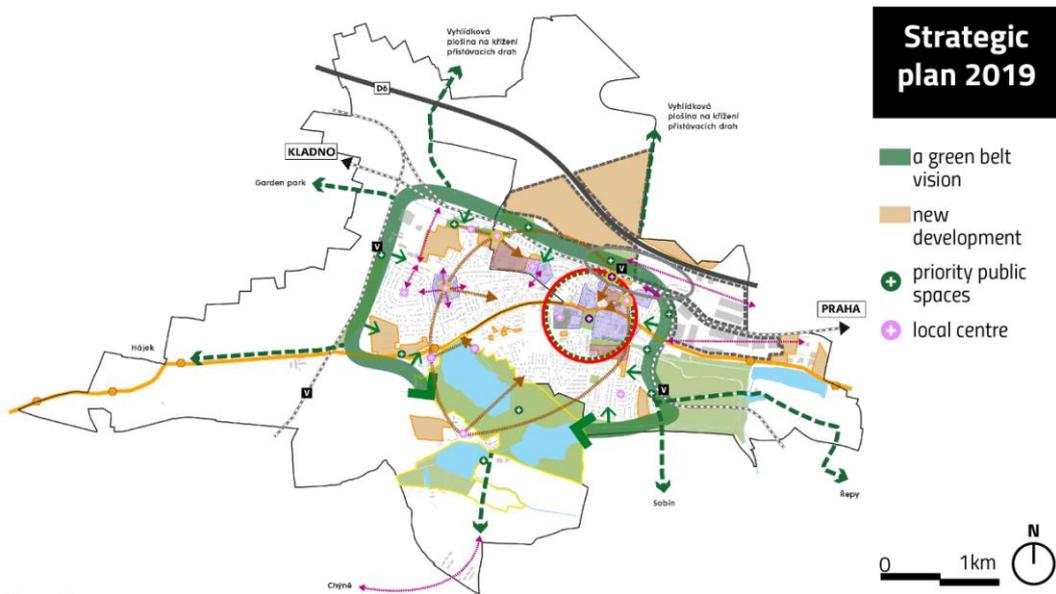


Figure 14: Hostivice Strategic plan 2019
 Source: Hostivice Municipality, ONplan; edited by Vojtěch Kettner.

There were public meetings scheduled for the new Comprehensive Plan discussion for spring 2021, however due to the pandemic, the presentation moved online. Such move included an organized overview about the role of the plan, its parts and phases and residents were asked for commentary processed online.

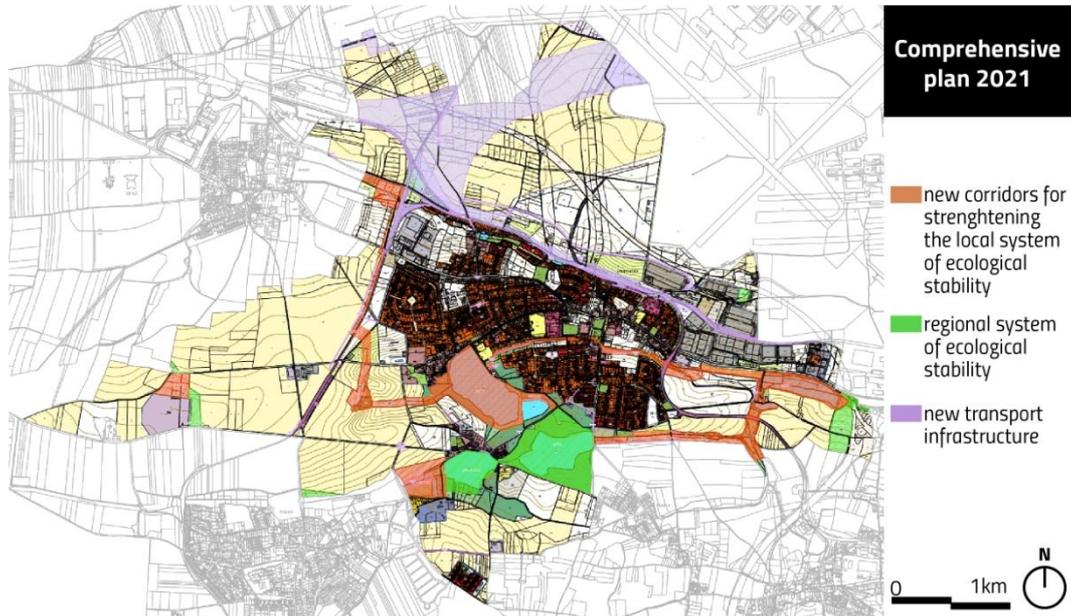


Figure 15: The Comprehensive plan proposal, 2021
 Source: Royal HaskoningDHV Czech Republic; edited by Vojtěch Kettner.

The author of the plan, Royal HaskoningDHV Czech Republic, disposes with a wide portfolio of realized projects within comprehensive planning (Royal HaskoningDHV Czech Republic 2021). The preliminary files of the

Comprehensive Plan deliver ambitious plans with clarity. The Plan itself has an extensive background text and couple of graphic attachments that could possibly be just as a medium alone a subject of an interesting research. The full extent of the new Comprehensive Plan, hence it contains much of the matter discussed in this thesis, is not the main focus.

The general conclusion about the new Comprehensive Plan is the fact, that it follows the Strategic plan from 2019. Thus the transition from an initial vision to a legal document determining and limiting the development can be registered.

2.4.2. Documentation of the upcoming projects

Multiple documents negotiated at the Municipal Board provide the near future intentions with all the geographical context and consequences: railway Kladno-Prague with an affiliated cycle path Kladno-Prague; architectural study of the Railway Station surroundings. The projects are in various stages of completion.

Prague – (Vaclav Havel Airport) – Kladno Railway

The new upgraded railway Kladno-Prague becomes electrified and run on two rails instead of one. In the project, whose realization is under responsibility of a state company, there is an additional project of a new railway turning to Vaclav Havel Prague Airport after leaving the town in direction to Kladno. This connection to the airport is one of a few variants of Airport Express and the verdict has not been given yet. Even if not brought to realization of both projects, the railway would mean an increase of noise as well as spatial demands. Due to the early stage of the project, exact spatial impacts are unknown, however it is mentioned by the EIA as a negative factor as the project will occupy agriculture land, create a barrier as well as generate new pollution and noise (Smrčková 2021).

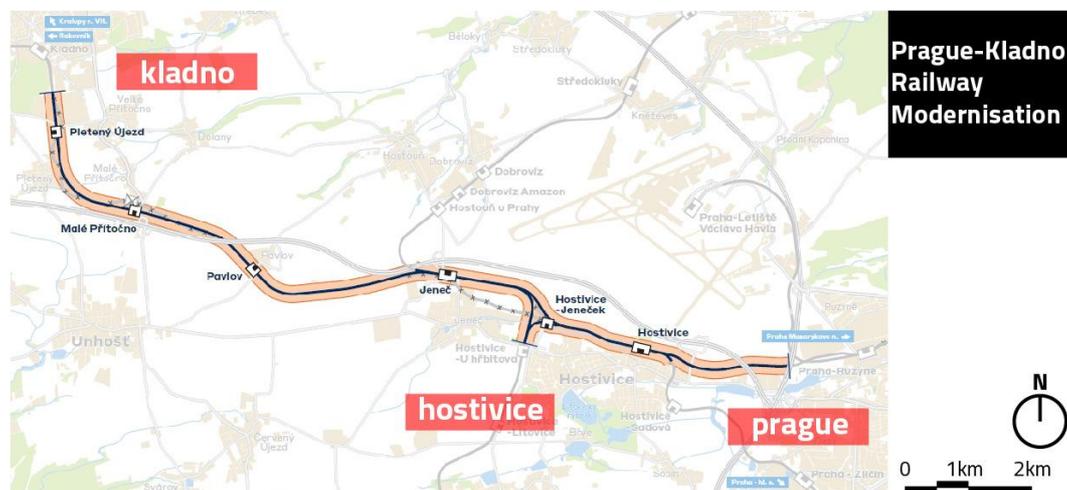


Figure 16: Prague-Kladno Railway Modernisation
 Source: SŽ; edited by Vojtěch Kettner.

Prague – Kladno Cycle Path

A project of a new cycle path to Kladno is closely bound to the new railway project. This new cyclist connection creates a brand new route led on top of an older and unused railway bank from Kladno and in the section through Hostivice and further into Prague, the bike lane is planned parallel with the upgraded railway (Cach 2019). The data was received from Mr. Kučera.

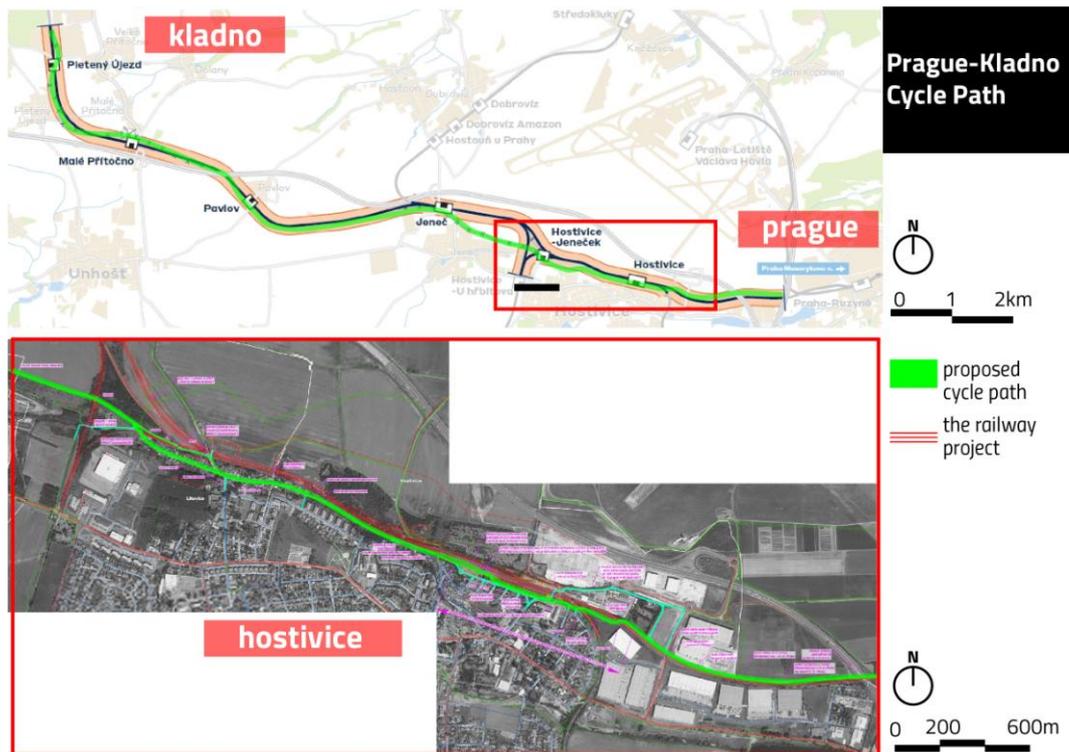


Figure 17: New Cycle Path along the railway Prague-Kladno
 Source: Cach (2019) /Metroprojekt, SŽ; edited by Vojtěch Kettner.

Hostivice Railway Station

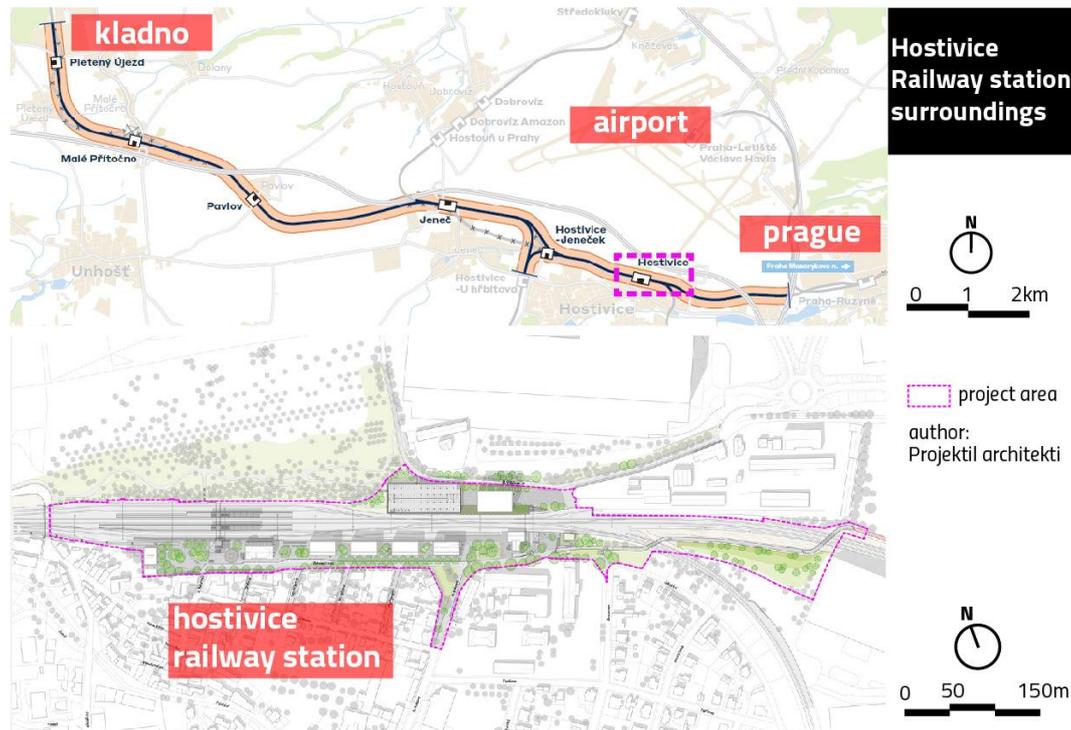


Figure 18: Hostivice Railway Station Surroundings
Source: Projektil architekti, SŽ; edited by Vojtěch Kettner.

The architectural study of the Hostivice Railway Station area links on the mentioned railway project. The Municipal Board took responsibility and chance to incorporate the huge intervention sensitively into the urban structure according to the strategic goals. The vision is a vibrant train station as a quality public space with stress on pedestrians and cyclists. A key part of the project is a multi-storey parking house that is easily accessible only from the D6 motorway (from outside of the town) and thus is suited not only for the Hostivice residents but for commuters from surrounding villages as well. By moving the car parking at a short distance from the Railway Station Building, other modes of transport have to be used for reaching the station through the town (walking, bike or bus). This project takes in account the already mentioned bike path Kladno-Prague and connects on the parks north of the Station by means of underpasses. Such way, social as well as landscape network within the area is enhanced (Projektil architekti 2021).

2.4.3. Student projects – Hostivice Urbanism

Hostivice had been a site for **architecture studio projects** from the Czech Technical University in Prague too. In 2017, student projects from *Redčenkov*

architecture studio course have provided visions for the Hostivice urbanism. The project data was received from Mr. Koňářík via email.

These projects were skimmed through and provided worthy insight into the Hostivice development especially with a couple of bold interventions. The landscape is not discussed in any deep measure; it is mentioned in the sense of environment for providing the leisure space. Naturally for its purpose, the projects are focused on the urban structure and architecture of the houses.

In the project, a distinct idea of a lookout tower situated in the middle of the three ponds, was an interesting feature. Such tower, reaching over the tops of the trees, would have a view over three of the Ponds as well as the broad landscape around. At the same time, it would feature an artificial dominant from the distance. The students were also generous when expanding the forested areas.

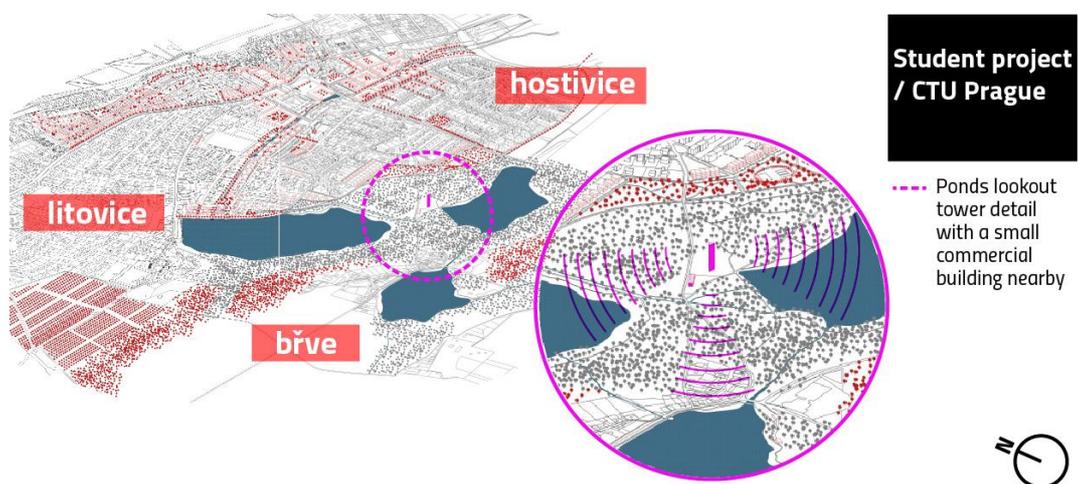


Figure 19: Student Project from CTU Prague, 2017

Source: Student project, Redčenkov Studio, CTU; edited by Vojtěch Kettner.

Another two interesting projects from the Faculty of Architecture, CTU Prague, were explored. Kohout proposed an urban development of the Hostivice centre (see 2013) and Blagoevová an experimental village development in Hostivice-Břeve (see 2014). However, no details from those projects were considered relevant for this thesis.

3. Background to the Three Themes

It is always a great challenge to describe a complex phenomenon in an elegant and easy-to-follow fashion and avoid excessive generalisation. This thesis is trying to address the landscape planning in Hostivice Municipality, thus embracing two complex domains – landscape, and planning. For the comprehensibility, a simplifying structure was adopted consisting of three themes covering the scope of this thesis. (see 1.3. The Thesis Objective – The Research Question)

3.1. The Climate Resilience Background

Many competing services including recreation and ecology are concentrated to the Hostivice Ponds reserve, an island of forest and wetlands that work as a relatively stable ecosystem. The environment has to resist not only the stress from the visitors (stress on the outer ecosystem stability) but above all the impact of climate (inner ecosystem stability). The environment being the key stage, the ecological services are closely associated with the climate resilience. Under this theme, various aspects boosting the climate resilience are presented. Measures against the climate change are subject to couple strategies (see Smrčková 2019:17-27): for instance the national *Strategy for Sustainable Development – Czechia 2030* aiming to ‘undertake urgent measures in fighting the climate change’ (2019:19-20), the National Programme for Climate change Effects Mitigation (2019:13), Nature and Landscape Protection Plan for Central Bohemia 2018- 2028 (2019:14) or *The National Nature and Landscape Preservation* program intending to ‘restore the natural hydro-ecologic functions of the landscape to endure the climate change’ (Smrčková 2019:24).

There is an objective for Climate Resilience in the Strategic Plan: ‘by limiting the housing expansion and by the completion of the urban nature infrastructure, the ecological stability is enhanced’ (ONplan lab 2019b:22).

3.1.1. From the Rudolf II. Era to the Territorial System of Ecological Stability (TSES)

Since the era of Rudolf II. in 17th century, the Prague castle was provided with utility water from the Hostivice Pond system shaping thus a biodiversity corridor along the Litovice Brook.

Nowadays, this corridor along the Litovice Brook is recognised under the TSES, which is a tool for maintaining ecological services. Many of the marked corridors are fragmentarily dysfunctional today. The fragmentation was caused by a process dealing with restitution of land in 1990s (see 2.3.4. Historian Jiří Kučera), that resulted in some plots within TSES being privatized and registered as agricultural land (Šindlerová et al. 2019b:7). Nevertheless, where there is open agricultural landscape, TSES still contains a small system of Significant Landscape Elements (see 1.10.2). The Litovice brook creates a pivotal green axis through the city and has potential of raising urban ecology awareness among the residents (AOPK 2016). According to the LAPD, the landscape is assessed as close to ecological harmony in the eastern part (thanks to the Hostivice Ponds area), whereas to the west, the landscape is ecologically instable only with stable enclaves (Šindlerová et al. 2019b:4). The orchard to the west from the Litovice Fortress is fallow (Šindlerová et al. 2019b).

3.1.2. Territorial System of Ecological Stability (TSES) and Significant Landscape Element

For TSES, the ecological stability is dependent on the number of bindings in an ecosystem as explained in Kyzlík: ‘The stability grows with the amount of biomass and the number of various species within’ (known as biodiversity) (Kyzlík 1995:15). The inner stability is regularly challenged by the climate. The outer stability of such ecosystem is tested by extremes, that are relatively new to the system – in many cases the human activity is most considerable (air pollution, industrial agriculture, fluctuation of the groundwater level).

In Czech planning, a number of legal terms is introduced in the Nature Protection Act 114/1992 §3 to deliver a balanced environment, that is able to cope with disturbances both from climate and human production. The *Significant Landscape Elements* are defined as ‘*valuable parts of the landscape in terms of ecology, geomorphology or aesthetics and contribute on creating the typical look and system stability (for instance wetland, ponds, water courses, hedges, grassed headland etc.)*’. These elements are often parts of the TSES. In the definition, the aesthetical aspect of the landscape is in somewhat confusing way mixed up with the other plainly environmental expressions.

The institute of a (Complex) Land Improvement is a tool for the TSES management according to the Czech Act no. 139/2002. The main importance is the rationality in reconstruction or maintenance of the ecological stability, and consolidation or division of plots. The process usually involves many actors.

After all, the goal is to maintain the ecosystem in an acceptable state of instability so that the economical use of the natural resources (agriculture, wood) is in balance with the ecosystem (Kyzlík 1995:16).

3.1.3. TSES in the Comprehensive Plan (2005)

In the ‘Landscape sheet’ of the Comprehensive Plan (IKP Consulting Engineers 20011b), greenery is assessed solely on the account of ecological service represented by the TSES corridors. Intentions to operate within these areas need to be consulted with the respective Board of Environment. Pityingly, the TSES system doesn’t involve parks and urban greenery as agents of ecological services. The displacement of the landscape from the urban environment and misinterpretation of nature reflects in the conception of parks that lack any connectivity – the parks are located along the major roads in a state both neglected with vegetation and function. (see 2.3.3. Cartographic activity)

3.1.4. Green Belt and Infrastructure

Amati & Taylor point out, that ‘a wide variety of different green space policies are called green belts in different countries’ (2010:143). They can include all sorts of linear greenery and parks, whereas the UK version corresponds with ‘pastoral area of open space circling a town’ (2010:143)

According to Amati & Taylor researching the green belt in UK, the London green belt happened to provide access to recreational spaces for the poor since 1935 (2010:152), protecting the open agricultural land from housing developments. Thinking about a green belt in Hostivice, Amati & Taylor assert that positive public perception is essential to generate the political will which makes the plan happen (2010:150).

The green belt acts as a measure against climate change, naturally. Allowing the green belt to infiltrate the city, corridors for ecological restoration and recreation that would also mitigate the heat island effect and the future impact of climate change are (2010:152). In LAPD, Šindlerová et al. calls for such measures and suggests increasing reflectance of materials, increasing forestation, orchards and meadows in order lower the surface temperature (2019a:172). Amati & Taylor didn’t uncover the extent, to which green infrastructure can replace or

complement the green belt, however, green spaces in the green belt do perform functions that may certainly increase in relative importance in the near future (Amati & Taylor 2010:153).

3.1.5. Estimated Pedolic-Ecological Unit

As a matter of fact, Hostivice landscape stretches out on fertile soils assessed by the Estimated Pedolic-Ecological Unit (EPEU) as more valuable than forests or meadows. This scale considers agricultural lands above all other soils regarding the contribution to society and the age value (see 2.3.2. Soil maps, ONplan 2019a:53). Having summarized the agricultural character of local landscape in 1.8.2 The Agricultural Landscape in Czechia and Sweden, the Environmental Impact Assessment (EIA), as a component of the new Comprehensive plan proposal (Kocourek et al. 2021a), argues for the fields' subdivision which results in 'less wind and water erosion, as well as better dynamics in the field management that is all strongly beneficial for the landscape' (Smrčková 2021:22).

3.1.6. Water management

Hostivice is located in a mild-dry climatic zone with an average of 450-500 mm precipitation per annual vegetation period (Smrčková 2019:29). The Prague accumulates a lot of heat in the built structures and works as a heat island which decreases the precipitation volume (Šindlerová et al. 2019a:172).

The Litovice- and Jeneč Brook have been axes where the first farms and centres of Litovice, Jeneček and Hostivice were located (see 2.2.1 Historical maps). Together with the Hostivice Ponds and adjacent wetlands, the brooks create the water system of the Municipality. The springs and the streams beds of both brooks are strongly influenced by human, especially intensive agriculture. In the open landscape, the 'fields are ploughed right to the edge of both Jeneč and Litovice Brooks' (Šindlerová et al. 2019b:6). The springs of the brooks are buried in the fields and is recommended be protected by a grassland in the closest vicinity as argued by the LAPD (Šindlerová et al. 2019a:93,174).

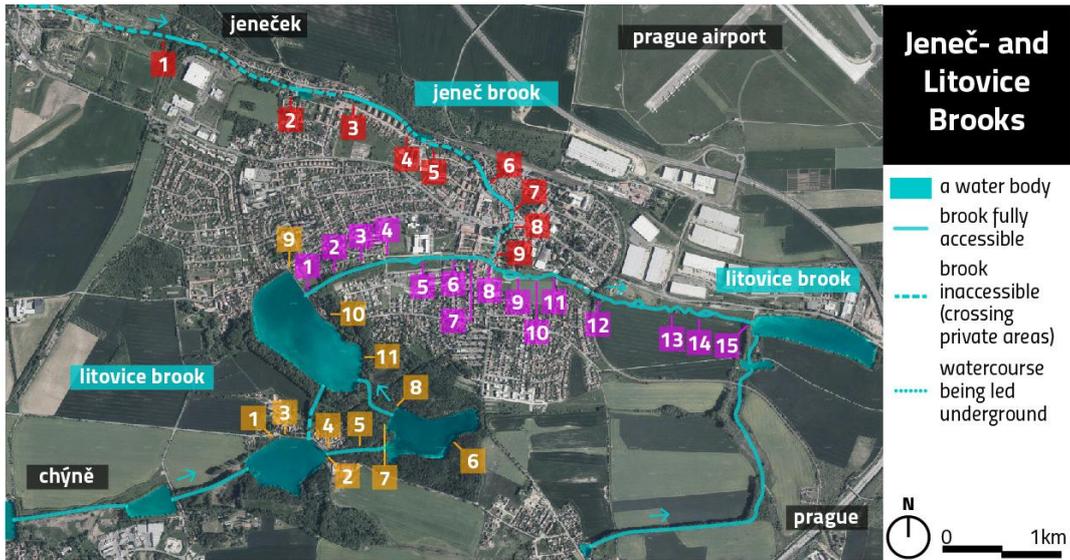


Figure 20: Water courses network within Hostivice
 Source: Seznam.cz a.s.; edited by Vojtěch Kettner.



Figure 21: Jeneč Brook
 Source: All material from Vojtěch Kettner.

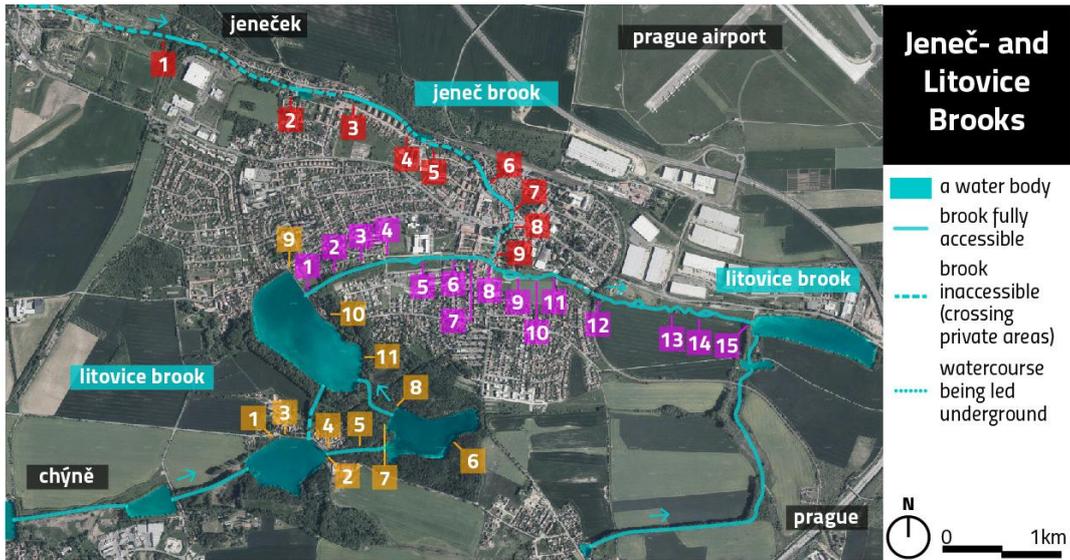


Figure 20: Water courses network in Hostivice
 Source: Seznam.cz a.s.; edited by Vojtěch Kettner.



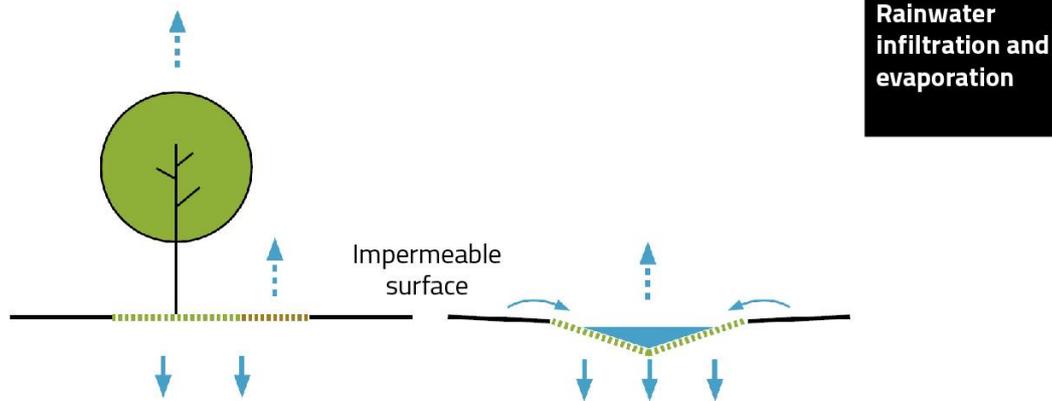
Figure 22: Litovice Brook
 Source: All material from Vojtěch Kettner.



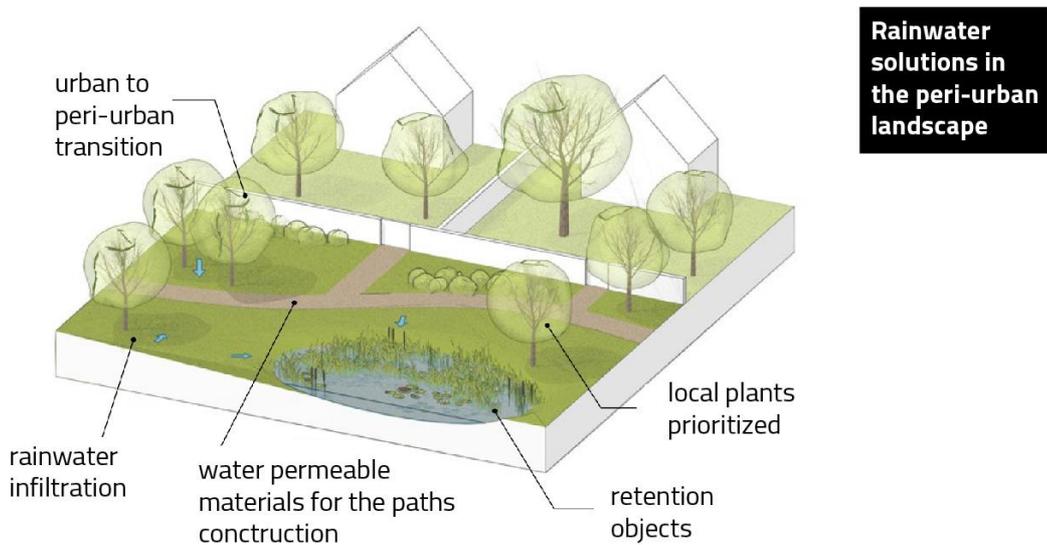
Figure 23: Litovice Brook
 Source: All material from Vojtěch Kettner.

The stream beds of the brooks were regulated within the residential areas, especially Jeneč Brook which is kept underground in a long part of the stream, mostly at the upper stream in Jeneč (Šindlerová et al. 2019b:6). Argued in the Landscape Analysis of the Prague-West District, the water retention is recommended to enhance within the already built areas and ‘require a thorough water management and ecological compensation in the new housing inside the town’ (Šindlerová et al. 2019a:181). Realization of rain gardens, retention ponds, restoration of former ponds or restoration of water streams and their littorals into a state closer to nature are recommended by the LAPD to become an efficient partner in the measures for strengthening the ecological system stability (Šindlerová et al. 2019a:172-173). Making a grassland around the springs of both

Litovice Brook and Jeneč Brook is recommended to protect the water sources from direct mechanisation (Šindlerová et al. 2019a:93).



*Figure 24: Spatially modest changes in the landscape
The rainwater collected from the impermeable surfaces can be delayed locally. The water gets back to the atmosphere by evapo-transpiration and infiltration.
Source: 'Water in the City' CTU Prague; edited by Vojtěch Kettner.*



*Figure 25: Rain water management within the peri-urban areas
Source: 'Water in the City' CTU Prague; edited by Vojtěch Kettner.*

The reconstruction of the Litovice Brook, protruding through the urban area from the Litovice Pond past the square and eastwards out of the city, met with great success. Both committee for Nature Conservation Agency of Czechia and the public appreciated this project on remodelling of the stream course from a straight and reinforced stream bed to a natural form. Buried deep in the terrain, covered with scrub and reed, the brook got open space in a widened valley swirling in

various curves with couple side ponds along. The revitalised corridor became a true green axis and is expected to be connected onto new green infrastructure (AOPK 2016).

The water quality is a great concern both to professionals and residents, who could see the direct effect on their usual walk around the Ponds. The cause is an abundance of phosphorus and nitrogen in the environment. As explained by Kyzlík, the ‘intensive agriculture and limits of the sewage treatment plant supply the waterways with high concentration of nutrients as well as pollutants. The compounds of phosphorus or nitrogen are most decisive an cause the water eutrofication – a process, that enables dramatic growth of algae, decreases the income of daylight and hinders the water life dramatically by causing anaerobic conditions in the water’ (Kyzlík 1995:28). The worsened quality of water was also mentioned by Baroch (2013).

3.1.7. Everyday Landscape

The municipal vision is a green belt with the most valuable green core of a forest park around the Hostivice Ponds (ONplan lab 2019b). In such planning, the interest is to raise the life standards and to make the recreation as well as everyday landscape worth engaging with.

The minor changes in the landscape along the roads, streets, and tiny rest places enable us to appreciate and approve nature – it teaches us living with it or creating one’s own nature (Nassauer 1995:169). That also involves vigilance against projects that would not contribute on boosting nature, for instance on project in a residential area (Vondrušková 2015). From the position of a landscape architecture student who lived in the particular area, I could see that a row of shrubbery sheltering gas and dust circulation was cleared out resulting in increased noise and dust, poorer rainwater management and lower biodiversity while the Municipality advocated for sanitation maintenance (Vondrušková 2015).

In the Figure 26, some examples from the everyday landscape in Hostivice can be seen.



Figure 26: Examples of rather conservative planting within the municipality
 Source: Seznam.cz a.s.; edited by Vojtěch Kettner.

In *Messy Ecosystems, Orderly Frames*, Nassauer argues that how we express wealth and power through landscape, establishes a framework within which ecosystems are manipulated' (1995:163). He calls this mindset *orderly frames* and

hopes that people will ‘accept what they regard as ugly and uncomfortable in exchange for what is attractive and familiar’ into their ‘orderly frames’. That way the contact between a human and nature can be enhanced because in the end, cultural expectations and human pleasure will continue to be the measures of ecological function, at least in everyday experience (1995:169).

Departing from Shwartz (2014) who researched the impact of different sorts of management on biodiversity in Paris, such urban islands of greenery are perfect even though people don’t necessarily mention it but still as she asserts ‘benefiting from biodiversity does not necessarily require people to be aware of species around them’ (Shwartz 2014:87).

Allowing people to understand nature in many forms, means to continuously break up the invasive nature-culture dichotomy often nurtured by people (see Kaika 2012, Cronan 1995). As argued by Newman in Douglas (2011:63), ‘disconnection between urbanities and nature will probably have profound consequences for global ecosystems’. In order to bring new forms of ecologically rich landscapes, as stressed by Nassauer, the new landscapes ‘must be recognized and perpetuated by people in everyday situations, maintaining it and creating their own landscapes’ (1995:169).

The connection of people to urban areas seems to be a fruitful field of research. Lewis Mumford, an American sociologist with interest in cities, urged the planners already in 60s with ambitious plans: ‘In the cities of the future, ribbons of green must run through every quarter, forming a continuous web of garden and mall, widening at the edge of the city into protective green belts, so the landscape and garden will become an integral part of urban no less than rural life (1964 see Hebbert 2008:34). Almost 60 years later, similar phrases are listed in the Strategic Plan (ONplan 2019b:15).

In Hostivice, there is couple of organisations and NGOs which help to introduce a closer relationship between people and nature. There is a Scout Club Junák, a Club of young Rangers called Kajky (the Czech name for *Somateria sp.*), a family centre ZaHRÁTka, Beekeepers Club Hostivice, HOMe organization, Hurá ven Society (Město Hostivice 2021a) which organize various types of activities and events bridging the contact of people with nature.

As also openly written in the LAPD, all forests within few kilometres from Prague are a frequently searched venue for recreation and access to the forest is to be guaranteed. The function of the forest is encouraged to be inspected and possibly transferred into recreational use (Šindlerová et al. 2019a:122). Especially in case of Hostivice, the forested area borders on the urban area (see Figure 2 and

3) so it has rather recreational potential of a forest park (Šindlerová et al. 2019a:209).



Figure 27: Forest Maintenance Map

The dominant part of the park forest around the Hostivice Ponds is between 61-80 (cyan) and 121-140 (lilac) years old. Though, management measures are visible on the rectangular shapes of younger plantations (yellow and orange).

Source : Gepro portal Hostivice, ČÚZK; edited by Vojtěch Kettner.

In the airport landscape, Šindlerová et al. argues park improved areas that are easily maintained and provide attractive places for air spotting (capturing pictures of planes) for creating those places attractive (2019a:125).

An interesting project from Amsterdam is relevant for the Prague Airport landscape, since the its extension of the runways is possible (Smrčková 2021:18). For dramatic decrease of noise limits, a fusion of land art and landscaping created an open-air leisure park in Schiphol–Amsterdam, Netherlands, with terrain formations resembling triangular waves. The idea was based on observations from a residential area over a field near the airport reporting lower noise levels when the field was ploughed as it succeeded in dispersing the noise waves (H+N+S 2011).



Figure 28: Schiphol-Amsterdam Airport Landscape Project
 This multidisciplinary project combined visual art with efficient noise reduction
 Source: H+N+S Landschapsarchitecten

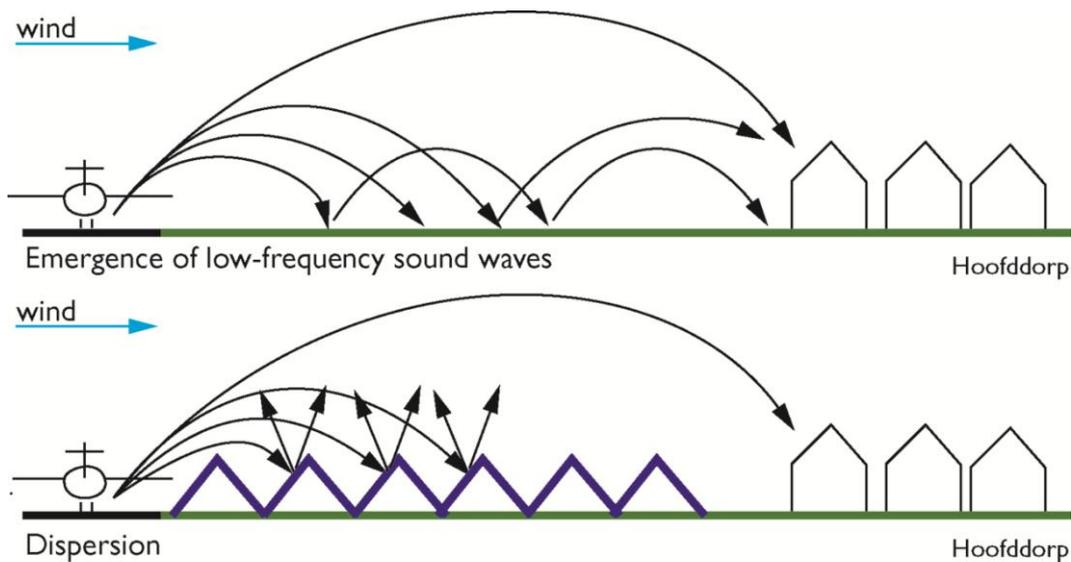


Figure 29: Schiphol Project Principle
 Sound waves are dispersed over the artificially heaped landscape that resembles a magnified ploughed agricultural land
 Source: H+N+S Landschapsarchitecten

3.1.8. Planting within Hostivice

Interestingly, certain towns or city-quarters apply a display of plant communities growing at public spaces to manifest their care for the environment and balanced ratio between ecologic and leisure service. In Czechia, the city of *Strakonice* is

known among the professionals for a top class plantings of perennials (Jungová 2014). Strakonice Authority has also cooperated with the Faculty of Horticulture at Mendelu University in Brno on a planting project (Jungová 2014).

Hostivice owns many planting sites that are maintained and rather traditionally planted. A conceptual planting strategy would help increase the level of aesthetical use of reserved places. To reach the highest possible use, according to Rainer, 'it is necessary to seriously think of patterns, structures and colours because it is the consciously chosen combinations of the plants that create the real aesthetic show' (Rainer 2015:24). With all the biomass – the wide variety of thriving stems and leaves, species' heterogeneity – proper awareness and maintenance is crucial since the public 'tends to mistaken that ongoing lush life for a lack of care' (Nassauer 1995:163).

Michael Hebbert's overview from modernist to contemporary urban landscape, concerning the synergy of urban density and ecology, assumes that 'the new enclosure movement is doing today what the modernists did seventy years ago: crystallizing a conception of social and environmental progress into a tangible landscape form' (Hebbert 2008:54).

In Hebberts social and environmental critique of the 20th century modernist urban picturesque, Oliver L. Gilbert argues that the image of nature was controlled, improved and gardenesque and assumed extensive maintenance (Gilbert 1989 see Hebbert 2008:41). Michael Hough, a Canadian landscape architect, adds that there was a 'failed vision of seeing nature work – the pre-forest combinations used in the urban picturesque were intrinsically unstable and so required a continuous input of labour, chemical and machinery – conventional, mowed, weed-controlled grass of urban amenity space' (Hough 1994:129 see Hebbert 2008:41).

According to Beer et al., serving both the ecosystem services and human use and enjoyment, the multi-functionality of spaces is the emergent paradigm (Beer et al. 2003 see Hebbert 2008, p47. 'This multi-functional infrastructure materializes in 'various typologies at several scales, from the gardens, balconies and roofs of individual buildings to the green belts' (Turner 1998, TCPA 2004, Swanwick & Dunett & Wooley 2003 see Hebbert 2008:47).

3.1.9. Landscape Architects

The importance of the institute of an architectural competition in process to an acquisition of either strategic or a Comprehensive Plan needs to be stressed. Greatly, it is the landscape architects who have been trained in a vegetation

comprehensive planning in transition to built areas and are a valuable member of a project team.

In this point, the Czech Association for Landscape Architecture (CZALA) has a support of the European Landscape Convention, that was ratified by Czechia in 2002, where ‘each member Party undertakes to introduce instruments aimed at protecting, managing and/or planning the landscape’ (Council of Europe, 2000). Landscape architects certainly are professionals who can contribute to the team work in this aspect.

Eventually Thompson argues (as an Englishman) that ‘landscape architecture is never going to move wholesale into the natural sciences, nor will it be absorbed by the social sciences or swallowed by the arts. Its position, uncomfortably perhaps, will always be at the border’ (Thompson 2017:49). Nevertheless, this border can be extremely fertile on inputs enriching the profession and enabling it flexibility in unprecedented speed of current societal development.

As Jackson puts it, ‘a narrow and pedantic taxonomy has persuaded us that there is little or nothing in common between what used to be called civil engineering and garden or landscape architecture’ (1984:8) whilst their aims both result in reorganisation of space for human needs. and both create the infrastructure and background for our collective existence. They ‘both produce works of art in the truest sense of the term’ (1984:8).

Be it public or private client, contemporary projects of landscape architecture are often stressing both urban ecology and the multifunctional use. For a mere reference, the project of *Hans Tavsens Park and Korsgade* in Copenhagen by the Danish landscape architecture studio SLA combines the aspects of water management, ecology, water management, education and leisure activities in a harmonious way (SLA&Ramboll 2016).

3.1.10. Landscape Quality Objective from ELC

As discussed in the Landscape Analysis of Prague-West District (LAPD), the *landscape quality objective* is a goal for selected sub-categories of landscapes within the district (LAU 1). For the part no.8 Zápraží (Šindlerová et al. 2019b) that covers the area around the towns of Hostivice, Chýně and Jeneč is the goal stated as ‘a landscape of vast open fields’ (Šindlerová et al. 2019a:93). The extensive Landscape Analysis applied a frame work of different landscape aspects that are eventually synthesized in *landscape quality objectives*. According to the European Landscape Convention, article 1. ‘*Landscape quality objective* means, for a specific landscape, the formulation by the competent public authorities of the

aspirations of the public with regard to the landscape features of their surroundings' (Council of Europe 2000).

For Hostivice landscape, the objective from LAPD is 'an open agricultural landscape, resilient against the air- and water erosion and interwoven with lines of trees and hedges along many paths' (Šindlerová et al. 2019a:93). It is planned to be reached by increasing the number of landscape elements (see 1.11.2) and dividing the landscape by dense network of spatially modest improvements – such as rows of trees/alleys along paths, small water bodies, rain gardens, hedges, copses etc. (Šindlerová et al. 2019a:93).

3.2. Transport Background

According to the Strategic plan, Hostivice is envisioned to employ a strategy to connect all the modes of transport, especially to expand the pedestrians and cyclists infrastructure and lower the number of cars in the town (ONplan lab 2019a:46, 2019b:15). As argued by Beatley and Manning (1997 see Hebbert 2008:51) in context of ecology modernisation agenda, 'cars are an option, not an everyday necessity'.

The intensive production landscape especially to the west of the Municipality is unattractive for leisure activities and difficult to access after all. These days, the movement is possible almost only on vehicle roads (Šindlerová et al. 2019).

Another important objective is to seek after the conversion of old industry areas within the city centre and use their exclusive location in for communal, cultural, and business purposes (ONplan lab, 2019b:15).

3.2.1. Cycling – ecological and fast mode of transport

Great attention is given to the cycle infrastructure in the LAPD that describes local issues similarly as I observed them myself when biking. Hostivice is conceived there as a cycle hub for cyclists from different parts of Prague (Řepy and Břevnov) to channel them further westwards in direction to popular Křivoklátsko Natural Protected Area. Hostivice would become a tourist centre for people going into the Kačák/Křivoklát region (Šindlerová et al. 2019a:118). The LAPD proposes a *cycle trail from Prague-Řepy/Břevnov – Litovice Brook Valley – Kačák to Křivoklát* promoting a route that people already bike despite dangerous conditions in traffic on vehicle roads (see 2.3.1 Strava Global heatmap)(Šindlerová et al. 2019a:121). At this moment, there is no direct

pedestrian of cycle path connecting Hostivice with other villages to the west (Šindlerová et al. 2019b).



Figure 30: Cyclists by the Břve Pond
Source: Vojtěch Kettner

It is expected a high number of visitors From Prague to Hostivice since the Hostivice Ponds area offers a great venue for easy cycle trips or walks. Urban furniture for leisure activities, benches and play- or sports elements for both adults and children is pointed out to be provided at rest places (Šindlerová et al. 2019a:126).

According the LAPD, the Prague Airport is also considered a potential attraction for cyclists. A cycle route around the airport would enable more opportunities for air spotting as well as open-air leisure (Šindlerová et al. 2019a:125).

3.2.2. Connectivity within the open landscape

Since the 19th century, the villages around were connected with a path usually used for horses, cycles and pedestrians until 20-30s of 20th century when many of the paths were ploughed or turned into vehicle roads (Šindlerová et al. 2019a:206). According to the LAPD the roads and paths are recommended be coordinated with the fields accessibility when densifying the path network within the landscape. The access paths to the fields is advised not be counted on roads

with higher than 500 cars / day in both directions. Circular system of roads for agro-mechanization is recommended so that the mechanization avoids going through the residential areas. Between the main field roads, headlands are recommended as infiltrations stripes as well as manipulating areas (Šindlerová et al. 2019a:249).

The higher permeability of the agricultural landscape is closely connected to division of the fields into smaller bits like a mosaic (Šindlerová et al. 2019a:128). Unreasonable or unpractical division are suggested to avoid (Šindlerová et al. 2019a:206). The most practical shapes of fields are rectangles. Fields are best serviced when bigger than 10ha and smaller than 40ha, where the efficiency ratio ceases to grow. Most usually the fields are about 15ha in size. 20-30m stripes as a buffer zone between residential and field are recommended (Šindlerová et al. 2019a, 250).

As stated in the LAPD, less attractive landscapes, usually agricultural landscapes, are also needed and can mitigate the throngs of visitors. The need for daily recreation is high, besides sport activities, the importance of dog walks cannot be overlooked since 37% of Czech households own a dog (FOCUS Marketing & Social Research 2017). The residents usually spend around 1 hour with the activity and cover around 3 kilometres on foot (Šindlerová et al. 2019a:129). A buffer of maintained landscape around a town, that fluently blends into the agricultural landscape, is most efficient for possible scope of walking loops for the open-air leisure activities (Šindlerová et al. 2019a:132).

Within the landscape, every path is recommended to lead from place A to place B with respect to landscape composition in the particular place especially in vicinity to heritage sites. Historical paths are recommended to be prioritized to the brand new ones (Šindlerová et al. 2019a:206). Hostivice-South (Pšeničná and Žitná streets) is a spatially segregated enclave of residential area and is missing a connection to the path network (Šindlerová et al. 2019b).

A good example of making the open landscape accessible, even though intensively used as a production land, appears in Steffanstorps Kommun, Sweden. The landowners, who enable entering to their land, would be compensated by the Municipality. A deal between the farmers and the locals searching for open-air leisure venues is thus reached (Hassgård 2019).

3.2.3. Connectivity (permeability) within the urban landscape

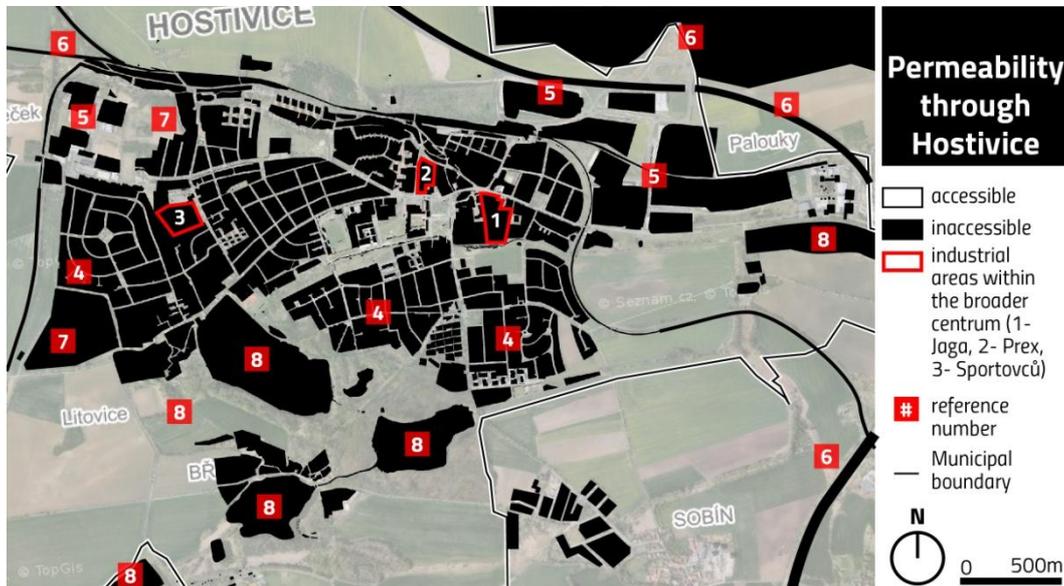


Figure 31: Permeability through Hostivice

Redlined, the industrial areas within the built areas are described. Assigned different numbers, areas of various character are specified regarding the permeability limitation.

- 4**, urban sprawl areas are limiting the permeability with vast private plots and car preferred streets
- 5**, industrial store halls of inhumane scale, are visual dominants in the landscape limiting the permeability for both human and animals severely
- 6**, objects of transport infrastructure (highway, railway, airport) are inevitably limiting the permeability despite serving public needs
- 7**, objects and plots of private ownership are hindering the connectivity
- 8**, natural objects (ponds) are limiting the connectivity with extensive impassable water bodies.

Source: Seznam.cz a.s.; edited by Vojtěch Kettner.

As mentioned in the 3.2. Transport Background, when looking in the map, old industry areas are occupying the city centre. Both of them are included in the transformation areas in the new comprehensive plan draft (Kocourek et al. 2021a:157). The PREX industry complex (back then a brick factory) located in the heart of the town (under P26 in Kocourek et al. 2021b), is inaccessible now. There has already been an architectural competition over this area searching for the best re-urbanisation idea combining public services with housing (zakopcem architekti 2017). Another important industrial area, the Jaga industry, occupies a great deal land to the east from the town centre (Kocourek et al. 2021b).



Figure 32: Hostivice Centre Re-urbanisation
 Source : zakopcem architekti, Seznam.cz a.s.; edited by Vojtěch Kettner.

Hebbert argues that the discovery of postmodern urbanism is a ‘crucial need for connections and corridors’ as understood from perspective of humans, mobility, recreation and climate. In the postmodern approach, human and ecosystem functions are combined (2008:50-51).

3.3. Heritage Background

As stated in the Strategic plan, ‘the urban identity is emphasized by the high standards of architecture’ (ONplan lab 2019b:13). As mentioned in the Comprehensive plan, architecturally significant buildings (school, library, community centre etc.) can be designed solely by an authorized architect so that the urban, cultural and composition values are maintained (Kocourek et al. 2021a:56). Moreover, the respect and effort for preserving and renovating the existent heritage is also supported (see ONplan lab 2019b:27 and Kocourek et al. 2021b:4).



Figure 33: The Müller Survey

Even though it is just a schematic map, Hostivice Ponds, Hájek Monastery, and the four centres (Hostiwitz/Hostivice, Litowitz/Litovice, Brzwy/Břve, Klein Jenetsch/Jeneček) were already acknowledged as most prominent in the region in 1720.

Source: Cenia; edited by Vojtěch Kettner.

3.3.1. Historical Heritage Sites in Hostivice

Cultural heritage phenomena are complicated to explain as they comprise all sorts of forms and materiality. In the Prague-West District, the culturally protected objects include churches, rectories, chapels, statues and vernacular architecture (Kyzík 1995:13-14). Few objects of heritage within the Municipality are listed on the National Heritage Institute: urban cores of Hostivice, and Litovice, St. Jacob Church, Hostivice Mansion, Hostivice Refectory, Litovice Fortress, the whole complex of the Pilgrim Trail, St. Maria column, and the chapel of Jan Nepomucký (ONplan lab 2019a:49).



Figure 34: Litovice Fortress
Source: Vojtěch Kettner.

The history of Hostivice is remarkable. The old farm villages that used to be more or less separate until 20th century – Litovice, Jeneček, Hostivice, and Břve with quite separate history (see Kučera & Kučerová 2017:27) – still maintain a specific character with old houses built in a naturally grown urban structure. The Litovice fortress from the 14th century is a sought-after example of a gothic- and baroque architecture composition (Kučera & Kučerová 2016:413-417). Currently the Fortress is empty in a private ownership (ibid 2017:413). Finally, the huge Hostivice Ponds system from 17th century and a Pilgrim Trail to the Franciscan Monastery in Hájek from 18th century are pieces of heritage that have a clear link to the landscape and are therefore dedicated a bit more attention.

In the Municipality, couple of old protected trees are parts of heritage since their age as well as environmental service is valued: Hostivice Lime tree (*Jiráskova street*), two lime trees in front of the St. Jacob Church and lime tree in Hájek (ONplan lab 2019a:56).

3.3.2. Hostivice Ponds

The Ponds collect the water from surroundings and channel it into Prague while being a key factor of local ecology.

According to Kučera, the author of the Ponds is unknown; they were built probably in the 14th century after having dried out the marshes. A prominent role in history was recorded in era of Rudolph II. when the system was supplying the Prague Castle with water. According to the Pond System plan from Antonín L. F. Klose from 1723, the system involved a number of ponds that are no longer existing – it had been Čížek-, *Nekejcov* and *Pátek Pond* in the Břve-(*Nekejcov*)-Kala-Čížek-Pátek-Peterka branch. The plan is also an evidence of almost no trees in the ponds surroundings. The interest for water supply dropped after the imperial court moved to Vienna resulting in *Nekejcov*- and *Čížek Ponds* to be relinquished in 19th century. The Litovice Pond (one of the biggest in the system) was even drained and used for agriculture for some years. Today, it is deserted wetlands at places of former *Nekejcov*- and *Čížek Ponds* (2021a). In 1996, Hostivice Ponds were ratified as a naturally protected area (Kučera & Kučerová 2016:430).

Mentioned by Kučera, the so called Bažantnice (Pheasant Park), forested area around the Kala Pond, had been used as a hunting grounds for noble guests since the Hapsburgs in late 19th century until 1956. Overlooking the Kala Pond, a small gloriette was built for the feast purposes; only foundation plinth is left until today. Since the removal of the fences around the grounds in 1970s, the forest serves recreation and production function under the state-owned company *Lesy ČR* (2021a).

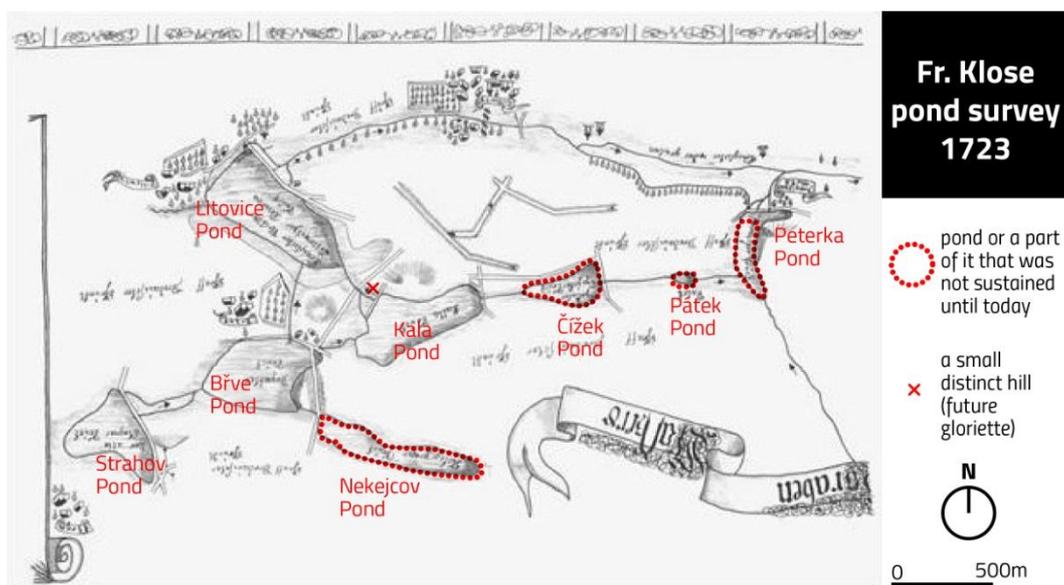


Figure 35: The plan of the Ponds from Antonín Leopold František Klose, 1723.

Those ponds that did not sustain until today are marked in red dotted lines.

Source: hostivickahistorie.cz; edited by Vojtěch Kettner.



Figure 36: Comparison of the current state with the Klose survey from 1723.

Nekejcov Pond turned into a marshland, partially forested, partially open. Čížek Pond was affected by the agricultural production, however, at the eastern dam, there was a historical path, today it is a bike path. The Pátek Pond can be still identified by the shape of the small forest, none of the original water surface has left though. The Peterka Pond has only turned in a small remnant part, while in history, the pond curled all the way under the railway following the shallow valley line. Today, most of this the former water surface is a wetland.

Source: Seznam.cz a.s.; edited by Vojtěch Kettner.

3.3.3. The Pilgrim Trail

Between the years 1720-1724, donated by noble men, Franciscans built 20 chapels along the Pilgrim Trail from Prague-Hradčany to the St. Maria Loreta in Hájek, part of a Franciscan Monastery. The chapels celebrated the 100th Hájek Loreta anniversary (Kučera & Kučerová 2016:421). St. Maria Loreta was founded by Florián Jetřich from Žďár in 1623-24 as a copy of Loreta from Italy (Kučera 2021b). Hence in a fragmentary number today, existing chapels are still dominant along the Road, distinct in the open landscape. Namely it is chapels no. 12, 18, 19, 20 (ranked in direction from Prague to Hájek) which are also registered under the whole complex of Pilgrim Trail as heritage objects by the National Heritage Institute (Natural Heritage Institute 2015). Unlike the usual Calvary chapels or rural chapels, The Pilgrim Trail chapels impress with their size (3.5m), proportions and plastic simplicity (Kučera 2021b). The other chapels (13-17) collapsed due to the lack of maintenance during the 20th century.

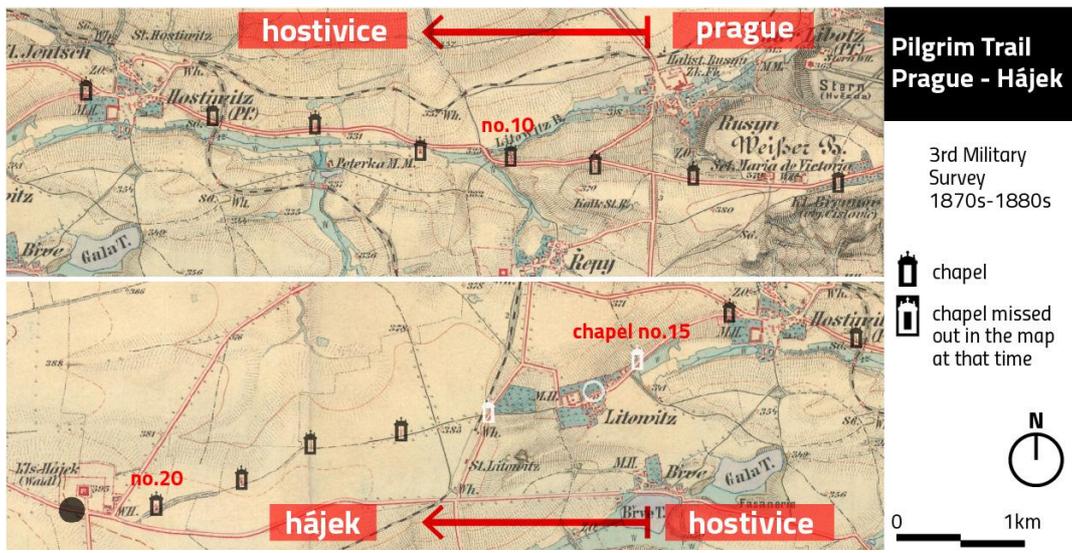


Figure 37: The Pilgrim Trail in the Third Military Survey
 Source: Cenia; edited by Vojtěch Kettner.

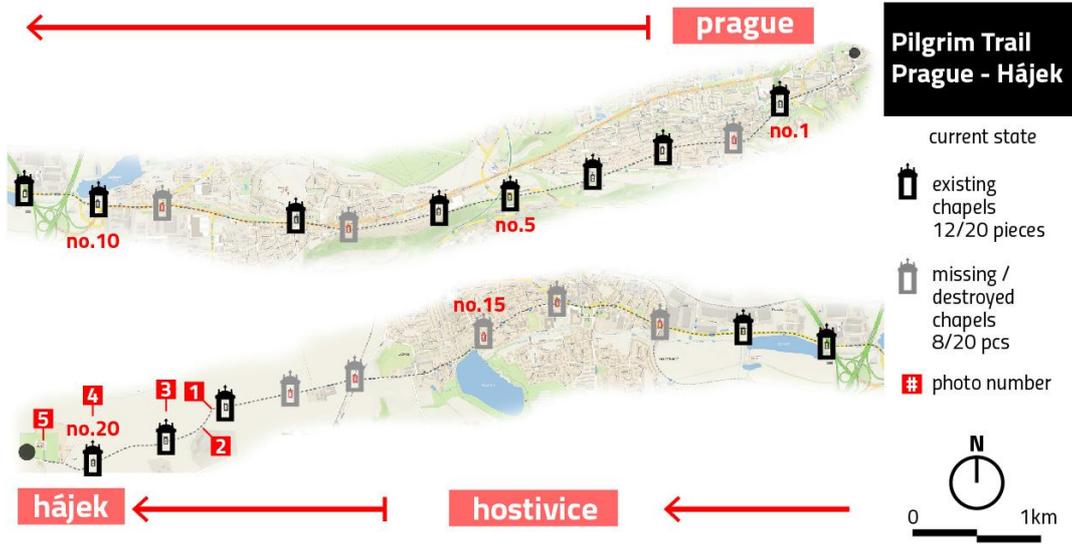


Figure 38: The Pilgrim Trail
 Source: Seznam.cz a.s.; edited by Vojtěch Kettner.



Figure 39: Pictures from the Pilgrim Trail

See Figure 38 for a reference map for the pictures.

Source: The chapel chart is from hostivickahistorie.cz, the rest is from Vojtěch Kettner.

4. Conclusions of the Themes Background

Combination of data sources strived for the most informed conclusion possible.

There is a strong materialist undertone in the studied planning documents (Kyzlík et al. 1995, Šindlerová et al. 2019a, Kocourek et al. 2021a), which is caused by the landscape definition in the Czech Act no. 114/1992 '*The Nature and Landscape Protection*', that misses out the human aspect compared to the European Landscape Convention (Council of Europe 2000). The term landscape is overused, as discussed in Mácha (2013:5) or Kučera (2009:152). The terms *landscape* and *environment* have been and often are taken as synonyms, which generates confusion.

The landscape is inherently connected to its history (1.8. History of Czech Landscape, see 2.2.1 Historical maps) – the agricultural landscape is composed of large fields, lacking landscape elements, and water management (Šindlerová et al. 2019a:93).

4.1. Climate Resilience Conclusion

A notable change in planning for the climate resilience can be seen between the Comprehensive Plan from 2011 (IKP Consulting Engineers 2011a, 2011b) and the draft for the new Comprehensive Plan (Kocourek et al. 2021a, 2021b).

The present TSES is followed and completed, expanded and expected to connect into a recreational corridors/belt through the Municipality (Kocourek et al. 2021a,b). TSES is a protected network, that gives a sense of guarantee for the future (Smrčková 2019). However, the combination of ecological services with involvement of people, is strongly advocated by the urban ecologists and planners who call for multi-functionality (Hebbert 2008:34), everyday landscape (Nassauer 1997, Rainer 2015, Jungová 2014) and urban ecology (Shwartz 2014, Thompson 2007, Douglas 2011).

The Brooks in Hostivice are socially and ecologically fruitful corridors (Hebbert 2008), well pioneered by the Litovice Brook reconstruction (AOPK 2016).

The green belt is crucially dependent on ownership and public opinion (Amati 2010), especially in the narrow corridors at the eastern and western branches of the belt (Kocourek et al. 2021b).

The multidisciplinary profession of landscape architecture can enrich the future environments (Thompson 2017) also in Hostivice (AOPK 2016). The profession strives for production of places for human needs (Jackson 1984). The *Jan Hus square* and the *Hostivice Mansion park* have always been located in the centre of affairs (2.2.1. Historical maps). Such central spaces, when designed and equipped (SLA&Ramboll 2016), can promote the Municipal goals of an architecturally, ecologically and socially balanced town (ONplan lab 2019b).

4.2. Transport Conclusion

Hostivice landscape is a fundamental area of daily open-air leisure for both pedestrians and cyclists (Šindlerová et al. 2019a:116). Pedestrians face low permeability in the urban (1.11.3 Connectivity within the urban landscape, 2.3.3 Cartographic activity), peri-urban (2.3.1 Strava Global Heatmap) as well as rural areas (Šindlerová et al. 2019a, 2.3.1.). The network of cycle paths is weak, missing safe connections to neighbouring villages (Šindlerová et al. 2019b). However, new promising cyclist projects do appear (Cach 2019).

4.3. Heritage Conclusion

Hostivice represents a landscape that had been overlooked for its low esthetical qualities and low leisure potential (Šindlerová et al. 2019b, Qviström 2010:225).

In the historical heritage aspect, low attention and care is given to the Litovice Fortress and the Pilgrim Trail considering their significance (1.12.3. Pilgrim Trail, Kučera & Kučerová 2016:413-417).

Similarly, Hostivice Ponds is as a piece of art and good craft, and has been a central point of interest in the area since 14th century (Kučera & Kučerová 2016:413-417, 2.2.1. Historical Maps).

5. RESULT

/ The Landscape Master Plan for Hostivice Municipality

» how can the Landscape Planning in Hostivice be challenged within the selected themes of Climate Resilience, Transport and Heritage?«

The Landscape Master Plan applies and displays the Conclusions. Each of the themes is given a distinct colour: **green for the Climate Resilience**, **yellow for the Transport** and **red for the Heritage**. Additional chart is contributing on the readability and credibility of the thesis.

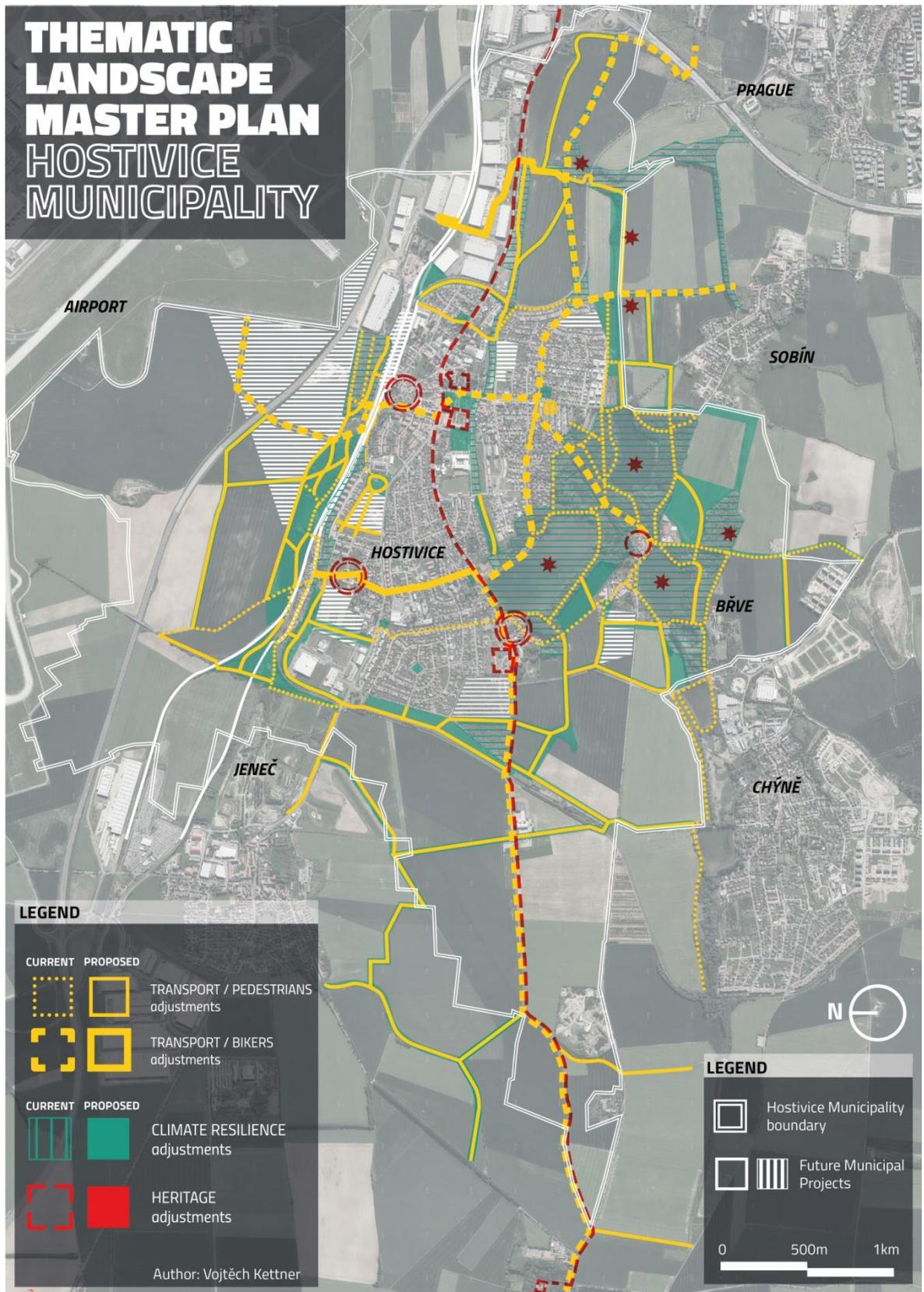


Figure 40: The Landscape Master Plan Proposal for Hostivice
 Source: Seznam.cz a.s.; edited by Vojtěch Kettner.

The plan recognizes the area of Hostivice Ponds reserve as a dominant green island. The centre, as well as the majority of the urbanized area, is located north of the Ponds. Inevitably, for most of the people, the forest is further than a comfortable walking distance (Šindlerová et al. 2019a:129). The lack of recreation areas creates a tension between the mass of the inhabitants and need for a sufficient open leisure time venues.

The recently renovated park on the northern rim of the town, *Višňovka*, is to be extended westwards into a wide belt along the railway (2.3.5. Vice-mayor Mr. Koňářík, Kocourek 2021b: under K19 code). This venue could create an antipole to the *Hostivice Ponds* natural reserve that is reaching visitors' limit on sunny weekends. This northern green island is planned as a fundamental segment of the green belt (ONplan lab 2019b, Kocourek 2021b).

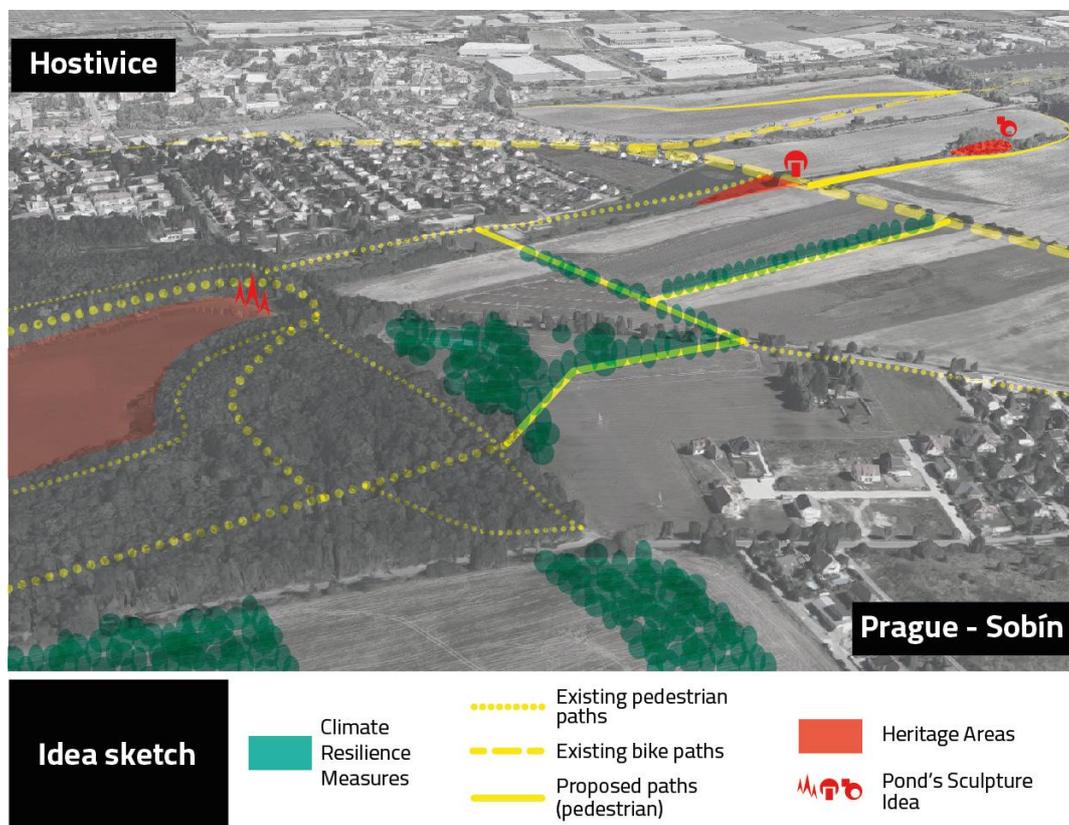


Figure 41: Idea sketch of the peri-urban landscape permeability enhancement
The view covers the landscape of the old ponds Čížek and Pátek with the Kala Pond in the foreground.

Source: Google maps; edited by Vojtěch Kettner.

In the centre, *Jan Hus Square*, as well as the Hostivice Mansion park, should co-create a vibrant hub both for small businesses as well as a close interaction with urban ecology. The recently renovated *Litovice Brook* can support this crucial function of the centre as the brook is naturally the most important green axis of

the town. The exposure of the Jeneč Brook, that is led underground these days, could bring fresh air into the most prominent public space in Hostivice.

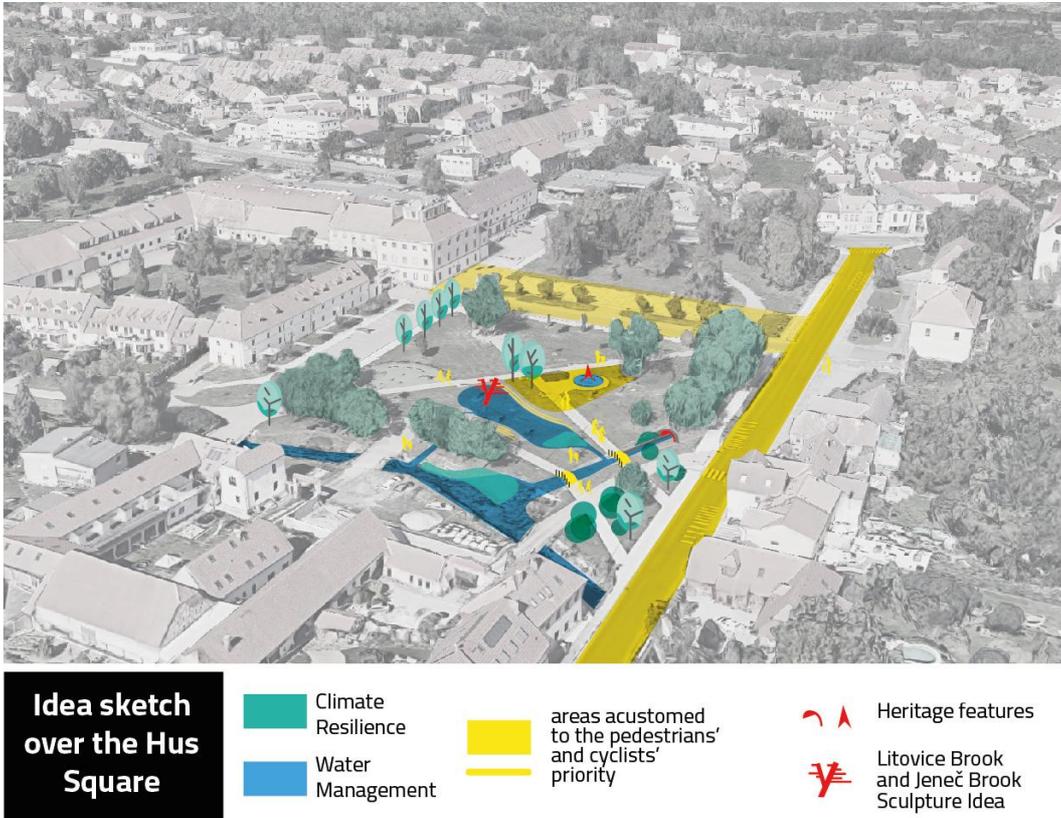


Figure 42: Mood sketch of the urban solution for Jan Hus Square
 Source: Google maps; edited by Vojtěch Kettner.

A series of local parks which feel like enclaves (*Hostivice-Nouzov Park, Zikl Park, Ke Skále Park, T.G. Masaryk Park*), need to be equipped accordingly and attempt to connect onto the surrounding green areas and thus boost the urban green infrastructure.

At the peripheries, the green belt should not only limit the exceeding expansion of residential areas into the open fields, but also found the bases for important nodes in the open landscape. As many as possible paths should be recreated in the agricultural land, not only for the cyclists and pedestrians but also in favour of the farmers as the wind erosion would decrease.

5.1. Climate resilience Key Proposal Elements

To connect ecology with people. Leave some silent places too.

by dense network of spatially modest improvements – such as rows of trees/alleys along paths, small water bodies, rain gardens, hedges, copses etc. (Šindlerová et al. 2019a:93, figure 24 and 25). Regard to the efficiency and connectivity should be prioritized.

Cooperation with students from universities in vicinity on small projects – for example on planting and ecological experiments (Jungová 2014), reconstruction of the Pilgrim Trail chapels, or heritage monuments for Hostivice Ponds.

5.2. Transport Proposal

A marked trail around Hostivice through the green belt with different ‘parks as beads’ tied to themselves might be a good project. With sufficient promotion and capacity, the trail could become an interesting open-air leisure element of similar popularity as *Gula stigen* (The Yellow Trail) in Uppsala (Uppsala Kommun 2014).

A great opportunity would be to connect the popular bike path from Prague-Řeplý with the new Prague-Kladno cycle path. Such a junction can happen either to the east from Hostivice through the industrial area or later through the Hostivice town. Both variants are complicated: the first variant would require a sensitive coordination with the industry traffic in terms of both space and safety. The second variant would conflict with the centre of Hostivice town, which is spatially very limited.

A cycling hub at Na Pískách would create a good meeting of cycling infrastructure and local amenities.

The noise from the airport could be lowered by the application of similar solutions as in Amsterdam – Schiphol (H+N+S LANDSCHAPSARCHITECTEN 2011). Since a great area would be dedicated to the new industrial area bordering on the airport north of the town (Kocourek 2019b), similar solutions of terrain modulations as in Amsterdam might be used both on roofs as well as in between the halls.

5.3. Heritage Proposal

The renovation of the close surrounding of Litovice Fortress should underline its importance. The current state is rather unrepresentative.

The role of the Pilgrim Trail is underestimated. In the aspect of landscape, it severely lacks funding and attention. The Pilgrim Trail could be a source of visitors, link to other municipalities as well as a source of local pride.

Contemporary reconstruction of the trail itself (altering the course, marking it with colour signs in the terrain) would return the faded fame of the Trail. Missing chapels along the Pilgrim Trail would maintain the continuance. A contemporary, artistic solution would be an option since the building of completely new copies of the chapel is costly.

The presence of the water at Jan Hus Square could be done in a bolder fashion. Contemporary urban ecological projects, yet functional and aesthetic for the promotion of the whole Hostivice Ponds system, would showcase the goals within the Municipality.

6. DISCUSSION

/ How much has been left unsaid?

Along the route towards the results, some stimulating insecurities and questions appeared. A discussion tries to reflect what can the weaknesses be as well as where the solution seems most convincing.

6.1. Framework: Discourse Materialized

As seen from the maps and studied material, nearly all of the land has once been cultivated. The cultural landscape is nearly everywhere – even the largest area of nature in the vicinity, Hostivice Ponds, was literally shaped by humans yet gradually became captured by nature.

The frame work with the three themes (Climate Resilience, Transport, Heritage) can be seen to resemble Schein's concept of cultural landscape – discourse materialized, that is site specific and the author self chooses the discourses (1997:675).

Someone can argue, that the three themes chosen were insufficient. I might have chosen just which ever discourses I wanted; for instance logistic corporate, sub-urbanity, or sports organisations. As a matter of fact, I have lived in the area for many years so I possess the intimate relation as Schein had. The understanding of a cultural landscape as discourse materialized is processual and inherent with change as Schein writes (1997:676). The authorship of such interpretation is however somewhat very personal and borders on the attitude that Mácha (2009) calls the *landscape narcissism* (see 1.6. The Concept of Landscape). Everyone would choose different discourses and conclude different results. From this point of view, the option for those three themes would always be subjective to an extent.

This concept seems fruitful, since it brings a touch of process into a landscape analysis, that is otherwise based greatly on physical objects and figures. If this

approach could be contributing on other landscapes and landscape plans too is left to be further examined.

6.2. Material collected

The collected material ranged from historical maps to expert articles from the landscape planning discourse. After skimming through the historical book *Litovice* from Kučera (2007) and after scanning the *hostivickahistorie.cz* website (Kučera 2021), I suddenly had an irresistible feeling how everything might be interconnected through history. Quite a paradox that it happened to me who spent some intensive years in the area. I felt an urgent though unrealistic craving to uncover all what happened in Hostivice through all the years. To know what the people thought about their lives, kings, politicians and finally about the landscape. What did the people think in 19th century about relations to neighbouring villages, and what did they think of life itself. What did people contemplate about in the beginning of the 20th century Czechoslovakia. That would have been charming (and possibly overwhelming) to get to learn. In such a landscape analysis project, one becomes a certain type of archaeologist.

I think the volume of selected sources was enough for being able to give an informed proposal for the Hostivice landscape. As wondered about in the previous paragraph, it might be fascinating to know as much as possible about the history about a particular place, since it is nearly unreal to know everything about a landscape. However, such feeling that a tiny forgotten information from decades ago could influence one's contemporary decisions seems rather irrational. As shown in the previous paragraph, it might have been fascinating in a romantic way to literally dig for historical sources, however such is probably not the right approach of an landscape architect. It is crucial to give meaning to multiple forms of data in a limited time and be able to base an opinion on such analysis.

Every era created its own landscape. In the historical maps, we could see that the landscape was nearly forestless. There were the ponds, probably since the 14th century, however until the late 19th century, the landscape around the Ponds was totally dominated by fields and meadows. Think of such a controversy today when the Ponds' surroundings ranked highest in the popularity evaluation during one of the public meeting for the Strategic Plan (ONplan lab 2019:78-81). Every era created such landscape that was most suitable. Only the initial act of building the Ponds was certainly motivated by the marshy area of limited use so the water management become a source of livelihood. The agricultural use developed until now. I think the historical paths with trees along must have been created on purpose – the fruit trees casted shadow and provided food in the summer, which

must have been good for refreshment during the labour. It was certainly also good for the wind protection as well as orientation and transport.

We have to think, what are the municipal needs today and have the courage to realize them. In the 19th century, the population was incomparably lower and the agriculture was the main occupation. Today, the landscape is required to deliver extensive open-air leisure spaces for many age groups. At the same time, the agriculture production is vital.

6.3. Complexity

The attempt of challenging the Hostivice landscape is an immensely complex task. The broader scope, the more information is attached and possibly intertwined generating collisions and contradictions. For instance, only a research on the history of industrial areas outside Hostivice with massive halls might be revealing – such intention goes strongly against agricultural, ecological, leisure and urbanisation cohesiveness of the area. Why were such plans adapted? Why can they not be cancelled?

More focused scope would be maybe more efficient and eyes opening. However, the goal was to challenge the landscape plan and there are many aspects associated with landscape.

Studying all the support documents of the Comprehensive Plan (text parts of the proposal, supporting documents, graphic attachments) would provide all planning related issues which would definitely make the municipal intentions clearer.

Since the framework of this thesis features a spectrum of source of data, the limited saturation of each part is inevitable. Clearly, the more each source is studied beyond strictly the landscape section, the more informed can this research be (for instance from perspective of housing regulations, technical norms etc.). Such knowledge extensions would be only beneficial.

6.4. Landscape Limitation

It has been stressed many times, that the Czech planning legislation has a strongly materialistic understanding of the landscape.

In both publications *The Nature, Environment and History of Prague–West District* from Kyzlik (et al. 1995) and *Landscape Analysis of Prague-West*

District from Šindlerová (et al. 2019a, 2019b), the term landscape could possibly be replaced by *environment* due to its ultimate ecological, organization and production purpose as argued by Mácha (2013). However, both publications used terms as grounded in Czech legislative – no. 114/1992 The Nature and Landscape Protection Act. In any case, divided in text (proposal, EIA) and graphical section (Landscape objective maps by topics), the *Landscape Analysis of Prague-West District* presents a legal planning document for the respective Municipality Boards.

6.5. Food production, recreation, and ecology

Indisputable as it is, the humans need good quality food. As witnessed, we humans also need ecology to help maintain liveable conditions whilst agriculture itself cannot deliver the stability itself. As witnessed, we humans also need different open-leisure spaces where we can socialize or relieve our psychology. This clash of demands is probably challenging every region, every of its landscape – rural and urban. One important aspect is the different terrain and climate configuration of every region on the planet Earth, so the clash of demands becomes site-specific.

Departing from how irresponsible would the behaviour of cutting down the self-sufficiency in food production be, a question of the landscape transformation occurs. How to keep the food production efficient and at the same time provide ecologic stability as well as open-air leisure to the monotonous landscape (see Šindlerová et al. 2019)?

The solution is just probably site-specific as mentioned in the beginning. Starting from delineating the dispositions and demands of the Municipality, the development should aim at efficient use of every part of the Municipality. Such process is basically something, that this thesis focuses on – finding the limits of the Municipality. However, I chose just the three themes: Climate Resilience, Transport and Heritage. In similar continuation, different topics can be chosen depending on the focus of the inquiry. Similar frame work of the study, possibly with slightly customized Background info, undertaken with accent on Economy or Sociology would be contributing.

6.6. Isn't the Territorial System of Ecological Stability (TSES) illustrating the rural-urban, nature-culture division?

The TSES system doesn't involve parks and city greenery as agents of ecological services. The TSES might be a continual system from definition and might be focused mainly on the rural environment so the villages are interconnected and thus regional ecology is deployed. However, the nature-culture divide seems to influence the planning since the landscape elements building up the TSES are usually located outside urban areas. There is a difficult way of getting the urban ecology on the same level of public acceptance as the rural ecology. Though, positive public opinion seems to grow towards the urban ecology in Hostivice after the *Litovice Brook* reconstruction (AOPK 2016). When having recognised the importance of urban ecology enough, the social acceptance and demand might cause the legislation change followed by changed planning.

This thesis concludes that the development is intrinsically connected to seizing living environment only to realize that those people generated by the development happen to miss the green areas. Inevitably, with the same pace of urbanisation, people will have to learn in closer contact with the nature, acknowledge it, integrate it and live it. As told by Thompson, a renowned American Landscape Architect, it will be the 'people's bond to nature that may save the world' not a command from authorities in form of a 'system scratched in plan but dead-withered in the reality' (Thompson 1999).

Inspecting if the TSES is not illustrating the rural-urban division, would be an interesting further inquiry contributing not only Hostivice Municipality in planning the green infrastructures within the landscape in general.

References

- AMATI, M. & TAYLOR, M.(2010). *From Green Belts to Green Infrastructure*, Planning, Practice & Research, vol. 25, no. 2, pp. 143-155, Routledge
- AOPK (2016). *Revitalizace Litovického potoka*. [Electronic article]. Accessible at: <https://vodnihospodarstvi.cz/revitalizace-litovickeho-potoka/>, viewed 2021-03-10
- BAROCH, P. (2013). *Stroj času: Z koupaliště, kam jezdila půlka Prahy, je obrť smetiště* [Time machine: Popular Bathing Place Becomes Junkyard]. [Electronic article], iDNES.cz, accessible at https://www.idnes.cz/cestovani/po-cesku/koupani-rybnik-brve.A130423_141941_tipy-na-vylet_skr, viewed 2021-05-01.
- BEATLEY, T. and MANNING, K. (1997). *The Ecology of Place: Planning for Environment, Economy and Community*. Washington, DC, Island Press.
- BEER, A. et al. (2003). *A Changing Understanding of the role of green-space in high density housing*. Built Environment, 29, p132-143.
- BLAGOEVOVÁ, B. (2014). *Residenční bydlení s vesnickým charakterem Hostivice-Břve, diplomní projekt* [Vernacular housing project Hostivice-Břve, Master Thesis]. Jan Sedlák Studio, FA CTU Prague, accessible at <https://www.fa.cvut.cz/galerie/diplomove-prace/2014-0-blagojevova-residenčni-bydlení-s-vesnickým-charakterem-hostivice-brve-54c9624250165368b62d9716/merged-compressed.pdf>, viewed 2021-05-16.
- BUSER, M. (2014). *Thinking through Non-Representational and Affective Atmospheres in Planning Theory and Practice*. Planning Theory 13 (3): 227–43. <https://doi.org/10.1177/1473095213491744>
- CACH, T. (2019). *Kladenská drážní cesta z města (Praha-Bubny – Kladno)* [Renovation of the Kladno no. 120 Railway]. Technical drawing to a project covered by Metroprojekt
- ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ (2021). *Voda ve městě* [Water in the City]. ISBN 978-80-01-06817-5, accessible at <https://vodavemeste.cz>, viewed 2021-06-15.
- COUNCIL OF EUROPE (2000). *European Landscape Convention*, ETS No.176, Florence, accessible at <http://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680080621>, viewed 2021-05-06.

- COSGROVE, D. & DANIELS, S. (1988). *The Iconography of Landscape: Essays on the Symbolic Representation, Design and Use of Past Environments*. Cambridge: Cambridge University Press
- ČORNEJ P. (2010). *Dějepis pro gymnázia a střední školy. 2, Raný středověk a novověk* [History Course Book for High School. 2, Middle- and Modern Age]. SPN – pedagogické nakladatelství. Praha. 160 p. ISBN:978-80-7235-430-6.
- CRONAN, W. (1995). *Uncommon Ground: Rethinking the Human Place in Nature*, New York: W. W. Norton & Co., p69-90.
- ČSOS (2021). *Mapový portál ČSOS, karta autora* [Czech Orienteering Federation Map Portal, author's page] Accessible at <https://mapy.orientacnisporty.cz/en/authors/1342>, viewed 2021-05-15.
- DOUGLAS, I. et al. (2011). *The Routledge Handbook of Urban Ecology*, Routledge.
- DREW, R. (2017). *Building the Global Heatmap*, Medium, accessible at <https://medium.com/strava-engineering/the-global-heatmap-now-6x-hotter-23fc01d301de>, viewed 2021-05-14.
- DUNCAN, J. (1990). *The City as Text. The Politics of Landscape Interpretation in the Kandyan Kingdom*. Cambridge University Press, Cambridge.
- ERBEN. K. J. (1853). *Kytice z pověstí národních*. Jaroslav Pospíšil. Prague. p149. Accessible at <https://kramerius5.nkp.cz/view/uuid:1eb82210-15e9-11dd-9d3a-000d606f5dc6?page=uuid:71694210-26e5-11e8-8220-005056827e51>, viewed 2021-05-17.
- EUROSTAT (2010). *Local Administrative Units*. [Electronic article]. Available at: <https://ec.europa.eu/eurostat/web/nuts/local-administrative-units>, viewed 2021-03-15.
- FOCUS Marketing & Social Research (2017). *Mazlíčci v českých domácnostech* [Pets in Czech families]. FOCUS – Centrum pro sociální a marketingovou analýzu, spol. s.r.o., Vrchlického sad 4, Brno. Accessible at <https://www.focus-agency.cz/z-nasich-vyzkumu/podil-domacich-mazlicku-v-ceskych-domacnostech-mirne-roste>, viewed 2021-05-07.
- GEPRO, spol. s r.o. (2021). *Geoportál GEPRO* [GEOPRO Geo-portal], version 15.20.137502, ©ČÚZK CENIA, accessible at <https://hostivice.gepro.cz/#/>, viewed 2021-05-08.
- GILBERT, L. O. (1989). *The Ecology of Urban Habitats*, London, Chapman & Hall.
- HANOUSKOVÁ, I. et al.(2003). *Landscape Change in the Czech republic during the 20th Century: Protected areas and abandoned anthropogenic ecotones*. Landscape Research. 28.309-316. 10.1080/01426390306519.
- HARLEY, J. B. (1988). *Maps, knowledge, and power*. In: S. Daniels & D. Cosgrove (Eds.): *The iconography of landscape* (277–312). Cambridge: Cambridge University Press.

- HASSGÅRD, E. (2019). *Beträdor*. Steffanstorps Komun, accessible at <https://staffanstorp.se/fritid-och-upplevelser/natur-kultur-och-sevart/betrador/>, viewed 2021-06-17.
- HEBBERT, M.(2008). *Re-enclosure of the urban picturesque: Green-space Transformations in Postmodern Urbanism*. The Town Planning Review, 2008, vol. 79, no. 01, pp. 31-59. Liverpool University Press.
- HELLNER, J. (2019). *Milion stromů pro Prahu bude*, Aktualne.cz, accessible at <https://zpravy.aktualne.cz/regiony/praha/milion-stromu-pro-prahu-bude-zelen-pribude-do-kazde-opravova/r~2771f0e83b4911e9b38a0cc47ab5f122/>, viewed 2021-05-18.
- HOUGH, M. (1994). *Cities and Natural Process*. London. Routledge.
- H+S LANDSCHAPSARCHITECTEN (2011). *Land art + Soundscape, Buitenschot park*, accessible at: <http://www.hnsland.nl/en/projects/land-art-park-buitenschot>, viewed 2021-04-12.
- IKP CONSULTING ENGINEERS s r.o.(2011a). *Územní plán města Hostivice, č.2* [Comprehensive Plan of Hostivice, vol.2 – text part], project number IKP CE: 108414, original from 2005 accessible at http://hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=409956, 2011 update at http://www.hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=413713, viewed 2021-07-04.
- IKP CONSULTING ENGINEERS s r.o.(2011b). *Územní plán města Hostivice, č.2* [Comprehensive Plan of Hostivice, vol.2 – drawing part], project number IKP CE: 108414, original from 2005 accessible at http://hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=409970, 2011 update at http://www.hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=413715, viewed 2021-04-07.
- INGOLD, T. (2000). *The Perception of the Environment*. Routledge, London. p465.
- IOF Map Commission (2006). *International Specification for Sprint Orienteering Maps (ISSOM/ISSprOM)*. IOF. Ås/Budapest. Accessible at <https://orienteering.sport/iof/mapping/>, viewed 21-05-16.
- JACKSON, J.B. (1984). *The Word Itself* from *Discovering the Vernacular Landscape*, New Haven, CT: Yale University Press.
- JUNGOVÁ, I. (2014). *Strakonická louka po celé Evropě* [Planting Practice from Strakonice]. Ministry of the Interior of the Czech Republic. Accessible at <https://www.mvcr.cz/webpm/clanek/strakonicka-louka-po-cele-evrope.aspx>, viewed 2021-05-17.
- KAIKA, M. (2012). *City of Flows: Modernity, Nature and the City*. Chapter 2, p11-26. [10.4324/9780203826928](https://doi.org/10.4324/9780203826928).
- KOCOUREK et al. (2021a). *Územní plán Hostivice – odůvodnění návrhu* [The Comprehensive Plan of Hostivice – proposal justification, text part]. Royal HaskoningDHV Czech Republic. Accessible at:

- http://hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=436357, viewed 2021-05-12.
- KOCOUREK et al. (2021b). *Územní plán Hostivice – hlavní výkres* [The Comprehensive Plan of Hostivice – the general drawing] . Royal HaskoningDHV Czech Republic. Accessible at: http://www.hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=436363, viewed 2021-05-12.
- KOUHOUT, J. (2013). *Hostivice, diplomní projekt* [Hostivice, Master Thesis]. Karel Maier Studio, FA CTU, accessible at https://www.fa.cvut.cz/galerie/diplomove-prace/2013-0-kohout-hostivice-52e78c1f501653507508410b/kohoutjan_portfolio.pdf, viewed 2021-05-04.
- KUČERA, J. & KUČEROVÁ, A. (2016). *Litovice*. MKSH, 653 p., ISBN 978-80-270-01252-1.
- KUČERA, Z. (2009). *Krajina v české geografii a otázka relevance přístupu anglo-americké humánní geografie*. Geografie, 114, no. 2, p. 145-155.
- KUČERA, J. (2021a). *Hostivická historie – Hostivické rybníky* [History of Hostivice – Hostivice Ponds]. [Web article], accessible at <http://www.hostivickahistorie.cz/pamatky/rybniky.htm>, viewed 2021-05-14.
- KUČERA, J. (2021b). *Hostivická historie – Poutní cesta z Prahy do Hájku* [History of Hostivice – Pilgrim Trail to Hájek]. [Web article], accessible at <http://www.hostivickahistorie.cz/pamatky/cesta.htm>, viewed 2021-05-14.
- KUČERA, J. (2021c). *Hostivická historie – Litovická tvrz* [History of Hostivice – Litovice Fortress]. [Web article], accessible at <http://www.hostivickahistorie.cz/pamatky/tvrz.htm>, viewed 2021-05-14.
- KYZLÍK, P. et al. (1995). *Příroda, životní prostředí a historie okresu Praha – západ* [The Nature, Environment and History of Prague – West District], Prague – West County Board, Černošice.
- KUKLÍK, J. sr. & KUKLÍK J. jr. & ČORNEJ P. (2010). *Dějepis pro gymnázia a střední školy. 4, Nejnovější dějiny* [History Course Book for High School. 4, 20th century]. SPN – pedagogické nakladatelství. Praha. p215., il. ISBN:80-7235-175-3.
- LANDSCAPE INSTITUTE (2008). *Landscape architecture and the challenge of climate change*, accessible at <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2016/03/LIClimateChangePositionStatement.pdf>, viewed 2021-06-09.
- LERCH, M. (2017). *International migration and city growth*. Electronic article. United Nations, accessible at <https://www.un.org/en/development/desa/population/publications/pdf/technical/TP2017-10.pdf>, viewed 2021-04-06.

- LERMAN, P. (2007). *Landskap i svensk rätt: Underlag för Landskapskonventionens genomförande*. Lagtolken AB. Accessible at https://www.raa.se/app/uploads/2012/06/landskap_i_svensk_ratt_v_1_0.pdf, viewed 2021-05-08.
- MÁCHA, K. H. (1836). *Mág: báseň od Karla Hynka Máchy*. Jan Spurný. Prague. p68. Accessible at <https://kramerius5.nkp.cz/view/uuid:5e5c5d90-0cad-11dd-81b7-000d606f5dc6?page=uuid:f5b9aa90-7122-11e4-9d98-005056825209>, viewed 2021-05-17.
- MÁCHA, P. (2013). *Krajiny: příspěvek k diskuzi o konceptualizaci krajiny v (české) geografii* [Landscapes: comment on the conceptualization of the landscape in the Czech geography], *Geografie*, 118, č. 1, s. 1-15.
- MĚSTO HOSTIVICE (2013). *Program rozvoje města Hostivice* [Hostivice Municipality Development Program], accessible at <http://hostivice.eu/program-rozvoje-mesta/ds-24490/archiv=0&p1=4433>, viewed 07-04-2021.
- MĚSTO HOSTIVICE (2021a). *Město Hostivice – sdružení a spolky*. [Clubs Organisations in Hostivice Municipality]. Accessible at <http://hostivice.eu/sdruzeni%2Da%2Dspolky/os-4004/p1=4741>, viewed 2021-05-10.
- MĚSTO HOSTIVICE (2021b). *Nový územní plan Hostivice* [New Comprehensive Plan for Hostivice Municipality]. Accessible at <http://uzemniplan.hostivice.eu/>, viewed 2021-05-14.
- MĚSTO HOSTIVICE (2021c). *Statistické údaje* [Key figures]. Accessible at <http://www.hostivice.eu/statisticke-udaje/d-409944/p1=4410>, viewed 2021-05-17.
- MUMFORD, L. (1964). *The Highway and the City*. London. Secker and Warburg.
- NASSAUER, J. I. (1995). *Messy Ecosystems, Orderly Frames*. *Landscape Journal*, vol.14, no. 2. p161-169.
- NATIONAL HERITAGE INSTITUTE (2015). *Poutní cesta do Hájku* [Pilgrim Trail to Hájek]. Accessible at <https://www.pamatkovykatolog.cz/poutni-cesta-z-prahy-do-hajku-14837664>, viewed 2021-05-15.
- NĚMCOVÁ, B. (1862). *Národní báchorky a pověsti*. Prague. Antonín Augusta. P328. Accessible at <https://kramerius5.nkp.cz/view/uuid:1d742140-5c70-11e4-a6f0-5ef3fc9ae867?page=uuid:75ac3710-8143-11e4-b5a7-001018b5eb5c>, viewed 2021-05-17.
- OLWIG, K. R. (2002). *Landscape Nature and the Body Politic: From Britain's Renaissance to America's New World*. The University of Wisconsin Press, Madison (Wisconsin), p299.
- ONPLAN LAB s r.o.(2019a). *Strategický plán Hostivice 2020-2035 – analytická část* [Hostivice Strategic Plan 2020-2035 – analytical part], accessible at <http://hostivice.eu/strategicky-plan-hostivice/ds-24696/p1=26625>.
- ONPLAN LAB s r.o. (2019b). *Strategický plán Hostivice 2020-2035 – návrhová část* [Hostivice Strategic Plan 2020-2035 – proposal part], accessible at

- <http://hostivice.eu/strategicky-plan-hostivice/ds-24696/p1=26625>, viewed 2021-04-07.
- ONPLAN LAB s r.o. (2019c). *Zpráva z konzultace návrhové části Strategického plánu*. [A report from the public meeting consulting the Strategic plan] Město Hostivice, accessible at http://www.hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=430674, viewed 2021-04-07.
- PROJEKTIL ARCHITEKTI (2021). *Studie širšího prostoru hostivického nádraží* [Architectural study of the Hostivice Railway Station surroundings], Město Hostivice, accessible at <http://prednadrazi.hostivice.eu/>, viewed 2021-05-03.
- QVISTRÖM, M. (2010). *Shadows of planning: on landscape/planning history and inherited landscape ambiguities at the urban fringe*. Geografiska Annaler Series B, 92(3), p1–17. Accessible at <https://doi.org/10.1111/j.1468-0467.2010.00349.x>.
- RAINER, T. et al. (2015). *Planting in a post-wild world*, Timber Press, p272. ISBN 978-1604695533.
- Romell, L. - G. (1928). *Skogens andliga värden*, in: WAHLGREN, A. and SCHOTTE, G. (eds): *Sveriges skogar och huru vi utnyttja dem*, del 2. Hökerbergs, Stockholm, p1601–1673.
- ROSE, G. (1993). *Feminism and Geography*. The Limits of Geographical Knowledge. University of Minnesota Press, Minneapolis.
- ROYAL HASKONINGDHV CZECH REPUBLIC (2021). *Projekty* [Projects]. Accessible at <https://www.royalhaskoningdhv.com/cs-cz/czechrepublic/projekty>, viewed 2021-05-16.
- SAUER, C. (1963). *The morphology of landscape* in Sauer, C. *Land and Life*, Berkeley: University of California Press.
- SCHEIN, R. (1997). *The place of landscape: A Conceptual Framework for Interpreting an American Scene*. Annals of the Association of American Geographers, 87(4), p660 – 680.
- SLA & RAMBOLL (2016). *Climate Adaptation Copenhagen: Hans Tavsens Park*, accessible at: https://www.sla.dk/files/2914/9449/3217/SLA_Ramboll_HansTavsensPark_UK.pdf, viewed 2021-04-11.
- SMRČKOVÁ, A. (2021). *Vyhodnocení vlivů územního plánu na životní prostředí* [Environmental Impact Assessment], Royal HaskoningDHV Czech Republic, spol. s.r.o., accessible at http://hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=436353, viewed 2021-05-04.
- SOUKUP, T. (2018). *Demografická studie Hostivice* [Hostivice Demographic Survey], accessible at http://hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=428273, viewed 2021-04-12.

- SHWARTZ, A. et al. (2014). *Enhancing urban biodiversity and its influence on city-dwellers: An experiment*. *Biological Conservation* 171 (2014). Elsevier Ltd. p82-90.
- SWANWICK, C., DUNETT, N., and WOOLEY, H. (2003). *Nature role and value of green space in towns and cities: an overview*. *Built Environment*. 29. p94-106.
- ŠINDLEROVÁ et al. (2019a). *Územní studie krajiny správního obvodu ORP Černošice* [Landscape Analysis of Prague-West District], Czech University of Life Sciences in Prague, accessible at https://up.mestocernosice.cz/US/US_krajiny_ORP_Cernosice/USK%20S0%20ORP%20Cernosice_NAVRH_cistopis_2019-11-30.pdf, viewed 2021-05-06.
- ŠINDLEROVÁ et al. (2019b). *Územní studie krajiny správního obvodu ORP Černošice – Karty krajinných okrsků, Zápraží 08* [Landscape Analysis of Prague-West District – Landscape Card no.08 Zápraží], Czech University of Life Sciences in Prague, accessible at https://up.mestocernosice.cz/US/US_krajiny_ORP_Cernosice/Karty_KO/KO08-Zaprazi_2019-11-28.pdf, viewed 2021-05-06.
- THOMPSON, I. (1999). *Ecology, Community and Delight: An Inquiry into Values in Landscape Architecture* (1st ed.). Routledge. <https://doi.org/10.4324/9780203362495>
- THOMPSON, I. H. (2017). *The Role of Theory*, in VAN DEN BRINK, A., BRUNS, D., HILDE, T., BELL, S., (2017). *Research In Landscape Architecture: Methods And Methodology*. Routledge. Taylor & Francis eBooks. p37-53.
- TCPA – TOWN & COUNTRY PLANNING ASSOCIATION (2004). *Biodiversity by Design: A Guide for Sustainable Communities*. London. Town & Country Planning Association.
- TURNER, T. (1998). *Landscape Planning and Environmental Impact Design*, London, UCL Press.
- UPPSALA KOMUN (2014). *Gula Stigen*, accessible at <https://www.upsala.se/globalassets/dokument/friluftsomraden/gulastigen-2014.pdf>, viewed 2021-05-17.
- UNITED NATIONS (2015). *Paris Agreement*, accessible at https://unfccc.int/sites/default/files/english_paris_agreement.pdf, viewed 2021-06-09.
- VONDRUŠKOVÁ, L. (2015). *Technická zpráva: Revitalizace zeleně - sídliště Na Pískách* [Technical report: Greenery revitalization], accessible at http://hostivice.eu/assets/File.ashx?id_org=4583&id_dokumenty=421283, viewed 2021-05-17.
- WYLIE, J. (2007). *Landscape*. Routledge. Taylor & Francis e-Library.
- ZAKOPCEM ARCHITEKTI (2017). *Reurbanizace centra Hostivice* [Central Hostivice Re-urbanisation], Web article, accessible at <http://www.zakopcem.com/architektura/hostivice>, viewed 2021-04-15.

Appendix 1

The Uneasy Position Of Landscape Architecture In Czech Republic Related To Semantic Constraints Of The Czech Translation For '*Landscape*'

Author: Vojtech Kettner (voke0002@stud.slu.se)

An essay for the course LK0313 – *Landscape Architecture: History, Theory and Practice*, held at the Swedish University of Agricultural Sciences, Uppsala.

28-10-2019

ABSTRACT

What is the current position of landscape architecture profession in Czech republic and how is it recognised by the public? What constraints the profession suffers from in feebly contextual Czech translation for landscape? What conditions is the profession evolving in?

Consulting semantics of the Czech landscape - cultural, historical and spatial context - this essay attempts to present an explanatory research.

The Genealogy of Landscape Planning in the Prague Suburb, Hostivice Municipality, Czech Republic

Author: Vojtech Kettner (voke0002@stud.slu.se)

An essay for the course LK0345 – *Landscape Planning in Theory and Practice*, held at the Swedish University of Agricultural Sciences, Uppsala.

23-10-2020

ABSTRACT

This paper studies a Prague suburb municipality's landscape planning to inquire about the form and extent to which the municipality has succeeded in providing an open-air recreational area to its inhabitants from history until today. The essay argues for active human involvement in the landscape and future potentials in line with the guarantee of democratic access and right to the landscape. By applying theoretical discourses and comparison of the existing plans, the essay reviews how landscape planning had favored no special attention and what might be the prospects for the future. The author has lived in the case study area for 20 years.

Keywords: landscape planning, Comprehensive Plan, strategic plan, recreational landscape, suburbs, biodiversity, connectivity, discourse materialized, Czech republic

The Role of the Landscape in the Comprehensive Plans of Four Small Municipalities around Prague, Czech Republic

Author: Vojtech Kettner (voke0002@stud.slu.se)

An essay for the course LK0330 - *Roles and Methods for Landscape Architecture in Comprehensive Planning*, held at the Swedish University of Agricultural Sciences, Uppsala.

24-03-2020

ABSTRACT

This essay focuses on a comparison of 4 selected municipalities in the vicinity of Prague, the capital of the Czech Republic, that are trying to incorporate different yet similar strategies concerning landscape in the Comprehensive Plans. Considering the municipal importance of the residential function in a tensed proximity to Prague, the role of landscape is questioned. Through the comparison, this essay aims to give example of practice how the landscape can be handled and how it can enhance living conditions.

Keywords: Landscape, Landscape Architecture, Municipality, Comprehensive plan, Prague
