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# PROSECKÉ SKÁLY REPORT

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## Chapter 1. Introduction

The Prosecké Skály hillside, an area of 99 hectares, is located in the North-West of Prague. The majority of the space is under the territory of Prague 8, however Prague 9 is also in charge of two small parts at the East side. The area could be described as an “urban jungle” meaning that the area is green space captured in an urban setting with ambiguous land use and functions. A defining feature of this area is Prosecké Skály with its sandstone caves.

This report documents the results and analysis from the data we have obtained from questionnaires, interviews and observations. Further information on the methodology used can be found in Annex A. In chapter 2 the results will be discussed in the following order: first the environmental aspects and second the organizational dimensions. From these results we come to the final chapter 3 in which the most important themes will be identified. Using a SWOT analysis, the current situation as well as four possible scenarios for Prosecké Skály will be discussed.



Figure 1. Area map of Prosecké Skály with indication of reference points



## Chapter 2. Key Research Findings

### 2.1 Environment

#### 2.1.1 Physical Characteristics

##### *Geomorphology*

The morphology started to take shape in the Quaternary, when the river Vltava eroded the terraces that shape Prague, due to neotectonic uplift of the region (Kalvoda & Balatka, 2016). The area marks the transition from the plateau in the North to the floodplain of the river, but it covers a smaller altitude difference than other areas included in this research. The sandstone formation consists mainly of porous Tertiary to Quaternary sediments, but the river also exposed older, harder materials in the South (Figure 2).

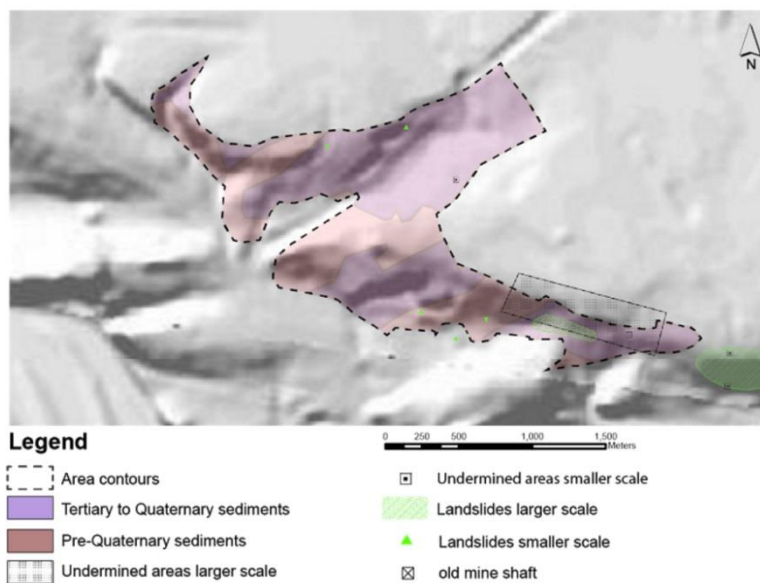


Figure 2. Geomorphology (Geoportal Praha, 2010)

##### *Ecology*

The current vegetation of dense forest has developed over the last 50 years. Before that the area was much more open and consisted of either small shrubs (e.g. *Crataegus Monogyna*) with a steppe vegetation underneath or had even an agricultural function, feeding the city and surrounding villages of Prosek, Střížkov and Liběň. The current vegetation of the green areas consists of a varied deciduous forest (see Figure 3). Major species are *Acer Campestre*, *Acer Pseudoplatanus*, *Quercus Robur*; *Tilia Cordata* and *Aesculus Hippocastanum*. What gives the vegetation an extra dimension is the frequent occurrence of fruit bearing trees like *Sambucus Nigra*, *Juglans Regia*, *Prunus Avium* and *Malus Sylvestris*. In Prosecké Skály even one *Castanea Sativa* is present, an uncommon species in the region. During the development of the forest invasive species like *Robinia Pseudoacacia* and *Quercus Rubra* were brought in. The presence of these species complicates the maintenance and alterations in vegetation, since these species will pop up first after cutting trees. Thus a targeted small-scale approach is required (Interview 15).

Human interventions also influenced the morphology of the area. Parts of the younger sediments are excavated for sand supply. In Prosecké Skály older materials are mined underground resulting in an elaborate network of caves. The mining lead to instability of the surroundings, but this does not affect the potential of the area. The excavations have resulted in steep, visually interesting, but erosion sensitive cliffs.

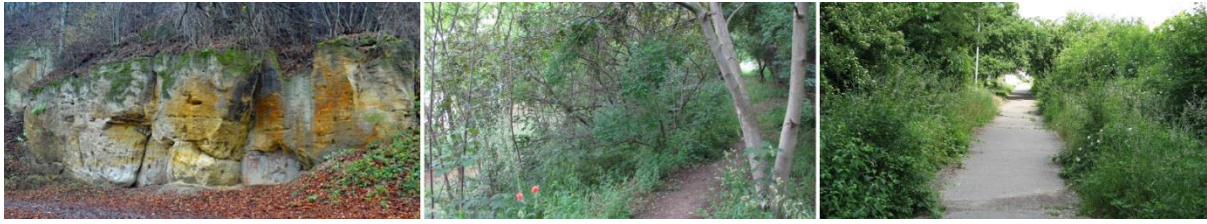


Figure 3. Prosecké Skaly, and vegetation in the area

Small steps have been taken to change the area back to its original appearance. Further there is an important landscape element that used to be an orchard (see land use map in section 2.1.3), which is located close to residential districts and surrounded by allotment gardens, making it a great opportunity to bring in people. However it is currently abandoned and overgrown by other trees. The caves provide an interesting habitat where seven bat species are found. If the caves are opened, only a small portion will be accessible for people, making interference with the habitat of the bats marginal (Interview 2, 23).

### Environmental quality

#### Air quality

Air quality in the area is mediocre at best caused by its location in the middle of an urban setting. Especially the highway, multiple other roads and the surrounding residential areas are a source of air pollution from emissions (e.g. benzene and nitrogen) caused mostly by traffic. A burden for the lower areas, but simultaneously a benefit for the upper areas is that the pollution can be trapped or blocked by the slopes and the thereon resting vegetation providing a valuable regulating ecosystem service.

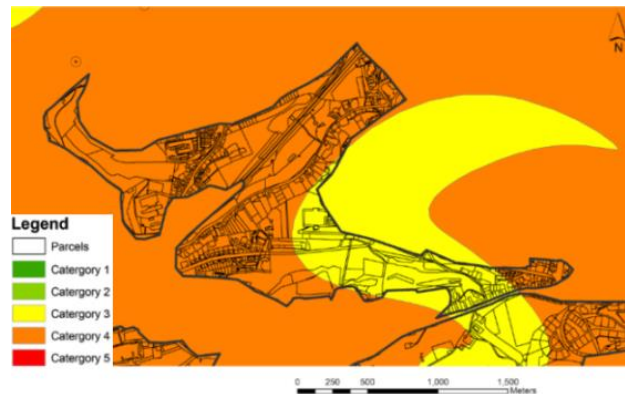


Figure 4. Air quality, ranging from good (green) to bad (red) (Geoportal Praha, 2010)

#### Noise

Noise levels are very much related to traffic and occurring in the lower lying and residential areas. When standing on higher ground (R8, Observation), unshielded by vegetation, the noise emerging from the highway is omnipresent in the background. In contrast in some places, e.g. the Prosecké Skaly protected area (S10, Observation), the sonic environment is pleasant as one is cut off from street and urban noise to a high extent and can enjoy the sounds of nature. Hence the green areas provide the important ecosystem service of noise abatement.

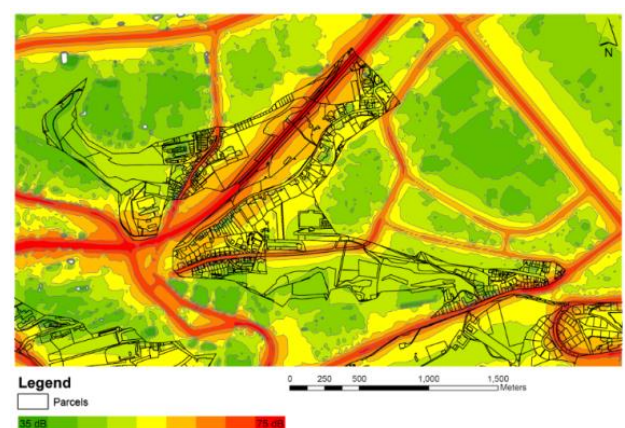


Figure 5. Noise during the day (Geoportal Praha, 2010)

## Microclimate

The microclimate can vary to a certain extent in different locations of our area due to a multitude of influencing factors such as wind speed, ventilation, solar radiation, elevation, land use. The lower lying urban areas benefit of an air vent caused by the delimiting slopes and the river valley. The sun radiation on the other hand is higher on the exposed, south facing slopes. Overall it is not possible to define a microclimate by area, but more by its land use. The built environment is warmer than a green surrounding caused by the effects of trapping heat. Overall the climate in the Prosecké Skaly area is considered acceptable (Praha 8 website, 2016) but with the potential for improvement.

### 2.1.2 Networks

#### *Bio- and green corridor*

There is no physical biocorridor present in the area and this may not be necessary since the urban infrastructure inhibits the area from providing a prosperous habitat for terrestrial species. A positive development could be to investigate the green routes for people. On the North side, there is potential for these connections (e.g. Park Přátelství) and the districts seem suitable for this purpose because of their spacious and green design. However the connections may cross (gated) private land, resulting in uncertainty about its use for mobility in the area. A direct green connection with Vysočany seems possible. There is however only one connection that crosses a busy road and goes through a built-up part of the area. To the South-West the connection seems less likely to occur. The connection to Libeň requires to overpass the major barrier of Zenklova road including the tram rails and go through the hospital campus. The hospital is not open to this connection in relation to patient security (Interview 1).

#### *Transport network and accessibility*

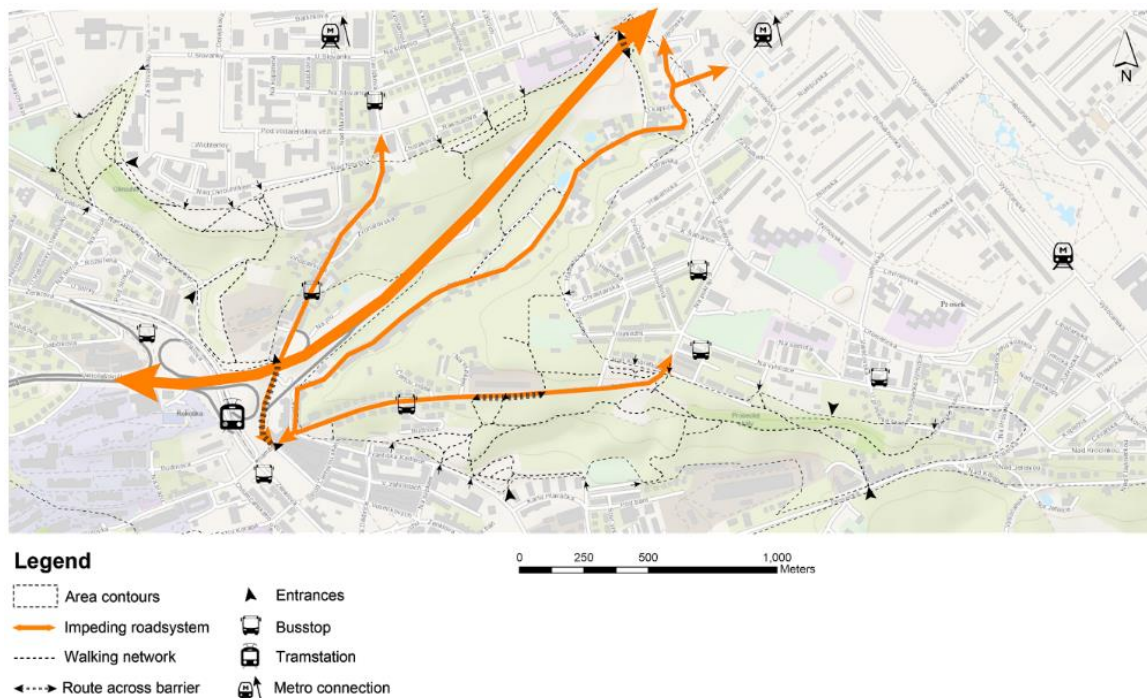


Figure 6. Transport network (Geoportal Praha, 2010)

The urban setting makes for a good external accessibility. There is access through road, tram, metro and bus. The road structure works in two ways: It increases the transit of people through the area, but also fragments the green spaces into five parts. Historically there were only two roads:



Davidkova and Střížkovská. In 1940 Na Sráži was developed. After the war Prague greatly expanded and the Liberecká highway was constructed. This highway splits the whole area in two and it is only possible to pass the road at the outer edges of the area.

The road system and private functions limit the internal accessibility and movement in the area. Pedestrians often need to follow a traffic road before being able to enter the next walking path, so it creates a fragmented green area. Another issue is that the entrances are often obscure as they lack indication with signs or gateway and are only known to the adjacent area, such as shown in Figure 7.



Figure 7. Unmarked and neglected entrances

### 2.1.3 Societal Presence

#### *History and Identity*

In the past the Prosecké area was on the outskirts of Prague and had the characteristic of a village or rural suburb of the city. Its major function was agriculture in forms of food and wine production for self-subsistence and for supplying the urban area. Additionally sand mining played an important role for the area and was providing building material for the city. However the area took a drastic change in its function after the end of World War II. Beginning in the 1950's and going all along the rest of the 20th century it is observable that the development of the City was absorbing the Prosek and Liben areas and transformed them into urban suburbs with a dense street grid and high rise residential buildings. Since 1992, the Prosecké Skaly is classified as protected area to protect the specific outstanding features and their associated biodiversity and habitats (IUCN) as well as preserving the geological, geomorphological and landscape value of the rocks.



Figure 8. Historical development of the area (1945, 1975 & 2004)

### Use and human activity

The different types of uses and activities are characterised by and closely related to the variation in land use, which can be observed below in Figure 9 below.

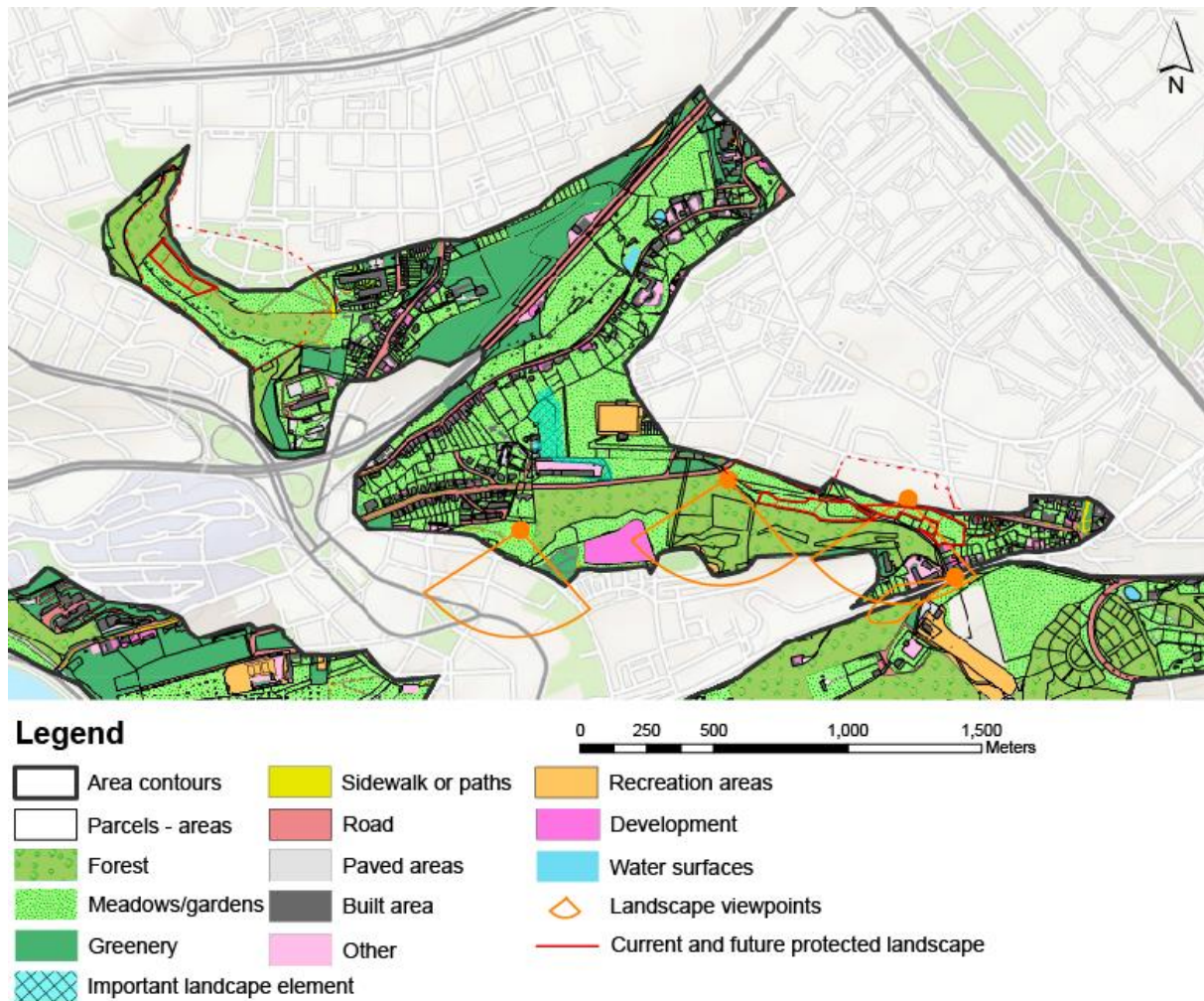


Figure 9. Land use map (Geoportal Praha, 2010)

According to the result of 115 questionnaires shown in Figure 10, the most popular activity is nature walks, followed by leisure and sports. This was also apparent during our observations: we mostly saw people running and (dog-)walking. We also encountered several mountain bike trails with citizen-made ramps so the area is also used for mountain biking. We encountered a man living in Q10 who pointed out that blueberries, mushrooms and other crops grow in the area so it could be used for fruit picking as well.

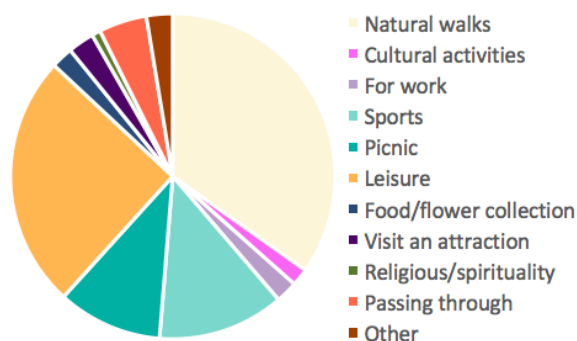


Figure 10. Human activities according to survey

The area has three different allotment gardens, giving the area a gardening function. Smaller parts of the area, e.g. near Prosecké Skaly (S10), are currently used for education, but exclusively by the scouting organisation in the area. There is more potential for using the green space, the rocks and the caves for educational purposes in the future.



Most people prefer to visit the hillsides during the day, specifically in the afternoon. There does not seem to be a preference among seasons or a difference between weekend and weekday. When visiting the area, we observed most people were alone or walking dogs. People also went with partners or children. No one uses the hillsides to attend an event, unsurprisingly as during our fieldwork we did not come across any signs of events. Some respondents also indicated other activities such as guerrilla cleaning activities in April.



Figure 11. Mountain bike trail in Prosek

### Viewpoint at Na Vyhlídce

Given the unique formation of underground space, the Prosecké Skály could have an important educational function. This can be done by opening the caves to the public. In April 2016 a viewpoint was realized by Prague 9 near Na Vyhlídce at the top of the Prosecké Skály area. It is a horizontal viewpoint, almost like a diving board hanging above the rocks, overlooking the city. It is not just intended as a viewpoint but also as a possible entrance to the caves, turning it into a tourist attraction. On top of the viewpoint a glass cube with gastronomic facilities is supposed to be built. There are big plans for this viewpoint, estimated to cost about 50 million crowns. A landscape engineer indicated that turning this spot into a tourist attraction is unfavourable due to possible instability. Large investments are required to create a safe and stable attraction. The viewpoint and caves could however provide a base for attracting more visitors, educating the public and giving the area the identity that it currently lacks. The green surroundings and recreational facilities (e.g. mountain bike track) could be integrated in the project to make it an overall attracting and exciting place.

The Prosecké Skály area has no specific tourist attraction that would be significant for the area and provide a clear identity. Although the Prosecké Skály caves themselves are a feature they do not have a significant image. Recently a viewpoint has been developed near Na Vyhlídce that could fulfil this function. Currently the value of the Prosecké area could be understood more as a green space with forest areas that provides recreational ground for the nearby inhabitants.

### Viewscope and Aesthetics

Concerning viewpoints there is the newly build and well accessible viewpoint near the protected area (S10) at Na Vyhlídce which offers a wide and panoramic view. There are further potential viewpoints (N9/O9 & R8) or viewpoints that could see their attractively increased by better maintenance and accessibility as in Figure 12, as currently the view and entrances are sometimes blocked.

In terms of aesthetics it is observable that the general vegetation on the hillside is providing an aesthetic function in the sense that it embeds the green into the landscape. From closer range, respectively from within the green area, the types of landscape and underlying vegetation can appear to be too fragmented and organised in an unclear manner also lacking maintenance in some cases. This can lead to a lack of identity and result in overgrown and/or neglected patches.

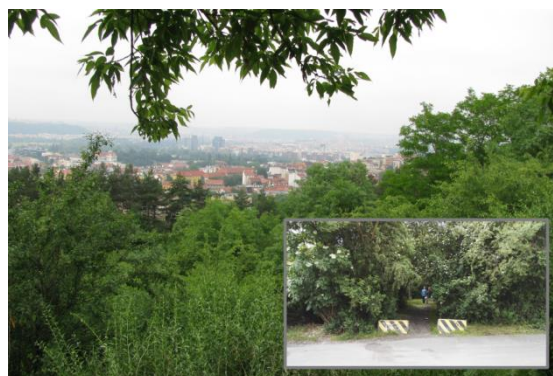


Figure 12. Overgrown viewpoint and neglected entrance

## 2.2 Organisation

The urban environment is shaped by various policies, management practices, a variety of stakeholders and actors and their relationships. This chapter will describe how these practices influence the development of the Prosecké Skály hillside.

The area of Prosecké Skály is falls under the jurisdiction. The western part falls under district 8. The eastern border falls under district 9. Public space is owned by districts, city magistrate and also by developers. The body that owns the plot is responsible for the maintenance (Interview 21, 32, 36). The districts give building permits and are responsible for the local spatial planning. However, they have to comply to national and city regulations like the habitat regulations and the land use plan (Interview 5). District 8 has a budget of 500,000 kc per year available for local bottom-up projects (Interview 21).

### 2.2.1 Metropolitan Plan

Ordered by City of Prague, IPR has delivered a new plan for the city development, The Metropolitan Plan which will replace the current Strategic plan when accepted by the District Municipalities and the City. The current deadline for the acceptance process is set on 2020 (Interview 35). For planning, The Metropolitan plan is the main view into future development of policies (IPR, 2016). Figure 13 shows the current Metropolitan map of the Prosecké Skály area. 6 points of interest are indicated (see markers) which will be further discussed below.

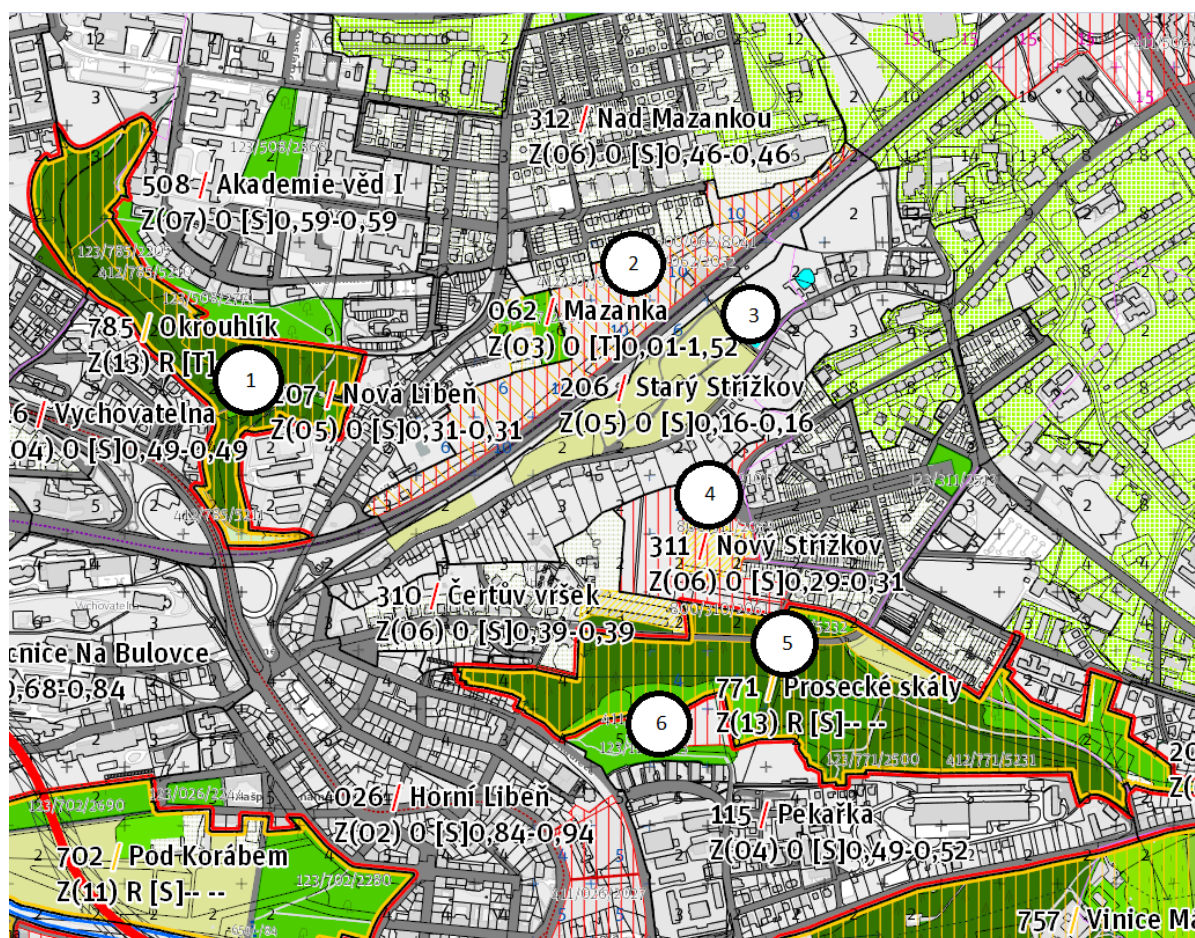


Figure 13. Metropolitan plan Prosecké Skály hillside. Points of interest for future developments.



Markers 1 & 5 - The green area is surrounded by a thick yellow line. This indicates that the plot is restricted from urban development. However, the grid lines in yellow indicate that the park is an transformational area for recreational use. Altogether the metropolitan plan states that the area may be developed to increase the value of recreational use. The plan further specifies that the increase in value can be done through improving internal accessibility and facilities. The developed environment has to be in line with the character of the location.

Marker 2 - The area is marked as both an transformational area for recreational use and as a transformational area for residential use (apartments). The location, or a portion, is part of a territory defined as priority acquisition. The height for building restriction next to the highway is set to 10 floors, meaning that the development in that area is suitable for large apartment buildings. The numbers 0.01-1.52 shown on the map indicate that a high amount transformation is likely. Only a small spot (green area on the south-eastern corner) is reserved for recreational development.

Marker 3 - The allotment gardens on the south eastern part of the highway are also labelled to be preserved as allotment gardens. The plan states that it wants to encourage development in the area. We interpret the statement of ‘development’ as improving the quality of the gardens along with their small residential huts used as holiday housing.

Markers 4 & 6 - Marker 4 shows a transformational plot inside an area that is now a forest, stating that it aims for connectivity with the allotment gardens. The grass field is set to a ‘transformational area for recreational use’. Marker 6 indicates a transformational plot as well. This plot is currently waiting to be developed into apartment buildings.

### 2.2.2 Stakeholder Analysis

In the Prosecké Skály area, relevant stakeholders are divided into three categories; ‘Governmental parties’, ‘Economical parties’ and ‘Societal parties’. These stakeholders are analysed on the level of influence in decision making, including mutual dependencies, cooperation, etc. (Figure 14).

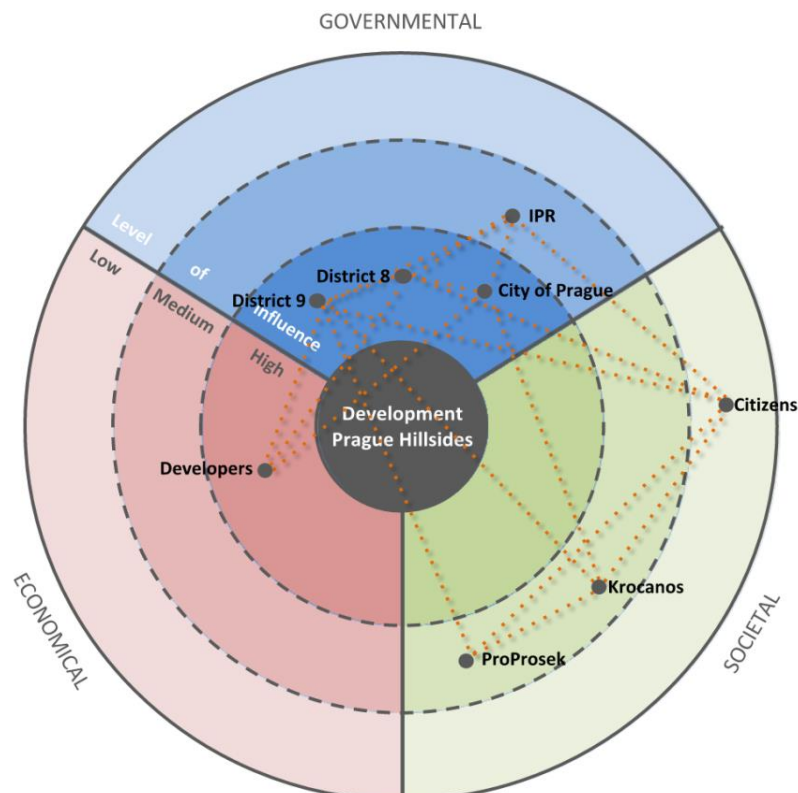


Figure 14. Stakeholder network Prosecké Skály



### *Governmental parties*

**The Magistrate of the City of Prague** - The City of Prague and its spatial planning department are responsible for the supervision on the creation of the land use plan, monitoring of the land use plan, preparing data and dealing with proposals for construction. Their current plans are currently in the land-use plan and metropolitan plan.

**The Prague Institute of Planning and Development (IPR)** - The IPR is the planning institute of the City of Prague which provides support in policy making on spatial planning matters. It is strongly linked to the City of Prague, since the city provides the funding and (dis)approves IPR's draft and coordinating documents. IPR advocates participative planning and tries to involve the public in its projects. Through its connection with citizens and their important role in policy making, the IPR can have an impact on developing the hillsides. However, the hillsides and its inhabitants and users are relatively unknown territory for IPR. Moreover, the institution is part of the political process in Prague in which they have little formal power to change the development of the hillsides. (Interview 19)

**Prague District 8** - District 8 covers most of the Prosecké area (western side). The district has little plans for large projects in the hillside (Interview 21). A small project is being initiated to improve the lighting in the western part of the area, this is not on their own plot (Interview 33). Land Ownership and responsibilities are the main topics of discussion between the City of Prague, Developers & the municipalities. The power interplay on development topics is limited to sharpen regulations. These regulations can make it almost impossible to develop anything. However, if development is allowed by the land use plan their power decreases (Interview 31).

The district wants to cooperate with the citizens. This starts by showing them the developing plans, the inhabitants can comment on the plans and also give recommendations. Their agenda is also influenced by the citizens, for example by protests. To stimulate citizen participation the District can fund local initiatives that aim to improve the environment . NGO's are another factor that can influence plans, either by protesting or by proposing self-designed plans (Interview 21).

**Prague District 9** - District 9 owns the borders and a small area on the eastern side of the hillside. They just finished building a viewpoint and are planning to continue touristic development by transitioning the caves of Prosecké Skály to a tourist attraction. However, there are some conflicting opinions about this project, within and outside the municipality. Stakeholders are involved in the decision-making process but there are difficulties around the methods of public participation (Interview 29, 31).

Costs for development and maintenance is not the main problem for environmental improvement. Instead, dispersed ownership is the real problem for the District that hinders adequate management and development (Interview 31).

### *Economical parties*

**Developers** - The hillside has a few areas that are currently under ownership of Developers Bighaus & Codeco. No contact has been made, therefore detailed information on their plans is not available. Bighaus owns a rather large plot of land on the western side of the Prosecké Skály. Codeco is currently developing a rather large plot of land in the south-eastern side to a residential area.

### *Societal parties*

**Citizens** - The interests of the citizens concerning the hillsides are described in the 'public perception' part. Realising these interest is dependent on the willingness of developers and political

actors to listen to them. Citizen involvement differs between Prague 8 and 9 (see District descriptions). Moreover, they are not obligated to take the public opinion into account, which limits their actual influence.

*Krocanos* - An NGO that is active in District 9, therefore has limited priority on the Prosecké hillside (only a small area is district 9). Their main goal is to improve the environment through saving greenery and proper public spaces. Krocanos states that citizens are lacking a proper platform to communicate with the municipalities about developments. The organisation has a mailing list of 400 people and a website that can reach around 3000 people. The NGO is currently opposing the proposed plan of the District to convert the caves into a touristic attraction. Their main concern is that the habitat of a certain amount of bat species gets destroyed (Interview 29).

*ProProsek* - An NGO which is quite alarming about the name NGO. ProProsek consist of a small group of 4 to 7 rather influential inhabitants of District 8. The main goal is: Informing people about planning, Motivate the municipality to make room for cultural space, Informing that Prosecké is a pleasant area, and should remain that way. Their alarming use of the word NGO is because it is often used by organisations that protest a lot. Their approach is to cooperate or at least think along with the project initiators and managers. Sometimes they are approached and sometimes they approach project initiators. ProProsek is quite active in the media, they have a Facebook & YouTube channel as well as connections with a radio station (Interview 34). Their attitude on the current situation is neutral. Improvements can be done on; management of trash, Green corridors that are blocked by private fencing, poor planning or design of the new viewpoint and lastly the southeastern condo's surrounding the park is not in harmony with the area (Interview 34).

### 2.2.3 Public Perception

While citizens enjoy the functions provided by the hillsides, they also play an important role in affecting the hillsides at the same time. Thus the public perception concerning current use, accessibility, safety, aesthetic and attachment are studied. The preliminary results of these questionnaires are summarized to analyse the public perception about the Prosecké Skály hillsides.

#### *Current perception*

Most people agreed that they feel happier and healthier in the hillsides. The majority of people enjoy the beautiful scenery of Prosecké Skály and agreed that there is enough green. In term of safety, most people agree that they feel safe and the improvement for safety measures is considered less important. However, some interviewees consider this area as unsafe due to the lack of maintenance and homeless people (Interview 29). People visit the hillsides mostly by walking or public transportation and have a high level of agreement about the internal and external accessibility.

#### *Media*

The municipality of Prague 8 provides several media channels like an official website, a local magazine, and a Facebook-page for public hearing. For example, its official website recently published an announcement about the road network planning in Prosecké Skály area in order to hear suggestions and comments from citizens (MČ Praha 8, 2016). Several NGOs also use own website to publish information about recent activities (ProProsek.cz, 2016). Enhancing media attention might increase the public awareness and thus stimulate more involvement.

### Future perception

The vision of future development was also surveyed. Considering 66 valid responses, the results about the public preference are analysed and illustrated in Figure 15.

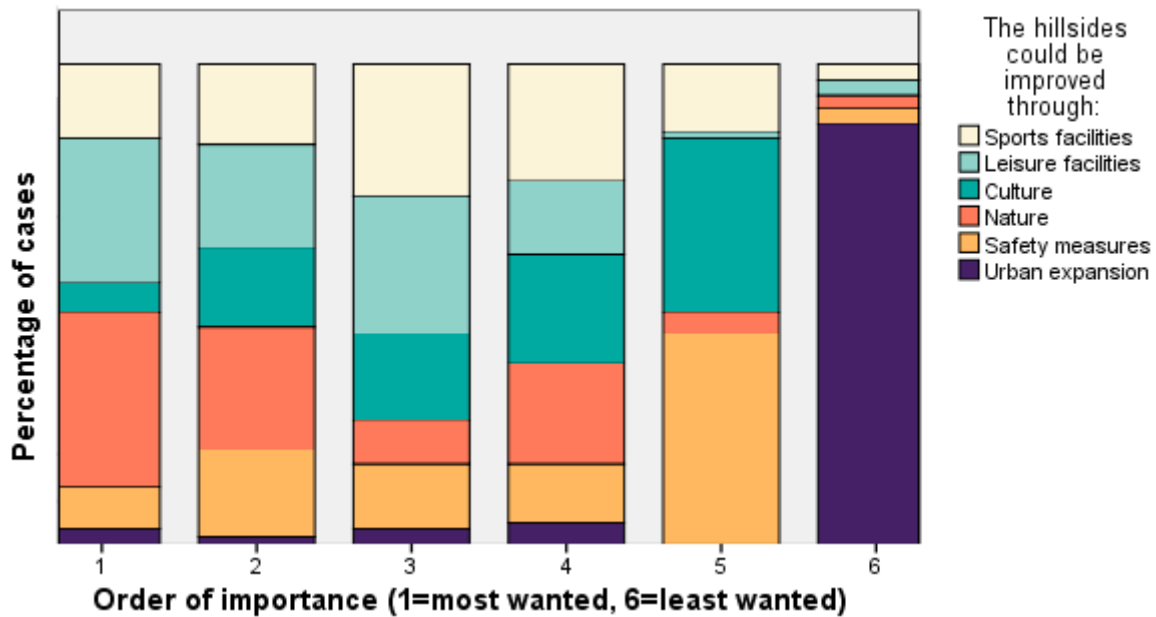


Figure 15. Public perception of development of hillsides

As shown in Figure 15, nature is valued the most, followed by the leisure facilities and sports facilities. Culture and safety measure are less wanted and the urban expansion is the least favoured.

### Public participation

The willingness of public participation in developing and managing the hillsides was further investigated. Based on the participation ladder of Arnstein (1969), different levels of public participation ranging from non-participation to full citizen control are considered. The result from the questionnaire analysed in non-participation, informing, consultation, functional participation, interactive participation, partnership and full power are illustrated in Figure 16.

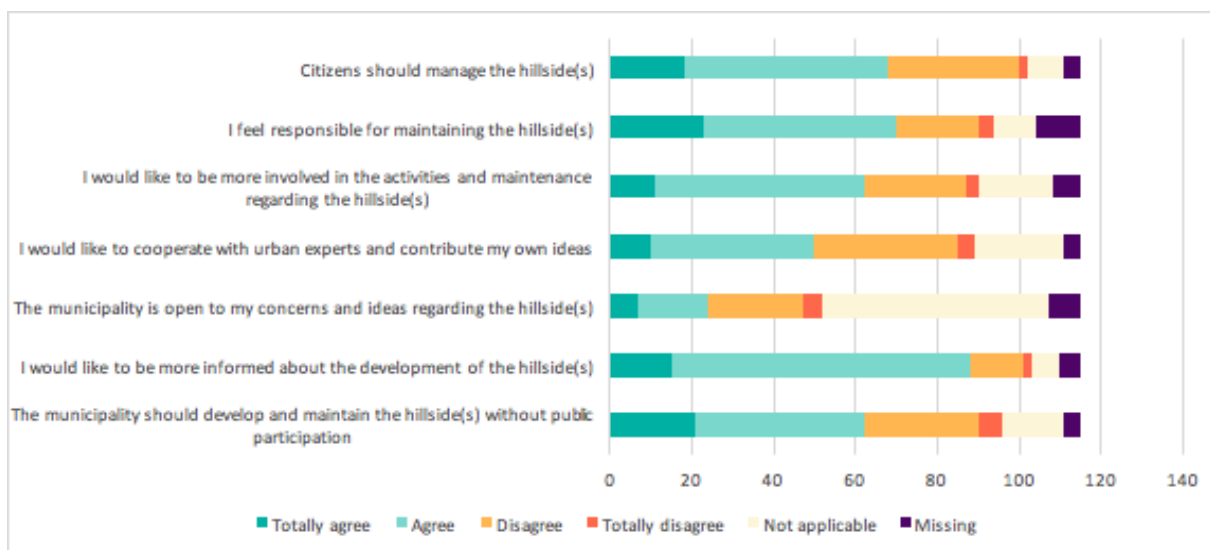


Figure 16. Willingness for public participation



As shown in Figure 16, half of the respondents agreed that the municipality should develop and maintain the hillsides without any public involvement. Being informed reached the highest level of agreement of 80%. The openness of the municipality to public hearing had the lowest level of agreement with only 22%. More than one third of the people wouldn't want to be involved in activities. In terms of interactive participation with experts, half of the respondents would like to join. When asked about that citizen should manage the hillsides, slightly more than half of the respondents agreed while one third holds the opposite idea. In general, the result shows a mixed willingness towards public involvement with large amount of citizen who show a low willingness, however, some people are also willing about more engagement and power. One possible approach to stimulate citizen involvement is enhancing the participatory planning with the cooperation among stakeholders. For example, possible collaboration between local NGO and the planning institution might benefit mutually: urban experts can provide professional knowledge to helps NGO's action plan and the NGO can facilitate the planning institutions to engage more citizens.

## 2.2.4 Management and Maintenance

### *Maintenance*

The plot consists roughly of two separate areas, intersected by a highway. The right side in large part is the actual Prosecké Skály. Prosecké Skály is designated as a protected area and is managed accordingly, supported by an elaborate management plan - "*Plán péče pro přírodní památku Prosecké Skály na období 2010 – 2019*". This document gives guidelines for maintenance on different dimensions, such as plant care, animal care, signs and the annual budget. An extract of this document can be found in Annex C. The left side is not as homogenous as the Prosecké side of the plot. Illustrative of this is the fact that the area does not even have a name and has a variety of different owners and land uses. It is not surprising that this area also does not have a general management plan.



*Figure 17. Trash near the viewpoint at Na Vyhliďce*

The management document indicates human activities lead to the destruction of plant and animal species and disturbance of hibernating bats. Another problem is solid waste originating from visitors of the park leaving litter and waste from neighbouring allotment gardens. During our explorations of the area we encountered many examples of litter scattered throughout the area (Figure 17). A Prague municipality official replied to this that the areas are often difficult to reach so the trash is not always taken care of properly and that visitors don't take responsibility (Interview 33). It is surprising that these issues, together with previously mentioned issues such as overgrown entrances or views, are not mentioned in this elaborate document.

### *Management*

Management of the Prosecké Rock area is not a straightforward issue due to a variety of public and private actors present (Figure 18). The municipality owns many plots, such as the actual Prosecké Skály (R&S 10), the park at Frantiska Kadlece (P10) and the land on which the viewpoint at Na Vyhliďce located (R10). In practice, however, this results in different situations. In case of the Prosecké Skály the municipality is the owner and executioner of the plot and is responsible for the

previously mentioned management plan. This is different for other plots, like the viewpoint at Na Vyhlídce. In this case the municipality is the owner of the land but the municipality has given the authority to Prague 9 to conduct management and execution of the developments. A Prague 8 official stated that the districts themselves own very few plots in the particular Prosecké Skály area, most (green) plots are owned by the City of Prague.

There are many privately owned plots in the area too. The three allotment gardens are owned by private persons. Between Na Strázi and Karla Hlaváčka, at the south west side of the plot, next to the park (P10), there is an area which is privately owned by Residence Pod Skalou Ltd. When visiting the area we encountered a sign announcing a housing project “Residence Pod Skalou”, financed by Residence Pod Skalou Ltd. and developed by Codeco. Starting in September 2016, 78 apartments divided over 5 buildings will be built, to be finished at the end of 2017.

The division and fragmentation of land use and ownership also interplays into the general identity of the area. Besides the publicly owned areas, the plots in the area are owned by one or more private stakeholders, including developers, mostly follow their own agenda, development strategy and design approach. This results in an uncoordinated effort and inhibits the area to build up a clear identity and approach that could benefit an overall image and character. This also hampers the development of green corridors and the maintenance of paths, greenery and trash. The municipality could envision to draw contracts with private owners for improving accessibility, but this is not currently in effect (Interview 2). We consider it important to define the balance between improving the aesthetics, use and maintenance of the green in the area without erasing parts of the wild character that can provide its own benefits and is appreciated by locals.

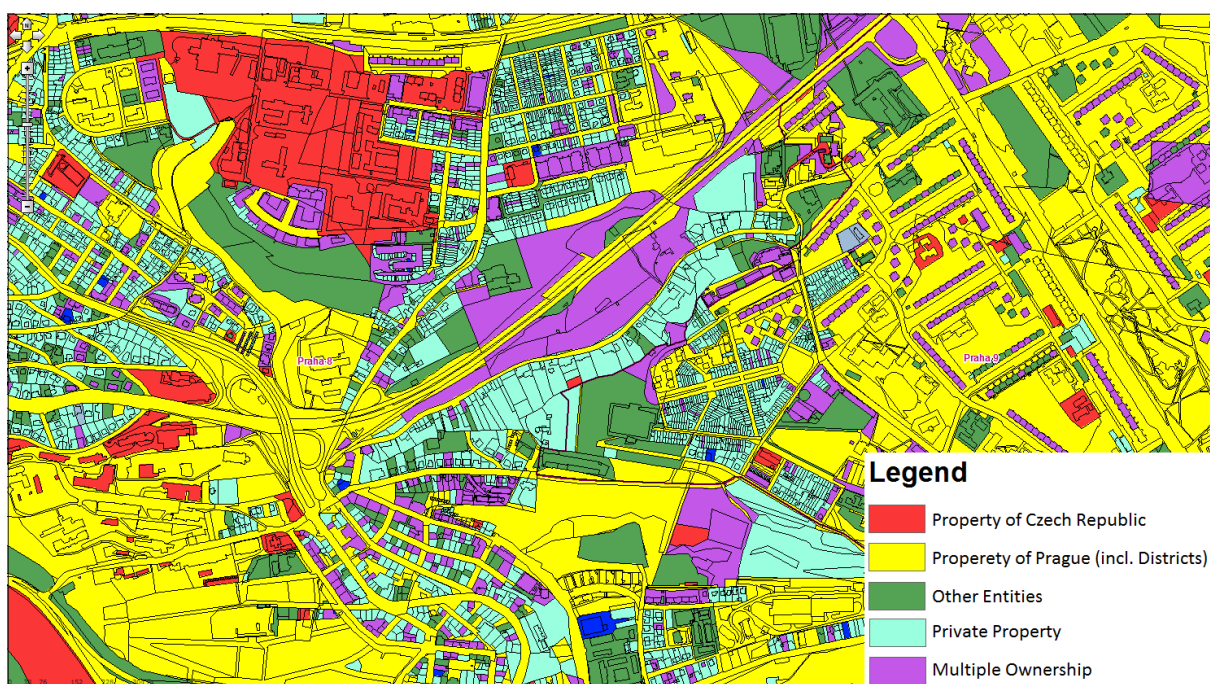


Figure 18. Scattered ownership in Prosecké Skály

## 3. Scenario Development and SWOT Analysis

### 3.1 Themes

Analysing the data obtained from the field research, numerous themes arose. The themes that emerged in every hillside were selected: governance and maintenance, development, functions, accessibility, attachment, safety and ecosystems. The scheme below is a summary of the thematic issues that arose in the Vysočany hillside:



#### Governance and maintenance

- The two districts, Prague 8 and Prague 9, are mainly in charge for the hillside.
- Prague 8 tends to have a more bottom - up approach than Prague 9.
- However, the majority of the residents states that they would like to be more involved at the hillsides matters.



#### Development

- In comparison with the other hillsides Prosecké Skály is placed in the most urban and built up setting.
- A lot of residential neighbourhoods and a highway compose the landscape of the area.
- Parts of the green have developed spontaneously in a fragmented manner and are not organized in an integrated approach.



#### Functions

- People in small groups, usually from the surrounding buildings, visit the area.
- The most popular activities are nature walks and leisure.
- Privately owned or rented plots for allotment gardening is a popular occurrence/function in the area (mostly for elderly locals).



#### Accessibility

- The area is highly accessible with public transportation.
- There are fences and barriers that limit the use of walking paths in certain places.
- The highway is the main barrier that blocks the East to West internal connection.





## Attachment

- Although the residents of the area mostly visit the other hillsides they seem to be attached with Prosecké Skály.
- The majority of the users of the hillside claim to be happy and healthy when they visit Prosecké Skály.



## Safety

- The majority of the residents perceive the area as safe.
- There are visible traces of vandalism e.g. for signs.
- Not many visual safety measures are taken.



## Ecosystems

- Mining and excavation of the sandstone formations have resulted in the current character of the landscape.
- The deciduous forest emerged in the recent past and contains invasive species complicating management.
- Except for the bats, the area does not provide a specific habitat or connection for flora or fauna.

### 3.2 Scenario Development

We developed the four scenarios using two out of the seven themes mentioned above: “Governance and maintenance” and “Development”. We placed some issues coming out of these themes on two axes and they acted as the foundation for the development of scenarios (See Figure 18). This way four scenario quadrants appeared, each representing a possible future for the hillsides. For each quadrant there is a scenario storyline which describes how the future will unfold and addressing the remaining themes (Synthesis report, ch. 4.2.2). In particular, the y-axis divides the theme “Governance and maintenance” in two extremes: a ‘top-down’ or a ‘bottom-up’ approach. The first defines the initiatives and decision-making by governmental bodies for the wider public and the latter represents the decision-making by smaller group of people like civil society actors or local community organizations. The x-axis “Development” consists of nature development or urban development. The first indicates inclination towards green preservation and the latter describes more the built development of the hillsides and its surrounding areas.

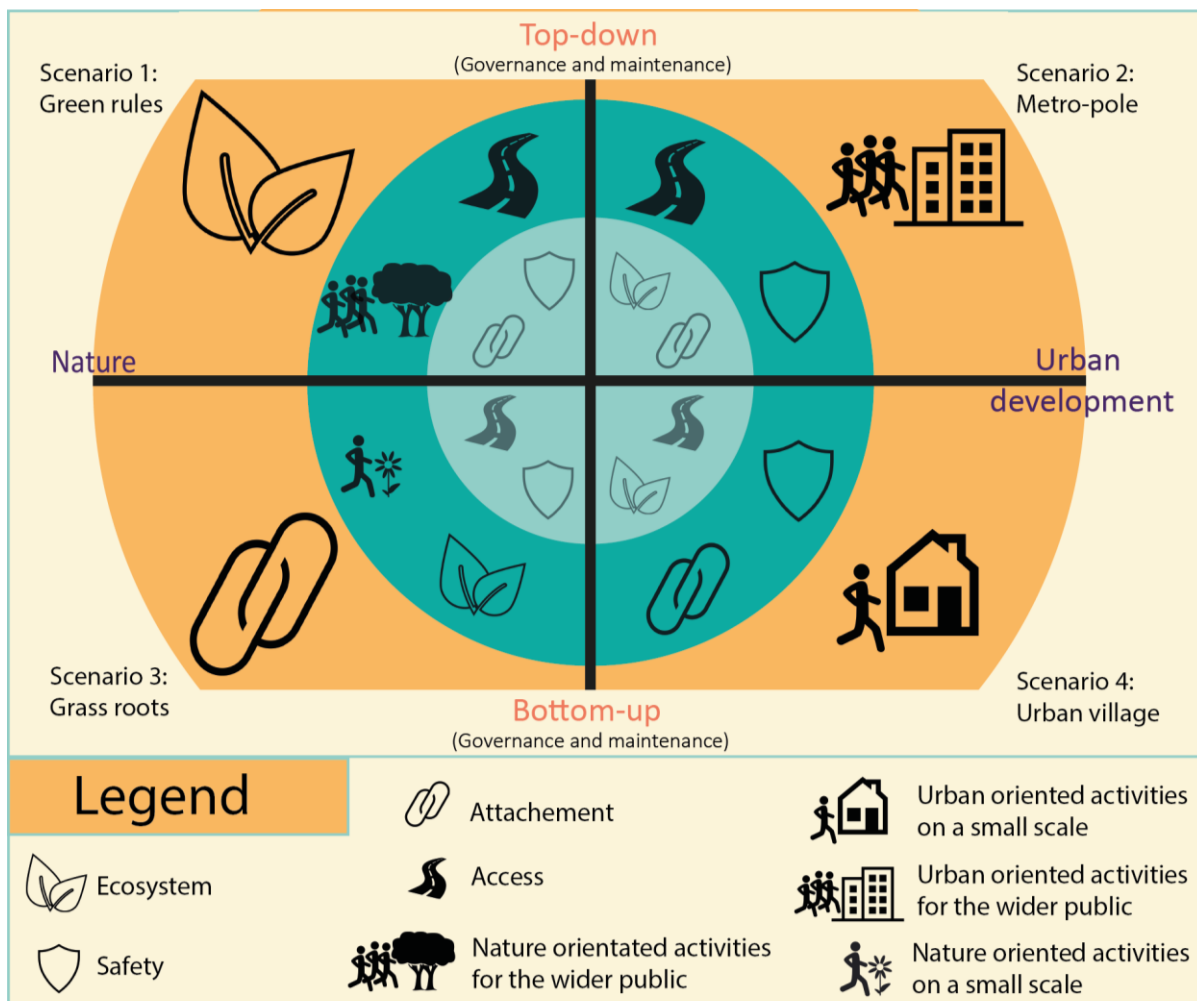


Figure 19. Overview of scenarios

In an effort to connect the current situation of Prosecké Skály hillside to the scenario matrix, one can identify a match with the Metro-pole scenario. In this scenario, management has a top-down approach and the development of the area is rather urban than green. It is a fact that the government approach differs between the two districts of the hill. Prague 9 does not involve the public in the decision making process, but on the other hand Prague 8 is making effort to provoke people to participate more regarding the management, the maintenance and the governance of the hill. However this does not mean that Prague 8 has reached their limit at the bottom-up scale. Since the largest part of the area is under Prague 8 territory we could say that there is public participation and involvement regarding the management but there is still space for more and better coordinated bottom-up actions. Therefore, we can characterise the governance approach of Prosecké Skály as top-down, but close to neutral.

As for the development part, it is clear that the urban element dominates on the hillside. In comparison with the rest of the Geo areas, Prosecké Skály is the least green hill. Seeing that the area is inhabited mostly by wealthy people it is interesting to observe how these class of people prefer to live in a green surrounding. The result of course is to have a mixed urban and green landscape. Another element that lead us towards the urban side is the highway that is crossing by the centre of the area. Considering all the above information, we could place Prosecké Skály to the right side of the development axis, meaning the urban side.

### 3.3 SWOT Analysis

In order to uncover and utilize the potentials of the scenarios, a SWOT analysis is carried out. SWOT refers to the analysis of (S) strengths (W) weaknesses (O) opportunities and (T) threats that could influence the future of the hillsides. The first two aspects, (S) and (W), describe the pros and cons of the current situation of the hillsides. The second part, (O) and (T), relates to issues in the present situation that might facilitate or obstacle the implementation of a certain scenario. The SWOT analysis of Prosecké Skály can be found below.



1

## Green Rules

### Opportunities

- People favour nature and leisure development.
- New metropolitan plan offers possibility of transforming green space to more leisure activities.
- There is a plan to create a bio-corridor to connect Vysočany and Bílá skála

### Threats

- Citizens want to be involved in managing the area.
- Stakeholders often collaborate to work against governmental plans.
- The new highway construction might be taken up in the metropolitan plan.
- Developers plan for further residential development.
- Fragmented ownership and two jurisdictions limit governmental effectiveness.

## Grass Roots

### Opportunities

- People favour nature and leisure development.
- Existing NGOs in the area help to involve citizens.
- Inhabitants want to be involved in managing the hillside and feel responsible for its maintenance.
- Stakeholders collaborate if they have mutual interests.
- Subsidies are available for bottom-up initiatives.
- The approach to homeless people gets more social.
- Much (green) public space available for citizens.

### Threats

- The new highway construction might be taken up in the metropolitan plan.
- Developers plan for further residential development.
- Bad internal accessibility hinders public relation with public space.
- Subsidies are given arbitrarily to initiatives.
- Some politicians are not in favour of public involvement.

3

## Current situation

### Strengths

- Good connection to the rest of the city via public transport (metro, trams, buses, trains).
- Orchards and vineyard provide fruit and cultural value.
- Green spaces provide important ecosystem services such as water infiltration and retention, climate regulation and pollination.
- Presence of ad hoc collaboration between stakeholders with mutual interests.

### Weaknesses

- Prague 8 and 9 have different approaches to management
- No large scale maintenance, due to steepness, lack of financial support and power over private land owners.
- Lack of communication and agreement between stakeholders regarding land use, management and development.
- Subsidies are given to bottom-up initiatives in an arbitrary way.

## Metro-pole

### Opportunities

- There are development plans for urban expansion.
- Good public transport connectivity.
- Accessibility will be improved with the redevelopment of the railway track and station.

### Threats

- Citizens want to be involved in managing the area.
- Most stakeholders and citizens are against urban expansion.
- Fragmented ownership and two jurisdictions limit governmental effectiveness.
- Forests and meadows are considered valuable by NGOs and users.

## Urban Village

### Opportunities

- Population growth in Prague can be accommodated by further residential development.
- Existing NGOs in the area help to involve citizens.
- Inhabitants want to be involved in managing the hillside and feel responsible for its maintenance.
- Subsidies are available for bottom-up initiatives.

### Threats

- Subsidies are given arbitrarily to initiatives.
- Bad internal accessibility hinders public relation with public space.
- Forests and meadows are considered valuable by NGOs and users.
- Most stakeholders and citizens are against urban expansion
- Some politicians are not in favour of public involvement

2

4

## Chapter 4. Conclusion

The value of the Prosecké Skály area can be understood as a green space with forest areas embedded in an urban surrounding, making it essential for providing recreational ground to the nearby inhabitants. The main activities for recreation in the area are hence leisure and nature walks. From an ecological point of view it has no particular or outstanding type of vegetation, however some very valuable ecosystem services are provided. As far as the physical structure of the hill the characterisation of an "urban jungle" is pretty accurate since there is a great mix of residential areas and infrastructures combined with nature. The current management and maintenance practices are somewhat uncoordinated mainly due to fragmented ownership and the various governmental bodies involved. Finally, the public has a positive attitude towards the hillside, feeling happy and safe when visiting the area.

Concluding, the purpose of this report was to study the Prosecké Skály hillside and to identify opportunities and threats in order to address potential future developments. Several themes were identified which led into developing probable scenario storylines. The last chapter indicates the most important points of attention in order to reach each scenario.

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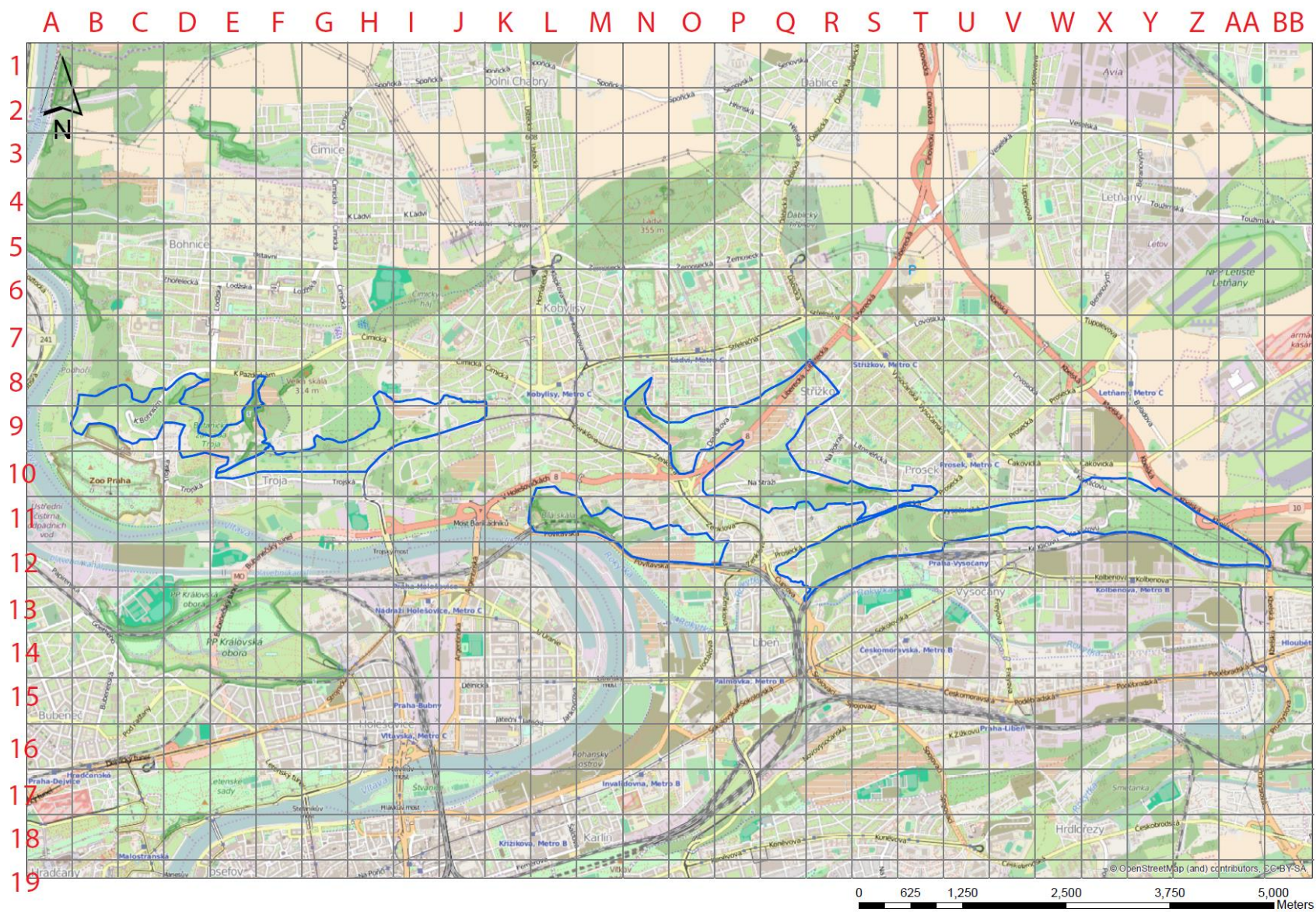
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# Annex 4.1

## Annex 4.1.1 Grid map for observations



#### Annex 4.1.2 Table for interviewees

Interview №	Interviewees
Interview 1	Representative of hospital
Interview 2	Representative of IPR
Interview 3	Lecturer of the university in the faculty of Civil Engineering
Interview 4	Representative of School
Interview 5	Representative of IPR
Interview 6	Representative of IPR
Interview 7	Representative of the municipality
Interview 8	Representative of sports center
Interview 9	Representative of the district of Troja
Interview 10	Manager of the site
Interview 11	Allotment gardens coordinator
Interview 12	Representative of public perception department IPR
Interview 13	Representative of IPR
Interview 14	Representative of IPR
Interview 15	Representative of IPR
Interview 16	Representative of IPR
Interview 17	Landscape architect
Interview 18	Representatives of allotment garden
Interview 19	Representative of municipality
Interview 20	Representative of botanical garden
Interview 21	Representative of district 8
Interview 22	Representative of IPR
Interview 23	Representative of municipality
Interview 24	Representative of apple orchard

Interview 25	Representative of Zoo
Interview 26	Representative of vineyard in Vysočany
Interview 27	Representative of allotment gardens
Interview 28	Representative of Prague 7
Interview 29	Representatives of NGO
Interview 30	Representative of community garden
Interview 31	Representative of Prague 9
Interview 32	Representative of NGO
Interview 33	Representative of Prague 8
Interview 34	Representative of NGO
Interview 35	Representative of IPR
Interview 36	Elderly residents
Interview 37	Local Roma people



### Annex 4.1.3 Methodology

This consultancy centres on the perspectives of citizens, experts and physical as well as social observations, together with a theoretical foundation.

In total 616 questionnaires were carried out. The sample size is large enough to draw general conclusions, but the significance of the results depends on the response and type of respondents per geo-area.

#### *First phase - Three weeks preparation*

The terms of reference, provided by IPR Praha, and the theoretical foundation of different Master's-programmes have been the core of the first three weeks of the European Workshop. With maps and GIS-data provided by IPR Praha, there has been made a theoretical construct that helped us prepare for the data collection during the field trip to Prague. A basic understanding was created about the area due to the division of groups; geo-groups and expertise-groups. Five geo-groups were responsible for carrying out research of their respective geo-area. Within each geo-group, there are five different expertises: Policy and stakeholder analysis, Green Infrastructure - physical and ecological analysis, Green Infrastructure - management practice and use analysis, Public perception analysis, and Scenario development. Every participant of the workshop therefore belongs to either a vertical (geo-area), and a horizontal (expert) group. In order to coordinate the exchange of information between groups, a management team was made. This team keeps the overview throughout the workshop, and makes sure everything is done the right way.

#### *Second phase - Two weeks Prague fieldwork*

At the start of the fieldwork we prepared a presentation for IPR, to summarize our work in the previous three weeks, show our working structure and get feedback on the research so far. During the study, 616 questionnaires, 39 interviews, and social and physical observations have been done. These were carried out during different times of the day and in multiple locations per geo-area in order to cover the diversity of the area. The location of where the questionnaires, and observations, have been done are marked in a grid map. The field study was ended with a presentation of our preliminary results near the riverbank of Vltava river. This involved a presentation with the use of posters, a discussion and also an exhibition of the findings of every geo-group about their respectable geo-area.

Note: The various perspectives and opinions stakeholders might have can result in biased information. This, however, will be nuanced by making use of a stakeholder matrix in the geo-reports.

#### *Last phase - Three weeks*

Using the data collected in Prague, the 5 geo groups wrote a detailed analysis. Within these reports the strengths and weaknesses of the current situation of the areas were identified using the structure of the Dutch layer approach. This analysis resulted in the geo-reports. These geo-reports are the foundation for the synthesis report. The synthesis report can be seen as the ultimate analysis on the area. The current situation on Prague hillsides has been analysed quantitatively (statistics) and qualitatively. A scenario study and SWOT-analysis will point out the possible pathways IPR Praha can follow in order to reach a desired outcome.

#### Annex 4.1.4 Management plan of Prosecké Skály

“Plán péče pro přírodní památku Prosecké skály na období 2010 – 2019” is the document that guides the management and maintenance of the Prosecké Skály. It is written by a zoologist, botanist and geologist. The City of Prague has created this 10 year management plan, current one running from 2010 to 2019, to ensure the existence of the rocks. The management plan states that if the protected area had not been declared, the Prosecké Skály would have completely disappeared due to the excavation of raw materials. The budget for maintenance is around 1 million czech crowns per year (around 37.000 euro). The management plan gives guidelines for maintenance on different dimensions:

*Plant care:* Plant care is taken care of in the form of selective removal of non-native tree species, mowing lawns and periodic grazing. The City of Prague owns flocks of sheep and goats that can graze natural areas throughout Prague. The document advocates the use of a high concentration of Roundup, a controversial herbicide produced by Monsanto.

*Animal care:* There is no individual care or (re)introduction of animals in this area. Preservation of biocorridors is important, therefore natural elements that facilitate the movement of communities has to be ensured. Nest boxes for bird species and bats can be installed (which saw during observations). A threat to protection of reptiles, birds and other mammals is free running dogs, therefore dogs are strongly recommended to be short leashed.

*Geoconservation:* Rock formations, including underground space, should be protected from damage. Interventions are justified to correct prior damage (e.g. vandalization of rocks or unauthorized development).

*Signs:* The protected area is marked by signs, such as national emblems, information signs and maps in the forest area, indicating the area and relevant characteristics. A municipal official however said these signs are often vandalized and stolen.

Please check the website for the complete management document: [http://envis.praha-mesto.cz/planypece\\_ozchu/PP\\_Prosecke\\_skaly\\_2010\\_2019/Plan\\_pece\\_PP\\_Prosecke\\_skaly\\_2010\\_2019.pdf](http://envis.praha-mesto.cz/planypece_ozchu/PP_Prosecke_skaly_2010_2019/Plan_pece_PP_Prosecke_skaly_2010_2019.pdf)