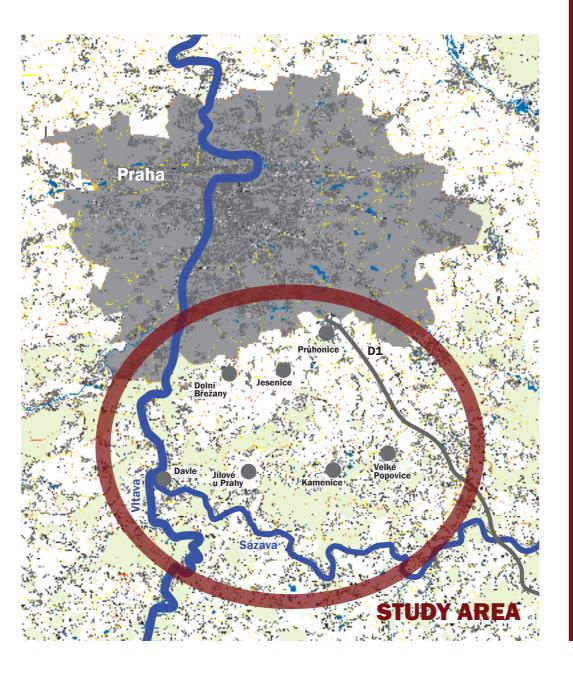


# LIFE BEYOND THE CITY EDGE

**Guide for Prague Suburbia** 

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# **PROLOGUE**

#### Suburbanization.

Alot has been said and written about it. For some time we may have thought that it is something that happens elsewhere, not in our country. But nowadays, if you just step outside of Prague, you can't deny it is suburbanization what shapes the landscape and the towns there. The revolution twenty years ago brought new opportunities in many fields, housing wasn't an exception. Thousands of Prague residents now had the chance to fulfill their dream of their own family house and so as soon as their economical situation allowed, the exodus into suburbia began. The most attractive locations started to fill first – and one of the most desirable destinations lay just a stone's throw from the southern rim of Prague. The flat plateau offered almost unlimited space for development and the surrounding woodlands and river valleys created a splendid background for the first residences. Together with quite easy and fast access to Prague it has attracted more then 25 000 people to move there causing dramatic change of character, environment and social climate in the locality.

Nowadays, the suburban towns are starting to wake up and realize that the uncontrolled development during the past decade have caused quite serious damage to the urban environment, the community relationships and the surrounding landscape. And the question arises – how can it be repaired?

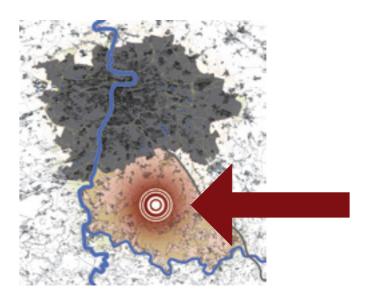
Well, I don't offer a Solution. Neither do I say what caused the problems and what should not happen again – that has been said many times by others, more competent.

Instead, I offer a toolkit – a guide that could help the local authorities or other people involved to navigate their actions to a more sustainable direction. It can be taken as a framework for local planning and decision making in the process of repair and new (better) development. It is then up to the towns and people who live there to find a solution for each situation that would work best at that time for the particular place. I only provide guidelines and at the end two examples to get a better idea how it can be applied for a concrete location.

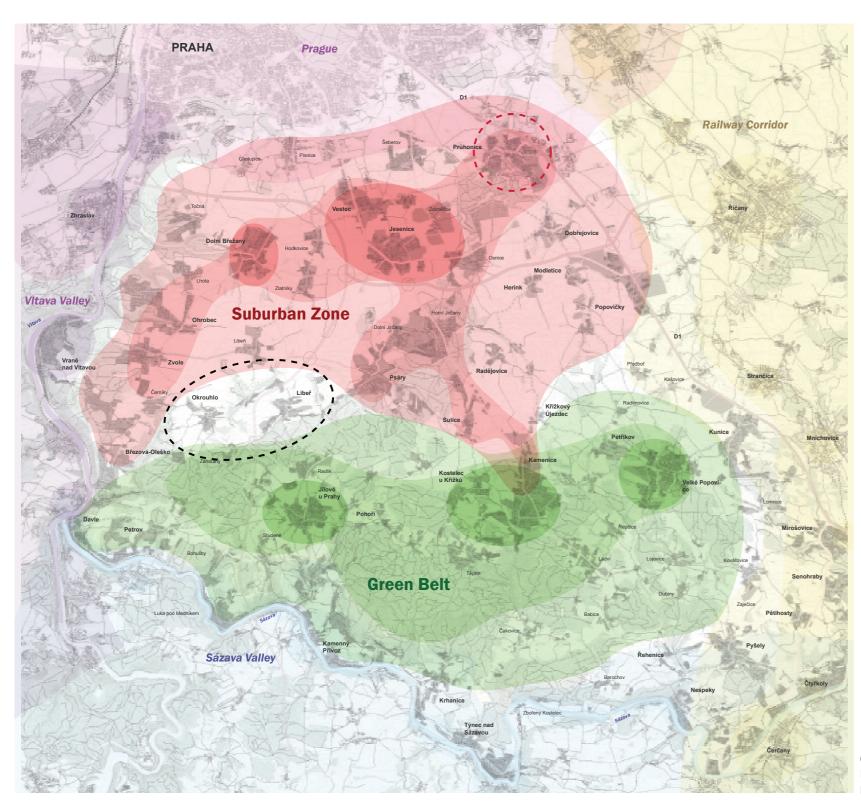
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# **HOW IS IT NOW**







#### **Suburban zone**



Proximity of Prague (easily accessible by both car and public buses)

Characteristics of new residents (in general young, well educated, active, higher income)

Landscape character with minimum barriers to development (flat, minimum of forests)

High quality soils

Proximity of attractive recreational areas (Průhonice, Sázava valley, Vltava, Jílové and surroundings, Celtic Oppidum Závist)



Low ecological stability (low retention capacity, missing eco-connections, fragmented landscape, few natural features)

Limited landscape accessibility for recreation (minimum of foot and bike trails as connections between towns, impenetrable town edges)

Recent unplanned development (insufficient infrastructure and services, missing community space, bad pedestrian accessibility, isolation)

Loss of identity

Car dependency

Unbalanced demographic structure

#### **Green belt**



Large natural areas (ecological stability)

Rich history (preserved historical monuments)

Stable local centers (accessible public services)

Dense network of tourist marked routes

Good accessibility from Prague for recreation

Good landscape accessibility

Scenic (visually attractive) landscape



Worse accessibility of Prague for daily commuting

Too many weekend house colonies (nowadays problems with insufficient infrastructure and transformation into residential areas)

#### Characteristical areas

Require different design approach when applying the principles (see Design Example)

# **MAIN ISSUES**

**Drawing attachment 1.1** 

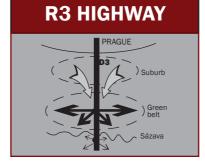
# **FACTORS OF CHANGE**



Accessibility for the Green belt area Financial reimbursement for affected municipalities (money for development)

Cheap land fragments ("leftovers") along the highway

Initiative for "Komplexní pozemkové úpravy"



Loss of attractiveness for the surrounding villages and whole Suburban zone

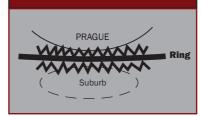
Landscape fragmentation Commercial development

#### Increase of traffic density on the connecting roads

People moving from suburban zone to new attractive locations (abandoned expensive houses in localities that lost attractiveness)

Very attractive location for commercial development

Takes the heavy transit traffic (tangential)



**PRAGUE HIGHWAY RING** 

Loss of attractiveness
Further landscape fragmentation
Commercial development
Noise and pollution

Diversion routes through the villages People moving out Reinforces barrier between Prague and suburbia

If prepared – attractive location Support for alternative and mass transport

Alternative transport – more social interaction (car pooling, cycling, public transport)



LESS AFFORDABLE CARS

Fewer customers for suburban shopping parks Abandoned car-dependent highway commercial development (large built areas)

Collapse of car-dependent mid-class communities Further social segregation

Local partnerships (village-village, public-private...)

Encourage local community based organizations (more trusted)



**POLITICAL UNCERTAINTY** 

Cannot rely on state support (for long-term projects) Rivalry Prague x Středočeský kraj

People skeptical about big projects

EU funds for town investments (+ high qualified new residents can help prepare successful projects)

Create an example (sustainable project as an attraction and for education)



**ECOLOGICAL AGRICULTURE** 

**SUSTAINABILITY AS EU PRIORITY** 

General (investors') image: sustainable = not profitable

Effective on less profitable soils – chance for Green belt area – preserve pastures

Restoration of deteriorated intensively used soils in suburban zone

Ecological water filter between urbanized areas and nature

Bio = trend - Young new residents would support local eco-farm



High profitable soils in the suburban zone – too expensive for eco-farming

# **FACTORS OF CHANGE - continued**



#### People demand and support bike-friendly development More bikes = less cars

Cycling provides more social interaction than driving car



**ACTIVE RECREATION** 

**CYCLING AS A MEAN OF** 

#### Recent development doesn't provide bike connections and may be hard to change it = barrier

Conflict Prague x suburbs (Prague residents want recreational connections x suburban people need shortest routes for daily commute)

## Support for bike trails

Place for social interaction



#### Require special facilities (simple natural paths may not be accepted)

New residents (from Prague) are used to drive to a special place for recreation

Recreation as goods (spinning x bike trip) - loosing relation to a place

#### **ALTERNATIVE EDUCATION**

#### Chance to build more local schools (New residents willing to pay)

Active parents - involved in school (community) projects



**Expensive private schools - social segregation Contest with Prague (modern Prague schools x "village")** 

#### **Building boom slowed down:**

→Time to fix infrastructure →Time for planning

# →Individual development rather than big projects

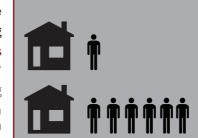
→Time for community to "settle"

→Multigeneration housing

→People ask for quality (more consideration before an investment)

After crisis (if still attractive location) - high demand = high regulation possible

# **DEMAND FOR HOUSING**

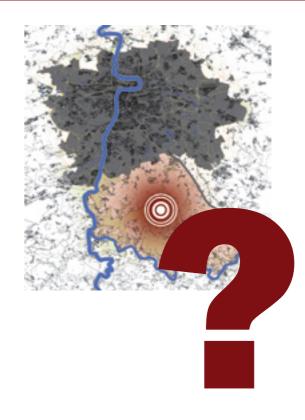


#### **Building boom slowed down**

- →Less people = less money for town
- →Blocked land by unfinished development projects
- →Cheap land privatization of landscape
- →Unbalanced demographic structure

After crisis (if still attractive location) - high demand and no planning - even more sprawl

# **AND NOW WHAT?**



Today, the landscape around Prague most of all resembles a battlefield – farmers fighting with developers, one developer fighting with another for who will make more money from it. Looking at a piece of land, all of them see only what CAN BE there (farmers see flourishing crops, developers the new residential complexes) – but no one really cares about what IS there, even less, what HAS BEEN there for the centuries before.

And people from Prague, blinded by 40 years of no option and 10 years of no money, come here to build their dream, their own house on their own tiny piece of land – and then, afraid of losing the dream, they build fortifications of 3 meters high fence against the reality of the present suburban town – against the cars that rule the streets, against the boring environment, against the featureless fields stretching to the horizon and against all the other people who threaten to disturb their comfortable feeling of their anonymous privacy. And they are disappointed – Prague is not quite as close as it seemed (and as the developer promised) and the small town doesn't offer much entertainment or shopping possibilities.

Is this really what they wanted?

Are these people really the ones which the town wanted to attract?

How can it be changed?



# "Make love, not war"

ove means understanding, respect and care for what is here now and what has been here before - and only together with that it is possible to plan future.

**S**o, understand, respect and play the role of the region outside Prague – don't fight to beat the global metropolis. Instead, offer local specials as an alternative: small communities living in a close relationship with the surrounding landscape, proud of the place, treasuring its unique values.

#### What a suburban town can offer (and Prague cannot)

- An afternoon walk in the woods behind your house
- All basic public services in one place within a short walk from home
- Knowing the parents of your child's classmates
- · Fresh milk from the local farmer
- · Chance to influence the town politics

#### What Prague can offer (and the suburban town cannot)

- · Wide variety of services and entertainment possibilities
- · Easy mobility with public transport
- · High qualified jobs
- Anonymity and privacy

LOVE PEOPLE
FEELING AT HOME



DIVERSITY
ACTIVE COMMUNITY
ACCESSIBLE PUBLIC SERVICES
PEDESTRIAN PRIORITY

LOVE THE PLACE
DISCOVER THE UNIQUE VALUES



UNIQUE IDENTITY
LOCAL PRODUCTS
ALTERNATIVE TO PRAGUE

LOVE NATURE UNDERSTAND AND ENJOY



ECOLOGICAL STABILITY
ACCESSIBLE LANDSCAPE
ELIMINATE CAR TRAFFIC
PEOPLE AWARNESS

LOVE NEIGHBOURS
REGIONAL CONNECTION



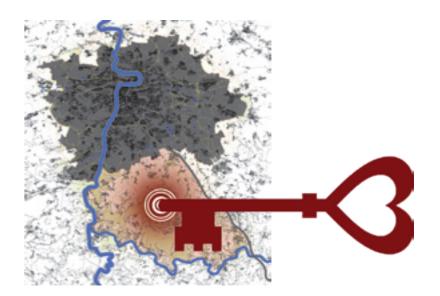
REGIONAL COLLABORATION
RECIPROCAL RELATIONSHIP WITH
PRAGUE

GET THE BEST OF IT



ELIMINATE NEGATIVE EFFECTS
TAKE OPPORTUNITIES

# **15 KEYS TO THE SUBURBAN HEART**

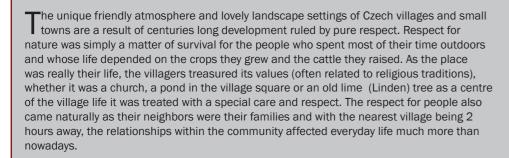


# **BUILDING WITH RESPECT – FOR PEOPLE, FOR THE PLACE, FOR NATURE**

(Re)creating the local identity

aving the respect of the ancient farmer and transforming it for the needs of a 21st century, man is the key to preserve the distinct local identity and create an attractive and comfortable environment for both humans and nature.

It is essential to understand the unique characteristics of each town which formed its urban structure in order to (re)create its identity and the connection with the surrounding landscape. Together, with very close relationships in the community and easy walking accessibility of public services it is the reason, why people choose the small towns and villages as a place to live.



#### PRINCIPLES FOR DEVELOPMENT:

# **Location priority**

Retain a clearly defined and compact urbanized area of a distinct town and minimize the appropriation of undeveloped land outside the town boundaries.

Infill development within the town boundaries

The use of an existing infrastructure saves money (for both investment (first cost) and maintenance), also it allows new development while protecting valuable natural and agricultural land.

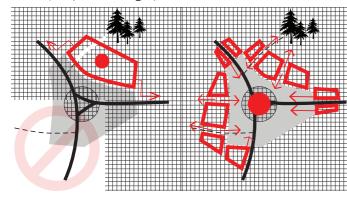
- New development along the natural axes (roads, a stream, a valley...) Development that respects the historical structure is more easily accepted and integrated into the town.
- Fill between the axes

A continued growth with respect for historical structure while keeping a compact shape allows for better accessibility of the centre.

# **Respect the centre**

Retain a visual, social and physical connection with the centre of the town.

- Preserve and support the visual effect as well as the social status (=public building) of the central landmarks (a church, a townhall...).
  - A clearly visible landmark makes the town recognizable from a distance and also helps navigation to the centre once you are in the town. These buildings have traditionally served important public functions, which was an important factor for them to be also socially perceived as landmarks. So, public function should be maintained in these buildings.
- · Support the social status of the centre by concentrating activities and public services around.
  - The town centre with a mix of everyday activities that bring the residents there works as the best place to meet people and to stay connected with the town life. Also it creates an opportunity for a successful business.
- · Easy and safe pedestrian accessibility of the public services in the central area An important factor that affects the residents preferences for local facilities (compared to Prague).



## Connections

Support the centre and retain connections (compared to a common suburban development pattern

# **Connection with the landscape**

Provide easy access and a visual connection with the surrounding landscape

- Integrate a network of footpaths and rural roads that provide comfortable access from the inner town to the surrounding natural areas for everyday recreation by residents as well as vehicular access to the agricultural land.
  - Access to nature is one of the top attraction factors that drive people to the suburban towns (however, the current suburban reality is quite far from that). Spending more time in nature leads to a better understanding and respect of the ecological issues.
- Provide enough space for the roads in the direction of possible future development to allow for transformation into a street.
- · Retain a smooth visual connection between the town and the landscape A gradual transition from town centre through the green residential areas and gardens to the surrounding landscape makes the town visually attractive and appealing to the visitors and also helps orientation within the town.
  - Plan higher density development (apartment blocks, row houses) in the town central area; lower density (single family houses) towards the
  - · Situate large gardens (both public and private), sport grounds and (low rise) recreation facilities on the town edge.



**Blocked access** Current development blocked access to the landscape

(Praha Kunratice)

Smooth transition from town

to landscape (compared to a

common suburban develop-

# Respect the historical urban structure and topography

Understand the factors that directed the historical development of the place and respect those (with a regard for current conditions) in planning the direction for future growth

- · Consider topography, climate and soil conditions for settlement (village in the valley as a protection against cold wind, building on the less fertile soil to preserve the better soils for farming, avoiding the wet, marshy lands along the river...)
  - Respect for these factors is a way to preserve the town's unique identity as well as protecting the natural values. + Development that respects the historical structure is more easily accepted and integrated in the town.



# Respect to the topography

Village grows along the natural axis (stream) down in the valley.

# **Design for diversity**

Provide a variety of housing options to attract a diverse group of residents (in age, education, culture, economical and social status)

Population diversity supports social stability, more business opportunities, stable demand for public services and general respect for other people.

- Make sure that new development offers various lot sizes or building types affordable with different levels of income.
- · Particularly, ensured by government support/policy, availability of a low-cost, barrier free housing with good accessibility of public services.



2.3 - 2.5 Diversity Variety of housing

# **Design for community**

Provide various public spaces for social interaction (meeting people) and community activities throughout the town

Provided with a comfortable place (safe, visually attractive, with a possibility to sit down), people are more likely to stop and talk to each other which helps to build good relations in the community.

- Respect the town centre as the most important public space.
- Situate the public space in a place where people meet naturally close to some other
  point of interest (a bus stop, a local shop...), at a street corner, on the way to school
  etc.



2.6
Support social interaction
Examples of communication barriers and possibilities of design

# **Streets for people**

(Re)design streets to be safe, comfortable and enjoyable for walking with respect for the unique characteristics of the place and the specific use and meaning of each street Carefully designed street not only makes the place more attractive for (potential) residents, but also safer and often support community interaction.

- Consider traffic restrictions (one way streets, dead end, slowing down cars, avoiding transit traffic) to give more space to pedestrians.
- Visual contact between houses and the street is a key factor that contributes to the safety (both on the street and on the private property), as well as to the visual attractiveness of the place.
- "Foregardens" in front of houses with a low or no fence are one of the typical attributes of a Czech village, making the streets colorful and enjoyable and giving it a unique identity.



Pedestrian friendly design
Example of a street re-design for safe, comfortable and enjoyable walking.

(Mořice)









2.8 - 2.9

Support social interaction

Examples of communication barriers and possibilities of design

# **Design for nature**

Respect the natural conditions and historical traditions of a place in the choice of planting material

Planting with respect for the natural conditions saves money (needs less care), doesn't threaten local ecosystems and with regard to the historical traditions, it supports the unique identity of the place.



2.10
Tradition
Fruit trees as a characteristical feature of Czech village.
(Malé Chrášťany)





the village common space. (Březnice, Malé Chrášťany)

2.11
History
Linden tree on the main common space.
(Zlatá Koruna)

2.12 - 2.13 Tradition

Characteristical trees in

Small suburban towns can't beat Prague in the variety of public services. However, they can offer something that's rarely achieved in the metropolis. It is possibile to find all the basic services in one place within walking distance from each other and from one's home. Not only does it save time, but it also gives an opportunity for people from the town to meet everyday and get to know each other.

To preserve this advantage, the key issue is to offer sufficient capacity to satisfy the demand (keeping in mind that the demand also comes from the catchment area of neighboring villages, not only the town itself).

Regarding schools, in particular, it is essential to act fast in order to keep the recently born children (and thus also their parents) in the region. At the same time it is important to consider the unbalanced demographic structure and design flexible buildings that can be later easily adapted to a different use.

#### **PRINCIPLES:**

## **Sufficient capacity**

Provide basic services with sufficient capacity for all residents within the catchment area

- Current needs can be estimated from the available demographic data as both the
  immigration rate and baby boom have reached their peak, the current demand for
  nursery and in few years also elementary schools is supposed to be close to maximum.
- Offer the services also for "unofficial" residents (= immigrants who haven't changed their official permanent residence address).
  - Even if they don't bring tax money to the town, their contribution to the community and local business is worth keeping them in town.

# **Temporary structures**

Build temporary, quickly assembled structures to accommodate the peak capacity for nursery and elementary schools, where fast solution is the priority

It is important to "catch" the children in the town as soon as possible – once they start school elsewhere, they are very unlikely to change. Also, younger brothers/sisters very often follow them to the same school. And keeping the children in town makes their parents spend more time there as well.



#### 2.14 - 2.17 Modular structures

Examples of fast assembled and easy to remuve modular structures used for school buildings. (exhibition example, Dolní Břežany, Prague, Kimmer - Germany)

# **Adaptable buildings**

Design multipurpose structures that can be later easily (with only limited resources) adapted to a new use; consider also appropriate location that allows the change in use (detached additional school pavilion that can be later transformed into private offices without disturbing the functionality of the original school campus)

In few years, when the baby boom is over, some of the new school buildings may be abandoned and then, if they are prepared for transformation, they can be truly attractive for a private investor looking for a property in the town centre. Or there will be no need to purchase new land for the intended town's home for the elderly.

# **Support for private schools**

Foster founding of local private schools to help satisfy the demand Offer a suitable property, a market study, legal support or just help with promotion.

# **Regional support**

Plan the services as a regional network of local centers, each one providing for its catchment

|                    | Popula | ation (2008) |
|--------------------|--------|--------------|
|                    |        | Catchment    |
|                    | Towns  | area         |
| Dolní Břežany      | 2476   | 8 497        |
| Lhota              |        |              |
| Točná              | 500    |              |
| Zlatníky-Hodkovice | 1091   |              |
| Libeň              | 985    |              |
| Libeř              |        |              |
| Ohrobec            | 899    |              |
| Zvole              | 1449   | 2 546        |
| Černíky            |        |              |
| Okrouhlo           | 400    |              |
| Březová-Oleško     | 697    |              |
|                    |        |              |
|                    | =000   | 40 = 40      |

| Jesenice            | 5289 | 10 719 |
|---------------------|------|--------|
| Zdiměřice           |      |        |
| Osnice              |      |        |
| Horní Jirčany       |      |        |
| Radějovice          | 260  |        |
| Sulice - Hlubočinka | 300  |        |
| Vestec              | 1923 |        |
| Dolní Jirčany       | 2947 | 2 947  |
| Psáry               |      |        |

| Průhonice   | 2448 | 4 548 |
|-------------|------|-------|
| Rozkoš      |      |       |
| Čestlice    | 500  |       |
| Dobřejovice | 757  | 1 600 |
| Modletice   | 507  |       |
| Popovičky   | 266  |       |
| Herink      | 70   |       |
|             |      |       |

|                 |       | ation (2008) |
|-----------------|-------|--------------|
|                 |       | Catchment    |
|                 | Towns | area         |
| Jílové u Prahy  | 3756  | 4 170        |
| Studené         |       |              |
| Bohuliby        |       |              |
| Luka p.Medníkem |       |              |
| Radlík          |       |              |
| Zahořany        | 160   |              |
| Pohoří          | 254   |              |
|                 |       |              |

| Kamenice          | 3458 | 4 893 |
|-------------------|------|-------|
| Těptín            |      |       |
| Ládví             |      |       |
| Štiřín            |      |       |
| Sulice            | 900  |       |
| Želivec           |      |       |
| Kostelec u Křížků | 535  |       |
|                   |      |       |

| Velké Popovice | 2174 | 3 398 |
|----------------|------|-------|
| Lojovice       |      |       |
| Řepčice        |      |       |
| Petříkov       | 400  |       |
| Radimovice     |      |       |
| Kunice         | 824  |       |

| Davle  | 1323 | 1769 |
|--------|------|------|
| Petrov | 446  |      |



3

This region bears a significant footprint of the past Czech phenomena of weekend houses. The proximity of Prague and lovely landscape settings made it the number one location for a second home for the Prague housing estate dwellers.

Nowadays, when the region has become a number one location for a Prague suburban residence and at the same time the recreation options have significantly widened, the weekend-house colonies have started a dramatic transformation process. Turning a weekend house into a permanent residence may seem quite harmless, but when it happens in a large scale, the consequences can considerably affect surrounding natural ecosystems as well as the municipal budgets. On the other hand, transforming already built land can be a good path to sustainable growth. Also, it brings new residents who already have a close relationship to the place and the community.

**S**o, the key issue is managing the transformation with regard to the specific local conditions in a way that maximizes the benefits and eliminates (reduces) the costs.



#### **PRINCIPLES:**

#### **Transformation**

Locate weekend-house colonies eligible for transformation and plan actions to integrate the transformed area as a fully functional part of town.

- Consider technical infrastructure capacity, public services and transportation accessibility; possible ecological, economical and social consequences of the building activities and higher amount of vehicular traffic.
- Design infrastructure and public amenities as for any other new development with a special focus on connections with the landscape and the town centre. In the case of isolated communities, provide a space for public services and community gethering.
- Respect and try to retain the specific identity of the weekend house colony small houses, variety of design, large gardens, low amount of paving, transparent fences (set building regulatives where appropriate - e.g. "Regulační plán").

The weekend-house colonies are a very specific Czech phenomena with quite a unique atmosphere which is worth preserving (even if the use changes). The transformation into a residential building site raises the value of property significantly and in such case even quite strict building regulations can be accepted (regulations for building footprint, height, amount/material of paving....)



Unplanned transformation

New building in the weekend house colony not respecting the scale and character of the place. (Zálepy)

2.19
Architecture with respect
Example of a modern, yet sensitive weekend-house transformation.

# **Recreation only**

Regulate locations where the transformation is not desirable to support quality recreation in nature

- Do not allow formally permanent residence there.
   Otherwise the town would be obligated to provide services for the residents and maintain accessibility of the area.
- Eliminate the vehicular traffic in the colonies. Provide a safe communal parking area instead of new roads.
  - Besides retaining a more natural and comfortable environment for recreation, it discourages possible permanent residents.
- · Maintain green (grassy) roads and public space.
- Maintain connections with the surrounding landscape and the attractive natural areas.



**2.20 Vehicular traffic**Increasing number of cars disturbs the character of the original colonies



**2.21 Grass common space**Characteristical green common space in the colony.

# **WALK THE TOWN**

# Easy everyday pedestrian mobility

The possibility to walk anywhere you need without the risk of getting hit by a car or poisoned by the fumes has always been one of the greatest assets of small towns. However, the latest uncontrolled suburban development has in many cases spoiled this value. And the comfort of pedestrian accessibility is an important factor that affects the residents' preferences for local public facilities (compared with commuting to Prague).

Also pedestrian-friendly community design seems to help foster neighborhood ties – walking increases opportunities for face-to-face contact with neighbors. US studies (published in the Cascadia Scorecard 2006 by the Sightline Institute) have found that "for each ten additional minutes a person spends in a daily car commute, the time spent involved in community activities falls by 10 percent."

**S**o, providing a safe and comfortable network of pedestrian connections within the town is now an important task for all municipalities in the region. However complicated it may be to implant such a network into an existing urban structure, it is worth the effort. And implementing it in plans for new development needs to become a rule, not a bonus.





#### **PRINCIPLES:**

#### **Distance matters**

Find the shortest possible distance as it is the key factor that influences the choice of route for everyday connections

People chose the more attractive route for an afternoon walk, but they usually pick the shortest option when going to school (work, bus stop, shop etc.).



2.22
Shortest way
Foot connections don't need to follow
streets - provide the shortest way.

#### **Connect destinations**

Find the logical directions to the most frequent destinations to make sure the new footpath will be used

Unused paths only waste money - for both building and maintenance.

- Both radial (between residential areas and the centre) and tangential connections (between the particular public facilities in the central area; between the separate residential parts) are important.
- Destinations include: public services (school, medical and social care, church, post
  office, sport grounds, culture centers...), shopping, community open space (town
  square and smaller local places), parks, playgrounds, bus stops

# **Regional connectivity**

Connect the in-town network to the regional trails and out-of-town recreational paths

# Safe and comfortable at any time

Maintain safety at night and walkability all year round

- Safe crossing provide additional safety features and traffic restrictions at the most frequent crossings.
- Night safety prefer footpaths on streets, provide well lit and controllable space (no hidings tall shrubs at the paths etc.).
- Chose paving that is easy to walk on even in the rainy or winter weather.



2.23 - 2.24
Paving
Ensure comfortable walking in rainy weather.



2.25 - 2.28
Safe crossing
Examples of various
safety measures on
pedestrian crossings.

# **Cycling options**

Make conditions for safe cycling on the main connections and provide bike parking at public facilities

Separate cyclists from vehicular traffic and from pedestrians as well (on more frequent routes)



2.29 - 2.30

Bike parking
Inspiration for a bit unusual bike racks.



2.31 - 2.32

Cyclists x pedestrians

Provide enough space for cyclists and pedestrians on frequent routes.

# Regional bike trails network for daily connections

The average distance between Czech towns in the countryside offers a great opportunity for daily commuting on a bike or even on foot. Historically, it was the only way to get to the market or school in the nearest town. Nowadays it is more about pleasure and as the recent western trends show, it is becoming more and more popular as means of a modern healthy lifestyle.

The distances between the suburban towns in the region are even shorter than average. Paradoxically, it is almost impossible to get from one to another by bike. The heavy traffic on the roads and the impenetrability of the fields has almost completely erased all connections between the towns – the physical as well as the social barriers. Because, when driving a car is the only option it is too easy to simply continue driving for 15 more minutes and go to school/shop/fitness centre in Prague instead of the nearest town.

Providing the physical connections is a way to recreate the lost social bonds in the region. Making the local centers accessible together with a sufficient offering of public services will contribute to a healthier social and economical climate (as more people would spend more time in the towns) as well as eliminating some of the daily car traffic.



#### **PRINCIPLES:**

#### **Destination = local centre**

Connect villages with the towns that provide basic services and work as a "natural" centre for the area (it is not always the nearest town; tradition, topography and direction to Prague also matter)

# **Connect to Prague**

Provide connection with Prague bike trails and to the nearest Metro stations through the local centers (including the planned line D)

Prague is and will remain the biggest destination for daily commuting, so providing comfortable access there can have the greatest effect on reducing the car traffic.

#### **Connect the centers**

The connection between centers offer an opportunity to choose from a wider variety of services and it helps to foster social interactions and communication between the towns.

# **Cycling all year round**

Support cycling by design and also for use in bad weather

- Paved surface (for rainy weather)
- Trees and shrubs along the trail for sun and wind protection
- Winter maintenance (snow-plowing to enable both walking and skiing)



Winter maintanance
Ploughing enables both cyclists and skiers to use the trail in winter.



#### **Distance matters**

Find the shortest possible distance as it is the key factor that influences the choice of route for everyday connections

# **Safety first**

Separate cycling paths from vehicular traffic to allow for an unaccompanied child to ride safely



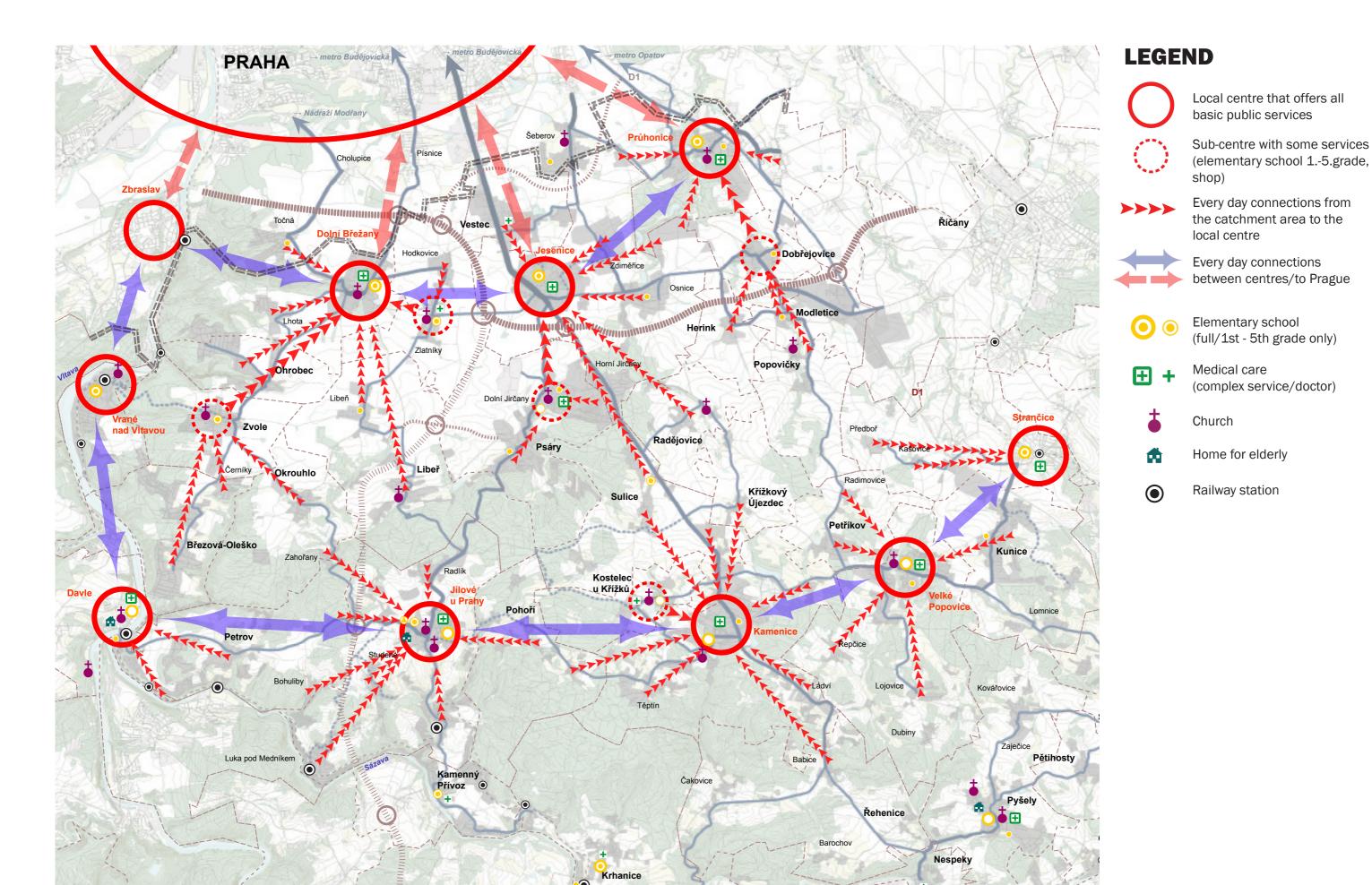
2.35 - 2.36
Separate traffic
Provide a safe separate
trail for cyclists and
pedestrians.

#### **Use old routes**

Where appropriate, use existing roads and trace historical routes where possible Makes it cheaper, easier to negotiate property ownership and these routes (even those that don't exist anymore) are already integrated in the urban and landscape structure.



2.37
Use existing roads
Paving the old road is a way to make a new bike trail with just a little effort.



# **DAILY CONNECTIONS**

# **RELAX IN THE LANDSCAPE**

# Make access to and through the landscape for recreation

Walking in nature is the most simple and one of the most relaxing and always affordable ways of recreation. At the same time, it is something that is hard to achieve in Prague. No surprise that nearly all the suburban developers have the world "nature" in their advertisements. In reality, the recent suburban development has often created closed, impenetrable blocks that interrupted the natural connection with landscape and the simple walk in nature has become almost as unrealizable dream for the suburban residents as for people in the centre of Prague.

As a result of such bad accessibility, the residents won't go out into the landscape and from there, it is not far to convince oneself that there is nothing interesting around – but there are places outside the "fortifications," only they're not remembered any more.

The task then is to penetrate the town edge and recreate a network of footpaths and bike I trails and discover the forgotten places with memory or create new attractions to bring people into the landscape. Not only would they have a chance to relax without need to drive anywhere but they can learn to understand nature and help to protect it.

Besides the daily recreation for the local residents, the landscape of this region offers a variety of tourist attractions particularly for people from Prague. So it is important to provide good access to these places and also to protect and promote the less known values.











#### **PRINCIPLES:**

# **Daily recreation**

Provide a network of footpaths and points of interest in the town surroundings

- · Make loops plan the paths so that it is possible to choose several options for different ways there and back.
- Every road needs a destination build paths to the points of interest (a chapel, a memorial stone, a cross, an old tree, a hill with a view, a lake...) and build points of interest on the paths. It can be even the bridge over the highway as a perfect viewpoint in the flat landscape, as well as an attraction for kids who like to watch the cars below.
- Emphasize these places with appropriate planting and provide seating to invite people to stop there.
- · Enjoyable paths plant trees (attractiveness and protection against sun and wind), offer views (opening between trees in the right places; direction and curving of the
- · Natural avoid hard paving (use grass, gravel, wood), plant natural species typical for the area, routes respect topography (follow contours, avoid steep slopes...)
- · Connect to the regional network of recreation trails



2.38 - 2.40 Recreation in the landscape Enjoyable natural paths and viewpoints in the landscape.

# **Natural playground**

Maintain grasslands at the town edge (or close to it) as a recreation place for the residents (financial reimbursement for the farmer; city owned land – an outside city park)



2.41 - 2.42 Natural playground Recreation on the grasslands outside the

# **Regional network**

Connect by tourist footpaths and bike trails the regional attractions with towns and with

- Choose the most attractive route distance doesn't matter. Also, make the new roads enjoyable (planting, views...) and separate from vehicular traffic.
- Offer places for rest seating and picnic furniture. Put these at some attractive places or trail crossroads.
- · Plan the routes through town centers to show it to the tourists and to offer shopping and refreshment possibilities.
- No need for paving even bike trails can be natural (gravel roads). While for daily bike commuting the paved surface is preferred, natural roads are acceptable for recreation (and for nature too).



Natural roads Recreational bike trails in the landscape - no need for paving.

# Invite people

Plan activities and promotion to bring people into the landscape and to the attractions

- Tourist promotion websites (facebook!), leaflets, maps etc. Promote the whole "Mikroregion".
- · Organize community activities and local feasts in the landscape to bring people's attention to the special places.



2.45 - 2.46 **Outdoor events** Community activities in the landscane

# Use old routes

Use existing roads and trace historical ones where possible



2.47 **Disrespect to landscape connections** New development blocking the natural connections with the surrounding landscape.

# **GREEN NETWORK**

# **Ecological connections through the suburban landscape**

Onnectivity of ecosystems is one of the main factors that contribute to ecological stability. Migration of plant and animal species supports balance in ecosystems and enables successful rejuvenation and evolution.

As a result of the intensive urban development and agricultural practices, the suburban landscape has become almost impenetrable for any native species.

n order to re-establish the ecological stability in the region it is essential to understand the landscape functionality and plan and plant new network of eco-connections and then protect it from any new disturbance.

#### **PRINCIPLES:**

## **Understand before planning**

Respect the ecological factors and the specific local conditions (natural, social, economical)

- Use the "ÚSES general" as a guideline for the minimum density and the most important directions of eco-connections.
- Make sure to provide enough space to meet the ecological requirements for the ecoconnections to function properly.
- Consider property ownership and land value careful planning (along property boundaries, on less valuable land...) will make the implementation much easier.
- · Revitalize and integrate the existing natural features as much as possible

## Two (or more) birds with one stone

Design multi-purpose landscape corridors to use available resources effectively In such a way, the property issues, the permitting process, project and construction work can be accomplished simultaneously, which can save a considerable amount of money. Also, leaving larger compact pieces of land allows for more effective agricultural use.

- Integrate biocorridors, trails, protection against water or wind erosion (make sure that all components function properly)
- Use the land along highways barrier (protection) planting, biocorridor, trail
   Trees along the highway would reduce its negative effects visual, noise, pollution; make conditions for biocorridor and create an attractive route for a bike trail.

   All executed with minimal cost on the already devalued highway land.



2.48 - 2.49

Accessible ÚSES

ÚSES features can become attractive recreational destinations in the landscape. (Mořice)

# **ÚSES** is not all

Add other landscape features (with other than strictly ecological function)

Breaking down the vast monotonous fields with natural features (alleys of trees, baulks, shrubs, small woods, distinct trees) gives the landscape a human scale and make it more visually attractive and accessible.

- Identity alleys along roads and streams as a characteristic landscape feature for this region.
- Protection planting along the highway (against both pollution and the negative visual effect), along trails and roads for wind and sun protection, wind and water erosion protective features.
- Attraction hide the "ugly" features (industrial and agricultural facilities, highways) and highlight the places of interest (tall, distinct trees can mark a chapel, a viewpoint, a memorial place...).





2.50 - 2.51

Alleys

Alley along a road is a characteristical feature of Czech rural areas, but it has ecological benefits as well.

2.52
Highlight
A solitaire tree can enhance the visual significance of a cultural place in the landscape



# **LIVING WATER**

# **Sustainable water management**



Water is the most elementary condition for live in all its forms. At the same time, water protection is one of the most complicated (yet urgent) issues, because water crosses all political boundaries and the disturbance of hydrologic cycle at one place can result in serious damage hundreds of kilometers away. Flood protection walls do not solve the problem (only send it further downstream), the real protection needs to begin at the source.

As most of the studied region lies in the upstream area, the water management needs to be a serious issue here. Taking the natural hydrological conditions as a measure, eliminating the disturbing effects of human activities (both past and future) is a key to healthier environment.



#### **PRINCIPLES:**

#### Land use control

Minimize surfaces with fast water run-off, increase the amount of natural vegetation areas and help revitalize agricultural soils

- · Urban areas:
  - Use existing road network for new development as much as possible
  - Use grass and permeable surfaces (gravel...) for public space
  - Increase the amount of vegetation in the streets
  - Support green roofs on buildings (provide information, technical assistance, financial incentives)
- Agricultural land:
  - Support ecological agriculture (provide land, financial incentives, technical and marketing assistance)
  - Water erosion prevention protective measures (baulks, ditches...) on slopes >7°; only grass cultures on slopes >12°; forest or non-agricultural grass on slopes >17°; forest only on slopes over 25°
- Protect streams grass (or other natural vegetation) borders along both sides of the stream (= no plough land directly to the bank)
- · Protect the natural areas



2.53
Natural filter
Vegetation border along the field stream.



2.54 Green roofs

## **Keep surface water**

Catch and slow down the water run-off in streams and ponds

- · Revitalize the natural flow of streams
- Design new ponds in suitable areas (in places of historical lakes or other) as a part of the eco-connections network or in other locations for recreation purpose.



2.55 - 2.56

Keep water

Revitalize streams and create new water ecosystems.

# **Support natural water ecosystes**

Protect existing natural water ecosystems and establish new ones where they have been destroyed

- · Protect and revitalize natural water banks and marshlands
- · Maintain water quality
  - Vegetation filters between urbanized or agricultural areas and streams or lakes
  - Quality sewage treatment focus especially on the weekend-house colonies

# **Individual responsibility**

Set limits for the outflow water quantity and quality for every property or development area and make it direct responsibility of the owner

Water management is much easier (and cost less) at the source then further downstream and to achieve that every owner needs to take responsibility for all water that goes out of his property.

The relatively small population size of suburban municipalities can earn even more bonus points for these towns. Compared to Prague, where a town representative is just as strange person as a member of national government, small town offers a chance for residents to know the people from their town hall in person – and vice versa. The possibility to be really heard and influence how the place is being shaped contributes significantly to developing a much closer relationship to the place where one lives. And to love a place means to care about it.

Another contribution comes from the other people there – from the local community. A strong community where people know and respect each other and talk together can be a great support when one needs help and a great pleasure to meet friends every day on the street. And when there are people with a mandate to speak for the community it can be a great support for the town planners as well.

So the task is to give people the opportunity to be heard and a chance to meet each other. Community based organizations can help a lot in this case, however, the town hall is the place where the town is being shaped and where the dialogue should come from.



#### **PRINCIPLES:**

# **Support local organizations**

Help existing and encourage new local community based (non profit) organizations – provide office/meeting room, financial assistance, town government participation in their activities...

# **Participatory design**

Foster participatory process (engage future users in the design) for the projects on public places

- Start with smaller projects (to get people used to it) a neighborhood park, new bus stop, children playground, picnic area outside the town...
- Lead by example participatory design as a requirement for projects funded by town





2.57 - 2.59

Community planning

Participatory process is challenging, but has great benefits for whole community.

# **Community activities**

Organize social activities to bring people together and to improve the environment

- Work (a stream cleanup, planting an alley...) motivate people to come (offer refreshment for participants, make a party afterwards...)
- Entertainment public celebrations (town anniversary, "witch burning", children day, summer solstice...)
- Good promotion is necessary! Make it accessible to all residents (invitation both on facebook and on posters on the bus stop).



2.61 - 2.62

Community activities

Working together to improve the environment

# **Open-door town hall**

Invite people to talk about any issues related to the town - present all intended projects to public, offer a chance to ask questions and discuss (web forum, "Mayor's afternoon" – a regular time when the office is open for people to come and talk to the Mayor or other representatives...)







There are many ways how to make improvements in local environment. Also there are several ways how to engage more people in these activities. However, engaging local school is one of the best ways to achieve both. Recent education trends show that modern school focuses more and more on hands-on experience, teamwork and thematic projects rather than just regular in-class lectures. And today's parents ask for alternative ways of education for their children. An educational project that results in a real action and a visible improvement of the town's environment can perfectly suit all - the school ambitions, parents' requirements and town's needs. As a bonus, not only children, but also their parents (who get involved) can learn about the local environment and history of the place where they live. And parents of smaller kids can see that the local school offers an attractive, modern program and they may remember it later when choosing school for their children.

On, communication with the local school, locating eligible projects and assistance with their implementation is one of the best ways to raise people's awareness of the town's activities and environmental issues as well as to help the local school to meet competition with Prague. Besides, Children often come up with very interesting and refreshing ideas even on very serious issues...



#### **PRINCIPLES:**

# **Prepare projects**

Locate opportunities for school projects, collect data and define the assignment in collaboration with teachers

It is easier to attract a school to a project which is prepared in detail and fitted to the school needs.

- Environment improvement (project examples):
  - Plant an alley find out about the history of alleys along roads in the region; learn about native trees and their planting; choose, prepare and plant the trees (with the help of parents); organize opening celebration for the town...
  - Re-discover a local spring; design and create an educational trail; paint benches in the park...
- Tracing history (project examples):
  - Places with memory find a place with a name that refers to something what had been there (Ke kapličce, K Jaromírce, V haldách, Na ptáku, U křížku...); try to find what was there; write a story; think how to remind the place today; draw how it can look; make the place accessible; play the story as a theatre performance at the place for public...
  - Suggest a new town celebration day remembering some historical event; re-discover a forgotten memorial stone, a cross, a chapel...
- Visionary:
- Drawing/story writing/ photo contest How would the town look in 20 years; What I want to change; The best place in the town...



2.63
Environmental projects
Let children plant the new alley.



Places with memory
Re-discovering forgotten historical
places can be an inspiring task
for childrenand a recreation of
identity for the town.

# **Support for schools**

Offer an assistance on the project for school – provide data, legal support (permissions), financial help, consultation for children, help organizing the public presentation...

#### **Present the results**

Introduce the school work to all residents – final public presentation, performance, exhibition, opening celebration...

Relationship to a new tree (bench, paving...) can change from "don't mind" to "like" only by recognizing that it's a work of local children (and to "love" if it is your children).

# **Regional meetings**

Support regional inter-school tournaments (or other events) with public participation Meeting at one place is the first step for communication – even if it is on the opposite sides of a soccer field.

# **BUILD THE TRADEMARK**

# **Recognize and promote the unique local values**

11

There are more values to suburban towns than just being close to Prague. Each place has its unique characteristics coming from history, traditions, landscape settings and its people that create a special identity. However, these characteristics of the suburban towns have changed dramatically in past 15 years – the landscape and history were overwhelmed by the influx of cars, buildings and people with a different background and lifestyle. As a result, much of the identity was lost or forgotten and there wasn't enough time yet to create new. But a town needs identity, so that people who live there can identify with it and be proud of their hometown and care about it (and when asked: "Where do you live?" answer: "Dolní Břežany" instead of: "Close to Prague" – especially for attracting new residents it is better to have people who want to live in Dolní Břežany and not just "close to Prague").

Recognizing the unique local values and defining the desired characteristics is a key that enables planning new development in a way that respects and enhances these values and thus helps to build a new identity. However, it would work only when the residents accept and identify themselves with the same values, so public participation is essential on this



#### **PRINCIPLES:**

#### **Find the values**

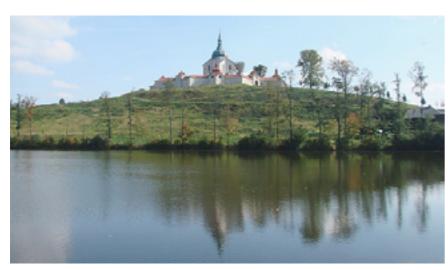
Recognize the unique physical values and social characteristics related to the town and based on those define a desired future characteristic

- Pick "Number One" dominant value/characteristic that would be presented in association with the town
- · Recognize also the negative features
- Residents' participation in the whole process (both finding and defining character) is essential

It is the local people who make the identity something more than just a slogan on the promotion papers, so it is important that they would accept the recognized features as real values.

## **Enhance the values**

Highlight the values (with a special focus on the Number One) and eliminate negative features by restoration, design and careful planning which respects and supports it If a church is defined as a value then restore it, open to public, make good access to it, consider cutting down trees that are hiding it, regulate building height around...



2.65
Landmark
Cutting down a forest that cove

Cutting down a forest that covered the whole hill let the landmark stand out.

# **Bring the values to life**

Show the values to the residents and to the world so that they can identify those characteristics with the town

- Make people acquainted with the valuable places by organizing public events that would bring people there (both local and from outside) and help them to remember the place as special
- Design also a unified characteristic graphical style (identity) for promotion (including town logo or coat of arms, motto...) and present the town





2.66 - 2.68
Visual identity
Modern graphic style for promotion clear, readable and variable.

# Attract and welcome new residents



The enormous increase in population experienced by the suburban towns in past decade brought problems to the region not only because of the quantity but also the specific demographic structure of the new residents. Particularly, it is the homogeneity of the group that causes problems. As it was mostly young families who came to the suburban towns, the amount of small children and also the birthrate in most towns has grown significantly as well as the rate of adults in the age of about 30 – 40 years. As a result there is unsatisfied demand on nursery and elementary school capacity in the region and the services are all designed for the one social group.

Recently, the immigration has almost stopped leaving the towns with such unbalanced demographic structure. In few years, that may result in another mass demand for special services – the schools won't be full any more, while the doctors, social services and elderly care may become the critical items.

The key to reduce this undesirable effect is to keep attracting new residents and maintain a more-or-less continuous growth for some time until more balanced population structure is achieved. At the same time, attracting a more diverse group of potential new residents is essential. Also let the newcomers feel welcome and give them motivation to change their permanent residence address officially to bring some money for the town too.

Besides, new development can fill the gaps between the recently built "satellites" and the town and thus help the newcomers from past decade integrate in the community.



#### **PRINCIPLES:**

#### **Create an offer**

Provide a complex offer that would attract new residents or developers to the town

- · Provide land in attractive location and/or completed with infrastructure
- Prepare market studies, offer help with promotion...
- Offer public-private partnership town's land and guarantees for a private investment (which includes public facilities)
- Focus promotion also on individual newcomers advertisement, exhibitions/fairs...

# **Support diversity**

Offer different kinds of property to attract a variety of new residents (in age, social background, economical status...); especially focus on providing affordable and barrier-free housing (often in town ownership)

# **Controlled growth**

Plan the new development together with sufficient infrastructure and services to allow growth only as much as the town is prepared.

#### **Warm welcome**

Make new residents feel welcome and motivate them to change the official permanent residence address

 Host a welcome celebration, invite newcomers to special informative meetings, offer help with the address changing process (designate a special office hours for that, can be together with the informative meeting...), explain the advantages of the official residence...



Welcome
Let the new residents feel at home

# **REGIONAL PARTNERSHIP**

# **Establish Micro-regions**

There are issues that can be solved in each municipality individually. However, there are some issues that require regional discussion (e.g. traffic infrastructure). And there are some that cane be solved individually but with a help of others the solution may be much easier (e.g. providing public services).

It is not only about giving a statement (agree/disagree) on the neighbor's plan – which is required by law. If the discussion starts at the beginning of any planning, it may result in a solution that is wanted by all involved, not only that the neighbors don't mind. Such discussion can sprout just out of a good relationship between neighbors but often it needs a formal scope to get everybody to one table in a regional scale. In the Czech Republic a good tool to provide such formal scope is the "Mikroregion" (Micro-region).

Establishing of two Micro-regions in the area would be a good way to encourage regional collaboration and planning of regional issues together. Also it offers a better chance to succeed in the competition for EU funds as well as a stronger representation in the dialogue with other political subjects (particularly Středočeský kraj and Prague).

# Mikroregion Jižní okruh (Southern Ring)

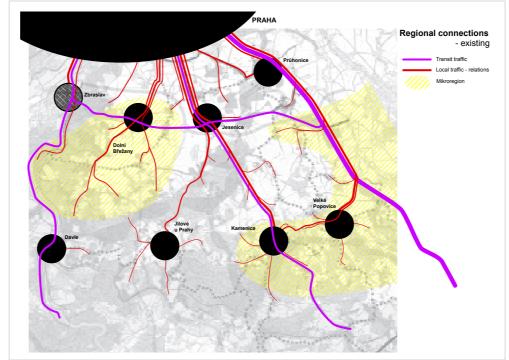
Coalition of the first-line suburban municipalities with centers in Dolní Břežany, Jesenice and Průhonice

- Dolní Břežany + catchment area:
- Zlatníky-Hodkovice, Libeř, Ohrobec, Zvole, Okrouhlo, Březová-Oleško
- Jesenice + area:
- · Vestec, Psáry, Radějovice
- Průhonice + area:
- · Dobřejovice, Modletice, Herink, Popovičky
- Vrané nad Vltavou

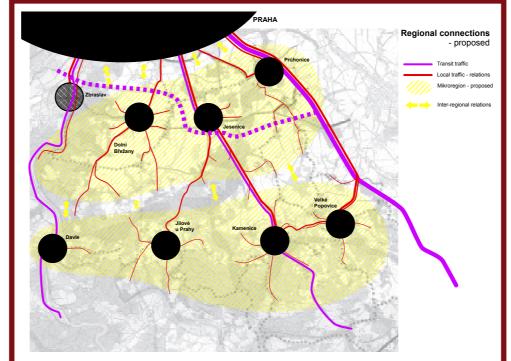
# Mikroregion Nad Sázavou (Over the Sázava Valley)

The woodlands area over the Sázava valley, so far almost spared from the intense suburbanization, local centers Davle, Jílové u Prahy, Kamenice and Velké Popovice

- Davle + Petrov
- Jílové u Prahy + Pohoří
- Kamenice + area:
- Křížkový Újezdec, Sulice, Kostelec u Křížků
- Velké Popovice + Petříkov



Existing Micro-regions



Proposed Micro-regions



The suburbanization process separated in many cases business from towns. There were created almost purely residential enclaves around towns and large business parks around the main traffic junctions. But neither of them (apart from some special highway business) got any long term profit from such separation. Town without business looses 8 hours of their day-life and half of the profit for local restaurants and services. Business without town looses a great deal of attractiveness for the employees and an opportunity to meet some potential customers. And together it creates a great pressure on traffic infrastructure.

Suburban towns can be a great place for smaller local business as a supplement to the global metropolis. A variety of smaller businesses adds to a better economical stability of the region as well as creating diverse job opportunities. If the business is locally owned the town gets even more profit – residents-entrepreneurs tend to care more about what's happening in the town and also they're more likely to keep the enterprise in town even in less favorable conditions. Besides, the money they earn stay in town.

N ow the task is to bring the small/medium business attracted by the highway into the towns and create conditions that would support the entrepreneurs to stay, with special privilege for locals.



## **PRINCIPLES:**

#### Create an offer

Provide a complex offer that would attract business owners to the town Sell the place as the best ever opportunity for a business.

- Provide land or commercial facilities in attractive location and completed with infrastructure that would suit small and medium business
- Offer market studies, help with promotion, assistance with permitting process, financial incentives (e.g. free rent for 6 months)...

#### **Bonus for locals**

Offer privilege for local owned business – first offer of new facilities, financial help, marketing support...

Businessmen who live in the place of their business are Besides, local businessmen can be more welcome (by other residents) then strangers.

# **Promote local goods**

Provide marketing support for locally manufactured goods – offer label "local product," official promotion by the town/Mikroregion

The label "local" can help to sell the product as well as the product can help to "sell" the region.





2.71 - 2.72

Regional products

Official labels for locally manufactured products.



2.73
Separation
Shopping park separated from the towns



2.74
Separation
Isolated residential enclave with no place for business.

15

Locally grown food used to be an inseparable part of life in the country. However, today in the time of Chinese garlic, Argentinean apples, German potatoes and Polish cheese, local food has become a special treat, almost a luxurious product. Fortunately, it has been caught in the recent eco- and healthy-lifestyle wave and re-appearing farmers' markets are being taken by storm of eager customers (particularly in Prague).

Support for small local farms and eco-farming is not only about being trendy, it has long-term positive effects on the environment. Consuming local food reduces the demand for transportation, but primarily it is the landscape that benefits most of it. Eco-farms have it in the program, but also non-eco small farms are much more vulnerable and dependent on the natural resources, thus they need to take care about the land (also they usually care because of their personal attachment to the land and the place where they live). Besides, a patchwork of small fields brings a human scale back to the landscape and makes it more accessible and attractive.

**S**o a thoughtful support for local farmers can kill two birds with one stone – revitalizing landscape and earning some more points for the town in the Prague x suburbia contest. Besides, it can be an attraction not only for the local people but also for visitors (particularly from the neighboring parts of Prague).



#### **PRINCIPLES:**

#### **Create an offer**

Provide a complex offer that would motivate farmers to come to the town

- · Provide land and facilities
  - focus on land that has been somewhat devaluated (from the large agricultural business point of view) and thus can be better affordable – small pieces ("leftovers") along the highway, land in the town surroundings fragmented with new roads and trails and new development...
  - use eco-farming as a filter between the artificial (town or intensive agricultural use) and natural ecosystems
  - a farm located close to the town can also serve for educational purposes
- Offer financial and legal support (assistance with the permitting process...)

#### **Provide market**

Help to get the products to local customers

- Organize farmers' markets and invite the local farmers there make them regional (one week in Dolní Břežany, one week in Jesenice...)
- Motivate local grocery store, restaurants, school canteens etc. to buy local products (financial support...)



2.75 - 2.76
Farmers' market
The easiest way to get farmers' products to local customers

#### **Bonus for eco-farms**

Offer privilege for eco-farms – special financial help, insurance/guarantee, marketing support...

# **Promote regional goods**

Provide marketing support for local food products – offer label "local product," official promotion by the town/Mikroregion

The label "local" can help to sell the product as well as the product can help to "sell" the region.



2.77

Regional goods

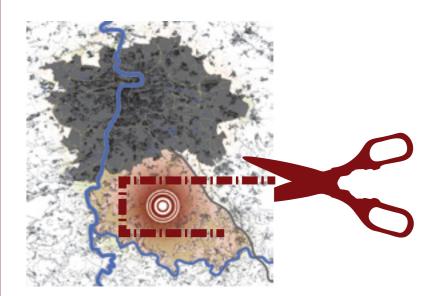
Official label provided by the

Ministry of Agriculture for locally
produced food



2.78
The best of region
Official label for the selected best food product of
Středočeský kraj

# **EXAMPLES**



# **DESIGN EXAMPLES**

# 15 key principles illustrated on 2 towns



This section consists of two design examples that illustrate the potential application of the key principles. The two examples represent each of the two Micro-regions to illustrate the different approaches to these localities. Dolní Břežany as a representative of the suburban zone proves the need for new connections and recreational options in the landscape, while Jílové u Prahy, represents the green belt area, showing more opportunity to protect and enhance the existing landscape values and prepare for the development that the new highway may bring.

# **Dolní Břežany**

#### Mikroregion Jižní okruh

Dolní Břežany represents quite a typical first-line Prague suburban town. The attractive location is at the Prague edge and at the same time very close to the scenic Vltava river valley. This very complaisant town has experienced an almost 200 % increase in population since 1998 and even larger increase in area. Its location and size makes the town a natural centre for the whole area southward along the river valley edge as well as for the neighboring villages Zlatníky-Hodkovice, Libeř and Točná (which administratively belongs to Prague). However, the town itself is now dealing with problems caused by the population increase and doesn't offer (yet) sufficient capacity of public services to support the whole area. Also, the accessibility from the neighboring villages is quite poor (despite of the physical distance) and mostly possible only by car or infrequent bus service.

Recently, after a change of the authorities, the town has shifted towards higher quality development and focused on the public space. As a result it now boasts a new town centre with public facilities, a park with playground by one of the best Czech landscape architects, new nursery school and a bike trail to Liber as well as many other projects that are under construction. So, some of the following suggestions for development are already being carried out here.

# Jílové u Prahy

#### Mikroregion Nad Sázavou

Jílové u Prahy offers quite a different situation compared to the suburban zone. The dramatic morphology and natural landscape setting together with rich history provide a unique attractiveness. The longer distance from Prague and the winding road across the Zahořanský stream valley have spared the town from the massive suburbanization attack. Also, it makes the town more important as a local centre as Prague is less accessible and thus Jílové retained all public services and a fairly good choice of shopping and entertainment possibilities. Additionally, it is an important tourist centre of the region.

The planned construction of highway D3 can dramatically change the situation. Providing fast access to the area (with planned exit right at Jílové), this place may become a tremendously attractive location particularly for residential development. Therefore, it is crucial to prepare for such a possibility and protect the unique values.

# Situation of the design drawings

#### Dolní Břežany

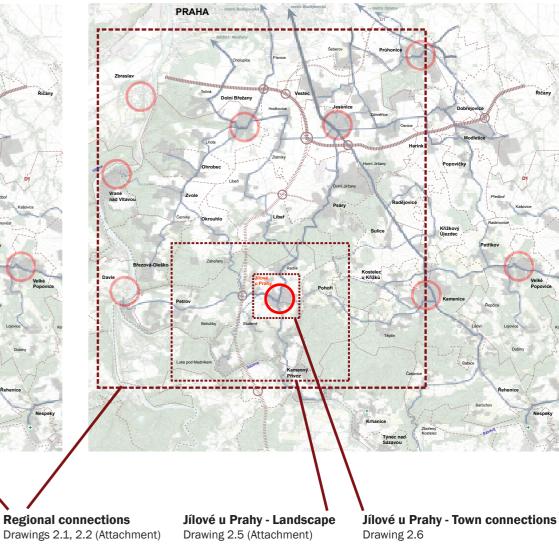
Drawing 2.4

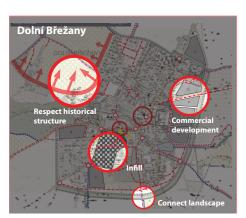
# PRAHA Dolní Břežany - Town connections Dolní Břežany - Landscape **Regional connections**

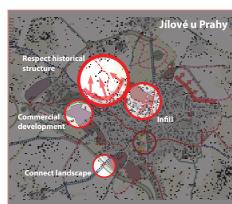
Drawing 2.3 (Attachment)

# Situation of the design drawings

Jílové u Prahy





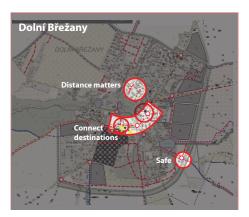


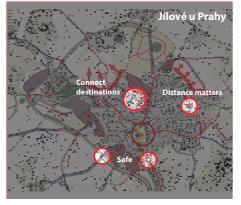


Jílové u Prahy
Town settings in the shallow
valley with the characteristical meadows around



**Zahořanský potok**Weekend houses in the stream valley - not for permanent residence





# **Dolní Břežany**

#### **Key Principles**

See the attached drawings (2.1 - 2.4) for reference

## 1 Building with respect

- There is great development potential within the town boundaries provided by the industrial land intended for transformation and by the planned by-pass road that would encapsulate some of the surrounding land. All new development should respect the general principles (Key 1 and others that apply).
- Public services should concentrate in the central area around the old and new town squares. Consider building height regulation around the old downtown and the castle.
   The old square should retain its representative function, while the new one shall be the business and shopping centre.
- A city character is natural and appropriate for Dolní Břežany, promote a higher density (apartment blocks) development in the central area – particularly in the transformation area in the old downtown (within the height regulation limits).
- Re-design the streets in the recent development areas for more comfortable pedestrian and bicycle use and more space for greenery. Restrict vehicular traffic (one way/ dead end streets, "residential zone" etc.) where appropriate.

#### 2 Public services for all

- Dolní Břežany is an important centre that can reduce the dependency on Prague for the whole catchment area so it is essential to provide enough capacity of public services here. School and nursery school capacity needs to be a priority.
- · Some options for additional school capacity:
- Temporary additions to the existing school building (some are now already under construction).
- Temporary use (conversion) of the commercial space at the new square or the castle building.
- New adaptable building (can be for future commercial use) as a part of the new development project in the transformation area at the old downtown.
- Do not allow a new shopping centre at the highway junctions in the area and motivate the service-oriented business to concentrate in the downtown area.

# 3 Managing the weekend-house colonies

- All the weekend-house and garden colonies in Dolní Břežany area were formed as an
  addition to an existing town, so they are mostly well prepared for transformation into
  residential areas (which has already started there). Yet still it needs special attention and more detailed plan to manage smooth transformation and retain the unique
  character. At least a planning study ("Územní studie") for the public space and traffic
  concept is appropriate, consider also "Regulační plán".
- The area of Károv-Zálepy needs one planning concept, so the collaboration with the Ohrobec municipality is essential.
- "Jarov" colony is the only exception where further development (transformation) should not be supported.

# 4 Easy everyday pedestrian mobility

- The recent development in Dolní Břežany connects quite well to the existing urban structure. However, there are several points where it can be improved. Important issue is the connection between the school and the new town square (with the main bus terminal). Also the comfort of sidewalks between the two town centers should be a priority.
- General rules (Key 1) should apply for any new development, with a special focus on the transformation area (at the old downtown), which must support currently missing pedestrian connections between the south-western residential area, the downtown and the castle park.

# Jílové u Prahy

## **Key principles**

See the attached drawings (2.1, 2.2, 2.5, 2.6) for reference



#### **1** Building with respect

- There is still good development potential within the existing town boundaries and more opportunities will be created with the planned by-pass road that will encapsulate some of the surrounding land. Later on, additional growth is possible in the northern part up the valley towards the northern by-pass.
- Respect the morphology the town lies in the depression of a wide upper part of the Jílové valley – plan the new development growing from the valley bottom upwards and do not allow development over the ridge.
- Locate commercial development close to the planned highway exit but hidden in the valley or by the forest such that it doesn't spoil the town view from the entry road (coming from the highway).
- Public services should concentrate in the current central area around the old town square and the adjacent streets.
- Consider vehicular traffic restrictions (one way/dead end streets, "residential zone" etc.) on some streets to allow for even better pedestrian comfort.

#### 2 Public services for all

- Support the quality of public services offered to prepare for the contest with Prague encourage school modernization and alternative education projects
- . Do not allow a new shopping centre at the planned highway exit.

#### 3 Managing the weekend-house colonies

- Jílové and its surroundings have been one of the most popular localities for outof-Prague weekend recreation so there are numerous weekend-house colonies all
  around. Many are set in valuable natural areas, especially the stream valleys, so the
  transformation into permanent residences or any new development is not desirable in
  most places.
- Consider restricting vehicular access to some of the recreational areas.

## 4 Easy everyday pedestrian mobility

- The existing urban structure of the town has developed slowly over time and respected natural connections between the centre and the surroundings so there are only a few places, where a new passage should be created.
- The most important issue now is to maintain the connections with the surrounding landscape despite the construction of the new by-pass roads.



Zahořanský potok Redirecting the Sázava bike trail along the attractive stream vallev



Dolní Břežany park
Revitalization of lakes and
stream in the central park



Modern school
Today's parents often prefer
alternative education for their
children



3.6 - 3.7

New chapel

Traditional attraction in the rural landscape and contemporary interpretation

# **Dolní Břežany**

#### **Key Principles**

See the attached drawings (2.1 - 2.4) for reference

## 5 Regional bike trails network for daily connections

- Safe bike and pedestrian connection with the neighboring villages (Zlatníky, Boskovice, Libeř, Lhota and Točná) is an essential factor that supports the importance of Dolní Břežany as a local centre.
- Closing the direct road to Lhota for vehicular traffic is suggested to allow easy and safe daily bike commute and also recreation activities (such as inline skating). Lhota has a very close relationship with Dolní Břežany that needs to be supported with a physical connection.

## 6 Access to and through the landscape for recreation

- The landscape surrounding Dolní Břežany (apart from the Vlatava valley) is currently
  almost impenetrable because of the intensive agricultural use and missing field
  roads. Therefore, a complex network of new footpaths and ecological connections
  (plus other linear greenery) is suggested together with new points of interest that
  would invite people into the landscape.
- Suggested new footpaths mostly trace historical roads (according to "Stabilní katastr") and property boundaries in some other places.

## 7 Ecological connections

- Possible routes for the principal eco-connections and places for the bio-centers are suggested. Further planning needs a more detailed ecological analysis.
- More vegetation features are designed to support the ecological network and to give
  a more human scale to the landscape. Alleys are suggested along the radial roads
  (out of the town) and baulks with shrubs and individual or groups of trees should
  accompany the rest. Groups of significant trees are located at important points in the
  landscape (crossroads, points of interest).

## 8 Sustainable water management

- Follow the general rules (Key 8)
- Some good work has been done on revitalizing the Břežany stream and a system of new lakes in the central park. Still the stream along the street "Ke Zlatníkům" should be opened to the surface and revitalized.

# 9 Community planning

- Support (financial, promotion, organization) community activities organized by local clubs and associations (Fire brigade, Football club...), encourage their collaboration.
- Encourage and support (financial, organization and technical assistance...) the Parents association at the Dolní Břežany school can organize community activities and events (focused on children but invite the whole community).
- Identify public places that need improvement and explore the options for participatory design.

# 10 School projects to improve local environment

- The Parents association at Dolní Břežany school can do a lot of work here if supported by town hall.
- · Some ideas for school projects:
  - Planting an alley along the new bike trail to Písnice.
  - Trace the history of the street name "Ke Kapličce" see possible location of new chapel on the map.
  - Design and create the new picnic/relax area on the way to Libeř
- Recently done project for inspiration "Introducing our village" (see http://www.skolabrezany.cz/indez.php?det=312 for more).

# Jílové u Prahy

## **Key principles**

See the attached drawings (2.1, 2.2, 2.5, 2.6) for reference



#### 5 Regional bike trails network for daily connections

 The existing network of rural roads and footpaths provides very good connection with all surrounding settlements, so the task is only to adapt and designate eligible roads for a comfortable bike use and maintain the proposed by-pass road and highway crossings. Only few new trails are suggested.

## 6 Access to and through the landscape for recreation

- Also, the recreational network needs only few improvements. Some new footpaths
  and a viewpoint are suggested in the northern part of the town to complement the
  "Pepř" watchtower on the opposite ridge (between the town and the village Studené).
- Route change for the regional Sázava bike trail is suggested going through the
  attractive Zahořanský stream valley instead of the road up on the ridge and then
  a diversion from Jílové around the "Pepř" watchtower and down to the viaduct in
  Žampach.

## 7 Ecological connections

Thanks to the complicated terrain settings the landscape of this area has retained a
mostly natural character, so the key is to designate and protect the existing ecological
connections and natural features against any damage that the highway construction
and possible related development could bring.

## 8 Sustainable water management

- Beside the general rules (Key 8), the main issue is protection of the streams that are surrounded by the weekend houses with often very poor or no sewage treatment – so improved control and support for local sewage treatment facilities for the recreational areas is required.
- Protect the pastures and meadows as a characteristic landscape feature of this area and also for water erosion protection.

## 9 Community planning

- Support (financial, promotion, help with organizing activities) the local clubs and associations (Sokol, Okrašlovací spolek, football club...) and encourage them to organize more community activities.
- Locate public places that need improvement and explore the options for participatory design.
- Open the town hall (ask residents for their opinion).

## 10 School projects to improve local environment

• Encourage modern school projects, hands-on learning, environmental education and other activities to help the local schools in the contest with Prague.



3.8 - 3.10 Jílové attractions 13th century church (Sv. Vojtěch) Gold mines - public tours Viaduct at Žampach



Festivals of Celtic (and Irish) culture are very popular Remains of Oppidum Závist

# **Dolní Břežany**

#### **Key Principles**

See the attached drawings (2.1 - 2.4) for reference

## 11 Recognize and promote the unique local values

- · Dolní Břežany is transforming into a young town with a modern centre, so a bit of contemporary design and architecture would support that - consider open architectural contests for the new buildings in the transformation area at old downtown; make a place for some contemporary artwork on the new town square...
- · The young town can grow on it's rich history highlight particularly the Celtic settlement. The Celtic oppidum at Závist which belongs to the Dolní Břežany municipality is a unique historical site that can not be found anywhere else in the Czech Republic! Organize a festival of Celtic culture and music in the open space adjacent to the site; explore possibilities of establishing an outdoor museum or an educational centre there.

#### 12 Attract and welcome new residents

- · Prepare the development areas for individual housing complete infrastructure, various lot sizes.
- Promote the housing opportunity, guarantee free capacity in nursery/elementary school for the newcomers.
- · Require building of affordable housing as a part of the new commercial development project in the transformation area.
- · Inform new residents and offer assistance with the change of their permanent residence address.

## 13 Establish Micro-regions

· Transform the Mikroregion "Dolnobřežansko" (and rename) into the association for whole region by inviting Jesenice and Průhonice areas.

#### 14 Active support for local business

· Dolní Břežany succeeded in attracting a science centre which can help to bring some day-life into the town and also possibly attract other investors. However, more focus on local businessmen and small businesses would be beneficial - offer some incentives (lower rent, marketing support...) particularly for the service-oriented businesses on the new town square to help establish a real centre of town life there. ,planfor transportation related Prepare the land (related to the construction of the by-pass road - see the drawing) for commercial development to attract also non-service busi-

# 15 Active support for local farms

- · Organize farmers' market on the new town square and invite farmers from the whole region - make it regular so that both farmers and people get used to it and keep coming.
- · With the help of Zlatníky-Hodkovice municipality, offer the land between the villages for eco-farming (here it can also serve as a water and soil filter and also for educational purpose and it can help to make the area more attractive for daily recreation).
- · Additional areas for eco-farming are suggested on the map.

# Jílové u Prahy

#### **Key principles**

See the attached drawings (2.1, 2.2, 2.5, 2.6) for reference



#### 11 Recognize and promote the unique local values

• The rich gold-mining history of Jílové and the lovely landscape settings are the dominant values to build on. Make sure to protect these and invite tourists (before the highway is built). Promote the town and surrounding area as a tourist destination - offer special discount packages (ticket for the Sázava steam train + entrance to the museum and a gold-mine tour...), prepare gold-mining adventure for children, help promote the Sázava bike trail...

#### 12 Attract and welcome new residents

· It is not such a big issue here, focus more on maintaining an attractive environment and services to prevent (particularly young) people from moving out.

## 13 Establish Micro-regions

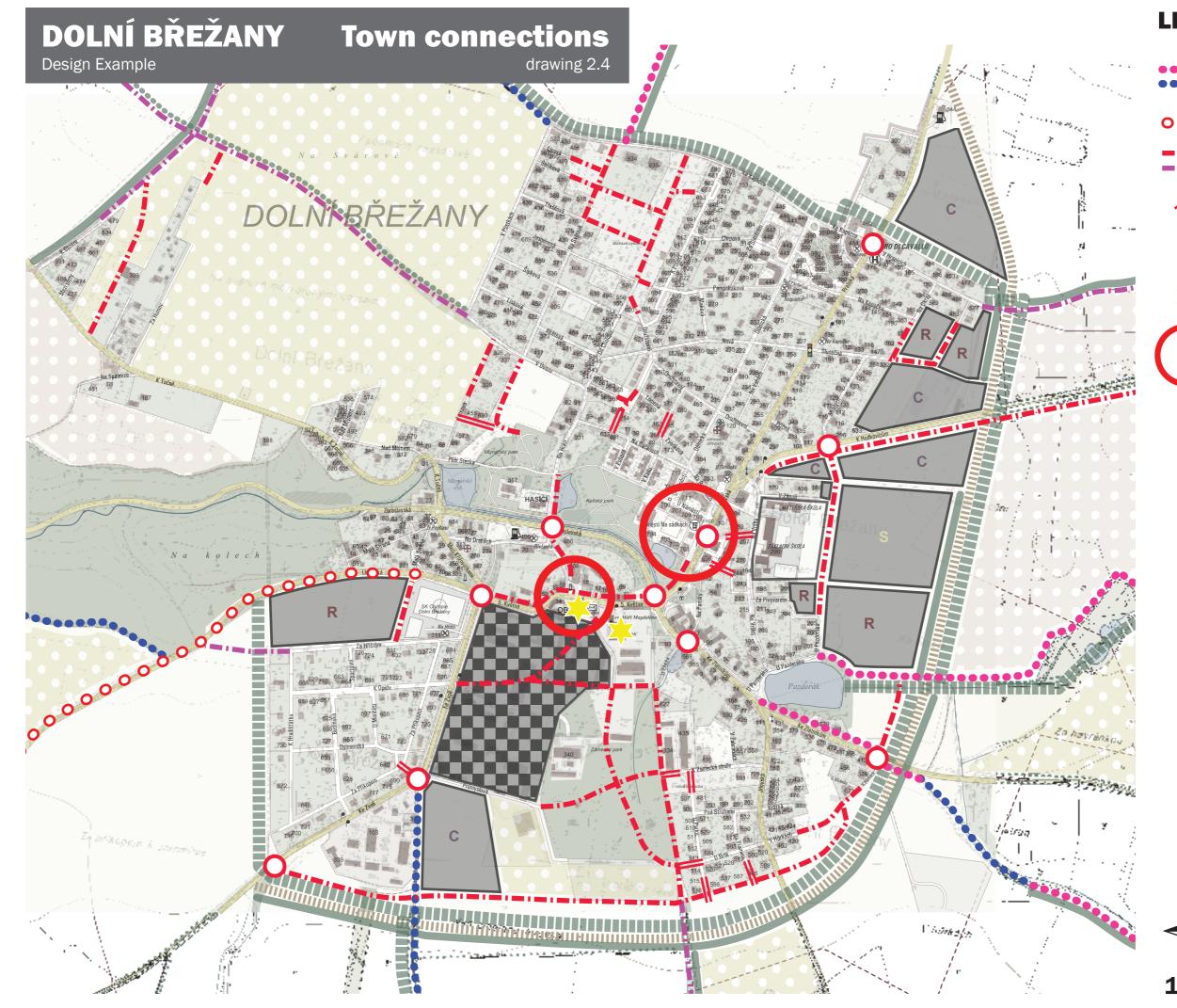
• Jílové should initiate the foundation of the Mikroregion Nad Sázavou. (explain why) Jílové is the largest and the strongest one of the local centers in the area and also it serves as the main tourist centre for a great part of the region.

## 14 Active support for local business

- · Support the small businesses in town (convenient rental conditions, assistance with conversion of the historical buildings in the centre to a commercial use...)
- · Control the commercial development at the western edge of the town (close to the highway) to prevent construction of a larger shopping or entertainment facility which could weaken the dominance of the town centre as the main service area.

## **15 Active support for local farms**

- · Organize farmers' market on the town square and invite farmers from the whole region - make it regular so that both farmers and people get used to it and keep
- . Support the eco-farming practices to retain (at least) the current condition about 80% of the farmland classifies as ecological (according to the Public Farmland Register LPIS - http://eagri.cz/public/app/plpis)



# **LEGEND**

Bike trail for daily use = paved(proposed/existing road)

O O Road closed for vehicular traffic

Pedestrian connection
(daily=paved/recreation=natural)

Proposed passage through built area

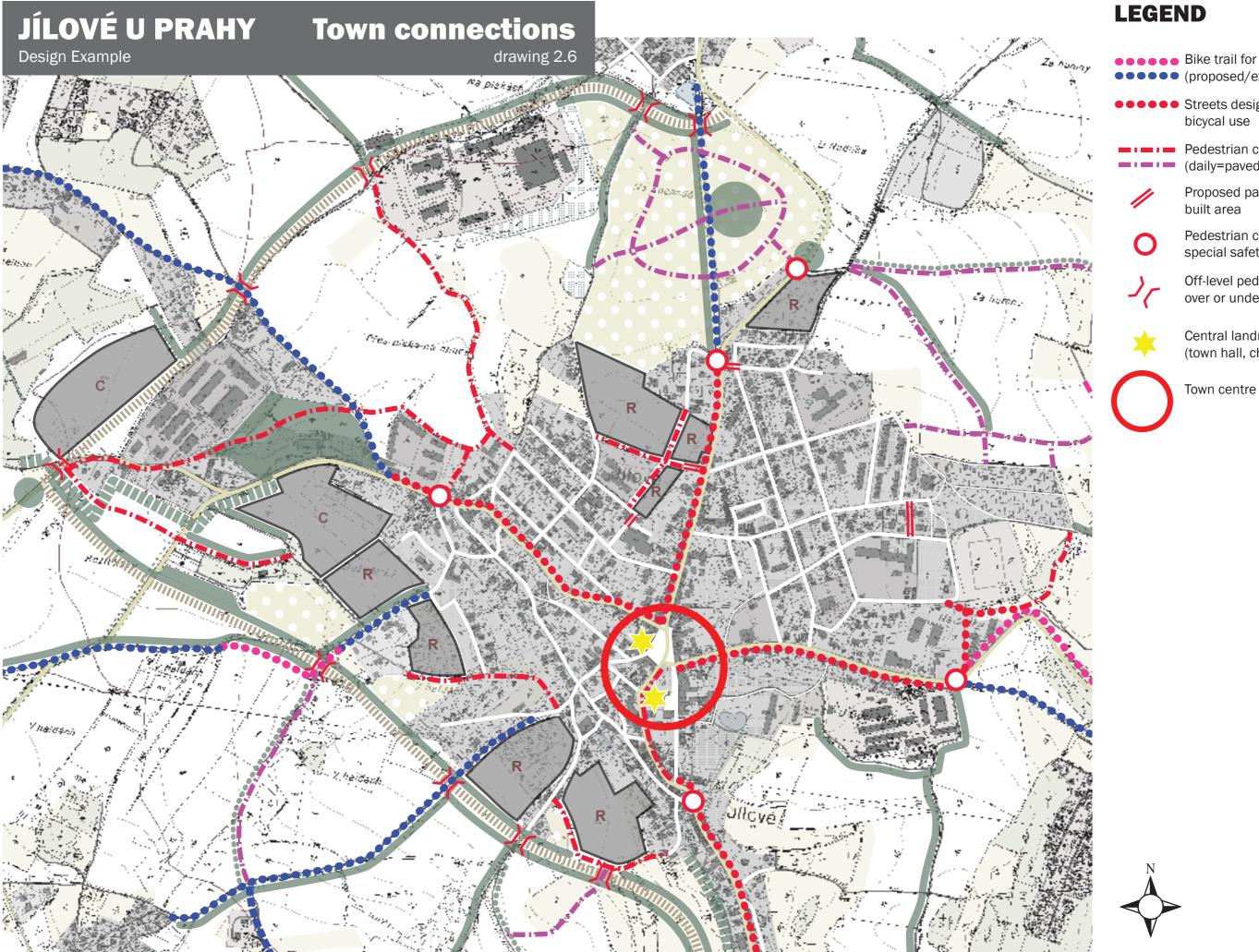
Pedestrian crossing that needs special safety measures

Central landmarks (town hall, castle)

Town centre (old, new)



1:7500



•••• Bike trail for daily use = paved (proposed/existing road)

•••• Streets designed also for safe bicycal use

Pedestrian connection (daily=paved/recreation=natural)

Proposed passage through

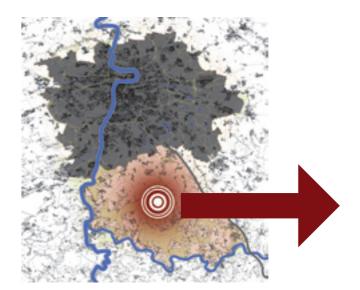
Pedestrian crossing that needs special safety measures

Off-level pedestrian crossing over or underpass

Central landmarks (town hall, church)

1:7500

# **AND WHAT NEXT?**



As it was said in the beginning, this work is intended to serve as a toolkit – so there should be some instructions for use provided.

Well, there are many different ways and actors that can help turn these keys into reality. It would be nice, if all people that live in the suburban towns just started to rebuild their houses with green roofs and tear down their fences and organize themselves in great community activities and plant trees in the streets and in the landscape and everybody would be happy... However, usually they need somebody to initiate the actions and even more these actions need a plan to ensure coordination and a longer term effect. Here, the role of local governments is the most essential. They create the plans and make decisions that shape the whole minicipalty. But they are not the only ones – local community organizations can do a lot of

work and carry out many of the key principles, yet their most important task is to provide a bridge between the four-year governmental periods and carry on the vision. In regional scale, the topical (mostly environmental) non profit organizations can help emphasize the integrity of trans-municipality issues (particularly the water protection and environmental connections).

This framework shall help local governments to design planning documents, create policies and make decisions that would work together for more sustainable development. For non governmental organization it can be an inspiration for new activities and a support for communication with the government. Also it could help negotiate partnerships with private sector to help turn the plans into reality.

#### **Applicable planning devices include:**

#### Územní plán

- The basic document for local planning; provides legal ground for the town's intentions and ensures one direction for individual development decisions.
- This guide should help town representatives to hold a more contributory discussion with architects/urban planners and with regional authorities in the process of "Územní plán" design

#### Regulační plán

 Ensures more control over development, but can be demotivating factor for investors/ developers – works better in more attractive areas. It is suggested to be used particularly for the weekend-house colonies transformation and larger scale commercial development.

#### Komplexní pozemkové úpravy

 A legal ground for landscape planning, particularly helps negotiate property ownership issues, that are often the most obstructive barrier for any new construction of landscape features.

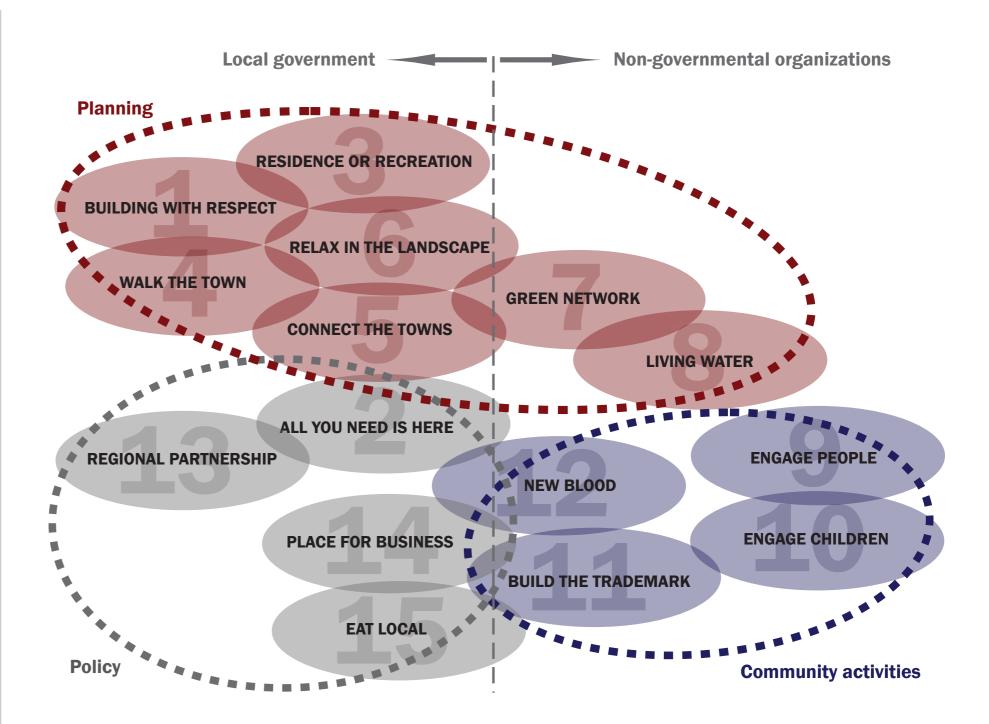
#### **Inspiration for local policies:**

#### Národní síť zdravých měst (National Association of Healthy Cities)

- Association of local governments for more sustainable cities and active communities.
   Offers valuable information, methodologies and practical experience that can help with. Also it ensures a formal (Ministry) support.
- More information: www.nszm.cz and the websites of involved cities.

#### Local Agenda 21

- Based on a UN document, it is a tool for the implementation of the principles of sustainable development at the local level. Touches very similar issues as this work, can be used as a formal scope for the application of the Key principles
- More information: www.ma21.cz



# **THE HAPPY END**

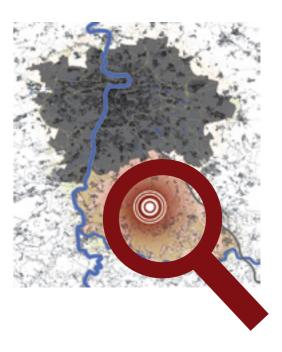
believe the war can end (or maybe it has ended already) and that the suburban towns can transform into really good place to live. But the transformation will be a long process with many small but important steps that need to be taken. And I think that no big vision can achieve that – it needs to grow out of local actions. I hope that this work can contribute to the process and encourage the local people to take these actions or – at least – raise questions and make those people think about their relationship to the place where they live and to the landscape around. Because that is where the transformation need to start – in the minds of people and with the community relationships.

And then, I would want to build my house there...



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# **RESOURCES**





#### **Literature:**

- Ouředníček, M. (ed.) (2006): SOCIÁLNÍ GEOGRAFIE PRAŽSKÉHO MĚSTSKÉHO RE-GIONU
  - Univerzita Karlova v Praze, Přírodovědecká fakulta, katedra sociální geografie a regionálního rozvoje
- Puldová, P. (2006): VLIV SUBURBANIZACE NA ZMĚNU SOCIÁLNÍHO PROSTŘEDÍ V ZÁZEMÍ PRAHY
  - Diploma project; Univerzita Karlova v Praze, Přírodovědecká fakulta, katedra sociální geografie a regionálního rozvoje
- Cílek, V.; Baše,M.(2005): SUBURBANIZACE PRAŽSKÉHO OKOLÍ: DOPADY NA SOCIÁLNÍ PROSTŘEDÍ A KRAJINU
  - www.suburbanizace.cz
- Novák, J. (2004): ČASOPROSTOROVÁ MOBILITA OBYVATEL A STRUKTUROVANÉ PROSTŘEDÍ METROPOLITNÍ OBLASTI
  - Diploma project; Univerzita Karlova v Praze, Přírodovědecká fakulta, katedra sociální geografie a regionálního rozvoje
- Day, C. (2003): CONSENSUS DESIGN Socially inclusive process Architectural Press, Burlington
- Rusk, D. (2000): CITIES WITHOUT SUBURBS Woodrow Wilson Center Press, Washington
- McHarg, I. L. (1967): DESIGN WITH NATURE John Wiley & Sons, USA
- Mareček, J. (2005): KRAJINÁŘSKÁ ARCHITEKTURA VENKOVSKÝCH SÍDEL ČZU – FAPPZ. Praha

#### Internet:

#### **General information:**

- www.suburbanizace.cz
- www.timur.cz
- www.thinktank.cz
- www.mmr.cz
- www.nszm.cz
- www.strukturalni-fondy.cz
- www.ma21.cz

#### **Local websites:**

- · www.kr-stredocesky.cz
- www.dolnibrezany.cz
- www.zsbrezany.cz
- www.jilove.cz
- www.zsamsjilove.cz
- www.oujesenice.cz
- www.obeckamenice.cz
- · www.zlatniky-hodkovice.cz

#### Data:

- · www.czso.cz Český statistický úřad
- geoportal.cenia.cz environmental analysis maps
- www.mapy.cz maps
- www.cuzk.cz Katastr nemovitostí (land register)
- · archivnimapy.cuzk.cz Stabilní katastr (historical maps)
- · www.eagri.cz agricultural land register
- www.ropid.cz Prague public transportation
- Digital map by ČÚZK ZABAGED
- Traffic analysis for ORP Černošce City Plan, 2008
- Územně analytické podklady
  - ORP Černošce
  - ORP Říčany
  - · Středočeský kraj
- · Rozbor udržitelného rozvoje Středočeského kraje
- Územní plány obcí
  - · Dolní Břežany
  - Jílové u Prahy
  - Jesenice
  - · Zlatníky-Hodkovice
  - · Praha (concept)
- Zlatníky-Hodkovice Strategický plán rozvoje vesnice analýza, 2009 (ProstorPlus. EU, s.r.o.)

# **Images:**

- 2.1 courtesy of Henry Hanson
- 2.2 background image from www.lidecko.cz
- 2.3 www.bcgraf.cz
- 2.4 www.prostor-ad.cz
- 2.5, 2.20, 2.21 aktualne.centrum.cz
- 2.6, 2.8, 2.9 Mareček, J. (2005): KRAJINÁŘSKÁ ARCHITEKTURA VENKOVSKÝCH SÍDEL
- 2.7, 2.45, 2.46, 2.48, 2.49, 2.61 www.morice.cz
- 2.10, 2.13 www.lidova-architektura.cz
- 2.11 www.klaster-zlatakoruna.eu
- 2.12, 2.64 cykloplaz.wbs.cz
- 2.14, 2.19, 2.54 www.novinky.cz
- 2.15, 2.34 www.dolnibrezany.cz
- 2.16, 2.17 www.zrup.cz
- 2.18, 2.47 background image www.mapy.cz
- 2.22 www.vanecek-projekce.cz
- 2.23, 2.24 www.ckrumlov.cz
- 2.25 www.bezpecneprechody.cz
- 2.26 www.nemlib.cz
- 2.27 www.ibesip.cz
- 2.28, 2.31, 3.8, 3.10 cs.wikipedia.org
- 2.29, 2.30 www.winnipegtransit.com
- 2.32, 2.35 www.plzenskonakole.cz
- 2.33 www.flickr.com
- 2.36 www.odsnachod.eu
- 2.37 www.spvd.cz
- 2.38 2.40, 2.63 www.obec-krenovice.cz
- 2.41 www.homeoporadna.cz
- 2.42 zs.novabystrice.cz
- 2.43, 2.44, 2.52 www.lareco.cz
- 2.50 www.kvetnice.info
- 2.51 Illenka.wz.cz
- 2.53, 2.56, 2.77 www.eagri.cz
- 2.55 www.praha-mesto.cz
- 2.57, 2.58 www.mosaicthecity.com
- 2.59 www.communityplanning.net 2.62 plantsciences.utk.edu
- 2.65 www.botany.cz
- 2.66 www.cms.kmo.cz
- 2.67 www.zdarns.cz
- 2.68 www.portadesign.cz
- 2.69 www.mikulov.cz
- 2.70 www.svateksousedu.cz
- 2.71 www.isumava.cz
- 2.72 www.tompeli.cz
- 2.73 www.suburbanizace.cz
- 2.74 www.cuni.cz
- 2.75, 2.76 image.tn.nova.cz
- 2.78 www.regionalnipotravina.cz
- 3.1, 3.2 foto.mapy.cz
- 3.3 www.czech-tim.cz
- 3.4 author
- 3.5 www.zsmsjilove.cz
- 3.6 www.rajce.cz
- 3.7 www.abf.cz
- 3.9 www.hornicky-klub.info
- 3.11, 3.12 img.mf.cz
- 3.13 www.navzduchu.cz