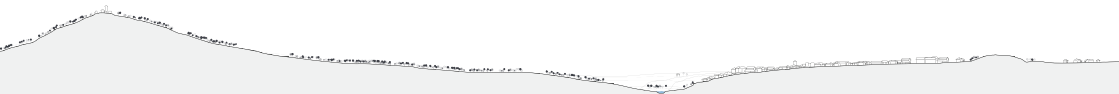


# FROM LETHARGY TO PROSPERITY

REVIVING A MOUNTAIN TOWN BY STRENGTHENING THE COMMUNITY







(( ))

The catastrophe of the Sudetenland is not the void of the abandoned houses. It is the void of the people.

*Tomáš Feřtek  
a journalist and writer*

# FROM LETHARGY TO PROSPERITY

REVIVING A MOUNTAIN TOWN BY STRENGTHENING THE COMMUNITY

Master Thesis in Sustainable Urban Design

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## ACKNOWLEDGMENT

At this moment and first of all, I would like to thank my parents for their endless support in recent months. At the same time, this thesis could never arise without inspiring tutorials with Kateřina, my thesis supervisor.

I also highly appreciate pleasant meetings with Aber-tamy's mayor, patriots, local people and a few professionals. I wish to thank a lot everyone who was around me for their incredible patience and encouragement.



Fig. 1

ABERTAMY 2010



## PREFACE

Due to rapid urbanization and globalization in previous decades, we face many serious problems. I decided to focus on depopulation, a less discussed consequence of urbanization.

Besides depopulation, a town in mountains called Aber-tamy copes also with its complicated history and lost relationship to the landscape. In my thesis, I was searching for potential answers to today's burning question: How to boost life in the countryside in a sustainable way?

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Fig. 2

## 2.00 ANALYSIS

### METHODS

The aim of following analysis is to collect all relevant data in order to see Abertamy in various perspectives. The result was a background in geography, history and demography of the Czech Republic, of the region and Abertamy itself. Site visits and interviews helped me to get more into everyday life in Abertamy. After identifying potentials and problems I was able to start with theme specific research.

## 2.01 WHY ABERTAMY?



### DEPOPULATION

- Consequence of today's rapid urbanization
- Lost relationship to the countryside and landscape



### THE PERIPHERY EFFECT

- Lack of self-confidence. Loneliness
- Culture of poverty. Centralist governance and policy



### CONSUMERS ONLY

- Increasing dependence on state subsidies. Unemployment
- Dependence on non-renewable energy sources



### SCARS OF THE TOUGH HISTORY

- Forced eviction of people - Sudetenland in the '40s
- Decline of industry, neglecting land, and depopulation



### BUT ALSO

- It is my home region
- Numerous similar localities and issues across Europe

## LOCAL IMPACTS OF GLOBAL PROBLEMS

Urban - rural differences are growing, job and study opportunities, as well as public facilities are concentrated in big cities. Especially periphery mountain regions are depopulating and everyday life becomes harder...

Low salaries, expensive commuting, unemployment, neglected landscape, decaying buildings. Local citizens feel being forgotten and they see no other option than moving away. We undeniably need new ways how to make life in the countryside attractive and meaningful.

## 2.02 GENERAL BACKGROUND

### CZECH REPUBLIC

The Czech Republic is located in Central Europe, bordered by Germany, Poland, Slovakia and Austria, mostly by mountain ranges. The Czech Republic covers an area of almost 80 000 km<sup>2</sup> and has 10.6 million inhabitants, which means a density of 134/ km<sup>2</sup>. It is a unitary parliamentary republic. Since 2004, the Czech Republic is an EU member. The capital and largest city is Prague, a popular tourist destination, located in the centre of the country. Although it is a successful, democratic and developed state, it still copes with its post-soviet history.

The Czech landscape and nature is rich and diverse, including fertile lands in river valleys, deciduous forests and mountains. The climate is continental and oceanic, which means mild weather and also a cycle of seasons.

### KARLOVY VARY REGION

The westernmost region of the Czech Republic, neighbouring with Germany, is named after its capital city - Karlovy Vary (Carlsbad). The population of 300 000 inhabitants slowly decreases. Several spa cities and the Karlovy Vary International Film Festival are well known and popular tourist destinations. In general, the region is historically and geographically very attractive.

Nevertheless, Abertamy, as well as the most of the region is poor and neglected - there is shortage of job and study opportunities, lack of state subsidies and public facility, and a lot of abandoned settlements. There is a noticeable reason for many of these phenomena - Karlovy Vary Region is situated in "former Sudetenland" area. Related complicated issues of the Sudetenland will be explored later on.



## 2.02 GENERAL BACKGROUND

### ABERTAMY

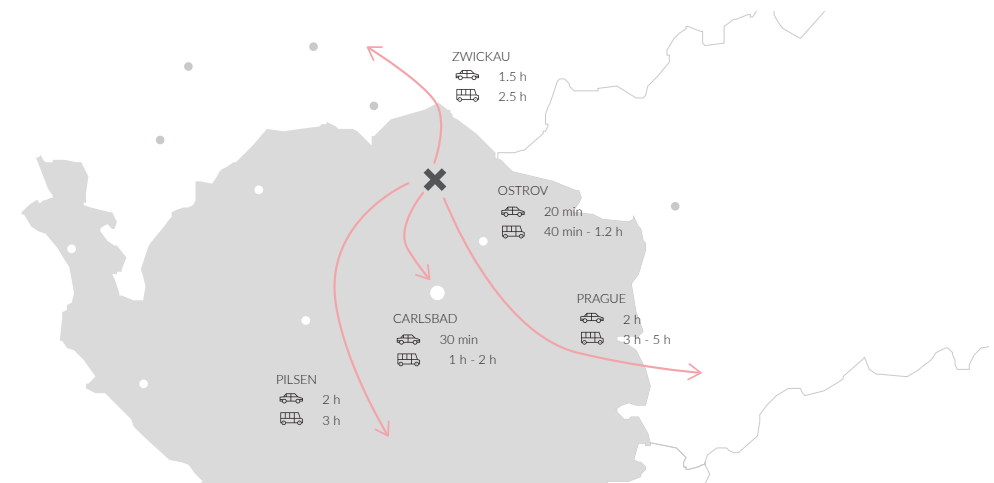
Abertamy, a town in the Karlovy Vary Region, is situated at an altitude of 840 m in the Ore Mountains. The town was founded in 1529 and used to accommodate miners who came in times of Silver Rush. A close proximity to mines is the reason why Abertamy is located on unusually very unprotected site, an open sloping plain.

Its population, now at 1016, slowly decreases. Local public facility is insufficient and many buildings are in bad conditions. The only driver for the town is tourism, thanks to town's rich history and beautiful landscape.

### ABERTAMY IN THE REGION

Abertamy's isolation is partly caused by its mountain position and lack of jobs. Abertamy's citizens mostly commute by bus or car to the towns nearby like Ostrov and Karlovy Vary, or to close German cities.

Due to mountain character and lack of investments, the train transportation is not very effective. A missing highway Karlovy Vary - Prague is one of the causes why the region is underdeveloped.





ABERTAMY

## 2.02 GENERAL BACKGROUND

### SCALE COMPARISON

#### ABERTAMY

- 1 016 inhabitants
- 0.45 km<sup>2</sup>
- density of 2 530/km<sup>2</sup>

#### LUND

- 89 000 inhabitants
- 25.75 km<sup>2</sup>
- density of 3 376/km<sup>2</sup>

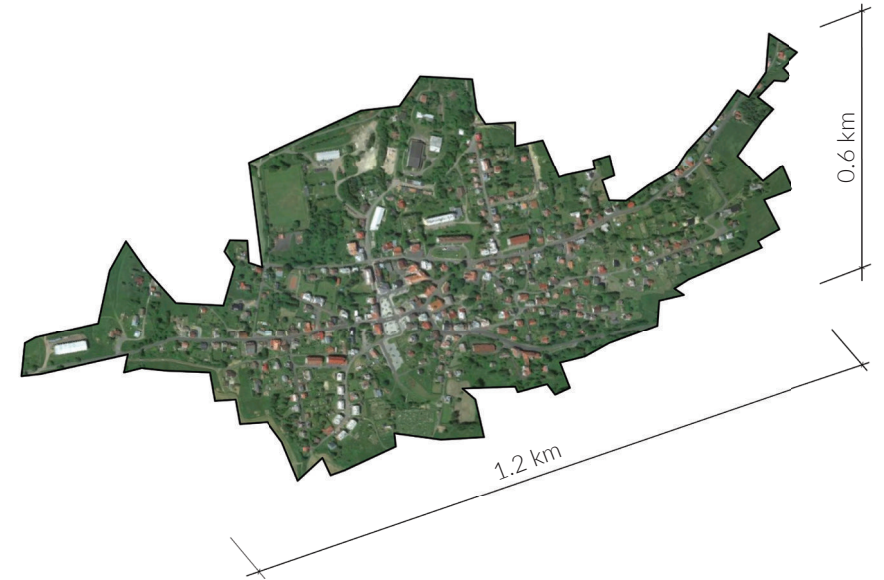


Fig. 3



Fig. 4

## 2.03 GENERAL BACKGROUND

### POPULATION AND DEPOPULATION

Abertamy's highest population is dated to years 1900 - 1939 when the town was prosperous and rapidly developing.

Throughout Abertamy's existence, for more than 300 years, German and Czech citizens lived there together without conflicts. German-speaking people were in vast majority: for example, in 1930 only 0.7% of inhabitants were Czechs.

year	1900	1910	1921	1930	1950
population	2610	2834	2404	2600	1595

year	1961	1970	1980	1991	2001
population	1417	1047	1107	1021	1160

Abertamy's population slowly decreases:

year	2010	2012	2014	2016	2018
population	1213	1236	1 118	1 050	1016

### POTENTIALS OF GERMANY NEARBY

Thanks to its history and proximity to Germany, people still can speak German which is an advantage in two ways. Firstly, they can commute to work in Germany nearby. Secondly, Germans are willing to travel to Abertamy. There is also a great potential for an old people's house/a sanatorium. Thanks to their higher living standard, German customers could afford those services.

### HŘEBEČNÁ

Hřebečná, a settlement located 1.5 km north-east from Abertamy, lies within Abertamy's administration. There are only 56 permanent residents (in 2011) but many more weekend cottagers.



A building of goat-skin glove manufacture, built in 1850, started degrading in 1990.

### ECONOMY AND JOBS

For almost 400 years, Abertamy used to be a base for miners who mined for instance silver, tin, iron ore, and recently uranium. Numerous paper, textile and glass factories were set up in the 19th century.

Besides that, a goat-skin glove manufacture was founded in 1850 right in Abertamy. World-wide known and luxury gloves were exhibited in London and exported to all the continents. By the way, that is why so many goats used to be kept around the town. A popular goat cheese, flavoured by various herbs is popular till present.

After WW2, when Sudeten Germans were expelled, all prosperous industry started declining. Nowadays, Abertamy's citizens run their small businesses but mainly commute to work in neighbour towns.

## 2.03 HISTORICAL BACKGROUND

### SUDETENLAND

Border regions of Czechoslovakia were inhabited predominantly by German-speaking citizens for several hundreds years. They are descendants of German incomers who were invited by Czech kings in the 13th century in order to colonize sparsely populated areas. Thanks to a strong community, Sudeten Germans managed to preserve language, religion, culture and traditions. They lived in a harmonious coexistence with Czech and Jewish minority and so the Sudetenland prospered.

In 1918, after the end of WW1, Hungary-Austria broke apart, independent Czechoslovakia was proclaimed and Austrian (German) influence weakened. Sudeten Germans attempted to gain independence on the new Czechoslovak state as they did not want to become Czechoslovaks. Rejection of this proposal and the following lowering of social status in the new regime caused that Sudeten Germans welcomed Hitler's annexation in 1938 although it caused persecution of Czechs.

In September 1938, the **Munich Agreement** was signed by Nazi Germany, the UK, France and Italy. This permitted Hitler to annex Sudetenland, the Czechoslovakia's territory. As the Czechoslovakia government was not invited to the conference, the agreement was perceived as "Munich Betrayal". However, Hitler continued in his pressure which led to WW2, lasting from 1939 to 1945.

After liberation of Czechoslovakia in May 1945, up to 3.5 million of Sudeten Germans were expelled. Many of them were humiliated, tortured or murdered as a revenge for collaboration with the Nazis. It is a very emotional and painful topic of Czech-German history even today.

Since 1945, the state supported people from inner Czechoslovakia regions to settle in hundreds of empty towns and villages. Unfortunately, the incomers were mostly poor opportunists who had no experience with agriculture and life in mountain peripheries.

Later on, formerly prosperous Sudetenland decreased into a neglected landscape with ruined villages inhabited by people with no relationship to what was built there. In following decades till 1989, the Sudeten catastrophe was deepened under Communist Party regime.



The expulsion of Sudeten Germans in 1945

Fig. 5



## 2.03 HISTORICAL BACKGROUND

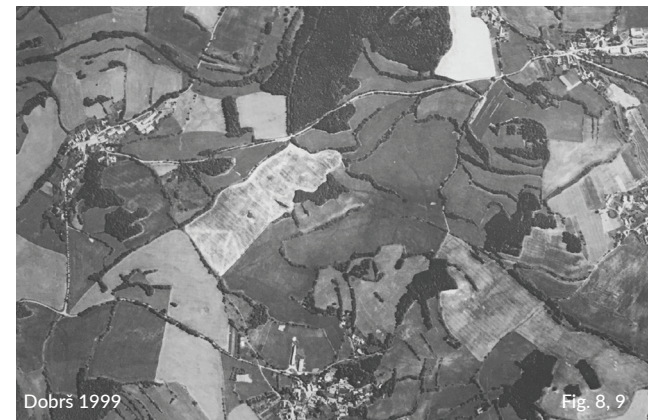
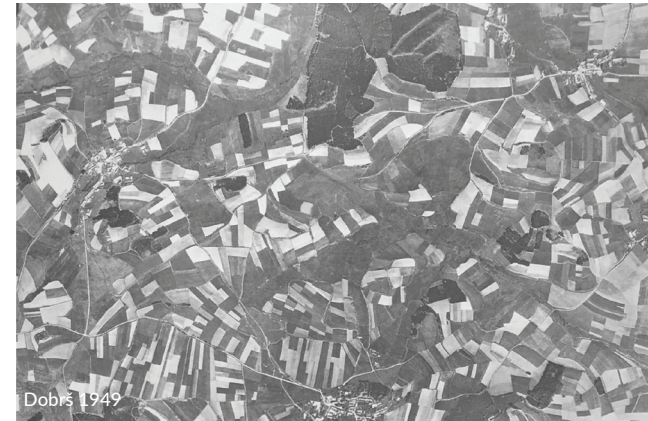
### 3000 DISAPPEARED VILLAGES

88 cottages (and 565 citizens) used to be in Chaloupky in 1900. A man-built water canal was used for panning tin. After WW2, the village was demolished and today is hardly accessible due to broken road and bridge. This beautiful valley, soft meadows and ruins inspire to think about history.



### COLLECTIVISATION, 1948 - 1960

During totalitarian regime, the Communist Party ordered an involuntary seizure of all private agricultural property, collected into "cooperative farms". If farmers protested, they were penalized and forced to leave their homesteads. That's when centuries long relations to the land were lost.



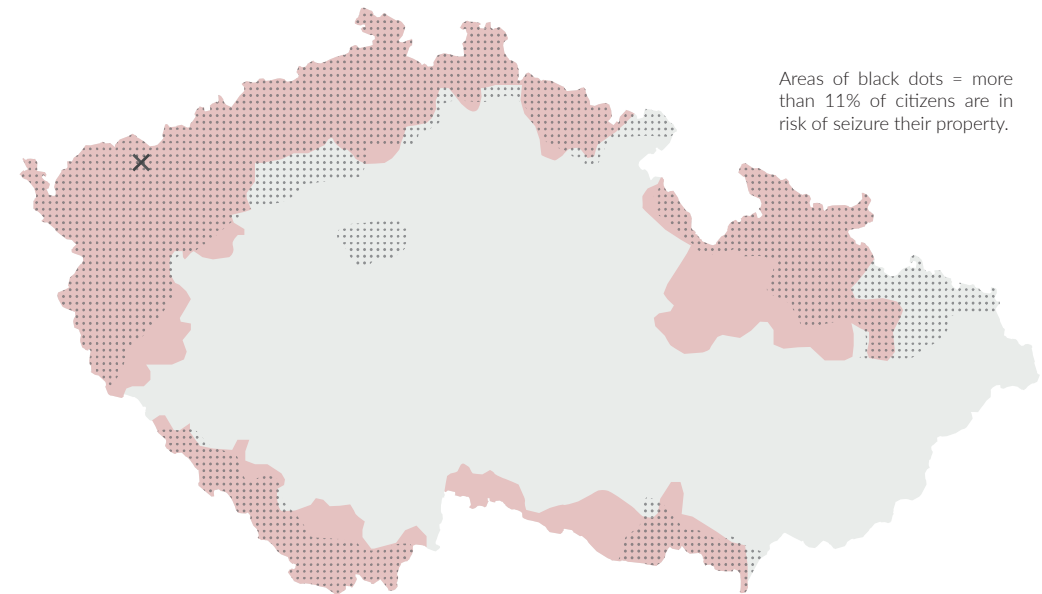
## 2.03 HISTORICAL BACKGROUND

### SUDETENLAND TODAY

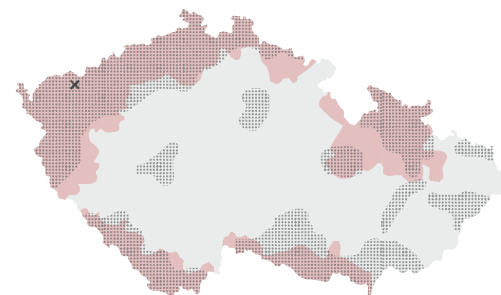
The Czech Republic has been a sovereign democratic state for 30 years. It is considered a prosperous developed west-oriented country with growing market economy and sufficient social welfare system. This can be documented by medium HDI (Human Development Index), which is the 28th in the world ranking. The health care system as well as free tuition education is on high level and accessible for everyone.

However, the historical territory of Sudetenland is still recognizable because of social phenomena like poverty, higher unemployment and debt rate, distraints, less commercial development projects and state investments, less public facility etc. In general, population slowly decreases as people move to big cities.

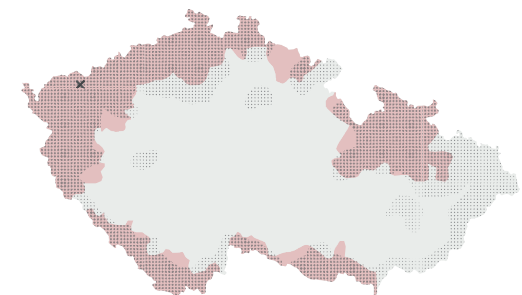
Beside others, the social inequality across the country became evident in election results in recent years. Voters who participate in parliamentary elections are more likely vote for extremist parties.



The historical territory of Sudetenland (pink) compared with distraint cases.



The unemployment rate is above Czech average (6%)



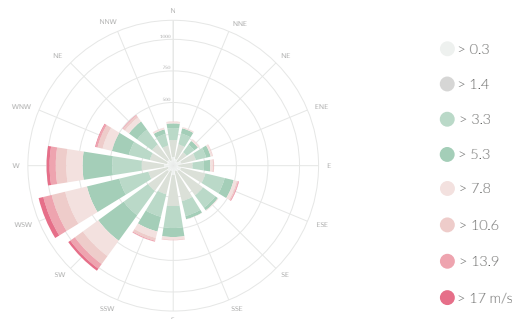
The voter turnout is below Czech average.

## 2.04 GEOGRAPHICAL BACKGROUND

### CLIMATE

The local climate is characterised as harsh: low temperatures and heavy amounts of snow and rain. Prevailing winds blow from west-southwest. The average year wind speed 7.6 m/s is suitable for a wind farm.

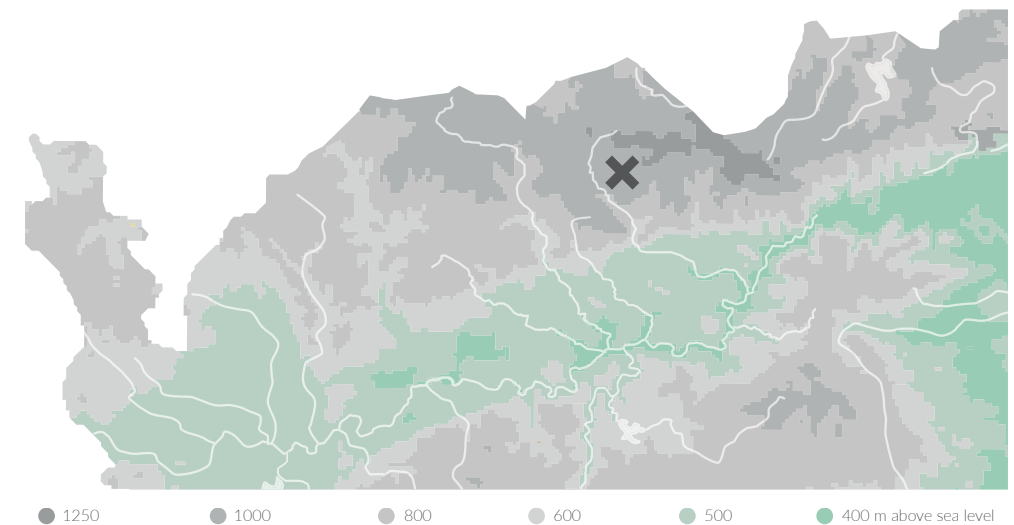
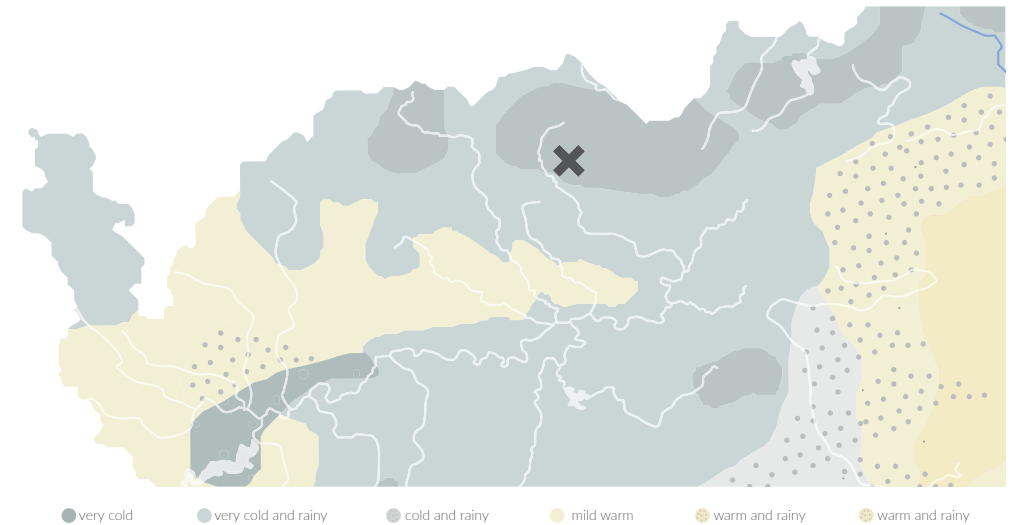
There are many rainy days in summer. The average summer temperature reaches 17° C. Winters are cold or freezing and a lot of snow remains till April.



### NATURE AND LANDSCAPE

The Ore Mountains form a natural border between Czech Republic and Germany. Klínovec and Plešivec, the highest peaks of Ore Mountains, are well known ski centres. The mountain range is a rich source of metals that are mined and used since Bronze Age. Mining relics gave a special identity to the local landscape.

There are numerous springs, streams and rivers. Despite harsh climate, one can find agricultural fields and mountain meadows there. Still, coniferous forests are the prevailing lands.



## 2.04 GEOGRAPHICAL BACKGROUND



A southern view of Abertamy



Fig. 10



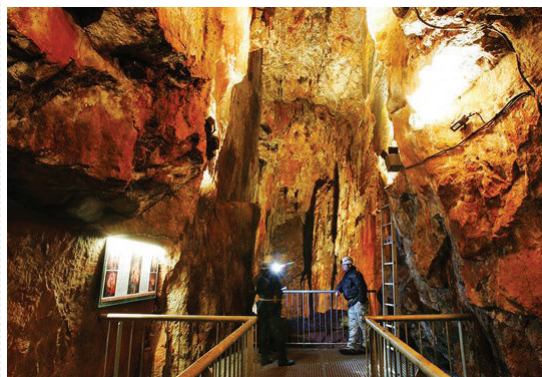
Dead Pon

Fig. 11



Plešivec Ski Centre

Fig. 12



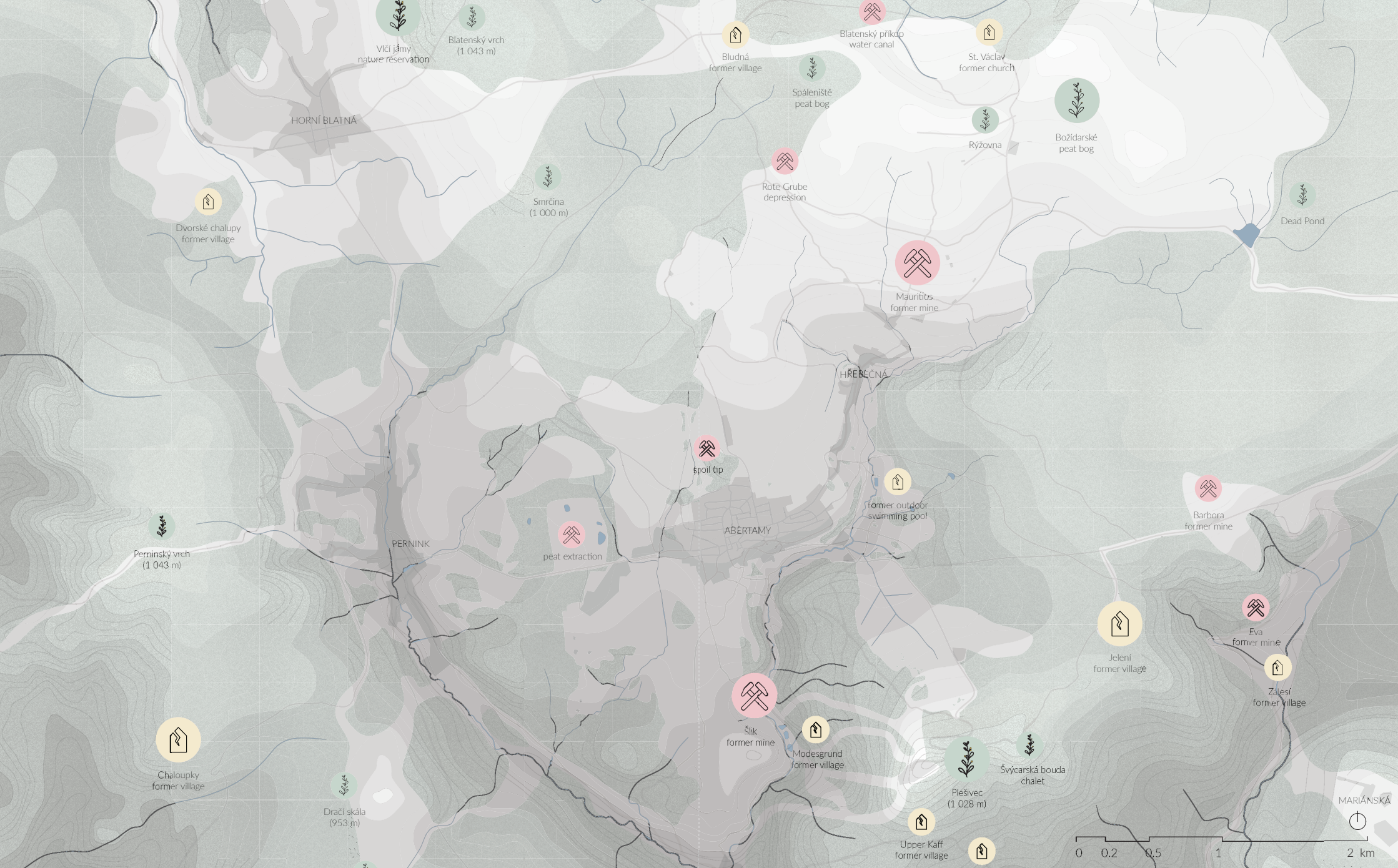
Mauritius, a large shaft of a former tin mine

Fig. 13



Peat bogs near Boží Dar

Fig. 14



HISTORICAL LANDSCAPE

MINING RELICS | FORMER VILLAGES | RARE NATURAL ELEMENTS



## 2. 05 PUBLIC LIFE IN ABERTAMY

### EXISTING COMMUNITY LIFE

Primarily thanks to an active mayor and a few patriots, a several local civic associations and sport clubs can be found in Abertamy.

The local civic association focuses mainly on preserving traditions and develops a partnership with former Sudeten Germans who are annually invited to their former homeland for some cultural events.

As Abertamy are suitable for winter sports, there are ski clubs for children and frequent ski races, for instance the Charles Run, a funny cross-country ski race in historical ski equipment.

Nonetheless, the citizens are lacking basic services like more shops, a library, restaurants and cafés. There is no community centre or place where people could meet. On the other hand, young families appreciate a well working kindergarten and a primary school.

### ECONOMY

The Sudetenland used to have a high concentration of successful industries: glass and textile, paper and toy-making industry - employing a significant part of the locals. The vast majority of the industry was export-oriented and started to decrease in the '30s because of economical crisis.

During following decades of broad decay, the industry has never been revived. In Abertamy's case it was the world-famous goatskin glove manufacture that used to produce and export millions of gloves around the world. The glove factory was closed down in 1998.

Nowadays, the majority of people in Abertamy commute to work in bigger cities, like Ostrov and Karlovy Vary (one way takes approximately 1 hour). Others commute to Germany where they can earn more money for the same, often unqualified, job. That is why tourism is currently the only prospective economical field in Abertamy.



Charles's Run, a cross-country ski race celebrating 110 years of Ski Club

Fig. 15



Traditional goatskin glove production presented for tourists (XX)

Fig. 16

## 2. 05 PUBLIC LIFE IN ABERTAMY

### TOURISM

As it was mentioned above, since the industrial decline there are not many job opportunities in Abertamy. On the other hand, tourism has an interesting potential that should be developed.

Tourists will have an opportunity to visit a new mining museum that is supposed to be opened in 2018. Till that time they can see The Goatskin Glove Exposition, the local Church of the Fourteen Holy Helpers (founded in 1534) and a few valuable buildings around Abertamy.

The nature around Abertamy offers perfect bike and hiking tracks, Plešivec ski slopes and cross-country ski tracks. Other very popular activities are dog sled and snowkiting.

In recent years, Abertamy started to profit from newly built Plešivec ski-centre nearby. Unfortunately, the project is not complete and one slope that would connect the centre and Abertamy is missing. If the project is finished, more skiers will be motivated to accommodate themselves in Abertamy.

However, there is a huge lack of tourist accommodation, also a lack of shops and restaurants. On the other hand, one can find numerous unused empty buildings that can serve as various public facilities.

### UNESCO

Another promising potential of future tourism in Abertamy could come via UNESCO. A group of German and Czech towns and mining monuments is applying for UNESCO status. The application is based on a unique combination of a minerally rich landscape and mining history. If the nomination is accepted, the Ore Mountains regions would definitely attract a new group of tourists.



Nature trail for children

Fig. 17



Dog sled race in Abertamy

Fig. 18

## 2.06 HISTORY IN BUILT STRUCTURE

### URBAN STRUCTURE

Abertamy's historical street network is mainly west-east oriented, following the terrain morphology and quite irregular. Despite the fact the town was originally founded purely functionally - just to accommodate miners, its structure quickly developed into modern block structure composed from town houses.

According to the Stable cadastral map, the vast majority of buildings were made in 1830s of brick or stones (red colour), which is another sign of high level of development.

### TYPICAL BUILDINGS

Traditional building typology is simple and climate-proof. Typical mountain houses (cottages) are characterized by compact solids, mostly long and 2 or 3 storey high. The thick walls are made of stones or bricks, upper floors are half-timbered. Steep sloping roofs contain spacious loft and the windows are small.

Thanks to the biggest increase of population, there was a large housing development in 1910 - 1930s, including mainly villas and a goatskin glove manufacture.

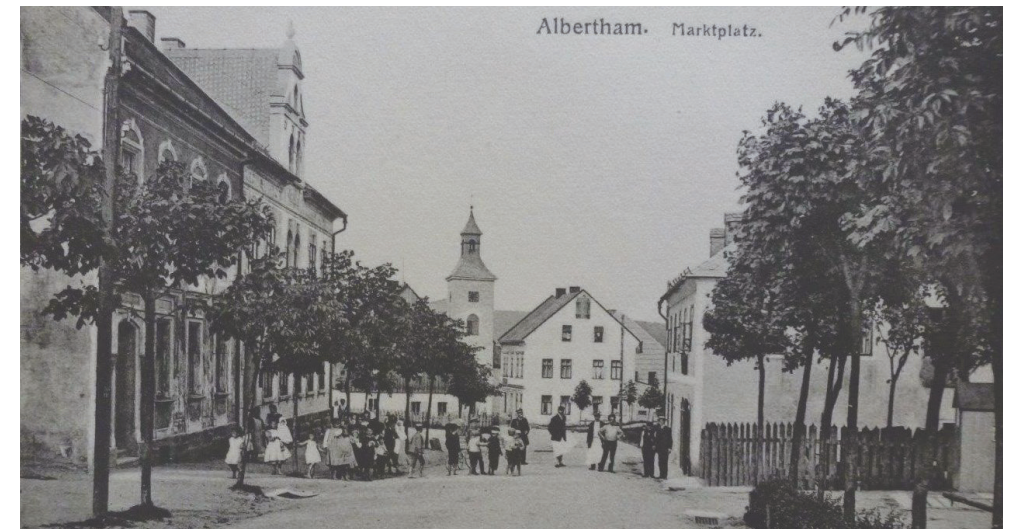
Later on, in 1940s and 1950s, a new socialistic development disrupted existing structure without respecting scale. For instance, some wood workshops and prefab housing blocks were built in the north, in the south but also in the centre of the town.

### UNESCO GUIDELINES

Representative UNESCO guidelines that may regulate future development in Abertamy are: respecting existing character, scale and height of buildings.

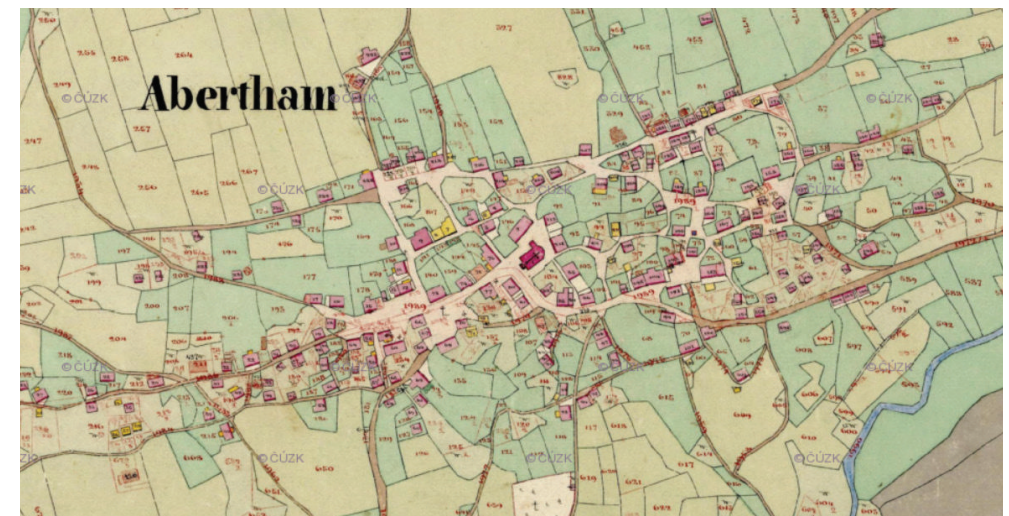
Building owners may be obligated to consult reconstruction projects of their houses with the Heritage Institute. Original stone and wooden elements (stones, façades, openings etc.) are protected.

Other important features are: rectangular footprint of building solids, sloping roofs (37 - 47°), respecting historical facade colours and traditional shapes and location of doors and windows.



A view from Perninská street across the square to the church, 1930

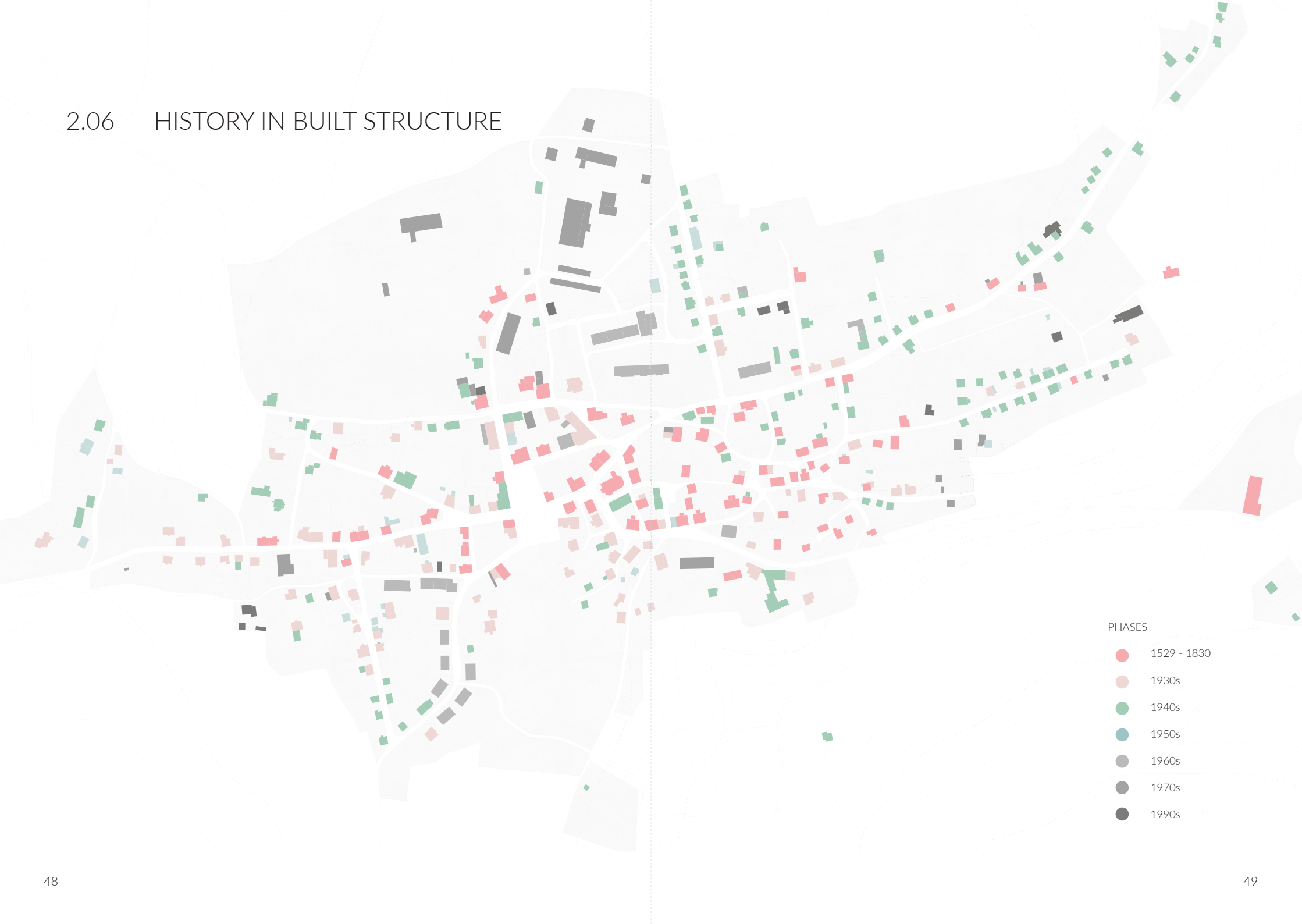
Fig. 19



Stable cadastral map from 1830s. Brick/stone buildings are red, public buildings dark red, wooden are yellow. Fig. 20



## 2.06 HISTORY IN BUILT STRUCTURE





ABERTAMY 1952

Fig. 21



ABERTAMY 2016

Fig. 22



ABERTAMY 2016

Fig. 22

## 2.07 SITE VISITS AND INTERVIEWS

### PERSONAL EXPERIENCE

I have visited Abertamy several times in recent years but only thanks to my thesis I started seeing the town in a different way. I used to superficially criticise the current situation of the former Sudetenland but through my analyses and project I moved to more constructive thinking.

My work method was simple - collecting information, specifying key problems clearly and forming potential answers. In order to gain an objective and complex view of Abertamy, I met several locals and professionals, who described their experience and opinions. Some of the inspiring input can be found below.

#### ZDENĚK LAKATOŠ, a mayor

After 12 years of hard work, Mr. Lakatoš can see the results. Thanks to current renewal of citizens, he meets more people interested in Abertamy's public life and the town is closer to realizing new projects like opening a new mining museum and building a community centre. On the other hand, he registers a big lack of tourist accommodation and public facility.

#### PETR MIKŠÍČEK, a writer and photographer

The limits of the countryside, "Culture of poverty" and missing middle social class are the crucial reasons of today's situation in Abertamy. According to Mr. Mikšíček, the town needs young people who care about their neighbourhood. The UNESCO status could enhance the region but only if citizens are participating in it.

#### VÁCLAV KOUBA an architect

Mr. Kouba collaborates on a UNESCO application for Abertamy that is being processed in last years. Thanks to this he is experiencing negativity and suspiciousness of some Abertamy's locals. Mr. Kouba says that they only care about their properties and do not accept any development of the town that UNESCO can bring.

#### PETR ZACHARDA, a landowner and farmer

A local farmer started his business in the '90s so he has a long-term agricultural experience. Nowadays he owns farms a few kilometres away from Abertamy. Unfortunately, his prosperous farms are almost absolutely dependent on state and EU subsidies. There are hundreds of sheep, cows and goats on farms, he produces meat and milk products. In his opinion, the main value of Abertamy is the wild rough nature.

#### DRAHOMÍRA NOVÁ, an owner of Mauritius Café

Mrs. Nová described several insignificant personal conflicts between locals that make any forming of a common vision of the future impossible. She talked about a great potential of building a sanatorium or a health care centre in Abertamy, as a demand of specific housing is rising. Besides that, numerous elderly Germans would be interested in affordable elderly people's houses located close to German borders.

#### VÁCLAV HLAVÁČ, a university professor and a cottager

Mr. Hlaváč represents a specific group of people who are the future's hope for Abertamy. During a "cottage boom" in the '70s and '80s, many empty cottages were bought by people from big cities. After a few decades, they are retired and search for a calm place to live. So they move to their cottages in Abertamy. They are active and ambitious and want to boost their new place of residence.

#### RUDOLF KREISINGER, an expert in wind energy industry

In Mr. Kreisinger's opinion, the wind conditions for building a wind park close to Abertamy are excellent. He outlined a basic calculations of two wind turbines that could cover all municipality needs. Therefore the only challenge is to convince the conservative locals about advantages of such a project.

## 2.08 PROBLEMS AND OPTIONS

### PUBLIC LIFE

“It is all about people”. Despite the fact that a natural renewal of people in Abertamy has started, there are still many of those who do not want their town to transform. Firstly, the community must be strengthened and self-confident. Only then some projects can be initialize, no matter how big.

### TOURISM

Tourism is undoubtedly the main opportunity for Abertamy and it is meaningful to focus on it. On the other hand, tourism could also become a threat, if for instance some global trends prevent tourist from travelling. This means that Abertamy should use the potential of tourism but not be dependent on it.

### THE MAGIC OF THE LANDSCAPE

One of the main values of Abertamy is the landscape in the surroundings. Nowadays more or less unused, neglected places can be revived. On the other hand, the genius loci must be protected. The specific atmosphere of wildness, mysterious abandoned places, old man-made structures in deep forests etc.

### UNESCO DEMANDS

Status of UNESCO could enhance existing situations of Abertamy and attract new tourists from around the world. However, UNESCO has a lot of strict guidelines. For instance citizens may not be allowed to install plastic windows or build a garage. On the other hand, following these rules could naturally help Abertamy, especially in its tourist-oriented economy.

### STRENGTHS

- Tourism and sports
- Mining history
- Nature, landscape
- Citizen's associations
- Cycle of seasons
- Germany in proximity  
(jobs, customers)

### WEAKNESSES

- Lack of leaders and money
- Lack of self-confidence
- Isolation, commuting
- Loss of culture and traditions
- Lack of public facility
- Ruins of buildings
- Undermined subsoil

### OPPORTUNITIES

- UNESCO Nomination
- Globalization - rise of tourism
- Sustainability trends
- Very windy location

### THREATS

- Depopulation
- Culture of poverty
- Periphery effect
- Decrease of tourism

## 2.08 PROBLEMS AND POTENTIALS



## OPTIONS FOR FUTURE DEVELOPMENT

## 3.00 RESEARCH

### MANY WAYS OF SUSTAINABILITY

After analysing Abertamy in various perspectives I found out which aspects should be investigated more in order to create an ambitious, sustainable and realistic vision. These aspects include :

- a) Eco-tourism
- b) Agrotourism
- c) Sustainable regional development
- d) Impacts of the UNESCO status



## 3.01 SUSTAINABLE TOURISM

### ECOTOURISM IN ST. MARTIN CHALETS

St. Martin Chalets is a green tourist village in Austrian Alps, situated at 1075 m above sea level. It is an eco-friendly and energy self-sufficient project, located in the UNESCO Biosphere region of Lungau, southern Austria, 100 km from Salzburg Airport. The Resort is run by a family team.

St. Martin attracts “green tourists” - travellers who demand their holidays to be eco-friendly. Tourists are accommodated in St. Martin Resort, in 10 chalets which have minimal ecological footprint.

The chalets were hand-built by local carpenter Herbert Bliem and his team in 2010. The structures of chalets are made of wood that was not chemically treated. Roofs are covered with natural larch. All timber is untreated and comes from local forests.

The village has a highly efficient heating system - a vegetable oil Combined Heat and Power. All energy needs of the village are ensured by certified green energy - solar, wind, hydro and biomass.

Water for chalets comes from resort's spring and is spared thanks to saving faucets and toilets. Rainwater is collected in an underground tank and used for example for a vegetable garden.

The chalets are heated via underfloor heating from a shared boiler. Locally produced pure sheep's wool protects façades and roofs as heat insulation. The windows are triple glass. All the organic waste is composted and the residual waste is recycled.

Typical free time activities are cross-country, downhill skiing, snow-bikes or biathlon in winter. In summer tourists enjoy hiking, cycling, rafting and horse riding etc.

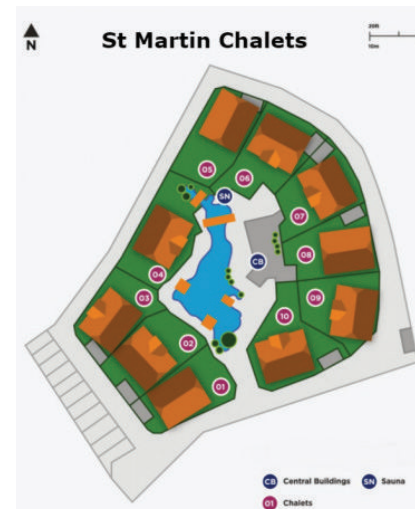
A four-bed room costs approximately 130 €/night. The price includes a sauna, a gym and all used energy and fireplace wood. The chalets accommodate between 4 and 14 people.

St. Martin Chalets is a very successful project, vast majority of references are very positive and clients often come back.



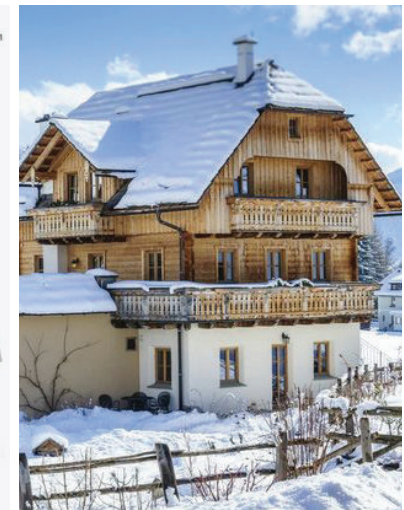
St. Martin Chalet

Fig. 23



A plan of St. Martin Chalet

Fig. 24



St. Martin Chalets in winter

Fig. 25

## 3.02 AGRO-TOURISM

### HORŇÁCKÁ FARM

A family farm located in Hrubá Vrbka, close to Slovak borders was founded in 2006. The farm uses traditional and eco-friendly techniques but also implements modern methods of farming.

Besides keeping various kinds of animals, the farm offers diverse spectrum of home-made BIO products: fruits, vegetables, eggs, milk products, juices. Meat production is represented by beef, pork, chicken and lamb, all in BIO quality. Besides this they produce and sell herbs, spice and tea. Thanks to avoiding chemical fertilizers their products contain more vitamins and antioxidants.

A wide range of species like cattle, sheep, goats, rabbits, geese, pigs, mini-pigs and horses are bred, and all of them have freedom of movement and are fed by locally produced fodder.

Horňácká farm cooperates with local institutions and helps to protect Natura 2000 rare meadows situated near Vojšice. The farm also donates and supports local kindergarten and volunteer fire-fighters. The farms also sells its home-made products and presents their activities on-line.

### WIDE SPECTRUM OF ACTIVITIES

Apart from production, the farmers offer accommodation for guests who would like to experience farming first-hand. They can try typical farm activities, baking bread, milking cows/goats and cheese making, horse-riding and feeding all animals. There are also special educational programs for schools and various sport facilities to be borrowed (bikes, a safari car).

However, the most popular animal inhabitants of the farm are rabbits and chickens, children simply love to feed and pet them.



Horňácká Farm

Fig. 26



Horňácká Farm

Fig. 27

### 3.03 EDUCATIVE ECO-TOURISM

#### CHALOUPKY

Chaloupky, a non-profit, non-governmental institution is well-established in environmental education since 1992. Children, adults and also people with specific needs can visit Chaloupky's farms, an ecological centre, a guest house or a villa, mostly located in Vysočina, Czech Republic.

Chaloupky's projects are situated in old historical buildings in the countryside that are reconstructed and extended by a new building. Chaloupky offers one-day or longer educational programmes for schools as well as social and therapeutic day care centres.

Everyone is welcome to come to Chaloupky to try traditional crafts like threshing the grain harvest, milking a goat, riding a horse, making a cheese etc. According to teachers, children really like trips to Chaloupky. Apart from activities mentioned above, they can meet new friends and participate in games or small competitions. Especially sleeping in a tent or under the stars is very popular.

Chaloupky's motto is: "We strengthen knowledge, skills and attitudes that lead to respect for nature, ecologically responsible behaviour and sustainable way of life."



Children are making cheese

Fig. 28



Children trying out traditional crafts

Fig. 29

## 3.04 SUSTAINABLE REGIONAL DEVELOPMENT

### ECO-VILLAGE HOSTĚTÍN

Hostětín is a municipality situated in Zlín Region in the Czech Republic at 384 meters above sea level. It has 240 inhabitants and is surrounded by White Carpathians Landscape Protected Area. Thanks to a unique approaches and beautiful nature it is considered to be a „living laboratory of sustainable regional development“

Since 1990, diverse spectrum of projects has been developed in Hostětín. These projects involve renewable sources of energy and use of local materials.

Hostětín's environmental projects are realized in a partnership of the municipality, the Veronica Centre and a civic association White Carpathians Traditions.

The Veronica Centre demonstrates finished model projects that aim for economical stabilization of remote regions. The Centre shows how our respect for nature, local resources and traditions can contribute to environment protection and prevention of global climate change.

The Veronica Centre organizes field trips, guided tours of the model projects, conferences, workshops and lectures, professional consulting etc. There are programmes and facilities for schools as well as team-building.

A few examples of realized projects in Hostětín:

- The First Public Passive House (The Veronica Centre)
- Biomass Heating Plant
- Solar Collectors
- Apple Juice Plant
- Fruit Drying Kin
- Wastewater Wetland
- Energy Saving Public Lighting
- Wooden Sculptures

Hostětín was awarded the Czech Solar Awards 2009 in an international competition Energy Globe, as well as many other awards for its contribution to environment protection filed.



A plan of Hostětín Eco-Village

Fig. 30



Hostětín

Fig. 31

## 3.05 SUSTAINABILITY IN ABERTAMY

### ECO AND AGROTOURISM

- Eco and agro projects should offer activities for a wide spectrum of guests - schools, families, the youth, the elderly, people with specific needs and disabled people, team-buildings etc.
- This type of public function can be located in some of the empty buildings in the historical centre of Abertamy, eventually extended by a new building.

### POTENTIAL PROJECTS IN ABERTAMY

#### A FAMILY FARM

- Small farm - animals, sports
- Farm food products (cheese, vegetable, herbs)
- Families, children, schools
- Reconstructed objects + a new building, cottages

#### A NATURE HOUSE

- Reconstructed historical buildings in Abertamy
- Educational programmes, craft workshops
- Pre-schools, schools, summer camps, a day care
- A therapeutic garden
- Partnership with farms

#### A GOAT/SHEEP/HORSE FARM

- Specialized farms
- Selling farm products - milk, cheese, wool etc.

### ADVANTAGES OF ECO AND AGROTOURISM

- Using the potential of nature and tourism in a sustainable way
- Job opportunities for the locals
- New people and children can revive life in the town
- Environmental education in an entertaining form
- Authentic experience

### POTENTIALS OF ECO-VILLAGE

- Opportunity for remote regions
- Possibility of independence
- Biomass Heating Plant, solar and wind energy
- Sparing energy on municipal level
- Local food production
- Water management and ecological use of wastewater
- New approaches can inspire other villages and contribute to sustainability trends

## 3.06 UNESCO EXPERIENCE

### WORLD BANK FINDINGS ABOUT UNESCO STATUS

Besides many activities, World Bank instigates impacts of UNESCO on cities and monuments. According to World Bank's analysis, cities that were inscribed on the World Heritage List, register various influences and changes, positive as well as negative.

- Higher standard of living
- History profits
- Rise of tourism (usually)
- Wider spectrum of services (for locals as well as tourists)
- Local economy profits (incomes, lower unemployment rate)

On top of that, caring about the city centre enhances the local identity of citizens, and participation in revived public life strengthens sense of belongingness.

### THE PROS AND CONS EXPERIENCED BY CITIES

A few of common advantages and disadvantages named by representatives of the UNESCO cities are:



- Higher prestige
- Economical support from UNESCO and the Government
- Prolongation of tourist season



- A year fee to UNESCO
- UNESCO requirements can limit the city development
- UNESCO requirements can cost a lot (poor municipalities)

### EXPERIENCE FROM GERMANY (Görlitz, Postdam)

- UNESCO brand is attractive for distant tourists (Japanese)
- 87% of people know and value "the brand" UNESCO

What do UNESCO oriented tourists expect:

- The city surrounded by attractive landscape
- Historical appearance
- Rich variety of small businesses, restaurants etc.
- Attractive and living historical centre
- Good transportation and access
- Culture events, free time activities, shopping

What is needed:

- Collaboration of private sector, the municipality and preservationists
- Balance of economy and negative impacts of tourism
- Marketing (web, media, a logo)
- To be tourist friendly (signs, info panels, benches, parking, languages)

### EXPERIENCE FROM GREAT BRITAIN (Lake District)

- "UNESCO cities focused on their social and economical aspects are much more successful than those that aim only to gain and keep the UNESCO status."
- Monitoring side effects is essential. For example a special tourist tax can support infrastructure and services that suffer from rising tourism.

## 3.06 UNESCO EXPERIENCE

### UNESCO IN TELČ

Telč is a town situated in the south of the Vysočina Region, in the Czech Republic. It was founded in the 13th century as an important crossroad of busy merchant routes. Nowadays, Telč has 5 800 citizens. Mainly thanks to Renaissance history, the town was inscribed on the World's Heritage List in 1992.

A boom of tourism has changed the town:

- Increase of accommodation capacity
- Increase of the number of bars and restaurants
- New mixed use buildings (and reconstructions)
- Locals have set up their small businesses
- Decrease of unemployment rate

Activities of the Telč municipality:

- Organising numerous events
- Investing money from tourism back
- Marketing (associations, partner cities)



Historical centre in Telč

Fig. 32

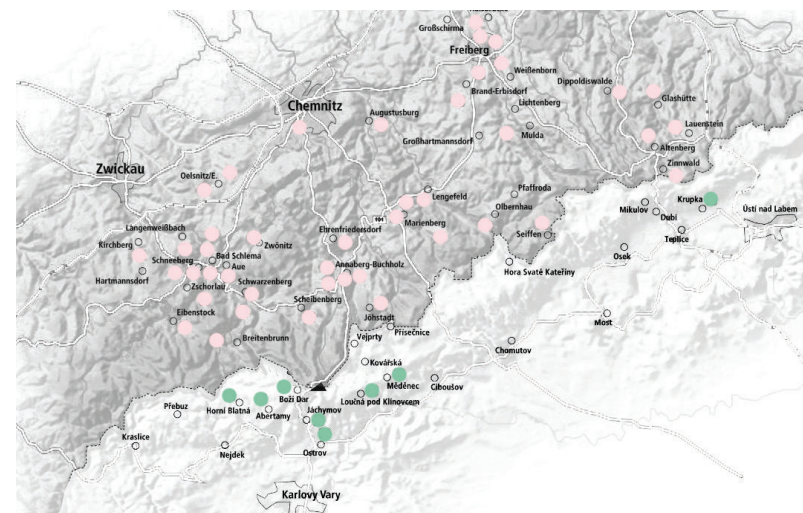
### UNESCO - OUTPUT FOR ABERTAMY

Based on the previous findings and experience, inscription on the World Heritage List brings opportunities but also threats.

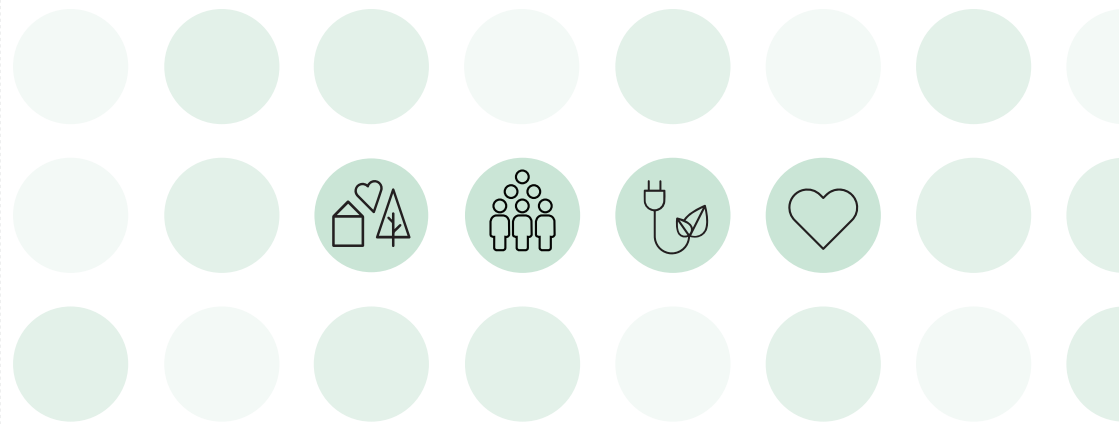
The essential topics could be:

- International propagation, rising awareness about Abertamy
- Increase of the number of tourists
- UNESCO guidelines and restrictions for buildings and repairs
- Financial and professional support in repair of the buildings
- Restoration of the historical centre
- Increase of the cultural events and public facilities
- New job opportunities

In general, an expected increase of tourism can damage the specific and historical landscape, which is the most important element of the UNESCO protection. That is why the impact of presence of more people needs to be observed.



„Montanregion“ UNESCO international nomination. German sites (pink), Czech (green). Fig. 33



## 4.00 CONCEPT

### IT IS ALL ABOUT PEOPLE

The concept is based on a few positive demographic phenomenons that have already started happening and I would like to support them. First of all, there are active retired cottagers. Secondly, thanks to today's modern technologies people are able to work remotely, so why not from a mountain meadow? These two new social groups can revive lethargic Abertamy.



## 4.01 SEARCHING FOR ANSWERS

### FORMING KEY PRINCIPLES



#### DEPOPULATION

- Consequence of today's rapid urbanization
- Lost relationship to the countryside and landscape



#### ATTRACTIVENESS FOR RESIDENTS

- Nature, fresh air, sports
- Local and remote jobs



#### THE PERIPHERY EFFECT

- Lack of self-confidence. Loneliness
- Culture of poverty. Centralist governance and policy



#### BUILDING A SELF-CONFIDENT COMMUNITY

- Activating public space
- New people, job, energy



#### CONSUMERS ONLY

- Increasing dependence on state subsidies. Unemployment
- Dependence on non-renewable energy sources



#### RENEWABLE SOURCES FOR ABERTAMY

- Suitable wind and solar conditions
- Local food production



#### SCARS OF THE TOUGH HISTORY

- Forced eviction of people - Sudetenland in the '40s
- Decline of industry, neglected land, and depopulation



#### SELF-CONFIDENT, INDEPENDENT TOWN

- Learning about history and traditions
- New identity

## 4.02 DEFINING A CONCEPT

### REVIVING THE COMMUNITY

Abertamy's community will be invigorated by new energy brought by cottagers, tourists and young middle class people and families.

As tourism is the main and very promising driver of Abertamy's future, it will be supported by several sustainable principles: new types of sports, sport facility, accommodation and public facility. Besides that, another group of tourists will be attracted by UNESCO status and farming, a new phenomenon of sustainable tourism.

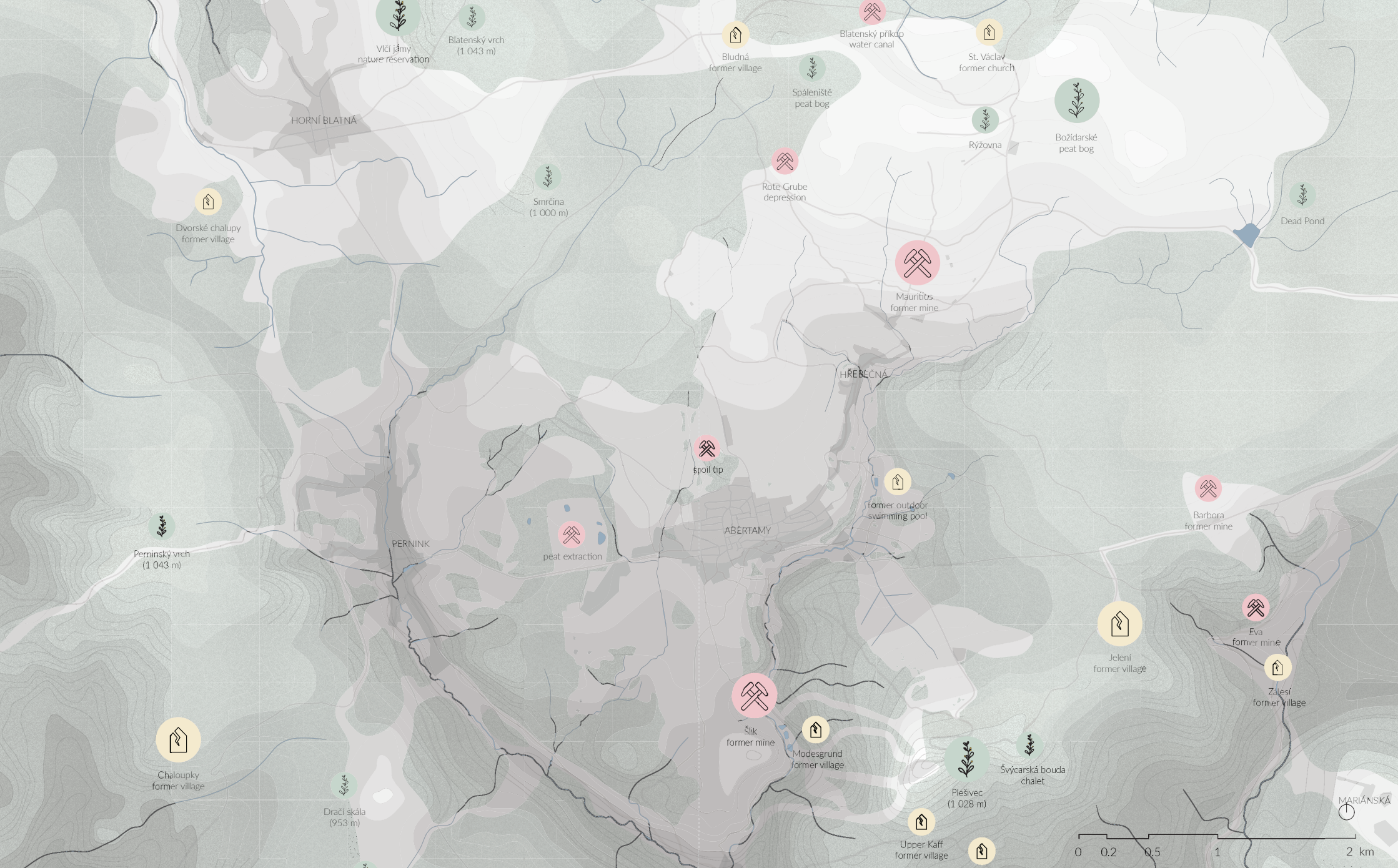


### ACTIVE RETIRED COTTAGERS

During a "cottage boom" in the '70s and '80s, numerous empty cottages were bought by middle class people from big cities. After three or four decades, they are retired and search for a calm place to live. So they move to their cottages in Abertamy. Thanks to their highly qualified professions and lifelong experience, they stay active, ambitious, and they want to boost their new place of residence.

Diversified community life will be completed by various events (farmer's markets, film projections, exhibitions) and participation projects (acupunctural interventions in Abertamy's public space, making the local landscape accessible or designing a community centre).





CONCEPT SUPPORTED BY HISTORICAL LANDSCAPE

Rough and mysterious landscape of the Ore Mountains proves very rich mining history in the Middle Ages as well as cruel war repressions during and after WW2. Nowadays it creates a specific genius loci that is remarkable and attractive for everyone to visit.

## 5.00 STRATEGIES

The project combines three design strategies: public space interventions and community reinforcement, municipal energy strategy and sustainable tourism strategy.

Apart from that, a few landscape strategies help to make landscape more accessible (new trails, a new connective ski slope). Thanks to the transportation strategies, people can move around Abertamy and the region easier.

## 5.01 DESIGN STRATEGY n. 1

### SIMPLE ONE-AFTERNOON IMPROVEMENTS

There are many things that can be developed and are needed already in the Phase 0, without any professional projects and investments. The square is a great place to meet, talk, dream and draw. Today, people can revive the space in front of the museum, make it pedestrian and child friendly and build a bench!

### MAKING BELIEVE

Many Abertamy's citizens are passive and bored. Thanks to a few active leaders, a mayor and newly coming people, some events are arranged. That is how public meetings, exhibitions, talks about UNESCO advantages can be held in order to attract locals and convince them to participate in future development.



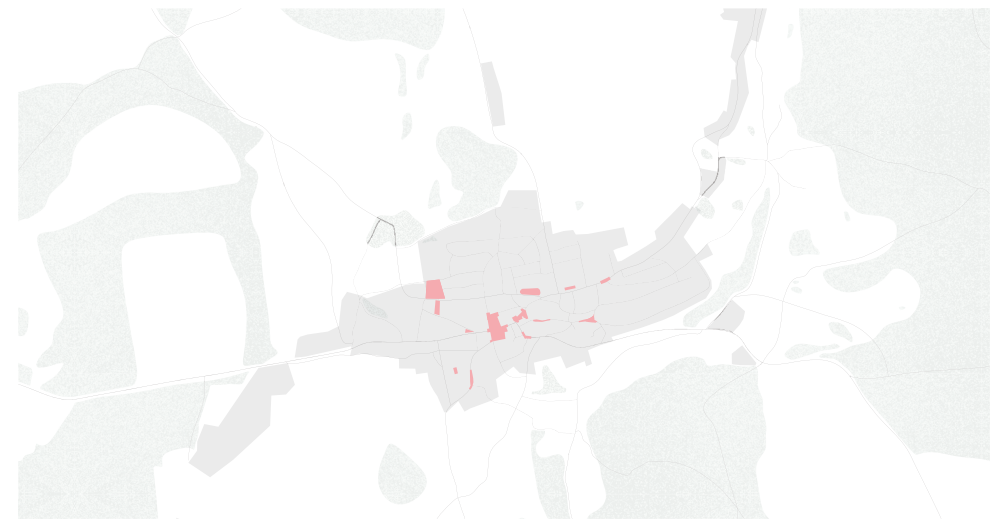
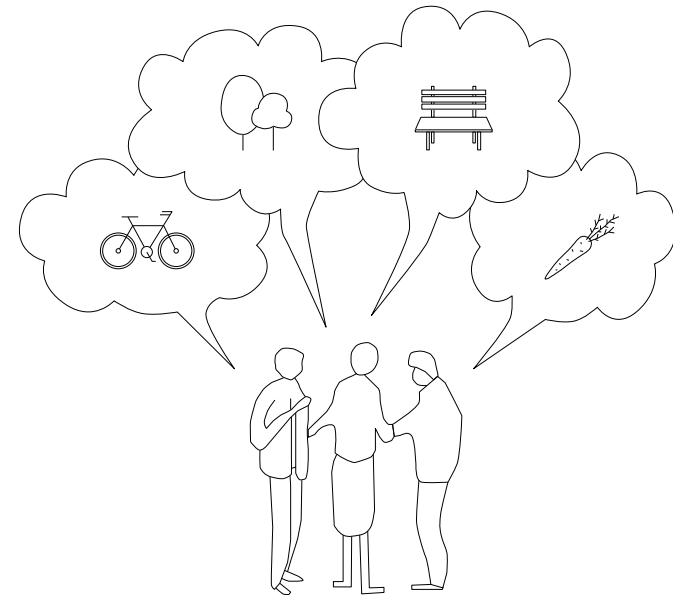
- A community centre/a gym, reviving the library
- Spaces in front of the museum, the school etc.



- Meetings and informing about the vision
- Exhibitions, farmer's markets, film projections



- Acupunctural, simple and cheap interventions
- New benches, shelters, playgrounds, paths





ACTIVATING THE TOWN SQUARE

## 5.01 DESIGN STRATEGY n. 2

### SAVING IN THE PHASE 1, PRODUCING IN PHASE 2

Firstly, a lot of energy can be saved by installing smart LED street lights, solar panels on the roofs, and reducing transportation. Ore Mountains, especially Abertamy area, are suitable for wind plants (the Ø year wind speed 6.7 m/s). Therefore, a municipality wind farm is proposed.

### TWO WIND TURBINES ENERECON E 103

Proposed wind turbines are 190 m high, located approximately 2.5 km from Abertamy. The wind farm will produce 13 million kWh/year, which covers all Abertamy's energy needs (7.5 million kWh/y in phase 3). The farm will cost 155 million CZK (6 million €) and the life of loan is 12 years.



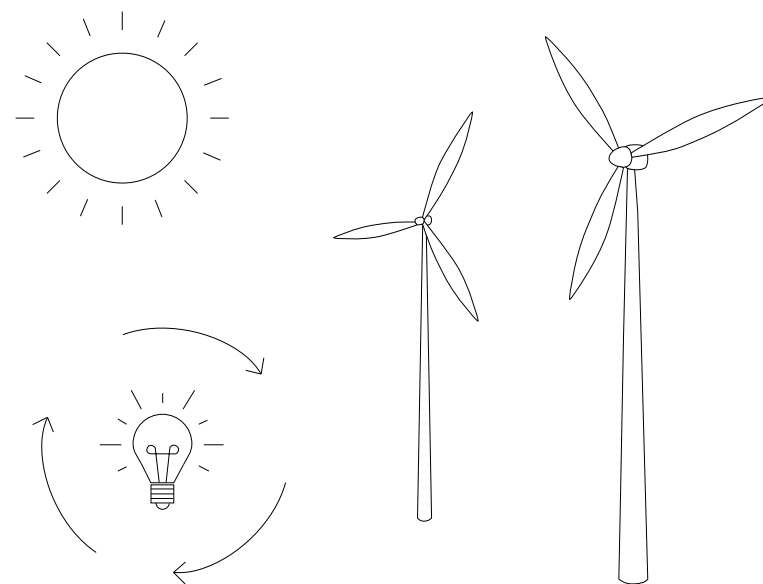
- Savings in municipality needs (LED street lights)
- Passive standards of new buildings



- A municipality wind plant (citizens as stakeholders)
- Covers 250% of Abertamy's energy needs



- Car sharing, a micro-bus line, electric cars
- Lowering commuting via local solutions





## A NEW ENERGY STRATEGY IN PRACTICE

Energy produced by municipal wind plant is used for charging electrical vehicles, including a micro-bus line bus. New buildings are built in passive standard and have solar panels on the roofs. Besides that, the municipality saves up to 80% of lighting costs by installing LED street lights. Citizens can participate in a car-sharing project.



## 5.01 DESIGN STRATEGY n. 3

### AGRO-TOURISM, ECO-TOURISM

We search for sustainable solutions in all fields. Tourism is currently the only potential driver of Abertamy's development. Sustainable tourism means less flying to Thailand and more active holidays, sports, fresh mountain air and nature. Agro-tourism offers a different experience and also supports local economy.

### ACCESSIBLE NATURE

The Czech Republic has one of the densest networks of hiking trails in the world. A few more trails around Abertamy can make the landscape accessible to the visitors, show them historical or natural sights, bring them an experience of feeding animals and tasting fresh locally produced cheese. Families, cyclists... everyone is welcome!



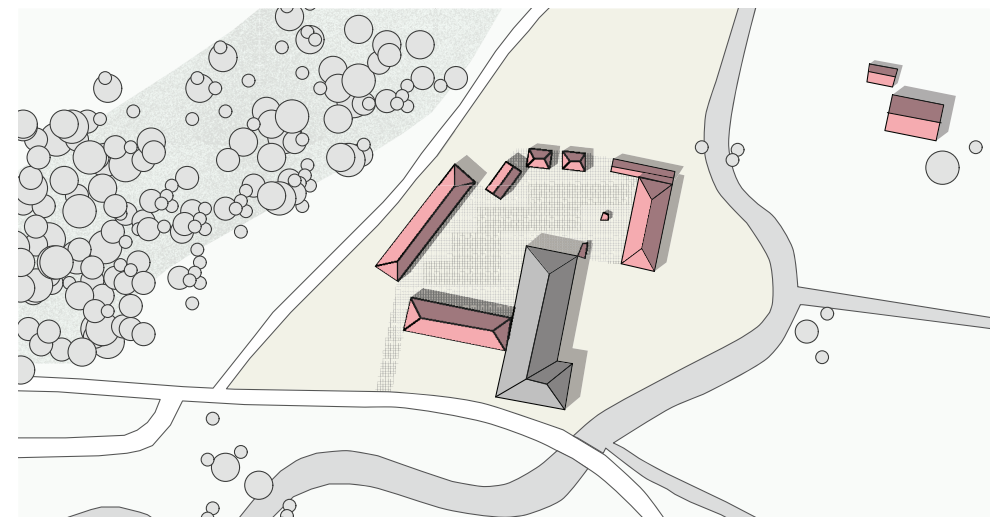
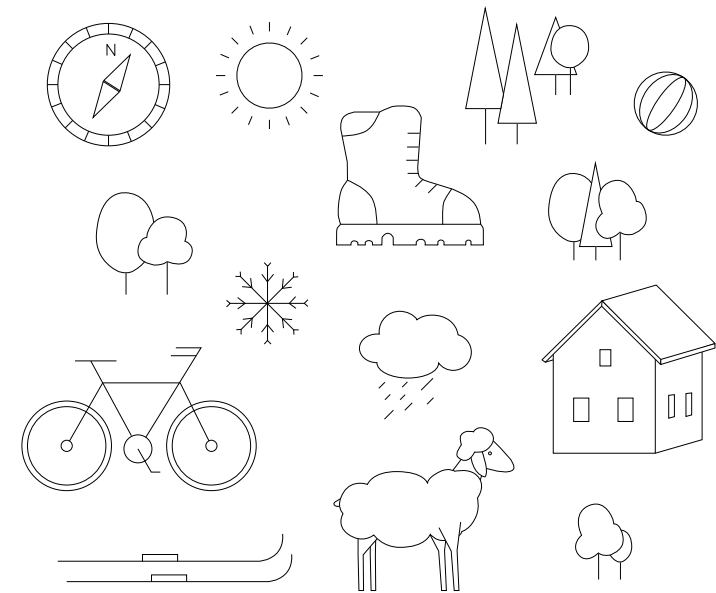
- Landscape
- Nature, rare plant species



- Hiking, biking, dog sled, horse riding
- Cross country skiing, downhill skiing



- Farms as rural life experience, sports and wellness
- Local food production





NEW USE OF THE LANDSCAPE

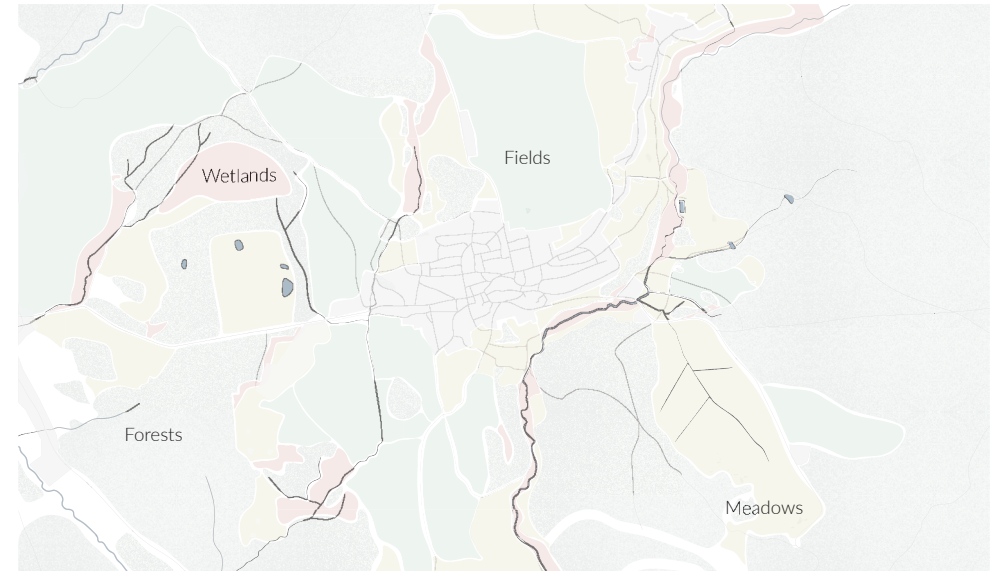
## 5.02 LANDSCAPE STRATEGIES

### LANDSCAPE OVERVIEW

The landscape in Abertamy's surroundings consists mostly of coniferous forests and mountain meadows. Besides that, there are wetlands, peat bogs and a few agricultural fields. The area is naturally well irrigated by many springs and streams.

### TRAILS AND CYCLE PATHS

Thanks to a dense network of trails and cycle-paths, visitors can discover local sights. There are various historical mining relics - adits, pinges, spoil tips, water canals, but also former villages or mysterious Sauer sack, the former tin mine. A new path offers a short and easy walk in Abertamy's surroundings, completed with a few stops by farms.



## 5.02 LANDSCAPE STRATEGIES

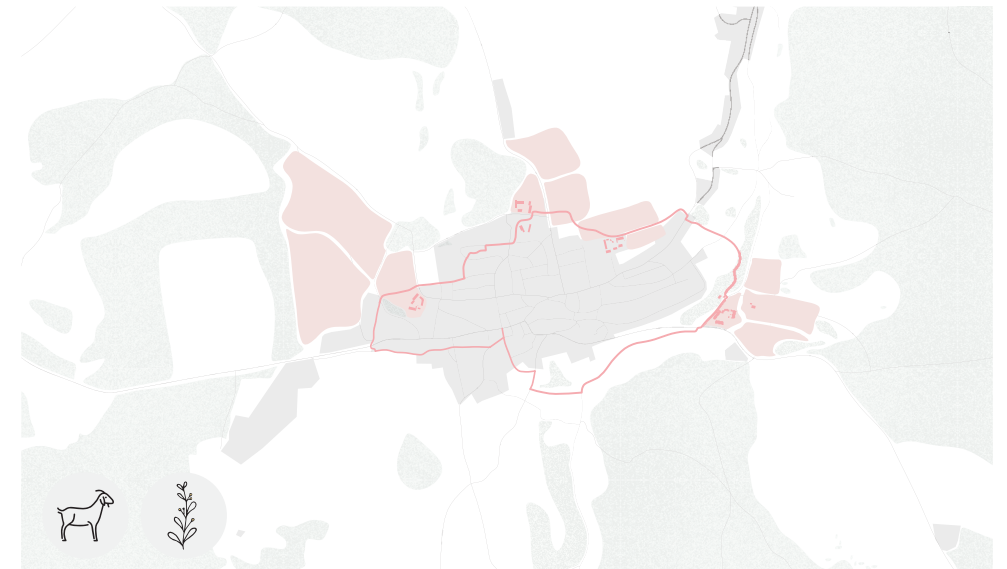
### CONNECTING ABERTAMY AND SKI RESORT PLEŠIVEC

In 2014, Plešivec ski resort was built close to Abertamy. Unlike the original project, a ski slope directly connecting Plešivec and Abertamy is missing. Building a proposed slope will motivate skiers to accommodate right in Abertamy.



### GOATS AS GARDENERS

Besides maintaining landscape, producing local cheese and organizing fun events for children, proposed farms have another advantage: When pasture lands are grazed by animals (not cut by mowers) original rare plant species restart growing after decades.



## 5.03 TRANSPORTATION STRATEGIES

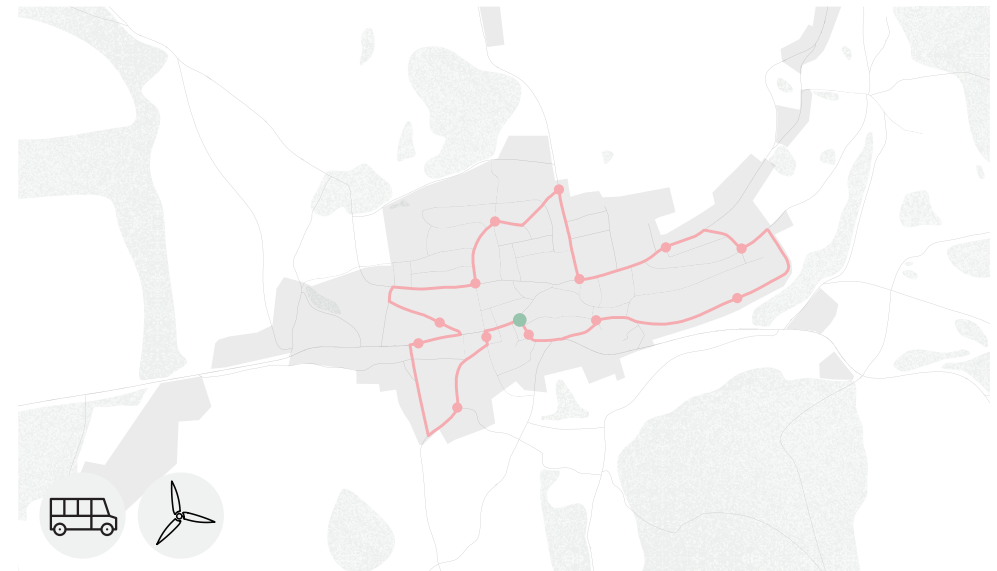
### OUTER TRANSPORTATION

Due to mountain morphology there is no train station in Abertamy. The closest station is above neighbouring village called Pernink. A new bus stop will support train transportation. Anyway, bus and car transportation will prevail.



### A MICRO-BUS LINE

Citizens usually walk or use their car. Most of streets have no sidewalks. Small interventions can make street more pedestrian and bike-friendly. Thanks to the proposed micro-bus line, also elderly or disabled people can travel comfortably.





## 6.00 PHASING AND PLANS

The future development of Abertamy is divided into four phases that cover 50 years. The phase 0 (2 years) is dedicated to strengthening community and explaining the vision. In Phase 1 (5 years), the town centre is densified and tourism is rising. In Phase 2 (25 years) a high increase of inhabitants and, on contrary, decrease of tourism are expected. In Phase 3, the town becomes partly self-sufficient but definitely self-confident.

## 6.01 PHASING

### PHASING OVERVIEW

Regarding the previous analysis and research that showed numerous advantages of living in Abertamy, almost a three-fold increase of inhabitants is expected: 400 new citizens in phase 1, 1300 in phase 2 and up to 1200 in phase 3.

Phase 0, lasting 2 years, is dedicated to strengthening the community as the acquainted and participating people are a necessary prerequisite of all the future changes. The community will be partly modified, mainly by active people moving to Abertamy in next years.

The key driver for initiating the development in phases 1 and 2 is tourism. Nevertheless, the town should not be dependent on tourism forever. That is why a slow decrease of tourism is expected in phase 3, caused by natural change of trends, or intentional regulation. Thanks to this temporary drive of tourism the local economy will be reinforced.

Apart from tourism, a new municipal strategy in energetics will be implemented. It consists of sparing energy (LED public lights can spare up to 80% of lighting costs), solar panels on roofs and mainly a project of municipal wind turbines.

Although the project aims to finish phase 3, the town development is liveable in every phase. Reaching later phases is not conditional.



A northern view of Abertamy in phase 3

EXISTING

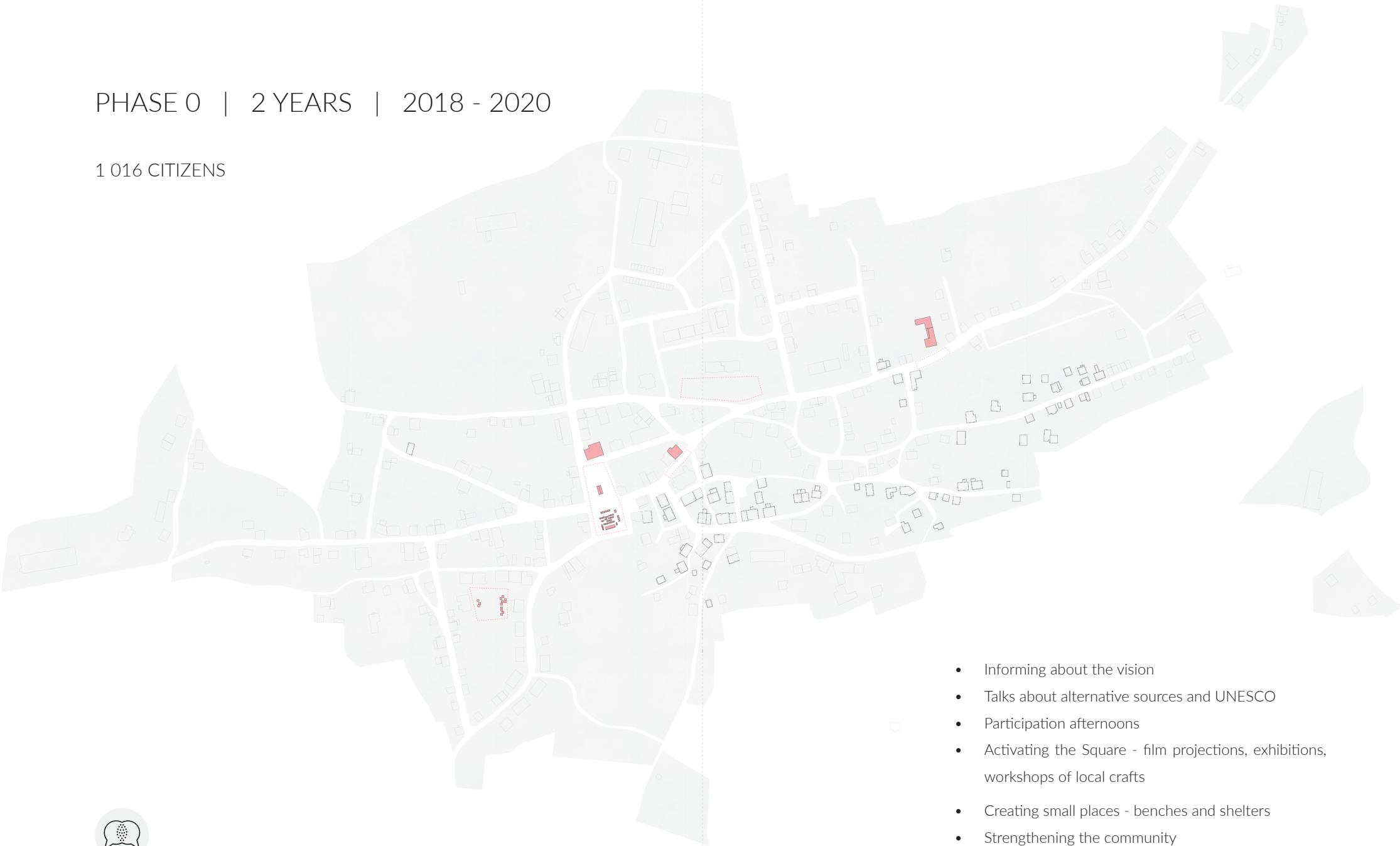
1016 CITIZENS





PHASE 0 | 2 YEARS | 2018 - 2020

1 016 CITIZENS



- Informing about the vision
- Talks about alternative sources and UNESCO
- Participation afternoons
- Activating the Square - film projections, exhibitions, workshops of local crafts
- Creating small places - benches and shelters
- Strengthening the community
- Pedestrian and bike-friendly streets
- Energetics - a saving strategy



MAKING BELIEVE

# PHASE 1 | 5 YEARS | 2018 - 2023

1 016 + **400** CITIZENS



FOCUS ON THE LOCALS | TOURISM ON RISE

- Social coherence and community activities
- Participation: a community centre or a gym
- Renewal of inhabitants
- Densification in the centre - gap sites
- Public facility - Community Centre, Uran Hotel
- Tourists magnets: nature, sports, local food, history
- Eco and Agrotourism: a trial farm
- Abertamy added to UNESCO List
- Energetics - savings and future strategies

# PHASE 2 | 25 YEARS | 2023 - 2043

1 450 + 1 300 CITIZENS



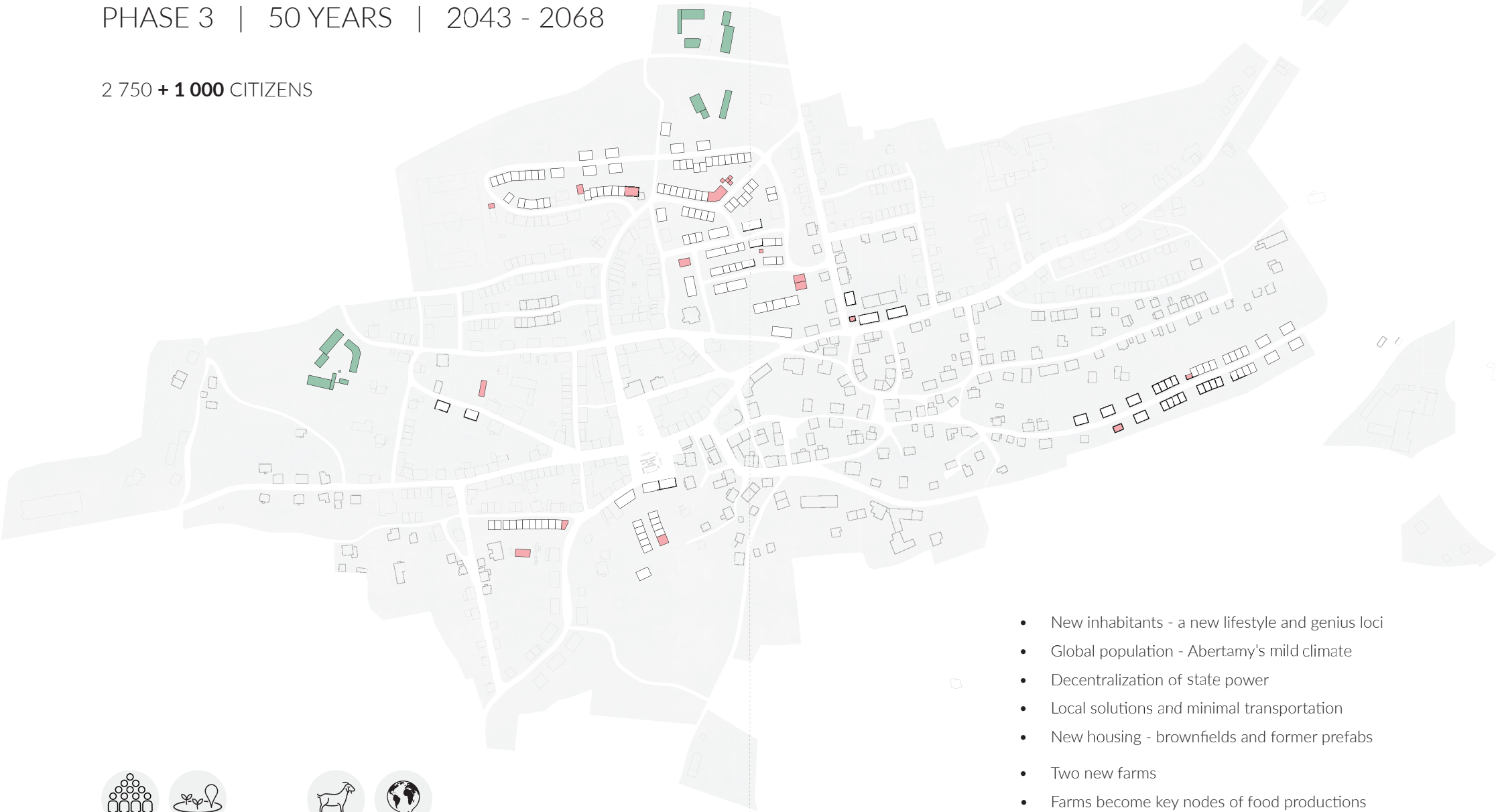
SELF-CONFIDENT LOCALS | TOURISM ON TOP

- Strong and self-confident community
- New inhabitants and a new generation
- Diversified local economy and public facility
- New housing - brownfields and gap sites
- Public facility - a wellness centre and sanatorium, school extensions, reconstruction of hotels
- A new farm - animals, local crafts and food
- Tourism can be regulated
- The local economy is independent on tourism
- Energetics - a wind farm, self-sufficiency



PHASE 3 | 50 YEARS | 2043 - 2068

2 750 + 1 000 CITIZENS



- New inhabitants - a new lifestyle and genius loci
- Global population - Abertamy's mild climate
- Decentralization of state power
- Local solutions and minimal transportation
- New housing - brownfields and former prefabs
- Two new farms
- Farms become key nodes of food productions
- Tourists become permanent inhabitants
- Energetics - absolute self-sufficiency



INDEPENDENT LOCALS | TOURISM TRANSFORMATION

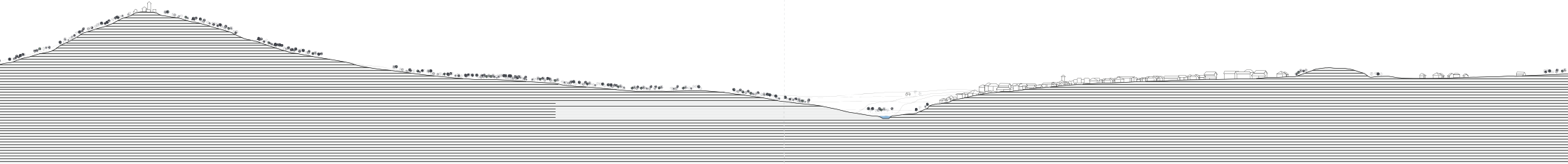


PHASE 2 - MASTERPLAN 1:2500



PHASE 3 - PHYSICAL MODEL 1:3000

EXISTING - LANDSCAPE SECTION



PHASE 3 - A SOUTHERN AERIAL VIEW



## 7.00 TYPOLOGY

### TRADITIONS AND MODERNITY

A new typology is inspired by simple and climate-proof traditional typology. Traditional principles are completed by modern building and energetic technologies in order to meet today's housing demands. Special emphasis is put on density and public space.



## 7.01 TYPOLOGY

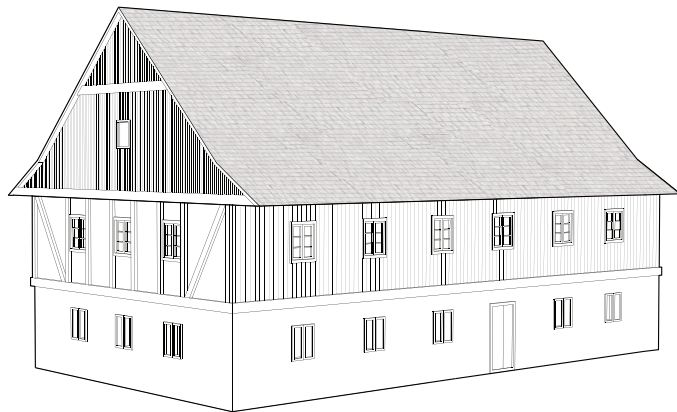
### INSPIRATION IN TRADITIONS

Some characteristics of the local typical house were described earlier. These are, for instance, a compact solid, thick stone or brick walls, half-timbered upper floors, a vast storage loft under a sloping roof and predominantly small windows. Besides that, houses usually have no front yard, on the other hand, they have private gardens and orchards behind them.

Houses were designed for big families, consisting of several generations. For example, a footprint of a common traditional house is 20 x 10 m and 2 or 3 storey high.

Entire structure was composed of small blocks. On the contrary, houses built in the 20th century were formed into much larger and impassable blocks.

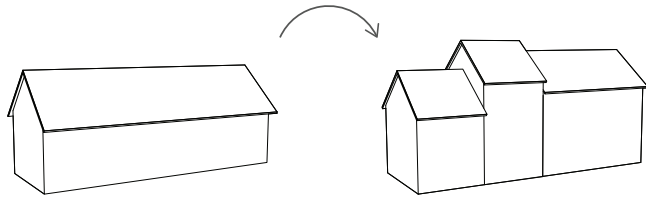
Most of the streets follow terrain morphology (west-east orientation). Abertamy's street pattern is irregular, streets are quite narrow, as they were created predominately for pedestrian move.



## 7.02 TYPOLOGY CHARACTERISTICS

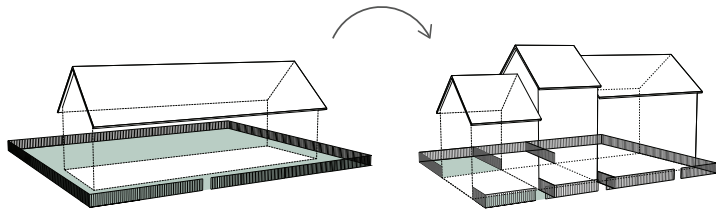
### ONE SOLID, MORE UNITS

Long compact solid and resilient structure is preserved. Instead of a big house for one big family, there are several row buildings with various units. Compact and dense structure are more sustainable.



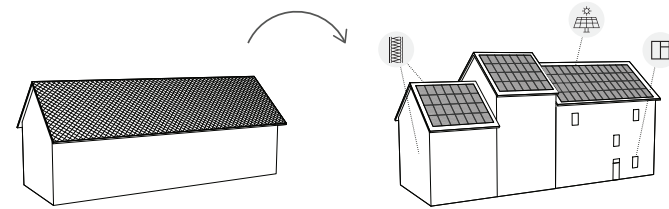
### GARDEN -> GARDEN + FRONT YARD

With awareness of the required density and beautiful landscape around the town, private gardens in the proposed typology are quite small. Front yards are created in order to support community life.



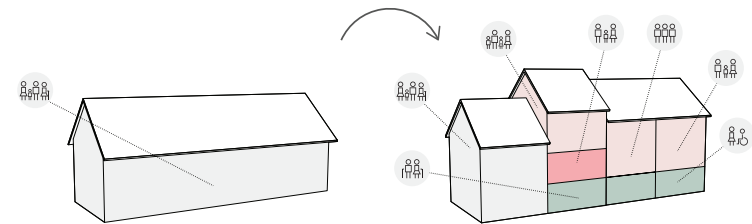
### SLOPING ROOFS, SOLAR PANELS

Abertamy is full of simple sloping roofs that can cope with snow. Roofs are covered with solar panels. New houses are built in a passive standard, made of local materials (sheep insulation).



### VARIOUS HOUSING UNITS

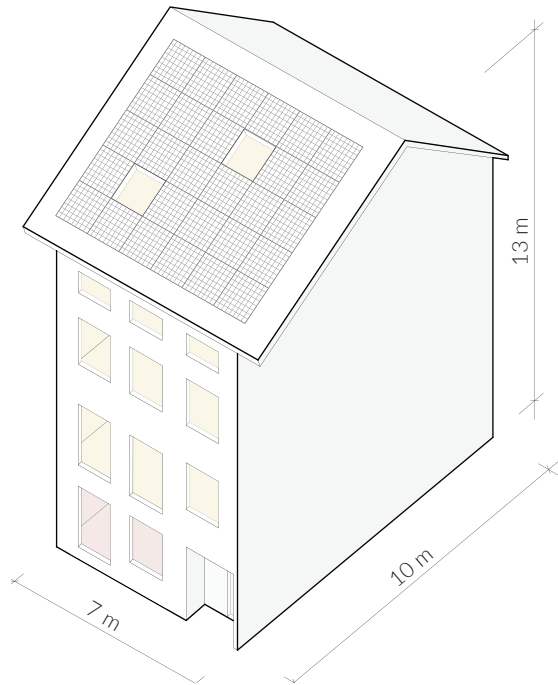
New typology offers several types of units. There are small units for nowadays small households, barrier-free units on the ground floor for disabled or elderly people, as well as double generation houses.



## 7.03 TYPOLOGY UNITS

### A TOWNHOUSE CONSISTING OF TWO UNITS

The building is either a multi-family house, or it contains two separate units: a lower unit on the ground floor that can accommodate disabled or elderly people, and an upper unit designed for a five-member family.



## 7.04 ZOOM-IN PLAN



A new district



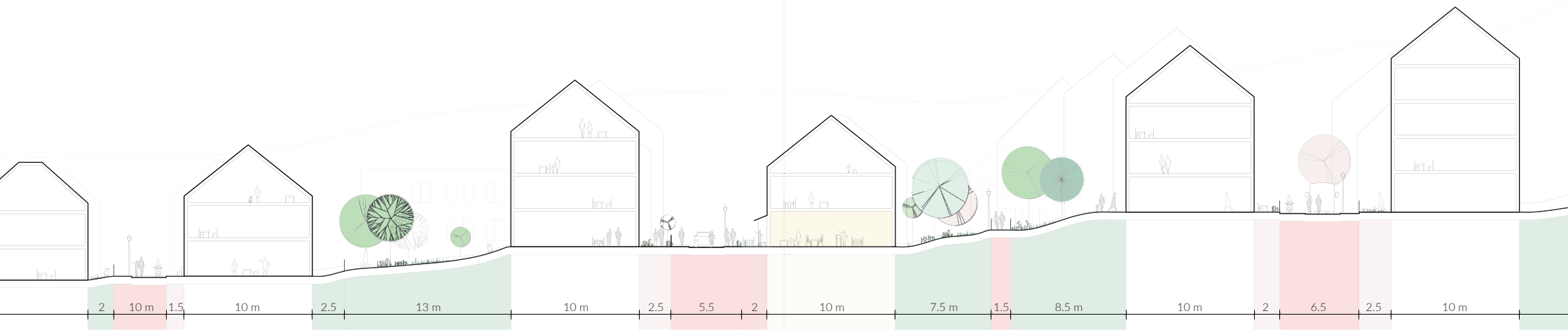
Activated town square and filled gap sites in the surroundings



Phase 2 - new typology, a school extension, a wellness centre and other public facility

7.05 PHYSICAL MODEL 1:200





## 8.00 SPACES AROUND

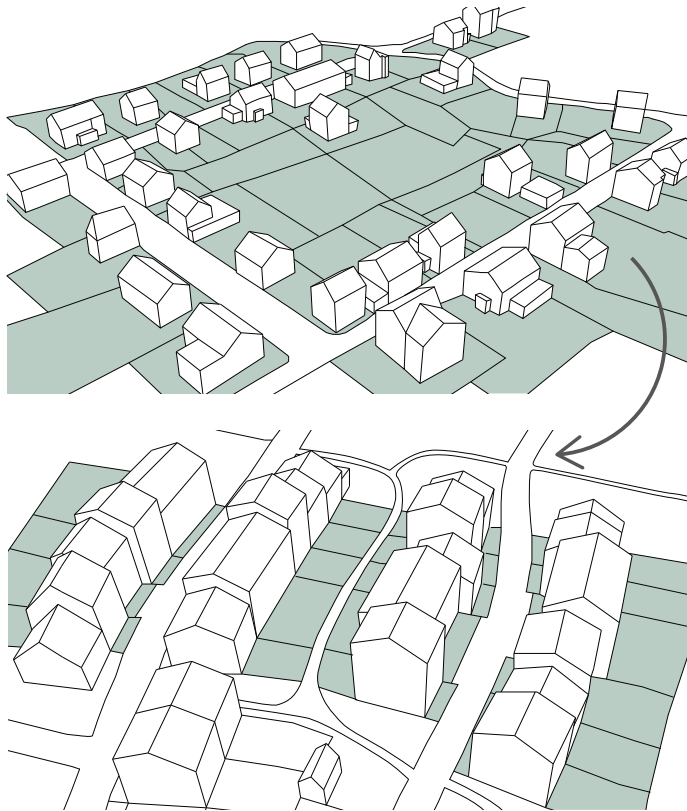
Urban design and urban life are predominantly concentrated and experienced between buildings. Therefore, a lot of effort was put into designing varied spaces.

Unlike existing Abertamy's structure, the new typology is composed of small blocks with diverse spaces around them. Thanks to shared spaces, small paths and semi-private front yards, a community spirit is created.

## 8.01 SPACE IN BETWEEN

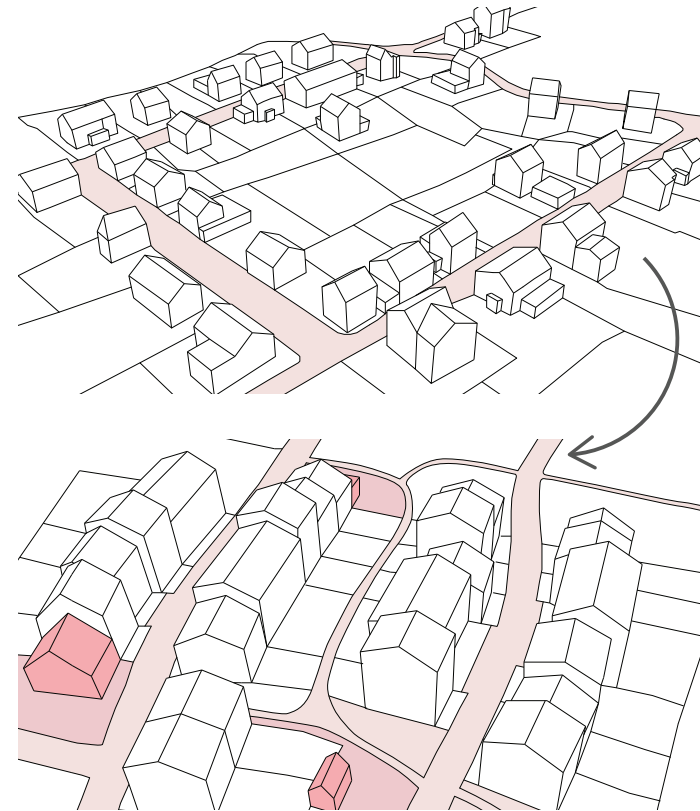
### PLOT DIVISION

Existing Abertamy's structure composes of detached houses in private gardens that create big impassable blocks bordered by fences. The new typology is composed of smaller blocks and contains shared streets with front yards, as well as narrow footpaths between private gardens.



### STREET NETWORK AND LIFE

Existing Abertamy's blocks are surrounded by monotonous streets that have no sidewalks, no meeting places, no benches etc. The public space around new blocks is more diverse - there are playgrounds, a mini library, a café, a community house parks, community gardens, shelters, bike and car parking.



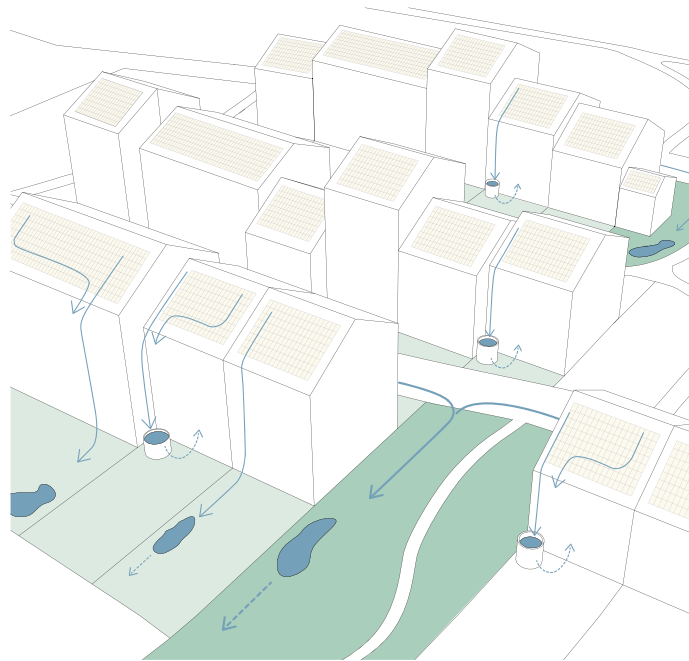
## 8.02 SPACE IN BETWEEN

### WATER MANAGEMENT

Every house, as well as whole districts, use elementary water-management solutions. Most of the buildings are west-east oriented, respecting terrain morphology and using southern roofs for collecting solar energy.

Rainwater is gathered in water tanks or small garden lakes and later it is used for watering or as service water. Rainwater from streets follows morphology and is collected in green public areas nearby.

New houses with conveniently large plots can also integrate heat pumps. In any case, new houses should use maximum of passive house principles.







NEW TYPOLOGY AND THE SPACE IN BETWEEN

## 9.00 RESOURCES

## RESOURCES

### LITERATURE

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- <http://www.chaloupky.cz/pro-verejnost/>
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### IMAGES

- Fig. 1 Mayor's archive, Abertamy
- Fig. 2 <http://kontaminace.cenia.cz>
- Fig. 3, 4 <https://www.google.com/maps>
- Fig. 5 <https://www.novinky.cz/zahranicni/evropa/346062-odsun-nemcu-z-ceskoslovenska-bude-pamatnym-dnem-rozhodl-berlin>
- Fig. 6 - 9 Antikomplex, 2006. Zmizelé Sudety. An exhibition catalogue
- Fig. 10 <http://www.nebeske.cz/gallery/plesivec-krusne-hory/>
- Fig. 11 <http://itras.cz/mrtvy-rybnik-u-hrebecne/galerie/19949/>
- Fig. 12 <https://hotelplesivec.cz/en/skiarea>
- Fig. 13 <https://vary.idnes.cz/dul-mauritius-privita-prvni-navstevniky>
- Fig. 14 <http://www.taxus.eu/aktualne/dreveny-chodnik-bozidarske>
- Fig. 15 <https://www.flickr.com/photos/130814332@N05/sets>
- Fig. 16 <https://www.abertamy.eu/gallery/detail/abertamska-pout>
- Fig. 17 <https://www.abertamy.eu/gallery/detail/120-let-plesivecke-rozhledny>
- Fig. 18 [https://kladensky.denik.cz/ostatni\\_region](https://kladensky.denik.cz/ostatni_region)
- Fig. 19 [http://www.weiperter-umgebung.de/r\\_fahrt.html](http://www.weiperter-umgebung.de/r_fahrt.html)
- Fig. 20 <http://archivnimapy.cuzk.cz/uazk/pohledy/archiv.html>
- Fig. 21 <http://kontaminace.cenia.cz>
- Fig. 22 <https://en.mapy.cz>

## RESOURCES

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- Fig. 27 <https://www.dobrykram.cz/znacka/hornacka-farma-s-r-o/>
- Fig. 28 <http://www.chaloupky.cz/pro-verejnost/>
- Fig. 29 <http://www.chaloupky.cz/pro-verejnost/>
- Fig. 30 <https://hostetin.veronica.cz/mapa-projektu>
- Fig. 31 <https://sk.wikipedia.org/wiki/Host%C4%9Bt%C3%ADn>
- Fig. 32 [https://hradeczije.cz/wp-content/uploads/2017/05/4.telc\\_uvodni](https://hradeczije.cz/wp-content/uploads/2017/05/4.telc_uvodni)
- Fig. 33 <http://www.muzeum-most.cz/montanregion/hkkk-e.html>

### ICONS

- <https://thenounproject.com>:

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