

Mendel University in Brno
IGU Commission on Local Development
UNISCAPE Network



5th Moravian Conference on Rural
Research

EURORURAL '16

with financial support by the City of Brno
and under patronage of

JUDr. Michal Hašek,
Governor of the South-Moravian Region

and

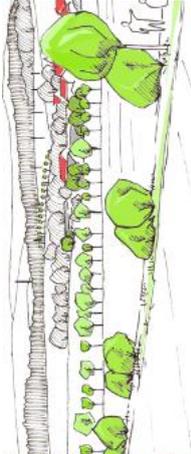
Ing. Petr Vokřál,
Mayor of the City of Brno

EUROPEAN COUNTRYSIDE AND ITS PERCEPTION

Excursion Guide



Brno, Czech Republic, August 29 – September 2, 2016



D1 motorway

D1 is the oldest Czech motorway. The first plans originate from 1930s in two alternative directions: Plzeň – Košice (eastern Slovakia) or Cheb – Chust (present Ukraine). The project of Jan Antonín Baťa in the direction Cheb – Velký Bočkov (Ukraine) was the first which was approved. Its construction started in January 1939. Till 1950 altogether 60 bridges and 77 km of the corpus were completed. After 1948 the construction has stopped due to the other priorities (construction of heavy industry).

The construction was restored in 1967. The first section came into operation in 1971 and the whole section Prague – Brno in 1980. After that the construction was interrupted again because the attention was paid to other motorways. At the present time, the total length of the D1 motorway Praha – Dolní Lutyně (Polish border in Silesia) is 376 km, of it 352 km has been completed. One part serves as a reserve military airport.

Originally, the motorway was constructed for the speed of 110 km per hour and for the much lower intensity of transport. The situation has changed in 1990s. The intensity of transport increased due to general increase of the transport and due to the opening of the border which caused an intensive transport between Germany and the East of Europe; the speed increased for 130 km per an hour. According to the census of road transport, the intensity reaches 33,000 vehicles per 24 hours in the Vysočina region and increases to 50,000 in the vicinity of Brno and 70,000 in the vicinity of Prague. Moreover, the motorway is situated in higher altitudes with changeable weather conditions. The technical conditions of the surface and bridges rapidly deteriorated. All this resulted in increased number of accidents and traffic jams.



D1 motorway



Traffic limitations during the reconstruction

That is why the reconstruction of 160 km of D1 motorway is in course. It concerns resurfacing, expansion, renovation of bridges, construction of anti-noise barriers. These works ask for limitation of the traffic in some sections. Another improvement is expected from completing of the parallel motorway D11/D35 Prague – Hradec Králové – Lipník nad Bečvou.

Velké Meziříčí

The second largest town of the Žďár nad Sázavou district (11,800 inhabitants, 2016), centre of the micro-region in the south-eastern part of the district. The micro-region contains 30 municipalities.

Although tales put the existence of the castle into the period of the Great Moravia Empire, the first written note is from 1226. The city rights were granted in 1408. The town was ransacked 8 times during the Thirty Years' War. After the war, Jews moved into the town. Their number reached 1 116 persons in 1857. The Jewish community faded in 1940. The town has been connected with the railway in 1886.

ALPA Inc. is the best known industrial facility in the town. The cosmetic enterprise has more than 100 years' old tradition. The ALPA embrocation is an alcohol solution of vegetable essential oils and menthol in an optimum ratio. It serves as a basic medical and sedative aid with versatile use. Since 1994 the factory is owned by the Swiss company IG Pharma Holding AG. Vintage cars are produced by the Vezeko company, Ltd. POEX Inc. supplies confectionery. Velké Meziříčí has two secondary schools, a museum and a gallery.



Velké Meziříčí – general view



Velké Meziříčí – the chateau

There are some sightseens in the town. The chateau was originally built in 13th century with two ramparts, 3 towers and 5 bastions and rebuilt in 1578 in the renaissance style. After the war it served as a maternity hospital and at the present time it is the seat of the museum. The chateau belongs to the Podstatzky-Liechtenstein family. The town core is dominated by St. Nikolaus church from 14th century which was rebuilt many times. Its tower is 64 m high. The church is protected as a part of cultural heritage of the Czech Republic. The Jewish heritage is formed by Old and New synagogue and by Jewish cemetery. The Old synagogue served to public from 17th century till 1870 when the New synagogue came into operation. By now, the museum and gallery are situated in the building which belongs to the Jewish community in Brno. The New synagogue served in the period of 1870 – 1940. By now, the Asian market is there. Original quotations from Scripture and Jewish symbols were substituted by the inscription "Textile and shoes" and the door is opened by photocell. Jewish cemetery was found in 1650 on the area of more than 4,000 m². Technical heritage is presented by the Vysočina highway bridge over the Oslava river valley from 1978. It is 428 m long and 76 m high.

Třebíč

The district town and the second largest town of Vysočina region (population 36,640, 2016) is situated on Jihlava river. Třebíč is an important center of western Moravia because Jihlava - the regional capital does not cover the whole territory of the region by its influence.

The origin of the town relates to the Benedictine abbey which was found here in 1101 in a relative empty forest. The first written note is from 1277. Třebíč obtained its city rights in 1335. Its importance increased rapidly. The abbey owned immobility in the whole Moravia and the town became the third most important town of Moravia after Olomouc and Brno. At the end of the 15th century more catastrophes affected the town. The abbey has been closed in 1525. Jews came in 16th century. They settled separately on the left bank of the river reaching 1,500 persons in 1890. A new development occurred during 19th century. The town has been connected with the railway network on 1886. The industrial development started soon. Constructions of new residential districts, social and technical infrastructure followed. During the WWII the development has stopped, Jews were deported to concentration camps. Třebíč had a strong communist movement due to its workers population. The fact was used for the development in the socialist period. An intensive residential built-up was connected with the Dukovany nuclear power plant.

The best known plant in the town is ZON, Ltd. found in 1879. The company produces non-alcoholic drinks. However, the industrial development in 20th century is connected with the shoe industry. It was found as a leather factory at the end of the 19th century. In 1930s the factory was bought by Tomáš Baťa who expanded the production of footwear. In the socialist period the factory employed about 5,000 employees being the biggest producer of shoes in central Europe. The factory ceased its existence in 2000 due to the increasing Asian competition. The production of shoes (on a much lower level) continues in the Selva Shoes Company and the production of hosiery in the TREPON Company. West-Moravian Engineering produces knitting machines. In 2000 the company was bought by British Monarch Knitting Company. By now, the industry is developed in the Hrotovická industrial zone in which 7 companies of different branches found its place. Foreign investments are represented by the German company MANN+HUMMEL, Ltd. producing filters for automotive industry and employing 1,200 people.



Třebíč – former abbey and St. Procopius basilica



Třebíč – a fragment of the Jewish quarter

Třebíč has 7 secondary schools. Efforts of establishing the West Moravian College have been unsuccessful so far. There is a hospital in the town, the theatre Passage (without a permanent stage), Museum of Highland, museum of agricultural technology, 2 galleries, an observatory. Some festivals took place in the town: festival of Jewish tradition Shamajim, festival of classical music Conventus Moraviae, Country fest, Festival of Folklore and others. Basilica of St. Procopius together with the Jewish town was inscribed in the List of the UNESCO World heritage in 2003. It caused increase in tourism, including the international

visitors. Unfortunately, the accommodation capacity sub-standards the importance of the town.

There are numerous historical monuments in the town. The basilica of St. Procopius was built in 1240 – 1280 at the place of precedent chapel of St. Benedict (finished in 1104) as the Church of the Virgin Mary Assumption. The construction of the church was connected with the reconstruction of the abbey into the fortress. The consecration was changed in 1704. The architectural importance consists in joining Romanesque and Gothic styles. Třebíč Jewish town is the only Jewish heritage on the UNESCO list besides of the Israel territory. It is one of the largest Jewish towns with well-preserved ground plan. The ghetto had developed since 12th century. In the Jewish Quarter there are 123 houses, two synagogues and the Jewish cemetery. The Charles Square in the town core covers 22,000 m² and it is comparable with the Wenceslaus Square in Prague. It is dominated by the town tower (75 m high) which belongs to the church of St. Martin of Tours. Capuchin monastery, with the Church of Transfiguration, orthodox and evangelic churches belong to the heritage in the town core.

Energetic complex Dukovany – Dalešice

The energetic complex consists of Dukovany - the nuclear power plant and Dalešice - the pump power plant. Czechoslovakia and the U.S.S.R signed the agreement about construction of two nuclear power plants in 1970. The construction of the oldest Czech nuclear power plant started in 1978, the first block has been put into operation in 1985, the last one in 1987. Before the construction started, three villages were demolished. The project was elaborated in the USSR, but 80 % of facilities are of the national origin. The company Industrial Construction Brno, national enterprise, was the general supplier. Škoda was the general supplier of the technological part.

The power plant consists of 4 blocks of water-water power reactor (PWR in western terminology). Original installed capacity was 1,760 MW, present capacity after modernization reaches 2,040 MW. The power plant produces about 14 TWh of power annually and is the biggest power source in Czechia ensuring about 20 % of total demand or total annual demand of all Czech households. The utilization factor is about 85 %. The financial benefit of its operation paid the original investment expenses more than three times. At the moment, the production of energy is the cheapest in Czechia.



The main entrance



Nuclear power plant – general view

The power plant has produced 402 TWh of power which spared 253 million tons of coal and prevented from 316 million tons of CO₂ and about 42,000 m³ of water flow through the cooling system per an hour. The power plant has eight cooling towers which produce 500 kg of water steam per a second. The storage of nuclear waste is situated in the territory of the power plant. Additionally, the plant could be used for the heating of Brno. Unfortunately the construction of the 40 km long steam pipe line is quite expensive. Fluctuating prices of energy make the decision difficult from the viewpoint of the return of investment.

The fifth 1,000 MW reactor is under discussion. A referendum about its construction was organized in neighbouring Slavětice village with the decision for the construction. Besides of the pump power plant the company operates also a solar power plant whereas the construction of a wind turbine was refused by inhabitants. The power plant passed through modernization and also with deep exercise stress tests after the Fukushima accident. The power plant is resistant against expectable natural disasters: an earthquake, wind over 216 km/s, temperature of ± 46 °C, precipitations evoking roof load of 200 kg/m². The power plant has to withstand without any aid from the outside for 72 hours.

The power plant creates more than 5,000 relatively well paid jobs. Additionally it collaborates with surrounding municipalities and supports their activities. That is why the power plant is perceived positively in the region.

The power plant belongs to the 20 % of most safe of PWR reactors worldwide. The only serious crash occurred at the beginning of 1990s. The power plant was disconnected from the network by external interference. The nature of the crash consisted in the fact that one of the reactors did not solve the problem by its own system but the backup diesel generators had to be used.

Two water reservoirs are part of the system. They serve as a reservoir of cooling water for the power plant and as an additional energy system, balancing the disproportion between the energy production and demand. Balancing of flows in Jihlava river, the anti-flood protection, tourism and fishing are additional functions of the reservoir. Recreational navigation is operated there. There are many private cottages and the Hartvíkovice Beach camp situated on the banks.



Dalešice water reservoir (cooling towers of the Dukovany nuclear power plant in the background)



Recreation activity on the banks of the Dalešice water reservoir

The deepest (85 m) Czech water reservoir Dalešice has been finished in 1978. Its backwater is 22 km long and maximum volume 127.3 million m³. The embankment body is 100 m high being the second highest fill dam in Europe. About 6 water mills felt victim to the construction.

The Dalešice pump water plant (the 2nd largest in Czechia) has the original capacity of 4 Francis turbines with 120 MW each. Its main advantage consists of the startup speed: from zero to the full performance in 55 seconds. This fastest Czech energetic source is operated from the central control facility in Prague. Usually only one or two blocks balance the energetic situation during peak hours. The full capacity has been used twice till this time – during huge floods in 1997 and 2002 when more coal power plants had to be stopped.

The water reservoir Mohelno serves as a balancing reservoir of the Dalešice – Mohelno system. It creates 7 km long artificial lake. Its concrete dam is 185 m long, 7.75 m wide and 39 m high. The technological water for the nuclear power point is taken from here. In the dike, a water power plant is localized with two turbines (Kaplan and Francis ones). Their relatively small capacity 1.2 and 0.6 MW is able to start up the nuclear power plant from which it is operated. Mohelno Serpentine Steppe natural reserve is situated on the banks. The trout zone is under the reservoir. Protected crayfishes live there.

Dalešice municipality

Dalešice with 600 inhabitants is situated 20 km from the Třebíč district town. It is a member of Rokytná LAG. Technical infrastructure contains public conduit, sewerage system connected with the water treatment plant and natural gas distribution. Social infrastructure is represented by the basic school. The main economic entities are traditional brewery and the Agrochema agricultural cooperative operating on 4,400 ha of agricultural land. The economic situation is improved in connection with the energetic complex Dukovany-Dalešice. A baroque chateau (in not very good condition) is the main architectonical heritage of the township.

The Dalešice brewery was found probably in 16th century. The oldest buildings come from the Baroque period. In 1882 the brewery was modernized by its owner. In 1920s the brewery was expropriated by the 1st Czechoslovak republic and functioned as a cooperative enterprise. During the socialist period it became a branch of the enterprise Breweries of Prague. Its activity was finished in 1997. In 1980 a cult movie “Postřižiny” was filmed here by famous director Jiří Menzel. Thereafter the brewery delapidated till 1999 when it was bought by private owners and the production of beer was renewed. Dalešice beer is neither pasteurized not filtered, so it is a natural product.