Guide to Industrial and Technical Structures in Prague
The Guide you hold in your hands is rather special, in that it shows you Prague from a seldom mentioned perspective.

Whilst we shall make our way into Prague by first reminding ourselves of several well known landmarks, such as the Petřín lookout tower, Sova's mills, or the Šítkovská water tower, this is only to draw attention to the continuity and importance of distinctive technical works and commercial and industrial structures to the life and development of the metropolis. These are just a setting-off point on our journey to see what stays out of the limelight.

A Guide to Prague's technical structures can only be a brief excursion, given how very numerous they are. The entries are sorted for clarity by the various Prague districts, from the historical centre outwards, to what used to be the outskirts.

The Guide primarily offers some attractive sights to see, as well as alternative tourist destinations, giving their exact addresses and GPS coordinates. It reveals curious and often surprisingly impressive places, but also draws attention to threatened heritage.

Benjamin Fragner
The idea to build a funicular to Petřín Hill came in 1890 along with the Petřín Tower project. The funicular was opened on 25th July 1891 and was at the time the longest cabled track in the Austro-Hungarian Empire. It was driven by water counterweight and the ride to the top took 6 minutes. During the First World War it ceased operation. Its restoration was undertaken in 1931 by the Elektrické podniky co., the new engine having an electric motor. The funicular stretched for 511m over an elevation of 130.5m. A world first was its safety cable system, enabling the cars to be stopped at any point along the route. The funicular also boasted another first – having the highest cable car carrying capacity in Europe. The funicular carried on working until 1965, when prolonged rains and a landslide put it out of action for the next 20 years. Today, the funicular is an integral part of the city’s public transport network and a popular tourist attraction.

This feat of a 62m high lookout tower was drawn up by civil engineers F. Prášil and J. Souček from Prague bridgeworks, which then supplied and assembled the steel construction in the incredibly short period of five months. The initiative for the construction came from the Czech Ramblers Club (Klub českých turistů) after their visit to Paris. The one-fifth-scale tower is comparable to the Eiffel Tower it looks up to, inasmuch as they top out at almost exactly the same height above sea level. The lookout tower came to symbolize the Jubilee Exhibition, and visitors were brought to the opening ceremony of 30th July 1891 by the 396m long funicular railway built at the same time, initially water powered, and subsequently electrified in 1931–1932. In addition to its function as a lookout, from the 1950s until the building of the Žižkov transmitter it also served for television and radio broadcasting.
SOVOVY MLÝNY / SOVA’S MILLS

The Mill on Kampa Island, which is named after its owner in the 15th century, Václav Sova of Liboslav, was founded by the Benedictine order of St. George in the middle ages. The mill’s original wooden structures came to be replaced with stone over time, its water-wheel also powered a sawmill and a grinding mill. In 1858 F. Odkolėk rebuilt the mill to be steam powered, and built on an engine room and chimney. The architect J. Schulz contributed to the neo-gothic facades of the residential wing. After a fire in 1896 the buildings were used as apartments and joinery workshops. In the 1990s the dilapidated mill, unused for decades, underwent reconstruction by the Jan and Meda Mládek Foundation, turning it into the Gallery of Fine Arts – Museum Kampa, which opened in 2001.

HERGETOVA CIHELNA / HERGET’S BRICKWORKS

Not far from Charles Bridge, in 1780 the professor of technology, notable entrepreneur in construction and municipal construction director F. L. Herget bought some land for his brickworks. Based on plans drawn up in 1781 by F. Bretschneider, production buildings were built around a central furnace. Its classicist reconstruction was done in 1796 by the builder J. Zoblel, the new owner of the complex. Further modifications took place between 1857–1858 as drawn up by A. Hellmych and K. Předák. In the 1990s the buildings suffered a major fire. In 2002 they were modified for social use. They house a restaurant, the Franz Kafka museum, and the courtyard has a kinetic sculpture by David Černý. Whilst the reconstruction has done away with industrial heritage, the outline of the structure remains intact.

□ Address: Prague 1 – Lesser Town, U Sovových mlýnů 2/503
□ Transport: tram “Újezd” 6, 9, 12, 20, 22
□ GPS: 50°05’02.5”N 14°24’30.5”E
□ Converted: Yes
□ Accessible: Yes
□ Web: www.museumkampa.cz

□ Address: Prague 1 – Lesser Town, Cihelná 2/102
□ Transport: tram “Malostranská” 5, 12, 18, 20, 22, metro A “Malostranská”
□ GPS: 50°05’17.6”N 14°24’37.9”E
□ Converted: Yes
□ Accessible: Yes
The tallest and largest Renaissance water tower, 35m high, can be found just next to the functionalist Café Mánes of the eponymous artistic association, which had made efforts to preserve the tower at the end of 19th century (after its decommissioning in 1881). In 1495 a wooden water tower stood here, whose wooden and masonry revision of the early 16th did not last long. The present-day stone structure dates from 1588–1591, which tilted 40cm from true already in the course of its construction and kept its tilt even after its reinforcement with a ferro-concrete brace in 1927. The reconstruction of 1648–1651 gave the tower the helm roof it has to this day. The recently restored tower saw peculiar use in modern history – the secret policemen spying on Václav Havel had their base inside it.

Pneumatic post, (a network of steel tubes, through which documents in transport capsules are pressure propelled) was put into operation for the first time in London in 1853. In 1887 this system came into operation in Prague. The first route, 5km long, not yet public, led from the main post office at Jindřišská Street through Malé náměstí square (‘U Rotta’ house) to Prague Castle. It flourished at the end of the 1920s when a five node star arrangement with 24 stations reached a length of 55km. Operation of the longest working pneumatic post system in the world was brought to an end by the 2002 floods. End-stations are maintained at some post offices (Josefská, Moravská, Prague Castle, the HQ at the Main post office in Jindřišská st.) and it is being readied for a restart in selected areas.
Prague’s underground conceals not just the Metro, but a singular network of utilidors – underground utility corridors serving as infrastructure network conduits needed for the city to function. Their construction began in the 1970s, but Prague Castle had its service tunnel constructed already as part of Plečnik’s modifications in the 1920s. In the historic centre, the utilidors run some 18km beneath a number of heritage listed buildings, where to run infrastructure underground is essential to maintaining authenticity. Utilidors are sited at an average depth of 20m, with a total length of 90km. There is a public guided tour, accessible from Senovážné square.

The watershed year for steam navigation on the Vltava River was 1865, when shareholders including V. Lanna, F. Dittrich, Č. Rott and Ruston co., founded the “Prague society for steamships on the Vltava River”. Ruston engineering built 6 paddle steamers for the company, the first of which, built in 1865, carried the name ‘Praha’. Today two vessels remain, although considerably more recent. The steamer ‘Vyšehrad’ (built 1938), is today the oldest and largest, and together with the steamer ‘Vltava’ (1940) the last of the paddle steamers on the Vltava River. Following their thorough refurbishment, both are used as sightseeing vessels.
In 1871, the second railway bridge came to span the Vltava River in Prague, which, as part of the Prague connecting railroad made the connection between the Emperor Franz Joseph railway station (Hlavní nádraží) and Smíchov district. The original lattice structure of the five segment bridge spanning 296m was supplied by the Harkort works from Duisburg. In 1901, the old bridge was replaced by a new one, comprised of three segments, based on the design by Ing. J. Kolář, the pillars being built by Gregersen and sons. The replacement of the structure itself in a single day by pulling the original girders onto a dismantling scaffold and sliding in the new hogging girders was supervised by Ing. F. Prášil. The bridge with two outlying 1.8m wide walkways for pedestrians and its 298.4m span serves its purpose to date.

An Art Nouveau station of the drive-through type, built in the years 1901–1909 by arch. J. Fanta, with works by sculptors J. Šimanovský, Č. Vosmík, S. Sucharda and L. Šaloun, which replaced the neorenasence building dating from 1871. The building, 214m long and 28m wide consists of a departure hall with a semicircular central space and turreted side wings, bearing on the southern side the symbol of the railways – a winged wheel. The track works are covered over by a glazed steel hall, 230m long, with arches spanning 33m and a height of 18m, made by the Bondy bridgeworks to a design by Ing. J. Marjanek and R. Kornfeld. The new clearance hall with its underground station, built to a design by architects A. and J. Šrámek in the years 1972–1977 recently underwent modernization.
Controversially received by the public, this tallest structure in Prague, the 216m high telecommunications tower, was built to a design by the architect Aulický and structural engineers Kozák and Bém in the period 1985–1992. The antenna trusses carry the transmitters of a host of television and radio broadcasters and mobile operators. On the three load-bearing tubes of the tower (the tallest being 6.4m across on average, and the two lower ones averaging 4.8m) there are pods at three levels on triangular bases. Much visited for the unforgettable view of Prague and the surrounding area is not only the restaurant and café, but above all, the lookout at a height of 93m. The highest pod is for technical facilities. The black babies by sculptor David Černý have been crawling up the tubular pillars since the year 2000.

This important Prague functionalist building was designed in 1930 by K. Caivas and V. Weiss. The distinctive reinforced concrete structure of domed ceilings designed to bear 2 tons/m² was constructed by the Skorkovský company. The vast terminus building encompassing 30,000 m² of storage space in two parallel wings, spanned across by the administrative building, served from 1936 till 2002 for the rapid trans-shipment and storage of goods. Particularly outstanding is the organizational, technical and architectural unity of the complex, which has survived in good technical condition despite a lack of long-term maintenance. Lately, this heritage station is used as an alternative setting for various cultural events.
The monumental building of the new waterworks, built in the years 1924–1926 to plans by architect A. Engel replaced the old Podolí waterworks, which had supplied the city since 1885. The treatment of Vltava river-water utilized a Puech-Chabal multiple filtration system. The rendition of the facades in the Classicist style contrasts with modern reinforced concrete arched ribbing in the interior, built to the specifications of renowned experts Prof. F. Klokner and Dr. B. Hacar. In the 1950s, the second half of the symmetrically composed complex was completed. Following total refurbishment at the end of the 20th century, it serves as the supply source of drinking water and houses the Prague Water Management Museum.

The Zlíchov glassworks, which was one of the largest in the Habsburg Empire, was founded by J. Inwald in 1878. As one of the first glass factories it partook in the making of flasks for the arc lamps and bulbs of F. Křižík. Between the two wars the glassworks became known for its production of crystal and soda glass. After 1935 production was discontinued and the buildings were used for other purposes. What remained of the glassworks buildings became in 2007 the launch pad for the MeetFactory Art project, founded by the artist David Černý back in 2001. This International non-profit contemporary arts centre has developed along four dramaturgy lines – theatre and music programmes, an exhibition gallery, and a residential programme for housing visiting artists.
**SEWER TREATMENT PLANT, THE OLD SEWAGWORKS MUSEUM**

Based on a project by renowned expert W. H. Lindley, who in 1894 designed the first Prague sewer network, a sewer treatment facility was built in the years 1901–1906. Where the Vltava River leaves the Prague basin, the Bělský construction company built a plant complex comprising of an operational building and sedimentation tanks. The exceptional architectural and technical standard of the construction is borne out by the fine underground brickwork. The treatment plant continued to operate until 1967, when a new treatment plant was put into operation on Císařský island. The building, which stands preserved in all authenticity, including technology fitments and functioning steam engines, today houses a Museum of the old sewage works, which runs organized tours for the public and various social events.

**STAROPRAMEN BREWERY**

Only the facade onto Nádražní street with the original malt floors in the basement remains preserved from the days of the Shareholders Brewery of Smíchov, founded in 1869. The brewery has seen continual modernization, in 1913 the company Novák & Jahn installed the largest brew kettle in the Czech lands – at 250hl. A major renovation occurred between the two world wars, when the construction company A. Lanna expanded the brewery with a new four-storey building complete with a machine room, brew kettle, conditioners with wort chillers, and the cellars fitted out with metal tuns. The annual output at the time amounted to 860,000hl of beer, but the envisaged production limit of 1 million hectolitres per year was first breached in 1960. Since 1992 the Staropramen Brewery belongs under Prague breweries – Pražské pivovary, a.s.
THE PLANETARIUM

The most recent technical structure located in the vicinity of the exhibition centre in Stromovka, Prague, the Planetarium (a fulldome projection of the stars and planets), began construction in 1958 as designed by the architect J. Fragner. The projection dome with a diameter of 23m was at the time the largest and by its instruments the most modern not just in Central Europe. After a comprehensive refurbishment in 1991, a new Cosmorama projection system was installed, which is still among the best in the world. The Planetarium, with its regular shows and lectures serves its calling as a cultural and educational centre.

Address: Prague 7 – Bubeneč, U Výstaviště 416
Transport: tram “Výstaviště Holešovice” 12, 17, 24; metro C “Nádraží Holešovice”
GPS: 50°06’23.8”N 14°25’47.5”E
Converted: No
Accessible: Yes
Web: www.incheba.cz

THE INDUSTRIAL PALACE

The Industrial Palace was the symbol of the Jubilee Exhibition in 1891, and was at the same time its largest exhibit, built to plans by architect B. Münzberger by the builder F. Víšek. Contributing to the success of the construction was the use made of steel beams, which were supplied and assembled by the První českomoravská továrna na stroje co. in Libeň, in cooperation with Ing. F. Prášil. Assembly over an area of 12,780m² was achieved in an incredibly short timescale – 142 days. The outer finishing with its rich stucco and sculptural decoration was done in 1952–1954 by the architect P. Smetana, who also transformed the exhibition hall into a civic hall for 4,000 persons. The Palace is still used for exhibition purposes. Preparation is underway to restore the west wing, which burned down in 2008.

Address: Prague 7 – Bubeneč, Královská obora 233
Transport: tram “Výstaviště Holešovice” 12, 17, 24; metro C “Nádraží Holešovice”
GPS: 50°06’19.8”N 14°25’39.1”E
Converted: No
Accessible: Yes
Web: www.planetarium.cz
After a series of nationwide exhibitions showcasing technology in the late 19th century, there were growing efforts supported by society’s mood of nationalist revival, to set up a special Museum to display the exhibits. This was helped by the industrial exhibition in 1908, on the occasion of which the Technical Museum was established. Its founding collections were the exhibits put on display in 1910 in the Schwarzenberg Palace. The new building, together with the adjacent building earmarked for the agricultural museum was built in the years 1938–1941 from plans by architect M. Babuška. It began to serve its purpose partially only after World War 2 and fully since 1999. Among its most significant expositions, renewed since 2011, and in addition to the large transport hall, are exhibits of mining and metallurgy.

The cast iron pavilion of the Prince of Hanau was exhibit no. 27 at the Jubilee Exhibition of 1891. The cast iron structure, to a design by architect O. Hieser and modeller Z. E. Fiala was cast by the Komárov ironworks, under the guidance of the technical director J. Jakoubek. The cast iron construction in the Baroque style, in combination with brickwork, the structural elements and exposed cast iron features inside made for an exemplary panoply of the very best in construction and decoration that the ironworks could muster. At the end of the exhibition the Prince of Hanau donated the pavilion to the city of Prague and in 1898 it was moved to Letná and furnished as a scenic restaurant. In the years 1967–1971 it was refurbished to its original form and renewed its operation as a restaurant.
The city abattoir complex was built in a unified neorenaissance style, with different types of advanced roof structures and facades combining decorative brickwork and plaster, and was inaugurated on 1st July 1895. The buildings were built to a design project by the abattoir office, led by J. Srdínko, implemented by the A. Elhenický company. The central axis, where the meat bourse building is located together with a hall and a restaurant as well as the administrative building, is emphasized by a pair of statues by Č. Vosmík and B. Schnirch. Its dominant feature is the water tower. Following the moving of production to new meat-packing plants, the complex has ever since 1983 been used primarily as a market with storehouses and shops. Some halls have been adapted for various cultural purposes.

A set of converted industrial buildings today houses a respected platform for contemporary art – the DOX Gallery. Initially, in 1901 the freshly parcellled-up Holešovice site came to be the Rossemann & Kühnemann machine works, with its classic facades combining brickwork, plasterwork and tall factory windows. In the next phase, from 1928–1939, working to a design by F. Troníček, the Nekvasil company built a corner office block and a reinforced concrete production building in Osadní street for the Páv engineering company. The original factory buildings were adapted and supplemented with new features by the architect I. Kroupa in 2008. The architecturally appealing mix of the historical and present-day is well matched to the site’s new calling.
NEGRELLI VIADUCT, KARLÍN VIADUCT

The Karlín viaduct, today called after Negrelli, was built by the State railway company as part of the line to Dresden. The first Prague railway bridge was, given its length of 1,111m among the best in Europe at the time. It came into operation on 1st June 1850. At its completion it had 87 stone-built, mostly circular sandstone arches, of which 8 over the river were of segmental granite, with two passages for pedestrians. The construction was carried out by 3,000 workers and the riverbed foundation excavations saw deployed the first two steam-driven waterpumps. Later, some arches were replaced with new structures. Admiration is due to Ing. A. Negrelli, who with his open arches managed to keep intact the classic overland transport routes through the newly growing industrial districts of Karlín and Holešovice.

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