

Preserve the treasure

The “Wieliczka” Salt Mine was among the first twelve sites entered on the UNESCO World Cultural and Natural Heritage List in 1978. Maintaining the best possible condition of this extraordinary underground monument, one of the biggest tourist attractions of Poland, requires a number of mining works – securing, renovating, modernising.

During over 700 years of salt mining, 26 shafts were struck in Wieliczka and 7.5 million m³ of workings were drilled, forming nine levels at depths ranging from 64 to 327 metres. In the Middle Ages, the proceeds from the sale of salt constituted as much as the third part of the royal treasure. Thanks to the “white gold”, the Renaissance Wawel Castle gained its glory, the Lubomirski family built their power and the professors of the Krakow Academy were able to conduct scientific research. Thus, Wieliczka was a true pearl in the crown of Polish kings and dukes, and then a precious prize of the Habsburgs (1772–1918).

The entry of the mine onto the UNESCO list 35 years ago drew the world’s attention to the value of the underground monument. Its growing popularity and the need to protect what is most valuable created the obligation to intensify efforts to protect and preserve the monument for future generations. In recent years, the mine has undergone many changes, and a number of investments have been made to ensure that the facility is perceived as a showcase of Poland. All actions taken were implemented on two levels.

The first area of activity focuses on the protection of underground workings. In search of the precious material, miners dug a network of 245 km of galleries under Wieliczka, extracting salt from as many as 2,500 chambers. The conservation works are aimed at achieving a condition of the mine in Wieliczka that will provide the best protection for its historic areas and surface. The workings are subject to constant pressure associated with the rock mass movement – those most valuable in terms of history, culture and nature should be preserved, the remaining ones – without historic value, often threatening the stability of the rock mass – should be eliminated.

218 chamber workings and 190 gallery and chamber complexes, located between the 1st and the 5th level of the mine (historic workings and protected workings of natural value with protective zones, as well as functional workings) have been designated for preservation. All of level 9, as well as levels 8, 7, 6 and 5 are to be decommissioned.

The stabilisation of the rock mass is accomplished by filling in the non-historical post-excavation voids with sand. The process is called a hydraulic backfill. The sand is delivered from the surface by a pipeline network to the chambers being eliminated. Every year, approximately 110,000 cubic metres of sand reach the Wieliczka underground.

Historical chambers and workings with special historical and natural value are protected using various types of casings – classic wooden casings as well as anchor casings. The latter allows for spaces to be preserved in their entirety, because it consists of a kind of “reinforcement” of the salt and the underlying rock using glass-epoxy bars (anchors).

The prevention of water hazards is of great importance for the salt mine. This is done using injections – sealing mixtures used to fill galleries and workings to prevent water from penetrating deeper into the mine.

The second sphere of activities concerns making historical excavations available to the public, either in the traditional form – visiting the Tourist Route, or various thematic offers addressed to individual segments of the market. The mine is successfully enriching the offer addressed to those who wish to explore areas of the mine that are inaccessible to tourists on a daily basis: in the form of a specialist, geological or the Miners' Route.