

POLAND

Wieliczka Salt Mine

Brief description

This deposit of rock salt in Wieliczka-Bochnia has been mined since the 13th century. Spread over nine levels, it has 300 km of galleries with works of art, altars, and statues sculpted in the salt, making a fascinating pilgrimage into the past of a major industrial undertaking.

1. Introduction

Year of Inscription 1978

Years of inscription on List in Danger 1989-1998

Agencies responsible for site management

- Cracow Salt-Works Museum
Zamkowa 8
32-020 Wieliczka
e-mail: podziemne@muzeum.wieliczka.pl
Web-site: www.muzeum.wieliczka.pl
- The "Wieliczka" Salt Mine State Enterprise
Park św. Kingi 1
32-020 Wieliczka
e-mail: sekretariat@kopalnia-pp.pl
Web-site: www.kopalnia-wieliczka.pl

2. Statement of Significance

Inscription Criteria C (iv)

ICOMOS evaluation

ICOMOS recommends the inscription of the Salt mines of Wieliczka-Bochnia on the World Heritage List on the basis of criterion IV.

IV. The salt mines of Krakow furnish the example of a large industrial establishment, administratively and technically well organized, the existence of which has been assured by the process of adaptation since the Middle Ages. The evolution of the mining processes throughout the centuries is perfectly illustrated there, in all their stages, due to the consolidation and conservation of the old galleries with the installations peculiar to each. A complete collection of tools, exhibited inside the mine, constitutes, as such, a valuable and complete material witness to the evolution of mining technology covering a long period of European history.

Committee Decision

Bureau (1978): There was then some discussion as to the desirability of limiting the number of sites that could be nominated by each country onto the World Heritage List to two on this first occasion only, in view of the fact that the total number of nominations was not large and some States had put forward several nominations. The Bureau agreed that on this first occasion in order to have a reasonably balanced List, States should be limited to two nominations each, which could either be all cultural or all natural or a combination of both, and that any sites deferred to 1979 for this reason, which otherwise clearly met the criteria, should be placed on a waiting list.

The only State affected in this way on this occasion was Poland, which had nominated three cultural sites which clearly qualified for inclusion. Auschwitz, Cracow and the Salt Mines. The ICOMOS representative was therefore asked to prioritise the three sites from an expert viewpoint. ICOMOS proposed, and the Bureau accepted, that the Salt Mines was the most important site, followed by Cracow and Auschwitz in that order. It was therefore agreed that the Auschwitz nomination would be deferred.

- Statement of Significance adequately defines the outstanding universal value of the site
- No need to seek a decision from the Committee on changes to the statement of significance
- Proposal for revised text has not been made by State Party
- Brief description of the site is not satisfactory, change required

Boundaries and Buffer Zone

- Status of boundaries of the site: adequate
- Buffer zone has been defined

Status of Authenticity/Integrity

- World Heritage site values have been maintained

3. Protection

Legislative and Administrative Arrangements

- Act dated 25 September 1981 on State Enterprises; Act dated 4 February 1994; Geological and Mining Law Act dated 21 November 1996 on Museums; Act dated 23 July 2003 on the Protection and Guardianship of Historical Monuments; Act dated 19 November 2004 amending the Act on

organisation and conducting of cultural activity; The basic conservation principles obligatory in any works undertaken in the historic "Wieliczka" Salt Mine, defined by the Conservation and Mining Board at the Cracow Salt-Works Museum in Wieliczka and approved by the Voivodeship Inspector of Monuments and the Mayor of Cracow on 6 June 1986; Decree of the President of the Republic of Poland dated 8 September 1994 on the basis of which the "Wieliczka" Salt Mine was designated as a Memorial of History; Order of the Cracow Voivode No. 10 dated 6 June 1997 on extending legal protection in the form of documentation sites to geological objects in the "Wieliczka" Salt Mine; Order of the Malopolski Voivode No. 84/2000 dated 11 September 2000 on establishing a nature reserve under the name "Crystal Caverns"; Decision of the Malopolski Voivodeship Inspector of Monuments No. SOZ I/4612/2000 dated 6 December 2000 identifying a list of historic workings in the Wieliczka Salt Mine designated for preservation

- Protection arrangements are considered sufficiently effective

4. Management

Use of site/property

- Visitor attraction, religious use
- Museum, education, scientific research in the field of mining, cultural, therapeutic

Management/Administrative Body

- No steering group
- No site manager/coordinator, not needed
- Levels of public authority primarily involved with the management of the site: national, regional and local
- The current management system is sufficiently effective

5. Management Plan

- No management plan, but preparation will be completed in 01/2008
- Responsibility for over-seeing the implementation of the management plan and monitoring its effectiveness: The "Wieliczka" Salt Mine State Enterprise and Cracow Salt Works Museum Wieliczka

6. Financial Resources

Financial situation

- Funding for conservation and protection provided by: State budget subsidy (Ministry of Economy and Labour, Ministry of Culture); Subsidies from the National Fund for Environmental Protection and Water Management; Subsidies from the State Fund for the Rehabilitation of the Disabled; Subsidy from the Voivodeship Fund for Environmental Protection and Water Management; Own funds
- In 1992 the mine received co-funding for works aiming at rescuing the Wieliczka Salt Mine, from the so called Counterpart Funds from the European Commission assistance fund
- In 1996 the mine received a subsidy from UNESCO in the amount of 100 thousand USD and a subsidy from the Polish-American Joint Commission for Scientific and Technical Co-operation - II Maria Sklodowska - Curie Fund
- Further financial assistance: Civic Committee for Restoration of Krakow Heritage; Polska Miedź (Polish Copper Company); National Bank of Poland
- Funding is insufficient

7. Staffing Levels

- Number of staff: 721

Rate of access to adequate professional staff across the following disciplines:

- Very good: conservation, management, promotion, interpretation, education, visitor management

8. Sources of Expertise and Training in Conservation and Management Techniques

- Specialists in mining works from the Academy of Mining and Metallurgy in Cracow and Cracow Technical University. The mine and the Museum staff comprises also graduates of the Academy of Economics in Cracow and the Jagiellonian University
- Regular training is carried out in the relevant provisions of geological and mining law, labour hygiene and safety issues. The engineering and technical staff participate in specialist conferences and often meet with specialists from various scientific and research centres working for the mine
- The conservation staff of the Museum comprises specialists in iron, wood, paper and archaeological exhibits conservation. They

participate in specialist workshops, training courses and postgraduate studies in the above fields of conservation

9. Visitor Management

- Visitor statistics: 919,018 in 2004 (Registration required by the mining law concerning all people visiting the Tourist Route and the Cracow Salt-Works Museum)
- Visitor facilities: Surface infrastructure: buildings of the shaft tops, winding engines, ventilators, transformer-switching stations, 6 operational ventilation shafts, 3 main ventilation fans, 2 hoisting gears, the reception and ticket office building, public conveniences, 2 waiting rooms, shops, restaurants and car parks; Underground infrastructure: shafts, underground excavations (galleries, chambers, chapels, lakes), shops, a cinema, a restaurant, a panoramic lift facilitating sightseeing for the disabled visitors, public conveniences
- Visitor needs: none

10. Scientific Studies

- Studies related to the value of the site, monitoring exercises, archaeological surveys, visitor management
- The results of the analysis gave basis for the preparation and updating of subsequent Preservation Programmes for the historic workings

11. Education, Information and Awareness Building

- Too many signs referring to World Heritage site
- World Heritage Convention emblem used on publications
- Adequate awareness of World Heritage site among visitors, local communities, businesses and local authorities
- Special events concerning World Heritage status: memorial stone obelisk inaugurated at 20th anniversary of the inscription; commemorative plaque unveiled at 25th anniversary; exhibition on "Polish historic sites inscribed on the UNESCO List"; competition for school children; conference organised in the Wieliczka mine; sculptor's open air atelier, where during the whole summer season a salt sculpture was being carved
- Two different web sites: www.kopalnia.pl
www.muzeum.wieliczka.pl

- No involvement of local population in the management of the site in connection with delivering social or other benefits

12. Factors affecting the Property (State of Conservation)

Reactive monitoring reports

- World Heritage Bureau sessions: 18th (1994); 19th (1995); 20th (1996)
- World Heritage Committee sessions: 18th (1994); 19th (1995); 20th (1996); 21st (1997); 22nd (1998)

Conservation interventions

- Since the end of 1970s an innovative method of preservation of historic chambers has been applied. Due to strict conservation requirements a roof bolting, previously used in coal and ore mining, has been adapted to the conditions of a Miocene salt deposit. This method of preservation usually makes it possible to preserve the workings space unchanged, without the necessity to build additional reinforcements, even in difficult mining conditions. It is extremely valuable from the conservation point of view. The anchors made of epoxide glass are environment-resistant and provide solid and hopefully sustainable stabilisation of the preserved chambers
- Extensive rebuilding of the Daniłowicz Shaft and Kościuszko Shaft
- Currently, the 14th century shaft Regis located in the town centre, is being rebuilt
- Conservation works carried out by the Museum on the preservation of historic mining sites, including old hoisting devices
- Present state of conservation: adequate

Threats and Risks to site

- Environmental pressure, natural disasters
- Water inflow hazard: Water may get into the mine if rocks or water-bearing layers are broken as a result of mining activity, and also as a result of discontinuous rock deformation within the border zones which insulate the workings from the water saturated formations outside the rock deposits. The whole deposit has been classified as exposed to the 1st degree water hazard with areas II and III located in the buffer zone. In total, as of 31 December 2004, there have been 186 leaks registered in the mine
- Collapse risk: The threat of chamber collapse on a small scale is still serious, and the workings have to be constantly inspected and protected. The collapse risk is a problem both

from the point of view of the preservation of historic workings but also because of the necessity to protect the surface

- Gas threats: In the mine there are risks related to the presence of CH₄ (hydrocarbon) and CO₂ (carbon dioxide). The part of the deposit where the Tourist Route and the Museum are located has been marked off as a non-methane part

Measures proposed/taken

- Works connected with elimination of natural threats and the preservation of historic chambers; capture and drainage of leakage from the mine and its utilisation; liquidation of workings; maintaining the mine operation; renovation of workings; liquidation of mining damage; area reclamation; replacement of fixed assets
- Annual plans of complete liquidation of the mining unit "Barycz" and of the non-historic part of the mining unit

13. Monitoring

- Formal monitoring programme
- The following parameters are monitored: temperature and humidity of the air; carbon monoxide; work of main fans ventilating the underground workings; closure of the ventilation stopping; volume of water leakage; ply separation of the workings ceilings; condition of the high chambers with measurement of crack parameters, workings convergence, geodetic surveys of deformation of the area and the workings; in places open to visitors, CCTV cameras are located, which enable constant supervision of the site; monitoring of museum collections

14. Conclusions and Recommended Actions

- Main benefits of WH status: conservation, social and economic; increase of the number of visitors, especially from abroad; development of scientific research extending the knowledge about the site; development of co-operation with other World Heritage listed sites through participation in research projects, exhibitions and publications; development of infrastructure
- Strengths of management: preservation of historic workings; development and modernisation of infrastructure; intensification of promotion; increased number of visitors; increased number of publications; more scientific and research interest

- Weaknesses of management: the mine is exposed to all the typical mining threats, which determines the necessity to carry out continuous expensive protective works. The number of visitors and the comfort of sightseeing are limited by the number of shafts with hoisting engines

Future actions:

- Implementation of the Preservation Programme
- Introduction of a security indicators system
- Modernisation of the existing hoisting gear
- Completion of the rebuilding of the Regis Shaft
- Inspection of workings and carrying out protective works