

# GERMANY

## Mines of Rammelsberg and Historic Town of Goslar

### Brief description

Situated near the Rammelsberg mines, Goslar held an important place in the Hanseatic League because of the rich Rammelsberg metallic ore deposits. From the 10th to the 12th century it was one of the seats of the Holy Roman Empire of the German Nation. Its well-preserved medieval historic centre has some 1,500 half-timbered houses dating from the 15th to the 19th century.

### 1. Introduction

**Year(s) of Inscription** 1992

#### Agency responsible for site management

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### 2. Statement of Significance

**Inscription Criteria** C (i), (iv)

#### Justification provided by the State Party

The Rammelsberg metallic ore deposits, which are amongst the largest ever found, produced some 30 million tons of ore making them the largest accumulation of deposits of copper, lead and zinc worldwide. When the Rammelsberg ore mine was closed down in 1988, after well over a thousand years of continuous operation, it was the oldest

metallic ore mine still in use anywhere in the world. In a limited area Rammelsberg itself and the Town of Goslar bear witness to this long period of history with their mining relics which have been preserved and enable the onlooker to imagine this era and its cultural ramifications from the time mining first flourished in the High Middle Ages right through to the present day. No other European mine possesses a collection of mining monuments which stand up to a comparison in qualitative and quantitative terms with those at Rammelsberg and represent such a huge timespan. Rammelsberg has some of the oldest mining monuments Germany has to offer as well as a collection of surface and underground mining equipment which is quite unique in terms of its completeness. Here, one could, for example, consider the waste heaps dating back to the 10th century, which rank amongst the oldest of all manifestations of German mining; the Rathstiefster tunnel of the 12th century, one of the oldest and at the same time best preserved German mining tunnels; the Feuergezäher vault dating from the 13th century, the oldest walled pit chamber in Central Europe; the Maltermeister tower of the 15th century, the oldest surface building in German mining; the Roeder tunnel system of the 18th/19th centuries; the best preserved and most extensive underground water power system in Germany with its two original water wheels, which rank amongst the most important monuments of European mining; the slate quarry dating from the early 20th century, as an impressive document of the filling methods used at Rammelsberg, which were the most advanced in the world; the surface installations of the 1930s, which in the context of contemporary architecture represent an individual achievement of the highest standards and are to be seen as one of the climaxes in the development of pit architecture; the ore dressing plant, technically and architecturally the central element of these surface installations, which by unwaveringly exploiting an incline set new standards in ore mining; the largely preserved surface and underground equipment of the 20th century which also provides a marvellous example of modern metallic ore mining, which is threatened with extinction in Germany; Rammelsberg itself, as one of the oldest industrial landscapes in Germany with its specific heavy metal flora, which are to some extent unique in Europe; and finally the old buildings under protection in the historic town centre of Goslar, which owe their existence directly to mining operations, such as the imperial palace of the 12th century, the Frankenberger Church of 1130, the church of the miners and smelting plant workers, the Rlauskapelle of 1160, which in 1537 became the miners' chapel, the extensive miners

settlement at Frankenberg around 1500, the magnificent residences of the mine owners from the 15th century onwards, the miners' infirmary of 1537, the mint building dating back to the early 16th century and many others. Furthermore, Rammelsberg is the primary archeological source when it comes to clarifying the question of when mining operations first started and the methods used to extract ore in connection with the corresponding settlement of miners and the development of the works from the early Middle Ages onwards. The sources available at Rammelsberg are so numerous and comprehensive that Rammelsberg must also be seen as an archeological monument of European status. All of the above-mentioned component parts belonging to the Rammelsberg site have been handed down through the generations in authentic condition.

In the history of the Rammelsberg ore mine a particularly important period of German and European history during the Middle Ages is reflected and this is thus also connected with the Town of Goslar. Rammelsberg is extremely closely associated with the imperial empire of the Middle Ages. Because of its rich deposits of silver Henry II built his imperial palace Goslar at the foot of the Rammelsberg and during the reigns of the Salian emperors Henry II and Henry IV as well as under Friedrich I Barbarossa of Staufeu, it became the main seat of residence of the Holy Roman Empire of the German Nation. Apart from the mine itself, whose vast silver deposits made a vital contribution to the economic strength from which emanated the political power of the rulers of the Middle Ages, the Romanesque assembly room of the imperial palace - whose building substance has been preserved and which was restored in the 19th century - with St. Ulrich's, its palatine chapel, as well as the 11th century Imperial bronze throne, on display in the antechurch of the former Stiftskirche, bear witness to the predominant political significance of the Town of Goslar in the High Middle Ages.

In the Late Middle Ages too the history of the Town of Goslar, the oldest of the Central European towns which owed their beginnings to the exploitation of metallic ores, is indivisibly linked to the history of the Rammelsberg. The founding, development and shape of the town was influenced to a crucial extent by the mine during its heyday between 1450 and 1550. Here reference is made to the many surviving buildings in Goslar which were either refurbished or completely rebuilt in this period: the town's churches, the town fortifications, the Town Hall with its surviving interior homage chamber, numerous buildings housing the guilds and above all the large

number of semi-timbered houses erected for the citizenry with artistically carved woodwork.

The entire historic town centre, built on the site occupied during the Middle Ages, which is completely preserved and can be described as a unique work of art, is dominated by the unusually large number of 1,500 semi-timbered houses built between the 15th and 19th centuries of which no less than ca 170 houses originate from the time prior to 1550. This very large number of semi-timbered houses in such a confined space makes Goslar a representative example of the art of building semi-timbered houses in northern Germany. The charming townscape with its narrow streets is dominated in turn by the commanding west buildings of the Romanesque churches with their twin towers. Apart from these, the imperial palace, the Town Hall and the fortifications, there are other smaller buildings of great significance which are only seldom to be found today in other towns such as the infirmary and the large number of "Kemenaten" (single room stone houses) dating back as far as the 12th century. The historic town centre of Goslar, which is still surrounded almost entirely by green spaces and ramparts is one of the most important, completely preserved, historic towns in Germany.

The Rammelsberg also had a decisive influence on the artistic creations of the High and Late Middle Ages. Without the ore from this mountain and without the expertise in smelting techniques of the staff of the mine Romanesque metal art in Lower Saxony would never have flourished in the exemplary manner it did, reaching its absolute zenith with the large bronzes of Hildesheim's Bishop Bernward. Of the numerous works of art preserved in Goslar mention is only made here of the most significant: the bronze throne of the emperor of the 11th century, apart from the throne of Charlemagne in Aix-la-Chapelle, the only surviving throne of a German emperor; the bronze Krodo-altar of the 11th century, one of the few surviving metal altars of the Romantic period, the fountain in the market place dating back to about 1200, one of the major works amongst the large bronzes created during the Middle Ages and the Goslar Bergkanne of 1477, one of the most important secular works of art by a goldsmith in the German Gothic period.

The system of social welfare benefits in the mining industry, whose achievements are accepted today as part of the natural rights of mine workers, originated in Rammelsberg. The miners' social welfare benefits system practiced there as early as the High Middle Ages and anchored in the mining

regulations of the Goslar Council in 1538, a system documented by the surviving side wing of the former infirmary for miners of 1537, was the oldest system of its kind and served as an example for subsequent miners' social welfare benefit systems in the mining regions of Central Europe.

To summarize one can say that the reasons for the extraordinary, universal value of Rammelsberg ore mine lie in its historical importance for the imperial empire of the Middle Ages, in its influence on the Ottonian and Romanesque art of metalwork in Lower Saxony, in its causal impact upon the founding, development and shaping of the Town of Goslar as one of the most important surviving examples of the art of town construction and planning in Germany in the Middle Ages, in the role it played in introducing the miners' social welfare benefits system, in its pioneering role in developing metalliferous ore mining technology in Europe, in its vast array of archeological sources and in its qualitatively and quantitatively unexcelled array of mining monuments documenting one thousand years of mining operations.

In accordance with the regulations on the implementation of the Convention for the Protection of Cultural and Natural Heritage of the World both Rammelsberg ore mine and the historic town centre of Goslar with its monuments fulfil criteria I, II, III and IV.

#### **As provided in ICOMOS evaluation**

It is not clear from the maps in the dossier to what extent there is a formal buffer zone around Goslar. It is fair to add, however, that most of the surrounding area is designated as protected forest and landscape and that the only corridor for development of any kind lies to the north of the town, and so the definition of a formal buffer zone is superfluous.

#### **ICOMOS RECOMMENDATION**

That this cultural property be included on the World Heritage List on the basis of Criteria i and iv.

*Criterion i:* As the largest and longest-lived mining and metallurgical complex in the central European metal-producing region, whose role was paramount in the economy of Europe for many centuries, Rammelsberg- Goslar, like the Ironbridge Gorge (U.K.), included on the World Heritage List in 1986, can with justice be considered to be "a masterpiece of the creative genius" of man.

*Criterion iv:* The extensive medieval mining and metallurgical area and the administrative and commercial settlement that grew up alongside it is a

very characteristic form of urban-industrial ensemble which has its most complete and best preserved expression in Europe at Rammelsberg-Goslar.

#### **Committee Decision**

Bureau (1992): the Bureau recommended the inscription of this property and requested ICOMOS to reconsider the criteria for inscription. The Bureau wondered whether in this particular case criterion (i) was applicable, or if criteria (ii) or (iii) would be more appropriate. ICOMOS will make a report to the World Heritage Committee at its next session in December 1992.

- New values that have been identified: recent research has revealed that the history of mining in Goslar stretches back further than was hitherto assumed. The most recent studies have uncovered mining and metallurgy activities in the Rammelsberg area in pre-Carolingian times again highlighting the value of the Rammelsberg Ore Mine
- Statement of Significance adequately defines the outstanding universal value of the site
- Proposal for text to be included in the brief description has been provided by State Party

#### **Boundaries and Buffer Zone**

- Status of boundaries of the site: adequate
- Buffer zone: no buffer zone has been defined
- No change to buffer zone proposed by State Party
- In its assessment, ICOMOS pointed out that the definition of a buffer zone was superfluous as the relevant areas are in protected landscape areas. The entire historic centre of Goslar and the facilities at the Rammelsberg Ore Mine are protected under section 3 of the Lower Saxony Law on the Protection of Monuments as a group of constructions. Section 8 of the aforementioned Law grants protection to the surrounding area meaning no facilities can be built, altered or removed in the area surrounding the protected site if this has an impact on the visual appearance of the monument. At the southern edge of the town - including the Rammelsberg areal - there is a large nature conservation area that was set up as early as 1966 pursuant to section 26 of the Lower Saxony Law on the Protection of Nature. As a result only recreational uses, forestry, agriculture and allotments are permitted. No buildings may be constructed in this area

**Status of Authenticity/Integrity**

- World Heritage site values have been maintained
- Possible impact in the future on the authenticity and/or integrity of the site: Problems have emerged resulting to some extent from the halting of mining operations in 1989. Changes planned in the following fields include 1. Refilling the shale mill, a quarry dating from the 1st half of the 20th century in Rammelsberg. This has been authorized by the Higher Authority for the Conservation of Monuments (Obere Denkmalbehörde) to protect the medieval "Maltermeisterturm" which is potentially threatened by erosion in the quarry; 2. Flooding of the "Feuergezähergewölbe": Decision taken in the courts because it was economically unreasonable for Preussag/Bergbau GmbH to maintain it. Actually flooding the medieval underground structure is however not yet planned. Despite the court ruling, alternative ways of maintaining the "Feuergezähergewölbe" are still being sought

**3. Protection****Legislative and Administrative Arrangements**

- Land laws on the protection of monuments and landscape, Lower Saxony Law on the Protection of Monuments; cultural landscape of the Rammelsberg Ore Mine is granted additional protection by being categorized as a landscape protection area
- No information provided regarding the effectiveness of protection arrangements

**4. Management****Use of site/property**

- Visitor attraction, urban centre

**Management /Administrative Body**

- No Steering group
- A management system was developed for the World Heritage site in Goslar based on existing bodies: The Council and Administration of the Town of Goslar are responsible for the management of the World Heritage site in close cooperation with the management of Rammelsberg Mining Museum. The Town of Goslar has a 96% share in the Rammelsberg Mining Museum. The Mayor of Goslar is a member of the Supervisory Board. The member of staff responsible for the conservation of monuments in the town also serves as site manager of the World Heritage site and attends

meetings of the Supervisory Board of Rammelsberg Mining Museum

- Overall management system: management under protective legislation; consensual management
- No site manager
- Levels of public authority who are primarily involved with the management of the site: regional; local; Rammelsberg Mining Museum Land Church Authorities (Landeskirchen), responsible for the churches within the World Heritage site)
- The current management system is sufficiently effective

**5. Management Plan**

- Management plan is being implemented
- Implementation commenced: January 1992
- Responsibility for over-seeing the implementation of the management plan and monitoring its effectiveness: Town of Goslar, Rammelsberg Mining Museum Goslar, Supervisory Board

**6. Financial Resources****Financial situation**

- Federal Government Commissioner for Culture and the Media (Beauftragte der Bundesregierung für Kultur und Medien); Lower Saxony Ministry for Science and Culture; Lower Saxony Ministry for Economics, Labour and Transport (Ministerium für Wirtschaft, Arbeit und Verkehr)
- Support for individual projects (above all linked to preparations for EXPO 2000): German Foundation for Monument Conservation (Deutsche Stiftung Denkmalpflege); Lotto Toto Foundation (Lotto-Toto-Stiftung); Savings Bank Foundation (Sparkassenstiftung); Hanover Monastery Chamber (Klosterkammer Hannover) Monastery and Study Fund (Kloster- und Studienfonds)
- Extra funding drawn through World Heritage status: the former Rammelsberg Ore Mine is receiving special institutional support from Land Lower Saxony based on its status as a World Heritage site. Outside funding was also acquired in recent years for conservation work in Rammelsberg and in the historic centre of Goslar by pointing to their World Heritage status
- Sufficient

## 7. Staffing Levels

- Number of staff: 13

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

- Good: conservation, management, promotion interpretation, education, visitor management

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

- Restorers and laboratory of the Land Office for the Conservation of Monuments
- Training needs: shortfalls concerning skills of craftsmen involved in the conservation of monuments. Local craftsmen need to be given the relevant further training (for example as a craftsman for restoration) in order to guarantee appropriate methods also in the private sphere

## 9. Visitor Management

- Visitor statistics: 333,536 Historic Centre of Goslar Overnight stays in 2003 (Rammelsberg Ore Mine Paying visitors - 68,100 in 2004 - were counted based on daily ticket sales); there has been an intensive campaign to attract visitors; detailed statistic in periodic report
- Visitor facilities: museum and visitor centre at Rammelsberg, tourist information centre in Historic Centre of Goslar; visitor guidance system developed in 2004

## 10. Scientific Studies

- Studies related to the value of the site, archaeological surveys
- The inventory of monuments is basis for conservation of monuments; archaeological and historical research used for publications and exhibitions

## 11. Education, Information and Awareness Building

- An adequate number of signs referring to World Heritage site
- World Heritage Convention Emblem used on publications
- Adequate awareness of World Heritage among: visitors, local communities, local authorities
- Need for awareness raising amongst the businesses
- Comprehensive educational programme in Rammelsberg Museum for school classes

- Series of colloquia, seminars, concerts
- Web site available

## 12. Factors affecting the Property (State of Conservation)

### Reactive monitoring reports

- N/A

### Conservation interventions

- Restoration of facilities of the Rammelsberg Ore Mine; archaeological excavations at the "Alter Ausbiss" near the Maltermeister Tower. Proof of 10th century mining 3 was uncovered
- Present state of conservation: good

### Threats and Risks to site

- Development pressure, environmental pressure

## 13. Monitoring

- No formal monitoring programme
- Measures taken: periodic technical monitoring of the underground facilities in the Rammelsberg Ore Mine. Ongoing building controls are carried out by the Lower Authority for the Protection of Monuments

## 14. Conclusions and Recommended Actions

- Main benefits of WH status: conservation, economic
- Strengths of management: prior to and in connection with the inscription on the World Heritage List, many key monuments were restored mainly using external funds. The title World Heritage site was very useful when it came to accessing funds. Furthermore a museum was built in the Rammelsberg Ore Mine which broke new ground with its specific and innovative forms of communicating information on mining history
- Weaknesses of management: The link between mining history and art in the Rammelsberg Ore Mine is a key feature of this site. The museum has to be extended to offer forms of presentation that attract a broad public, for example a "hands on" museum and special facilities for children

### Future actions:

- Pedagogical measures for children: a model mine for children is currently being planned
- Organisation responsible: Rammelsberg Mining Museum Goslar
- Timeframe: 2007