

## The World Heritage City of Prague and its Jewish Cemeteries: Values and Conservation Strategies

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Jewish tradition entails special respect for sites where the remains of the ancestors are buried; the inviolability of graves is to be guaranteed forever. This religious precept relates both to individual burials and to the cemetery as a whole. From this principle issue a number of consequences which, to this day, determine the mode of burial and the special appearance of old Jewish cemeteries.



*Fig. 1 Old Jewish cemetery, general view (photo: P. Justa)*

The tombstone is erected at the head of a grave by the time of the first anniversary of the burial. Apart from having religious significance – to protect and mark a burial place so that it is not disturbed, thereby preserving the name of the deceased – Jewish tombstones are of considerable historical significance. This consists in the epitaphs, which constitute an important source for the history of the Jews. Moreover, Jewish cemeteries are also important sites in view of the history of art and provide valuable evidence of the centuries-long development of Jewish sepulchral art. Unfortunately, many Jewish cemeteries were destroyed as a result of various historical events.

### Prague Jewish cemeteries

The first medieval Jewish cemetery in Prague with reliable records was situated in the area where the so called New Town was built in the 14th century. This cemetery was founded probably at the beginning of the 13th century, not far from the Old Town walls. Burials took place here only until 1478, when Wladyslaw II Jagiello ordered the closure of the cemetery. A new street was built later on across the

cemetery grounds; up until the mid-19th century this was known as the Jewish Garden. In 1866, fragments of tombstones dating from the mid-14th century were discovered on this site and transferred to the Old Jewish Cemetery to create a hill memorial at the eastern side of the Klaus Synagogue.

There were extensive discoveries made in 1998 during massive constructions in the former area of the Jewish Garden. The remains of numerous graves and subsequently the continual strip of burial ground with almost 140 undisturbed graves were re-discovered and became a large archaeological site for the moment. The whole part of the burial ground had been documented, secured and subsequently separated from the new house by an especially designed concrete slab. All sets of original tombstones remained in their original place. There were additional new discoveries of Jewish tombstones in 1998 in medieval cellars in nearby streets. In September 2000, the remains from disturbed graves were reburied in the New Jewish Cemetery in Prague.

The Old Jewish Cemetery is actually the second oldest Jewish burial ground in Prague. Alongside the Old-New Synagogue, it is the most important preserved monument of the Prague Jewish Town. The cemetery was founded in the first half of the 15th century at the western edge of the former ghetto and served as the main burial ground of the Prague Jewish community for another 350 years. There are now about 12,000 tombstones in the cemetery, bearing testimony to the centuries-old life and history of the Prague Jewish community. The number of buried, though, is even higher; in the course of time, many tombstones have sunk deep into the ground and others have been destroyed.

The oldest preserved tombstone in the Old Jewish Cemetery is dated 1439 and belongs to the scholar and poet Avigdor Kara. This considerably damaged tombstone is housed in a historical exhibition in the Maisel Synagogue. Since 1974, a reconstructed cast copy made from artificial sandstone has been in the original burial place. The epitaph was reconstructed from early transcriptions. Burials took place in the Old Jewish Cemetery until 1787, when interments within residential areas of the city were forbidden.

The cemetery was enlarged several times, but in spite of this it was unable to cope with the needs of the Jewish community and it was necessary to add further layers of earth. It is presumed that there are several burial layers on top of each other. The picturesque clusters of tombstones from various periods are the result of the raising of older tombstones to the upper layers. In certain parts of the cemetery, however, these clusters were formed by the transfer of tombstones from the liquidated north-western part, which was used as a new construction area for the Museum of Decorative Arts in



Fig. 2 Old Jewish cemetery, Mefele mound (photo: P. Justa)

the early 20th century. The exhumed remains were re-buried on the *nefele* mound near the Klaus Synagogue. This transfer is commemorated by a memorial tomb situated at the top of the mound.

Simple, mostly rectangular steles of dark sandstone represent the oldest tombstones of the 15th and first half of the 16th century. Dating from the late 16th and the 17th centuries there are more decorative tombstones visible, often architecturally shaped. Besides dark sandstone, local pink marble became the prevailing rock to be used in the cemetery during the 17th century when also first tombs appeared in the cemetery. The most striking of them is the artistically valuable tomb of Hendl (deceased 1628), wife of Jacob Bassevi, who was the first Prague Jew raised to the nobility. The white marble tomb is decorated with seated lions, coats-of-arms and rich architectural elements.

The Renaissance and particularly the Baroque times were marked by the development of symbolic decorations of tombstones. Apart from traditional Jewish symbols (Kohen hands, Levite jug and crown) in most cases motifs symbolized the name of the deceased (most frequently by images of animals carved in relief) or their profession (usually symbolized by the instrument that was characteristic for his particular occupation). A uniqueness of this cemetery is the use of figural motifs in the decoration of tombstones (usually female figures on the tombstones of young, unmarried girls).

The most famous person buried in the Old Jewish Cemetery is indisputably the great religious scholar Rabbi Jehuda Liwa ben Becalel, known as Rabbi Loew (deceased in 1609). His name is connected with the legend about the creation of an artificial being – the Golem. The great number of other personalities interred in this cemetery include for example the Primas of the Jewish Town, Mordecai Maisel (deceased in 1601), the Renaissance scholar, historian, mathematician and astronomer David Gans (deceased in 1613), the scientist and scholar Joseph Solomon Delmedigo (deceased in 1655) and the Rabbi and collector of Hebrew manuscripts and prints, David Oppenheim (deceased in 1736).

The historical and artistic significance of the cemetery is undoubtedly exceptional. Since 1995 the Old Jewish Cemetery has been a national cultural monument, and thus is ranked in the highest category of cultural monuments in our country.

The Jewish cemetery in Žižkov was founded as a plague burial ground in the wave of the devastating epidemic of 1679/80. About 3,000 bodies from the Prague ghetto were buried here during the ten-month epidemic. The cemetery was temporarily reused again during the plague in 1713. This epidemic claimed the lives of further 3,388 victims. Burials also took place in this Jewish plague cemetery at the time of the expulsion of Jews from Prague in 1745–1748; only a few tombstones, however, have been preserved from



*Fig. 3 Žižkov, Jewish cemetery in 1961 (photo: Bárta)*



*Fig. 4 Tomb of Rabbi Maisel before restoration (photo: P. Justa)*

this period. Since 1787 this newly extended cemetery was the main burial ground of the Prague Jewish community, remaining so for more than a hundred years. In the course of over a century, 37,800 people were buried here, including a number of prominent rabbis, scholars and representatives of the Prague Jewish community as well as other personalities from the scientific, cultural and economic life of Prague from the period of Enlightenment and emancipation. The most famous person buried here is the Chief Rabbi of Prague, Ezekiel Landau (1713–1793). The cemetery was closed in 1890 and has been abandoned since World War II.

In the early 1960s, it was decided to liquidate the devastated cemetery. The considerable area of the cemetery was converted into a park and only the oldest, northern section with the most precious tombstones was preserved. Unfortunately, in 1985 more devastation occurred when a new TV tower was built in the park, leading to additional destruction of several graves in the remaining cemetery. Only in 1999 the cemetery was handed over to the care of the Jewish Museum. The Museum arranged the construction of a new cemetery wall and organised the general conservation project. Since 2000, the cemetery has been continuously renovated. Approximately 150 tombstones have been restored and around 300 other ruined tombstones saved, including the seriously damaged tomb of Rabbi Eleazar Fleckeles (deceased 1826).

The New Jewish Cemetery on the easternmost edge of Prague was founded in 1890. This large area with neo-classical House of Purification and a large neo-Renaissance Ceremonial Hall (reconstructed in 1995) is in use until today. Tombs and tombstones often reflected the rising wealth of the Jewish community in Prague. There are series of tombs created by renowned architects and artists. Dark granite and other fine rocks became prevailing materials for these particular graves.

### **Maintenance of Jewish monuments in the past**

The preservation of Jewish monuments, including cemeteries, was very limited in time between the beginning of the Second World War and the end of the 1980s. Many synagogues and especially cemeteries were left to their fate, without any regular maintenance. The cemeteries became overgrown with vegetation and tombstones were damaged both by weathering and vandalism.

However, even in this period and thanks to being a tourist attraction, the Old Jewish Cemetery in Prague was maintained to a certain extent. The first documented treatments were performed in the 1970s. Methods and materials used for cleaning, conservation and surface treatment of the tombstones were influenced by the technology and expertise available at the time. Mostly mechanical devices and some basic chemicals were used for treatments.

Despite restorers doing their best, it gradually became clear that some of the materials and procedures used in the cemetery were not sufficient. This state of affairs in conjunction with the extent of the necessary interventions gradually made it necessary to deal with the conservation and restoration of the gravestones more comprehensively and systematically.

No sooner than in 1989, it was possible to prepare a plan of methodical approach, a comprehensive preservation plan and presentation rules. Upon the initiative of the Jewish religious community and the Jewish Museum in Prague, a working group was established in 1993 consisting of stone restorers, conservation scientists and art historians. Scientific research was carried out on selected gravestones, their material was identified, the main types of damage were described and procedures for the conservation of gravestones were linked.

## Material composition of gravestones

Most of the gravestones were made of so-called Slivenec limestone. This stone comes from the Prague strata of Devonian limestone and is still mined to a certain extent. It was quarried as early as in the Middle Ages and came into fashion during the Renaissance and especially the Baroque period. Its colour is highly variable, from shades of pink to red, brown to grey-blue. It contains frequent white, grey or red veins, occasionally spots. The most valuable dark-red type, which is the most common in the Old Jewish Cemetery, is however depleted today.

The dominant mineral is calcite. The ultimate colour of the stone is dependent on impurities (red – hematite, brown – limonite, black – bitumens). The stone often contains a small portion of clay minerals in the form of thin layers or “tuberous” strata with a clear tendency to separate. It has very low porosity; however, the clay components have a tendency to change their volume depending on changes in the content of water.

A lesser number of gravestones were made of other types of mostly white or light grey limestone, originating from various locations. Some gravestones are made of fine-grain sandstone or light or dark red coarse-grain arkoses. These stones have a substantially higher porosity which markedly influences the degradation of the stone blocks.

## Cause of damage

As a result of its location in the centre of the historic part of the city and in the vicinity of the Vltava River, the stones were exposed to intensive chemical corrosion caused by heavy and persistent air pollution of sulphur and nitrogen oxides, particularly from the 1960s to the 1980s. The effects of acid air pollutants came to light primarily on stones with high carbonate content through the creation of a thick black residue – a crust which forms mainly in so-called rain shadows, i.e. in places where rainfall has only a very limited rinsing effect. Its main component is calcium sulphate. It is hard and very difficult for liquids and gases to permeate; it deforms the surface of the stone and after a certain period of time peels off, normally along with part of the original mass of the stone. By contrast, on surfaces which are washed off regularly by rainfall, corrosive materials are rinsed away leaving the surface deeply eroded and rough. In the cases of sandstone and arkosis, these effects were outweighed by disintegration of stone by water-soluble salts rising into the porous structure from the ground. The limited maintenance of the cemetery led also to rampant growth of vegetation. In addition to green algae and certain particularly resistant varieties of lichens and mosses, the greatest damage to the gravestones was caused by trees and bushes. Many gravestones were overgrown by climbing ivy (*Hedera helix*) which attaches itself firmly to stone surface, causing damage in the process. Naturally seeding bushes and especially trees growing in close proximity to certain gravestones damaged the stone with their trunks or roots.

Contamination of gravestones by droppings from birds (mostly ravens) nesting in full-grown trees is another issue.

Furthermore, certain trees (maples) are a source of juices dripping onto the gravestones below in spring time. This is the cause of a characteristic type of contamination which can be removed only with great difficulty. The thick growth of vegetation reduced the ability of gravestones to dry out, which in turn accelerated not only the chemical reactions, but also volume changes in the clay components of the limestone.

In the Old Jewish Cemetery the gravestones are generally formed by a single stone block, a stele, although tombs also quite frequently have faces (gables) normally bearing rich sculptural decoration, two side-panels and two slabs forming a roof for this construction. The individual parts of such graves were generally connected with iron clamps. Corrosion of the iron parts resulted in the creation of products with a greater volume than the original mass of the metal. This is a regular cause for fissures in the stone. Another source of damage may have been the materials used earlier for gluing, for filling missing parts or cementing cracks (primarily based on Portland cement).

Last but not least the surfaces of certain restored gravestones were covered with remnants of various conservation materials, forming unsightly blemishes or blisters at best; at worst these remains may have contributed to the stone surface’s degradation.

Heightened interest among visitors in certain gravestones (mostly gravestones of famous persons, such as Rabbi Loew) along the main tourist routes poses a different threat: small stones or coins placed on the surface of the gravestones, paper messages pressed into the fissures of the stone blocks or wax from candles on stone.

## Interventions

Based on the research performed in 1993, a proposal for individual procedures was prepared. Interventions were divided into four groups:

*Fig. 5 Tomb of Rabbi Löw after restoration (photo: P. Justa)*





*Fig. 6 Rabbi Fleckeles, reconstruction of the front part of the tomb (photo: P. Justa)*



*Fig. 7 Colour retouching, highlighting of the text (photo: P. Justa)*

- Preventive treatment against water and vegetation, always performed generally on all stones of a certain area; the goal was to remove gross contamination and vegetation from the gravestones and to treat the surface by suitable waterproofing agents.
- Emergency works on individual gravestones which were in severe disrepair and whose integrity was threatened; in some cases there was a danger of losing historical material; the goal was cleaning, suppression of vegetation and if needed, gluing broken parts together.

- Restoration of individual gravestones; the goal was to conserve and repair the extant state and rehabilitate both the material and decorative appearance (colour and plastic retouching).
- Landscaping of the whole area of the cemetery according to the separate project. Removal of bushes and old trees, design for new plantations.

As the Jewish religious custom does not allow moving any part of stone from its present position, even if it is considerably leaning, they all have to be treated in situ. It turned out that only under exceptional circumstances one could move the stone for the treatment. The works thus could only be carried out during favourable climate conditions from late spring until the fall.

The landscaping project unfortunately also covered seeding decorative flowers in certain parts of the cemetery. This step, however, would require sufficient watering of the plants, which conflicts with the requirement of limiting the contact of ground moisture with the gravestones, in particular those made of sandstone.

### Conservation treatment

A basic wet cleaning of all gravestones was performed by washing, using a pressure-regulating nozzle, or by steam. In cases where the surface of the stone was so heavily damaged that loss of historic material could occur during cleaning, all eroded parts were pre-consolidated. Following this partial consolidation the stones were gradually stripped of sedimentary deposits of contaminants and biological growth. Biological contaminants were removed through a combination of mechanical and chemical cleaning methods. Lodged earth and remains of root systems of higher plants were removed from cracks and fissures.

The hard gypsum crusts were gradually cleaned with the help of poultices based on a solution of ammonium bicarbonate with added detergent and thickened with ground cellulose. To prevent dehydration the poultice was protected by a polyethylene sheet. The length of each application of the poultice varied from one to three days depending on the strength of the crust. The poultices were repeated until the stone's appearance was satisfactory. The extent of the cleaning always took into consideration the physical state of the stone and was undertaken only to an extent which did not threaten the cleaned object. The ability of subsequent conservation treatment was essential.

Adhesives based on epoxy resin were mostly used for gluing broken parts together. The cleaned and/or glued gravestones were consolidated. Gravestones with experienced deep degradation or stones threatened by splitting were injected with low viscose synthetic resins, partially filled with marble powder. For more extensive fillings the mineral grouting material based on natural hydraulic lime was used. The hydraulic lime-based putty was used for supplements and plastic retouching, the mechanical properties of which are comparable to those of the original stone.

All supplements were carried out with maximum respect for the extant conditions of gravestones. Gravestones with-

out evident relief or architectural morphology were re-touched, only using an archaeological type of so-called securing retouching. Other gravestones were retouched to the plane of the relief. The text part was always left without any attempts of reconstruction.

Colour retouching was carried out to a minimal extent. The declarative value of inscriptions and the highlighting of decorative motifs in reliefs were rehabilitated. Water-repellent treatment of gravestones was concentrated only on the horizontal parts of stone or on parts exposed to the direct impact of rain.

## Conclusion

The majority of emergency interventions were carried out between 1994 and 2000 and subsequently after severe flooding in 2002. During the same period, landscaping was performed in the exhibited area: most of the bushes were removed as well as some of the naturally seeded trees. Since then, approximately 50 to 80 gravestones have been treated each year.

The philosophy of the restoration of the Old Jewish Cemetery is based on the principle that it must be preserved not merely as a collection of individual gravestones but mainly as a unique cultural and commemorative whole. As such, it is necessary to have a comprehensive approach to the individual steps of preservation and protection, which take into consideration material, spiritual, historical as well as ecclesiastical requirements. The future lies in the research of the least invasive methods and reversible materials for the conservation treatment. The substitution of damaged tombstones by copies made of natural or artificial stone is not considered as the right way to be followed.

## Zusammenfassung

### *Die Weltkulturerbestadt Prag und ihre jüdischen Friedhöfe: Werte und Erhaltungsstrategien*

*Diese Arbeit beschäftigt sich mit den vier historischen jüdischen Hauptfriedhöfen in der Stadt Prag. Sie deckt den Zeitraum vom frühen 13. bis zum 20. Jahrhundert ab und gibt Grundinformationen über die historischen Gegebenheiten sowie über Persönlichkeiten, die hier beigesetzt sind. Hier werden auch zahlreiche Umstände, welche die Art des Begräbnisses und die bestimmte Gestalt der jüdischen Friedhöfe bestimmt haben, diskutiert. Die jüdische Gemeinschaft hat eine lange Tradition in Böhmen. Neben der berühmten jüdischen Gemeinschaft in Prag waren landesweit in den meisten Orten jüdische Siedlungen vorhanden. Im Lauf der Zeit wurden viele jüdische Friedhöfe geschlossen oder gar zerstört.*

*Vom Beginn der NS-Besetzung 1939 bis zum Ende des kommunistischen Regimes 1989 wurde nichts unternommen, um die bestehenden Friedhöfe zu erhalten. An den Bemühungen seit 1989, die Friedhöfe zu erhalten, sind viele Berufsgruppen wie Wissenschaftler, Restauratoren, Denkmalschützer und Kunsthistoriker beteiligt, ebenso finden Beratungen durch das israelische Rabbinat statt. Die Herangehensweise der restauratorischen Maßnahmen wurde sorgfältig abgestimmt. Nicht nur aus Vorsicht vor Materialbeschädigungen, sondern auch aus Respekt vor der kulturellen, historischen, religiösen und spirituellen Bedeutung. Die Grabsteine wurden nicht nur als eine Sammlung von individuellen Erinnerungen erhalten, sondern Friedhöfe wurden als einzigartige, kulturell bedeutende Gedenkort verstanden, deren Wert nicht in Worte gefasst werden kann.*

*Der Austausch von stark beschädigten Grabsteinen durch natürliche und/oder künstliche Steine wurde in Erwägung gezogen, aber meist abgelehnt als ein nicht wünschenswerter Teil des Erhaltungsprozesses. Stattdessen wurde eine Kombination von Säuberung, lokalen Reparaturarbeiten und Vorsorgemaßnahmen gewählt. Das Hauptinteresse lag in der Auswahl der zu bearbeitenden Grabsteine und in der Präsentation der Ergebnisse dieser Arbeiten. Diese Diskussion unterstreicht die Herausforderung, die es zu bewältigen gilt, von dem Zeitpunkt an, wo durch eine Notsicherung eingegriffen wird bis zu dem Zeitpunkt der umfassenden Restaurierung – in einem beliebten und viel besuchten kulturellen Zentrum, das sich im Herzen von Europa befindet, das einen enormen Aufschwung im Tourismus erfährt und viele bedeutende Restaurierungsprojekte präsentiert.*

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