In 1985 the ancient town of Petra with its almost 4000 individual heritage sites was declared a World Heritage site. Petra is particularly famous for its hundreds of façades cut from the bedrock. The other sites are caves without projecting façades, so-called sanctuaries, sacrificial sites and altars, inscriptions and votive tablets, stairs and streets, statues and reliefs as well as temples, houses and villas. From around 400 BC to the 4th century the rock town of Petra in the south of Jordan was the capital of the Nabataeans and had up to 30–40.000 inhabitants. With the end of their territorial independence the Nabataeans also lost their economic and political influence so that Petra became increasingly unimportant in the course of the 4th century.

Today, the rock-cut architectural heritage, as well as the buildings erected of ashlar masonry, are at risk because of weathering, decay, insufficient care and lack of conservation. There are three main causes for the weathering and destruction:

- collapse due to static cracks, gaps and crevasses and falling loose fragments,
- erosion caused by uncontrolled rainwater drainage and floods,
- weathering from salt contamination.

Ashlar Stone Buildings

Especially at risk are the buildings made of stone masonry. Many of the ruins from the Neolithic, Nabataean, Roman and Byzantine periods threaten to collapse. These ruins were perfectly preserved in the sandy soil of the desert, but after their rediscovery via excavation they were left to their fate and are now increasingly deteriorating. Many of the sites and buildings excavated in Petra in the past decades are now in a critical state. This applies for instance to the main temple Qasr al-Bint, the Winged Lions Temple, the excavated remains above Zipp Fir’awn, the fortifications on the al Habis Medieval, Jabal al Madhbah and Al Wu’ayra, north-east of Petra, as well as to the great number of dam walls and rock-carved cisterns. Remains of buildings in the centre of the town, such as the ruins of the so-called Royal Palace, the Nymphaeum, the ‘Roman House’ and the Small Temple all require urgent conservation.

Incorrect restoration and shortcomings

In the last 30 years extensive restoration was carried out on Qasr al-Bint and on the Temenos gate. In all these processes, mortar
containing cement was used. This very hard and dense building material leads to an acceleration of the weathering processes of the original material and has resulted in further damage. Until now, there is no stone workshop for the large number of decorative elements, such as ornamented and partly stuccoed and painted capitals, friezes and waste fragments. Many of these pieces remain largely unprotected against weathering.

Outlook

Taking into account the large quantity of tasks, the number of heritage sites, and the size of the entire complex, effective protection is extremely difficult. In order to achieve a lasting conservation management of Petra a joint effort by an association of counties is necessary. This is why a German-Jordan project established a conservation and restoration centre in Petra (CARCIP) between 1993 and 2002. Undertaken as part of this project were a model restoration of the 14 Tombs site (Monument 825), a number of emergency stabilisations on buildings and façades and the conservation of Tomb No 826.

Apart from CARCIP’s restoration work, various other teams of archaeologists are involved in restoration projects. In 2000, the altar construction of Qasr al-Bint was restored with the help of UNESCO. Currently, a casing is being erected for the wall paintings of the excavated villa on Ed-Zantur hill and the paintings are being conserved.

A strategy needs to be developed for the future which takes account of the conditions, competence and available capacities in order to achieve a lasting protection of the monuments in Petra.

Wanja Wedekind

1 D Bumbaru, S Burke, M Petzet, M Truscott, and J Ziesemer 2000, Jordan
measurement results

- 85.5% conserved shape
- 53.3% weathering rate
- 47.4% weathering
- 2.5% alveolar/tafoni weathering
- 116.9 m weathered limonite
- 57.7 m cracks
- 3.5% broken area
- 7.7% stonewalled part

monument type: Roman temple tomb
date of erection: first century AD
monument location: G5
monument name: Palace tomb
monument orientation: 297°
façade size (h,w): 47.5 x 43.9 m
tomb room size (h,w,d): 5.3 x 8.2 x 7.7 m
8.9 x 7.8 x 12.2 m
8.5 x 9.3 x 8.8 m
5.6 x 12.4 x 14.9 m

notes: first room sealing unfinished


Corinthian Tomb, verdure

Corinthian Tomb, drainage

Tomb 824, endangered architectural elements

Weathered stucco decoration from the capital of the Great Temple

Wadi Mousa, wall remains
Tombs 649 and 650

Tombs 779–803
Qasr al Bint, condition of stucco decoration

King's Palace, masoned corner

Temenos Gate, cement mortar

Qasr al Bint, recent rupture on stucco decoration