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EVALUATIONS OF CULTURAL PROPERTIES

Prepared by the
International Council on Monuments and Sites
(ICOMOS)

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2003

WORLD HERITAGE LIST

Nominations 2003 - Addendum

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- Cultural Landscape and Archaeological Remains of the Bamiyan Valley

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Bamiyan Valley (Afghanistan)

No 208 rev

1. BASIC DATA

State Party: Afghanistan

Name of property: Cultural Landscape and Archaeological Remains of the Bamiyan Valley

Location: Bamiyan Province, Bamiyan District

Date received: 19 May 2003

Category of property:

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*, and it is a serial nomination. In terms of the Operational Guidelines for the Implementation of the World Heritage Convention this is: a cultural landscape.

Brief description:

The cultural landscape and archaeological remains of the Bamiyan Valley represent the particular artistic and religious developments from the 1st to the 13th centuries in the ancient Bakhtria, integrating various cultural influences into the Gandhara school of Buddhist art. The area contains numerous Buddhist monastic ensembles and sanctuaries, as well as fortified settlements from the Islamic period. The site is also testimony to the tragic destruction of the two standing Buddha statues by the Taliban in March 2001, which shook the world.

2. THE PROPERTY

Description

Bamiyan Valley is situated some 246km by road west of Kabul, enclosed between the high mountains of Hindu Kush (Khwaja Ghar and Kuh-e Baba), in the central highlands of Afghanistan. The valley follows the Bamiyan River, and was the track of branch of the Silk Roads. The valley is situated in a large tectonic basin, which is ca 50km long and 15km wide, at an altitude of 2500m. The rocks are of conglomerate smoothly rubbed stone forming a long stretch of cliffs. The site is a landscape of great beauty, and was also associated with legendary figures. These aspects contributed to its development as a major religious and cultural centre. It was inhabited and partly urbanised from the 3rd century BCE.

The nominated site consists of 8 separate core zones, each with its buffer zone:

- *Bamiyan Cliff*, incl. two large standing Buddha figures;
- *Kakrak Valley*, ca 3km east of the previous;
- *Fuladi Valley*: *Qoul-i Akram* and *Kalai Ghamai Caves*;
- *Shahr-i Zuhak* includes a fortress of the Islamic period;
- *Qallai Kaphari Monuments*, Clusters A and B;

- *Shahr-i- Ghulghulah*, a fortified settlement.

Bamiyan Cliff is located on the north side of the valley, and includes the two colossal niches that contained the large standing Buddha figures (55m and 38m), dating from 3rd to 5th century CE, one of the them the tallest in the world. They were destroyed by the Taliban in March 2001. In 16th century CE, the site is reported to have contained some 12,000 caves, forming a large ensemble of Buddhist monasteries, chapels and sanctuaries, along the foothills of the valley. A preliminary geophysical exploration in 2002 has indicated the presence of ancient roads and wall structures. In several of the caves and niches, often linked with communicating galleries, there are remains of wall paintings. There are also remains of seated Buddha figures.

Kakrak Valley caves are situated ca 3km southeast of the Bamiyan Cliff, and consist of over a hundred caves, dating from 6th to 13th centuries. There are fragments remaining of a 10m tall standing Buddha figure and of a sanctuary with painted decorations from the Sasanian period.

Fuladi Valley caves: are located ca 2km southwest from the Bamiyan Cliff. The two main groups of caves are *Qoul-i Akram Caves* and *Kalai Ghamai Caves*, which have important decorative features.

Shahr-i Zuhak, ca 15km east of Bamiyan Cliff, relates mainly to the Islamic period under the rule of Ghaznavid and Ghorid dynasties (10th to 13th cent. CE), though the origins of the fortress of *Shar-i Zuhak* go back to 6th - 7th cent. CE.

Qallai Kaphari monuments are situated 12km east of the Bamiyan Cliff, in two clusters (A and B), consisting of fortification walls, towers and citadels, built in earthen structures. They date mainly from 6th – 8th cent. CE.

Shahr-i Ghulghulah is a fortified citadel situated on a hill in the centre of the Bamiyan Valley, and dates from 6th to 10th cent. CE.

History

Afghanistan was the ancient Bactria, one of the provinces of the Persian Empire under the Achaemenids. The region was then ruled by Alexander the Great, the Seleucid dynasty, and the Maurya dynasty of northern India. The Kushans, a group of nomadic tribes, ruled from the 2nd century BCE, reaching the climax in the 2nd cent. CE. The Sasanians controlled Afghanistan from the mid 3rd century, Central Asian nomads ruled in the 5th century; a coalition of Sasanians and Western Turks took the power in mid 6th century. The Silk Roads passed through Afghanistan, and contributed to the diffusion of Buddhism from India in this region in the 1st century CE. The Kushans were patrons of the arts and religion, and were responsible for the introduction of Buddhist art in the Bactrian style, which was influenced by Hellenistic art, and the Sasanians.

Islamic art and architecture were introduced to Bamiyan in the 11th century CE, when the central part of Afghanistan was under the rule of Sultan Mahmud of Chazna (998-1030). The town of Bamiyan was designed on the model of the Khorassan region of Iran. Under the rule of the Ghurids (1155-1212) the development included the fortified settlements of *Shahr-i Bamiyan* (later *Ghulghulah*), *Shahr-i Zuhak* and *Shahr-i Khoshak*. The army of Genghis Khan ruined the town of Bamiyan and looted the Buddhist monasteries in the early 13th century. The Mughal emperor

Aurangzeb (1618-1707) ordered his army to shoot off the legs of the large Buddha. The valley was abandoned for a long period, but at the end of the 19th century, the caves were inhabited and used as shelters for domestic animals. In 1979, there were over 7,000 inhabitants in the Bamiyan town. From the 1970s, the area was used by the military. In the 1990s, it was exposed to armed conflicts. In 2001, the large Buddha statues were destroyed by the Taliban.

Management regime

Legal provision:

The monuments and archaeological remains of Bamiyan Valley are public property, owned by the State of Afghanistan. However, large parts of the buffer zone are in private ownership. The documents defining the ownerships were destroyed during the Taliban rule, and are now being re-established.

The State Law on the Conservation of Historical and Cultural Properties, dating 1980, is still in force, and provides the basis for financial and technical resources. Similarly, the legal framework is currently under review by the government.

Management structure:

The management of the nominated sites is under the authority of the Ministry of Information and Culture, Institute of Archaeology and the Department of the Preservation of Historical Monuments, as well as the Governor of the Bamiyan Province.

The Ministry of Information and Culture has a provincial local office representative in Bamiyan. There are ten guards protecting the site against vandalism and looting.

The 1981 plan on 'Rehabilitation and revitalisation of the Bamiyan Valley cultural heritage, has been recently reactivated and has the objective to prepare and implement a programme for the protection, conservation and presentation of the Bamiyan Valley, to undertake exploration and excavation of the archaeological remains, and to prepare and implement a programme for sustainable cultural tourism in the valley.

The Governor of the Province is responsible for the implementation of the regional development plan, which includes rehabilitation of housing, provision of health and educational services, and development of infrastructures and agriculture.

The government hopes that the inscription on the World Heritage List will contribute to the preparation of an appropriate property management plan.

Resources:

Some foreign funds have been allocated through UNESCO, e.g. Japanese government for the consolidation of cliff faces and conservation of mural paintings, as well as through ICOMOS for expert missions. There are also projects for the reorganisation of agriculture.

The Afghan government, in collaboration with international organisations, is currently identifying already trained Afghan expertise, who could be involved in the process of safeguarding.

Tourism development will need to be taken up when the situation in the country has been stabilised.

Justification by the State Party (summary)

The State Party has nominated the property under the criteria i, ii, iii, iv and vi.

Criterion i: The cave art in the Bamiyan Valley is a masterpiece of early Buddhist cave art and one of the exceptional testimonies of Gandaharan art in this region.

Criterion ii: The monuments and archaeological remains of Bamiyan Valley together represent an important interchange of religious values and diverse cultural traditions.

Criterion iii: The Bamiyan Valley bears an exceptional testimony to a cultural tradition which has disappeared.

Criterion iv: The Bamiyan Valley is an outstanding example of a cultural landscape which illustrates a significant period in Buddhism.

Criterion vi: The Bamiyan Valley is a property which is directly and tangibly associated with a tragic, violent and deliberate destruction of irreplaceable cultural heritage in the 21st century.

The State Party nominates the property as a **cultural landscape** (criterion ii, 'organically evolved landscape'): The Bamiyan Valley is a landscape which has evolved through geological formation and human intervention, and the process of evolution in their form and component features are still visible today. Even today, one can witness the landscape being continuously used, which retains an active social role in contemporary society of the local communities.

The State Party also asks the property to be put on the **World Heritage in Danger List** considering that it is threatened by serious and specific danger, and because major operations are necessary for its conservation.

3. ICOMOS EVALUATION

Actions by ICOMOS

ICOMOS has made an evaluation of the property in 1982. ICOMOS has organised several international expert missions during the past two years in order to assess the state of conservation of the heritage resources, and to contribute to their safeguarding.

Conservation

Conservation history:

The towns and monasteries in the Bamiyan Valley were destroyed and looted by the Mongols, remaining abandoned for a long period. Parts of the site have been occupied since the 19th century. From the 1970s, the site has suffered from limited occupation and armed conflicts,

and in March 2001, the large Buddha statues were destroyed with dynamite to the order of Mullah Omar.

The first archaeological studies in Bamiyan were carried out, in the 1920s and 1930s, by the French archaeological mission (DAFA). The French and Italian missions continued the explorations in the 1950s and 1960s. An Afghan team, under R. Sengupta from the Archaeological Survey of India, undertook the conservation and restoration of the large Buddha statues. A Japanese team from Kyoto University surveyed the mural paintings in the 1970s. In the past two years, there have been several missions by UNESCO and ICOMOS identifying the state of conservation of the site.

State of conservation:

Many of the caves and architectural remains of the Bamiyan Valley are in precarious condition. The niches of the large Buddhas have been damaged in the explosion of 2001, which caused cracks and also destroyed many of the mural decorations. The material of the rock is fragile and is easily dissolved in water, even though the surface is hardened and more resistant. The traditional buildings in the valley have been constructed in unbaked earth, and many of them have been repaired using traditional methods and materials after the war.

There are currently studies being made to identify appropriate methods for the consolidation of the cliffs, and the conservation of the sculpted and painted remains. There are hypotheses for a partial anastylosis of the Buddha statues, using the fragments on the site. The largest of these are about 4 cubic meters. Anastylosis, as indicated in article 15 of the Venice Charter, is also considered a reasonable way to protect the remaining fragments of the statues.

Management:

At the moment, the management system is provisional with help from international community, in view of the development of a revised legal framework and appropriate administrative, scientific and technical resources. There is no property management plan yet, but it is foreseen that such a plan be prepared and implemented in the coming years.

Risk analysis:

The heritage properties are in a fragile state of conservation considering that they have suffered from abandonment, military actions, and dynamite explosions. They require urgent cure.

There are some 50,000 inhabitants in the valley at the moment. Parts of the buffer zones are still used for military purposes. There is also some limited mining of rocks in the buffer zone of the Bamiyan Cliff. The area is subject to seismic hazard. Rain and snow can aggravate the fragile condition of the remains.

The major dangers include: risk of imminent collapse of the Buddha niches with the remaining fragments of the statues, further deterioration of still existing mural paintings in the caves, looting and illicit excavation.

Parts of the area are still not accessible due to anti-person mines.

Authenticity and integrity

The heritage resources in Bamiyan Valley have suffered from various disasters, and are in a fragile state. A major loss was the destruction of the large Buddha statues in 2001. Nevertheless, the valley represents important authentic remains as testimonies to the different cultural phases of its history.

Seen as a cultural landscape, Bamiyan Valley, with its artistic and architectural remains, the traditional land use and the simple mud brick constructions has retained an integrity, which may be vulnerable in face of development, and requires careful conservation and management.

Comparative evaluation

There are several Buddhist sites already inscribed on the World Heritage list. These include: Ajanta Caves (1983; i, ii, iii, vi), Ellora Caves (1983; i, iii, vi) in India; Seokguram Grotto and Bulguksa Temple (1995; i, iv) in Korea; Golden Temple of Dambulla (1991; i, vi), Ancient City of Polonnaruwa (1982, i, iii, vi), Sacred City of Anuradhapura (1982; ii, iii, vi) in Sri Lanka; Mogao Caves (1987; i, ii, iii, iv, v, vi), Dazu Rock Carvings (1999; i, ii, iii), Longmen Grottoes (2000; i, ii, iii), Yungang Grottoes (2001; i, ii, iii, iv) in China.

The Gandhara region being a crossroads of cultural influences received Buddhist missionaries already during the reign of the Indian emperor Asoka (3rd century BCE). In the 1st century AD, under the rulers of the Kushan Empire Gandhara maintained contacts with Rome, but there are influences also from the Hellenistic and Sasanian art. In the interpretation of Buddhist legends, the Gandhara school incorporated many motifs and techniques from classical Roman art. The basic iconography remained Indian, related to Mathura school, but it developed independently. As a result, the Gandhara school achieved its specific artistic expression, deferring from similar sites elsewhere. Bamiyan Valley has some of its most important representations. The 55m tall Buddha statue was the tallest in the world.

Outstanding universal value

General statement:

Bamiyan Valley is an exceptional cultural landscape, resulting from the interaction between man and nature especially from 1st to 13th centuries CE. It is an outstanding representation of the Buddhist art as it developed under the Kushan Empire from the 1st century CE, reaching its climax in the 4th to 8th centuries. The standing Buddha statues of 3rd to 6th centuries were particularly representative of this art. The valley contains a large number of monastic ensembles and some 1000 caves; many of them have been richly decorated with paintings and sculptures.

The Gandhara school of Buddhist art, of which Bamiyan Valley is an outstanding representation, drew from the Hellenistic, Roman and Sasanian art traditions. The Buddha was represented with a youthful Apollo-like face, dressed like Roman imperial statues. The school had important influence from India, though it differed from this in its cultural expressions. The general trend was toward an

idealized image. The Gandharan craftsmen made an important contribution to Buddhist art in their painted compositions related to Buddha's life.

Islamic religion was introduced in the region in the 13th century, and has contributed to the enrichment of the Valley through the construction of a number of fortified cities.

4. ICOMOS RECOMMENDATIONS

Recommendation for the future

It is recommended that the State Party make every effort to guarantee the adequate legal framework for the protection and conservation of Bamiyan Valley. It is further recommended that the International community continue its collaboration with the scope to provide a sustainable basis for the future conservation, rehabilitation and maintenance of the Bamiyan cultural landscape, its monumental remains and traditional settlements.

Recommendation with respect to inscription

That the property be inscribed on the basis of *criteria i, ii, iii, iv and vi*:

Criterion i: The Buddha statues and the cave art in Bamiyan Valley are an outstanding representation of the Gandharan school in Buddhist art in the Central Asian region.

Criterion ii: The artistic and architectural remains of Bamiyan Valley, and an important Buddhist centre on the Silk Road, are an exceptional testimony to the interchange of Indian, Hellenistic, Roman, Sasanian influences as the basis for the development of a particular artistic expression in the Gandharan school. To this can be added the Islamic influence in a later period.

Criterion iii: The Bamiyan Valley bears an exceptional testimony to a cultural tradition in the Central Asian region, which has disappeared.

Criterion iv: The Bamiyan Valley is an outstanding example of a cultural landscape which illustrates a significant period in Buddhism.

Criterion vi: The Bamiyan Valley is the most monumental expression of the western Buddhism. It was an important centre of pilgrimage over many centuries. Due to their symbolic values, the monuments have suffered at different times of their existence, including the deliberate destruction in 2001, which shook the whole world.

It is further recommended that the property be inscribed on the World Heritage in Danger List considering that it is threatened by the imminent danger of further deterioration, and considering that major operations are necessary for its conservation.

Ashur (Iraq)

No 1130

1. BASIC DATA

State Party: Iraq
Name of property: Ashur (Qal'at Shergat)
Location: Salah Addin Province
Date received: 18 October 2002
Category of property:

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is an archaeological: *site*.

Brief description:

The ancient city of Ashur is located on the Tigris River in northern Mesopotamia. The city has its origins in the 3rd millennium BCE. It was the first capital of the Assyrian empire from 14th to the 9th centuries BCE. Ashur was also the religious capital of the Assyrians, associated with the god Ashur. The city was destroyed by the Babylonians, but revived during the Parthian period in the 1st and 2nd century CE. At present, this archaeological site is threatened by the construction of a dam some 30-40km downstream.

2. THE PROPERTY

Description

The site of the ancient city of Ashur (Assur, modern Qal'at Shergat) is located 390 km north of Baghdad. The settlement was founded on the western bank of river Tigris, on uneven bedrock; within its walls it covers the area of about 65 ha. The excavated remains consist of numerous superimposed stratigraphic levels of archaeological deposits. The earliest of them date to the Sumerian Early Dynastic period of the early 3rd millennium BCE. After the Akkadian and Ur III periods, which are present at some points, follow the Old, Middle and Neo-Assyrian periods, the later one ending at the mid-first millennium BCE. Finally, Hellenistic remains and those of the Arab Hatrian kings are attested. Structurally, the city of Ashur was divided into two parts: the old city (Akkadian *libbi-ali*, the heart of the city), which is the northern and largest part of Ashur, and the new city (Akk. *alu-ishshu*), a smaller southern projection in the city, which was constructed around the middle of the second millennium BCE.

The major features of the city which are presently visible on-site consist of architectural remains (some of them partly restored): the *ziggurat* and the great temple of the god Ashur, the double-temple of Anu and Adad (with the remains of two smaller *ziggurats*), the temple of Ishtar, the Sumerian goddess of love and war, the Old Palace with its royal tombs and several living quarters in many parts of the city. Some parts of the Parthian palace are visible at the border between old and new city. The double-temple of

Sin and Shamash has almost disappeared. The same is valid for the Assyrian New Year's festival building (*bit akitu*), which is located outside the walls of the city. Living quarters with indoor-burials and a palace area in the northern centre of the city are being excavated. The city was surrounded by a double wall with several gates (the new city just by a single wall) and a big moat.

The majority of the buildings of the city were built with sun-dried mud-bricks with foundation of quarry stones or dressed stone, depending on the period. Artistic objects and parts of architectural remains of the city are at present on display in the major museums of the world, in the Louvre, the British Museum, the Pergamon Museum in Berlin and the Metropolitan Museum in New York, as well as in other museums. The surface of the site is partly covered by the excavation debris from several generations of archaeological excavations.

History

The history of the city of Ashur goes back to the Sumerian Early Dynastic period (first half of the 3rd millennium BCE). Some remains may even date to preceding periods. For this early part the stratigraphic excavation of the temple of Ishtar provided substantial information about the development of the religious architecture. Two of the five major building stages of it belong to this period. During the Akkadian empire (ca 2334-2154 BCE) Ashur was an important centre, and a governor of the third dynasty of Ur (2112-2004 BCE) ruled over the city which had to pay taxes to the central administration in the south. Still, the temple of Ishtar and its findings remain the main archaeological reference point. As an independent city-state Ashur became capital of Assyria and the Assyrians during the 2nd millennium BCE starting with the Old-Assyrian rulers Erishum, Ilushuma and Shamshi-Adad I and thereafter with the Middle-Assyrian kings Eriba-Adad I and Ashuniballit I. From here, the military campaigns of the Middle-Assyrian kings Tukulti-Ninurta I and Tiglathpileser I started and laid the foundation for the territorial expansion of the Assyrian empire to the west, ie Syro-Mesopotamia and the Levant, and other adjacent regions. For the 2nd millennium BCE a systematic building programme is attested for Ashur, culminating in the Middle-Assyrian period, when king Tukulti-Ninurta I not only renovated or reconstructed the majority of the temples (among them the temple of Ishtar), but terraced a large area for the his New Palace (the building was not erected since the king founded a new residential city named Kar-Tukulti-Ninurta, further upstream).

Ashur remained political capital until the reign of the Neo-Assyrian king Ashurnasirpal II (883-859 BCE), who moved it to Kalhu (modern Nimrud). After that, Ashur continued to be an important religious and provincial Assyrian centre even though it had lost its function as national capital. The Neo-Assyrian kings executed restoration work at the main sanctuaries and palaces of Ashur as it was requested by the inscriptions of their predecessors and erected the royal burial place within the area of the Old royal palace. The majority of the private houses and living quarters date to this Neo-Assyrian period and provide important information about domestic architecture and the conditions of life of those parts of the Assyrian society not belonging to the royal elite. Special

attention was received by the more than 1,000 inhumations in graves and tombs, mainly located inside the buildings, which provide important information on aspects of burial rites and funerary culture. The site survived the fall of the Assyrian empire in the 7th century BCE, and it flourished in the Hellenistic and Parthian periods until the 2nd century CE. The Parthian palace and a temple close to the *ziggurat* are architectural testimonies of this period. Presently, residential areas of the Parthian period are being excavated.

Management regime

Legal provision:

The area of the ancient city of Ashur has been the property of the State of Iraq since 1935. In the past, the site was protected under the Law of Antiquities of 1937, and its further amendments. Currently, the site and its buffer zone are protected under the recently revised Law of Antiquities and Heritage, no. 55, dated October 2002.

Management structure:

The protection and management of the site is the responsibility of the State Board of Antiquities and Heritage (former Directorate General of Antiquities). Locally, the archaeological site is under the responsibility of the Inspector of Antiquities in the province of Salah Addin. Excavations are conducted by the Department of Excavations and Archaeological Investigation in the State Board of Antiquities and Heritage, Ministry of Culture. The site has 10 guards in charge for its protection.

Resources:

Excavations by the Iraqi expedition are financed annually from the central budget of the State Board of Antiquities and Heritage, Government of Iraq. The *Deutsche Forschungsgemeinschaft* has financed the German expedition. At the moment there are no funds for restoration and conservation facilities or for training.

There are ca 1,000 visitors per year. Until 1991, there was a site museum in a military barrack. At the moment there are practically no facilities for visitors.

Justification by the State Party (summary)

The city of Ashur is the first capital of the Assyrian empire and the religious centre of Assyria, the core of which is located between Ashur, Nineveh and Erbil. The singular settlement was founded in a specific geo-ecological zone, ie at the borderline between rain-fed and irrigation agriculture, at the intersection between nomadic and sedentary subsistence strategies. The city gained its reputation because it was the city of the god Ashur, the national deity of the Assyrians. ... Ashur played a key role as the centre of political power for the foundation of the Assyrian empire in the Middle Assyrian period (14th-11th BCE) and for Assyrian art and craftsmanship, retaining its importance as the main cult site even later. ... It was also the place where the Assyrian kings were crowned and buried. As one of the few archaeological multi-period sites in Assyria of its kind, remains of the buildings and their furnishing have been extensively excavated. The architectural and artistic record is accompanied by a large

corpus of cuneiform texts which attest a leading role of Ashur in religion and scholarship, especially during the Middle and Neo-Assyrian periods.

Criterion iii: During its history of three millennia, the most important step at Ashur was certainly the establishment of the Assyrian civilisation. The strong tradition in the material, religious and intellectual culture of Assyria remains connected to the site and its region. As to the space use and urban layout, most significant is the concentration of public buildings at the periphery of the city, the development of the specific Assyrian temple ground-plan and of the palatial architecture, its decoration, monumental art and furnishing. These elements became the standards for the other urban and provincial centres during the Middle and Neo-Assyrian periods, that is, for a time span of more than seven centuries. At Ashur, the early steps towards a systematic shaping of Assyrian cities could be observed for the first time within the limits of an extremely restricted space and a grown urban system, this in contrast to all the later Assyrian capitals. The tight and complex cultural identity is expressed by the fact that the land, the god and the city bore the same name: Ashur. It is clear that, already during pre-Assyrian periods, the site played an important role in the land of Subartu, since it was a desired place for foreign control over the region during the Akkad and Ur III periods (last quarter of the 3rd millennium BCE).

Criterion iv: Ashur has an outstanding density of excavated architectural remains from different parts of the Assyrian periods without comparison. The ensemble of public buildings (temples, palaces, city walls) finds its counterpart in several areas of domestic architecture. As for the religious architecture, the presence of three *ziggurats* erected of mud bricks and two double temples should be mentioned as well the temple of the national god Ashur. Of them, the impressive ziggurat of the god Ashur is still standing today and is a visible landmark. Whereas these buildings embody the Assyrian architectural tradition, the temple of Ishtar alone features a different building tradition (bent axis), which has its origin possibly in the area southeast of Assyria. At two places a sequence of royal palaces was observed, one of them saved later as burial place for Assyrian kings.

3. ICOMOS EVALUATION

Actions by ICOMOS

The ICOMOS evaluation has been referred to the mission organised by the UNESCO (World Heritage Centre, Division of Cultural Heritage, Amman Office) to Iraq, 18-28 November 2002, involving a hydraulics engineer and an archaeologist to assess the impact of the construction of the Makhool Dam currently underway on the Tigris River. The mission was considered positive and encouraging, and a good collaboration was established with the authorities re the identification of the cultural issues on the site of Ashur and in the region concerned. Nevertheless, the experts were not provided with technical information regarding the Makhool Dam itself and its environmental impact. Therefore it was not possible to make a full assessment of the specific risks faced by the archaeological site, nor of the interventions that would be required.

Conservation

Conservation history:

The site has been abandoned for nearly two millennia, major incursions having come only from archaeological excavations. In 1903-1914, the German expedition carried out excavations particularly in the northern section of the site and on the defence walls. In the late 1970s the State Board of Antiquities and Heritage of Iraq resumed the archaeological excavations and carried out some restoration to maintain and strengthen what had been exposed so far, ie the city wall, the Tabira-Gate, some private houses, the temple of Anu and Adad, the Old Palace and the royal burial. A large part of the town still remains unexcavated.

Currently, Iraq is implementing extensive agricultural and economic plans, which involve the construction of a large dam on the Tigris River some 30-40 km downstream from the archaeological site of Ashur. The construction of the dam is expected to be completed in 2006, and the level of water would then cover the lower parts of the archaeological site of Ashur and its surroundings.

State of conservation:

The photographs indicate that subsurface stratification and structures were in good state of preservation when first encountered in excavation at the beginning of the 20th century. Nevertheless, the excavated structures were left open, remaining exposed to erosion by rain and winds and normal natural destruction. The excavated area contains mainly public buildings. A large part of the town, probably mainly residential, still remains unexcavated.

Management:

The responsibility for the site management lies with the government authorities. However there is no management plan, neither regarding the excavation and restoration of the site, nor regarding the visitor management and environmental control. There are no facilities for the presentation of the site nor for the reception of visitors.

Risk analysis:

The main risk at the moment is presented by the dam construction some 30-40 km downstream, expected to be completed by 2006, after which the basin would be filled with water. The archaeological site of Ashur remains within the perimeter of this reservoir, though a major part of the walled city area is on higher ground. Nevertheless, once the basin has been created, especially the southern part of the city would be flooded for certain periods of the year. In any case, the archaeological remains would suffer from infiltration and seepage of underground waters. The water-bearing (phreatic) levels in the foundations of the whole area are expected to rise considerably.

Another problem is presented by the fact that the excavations so far have mainly focused on the main sites in the area. Only quite recently, there has been some attention to the archaeological resource of territory as a whole. In fact, it is estimated that some 63 archaeological sites would remain within the area of the water reservoir. Most of these are small, and many are in poor condition due to damage from agricultural and construction activities. Nevertheless, the UNESCO report emphasises that the sites represent an important information source in order to obtain a balanced

and more comprehensive understanding of the history over the past several millennia. It is only some 30 years that regional settlement analysis has changed the archaeological view of Ancient Mesopotamia, recognising the "significant role of the systemic interaction between urban centres and rural settlements, and contributing to a better understanding of the emergence of states, the economic, social and environmental relations, subsistence patterns and modes of production and trade through time". The report also notes that the impact of the rise of the Middle Assyrian and Neo-Assyrian empires on the immediate surroundings of Ashur and Kar-Tukulti-Ninurta has not been studied. In fact, it is understood that only small areas (perhaps only 1%) of the Mesopotamia has been studied so far.

Regarding the Ashur site, the UNESCO report presents three possible scenarios:

1. No retaining wall is constructed to protect Ashur. This is the worst scenario, and the site would be flooded and infiltrated from 2006 on. This scenario will require an urgent programme of salvage archaeology and documentation in and around the site.

2. A retaining wall is constructed separate from the site. This is the least bad scenario. In this case, the salvage programme could focus only on areas directly affected by the water reservoir.

3. A system of protection is constructed directly on the borders of the site. This is the most cost-effective protection as discussed by the Iraqi authorities. It would involve a retaining system that makes use of the actual topographic situation of the areas bordering the reservoir, ie the eastern and northern fronts of the site. The structure could be built of earth, and use so-called 'gabions' (small stones held together by a wire-network) to protect the surface.

While no decision has yet been taken, it is possible that the solution to be adopted would follow the third scenario, ie the most cost-effective, even though this would not necessarily be the least bad solution.

At the time of writing this evaluation, the region of Ashur is in war zone, and therefore extremely vulnerable to destruction. In fact, archaeological heritage, even though partly indicated in maps, is often not even visible, apart from remains that still survive above ground.

Authenticity and integrity

The site of Ashur had been abandoned at the end of the Parthian period (2nd century CE), and, contrary to many other sites in the region, there was no further occupation. Therefore, the authenticity of the remains is high. The nomination dossier mentions two structures built in the 19th and 20th centuries, ie Ottoman military barracks at the north-eastern edge of the site. A site museum was located here until 1991. There is also the building of the German expedition, as well as two small guard's houses.

As for restoration works, the nomination dossier reports that traditional techniques and materials (mud-bricks and plaster) have been applied in the 1980s for partial reconstruction of the Old Palace, the temple of Anu and Adad, and parts of the city wall. The reconstruction has

been based on the excavated evidence. The walls stand up to a height of ca 2 m. Baked bricks have been used for the Tabira gate, the temple of Ishtar and parts of the Parthian palace. Gypsum and some concrete have been used in mortars.

Comparative evaluation

The Mesopotamian region is a cradle of civilisation, where several cultures have followed one another and built on each other's achievements, including the Sumerian, Akkadian, the third dynasty of Ur, Babylonian, Elamite, Assyrian, and Persian. Together with Kalah (Nimrud), Dur-Sharrukin (Khorsabad) and Nineveh, Ashur was one of the four capitals of the Assyrians and the first of these. It is considered the only example of an urban site where continuity and change of the Assyrian civilisation pertaining to religious, public and domestic architecture, artistic production, urban planning, religious and political systems, economic subsistence and social patterns is revealed by the archaeological and textual evidence throughout the recorded archaeological periods.

In terms of historical importance and cultural impact, Ashur can be compared with ancient capitals such as Babylon, Ur, Thebes, as well as Susa, and Persepolis. No sites representing the Assyrian civilisation have been inscribed on the World Heritage List so far. The closest reference is Tchoga Zanbil (WH 1979), in western Iran, the sacred city of Elam, founded c. 1250 BCE.

Outstanding universal value

General statement:

The significance of the city of Ashur is related to its being the first capital of the Assyrian empire. It was also the religious centre of Assyria, being associated with the god Ashur, the national deity of the Assyrians. Historically, Ashur played a key role during the foundation of the Assyrian empire in the Middle Assyrian period, and for the development of Assyrian art and crafts. It retained its importance as the main cult site even later, and was the crowning and burial place for Assyrian kings. Apart from architectural and artistic records, a large corpus of important cuneiform texts has been discovered on the site. The major pieces found on the site are now displayed in various major museums abroad.

Evaluation of criteria:

The nomination dossier presents the site under ***criteria iii*** and ***iv***:

Criterion iii: is certainly relevant in the case of Ashur as an exceptional testimony to succeeding civilisations from the Sumerian period in the third millennium BCE to the Assyrian empire from the 14th to 9th centuries, and, later, the Parthian revival in the 2nd century BCE. The city has also been strongly associated with the identity of the Assyrians, and the name Ashur has been associated with the god, the city, and the land.

Criterion iv: the site, both on the basis of its visible structures and the structural remains excavated, presents plentiful evidence of being an outstanding example of a

type of architectural ensemble illustrating significant states in human history over some millennia.

4. ICOMOS RECOMMENDATIONS

Recommendation for the future

ICOMOS strongly recommends that protection in the area of Ashur should be extended from the excavated site to the surrounding territory, which will certainly contain extremely valuable and relevant information to the understanding of the whole region.

Secondly, ICOMOS recommends that a management regime be properly organised and implemented for the site of Ashur and its context as soon as possible.

With reference to the findings of the UNESCO mission to Ashur in November 2002, ICOMOS further recommends that:

- Iraqi authorities launch an invitation to archaeological expeditions on an international level to participate in the salvage excavations and studies of the Makhool Dam reservoir area;
- a coordination centre for the archaeological research in the area of Ashur be established with the support of UNESCO and the World Heritage Fund;
- an integrated approach be applied, combining on-site and off-site research, based on archaeological survey strategies, archaeological excavations, and the use of scientific methods of analysis;
- the necessary technical information on the Makhool Dam construction and its environmental impact be provided by the Iraqi authorities to UNESCO and its specialists as soon as possible, as a necessary condition for appropriate measures to be developed for the safeguard of Ashur and the territory affected by the dam construction.

Recommendation with respect to inscription

ICOMOS recognizes the outstanding universal value of Ashur, and despite the current lack of management systems, considering the exceptional circumstances, recommends that the site be inscribed on the basis of ***criteria iii*** and ***iv***:

Criterion iii: Founded in the 3rd millennium BCE, the most important role of Ashur was from the 14th to 9th century BCE when it was the first capital of the Assyrian empire. Ashur was also the religious capital of Assyrians, and the place for crowning and burial of its kings.

Criterion iv: The excavated remains of the public and residential buildings of Ashur provide an outstanding record of the evolution of building practice from the Sumerian and Akkadian period through the Assyrian empire, as well as including the short revival during the Parthian period.

Consideration should also be given to inscribing the site on the World Heritage in Danger List.

Krasnoyarsk Bridge (Russian Fed.)

No 1071

1. BASIC DATA

State Party: Russian Federation
Name of property: The First Railway Bridge over the Yenissei River
Location: The town Krasnoyarsk, Krasnoyarsk territory
Date received: 28 June 2001

Category of property:

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *monument*.

Brief description:

The First Railway Bridge over the Yenissei River was built in Krasnoyarsk in 1893-1896. It is a crucial part of the Trans-Siberian Main Railway. Being over 9000km, it is the longest single-track railway in the world, connecting St. Petersburg and Moscow with Vladivostok. The bridge benefited from the engineering knowledge of the time, and made innovative technical solutions to meet the challenges of the difficult and unknown conditions of Central Asia.

2. THE PROPERTY

Description

The proposed property is situated at the crossing of the Trans-Siberian Railroad and the Yenissei River in Krasnoyarsk, Central Asia. The Yenissei River is one of the longest in the world, and it is here nearly 1km wide. The Trans-Siberian Railroad is the longest single rail system in Russia, stretching from St. Petersburg and Moscow through Asia, over more than 9000 km, to reach Vladivostok on the Pacific Ocean.

The railway bridge Krasnoyarsk over the Yenissei River has an overall length of 1000m, and its width is 8m. The bridge is articulated in six girders, the span length of each of them being 144m. There are further 20 meter-long girders to link the bridge with the coastline on both sides.

The Krasnoyarsk bridge represents the split system beam-type metal bridge. Such systems are distinguished by their simplicity and definiteness of their designs, independence of the span constructions, convenience of manufacturing and assemblage. Safety of split girders in the case of unexpected settlements and movements of the legs also serves as a good reason in favour of such designs. Ease of replacement, restoration, transportation, application of standard girders made these systems rather convenient for use on railways where they had subsequently received a wide spread. The girders were made of sheet iron. The legs were closed into large caissons, which were sunk 18m below water level. Wooden caissons were used for the

coastal legs for the first time. The bridge legs were coated with blocks of the Biryusa granite. The ice cutters are in an extended oval shape and coated with granite.

The author of the engineering design of polygonal beam trussing girders was the bridge builder Lavr Dmitrievich Proskuryakov, professor at the Moscow Imperial technical school. The builder of the Krasnoyarsk bridge was Eugeny Karlovich Knorre - an expert in the field of engineering technology.

It is noted that particular engineering problems were met when constructing the foundations of bridges and other structures along the railway, due to permafrost, i.e. perennially frozen ground. During the construction of this railway, for the first time, engineers developed methods to avoid damage in such areas.

History

Conceived by specialists of the St. Petersburg's Academy of Sciences in the 1880s, Tsar Alexander III gave the order for the construction of the Trans-Siberian main railroad in 1890, and the work began in 1891. The commission on construction of the Transsiberian highway was headed by the future emperor Nikolai II. The work proceeded simultaneously in several sections, starting from both ends. The railway was connected with the Mid-Siberian Railway, the Transbaikal Railway, and other lines. Originally, the line was built directly across Manchuria (the Chinese Eastern Railway) completed in 1901. After the Russo-Japanese War of 1904-05, an alternative route was built, the Amur Railway, which was completed in 1916.

Construction of the bridge across the Yenissei near Krasnoyarsk took place in 1893-1896. Another bridge was built across the Amur River near Khabarovsk (2,5km wide) in 1912-1916, which was demolished in 1999.

The Krasnoyarsk railway bridge was awarded a gold medal at the World Exhibition of Paris in 1900. The first train passed from Europe to Vladivostok without stopping in 1903.

The railway bridge has continued in normal use under the management of the Russian Federation Ministry of Railways until 1999, when it was listed for preservation. A new railway bridge has also been built on the side of the old bridge in the mid 1980s.

Management regime

Legal provision:

The Krasnoyarsk bridge is federal property as a railway site under the jurisdiction of the Russian Federation Ministry of Railways (transportation).

By the decision of the Territory executive committee of the People's Deputies # 345 of 24.12.86 the property has been placed under state protection as a memorial of history.

Management structure:

The railway bridge has been maintained by the Russian Federation Ministry of Railways until 1999, providing for its annual supervisions. Since then, however, as the property was included on the state list of memorials of

local value, it has been surveyed by the experts of the Krasnoyarsk Region Administration Center on preservation and use of memorials of history and culture.

The Krasnoyarsk Region Administration has developed a) a plan for tourist presentation, b) a plan for the preservation of the property under the coordination of the Management of the Krasnoyarsk railway, and c) a plan of land improvement of the bridge surroundings and its inclusion into observation exhibitions.

The State Party has informed that the management plan for the maintenance of the bridge in the period 2001-2010 is in preparation by the UNESCO Chair in Urban and Architectural Conservation (Moscow), the Centre of Protection and Use of History and Culture Monuments of Krasnoyarsk Krai, and the Group for Implementing of Monitoring of the first Railway Bridge over the Yenissei River.

Krasnoyarsk receives some 10,000 tourists per year, and the railway bridge is one of the major sites of the city.

Resources:

Financing of conservative actions is provided from the federal budget, and amounts to about 50 thousand roubles annually.

The Center of protection and use of memorials of history and culture has a staff of experts, historians and engineers, who take care of the property.

Justification by the State Party (summary)

The railway bridge across the river Yenissei is the largest bridge of the Trans-Siberian main-line railway (1891-1916) stretching for the distance of 9000 kms from Chelyabinsk up to the coast of the Pacific Ocean (Vladivostok) with a start in Saint Petersburg. It had been called the eighth miracle of the world, and the Krasnoyarsk bridge across the Yenissei was the first in Russia (1895-1899) and the second in the Euro-Asian continent to have such a length and size of span between abutments. ... It was the record span size for the pre-revolutionary Russia. The system of beam split bridges with descending diagonal braces was the most widespread in railway construction all over the world, but even abroad there were just a few bridges of such type with so big span size. ...

In 1900 the bridge received a gold medal at the World Exhibition in Paris. After the Krasnoyarsk bridge having been commissioned the West and East parts of the Great Siberian way, to which the end of the XIX century world community had allocated the same significant role in formation of the world civilization, as to discovery of America, construction of the Suez canal and the project of Panama canal, were connected.

Construction of the bridge became critical in development of the world engineering thought. Experience in erection of such large bridges as the Krasnoyarsk one has shown that the application of polygonal beam trussing girders is not only convenient for overlapping the big spaces but also has the least number of errors at realization. ...

Criterion i: The Krasnoyarsk bridge is an outstanding memorial of engineering architecture, with its size and grandiosity undoubtedly representing an outstanding universal value from the point of view of development of the world scientific thought applied in the creation of the given project and its realization

Criterion ii: The Krasnoyarsk bridge ... rendered great influence on formation of a certain type of engineering constructions of bridges and became a prototype for numerous reiterations for subsequent decades. ...

Criterion iv: The bridge in Krasnoyarsk is an outstanding sample of a construction typical for the end of XIX century when the world engineering thought in such a material as metal and with those imperfect methods of construction ... was solving the most complicated tasks in overlapping considerable water spaces.

3. ICOMOS EVALUATION

Actions by ICOMOS

ICOMOS has consulted experts on historic bridges, but there has been no site mission.

Conservation

Conservation history:

The bridge has maintained its original form and structure until the present, and there have been no major works apart from maintenance. However, in the past ten years, the Ministry of Railways has been considering the possibility to dismantle the bridge. The issue is whether or not the bridge is capable or not capable for the further operation by heavy transportation means.

State of conservation:

According to the reports of the Krasnoyarsk Region Administration Center the general condition of the bridge can be considered satisfactory. Nevertheless, there has been no maintenance over the past two years, and the corrosion of metal has increased by 1mm in this period.

Risk analysis:

The nomination dossier does not indicate any specific physical risks that should undermine the condition of the bridge. Nevertheless, the Federal Ministry of Railways had been pondering on the eventual dismantling of the bridge. In fact, the Amur Bridge on the same railway was demolished in 1999. It is not clear from the available documentation whether this risk of demolition still exists at the present time when the property has been listed for protection.

Authenticity and integrity

According to the indications of the nomination dossier the bridge has retained its original form and material, and can thus be considered to pass the test of authenticity.

It is noted that a bridge has been built along the old bridge in the 1980s, and to some degree changes the original

context of the property. Nevertheless, the new bridge is also built in metal and follows the same structural principles as the old bridge.

Comparative evaluation

ICOMOS jointly with TICCIH has published a thematic study on bridges, 'Context for World Heritage Bridges', 1997, which discusses the general development of bridge building. The list of examples of the study focuses on older bridges in the 19th century, and does not include the Krasnoyarsk bridge.

ICOMOS has also carried out a study of 'Railways as World Heritage Sites' (A. Coulis, National Railway Museum, York, 1998). This study mentions the Trans-Siberian Railway as part of the development of major railways. It is here compared with the Canadian Grand Trunk Railway, which was built starting in 1853. It can also be compared with the Canadian Pacific Railroad, which took ten years to build for 4,700km (i.e. less than the Trans-Siberian).

The nomination dossier mentions the bridge on the River Lek in Kuilenburg, The Netherlands. This bridge was built in 1868 with a span of 157.5m. Spans over 160m were developed towards the end of the century, e.g. the Firth of Forth Bridge in Scotland. Another type of construction was based on the theory of curved bars (elastic arches), e.g. Münstereifel Bridge in Germany. The Krasnoyarsk Bridge is based on the combination of these concepts applied in particularly complex conditions in Central Asia. It remains one of the rare large examples of this kind from the end of the 19th century. It was the first of its kind in Siberia, though similar bridges had already been built in Europe, and it presents lots innovative technical solutions, for example in the foundations, taking into account the difficulties met by large-scale applications in unknown conditions. The structural solutions developed in the bridge were later applied in a large number of cases in Russia.

There are reported to be only two late-19th century examples of long-span railroad bridges in the USA, which are similar to the Krasnoyarsk Bridge. The Louisville & Nashville Bridge over the Ohio River in Cincinnati was originally built in 1877 and rebuilt in 1897. Recently, the bridge has been subject to various changes and is used for pedestrians. The Pennsylvania Railroad Bridge over the Delaware River at Philadelphia was built in 1896, but it has been extensively altered since.

Outstanding universal value

General statement:

The Krasnoyarsk Railway Bridge over the Yenissei River in Central Asia is a rare remaining example of large-span railway bridges from the late 19th century. It is part of the Trans-Siberian Main Railway, which was built in record time in difficult climatic and geological conditions facing

unknown risks, such as permafrost. The Krasnoyarsk Bridge combines and builds on the scientific and technical knowledge of the period, and makes innovative solutions to meet the challenges.

Evaluation of criteria:

Criterion iv: The Krasnoyarsk Bridge is a crucial part of the Trans-Siberian Main Railway (1891-1916), which is the biggest engineering project of its kind in the world. The bridge is an early representation of a typical parabolic polygonal truss bridge in Russia. It has remarkable dimensions and technological details, and it is one of the last of its kind in the world.

Criterion ii: The Krasnoyarsk Bridge became a testing ground for the application of engineering theories and the development of new innovative solutions, which had numerous successors.

4. ICOMOS RECOMMENDATIONS

Recommendation with respect to inscription

Following the ICOMOS evaluation, the proposed property of the First Railway Bridge over the Yenissei River appears to meet the requirements of outstanding universal value on the basis of criteria ii and iv.

Nevertheless, ICOMOS has not been in the position to send a site mission in order to verify the condition of the bridge within its context and the management structure.

The property was presented as an emergency inscription. Nevertheless, no physical concerns are indicated in the nomination documents. It is understood however that the Ministry of Railways had been considering that possibility of demolishing the bridge as it did not meet the present traffic requirements any longer. Since 1999, the bridge has come under a new administration and it has been listed for protection at the local level. Notwithstanding the requests, the State Party has not provided specific reasons to continue with the emergency inscription.

Considering the above, ICOMOS does not see justification for emergency inscription, and recommends that the inscription should follow the normal procedure, allowing also a site mission to take place.

ICOMOS, 16 June 2003