
Koh Ker (Cambodia) No 1667

1 Basic information

Official name as proposed by the State Party

Koh Ker: Archaeological Site of Ancient Lingapura or Chok Gargyar

Location

Preah Vihear Province
Cambodia

Brief description

Located between the Dangrek and Kulen mountain ranges on a gently sloping hill some eighty kilometres northwest of Angkor, the archaeological site of Koh Ker is a sacred urban ensemble consisting of numerous temples and sanctuaries with associated sculptures, inscriptions, and wall paintings; archaeological remains; and hydraulic structures. Constructed in a single phase over a twenty-three-year period, it was one of two rival Khmer Empire capitals – the other being Angkor – that co-existed between 921 and 928 CE, and was the sole capital from 928 to 944 CE, after which the Empire's capital moved back to Angkor. The city was established by King Jayavarman IV, who claimed the kingship in 921 CE. His sacred city was believed to be laid out on the basis of ancient Indian religious concepts of the universe. The new city demonstrated markedly unconventional city planning, architectural features, artistic expression (the influential Koh Ker Style), and construction technology, notably the use of very large monolithic stone blocks. Although Koh Ker was short-lived as a capital and thus acted only as an interlude in Khmer history, its innovations had a profound and lasting influence on urban construction and artistic expression in the region.

Category of property

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

Included in the Tentative List

27 March 2020

Background

This is a new nomination.

Consultations and technical evaluation mission

Desk reviews have been provided by ICOMOS International Scientific Committees, members, and independent experts.

An ICOMOS technical evaluation mission visited the nominated property from 27 September to 10 October 2021.

Additional information received by ICOMOS

A letter was sent to the State Party on 27 September 2021 requesting further information about the identification and the mapping of the attributes of the proposed Outstanding Universal Value, the rationale of the boundary demarcation in relation to the attributes, research, conservation, interpretation, and visitor management.

Additional information was received from the State Party on 11 November 2021.

An Interim Report was provided to the State Party on 20 December 2021 summarising the issues identified by the ICOMOS World Heritage Panel.

Further information was requested in the Interim Report concerning tourism management, Heritage Impact Assessment, and future research.

Additional information was received from the State Party on 23 February 2022.

All additional information received has been incorporated into the relevant sections of this evaluation report.

Date of ICOMOS approval of this report

9 March 2022

2 Description of the nominated property

Note: The nomination dossier and additional information contain detailed descriptions of this property, its history and its state of conservation. Due to limitations on the length of evaluation reports, this report provides only a short summary of the most relevant aspects.

Description and history

Koh Ker was a capital of the Khmer Empire between 921 and 944 CE. The name Koh Ker is the modern derivative of Chok Gargyar, meaning the ironwood tree in the Cambodian language. It was also known as Lingapura, which is of Indian origin, meaning the city of lingas.

The archaeological site is located between the Dangrek and Kulen mountain ranges and nestled on a gradual slope embraced by hills to the east, south, and west, with the Steung Sen River to the north. The nominated property is partially hidden in the broad-leaf forest, with the towering thirty-five-metre-high Prasat Prang pyramid piercing through the dense arboreal canopy.

The orientation of the city is rotated fourteen degrees clockwise from the cardinal directions, presumably for symbolic, astronomical or political reasons. The layout of the city is presented in the nomination dossier as being based on the shape of the sacred *Padmaka* or *Shiva Shakti* mandala, a concept of city plans from the *Vastu Shastra*, a collection of treatises of ancient Hindu

architecture and town planning, though there are no known contemporary records or inscriptions to confirm the original planning methodology.

The city has no clear boundary, nor does it have a defence system such as a city wall to help define its perimeter. Temples and associated artificial ponds are concentrated in the city centre around the Prasat Thom temple complex, the largest building complex of the city. As the distance from the centre increases, the density of the constructions decreases sharply. Dykes are located primarily at the high contours of the surrounding hills. They were built to prevent the city from flooding, and at the same time to guide water flow to feed city ponds and reservoirs used for ritualistic and utilitarian purposes. Secular buildings are believed to have been constructed of wood, but these have vanished over the centuries.

The nominated property comprises thirty temples and sanctuaries, thirty archaeological remains, and nine hydraulic structures – some elements of these types are also scattered throughout the buffer zone and satellite zone. As the shortage of this report does not allow a detailed account of each of the elements, a selection of the most important temples and sanctuaries, archaeological remains, and hydraulic structures is described here.

A. Temples and sanctuaries

The temples and sanctuaries in the nominated property can be divided into five groups: the Prasat Thom temple complex; the marker temples; the associated temples; other temples; and sculptures, inscriptions, and wall paintings.

Prasat Thom temple complex

Constructed in 921 CE, the first year of the capital's establishment, the Prasat Thom temple complex is the city centre and defining landmark of Koh Ker. The complex includes, along the central axis from the east, the Tomb of the White Elephant King, Prasat Thom (Prasat Prang, Prasat Ruom with surrounding moat, Prasat Kraham, and Prasat Kuk), Prasat Srut, the ceremonial pond, Prasat Balang Tbong, and four linga terraces.

The Tomb of the White Elephant King is a small artificial mound with a huge stone sculpture of an elephant. It has been regarded throughout history as one of the most sacred places in Cambodia.

Prasat Prang is a thirty-eight-metre-high stepped pyramid constructed as the Koh Ker version of Mount Meru and Kailash, the earthly abode of Lord Shiva. At its top is a temple with a huge plinth, which is believed to have enshrined what was the world's largest linga at that time.

Prasat Ruom is a square terrace of twenty-one brick towers and two libraries with rich statues and a strip of wall painting, surrounded by a large moat and accessed by causeways along the central axis. The statues constitute

the unique and outstanding iconography of the so-called Koh Ker Style in Khmer art history.

Prasat Kraham, square in plan and perhaps the biggest open-space brick tower in Khmer architecture, is the gateway of Prasat Thom. Prasat Kuk is a cruciform building linked to Prasat Kraham as a part of the entrance to Prasat Thom. The group of Prasat Srut forms the central bay of the temple complex and comprises two identical buildings laid out symmetrically to the central axis. Prasat Balang Tbong is the central pedestal that lies on the central axis and is separated by the ceremonial pond from Prasat Srut.

The four linga terraces, namely Prasat Balang Cheung, Prasat Thnoeng, Prasat Andong Kuk, and Prasat Sralau, are lined up perfectly perpendicular to the central axis. Prasat Sralau was also a chapel of a hospital constructed during the reign of Jayavarman VII in the 13th century CE by re-using stones and the foundation of a previous temple structure.

Marker temples

The marker temples are those that seem to be directly aligned with the Prasat Thom to form the geometric shape of the sacred mandala. They are Prasat Banteay Pir Choan, Prasat Chen, Prasat Damrei, Prasat Khnar, Prasat Kok Krong, Prasat Krachap, Prasat Neang Khmau, Prasat Pram, Prasat Chrap and Trapeang Ang Khnar. Both Prasat Banteay Pir Choan (Brahma Temple) and Prasat Chen (Vishnu Temple) are equidistant from Prasat Thom (Shiva Temple). Dedicated to Lord Brahma, Prasat Banteay Pir Choan opens towards Prasat Thom, deviating from the usual temple orientation to the east. The temple comprises the central tower surrounded by eight brick buildings. Dedicated to Lord Vishnu, Prasat Chen comprises three laterite sanctuaries that are square in plan and face east. Prasat Banteay Pir Choan, Prasat Chen, and Prasat Thom together represent the Hindu Trimurti (Brahma, Vishnu, and Shiva). Prasat Krachap is the second largest temple complex in Koh Ker after Prasat Thom, and the only temple with a causeway that connects it to the Rahal, the largest reservoir of Koh Ker, suggesting its religious significance.

Associated temples

The associated temples are those that associate with the marker temples to form groups. They are Prasat Beng, Prasat Kraham, Prasat Tuol Kruos, and Prasat Trapeang Rosei.

Other temples

These are important temples randomly scattered in the city centre. There are nine such temples.

Sculptures, inscriptions, and wall paintings

Temples and sanctuaries in Koh Ker are richly adorned with sculptures of Indian epics of *Ramayana* and *Mahabharata*, and the Shaivite and Vishnuite mythologies. These artistic works are particularly rich in the Prasat Thom temple complex, Prasat Chen, and Prasat Kraham. The size of the sculptures and the

movement and dynamic motion expressed by them defined a new artistic style – the Koh Ker Style – which had a profound and lasting impact on the region’s artistic works in subsequent centuries.

There are seventy-three inscriptions found in nine temples of the nominated property. They shed light on the social, economic, cultural, and religious life in ancient Cambodia, and help establish the chronology of Koh Ker as the capital and the construction of its various temples. These inscriptions are typically found on doorjambs, free-standing steles, and temple pillars.

A strip of wall painting is found at Prasat Ruom, which is the sole survivor of this type of art in the nominated property.

B. Archaeological remains

The archaeological remains in the nominated property can be categorised into five groups: the Royal Palace complex; platforms and pedestals; boundary stones; quarry sites; and artefacts.

The Royal Palace complex

Located approximately 500 metres south of Prasat Thom, the rectangular palace complex is enclosed by a gallery with the solid wall facing outward. Andong Preng is a rectangular artificial pond located at the northeast corner of the compound. Roof tiles were found to the west of the pond, suggesting there were once buildings there. Some palace structures were found southeast of the compound, including drainage components, basements of buildings, and a brick floor. The east gate of the palace, with a laterite basement and roof tiles on the ground, has been identified.

Platforms and pedestals

There are fourteen laterite platforms, which are thought to be the foundations for wooden sanctuaries. The similar proportions of these platforms suggest there once was a standardised construction system prevalent at the site. There are also remains of pedestals with no traces of having had platforms.

Boundary stones

Boundary stones (*gol* in Khmer) were placed at the corners of land plots to determine and delineate the temple domains. Only a few boundary stones have been found in Cambodia, of which six are in the nominated property, five in the buffer zone, and one in the satellite zone.

Quarry sites

Three sandstone quarries have been found from where the grey to yellowish-brown sandstone blocks used in Koh Ker’s monuments likely originate.

Artefacts

Artefacts have been collected from above ground and in excavations, including fragments of clay roof tiles, shards

of earthenware, shards of Khmer and Chinese ceramic, iron staples, and clamps.

C. Hydraulic structures

The water management system at Koh Ker is a combination of a highland system of damming river valleys and a lowland system of reservoirs, channels, and bunded fields. This amalgamation of techniques is unique to the Khmer history. The hydraulic structures of this water management system can be classified into two broad categories: artificial ponds, and embankments.

Artificial ponds

Artificial ponds were constructed for religious and utilitarian purposes. In addition to the numerous water bodies associated with temples, there are five nationally registered artificial ponds in the nominated property. Situated in the city centre southeast of the Prasat Thom temple complex, the Rahal is the largest artificial pond. With an almost rectangular plan, it measures approximately 1140 metres by 500 metres, and is three to four metres deep.

Embankments

Embankments are essential during the wet season to prevent the city from flooding, and to collect water for living during the dry season. They also guide water from various sources to run through the lingas of temples or sanctuaries for the purpose of sanctification. There are five nationally registered embankments in the nominated property, and many more in the buffer zone and satellite zone.

The nominated property has an area of 1,187.61 ha and a buffer zone of 3,523.77 ha. An additional 4,078.05 ha “satellite zone” beyond the buffer zone has been established to protect the wider setting of the nominated property.

The earliest evidence of the human occupation of Koh Ker was a small settlement in the 6th century CE. In 921 CE, King Ishanavarman II ascended the throne at Angkor, the capital of the Khmer Empire. At the same time, Jayavarman IV claimed his kingship and began to establish his own capital city at Koh Ker to rival the legitimate one at Angkor. As a result, between 921 and 928 CE the Khmer Empire was ruled by two kings from two capitals at the same time. Ishanavarman II died in 928 CE, and Jayavarman IV formally ascended his rival’s throne and ruled the Empire from Koh Ker until his demise in 941 CE. His son Harshavarman II continued to use Koh Ker as the capital until 944 CE, when King Rajendravarman II ascended the throne and moved the capital back to Angkor. Koh Ker thus became a secondary city of the Khmer Empire and remained so during the Angkor period from the 10th to 15th centuries. Koh Ker was abandoned after the 15th century.

Koh Ker was constructed in a single phase between 921 CE and 944 CE, possibly according to a preconceived layout of a sacred mandala. During this period, most of

the Koh Ker temple complexes, individual temples, artificial ponds, and pedestals were built, and a sophisticated hydraulic system was constructed to transform the often-flooded area into habitable land. Inscriptions found on site indicate that between 928 and 944 CE, when Koh Ker was the sole capital, more than 10,000 people lived in and around the city. Only two temple complexes were constructed in Koh Ker after 944 CE, when the capital moved back to Angkor.

Koh Ker was rediscovered in 1873 by French researcher Louis Delaporte. In the following century, several French scholars documented and studied the archaeological site and identified the Koh Ker Style as a unique artistic achievement.

State of conservation

The landscape and setting of the nominated property are in a good state of conservation, without any disturbance from modern development or other similar activities.

Sixty-three conservation projects and related works have been undertaken since 2017, including surveys, documentation, condition assessments, conservation and repair, stabilisation, archaeological excavations, research, outreach, environmental and ecosystem restoration, landscape improvements, tourism facility upgrading, and community development.

The National Authority for Preah Vihear (NAPV) has been undertaking regular monitoring and maintenance. Emergency stabilisation of unstable temple constructions has been conducted to prevent the structures from collapsing and to gain time for detailed planning, research, and subsequent interventions.

Over the years since Koh Ker's abandonment in the 15th century, many artificial ponds have silted up and been transformed into paddy fields, although the original function of water collection during the wet season still remained to a certain degree. Recent attempts have been made to systematically restore the hydraulic structures. As the result, the Rahal reservoir has been restored, and more ponds are to be reclaimed by the government.

Based on the information provided by the State Party and the observations of the ICOMOS technical evaluation mission, ICOMOS considers that the site, although in a ruined state, is stable, and that the state of conservation is good.

Factors affecting the nominated property

Based on the information provided by the State Party and the observations of the ICOMOS technical evaluation mission, ICOMOS considers that the main factors affecting the nominated property are environmental pressures, notably vegetation growth, temperature and moisture fluctuation, and forest fire. Farming activities may also be a factor in the future.

Vegetation growth is the main cause of structural damage to and collapse of the archaeological ruins. It also

provides the opportunity for water ingress and soil deposition, which accelerate the damage.

Temperature and moisture fluctuations create tension between the surface and subsurface of the building materials such as sandstone and laterite, causing slow but accumulated deterioration.

Farming activities could potentially damage the landscape, the hydraulic systems, and the natural environment in the buffer zone over time. The NAPV currently has these activities under control.

An additional environmental factor is forest fires in the dry season. Risk mapping is carried out routinely, with information being updated in a timely fashion. The risk management mechanism is in place and effective.

ICOMOS considers that the state of conservation is good and that factors affecting the nominated property are under control.

3 Proposed justification for inscription

Proposed justification

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Koh Ker is an exceptional example of a sacred urban ensemble, envisaged and planned in a single phase, in a remarkably different approach from previous town planning practices, as evident from the changes in existing norms of alignments, scale, and aesthetics of the time.
- This sacred and ceremonial centre responded to local topographical settings with large infrastructures for protection, connectivity, and water management, creating an iconic and symbolic city infused with geometric order and religious symbolism in harmony with nature.
- The city shows how influences from Indian religion, town planning, architecture, and artworks were adapted, assimilated, and refined into a distinctive local style – the Koh Ker Style – which had a lasting impact on the art and architecture design of the region.
- The divinisation of the king as a political idea through the Devaraja cult, manifested in architecture and art for the first time at Koh Ker, became the source of inspiration for the great monuments of Angkor and in Southeast Asia in later centuries.

Based on the nomination dossier and the additional information, the key attributes of the nominated property can be grouped as follows: the spatial layout of the city, the temples and sanctuaries, the archaeological remains, the hydraulic structures, and the traditional religious activities.

Comparative analysis

The comparative analysis has been developed around three parameters: influences, impacts, and interpretations. Comparisons are made at the national, regional and global levels. The properties selected for comparison are inscribed on the World Heritage List, included on States Parties' Tentative Lists, and listed at States Parties' national level. The geo-cultural region is inferred to be Southeast and South Asia, though the State Party has included selected comparisons from a global perspective.

At the national level, nine sites were selected for comparison, two of which are on the World Heritage List, two are on Tentative Lists, and five are similar in construction date to the nominated property.

The nominated property stands apart from these comparators by its innovative urban planning, architectural style, symbolism, aesthetics, hydraulic system, and use of megalithic stone for temple construction. These innovations were adopted and adapted in the successive dynasties of the Khmer Empire. The nominated property also testifies to the beginning of the lasting tradition of materialising Devaraja, the idea of elevating the status of a king to a god-king by using the symbolism of temple architecture and town planning, based on the same idea used only conceptually by King Jayavarman II in 802 CE. Furthermore, the height and scale of Prasat Prang were never surpassed by any later structures.

At the regional level, eighteen sites from Thailand, Myanmar, Viet Nam, Indonesia, India, Laos, and Nepal were selected for comparison, of which eleven are inscribed on the World Heritage List and one is included on a State Party's Tentative List.

While influences from ancient Indian town planning are evident in several sites in the region, the comparisons set the nominated property apart by the grand vision reflected in its urban planning, as well as by its combination of art, architecture, city planning, symbolism, and religious and secular functionality in a single city. Furthermore, Koh Ker is a snapshot of Khmer history, having largely escaped from later overlays of other periods or eras.

At the global level, three properties on the World Heritage List and one nationally listed site were selected for comparison. These are Pre-Hispanic City of Chichen-Itza (Mexico, 1988, criteria (i), (ii) and (iii)), Tikal National Park (Guatemala, 1979, criteria (i), (iii), (iv), (ix) and (x)), Monuments of Oviedo and the Kingdom of the Asturias (Spain, 1985 and 1998, criteria (i), (ii) and (iv)), and Amarna (Akhenaten), in Egypt. Its imbued Indian influence sets the nominated property apart. While sharing the common concept of using pyramids to express religious and political powers, each site demonstrates its unique culture.

ICOMOS considers that the sites selected for comparison at both national and regional levels are appropriate, the logic underpinning the comparative analysis is sound, and the conclusions reached are valid.

ICOMOS considers, however, that the comparators selected at the international level are not so relevant to highlighting and understanding the values of the nominated property.

ICOMOS considers that the comparative analysis overall justifies consideration of this property for the World Heritage List.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii) and (iv).

Criterion (ii): *exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;*

This criterion is justified by the State Party on the grounds that the nominated property is an outstanding example of cultural exchanges between Indian religious symbolism and Indigenous cultural values and traditions, as demonstrated by the urban design, architecture, and arts of the early 10th century Khmer Empire, which had an enduring impact in the Khmer Empire and on a wide part of Southeast Asia. The Koh Ker Style was created by interpreting, adapting, assimilating, and refining ancient Indian religious concepts, iconography, and accompanying architectural and artistic expression. The complex symbolic imagery of the capital city is a materialised inspiration of Indian religious philosophies.

ICOMOS considers that many cities and settlements in South and Southeast Asia, including the nominated property, exhibit strong cultural and religious influences from India in terms of town planning and architectural design. What has not been demonstrated at this stage is the outstandingness of these influences as presented by the nominated property as compared with the town planning and architectural design of other cities in the geo-cultural region.

ICOMOS considers, however, that the Koh Ker Style is the product of the fusion of Indian religious symbolism with Indigenous cultural values and traditions. This new artistic expression features dynamism and monumental representation, communicating a sense of power and grandeur in its sculptural art, which was previously unseen in India and countries in the region. The Koh Ker Style subsequently exerted a strong influence on the art and architecture of the later dynasties of the Khmer Empire, and in the region beyond national boundaries. This interchange of values, as demonstrated by the Koh Ker Style, justifies this criterion.

Criterion (iv): *be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;*

This criterion is justified by the State Party on the grounds that Koh Ker is an outstanding example of an urban ensemble of a preconceived layout of the sacred symbolic mandala representing the Shiva cult, which showed a marked advance over similar attempts in the region, including the Indian subcontinent. The State Party indicates that the use of colossal monolithic stone blocks in construction and sculptures inaugurated a centuries-long phase of stone temple construction across the Khmer Empire.

ICOMOS considers that ancient cities in South and Southeast Asia frequently appropriated shapes of sacred patterns having their origins in Indian religious motifs. ICOMOS does consider, however, that the nominated property demonstrates a marked difference from previous cities and towns of the Khmer Empire in terms of its urban design, religious symbolism, artistic expressions, construction techniques, and scale of buildings. The use of megalithic stone blocks for construction made the grand scale of buildings possible, which established an outstanding prototype of city construction that profoundly transformed the urban landscape of the later dynasties, culminating in Angkor Wat in the 12th century, an architectural marvel of the world. ICOMOS considers that this criterion is justified for this latter reason.

ICOMOS considers that the nominated property meets criteria (ii) and (iv).

Integrity and authenticity

Integrity

The integrity as proposed by the State Party is based on the wholeness and completeness of the urban centre of Koh Ker, as demonstrated by the spatial relationship between the temples and sanctuaries, archaeological remains, and hydraulic structures. All the elements that contribute to the potential Outstanding Universal Value of the nominated property are included within the property area, with few being included in the buffer zone and satellite zone, and most of them remained unchanged after the city was abandoned in the 15th century. The hydraulic structures are mostly intact, with some still functioning today to fulfil the needs of the local communities.

An important array of statues, sculptures, and inscriptions, as well as traces of paintings, are still an integral part of the original structures of Koh Ker. Some sculptures were looted in the past, particularly during the civil war period between 1967 and 1975. The looting has effectively been stopped with the enforcement of laws and the establishment of a management body. Many looted sculptures have been repatriated from abroad. Important sculptures have been transferred to the national museums for restoration, with replicas proposed to be installed in the

original places for interpretation purposes. The major threats to the nominated property are under control.

ICOMOS considers that the conditions of integrity have been met.

As mentioned in the Interim Report, ICOMOS considers that, in the future, research and archaeological investigations should be undertaken in the wider setting of the nominated property, particularly on the hills that embrace the city, in order to understand the hydraulic systems that were once a part of the original city planning and were the critical infrastructure that transformed the wild landscape into a habitable place for more than 10,000 people.

Authenticity

The authenticity of the nominated property is based on its ability to truthfully and credibly express its cultural values through its location and setting, forms and designs, and materials and substances, as demonstrated by the archaeological evidence.

The authenticity of the nominated property is high. Having been abandoned since the 15th century it thus escaped from later modifications, has effectively preserved the original landscape, location and layout of the city, the spatial arrangement of the temples and hydraulic structures, and the forms, designs and materials of the structures. The past conservation interventions were mainly restrained to stabilisation and maintenance. Many temples and water bodies, though in a ruined state, still perform their original functions, contributing to the spiritual and secular lives of the local communities.

ICOMOS considers that the nominated property meets the conditions of authenticity.

In conclusion, ICOMOS considers that the conditions of integrity and authenticity of the nominated property have been met.

Boundaries

There are no inhabitants in the nominated property. As of 2019, 1,108 inhabitants (237 households) live in the buffer zone and 212 (52 households) in the satellite zone.

The boundaries of the nominated property follow those of the archaeological site listed and protected by Royal Decree promulgated in May 2004. They have been delineated to encompass the original sacred centre of Koh Ker created by King Jayavarman IV together with the main associated elements of the archaeological site, including its sacred geometry, the main temples, and their axial alignments. The boundaries are also influenced by the designation under the Law on the Protection of Cultural Heritage (1996) and related bylaws.

The buffer zone conforms to the surrounding landmarks, natural terrain, and associated civic infrastructure such as a dyke, and the Royal Road. These features acted as reference points for establishing the urban ensemble of

Koh Ker in the early 10th century CE. Development in this area is highly regulated, and all the temples in this zone are accorded the same protection as the temples within the nominated property.

A “satellite zone” beyond the buffer zone provides a wider protected zone under the national laws. All restrictions on development also apply to this zone, which is intended to be managed in the interest of sustainable social and economic development of the site.

Three small villages are located in the buffer and satellite zones.

Evaluation of the proposed justification for inscription

In summary, ICOMOS considers that the comparative analysis justifies the consideration of the nominated property for the World Heritage List. The nominated property meets criteria (ii) and (iv), as well as the conditions of integrity and authenticity. The underlying logic for the boundary demarcation is sound and appropriate, and the current property area, buffer zone and satellite zone provide adequate protection for the nominated property.

4 Conservation measures and monitoring

Documentation

The inventories of the attributes of the nominated property are comprehensive and detailed, including the built heritage, archaeological remains, sculptures and paintings, inscriptions, water bodies and ponds, archival images, and trees. These inventories and other documents are available at the National Authority for Preah Vihear (NAPV) office. They represent useful baseline information for management, monitoring, conservation intervention, and research.

Conservation measures

Emergency stabilisation has been undertaken since the 1990s to secure the structures from collapse. Structural conservation, regular maintenance, and monitoring have been performed continuously by the NAPV to keep the archaeological site from deteriorating further. Archaeological remains have been inventoried and documented, and the excavated sites have been backfilled to protect the historic fabric from further damage. Ponds and reservoirs that had silted up over the years are being restored to their original states by the NAPV.

ICOMOS considers that inscriptions are one of the most important sources of information for Cambodian history, yet they are often located in vulnerable locations such as at the entrances of temples on the lower parts of the walls facing passageways. ICOMOS requested additional information in November 2021 on the specific measures that have been taken for their protection, conservation and monitoring from both gradual deterioration and

accidental damage. The State Party replied that these inscriptions have been documented with photogrammetry, rubbing and digitisation; they are fenced for physical protection, cleaned, desalinated, and treated against biological deterioration.

A temporary shelter has been constructed over Prasat Room to protect the only wall painting found in the nominated property. Risk mapping and condition assessment of some of the structures have been undertaken to develop and prioritise conservation treatments. Conservation interventions follow internationally accepted principles and procedures.

Monitoring

The current monitoring activities benefit from the existing documentation, which acts as baseline information for measuring changes and predicting trends. Specific monitoring indicators focus on management and protection, conservation, regional development, tourism and outreach, World Heritage site awareness, environmental quality, green agenda, and risk. The departments under the NAPV are responsible for monitoring. Daily monitoring of the nominated property is performed by security staff who are overseen by a supervisor and reporting personnel.

The NAPV has a reporting and reviewing system, which is in fact an effective monitoring mechanism. There is a monthly, biannual, annual, and five-year reporting and reviewing mechanism within the NAPV, which compels the relevant departments under NAPV to constantly assess the conditions of the archaeological site and its wider setting.

ICOMOS considers that it would be advisable to further develop the monitoring system to reflect the factors affecting the property and ensure easy integration of monitoring outcomes into the Periodic Reporting questionnaire.

ICOMOS considers that the current comprehensive inventory and documentation provide a good foundation for conservation, management, and monitoring. The conservation measures are effective, and the monitoring mechanism will be adequate once it is further developed to take into account the factors affecting the property and adapted for easy integration of monitoring outcomes into the Periodic Reporting questionnaire.

5 Protection and management

Legal protection

Of the nominated property's total area, 93.1 percent is in public ownership and 6.9 percent is privately owned by the local population as farmland.

There are five national laws that protect the nominated property. The Royal Decree on the Establishment of Koh Ker Temple Site, NS/RKT/0504/070, promulgated in 2004 and amended in 2020, mandates the protection of temples, art objects, archaeological and anthropological remains, and ancient hydraulic infrastructure, as well as the natural landscape, forest ecosystem, and biodiversity. It demarcates the nominated property, its buffer zone, and its satellite zone.

The Law on the Protection of Cultural Heritage (1996) is the principal law for the protection of national cultural property against illegal destruction, vandalism, and illicit transfer of ownership, excavation, export and import of artefacts. The Land Law (2001) stipulates that the archaeological site and cultural and historical heritage are state property. The Law on Forestry (2002) requires strict protection of the forest ecosystem within the recreational and religious forests that are in the Permanent Forest Estate category. The Royal Decree on the Organisation and Functioning of the National Committee for Disaster Management (2015) defines the organisation and functioning of the National Committee for Disaster Management as the headquarters of the Royal Government for leading, administering, and coordinating all activities responding to either natural or human-made disasters in Cambodia.

ICOMOS considers that the current legal protection of the nominated property is adequate.

Management system

In 1999, the Ministry of Culture and Fine Arts commenced managing the archaeological site. From 2005 to 2016, the management responsibility was transferred to the APSARA National Authority for the Protection and Management of Angkor. Responsibility was shifted to the National Authority for Preah Vihear (NAPV) in 2016.

The Ministry of Culture and Fine Arts is the highest national institution responsible for managing the nominated property. Under the Ministry, the NAPV is the site manager responsible for maintenance, protection, monitoring, upkeep, conservation, documentation, research, archaeological surveys and excavations, museum management, cultural tourism-related activities, community education, awareness-raising, development, outreach, environmental protection, and risk management. It also assesses all requests for construction within the nominated property.

The NAPV is governed by a Board of Directors whose mission is to set directions and supervise the NAPV's activities. Chaired by the Ministry of Culture and Fine Arts, the Board consists of representatives from the office of

the Preah Vihear Provincial Governor and the ministries of Economy and Finance; Interior; Land Management, Urban Planning and Construction; Tourism; and Environment. The NAPV is managed by a Director-General who is supported by Deputy Directors-General and operated through six technical departments: conservation and archaeology; land management and community development; tourism development; environment, forestry and water; public order and cooperation; and administration and finance.

The expertise of the NAPV staff includes archaeology, architecture, stone conservation, museology, engineering, history, forestry, agriculture, tourism, information technology, land use management, and community development. Funding for NAPV comes from the national budget and the Angkor Conservation and Development Fund. In addition, the NAPV also receives financial and technical support from member countries of the International Coordinating Committee for the Safeguarding and the Development of Preah Vihear (ICC-PV).

The ICC-PV, established in 2014 by Cambodia in collaboration with UNESCO, is a consultative body comprising the Royal Government of Cambodia, two co-chair countries (China and India), six founding countries, and a group of *ad-hoc* experts. It examines general policy matters related to safeguarding the property in conformity with international conservation standards; follows up the conservation and development activities conducted by the NAPV and its partners; and makes recommendations. The ICC-PV has included Koh Ker in its activities since 2016. Funds for conservation are raised through ICC-PV member countries.

The ICC-PV normally meets twice a year, during a technical session in March and a plenary session in September. Prior to the meetings, the *ad-hoc* experts are invited to the site to discuss with staff any issues that have been identified. During the meetings, the condition of the site, the progress made during the previous six months, and issues to be addressed are discussed and action plans are made. After the meetings the NAPV then implements the plans accordingly.

Site management is guided by a five-year Comprehensive Cultural Management Plan (CCMP), which was developed, approved, and implemented in 2020 by the NAPV. The management plan is divided into two parts: a general management plan, and four sectoral plans. The general management plan includes an overview of the nominated property, the current management system, threats and challenges, management strategies, implementation strategies, and an action plan. The sectoral plans are the Conservation Management Plan, Tourism Management Plan, Regional and Community Development Plan, and Disaster Management Strategies. All the activities, initiatives, and strategies are prioritised into four categories: immediate (0-1 year), urgent (1-2 years), necessary (2-5 years), and desirable (5-10 years).

Guidelines for conservation interventions are provided, which are in line with internationally accepted principles.

Heritage Impact Assessment and Environmental Impact Assessment processes are embedded in the management plan. In addition, before conducting large conservation interventions, a rapid risk assessment and documentation – which is in essence a heritage impact assessment – is performed and issues are presented, discussed, and evaluated at the biannual ICC-PV meetings, which result in recommendations.

Risk management applies to both the natural environment and cultural heritage. Environmental risk management deals primarily with wildfires. In the dry season, the underbrush around the temples that are in potential fire zones is regularly cut back. The NAPV has rangers monitoring the entire archaeological site twenty-four hours a day from six locations. Dissemination seminars for the local population also cover the topic of uncontrolled burning of rice fields. There is a risk mapping team comprised of staff members from different departments of the NAPV. This team meets twice a week to schedule the investigation of structures and to discuss the observations made.

The CCMP has laid a solid foundation for the conservation and management of the nominated property. Its implementation will undoubtedly require significant human resources. ICOMOS considers that capacity building should therefore be a top priority for the NAPV.

ICOMOS notices that in recent years, research on the history, urban planning, artistic and architectural styles, hydraulic engineering, and sacred and secular lives of the Koh Ker people has been progressing. ICOMOS considers, however, there is a lack of an overall strategy for future research to guide the conduct of all research in the context of the CCMP, and to expand the understanding of the Outstanding Universal Value of the property. In the Interim Report, ICOMOS raised this issue and asked whether the State Party envisages such a strategy, and when it could be developed. The State Party responded positively with the commitment to develop such a strategy, and provided a list of the proposed activities with existing partners to conduct further research on specific fields in the next two to five years.

ICOMOS considers that the current management system is adequate.

Visitor management

The Koh Ker archaeological site, which is accessed by three National Roads, is one of the key tourist destinations in the country. Currently, there are twenty-one temples open to visitors. They are linked by a gravel road that serves a visitor circuit. Traffic signs have been installed along the main road from the entrance to the visitor circuit. The main parking area is located in front of the Prasat Thom temple complex, which is overcrowded at times, especially at peak time during the high tourist season. There are smaller parking areas at several other locations

across the site. A booth is located in the buffer zone near the site's entrance, from where tourists can purchase tickets, obtain information, and use the restrooms. There are two local guesthouses (twenty rooms), one resort (five rooms), and three local restaurants at Srayang Township, located south of the nominated property in the buffer zone just before the entrance to the site. Local eating places and restrooms are available at the Prasat Thom temple complex.

The Koh Ker archaeological site received approximately 300 to 400 tourists per day in 2017 and 2018. Generally, large numbers of domestic tourists visit from March to April and from September to November, while international tourists normally visit between November and February. The number of visitors is expected to increase in the event of the property being inscribed on the World Heritage List. The State Party estimates that the carrying capacity of the twenty-one temples currently open to the public is 3,000 to 4,000 tourists per day. As indicated in the State Party's Additional Information letter responding to the ICOMOS' Interim Report, the carrying capacity of the individual monument will be established in 2022 depending on the available funds.

A Tourism Management Plan has been developed as a sectoral plan of the CCMP. New visitor circuits are planned to provide access to more temples in order to reduce pressures on the most popular ones. A large visitor centre complex is proposed to be constructed to the south of the nominated property in the buffer zone, with a ticket office, restaurants, workshops, and shops. Tourists will park here and change to more environmentally friendly vehicles such as electric cars and bicycles. Better designed signage with QR (Quick Response) applications to facilitate visitors' access to information are also proposed, as are improved parking areas. The local communities are encouraged by the NAPV to develop initiatives for restaurants, visitor accommodation, and selling local goods. As indicated in the State Party's Additional Information letter responding to the ICOMOS' Interim Report, all these planned activities will be subject to a prior Heritage Impact Assessment for evaluation by the World Heritage Centre and ICOMOS. Tourism initiatives will be closely monitored and supervised by the NAPV.

ICOMOS considers that the current visitor management is adequate. ICOMOS welcomes the State Party's commitment to conducting the Heritage Impact Assessment for the planned visitor centre and other infrastructure.

Community involvement

The local communities still use the temples and the Tomb of the White Elephant King as places of worship, and use the ancient water bodies and hydraulic systems. The NAPV employs the villagers to assist with activities such as conservation intervention, restoration, surveying, documentation, and archaeological excavation, which not only increases their income but also raises their awareness of the value of the archaeological site. Awareness-raising

workshops have been held to encourage villagers to appreciate the temple sites. Selected villagers were brought to the National Museum of Cambodia in Phnom Penh to see the statues that were brought or looted from Koh Ker. Community development has been one of the top priorities for the NAPV, with a department dedicated specifically to this aspect.

Effectiveness of the protection and management of the nominated property

In summary, ICOMOS considers that both the legal protection of the nominated property and the management system are satisfactory. Capacity building should be a top priority for the long-term site management. The current visitor management and community involvement are adequate. The carrying capacity for each monument should be established, and Heritage Impact Assessment for the proposed tourist centre should be undertaken prior to the commencement of the work.

6 Conclusion

Koh Ker was a short-lived capital of Khmer Empire for only twenty-three years, yet it had exerted a profound influence on the later dynasties and beyond the country. The primary interesting features of Koh Ker: Archaeological Site of Ancient Lingapura or Chok Gargyar are its artistic expression of the Koh Ker Style, which had a strong influence on the monumental and sculptural arts of the region, and its use of megalithic stone block for construction, which profoundly transformed the urban landscape and temples of the later dynasties of the Khmer Empire.

ICOMOS considers that the nominated property meets criteria (ii) and (iv), the conditions of integrity and authenticity, and the protection and management of the property are satisfactory.

ICOMOS considers that the nominated property justifies inscription on the World Heritage List.

7 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that Koh Ker: Archaeological Site of Ancient Lingapura or Chok Gargyar, Cambodia, be inscribed on the World Heritage List on the basis of **criteria (ii) and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief Synthesis

Koh Ker: Archaeological Site of Ancient Lingapura or Chok Gargyar was a capital of the Khmer Empire between 921 and 944 CE. Partially hidden in a dense broad-leaf forest between the Dangrek and Kulen mountain ranges on a gently sloping hill some eighty kilometres northwest

of Angkor, the archaeological site comprises numerous temples and sanctuaries with associated sculptures, inscriptions, and wall paintings, archaeological remains and hydraulic structures.

Established by King Jayavarman IV in 921 CE, Koh Ker was one of two rival capitals of the Khmer Empire that co-existed between 921 and 928 CE – the other being Angkor – and the sole capital until 944 CE, after which the Empire's political centre moved back to Angkor. Constructed in a single phase over a twenty-three-year period, the sacred city was believed to be laid out on the basis of ancient Indian concepts of the universe. Koh Ker demonstrated markedly unconventional city planning and architectural features, which were primarily the result of the combination of King Jayavarman IV's grand political ambition and the two outstanding innovations that helped to materialise this ambition: the artistic expressions of the Koh Ker Style, and the construction technology using very large monolithic stone blocks. Although short-lived as a capital and thus acting only as an interlude in Khmer history, these innovations had a profound and lasting influence on urban construction and artistic expression in the region.

Criterion (ii): The archaeological site of Koh Ker exhibits in an exceptional way the interchange of human values that resulted in the Koh Ker Style, a sculptural expression featuring bold, expressive imagery and a dynamic sense of movement that resulted from the fusion of Indian religious and artistic symbolism with local design concepts and artistic craftsmanship. The Koh Ker Style, though formed within a short period of twenty-three years in the 10th century, had an enduring influence on the artistic expression of the subsequent period of the Khmer Empire and other Southeast Asian countries.

Criterion (iv): The archaeological site of Koh Ker is a prototype of a new urban landscape featured by grand-scale buildings, thanks to the use of colossal monolithic stone blocks for construction and sculptures. It had inaugurated a centuries-long phase of stone temple construction across the Khmer Empire and became a source of inspiration for the great monuments of Angkor and Southeast Asia in later centuries.

Integrity

All attributes necessary to express the Outstanding Universal Value of the property, including the temples and sanctuaries, archaeological remains and hydraulic structures, are included within the property. The layout and built environment of the entire ancient capital are evident. Many looted sculptures have been repatriated. Threats to the attributes are under control.

Authenticity

The link between the property's attributes and its Outstanding Universal Value is truthfully expressed, and the archaeological remains can be said to truthfully convey their meaning; there are no conjectural reconstructions. The absence of later modifications or

reuse after its abandonment in the 15th century has left the property with a high level of authenticity in terms of its location and setting, forms and designs, and materials and substances, as demonstrated by the archaeological evidence. The geographical location of the ancient capital city, the layout of the original urban plan, and the archaeological remains of the temples, royal palace, hydraulic systems, sculptures, inscriptions, and wall painting are authentically preserved *in situ*. The property is the same size and is in almost the same condition as at the time of its documentation in the late 19th century.

- e) Adjusting the monitoring system to take into account the factors affecting the property and for easy integration of its outcomes into the Periodic Reporting questionnaire;

Management and protection requirements

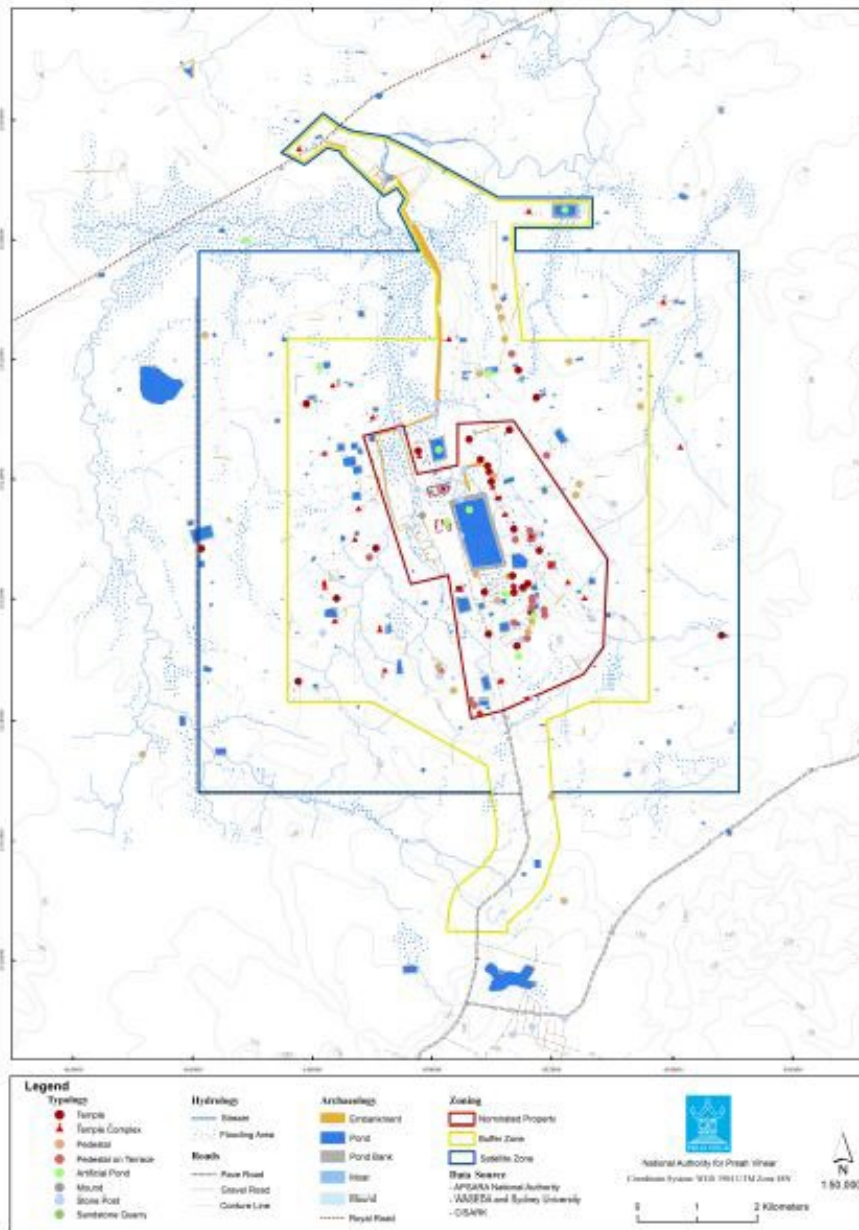
Koh Ker: Archaeological Site of Ancient Lingapura or Chok Gargyar is protected by the Law on the Protection of Cultural Heritage (1996). The Royal Decree on the Establishment of Koh Ker Temple Site, NS/RKT/0504/070, of 2004, as amended in 2020, defines the boundaries of the property, the buffer zone, and the satellite zone beyond the buffer zone.

The National Authority for Preah Vihear (NAPV) is the dedicated governmental authority that oversees policy formulation and implementation for the protection and conservation of the property, and for combating illegal destruction, alteration, excavation, alienation or exportation of cultural objects at both Preah Vihear and Koh Ker. The NAPV technical teams, together with the active participation of the community, undertake activities for the conservation and promotion of the property according to a Comprehensive Cultural Management Plan. The International Coordinating Committee for Preah Vihear advises and monitors all NAPV activities. Heritage Impact Assessment mechanisms have been embedded in the current management system. Risk management for both the natural environment and the cultural heritage is carried out by staff with adequate equipment following established procedures. Specific long-term expectations include building up staff capacity.

Additional recommendations

ICOMOS further recommends that the State Party give consideration to the following:

- a) Establishing the carrying capacity for each monument,
- b) Undertaking a full Heritage Impact Assessment for the proposed visitor centre complex, and for any other development projects and activities that are planned for implementation within or around the property,
- c) Developing an overall research strategy to guide the conduct of all future research in order to further improve the understanding of the Outstanding Universal Value of the property,
- d) Strengthening the capacity of the staff for the long-term protection, conservation, and management,



Map showing the boundaries of the nominated property