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## Hill Forts of Rajasthan (India) No 247rev

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### Official name as proposed by the State Party

Hill Forts of Rajasthan

### Location

District of Chittorgarh, City of Chittorgarh; District of Rajsamand, City of Kumbhalgarh; District of Sawai Madhopur, City of Sawai Madhopur; District of Jhalawar, City of Jhalawar; District of Jaipur, City of Jaipur, District of Jaisalmer, City of Jaisalmer, State of Rajasthan  
India

### Brief description

Within the State of Rajasthan, six extensive and majestic hill forts together reflect the elaborate, fortified seats of power of Rajput princely states that flourished between the 8<sup>th</sup> and 18<sup>th</sup> centuries and their relative political independence.

The extensive fortifications - up to 20 kilometres in circumference - exploit the contours of the hills, and specifically the river at Gagron, the dense forests at Ranthambore, and the desert at Jaisalmer.

Within their defensive walls, the distinctive architecture of palaces and other buildings reflects their role as centres of courtly culture, and places of patronage for learning arts and music. As well as housing for the court and military guard, forts included urban settlements (some of which have survived), and some had mercantile centres reflecting the trade that underpinned their wealth. Most of the forts had temples or sacred buildings, some pre-dating the fortifications and outliving the Rajput kingdoms. And collectively the forts contain extensive water harvesting structures, many of which are still in use.

### Category of property

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

## 1 Basic data

### Included in the Tentative List

13 December 2010

### International Assistance from the World Heritage Fund for preparing the Nomination

None

### Date received by the World Heritage Centre

1 February 2011

31 January 2013

### Background

This is a referred back nomination.

At its 36<sup>th</sup> session (St Petersburg, 2012), the World Heritage Committee, adopted the following decision:

Decision: 36 COM 8B.22

*The World Heritage Committee,*

1. *Having examined Documents WHC-12/36.COM/8B and WHC-12/36.COM/INF.8B1,*

2. *Refers the nomination of the Hill Forts of Rajasthan, India, back to the State Party, in order to allow it to:*

a) *Provide a more detailed approach for the selection of the components to show that they present the various categories of Rajput military architecture in the whole range of the Rajput kingdoms' physiographical terrain,*

b) *Provide more information on management of the five components under the Fort Apex Advisory Committee and the overarching authority for the serial nomination;*

3. *Recommends that the State Party requests an advisory mission to the site or discusses other forms of dialogue to encourage the upstream process which is essential for this nomination.*

An ICOMOS Advisory Mission visited Rajasthan from 23 to 26 November 2012.

### Consultations

ICOMOS consulted its International Scientific Committee on Fortifications and Military Heritage as well as several independent experts.

### Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 23 August to 2 September 2011.

### Additional information requested and received from the State Party

For the initial nomination, ICOMOS sent a letter to the State Party on 9 September 2011 requesting additional information with regard to the justification for the serial approach and selection of sites, the justification for criteria (ii), (iii) and (iv), the definition of boundaries and buffer zones, as well the overall management framework. The State Party provided additional information in response to the questions raised on 24 October 2011, which is included under the relevant sections below.

For the revised nomination, ICOMOS sent of letter to the State Party on 18 February 2013 requesting further information on Jaigarh Fort. The State Party provided additional information on 28 February 2013 and this is included in this report.

### Date of ICOMOS approval of this report

6 March 2013

## 2 The property

### Description

The Hill Forts of Rajasthan are presented as a serial nomination of six sites located on rocky outcrops of the Aravallis mountain range in the south-eastern part of Rajasthan and in the desert of western Rajasthan. They represent Rajput military hill architecture, which optimises the defensive properties of the terrain. All six properties share multi-gated approaches, which provide access through massive and often high fortification walls, as well as central palace areas, temples, memorials and water reservoirs within the inner boundaries.

The property consists of:

- Chittorgarh Fort
- Kumbhalgarh Fort
- Ranthambore Fort
- Gagron Fort
- Amber Fort
- Jaisalmer Fort

The six component sites are described in turn below to demonstrate how each contributes to the series as a whole.

- Chittorgarh Fort

Chittorgarh Fort, on its isolate rocky plateau, rising 500 feet above the plain, developed between the 8<sup>th</sup> and 16<sup>th</sup> centuries. Its defensive structures reflect the re-building necessitated by the many military campaigns of its rulers against western invaders and the Mughal Empire.

The extent to which it displays building that reflect its role as a centre of power make it distinctive from the other forts. As the former capital of the Sisodia clan and the target of three famous historical sieges, the site is strongly imbued with associational values attaching to Rajput history and folklore. Furthermore the sheer number and variety of architectural remains of early date (ranging from the 8<sup>th</sup> to the 16<sup>th</sup> centuries) mark it out as exceptional, with only a few Indian forts that are comparable.

Its fortifications are now considered to be one of the finest Hindu defence systems to survive in any degree of completeness. The initial walls were constructed in the 13<sup>th</sup> century AD. Their current planning reflect the ideas of the Rana Kumbha (1433-1468), the ruler of Mewar state, who, with his artisan Mandan, established guidelines for Rajput fortifications.

The ascent to the fort passes through seven gateways, partly flanked by hexagonal or octagonal towers, and all protected by enclosing defensive walls. The gates are known as the Paidal Pol, Bhairon Pol, Hanuman Pol, Ganesh Pol, Jorla Pol, Laxman Pol, and Ram Pol, the final and main gate.

Within the walls are the extensive remains of several palaces.

Rana Kumbha Mahal, the palace of Rana Kumbha, was constructed in the 15<sup>th</sup> century and enlarged several times. It now incorporates the Kanwar Pade Ka Mahal (the palace of the heir), the later three storey palace of the poetess Mira Bai (1498-1546), and the Ratan Singh Palace (1528-31). The stone palaces are decorated with turrets, balconies and verandas with balustrades.

Two of the last buildings to be constructed in the 16<sup>th</sup> century before the Sisodias lost the fort were the Patta and Jaimal Havelis.

In the early 19<sup>th</sup> century the Padmini Palace, named after the wife of a mid-13<sup>th</sup> century ruler, was re-constructed. It overlooks a large reservoir in the centre of which is a pleasure pavilion. At the end of the 19<sup>th</sup> century, the large Fateh Prakash palace, also named Badal Mahal (1885-1930), was constructed in the Mewar/British style.

Besides the palace complex, located on the highest and most secure terrain in the west of the fort, there are many temples such Kumbha Shyam Temple, the Mira Bai Temple, the Adi Varah Temple, and the Shringar Chauri Temple.

Although the majority of temple structures represent the Hindu faith, most prominently the Kalikamata Temple (8<sup>th</sup> cent.), the Kshemankari Temple (825-850) the Kumbha Shyam Temple (1448) or the Adbuthnath Temple (15<sup>th</sup>-16<sup>th</sup> cent.), the hill fort also contains Jain temples, such as Shringar Chauri (1448) and Sat Bis Devri (mid 15<sup>th</sup> cent.) Also the two tower memorials, Kirti Stambh (13<sup>th</sup>-14<sup>th</sup> cent.) and Vijay Stambh (1433-1468), are Jain monuments. They stand out with their respective heights of 24m and 37m, which ensure their visibility from most locations of the fort complex.

The forts has 85 historic water structures of which 20 are still functioning, including three water tanks dating from the 7<sup>th</sup> century.

Finally, the fort compound is home to a contemporary municipal ward of approximately 3,000 inhabitants, which is located near Ratan Singh Tank at the northern end of the property.

The site extends to 305 hectares with a buffer zone of 440 hectares.

- Kumbhalgarh Fort

Located in the district of Rajsamand, at an altitude of 1,100m above sea level, Kumbhalgarh Fort controlled the key border crossing between the Mewar and the Marwar territories.

The walls of Kumghalgarh extend to 20km in length, making them the longest in India and the third longest in the world.

Its distinctive contribution to the series arises from it having been constructed in a single process and (apart from the palace of Fateh Singh, added later) retains its

architectural coherence. Its design is attributed to an architect known by name – Mandan – who was also an author and theorist at the court of Rana Kumbha in Chittorgarh.

Like Chittorgarh, Kumbhalgarh Fort was also built under the rule of Rana Kumbha and is equally accessed through a series of seven gateways, here named Aret Pol, Halla Pol, Hanuman Pol, Ram Pol, Vijay Pol, Nimboo Pol and Bhairon Pol. Only six of these gates are located inside the property boundaries; Halla Pol is situated in the buffer zone.

The outer walls of Kumbhalgarh Fort were constructed between 1443 and 1458, on the base of pre-15<sup>th</sup> century wall structures. The complete perimeter extends to a length of 14km, most of which consists of ramparts between 3-5m in height, enforced by circular structures constructed in rubble and brick masonry laid in lime mortar, which are plastered in some parts. All gates leading towards the palace compound on the western side of the fort are roofed and flanked by additional structures. Characteristic elements of Mewar defensive access are the zigzagging turns of the pathway between the gates, the small side cells and chambers for guards, as well as the trabeated stone construction of the gates.

The palace area consists of the Kumbha Mahal (1443-1468), integrating both men's and women's apartments, and the much later Badal Mahal (1884-1930), built under Rana Fateh Singh, which occupies the highest point of Kumbhalgarh Fort. It also includes memorials and pleasure pavilions in the historic gardens.

Among the religious structures are Hindu and Jain temples of different periods, ranging from the earlier, such as the Mataji Temple from the 13<sup>th</sup> century, to later examples such as the temples of the Golera, a group of Hindu and Jain temples constructed up until the 18<sup>th</sup> century.

The fort had an ingenious water system and several reservoirs and tanks survive such as the Badva Bund, a 15<sup>th</sup> century dam, and the Langan Baori, a 15<sup>th</sup> century step-well.

Kumbhalgarh is currently inhabited by approximately 300 persons, who inhabit five rural houses near the Golera Temples and a recent Muslim community settlement, which has developed around the main entrance to the fort.

The nominated area extends to 268 hectares and has a buffer zone of 1,339 hectares.

- Ranthambore Fort

Ranthambore Fort's distinctive contribution to the series arises from it being the only forest fort included in the nomination. Located on Thambhor Hill, the fort stands guard over the Jaipur Rajput Maharaja's former hunting grounds, in what is nowadays the Ranthambore National Park. Three large lakes, the Padam Talab, Malik Talab and Raj Bagh, are visible from the fortification walls and

contribute to a landscape of forests with aquatic vegetation, which is the habitat of the Indian Tiger. The dense jungle in all directions from the fort constituted an added defence feature, a key characteristic of the Rajput forest forts. The density of the vegetation also contributed to the visual protection of the fort, which is hardly visible at a distance.

The surrounding ramparts are adapted to the natural features of the hill crest, which at times rises vertically above the valley and required only minimal additional defences. Where necessary strong rampart walls with circular enforcements were built upon the hill side, and often contain square loopholes designed for firearms.

The main approach to the fort is from the north via stairs cut into the rock. Within a circumference wall of 5.4km, are four gates called Naulakha Pol, Hathhi Pol, Ganesh Pol and Andheri Pol. Following the zigzag ascent, the final gate leads into the palace area, beyond which are further temples, shrines, *chattris* and other walled enclosures.

In contrast to the western location of the palace area in the other forts, the residential and official structures are here located in the centre of the compound. Hammir Mahal (1281-1301) and Rani Mahal (1283-1381) are the dominant parts of the Hindu-style palace area, which was expanded by additions in the 17<sup>th</sup> and 18<sup>th</sup> centuries, such as Supari Mahal or Dulha Mahal.

The remains of the palace of Hammir are amongst the oldest surviving structures of any Indian palace.

Significant features in Ranthambore Fort are the *chattris* and pleasure pavilions added in the 18<sup>th</sup> century, such as Battis Khamba Chattri. Little evidence is left of what must have been significant historic garden structures, but the horticulture department of the Archaeological Survey of India (ASI) is investigating opportunities to redevelop these.

Among the religious structures are Hindu temples founded as early as the 5<sup>th</sup> century (Ganesh Mandir) but also the remains of a mosque and a Muslim burial site dating to the 13<sup>th</sup> or 14<sup>th</sup> century.

Ranthambore Fort covers an overall area of 102 hectares and has a buffer zone of 372 hectares that includes the entire hill on which the fort stands along with surrounding water bodies of the Padam Talav, Malik -Talav and Raj Bagh visible from the north eastern edge of the fort.

- Gagron Fort

Gagron Fort is located approximately 10km north-east of Jhalawar, at the confluence of the Ahu River and the Kali Sindh River.

Its distinctive contribution to the series arises from it being the only river-protected fort included in the nomination. In addition, its strategic location on a pass in the hills gave it enhanced significance in the control of trade routes.

The fort covers the entire stretch of a plateau on a steep outcrop of the Vindhyan Hill Range.

The main access to the fort is from the northern side via a steep passage through two gates. The fortifications consist of two walls, an outer wall which loops into a major rampart at the rear and an inner fortification wall, which is interspersed with circular enforcements and crowned with large crenellations. The ramparts rise up 10-15m above ground, with the circular corner defences reaching 25m in height. The inner wall compound is accessed via an ascending route through a simple opening in the south-eastern wall, which leads directly to the outer wall over the river. On the river side, the hill top is defended by the vertical Gidh-karai (vulture's cliff) of 93.6m height. It makes the fort inaccessible and was also used as place for executions.

The typology and architectural style of Gagron Fort is representative of the Doda and Khinchi Rajput military architecture of the 12<sup>th</sup> century. The access to the palace area leads through a succession of courts and temples which are outside of the inner enclosure.

The palace area itself, located in the north-west of the inner enclosure, predominantly consists of 18<sup>th</sup>-19<sup>th</sup> century structures, like the Sheesh Mahal of the Jhala Rajputs or the Zenana and Mardana Mahal, with its foliated ornamentation and arched openings of Zalim Singh Jhala's time (19<sup>th</sup> cent.).

Further structures are the Hindu Vaishnava Temple called Madan Mohan (18<sup>th</sup>-19<sup>th</sup> cent.), the Hindu Hanuman Temple and the Muslim shrine, the Dargah (16<sup>th</sup> cent.).

As in the forts previously described, Gagron Fort also includes memorials, water reservoirs and wells as well as storage buildings and habitations. At present, the fort has approximately 300 inhabitants.

The fort covers 23 hectares and is surrounded by a buffer zone of 722 hectares.

- Amber Fort

In a valley formed by the range of the Aravallis known as Kalikho Hills, Amber fort is situated below the hill fort of Jaigarh, to which it is strategically connected. The shared fortifications have gates in the four cardinal directions and include not only Jaigarh Fort but also Amber Palace, the village of Amber, Lake Maota and parts of the valley.

The distinctive contribution of Amber Fort is the representation of a key phase (17<sup>th</sup> century) in the development of a common Rajput-Mughal court style, embodied in the buildings and gardens added to Amber by Mirza Raja Jai Singh I. The gardens borrowed Mughal formal planning and superimposed it within the hilly terrain of a hill fort.

The nominated property covers Amber Palace, its gardens and Lake Maota, the connecting tunnel, with Jaigarh Fort, and the immediate fortification of Amber fort, including

cannon bases and bastions. Jaigarh Fort and the city wall (the front lines of fortifications) including observation posts are within the buffer zone.

The primary function of Amber Palace was as the seat of power of the Kachchwaha Rajputs and the capital of the Dhoondhar region of Rajasthan. The complex, which served residential, official and religious functions, is an example of a fortified Rajput palace structure, which in layout and architectural style is strongly influenced by Mughal architecture. The palace is built in a linear manner along an almost north-south axis, following the natural formation of the hill. All important residential and official functions are placed along its eastern side with views of the lake, while servants' quarters, storerooms and stables are oriented towards the west, facing the cliffs.

Amber Palace's ground plan follows the principle of increasing privacy via several courtyards which is so dominant in Mughal architecture. The first court, Jaleb Chowk, is directly entered via the winding, ascending path which leads through two gates from the lake to the palace. Its function was that of a forecourt, which served as an open space for large gatherings, parades and other festive events. Historically, functional buildings such as the record office, stables and staff residences were also located in this section. The second courtyard, Diwan-i-Am (1622-1667), was the court of the commoners and mostly used for public meetings. At its southern end, the imposing Ganesh Pol embellishes the passage towards the third court, the Diwan-i-Khas (1622-1667). This was the most important court in the political hierarchy and therefore the most formal and ornate. Decorated with mirror-work on the walls, columns of alabaster and intricate geometric patterns, this court was designed to impress visitors to Sawai Jai Singh's private audiences and residence. Water features, fountains and courtyard gardens created a pleasant local climate and intricate lighting arrangements enhanced by mirrored walls created a special after dark atmosphere. The fourth and southern courtyard, Man Singh Mahal (1589-1614), originally built by Raja Man Singh, was reserved for the women of the palace. It is divided into multiple smaller courts with separate residential units, each with an opening gate into the central court. From Suhag Mandir, a pavilion in this court, the female residents were able to observe the activities in the Diwan-i-Khas without being seen.

The Dalaram Ka Bagh and Ram Bargh gardens were constructed alongside the Maota Lake in 1664 AD by the order of Mirza Raja Jai Singh. It is commonly held that Dula Ram (or Dalaram) was one of the two main architect-artisans employed. They are along the lines of Mughal gardens laid out in a geometric Char Garh pattern with water channels. In the middle of the lake on an island is the Kesar Kyari terraced garden, also created by Mirza Raja Jaai Singh. It is now laid out in elaborate parterres beds.

A technical intricacy of Amber Palace is the hydraulic system which uses pulleys to lift collected rain water from Maota Lake into the palace. In a three-stage process the

water was first transported through clay pipes and stored, then lifted into upper tanks using pulleys and finally lifted with the help of a Persian wheel fitted with a number of earthenware buckets. The inhabitants therefore had the benefit of a continuous water supply, which during the colder months was heated in the hammam heating system. As the only water supply, the Maota Lake had a strategic function, which explains its inclusion within the fortification walls.

A 325 metre long tunnel connects Amber Palace to Jaigarh Fort. Amber Fort covers 30 hectares and has a buffer zone of 498 hectares including part of the Nahargarh Wildlife Sanctuary and the entire town of Amber located in the valley.

- **Jaisalmer Fort**

Jaisalmer is the only example included in the nomination of a hill fort in desert terrain. The extensive township contained within it from the outset, still inhabited today, and the group of Jain temples, make it an important (and in some respects even unique) example of a sacred and secular (urban) fort. The whole complex of fortifications palaces, temples and extensive urban dwellings reflects building between the 12<sup>th</sup> to the 18<sup>th</sup> centuries.

Jaisalmer sits on top of a triangular rock outcrop that rises 76 metres above the surrounding plain. It has a double line of fortifications, with a walkway between the two. The outer wall has 99 mostly circular bastions. The entire fortifications, and the sloping pitched retaining wall beneath them, are built of dry sandstone blocks. Originally, before the outer bastions were built, the inner bastions formed the defence wall of the Fort. Later, the inner bastions were absorbed into the residential quarters of the Fort.

Entry to the Jaisalmer Fort is through a single gateway, Akhey prole, beyond which are three other gateways, Suraj prole, Ganesh prole and Hawa prole, that have to be traversed to enter the inhabited upper sections of the Fort. Ganesh prole dates from 12<sup>th</sup>-13<sup>th</sup> centuries, reflecting the earliest period of development.

Within the fort the palaces lie around two sides of a square. Dating originally from the 13<sup>th</sup>-14<sup>th</sup> centuries, the palaces have continued to be extended until the 20<sup>th</sup> century with similar vibrant carvings as on the earlier buildings.

One temple, the Annapurna temple, dates to the earliest period of the Fort. The eight Jain temples were constructed between the 14<sup>th</sup> and 17<sup>th</sup> centuries. The oldest of these is Sh. Chintamani Parsavnath Jain Mandir, dating to 1389 AD. The Fort also includes three Hindu Vaishnava temples of which the oldest presently called the Ratneshwar Mahadeo temple, dates back to 1490 AD.

Off the royal *chowk* (square) that forms the heart of city, narrow alleys paved in stone lead to domestic houses which were originally formed into neighbourhoods. All

built in the same yellow sandstone as the walls, the larger houses, *havelis*, were embellished with intricately carved cantilevered balconies reflecting the wealth of their owners. Thirty-eight thousand people in some 460 households now live in this urban area and most are said to be descendants of the original settlers.

Seven wells within the Fort provided water to its inhabitants. However, the water from these wells was often brackish and saline and therefore could not be used for drinking purposes.

Jaisalmer Fort covers 8 hectares and is surrounded by a buffer zone of 89 Hectares.

### **History and development**

The Rajput clans were Hindu warrior clans that emerged in north western India around 7<sup>th</sup> – 8<sup>th</sup> century AD, after the decline of the Gupta, Maurya and Harshavardhana Empire. The Rajput clans formed a number of small kingdoms and acted as a barrier from invasions from Central Asia. They became vanguards of the Hindus in the face of Islamic onslaught throughout the Sultanate and Mughal period.

Of the Rajput clans, the Sisodias of Mewar are renowned for consistently resisting the rewards of succumbing to Mughal suzerainty. This political stance of the Sisodia Rajputs is clearly reflected in the fort architecture of Chittorgarh and Kumbhalgarh where planning, architectural form and styles exhibit Hindu traditions. The Kachchwaha Rajputs of Amber in contrast, aligned themselves with the Imperial Mughal rule with an evident adaptation of Mughal spaces and architectural styles in Amber though these ideas were embedded within the context of existing Hindu Rajput fort planning.

The nomination dossier provides detailed tabular information on the historic development of each fort, including the related ruling dynasties, architectural interventions and important events, as well as the more recent histories of archaeological and conservation activities. Each of the six component sites contributes a slightly different combination of key phases in building activity and military action, by which it is intended that together the properties display the architectural features of Rajput military defence over several centuries.

The oldest of the hill forts could be Kumbhalgarh, also known as Machchindrapur, where, following a local legend, a Jain Prince of the Maurya dynasty built a fortress around the 2<sup>nd</sup> century BC. However, the earliest archaeological evidence in Kumbhalgarh Fort dates to the 12<sup>th</sup> century, which is considerably later than the earliest findings at Chittorgarh and Ranthambore, which date to the 5<sup>th</sup> century. However, construction of the fortifications started later, firstly at Chittorgarh, where Chitrangad, also of the Maurya dynasty, erected a stronghold in the 7<sup>th</sup> century. In Ranthambore and Gagron, the earliest certain reference to fortification structures is from the 12<sup>th</sup> century, when Ranthambore was a well-established Jain holy site

and Gagron was being constructed by the Khinchi Chauhan Rajput Clan.

The Fort of Chittorgarh was expanded in the 13<sup>th</sup> and early 14<sup>th</sup> century, when it served as the capital of the Kingdom of Mewar under the Guhila Rajput dynasty. In 1336 AD the Sisodias of Mewar took the fort under their control and continued to use it as their capital. During the period of their influence, the Chittorgarh complex acquired the most important constructions still present today, including the existing Rajput palace structure, in particular during the reign of Rana Kumbha (1433-1468), who constructed amongst other things the Vijay Stambh (1440-1448) and the palace named after him. Also, Kumbhalgarh Fort displays evidence of the Sisodias of Mewar during the first half of the 15<sup>th</sup> century under the rule of Rana Kumbha, during which time many of its structures were built. This includes the walls, the gateways and several temples. Kumbhalgarh Fort also remained popular among Rana Kumbha's successors due to its strategic defensive function and was only ever captured once and for a short period by a general of Akbar in 1578AD. With this single short occupation, Kumbhalgarh has proven the most successful of the Rajput defence structures throughout its history.

Also, at Gagron Fort the ruler Rana Kumbha of Mewar left his mark, after the fort came under his control in 1439. Henceforth, it became the site of several battles between Mewar warriors and Mahmud Khilji, who took over the fort only to be defeated by the Sisodia Rajput ruler Rana Sanga soon after. Sanga held Gagron until 1532, when it was conquered by the ruler of Gujarat and held for 30 years, after which it was captured by the Mughal Emperor Akbar in 1561.

In Rathambore the earliest structures were destroyed during its sack in 1301 following Alauddin Khilji's victory. It was shortly after captured by the Sisodia Rajput of Mewar and expanded during the reigns of Rana Hamir Singh (1326-1364) and Rana Kumbha. In 1569AD Rathambore was captured by Akbar and thereby followed Chittorgarh Fort, which had already been lost in 1567AD. During this era, when all forts except Kumbhalgarh were under Mughal control, the construction of Amber palace in its surviving form was begun during the reign of the Kachchwaha ruler Bharmal (1547-1574), who had established a political alliance between the Kachchwaha Rajputs of Amber and the Mughal Empire. The expansion was continued by the following generations, most particularly under the Kachchwaha ruler Mirza Raja Jai Singh (1622-1667), who is credited with having laid out the entire ground plan of Amber Palace.

Under Mughal rule, the Rajput signed peace treaties which also contained clauses regarding their responsibility over the forts, such as a treaty with the Mughal Emperor Jehangir, which returned Chittorgarh Fort to the Sisodias but prevented them from undertaking any repairs or constructions. Other forts were granted as feudal estates to the allies of the Mughal rulers, such as Ranthambore to Sawai Madho Singh (1753) and Gagron was awarded to

Maharao Bhim Singh, the ruler of Kota, from the Hada Clan of the Rajput.

Following the weakening of the Mughal imperial powers, which were faced with several famines and internal disputes, the Sisodias signed a subsidiary alliance treaty with the East India Company in 1818. This constituted the basis for new construction and restoration activities, which were initiated for example at Chittorgarh and Kumbhalgarh. Finally, following the independence of India in 1947, the forts became the public property of the Rajasthan State government and were designated as monuments of either national or state importance. Since then, an impressive number of excavations and conservation works have been carried out.

### 3 Justification for inscription, integrity and authenticity

#### Comparative analysis

The nomination dossier proposes six hill forts in Rajasthan, which represent Rajput military strongholds across what is described as a vast range of geographical and cultural zones. Emphasis is given to hill forts, one of the four fort categories of importance in Rajput military architecture, which is based on descriptions in ancient Hindu treatises like the third book of the *Arthashastra*, Hill Forts were considered to be the most superior form of military architecture. The hill forts selected also reflect the three other categories of water, forest and desert forts.

The architecture of Rajput forts in terms of their fortifications is not unique. However what is being nominated is more than the fortifications. Rather it is the complexes of fortifications together with the buildings inside the walls that reflect their function as seats of power. The forts were large and accommodated not only garrisons, but the ruling families and their retainers, an urban population engaged in trade, and temples and water harvesting facilities to underpin long-term settlement. They are in effect fortified towns.

The comparative analysis thus considers this combination of hill fortifications and urban ensembles as a reflection of the power and influence of the Rajput Kingdoms that flourished between the 12<sup>th</sup> and the 18<sup>th</sup> centuries.

In the international context, the forts are compared as a group to other groups of hill forts. The nominated property is compared to existing archaeological properties, such as the Hill forts within Kernavé Archaeological Site, Lithuania (2004, (iii), (iv)), the Dacian Fortresses of the Orastie Mountains, Romania (1999, (ii), (iii), (iv)), or the Parthian Fortresses of Nisa, Turkmenistan (2007, (ii), (iii)). Equally, fort groups which still exist in their full historic monumental scale were compared, such as Three Castles, Defensive Wall and Ramparts of the Market-Town of Bellinzona, Switzerland (2000, (iv)), the Castles and Town Walls of King Edward

in Gwynedd, UK (1986, (i), (iii), (iv)), or the Forts and Castles, Volta, Greater Accra, Central and Western Regions, Ghana (1979, (vi)).

ICOMOS considers that the comparison to other groups of hill forts has limited the capacity to compare all typologically relevant examples on the World Heritage List, as many of these were inscribed singly as the most exceptional examples of a group of fortifications. Such examples include Bahla Fort, Oman (1987, (iv)), or Rohtas Fort, Pakistan (1997, (ii), (iv)).

At a national level, the range of fortifications that were strongholds of local clans or larger empires through history can be divided into ancient fortified cities, medieval forts and post medieval European forts. Consideration of these reveals that the earliest fortified cities dating from around 4<sup>th</sup> century BC are now ruined, while the post medieval European forts are mostly coastal and of simple design.

Much more valid are the comparisons with medieval forts. There are hundreds of these mostly stone forts across India, the majority of which are related to the dominant rule of the Sultanate at Delhi, and the later imperial rule of the Mughals.

During the period between the 14<sup>th</sup> and early 16<sup>th</sup> century, with the weakening of the Delhi Sultanate and its withdrawal to the Ganges plain, much of the country became divided into kingdoms such as the Rajput kingdom, Malwa (Mandu), Gujarat (Anhilwada Patan and later Ahmedabad), Sorath, Khandesh (Burhanpur), Vijaynagar, Bahmani Kingdom, Gondwana, Bengal and Orissa, some of which built their own extensive fortifications.

Of these, most were Islamic kingdoms displaying essentially Islamic (Persian) architecture with integrated regional craftsmanship. Only Vijaynagar and the Rajput Kingdoms were Hindu holdings. Though Vijaynagar had an exemplary palace complex (16<sup>th</sup> century) and other significant Hindu structures, there is no evidence of a hill fort.

The emergence of the Mughal Empire had an impact on stylistic development of forts and palaces across the country between the 16<sup>th</sup> and 18<sup>th</sup> centuries.

The analysis provides detailed comparisons between the Rajput Forts and the various other forts that are grouped into Sultanate forts, Southern Kingdoms forts, Mughal forts, Maratha forts, Sikh forts, Northern forts and Eastern forts. This demonstrates how the Rajput Forts reflect the strong cultural identity of Rajasthan as the land of Rajputs, which clearly differentiates them from the forts of other states such as Madhya Pradesh, Uttar Pradesh and Gujarat and from the forts of the Delhi Sultanate and the Mughal Empire as well as from later post-mediaeval forts.

Within Rajasthan, there are more than a hundred forts/fortresses/castles and watch posts of varying scale, proportion and significance. Of these, 54 forts are considered to have the key characteristics of Rajput military architecture – that are designed as citadels for defence and shelter – and 24 to have significant military defences. This list is refined further to consider which sites are associated with success at famous battles, and which reflect Rajput patronage of art, religion, music and literature.

The analysis clearly differentiates Rajput forts from other mediaeval Indian forts and also justifies the choice of six Rajput sites for the way each contribute to the value of an overall series.

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ICOMOS considers that the comparative analysis does justify consideration of this serial property for the World Heritage List.

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### **Justification of Outstanding Universal Value**

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

- The six hill forts represent the whole range of Rajput hill forts in terms of their physiographical terrain, encompassing mountains, forests, water and desert forts;
- The six forts are exceptional examples of centres of Rajput power and control, are reflections of courtly culture and patronage of arts and music, their mercantile business that formed the basis of their wealth, and strong sacred associations;
- The forts many of enormous size, display large complex fortifications, palaces, temples, urban centres and water harvesting facilities;
- The forts, together with the palaces and other buildings they contain, all embody this power and courtly culture in Rajput architecture. Rajput architecture was eclectic (drawing inspiration from antecedents and neighbours) together with its degree of influence over later regional styles (such as Maratha architecture) do make it distinctive;
- Together the six forts comprise a complete and coherent group that manifest all these facets and each fort reflects one or more of them in an exceptional way;
- *Chittorgarh*. As the former capital of the Sisodia clan and the target of three famous historical sieges, the site is strongly imbued with associational values attaching to Rajput history and folk lore. Furthermore the sheer number and variety of architectural remains of early date (ranging from the 8<sup>th</sup> to the 16<sup>th</sup> centuries) mark it out as a site of exceptional importance, with only a few Indian forts that are comparable.
- *Kumbhalgarh*. Its distinctive contribution arises from it having been constructed in a single process and (apart from the palace of Fateh Singh, added later) retains its architectural coherence. Its design is

attributed to an architect known by name – Mandan – who was also an author and theorist at the court of Rana Kumbha in Chittor (another fort in the series). This combination of factors is highly exceptional.

- *Ranthambore*. Its distinctive contribution arises from it being the only forest fort included in the nomination. In addition, the remains of the palace of Hammir – if taken to be authentic – are among the oldest surviving structures of an Indian palace.
- *Gagron*. Its distinctive contribution to the series arises from it being the only river-protected fort included in the nomination. In addition its strategic location in a pass in the hills gave it enhanced significance in the control of trade routes.
- *Amber*. is the representation of a key phase (17<sup>th</sup> century) in the development of a common Rajput-Mughal court style, embodied in the buildings and gardens added to Amber by Mirza Raja Jai Singh I.
- *Jaisalmer*. is the only example included in the nomination of a hill fort in desert terrain. The extensive township contained within it from the outset, still inhabited today, and the group of Jain temples, make it an important (and in some respects even unique) example of a sacred and secular (urban) fort.

ICOMOS supports this justification. However it also considers that Amber Fort needs to be extended to include the outer fortifications of Jaigarh Fort to which it was militarily linked to allow it fully reflect Rajput military planning.

### **Integrity and authenticity**

#### **Integrity**

The integrity of the serial property is judged in relation to the ability of the components to cover all attributes needed to express the Outstanding Universal Value suggested by the State Party. With regard to the individual components, integrity is expressed in the completeness and adequacy of size of the component to represent the relevant contribution to the overall Outstanding Universal Value.

As a series, ICOMOS considers that the six components together form a complete and coherent group that amply demonstrate the attributes of OUV as defined, without depending on future additions to the series.

When considered as individual components, Chittorgarh and Ranthambore include all relevant elements to present their local, fort-related significances. However, ICOMOS is concerned about the surrounding development and industrial activities around Chittorgarh Fort, in particular the pollution and landscape impact of the nearby quarries, cement factories and zinc smelting plants, which, if continued or even expanded, have the potential to adversely affect the property.

For Amber and Kumbhalgarh Fort, ICOMOS considers that the strategic functions and evolutions of Rajput military architecture cannot be understood outside of the

full context of their military defence structure. For Amber this context includes the outer fortification walls with Jaigarh Fort, and for Kumbhalgarh Fort the outer gate of Halla Pol should be included.

#### **Authenticity**

Authenticity of the serial property relates to the ability of the serial group to convey the Outstanding Universal Value as nominated. With regard to the individual site components, authenticity relates to their ability to exhibit the historic context, built form and function, as well as setting and other components in relation to the overall Outstanding Universal Value.

As a series, ICOMOS considers that the six sites have the capacity to demonstrate all the outstanding facets of Rajput forts between the 8<sup>th</sup> and 18<sup>th</sup> centuries, and each of the sites is necessary for the series.

With regard to the individual structures, ICOMOS regrets that the original exterior plaster at Amber Fort and Gagron Fort has been removed and entirely replaced, which has caused a loss of the historic material and patina. ICOMOS further notes that some remote parts of the larger forts, in particular Chittorgarh and Kumbhalgarh Forts, contain structures in a state of progressive decay, which are in the process of losing their authenticity in material, substance, workmanship and design. To reverse this trend, ICOMOS recommends launching immediate action to prevent further decay or even collapse of some structures, such as Suraj Devri Temple, the small temple near Mamadeo Baori, some parts of Kumbha Mahal and some temples of the Golera group.

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In conclusion, ICOMOS considers that the conditions of integrity and authenticity of the series have been met, but are to a degree vulnerable.

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#### **Criteria under which inscription is proposed**

The serial nomination of six sites is nominated on the basis of cultural criteria (ii), (iii), 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 Hill Forts of Rajasthan exhibit an important interchange of Princely Rajput ideologies in fort planning, art and architecture from the early medieval to late medieval period within the varied physiographic and cultural zones of Rajasthan. The forts trace the development of Rajput architecture and technology, monumental arts and landscape design that subsequently influenced the architectural development in Rajasthan and Central India for centuries.

ICOMOS considers that although Rajput architecture shared much common ground with other regional styles,



such as Sultanate and Mughal architecture, it was eclectic, drawing inspiration from antecedents and neighbours, and had a degree of influence over later regional styles such as Maratha architecture. ICOMOS thus supports this justification subject to the fort at Amber being extended to include Jaigarh.

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ICOMOS considers that this criterion has been justified for the series presented.

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*Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;*

This criterion is justified by the State Party on the grounds that the Hill Forts of Rajasthan are an exceptional testimony to the Rajput cultural tradition and the socio-economic strata of Rajasthan. These forts are architectural manifestations of Rajput valour, bravery, feudalism and cultural traditions documented in several historic texts and paintings of the medieval and late medieval period in India. The six components bear an exceptional testimony to the cultural traditions of the ruling Rajput clans and to their patronage of religion, arts and literature in the region of Rajasthan over centuries.

ICOMOS considers that the series of massive hill forts is an exceptional testimony to the cultural traditions of the Rajput States in relation to the way they reflect the tradition of enclosing extensive areas with elaborate fortifications to protect not only garrisons for defence, but also palatial buildings, temples, and urban centres, that together reflect a distinctive Rajput style of architecture. The six selected forts together manifest the most important elements of this cultural tradition.

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ICOMOS considers that this criterion has been justified for the series presented.

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*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 the Hill Forts of Rajasthan are not just monumental structures which explain the architecture and developments of a culture but also are the living testimony of the associational values attached of the people with them. The complete planning of the fort is an outcome of the belief systems which guided rulers from selection of the site for the fort to planning of different components within it including its defence mechanism which represents the Rajput culture.

While ICOMOS agrees that the forts have strong associational value in terms of being linked to famous battles and to their reflection of Rajput ideologies, it does not consider that these events can be seen to be a significant stage in human history.

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ICOMOS considers that this criterion has not been justified.

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ICOMOS considers that the serial approach is justified for Hill Forts of Rajasthan

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ICOMOS considers that the conditions of integrity and authenticity of the series have been met, but are to a degree vulnerable and that criteria (ii) and (iii) have been demonstrated for the series presented.

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#### 4 Factors affecting the property

The State Party reports that the main development pressures derive from continued encroachment and enlargement of the residential communities within the forts, including their housing developments and adaptation of structures for domestic and community functions. Although the nomination dossier stipulates that the extension of the official and unofficial settlements, in particular vertical extensions, need to be controlled, and that more adequate settlement controls need to be established, this is not directly addressed in the Management Plans for the individual properties.

In addition, development pressures exist in the buffer zones of some properties, in particular at Chittorgarh Fort, where future vertical developments of the city to the west of the hill fort could constitute negative impacts. However, at present the main development pressures at Chittorgarh are quarrying and mining activities as well as cement factories to the east of the property, which contribute to air and landscape pollution and which progressively alter the setting of the serial component. Equally worrying is the ICOMOS observation of construction activities near Gagron Fort. Although the construction itself seems of limited extent and small dimensions, the worrying aspect lies in the fact that it is situated in the Darrah Wildlife Sanctuary, which is legally a no-construction zone. ICOMOS therefore considers that it is essential to have in place clear and concise regulations for any new constructions in the properties and buffer zones, which apply both *de jure* and *de facto*.

With regard to the planned relocation of dwellings in Ranthambore and dwellings or shop structures in the other forts, ICOMOS notes that such plans should be developed in full consultation with the communities and merchants concerned. Priority should also be given to improving the situation of traffic circulation and parking, in particular in Chittorgarh Fort, but also for the other hill forts, in which traffic infrastructure creates visual obstacles to the appreciation of the historic structures, as well as danger to the historic substance. In this context ICOMOS suggests that parking places should ideally be removed from the immediate surroundings of the entrance gates.

The greatest pressure for development within the forts is probably seen at Jaisalmer. Here the urban centre is still thriving and this is bringing pressure for re-building of

houses. Although the traditional materials and craftspeople still thrive, which is beneficial, it is not desirable that historic building should be completely re-built in new materials, even though there is a need to update them.

With the exception of Chittorgarh Fort and Amber Palace, which are already main tourism destinations and provide services for visitors, the other hill forts attract limited visitor numbers and do not seem fully prepared for a considerable increase in visitation. A particular cause of concern is the lack of security and observation personnel. Under the current situation, thefts of temple idols and also lighting installations have occurred, and acts of vandalism including graffiti are not rare occurrences.

ICOMOS would not recommend promotion of increased visitation to these sites, before the most basic security measures can be put in place and acts of theft and vandalism can be better controlled. In the long term, it also seems necessary to provide better visitor infrastructure including sanitary facilities, water and electricity, even through solar generation, at all the forts. ICOMOS notes that the State Party seems aware of these needs and that they are partly addressed in the management plans provided. A priority should be to provide security measures and personnel during major religious festivals, as during previous celebrations acts detrimental to the preservation of individual monuments have been observed.

ICOMOS further considers that all sites, including Amber Palace and Chittorgarh Fort, would benefit from increased effectiveness of waste management systems or establishment of these. Waste Management has not yet been given adequate attention in the management plans provided.

Environmental pressures seem limited to Chittorgarh Fort, where the nearby stone quarry blasting and cement factories cause notable air pollution.

ICOMOS considers that the hilly terrain on which the fortification walls are built, which in most cases has only limited vegetation, is likely to be affected by water erosion and landslides following the annual monsoon rains. However, landslides have only been observed in the environment of Kumbhalgarh Fort, where they also present a risk of natural disaster (see below).

Following water and wind erosion, landslides constitute a risk for the setting of all hill forts, in particular after the annual monsoon rains and could potentially cause damage to the outer hill fort structures. ICOMOS recommends the inclusion of inspection of the wider territories of the forts in the monitoring process, to identify potential areas at risk of future landslides.

Forest fires could also constitute a potential source of destruction, both in relation to the historic buildings and the vegetation within the fort compounds. Adequate emergency response procedures need to be established.

No impacts of climate change have been identified by the State Party. ICOMOS considers that a potential change of seasonal phenomena with increased precipitation during the monsoon months may increase the risk of water erosion and landslides.

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ICOMOS considers that the main threats to the property are the expanding encroachment of habitations in the forts, industrial, mining and development activities in the buffer zones, landslides, and acts of vandalism and theft.

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## **5 Protection, conservation and management**

### **Boundaries of the nominated property and buffer zone**

#### **Chittorgarh Fort**

ICOMOS considers that the boundaries of Chittorgarh Fort are adequately defined. However, ICOMOS recommends expanding the management and control of urban development as well as industrial and mining activities to the wider setting beyond the currently designated buffer zone.

#### **Kumbhalgarh Fort**

ICOMOS considers that this serial component could be better understood if the complete fort complex lies within the property boundaries, including all the gateways. Aret Pol has been included in the revised nomination. It would be desirable if the outer gateway, Halla Pol, could also be within the boundary, the gateways.

#### **Ranthambore Fort**

The boundaries of the nominated serial component and its buffer zone are considered adequate, given that the surrounding National Park provides an even larger protective zone.

#### **Gagron Fort**

The boundaries of the nominated serial component are considered acceptable, but ideally should include the river beds, which contributed so essentially to the defensive function. The buffer zone of the component is adequate, as long as additional measures are taken to protect the main view corridors of the fort and the impressive scenery of the hill fort from all sides and especially from across the river, in order that its strategic position can be conveyed.

#### **Amber Fort**

ICOMOS considers that the Rajput military defence structure of Amber Palace can only be understood if it is seen together with its surrounding outer fortification walls and the protection provided by Jaigarh Fort on the peak above, to which it was connected by an underground tunnel. ICOMOS would therefore consider it desirable to enlarge the boundaries of this component part to include the whole of Jaigarh Fort and accordingly to enlarge the boundaries of the buffer zone to provide adequate protection to the structures in the enlarged boundaries.

### Jaisalmer Fort

The boundaries include the whole fortified promontory but not the late medieval town that developed on the plain around its base. There is a need for planning protection to extend beyond the buffer zone to protect the dominant position of Jaisalmer in the landscape and important views to and from it.

In conclusion, ICOMOS considers that the boundaries and buffer zones are adequate but the boundary of Amber need to be extended to include the whole of Jaigarh Fort, and the boundary of Kumbhalgarh needs to be extended to include the first gate, Halla Pol.

### Ownership

With the exception of smaller private sections and plots in Chittorgarh, Kumbhalgarh, Gagron and Jaisalmer, the forts are owned by different agencies of the State of Rajasthan, and administrated as state property by either the Forestry Department or the Department of Archaeology and Museums. In Chittorgarh a number of selected monuments are owned by the government of India and administered by the Archaeological Survey of India (ASI).

### Protection

Chittorgarh, Kumbhalgarh, Ranthambore and Jaisalmer Forts are protected as Monuments of National Importance of India under the Ancient and Historical Monuments and Archaeological Sites and Remains (Declaration of National Importance) Act of 1951 (No. LXXI of 1951 (AMASR)) and the AMASR Amendment of 2010. They were listed in 1951 (Kumbhalgarh, Ranthambore and Jaisalmer) and in 1956 (Chittorgarh) respectively. The 1951 national legislation provides unlimited protection to the monuments designated in its framework and the 2010 amendment establishes a 200 metre protection zone around the area of the designated Monuments of National Importance.

Gagron and Amber Forts are designated as State Protected Monuments of Rajasthan under the Rajasthan Monuments, Archaeological Sites and Antiquities Act of 1968. They were both listed in the very year the act was adopted. The 1968 Act stipulates that no person, including the owner of the property, can carry out any construction, restoration or excavation work, unless permission has been granted by the responsible state authorities. In the case of Amber Palace an additional notification for the protection of a 50 metre buffer zone around the property has been issued.

ICOMOS notes that only four of the six properties are designated as Monuments of National Importance and that it would be desirable to gain national designation for the remaining two. ICOMOS further considers that capacity-building measures should ensure that local site staff and other stakeholders are well-versed in the legal regulations implied by the property and buffer zone protection. Good knowledge of development limits and intervention opportunities will allow for early recognition of inappropriate activities and contribute to the effective implementation of legal regulations.

ICOMOS considers that the legal protection for Chittorgarh, Kumbhalgarh, Ranthambore and Jaisalmer Forts is adequate. ICOMOS recommends that Gagron and Amber Forts be protected at national level. ICOMOS further considers that the buffer zone protection needs to be augmented, and that the implementation of the legislation needs to be managed more effectively.

### Conservation

Inventories seem to exist for all the properties and were either compiled by the Archaeological Survey of India (ASI), Jaipur Circle, or the Department of Archaeology and Museums of Rajasthan. Records of these inventories and other research are being held at the National Archives of India, the Archaeological Survey of India, the Kapad Dwara (City Palace) in Jaipur and the Rajasthan State Archives respectively. However, not all inventories seem to have the same level of detail and ICOMOS considers that it may be desirable to complete the inventories by surveying smaller structures in some of the forts.

The overall state of conservation varies from site to site but is in general fair to good, with the exception of parts of Jaisalmer and Ranthambore Forts. In all cases conservation work has been undertaken as part of on-going programmes which are continuing.

Ranthambore is not in an acceptable state of conservation to safely allow visitors in some of the key architectural structures.

Jaisalmer has had long-standing problems associated with water seepage into the mound on which the fort is built. Also because of its size and complexity, particularly of the urban areas, conservation work is very a long term project.

Extensive work has already been undertaken on stabilising the fort walls and other buildings. The impact of deterioration processes is controlled. An elaborate conservation programme has been initiated with the help of World Monuments Fund to restrict deterioration of the retaining walls of the fort.

The Jaisalmer Revitalisation project was undertaken between 1999 and 2001 for all the main streets. This aimed to improve the welfare of local residents and encourage good conservation practices.

The most challenging project is to ensure total dryness of the soil beneath the fort. A major programme to replace the existing dilapidated sewer line has been initiated by Government of Rajasthan with the help of Asian Development Bank so that the primary issue of water seepage and damage due to hydrostatic pressure on the retaining wall can be eliminated.

It is understood that the new system will be long lasting and will ensure no further seepage of water inside the hill. The contract for the work has been awarded and sufficient funds have been allocated for the implementation of the project. Professionals such as

archaeologists and conservation architects will be monitoring the project throughout its execution to ensure the safeguarding of any archaeological / heritage features.

Apart from Jaisalmer and Ranthambore, several individual structures in almost every fort – perhaps with the exception of Amber Palace which has just undergone a major conservation project – require at least some attention. In most cases, the water reservoirs, wells and other water structures have received the least attention in conservation activities and may have to be treated more systematically.

In the larger fort complexes, Chittorgarh, Kumbhalgarh and in particular Ranthambore, smaller temples and pavilions in the remote areas of the fort compounds seem to present a less satisfactory state of conservation and should ideally be surveyed to prevent future losses. This is, for instance, the case in Kumbhalgarh Fort where structures such as Suraj Devri Temple, the small temple near Mamadeo Baori, some parts of Kumbha Mahal and some temples of the Golera group require attention. In Ranthambore important sections of Hammir Mahal, Dulha Mahal, Badal Mahal, Pachauri Mahal, and Shiv Mandir need to be investigated and urgently prioritized for conservation measures.

Active conservation measures are planned for each of the six serial components and major conservation projects were recently carried out at Gagron and Amber Forts. To a large extent the conservation measures seem appropriate although ICOMOS regrets that it was deemed necessary to remove large sections of the outer original plaster at both state-supervised component sites, as these measures seriously reduced the authenticity expressed in the material and workmanship of the outer fortifications. In general, ICOMOS observes that the conservation policy applied at state level may benefit from further collaboration with the conservation team of the Archaeological Survey of India (ASI).

The nomination dossier presents a detailed list of all conservation activities conducted between 1899 and 2010 and provides conservation plans for Gagron and Amber Forts. For the remaining serial components without explicit conservation plans, the historic records illustrate the ongoing systematic conservation activities and individual buildings are highlighted as targets for forthcoming conservation measures, in a status report and five year prospective plan provided with the additional information submitted by the State Party at ICOMOS' request. All conservation measures follow a standard routine of initial examination and documentation, followed by chemical surface cleaning, structural stabilization, biocide treatment, consolidation, and lastly hydrophobic treatment. These steps are described in more detail in a *Conservation Manual* written by John Marshall, which is used as the handbook by those entrusted with the care of the historic monuments.

General maintenance works, cleaning and sweeping of the monuments are carried out on a regular basis under the supervision of the Archaeological Survey of India or the Department of Archaeology and Museums of Rajasthan. ICOMOS considers that, in order to ensure the long-term preservation of the architectural structures, especially in the outer areas of the larger forts, cutting and clearing of vegetation, in particular vegetation growing on or next to the historic structures should be increased to prevent damage caused by plant roots or falling trees.

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In conclusion, ICOMOS considers that urgent attention is needed to preserve degraded and dilapidated structures at Ranthambore Fort and in a few cases at Kumbhalgarh Fort, and that the ongoing control of the vegetation in the fort compounds needs to be improved. The major conservation programme at Jaisalmer needs to be completed according to the agreed timetable.

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## Management

Management structures and processes, including traditional management processes

The overall management of the six properties is steered by the State Level Apex Advisory Committee, which was established through Order A&C/2011/3949 on 11<sup>th</sup> May 2011. It is chaired by the Chief Secretary of Rajasthan and comprises members of the concerned ministries, namely Environment & Forests, Urban Development and Housing, Tourism, Art, Literature & Culture, Energy and various representatives of the heritage sector including the ASI. The Apex Advisory Committee meets on a quarterly basis and is designed to constitute the overall management framework of the serial property, guide the local management of the six serial components, coordinate cross-cutting initiatives, share research and documentation, share conservation and management practices and address the requirements of common interpretative resources.

To implement the recommendations of the Apex Advisory Committee, the Amber Development and Management Authority, which manages Amber Fort and is authorized to manage other heritage properties within the State of Rajasthan, acts as an overarching authority for management implementation. As documented in the additional information the State Party provided at ICOMOS' request, the authorization of the Amber Development and Management Authority to act as the overarching management agency was legalized through notification by the Chief Secretary of the Government of Rajasthan dated 14 October 2011.

Policy framework: management plans and arrangements, including visitor management and presentation

As part of the nomination dossier, the State Party has provided separate so-called Management Plans for five of the six serial components (all except Jaisalmer) including a shared introductory section highlighting the overall

management structure of the six components. The Management Plans are designed to cover the period 2011 to 2015 and contain, following a description of architectural structures and site significance, somewhat general policy and strategy statements for future work.

ICOMOS notes that the policy statements are not directly referencing the Outstanding Universal Value suggested, and that more detailed action plans for the implementation of the management policies, as well as indicators for management quality assurance during the implementation processes, are needed.

For Jaisalmer, the Management Plan for the property along with Sub-plans including visitor management, risk preparedness, and livelihood generation for the local population, will be completed by end of 2013.

In Chittorgarh, Kumbhalgarh and Ranthambore Forts new interpretation signage has been installed (in 2009-2010), and further measures to expand the presentation are envisaged in the management plans. Gagron Fort at present does not have any interpretative facilities, but the development of a comprehensive interpretation plan was earmarked as a management priority. In Amber Fort visitors can find a variety of interpretive material, including signage and audio guides, and a number of human guides are part of the site management team.

At present, detailed risk management plans are not available for the six serial components, but the State Party indicated in the nomination dossier that these risk management plans will be compiled. Yet, at present this process is not included in the Management Plans for 2011-2015. ICOMOS recommends that risk management should be given priority in the short-term action plans and that specific emphasis should be given to the risk of forest fires as well as flooding and subsequent landslides.

Financial resources and staffing levels at present do not seem adequate to ensure the management and protection of those hill forts designated as national monuments. ICOMOS notes that, whilst funding is made available by ASI to conduct conservation measures following the five year plan, the annual regular budgets of the Chittorgarh, Kumbhalgarh and Ranthambore forts are not adequate to provide for the most essential personnel and maintenance needs.

ICOMOS notes from the State Party's report that the costs for electricity, in particular lighting, are high and recommends exploring the opportunity of utilizing solar energy lighting systems. ICOMOS considers it essential to provide additional personnel to guard the key historic structures in the fort compounds and prevent further vandalism and theft.

In terms of training, the professional experience of ASI-trained staff and consultants seems generally adequate for their respective functions, yet the craftsmen participating in the maintenance of the conservation works supervised by the department of Archaeology and

Museums of the Government of Rajasthan, could benefit from further training in heritage conservation technologies.

The coordination of management activities by the Apex Advisory Committee commenced in May 2011 and has initiated closer cooperation between the serial components. At present, the site management lacks detailed action plans as well as personnel to undertake the most essential management functions, especially with regard to guarding and security activities. In order to ensure the effectiveness of the management at all the serial components, funding resources need to be increased to employ site guards on all the properties. Tourism management strategies need to be further developed to ensure visitor safety and adequate site interpretation.

#### Involvement of the local communities

As indicated in the documentation provided, limited community consultation took place in the preparation of the nomination dossier but broader community involvement initiatives are planned for the future management of the hill forts, and in particular for the aspects related to the community habitations. A noteworthy past project of community involvement is the World Monuments Fund-supported revitalization of streetscapes project at Amber, which encouraged local residents to participate in the interpretation of landscape values in the buffer zone.

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ICOMOS considers that the management plans provided contain adequate policy guidelines but should be supplemented to contain more detailed action plans for implementation, including for tourism management. ICOMOS further recommends providing additional funds for security and maintenance personnel to ensure the effective management and protection of the property.

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## 6 Monitoring

The State Party reports that comprehensive monitoring measures have been in place since 1951 and that the sites are monitored on an annual basis by the ASI Director of Conservation, and on a quarterly basis by the Superintendent Archaeologist of the ASI Jaipur Circle. In addition, the superintendents on site are responsible for monitoring the condition of all structures on a weekly basis.

ICOMOS considers that whilst the administrative arrangements for monitoring seem satisfactory, detailed monitoring indicators need to be developed with explicit reference to the Outstanding Universal Value proposed. ICOMOS further recommends including a periodic inspection of the outer hill structures in the monitoring process to identify any risk of future landslides.

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In conclusion, ICOMOS considers that the administrative monitoring arrangements are adequate but that monitoring indicators need to be further developed.

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## 7 Conclusions

In the evaluation of the first nomination, ICOMOS stated that it considered that the theme of Rajput military architecture and defensive technology had a strong potential to illustrate Outstanding Universal Value but that the selection of sites for the serial nomination did not adequately support the Outstanding Universal Value proposed by the State Party.

The revised nomination has considered Rajput Forts not only in terms of their military architecture and defensive technology within different physiographical terrains, but also more widely as enormous fortified towns that reflect the Rajput kingdoms' power, influence, and cultural patronage and their sustainability as important mercantile centres with sophisticated water harvesting systems that could support considerable populations.

Thus the text considers the eclectic Rajput architecture in palaces and other buildings that drew inspiration from Sultanate and Mughal architecture and demonstrate a strong influence on later regional styles such as Maratha architecture; the remarkable collection of temples that still attract followers, as well as the scale and complexity of the substantial fortifications.

The series has been extended to include Jaisalmer, situated in the desert area to the west. This addition brings in a fort with a still has an urban population that has persisted since Rajput times and demonstrates the way the forts were designed to support the populace as well as the court and the military.

ICOMOS considers that the revised dossier fully encapsulates the significance of Rajput forts in the way they developed and their influence. It also considers that the six forts can be seen as a coherent group in which each of the forts contributes strongly to the series as a whole.

The one aspect that needs comment is the exclusion of Jaigarh Fort. Jaigarh and Amber forts are interlinked in military terms and to understand Amber as a Fort the outer fortifications of Jaigarh on the hill above need to be included. ICOMOS understands that the State Party may only nominate properties with the consent of the owners and that the owners of Jaigarh do not currently wish to have their fort included in the series but nevertheless are willing for it to be in the buffer zone and to be managed along with the other forts. Jaigarh is also open to the public and the tunnel linking it to Amber has recently been opened. It thus can be visited and understood as part of Amber.

## 8 Recommendations

### Recommendations with respect to inscription

ICOMOS recommends that the Hill Forts of Rajasthan, India, be inscribed on the World Heritage List on the basis of **criteria (ii) and (iii)**.

### Recommended Statement of Outstanding Universal Value

#### Brief synthesis

Within the State of Rajasthan, six extensive and majestic hill forts together reflect the elaborate, fortified seats of power of Rajput princely states that flourished between the 8<sup>th</sup> and 18<sup>th</sup> centuries and their relative political independence.

The extensive fortifications up to 20 kilometres in circumference optimised various kinds of hill terrain, specifically the river at Gagron, the dense forests at Ranthambore, and the desert at Jaisalmer, and exhibit important phase of development of an architectural typology based on established "traditional Indian principles". The vocabulary of architectural forms and ornaments shares much common ground with other regional styles, such as Sultanate and Mughal architecture. Rajput style was not 'unique', but the particular manner in which Rajput architecture was eclectic (drawing inspiration from antecedents and neighbours) together with its degree of influence over later regional styles (such as Maratha architecture) do make it distinctive.

Within the defensive walls of the forts, the architecture of palaces and other buildings reflects their role as centres of courtly culture, and places of patronage for learning arts and music. As well as housing for the court and military guard, most had extensive urban settlements within their walls, some of which have persisted to the present day. And some also had mercantile centres as the forts were centres of production and of distribution and trade that formed the basis of their wealth. Most of the forts had temples or sacred buildings, some pre-dating the fortifications and outliving the Rajput kingdoms, and many of these remarkable collections of buildings still attract followers. Collectively the forts contain extensive water harvesting structures, many of which are still in use.

As a former capital of the Sisodia clan and the target of three famous historical sieges, Chittorgarh is strongly associated with Rajput history and folk lore. Furthermore the sheer number and variety of architectural remains of early date (ranging from the 8<sup>th</sup> to the 16<sup>th</sup> centuries) mark it as an exceptional fort in its scale and monumentality comparable to very few other Indian forts. Kumbhalgarh was constructed in a single process and (apart from the palace of Fateh Singh, added later) retains its architectural coherence. Its design is attributed to an architect known by name –Mandan – who was also an author and theorist at the court of Rana Kumbha in Chittorgarh. This combination of factors is

highly exceptional. Situated in the middle of forest, Ranthambore is an established example of forest hill fort and in addition, the remains of the palace of Hammir are among the oldest surviving structures of an Indian palace. Gagron is an exemplar of a river-protected fort. In addition its strategic location in a pass in the hills reflects its control of trade routes. Amber Palace is representative of a key phase (17<sup>th</sup> century) in the development of a common Rajput-Mughal court style, embodied in the buildings and gardens added to Amber by Mirza Raja Jai Singh I. Jaisalmer is an example of a hill fort in desert terrain. The extensive township contained within it from the outset, still inhabited today, and the group of Jain temples, make it an important (and in some respects even unique) example of a sacred and secular (urban) fort.

**Criterion (ii):** The Hill Forts of Rajasthan exhibit an important interchange of Princely Rajput ideologies in fort planning, art and architecture from the early medieval to late medieval period within the varied physiographic and cultural zones of Rajasthan. Although Rajput architecture shared much common ground with other regional styles, such as Sultanate and Mughal architecture, it was eclectic, drawing inspiration from antecedents and neighbours, and had a degree of influence over later regional styles such as Maratha architecture.

**Criterion (iii):** The series of six massive hill forts are architectural manifestations of Rajput valour, bravery, feudalism and cultural traditions documented in several historic texts and paintings of the medieval and late medieval period in India. Their elaborate fortifications, built to protect not only garrisons for defence but also palatial buildings, temples, and urban centres, and their distinctive Rajput architecture, are an exceptional testimony to the cultural traditions of the ruling Rajput clans and to their patronage of religion, arts and literature in the region of Rajasthan over several centuries.

#### Integrity

As a series, ICOMOS considers that the six components together form a complete and coherent group that amply demonstrate the attributes of OUV, without depending on future additions to the series.

When considered as individual components, Chittorgarh and Ranthambore include all relevant elements to present their local, fort-related significances. However, ICOMOS is concerned about the surrounding development and industrial activities around Chittorgarh Fort, in particular the pollution and landscape impact of the nearby quarries, cement factories and zinc smelting plants, which, if continued or even expanded, have the potential to adversely affect the property. For Amber and Kumbhalgarh Fort, ICOMOS considers that the strategic functions and evolutions of Rajput military architecture cannot be understood outside of the full context of their military defence structure. For Amber this context includes

the outer fortification walls with Jaigarh Fort, and for Kumbhalgarh Fort the outer gate of Halla Pol should be included.

The wider setting of Chittorgarh is vulnerable to urban development as well as industrial and mining activities that cause notable air pollution. At Jaisalmer the wider setting and views to and from the fort could be vulnerable to certain types of urban development in the surrounding town. While at Gagron the setting could be under threat from unregulated construction.

Within the forts, there are acknowledged development pressures derived from continued encroachment and enlargement of residential communities. The stability of the overall hill on which Jaisalmer rests is vulnerable to water seepage as a result of the lack of adequate infrastructure.

#### Authenticity

As a series, ICOMOS considers that the six sites have the capacity to demonstrate all the outstanding facets of Rajput forts between the 8<sup>th</sup> and 18<sup>th</sup> centuries. And each of the sites is necessary for the series.

For the individual forts, although the structures at each of the sites adequately convey their value, some are vulnerable. The original exterior plaster at Amber Fort and Gagron Fort has been replaced, which has caused a loss of historic material and patina. At Chittorgarh and Kumbhalgarh Forts, there are structures in a state of progressive decay or collapse, which are vulnerable to losing their authenticity in material, substance, workmanship and design. At Jaisalmer within the urban area individual buildings are in need of improved conservation approaches.

#### Management and protection requirements

Chittorgarh, Kumbhalgarh, Ranthambore and Jaisalmer Forts are protected as Monuments of National Importance of India under the Ancient and Historical Monuments and Archaeological Sites and Remains (Declaration of National Importance) Act of 1951 (No. LXXI of 1951 (AMASR)) and the AMASR Amendment of 2010. They were listed in 1951 (Kumbhalgarh, Ranthambore and Jaisalmer) and in 1956 (Chittorgarh) respectively. The 1951 national legislation provides unlimited protection to the monuments designated in its framework and the 2010 amendment establishes a 200 metre protection zone around the area of the designated Monuments of National Importance.

Gagron and Amber Forts are designated as State Protected Monuments of Rajasthan under the Rajasthan Monuments, Archaeological Sites and Antiquities Act of 1968. They were both listed in the very year the act was adopted. The 1968 Act stipulates that no person, including the owner of the property, can carry out any construction, restoration or excavation work, unless permission has been granted by the responsible state authorities. In the case of Amber Palace an additional notification for the

protection of a 50 metre buffer zone around the property has been issued. It would be desirable to gain national designation for Gagron and Amber Forts.

All sites have buffer zones designated but there is a need for clearer planning policies for these and for the wider setting of the forts in order to regulate development.

The overall management of the six properties is steered by the State Level Apex Advisory Committee, which was established through Order A&C/2011/3949 on 11<sup>th</sup> May 2011. It is chaired by the Chief Secretary of Rajasthan and comprises members of the concerned ministries, namely Environment & Forests, Urban Development and Housing, Tourism, Art, Literature & Culture, Energy and various representatives of the heritage sector including the ASI. The Apex Advisory Committee meets on a quarterly basis and is designed to constitute the overall management framework of the serial property, guide the local management of the six serial components, coordinate cross-cutting initiatives, share research and documentation, share conservation and management practices and address the requirements of common interpretative resources.

To implement the recommendations of the Apex Advisory Committee, the Amber Development and Management Authority, acts as an overarching authority for management implementation. This was legalized through notification by the Chief Secretary of the Government of Rajasthan dated 14 October 2011.

There are Management Plans designed to cover the period 2011 to 2015 for five of the six sites. For Jaisalmer, the Management Plan for the property along with sub-plans including visitor management, risk preparedness, and livelihood generation for the local population, will be completed by end of 2013. There is a need for policy statements in the Plans to reference Outstanding Universal Value and for more detailed action plans to be produced for the implementation of the management policies, as well as for indicators for management quality assurance during the implementation processes. For the first revision of the Plans, it would be desirable to provide an over-arching volume for the whole series that sets out agreed approaches.

To reverse the vulnerabilities of certain individual structures within the forts, there is a need for short-term conservation actions. For Jaisalmer, there is a need to ensure the major conservation project for infrastructure and conservation of individual buildings is delivered according to the agreed timescale. Conservation of the extremely extensive fortifications and ensembles of palaces, temples and other buildings will call for extensive skills and resources. A capacity building strategy to raise awareness of the importance and value of these skills as part of an approach to livelihood generation could be considered.

In order that there is a clear understanding of how each of the forts contributes to the series as a whole, there is a

need for improved interpretation as part of an interpretation strategy for the overall series.

#### **Additional recommendations**

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

- Extending the boundaries at Amber Fort to include Jaigarh Fort, and at Kumbhalgarh to include Halla Pol;
- Designating both Amber and Gagron forts as national monuments;
- Submitting, by 1 February 2015, a State of Conservation Report to the World Heritage Centre, reporting on progress with the conservation project at Jaisalmer, and conservation work at Chittorgarh and Kumbhalgarh Forts, to be examined by the World Heritage Committee at its 39<sup>th</sup> session in 2015.

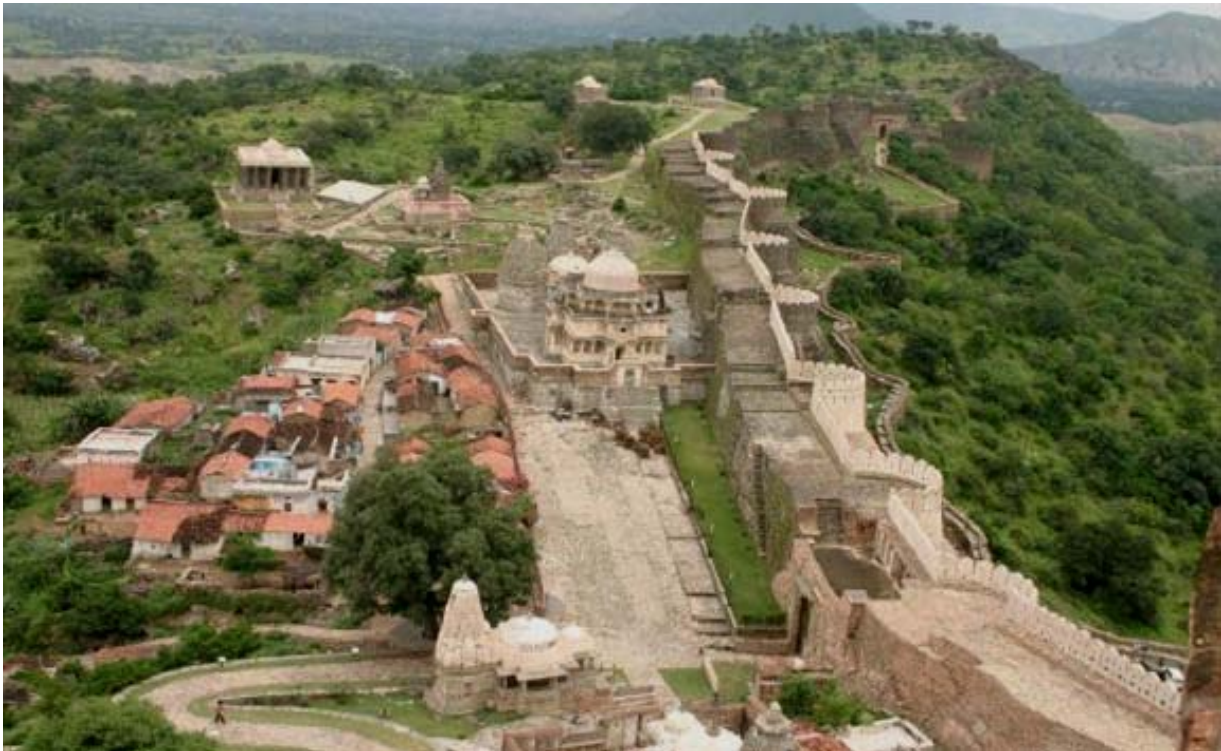




Map showing the location of the nominated properties



Chittorgarh Fort



Kumbhalgarh Fort



Ranthambore Fort



Gagron Fort



Amber Fort



Jaisalmer Fort