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# World Heritage Patrimoine mondial

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UNITED NATIONS EDUCATIONAL,  
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POUR L'EDUCATION, LA SCIENCE ET LA CULTURE

CONVENTION CONCERNING THE PROTECTION OF THE WORLD  
CULTURAL AND NATURAL HERITAGE

CONVENTION CONCERNANT LA PROTECTION DU PATRIMOINE  
MONDIAL, CULTUREL ET NATUREL

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**Item 7 of the Provisional Agenda:** State of conservation of properties inscribed on the World Heritage List and/or on the List of World Heritage in Danger

**Point 7 de l'Ordre du jour provisoire :** Etat de conservation de biens inscrits sur la Liste du patrimoine mondial et/ou sur la Liste du patrimoine mondial en péril

MISSION REPORT / RAPPORT DE MISSION

Historic Ensemble of the Potala Palace, Lhasa (China) (707ter)  
Ensemble historique du Palais du Potala, Lhasa (Chine) (707ter)

8-14 April/avril 2019

REPORT on the joint  
World Heritage Centre/ICOMOS/ICCROM  
Reactive Monitoring Mission  
to the World Heritage Property  
“Historic Ensemble of the Potala Palace,  
Lhasa” (China)

08–14 April 2019



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Throughout its stay in Beijing and Lhasa, the mission received all necessary support from the officials and staff members of the National Cultural Heritage Administration (NCHA), under the leadership of Mr SONG Xinchao, Deputy Director-General of NCHA. We would also like to acknowledge the support received from the Vice-Chairman and officials of the Government of Tibet Autonomous Region; the Mayor, Vice-Mayor and officials of Lhasa Municipal People's Government; Officials of the three Management Offices of Potala Palace, Jokhang Temple and Norbulingka; representatives of Resident of Old Town of Lhasa/Barkhor Historic Area and other individual experts, who made our mission rewarding.

# EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

The Potala Palace was inscribed on the World Heritage List in 1994 under criteria (i), (iv) and (vi). The Jokhang Temple and Norbulingka were inscribed in 2000 and 2001 respectively as part of successive extensions of the property. The Historic Ensemble of the Potala Palace, Jokhang Temple and Norbulingka embody the administrative, religious and symbolic functions of the Tibetan theocratic government through their location, layout and architecture. The beauty and originality of the architecture of these three sites, their rich ornamentation and harmonious integration in a striking landscape contribute to their Outstanding Universal Value.

Following the decision adopted at the 42nd session of the World Heritage Committee, a Reactive Monitoring mission to the Historic Ensemble of the Potala Palace, Lhasa, was carried out from 08 to 14 April 2019 to:

- 1) assess the damage caused by the fire of February 2018, with particular attention accorded to the Golden Ceiling of Jokhang Temple;
- 2) review the preventative actions taken following the fire, the restoration plans developed, and the restoration works undertaken so far;
- 3) evaluate the impact of the aforementioned fire on the Outstanding Universal Value (OUV) of the property;
- 4) ascertain the progress made with the three conservation plans for the component parts of the property (Potala Palace, Jokhang Temple Monastery and Norbulingka), in particular the maps contained in these conservation plans that shall clarify the buffer zones of the property and the regulations which will apply to the buffer zones;
- 5) provide advice for the study to be launched on the potential impacts of the proposed television tower on the OUV of the property, in accordance with the 2011 *ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage properties*; and
- 6) assess and provide advice on the general state of conservation of the property, having particular regard to its role as a pilgrimage site and the integrity of the attributes that contribute to its Outstanding Universal Value.

## Conclusions

The general state of conservation within the Potala Palace, Jokhang Temple Monastery and Norbulingka is relatively good. However, the intangible cultural heritage associated with the living traditions of pilgrims (i.e. their journey through Lhasa toward the Jokhang Temple Monastery, their perambulation and their experience within it) is at risk.

The fire was partial and did not affect the whole architecture, art, and belief system of the Jokhang Temple. Thus, the overall impact on the authenticity and the integrity of the temple was minimum.

The reconstruction of the Ventilation Chamber and its golden roof at the Jokhang Temple has been made to relatively good standards of workmanship and tolerance. Modest changes have been made to the Ventilation Chamber to improve the safety of the building by mitigating the risk of fire. The area most severely impacted by the fire dates primarily to the period of major reconstruction in the 1980s. The OUV of Jokhang Temple Monastery is unchanged as a result of the fire and subsequent restoration efforts.

## Summary of the Recommendations

- Concerning the restoration and protection of wooden elements, the State Party should ensure the availability of forests or woodland reserves, where appropriate timber can be obtained for the preservation and repair of the historic timber structures at Lhasa. Traditional skills and hand tools

necessary to convert timbers by hand should be preserved so that they will match the historic parts of the buildings. When making repairs to the historic timber buildings, the *ICOMOS Principles for the Preservation of Historic Timber Structures* (2017) should be adopted and implemented [R1].

- Three conservation plans should be developed for the component parts of the property (Potala Palace, Jokhang Temple Monastery and Norbulingka), including maps that clarify the buffer zones of the property and the regulations that will apply to these buffer zones [R2].
- In this regard, the State Party may wish to consider that future monitoring missions should include a walking tour of the boundaries of the buffer zones for each of the three component sites and that the demarcation of the buffer zone boundaries could be indicated with subtle and appropriate signage throughout the city [R3].
- The original television tower should be dismantled as soon as possible once the new tower is made operational to restore the historic views and cityscape [R4].
- Regarding the overall state of conservation of the property, particular regard should be given to the property's role as a pilgrimage site and the integrity of the attributes that express its Outstanding Universal Value [R5].
- When considering the carrying capacity of the three historic sites, the people who inhabit the buildings should be consulted to understand fully the impacts of visitors on living traditions [R6].
- The holy atmosphere of Lhasa should be maintained, ensuring a favourable environment for pilgrims, which should be a management requirement for the World Heritage property [R7].
- A professional structural engineer who is familiar with historic timber frame construction and repair techniques should be engaged to investigate the capacity of the two-story inner timber colonnade to withstand the loads imposed upon them mid-span by temporary props that have been installed to support the second-floor mezzanine, where it is separating from the outer posts under the load of concrete floors [R8].
- The conservation of the property should not be the only goal in conserving and enhancing the cultural value of the city of Lhasa. Priority should also be given to the conservation of the sacred religious spaces and the atmosphere of Tibetan religious life [R13].
- The State Party should work with the monks and pilgrims of the Jokhang Temple Monastery to examine how visiting tourists are affecting the experience of pilgrims [R9] while considering implementing reasonable restrictions regarding the visitors' photographs of pilgrims during their procession and ritual practice [R10]. The State Party may also restrict the newly paved central pathway (i.e. the larger, light grey paving stones) around the Jokhang Temple Complex for the exclusive use of pilgrims and require visitors (tourists) to remain outside this pathway as they explore the historic Barkhor area [R11].
- An official qualification system or an education system should be created to ensure the sustainability of traditional skills and enhance quality, knowledge and technology transfer in the field of restoration and conservation [R12].
- In accordance with the 1972 *Recommendation concerning the Protection, at National Level, of the Cultural and Natural Heritage*, Tibetan heritage sites need to be identified following a thorough analysis, a publicly accessible database established, and public awareness/ outreach organised to stress the need for conservation and to limit excessive or unregulated development [R14].
- A Cultural Environment Management Plan is also needed to conserve the historic fabric of the city and ensure consistency in the historic environment and visual corridors between the Potala Palace, the Jokhang Temple, and Norbulingka [R15]. In addition to the visual corridors between component sites of the World Heritage property, the cultural contexts with many other heritage properties inside and outside the buffer zone need to be managed [R16].

- The development density on the Land Use Plan (Urban Master Plan) should be lowered by reducing the permissible density limit, i.e. reducing the limit of the total floor area ratio and height of the building in the residential zone and commercial zone, based on the carrying capacity of the cultural environment of Lhasa **[R17]**.
- Specific criteria should be established to determine whether buildings have negative impacts on the historical environment, and a survey should be conducted of the buildings located in buffer zones **[R18]**.
- Specific regulations and guidelines are needed in Lhasa for the management of excavated relics and excavation sites, including how to preserve such sites and/or manage development in and around them **[R19]**.
- A systematic review and analysis process should be established for excavation results, along with the above-mentioned database, to ascertain the relationship between the excavation site and the World Heritage property and/or other heritage sites in Lhasa, notably beyond the property's buffer zone **[R20]**.

# 1 BACKGROUND TO THE MISSION

The World Heritage Centre, in a letter dated 16 July 2018, transmitted Decision **42 COM 7B.2** regarding the state of conservation of the World Heritage property 'Historic Ensemble of the Potala Palace, Lhasa', adopted by the World Heritage Committee at its 42nd session (Manama, 2018), which requested the State Party to provide more detailed reports on all the damage caused by the fire of February 2018 and to invite a joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission to the property to assess the damage caused by the fire. Following this letter, the World Heritage Centre, in a letter dated 1 March 2019, informed the State Party about proposed dates and Terms of Reference for the joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission. These Terms of Reference (TOR) of the joint mission, as transmitted to the State Party, are included in Annex 1.

The joint Reactive Monitoring mission took place from 8 to 14 April 2019 with the following members:

- Ms Himalchuli Gurung, representing the UNESCO World Heritage Centre (Paris)
- Dr Mie Oak Chae, representing ICOMOS International
- Mr Gordon Macdonald, representing ICCROM

The National Cultural Heritage Administration (NCHA) was responsible for the overall arrangement of the mission and provided all the necessary support during the mission. A meeting was organized between NCHA and the mission team in Beijing on 8 April 2019, chaired by Mr SONG Xinchao, Deputy Director-General of NCHA. In coordination with the local authorities, NCHA organized all the relevant meetings with stakeholders in Lhasa and field visits to the three component sites, i.e. Potala Palace, Jokhang Temple and Norbulingka. Relevant documents and reports were provided to the mission team by NCHA before and after the mission.



## **2 NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY**

### **2.1 Protected Area/National Legislation**

State Priority Protected Sites: Historic Ensemble of the Potala Palace (Potala Palace, Norbulingka, Jokhang Temple). The three elements of the property benefit from protection involving entities at the national, regional, and city levels. The government also protects the buffer zones and a significant number of individual historic buildings.

In 2017, the State Council approved the 'General Plan for Lhasa City (2009-2020) (revised in 2017)' issued by the People's Government of Tibet Autonomous Region. It emphasized the importance of the protection of historical culture and features and particularly mentioned the protection of the Historic Ensemble of the Potala Palace.

### **2.2 Institutional framework**

The conservation and management of the property fall under the following regulatory measures, which also prescribe the institutional arrangements:

- The Cultural Relics Protection Law of the People's Republic of China;
- Regulation on Preservation of the Old Town of Lhasa;
- Conservation Master Plan for the World Cultural Heritage Property;
- Lhasa Barkhor Area Conservation Plan;
- Conservation Plan for the Historic Ensemble of the Barkhor Area in Lhasa;
- Cultural Heritage Conservation Plan for the Jokhang Temple;
- Regulation on the Preservation of the Old Town of Lhasa;
- Urban development strategy "Protecting the historical urban area and building a new urban area elsewhere";
- General Plan for Lhasa City (2009-2020) (revised in 2017).

### **2.3 Management structure**

As for the management structure, the following entities are largely responsible for the property:

- The State Council of China, in particular the National Cultural Heritage Administration (NCHA) at the national level;
- The Department of Cultural Heritage, the Tibet Autonomous Region;
- The Department of Cultural Heritage, Lhasa City;
- Chinese Monitoring Centre of World Cultural Heritage.

### 3 IDENTIFICATION AND ASSESSMENT OF ISSUES / THREATS

#### 3.1 Assessment of the effects of the fire of February 2018 with particular attention accorded to the Golden ceiling of Jokhang Temple

“Around 18:40, February 17, 2018, the ventilating chamber on the second floor of the Back Hall of the Main Hall caught fire, with a burned area of approximately 50 square meters. The statue of Sakyamuni Buddha is enshrined on the first floor, inside the Back Hall.” - *Report forwarded to UNESCO World Heritage Centre on 16 March 2018.*

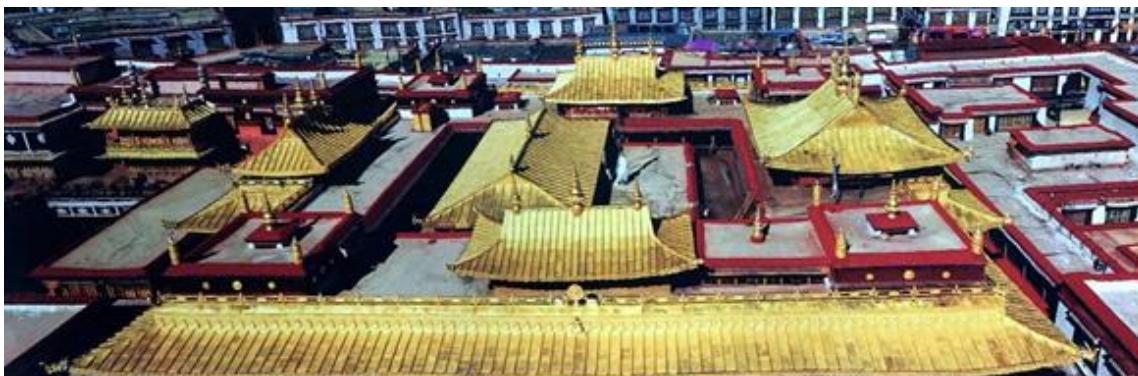


Figure 1 - The Golden Roofs of Jokhang Temple with the Ventilator Chamber at right. Jokhang Temple Management Committee.

The Ventilating Chamber of the Jokhang Temple Monastery is located at roof level (third floor) on the eastern end of the original temple complex, three stories above the 7th-century sanctum containing the Buddha Shakyamuni gilded bronze statue. The Ventilating Chamber is a wood, brick and earthen construction that serves to exhaust air from the interior of the temple. Each of the six major roof constructions at Jokhang is highly decorative, with painted external timber brackets beneath the eaves and gilded copper and/or bronze roof sheathing over wood sarking. The walls are crudely timber-framed, with brick and earth infill and an earth-plaster render. There is a dropped ceiling internally, formed of closely spaced roundwood joists with sawn lumber ceiling boards above them. Air enters the chamber via a small square opening (approximately 1.5m x 1.5m) in the centre of the earth floor and is exhausted from narrow openings immediately beneath the wall plates (above the exterior brackets); these vent into the eaves and are concealed by the decorative roof.

Collectively, the six structures shown in Figure 1 form the ‘Golden Roofs’ of Jokhang Temple. These are highly significant and character-defining aspects of the building (the Ventilating Chamber is the wider roof visible at the right side of the image).



Figure 2 - Fire at Jokhang Temple on the evening of 17 February 2018. Source: Twitter.



Figure 3 - Aerial firefighting at Jokhang Temple. (NB: sunset on 17th February 2018 was at 19:45.) Source: Twitter.

Images posted on social media suggest the fire burned for several hours and well into the evening (see Figures 3 and 4). Firefighters fought the blaze using a combination of portable extinguishers indoors, and aerial equipment from street level outside (see Figure 4). The fire was extinguished before the morning of 18 February, and fire crews then dismantled the remaining roof structure of the Ventilation Chamber to prevent debris from falling onto the floors below.

The floor opening between the Ventilating Chamber and the Chapel below (at second-floor level) is relatively small and the earth floor of the room would have provided some insulation from the heat of the fire. Similarly, the opening between the second floor and the two-story-tall Sanctum of the Shakyamuni Buddha, at ground level, is also quite small. Additionally, the Shakyamuni Buddha is contained within a roofed structure that forms part of the shrine. Collectively these conditions all served to protect the relic from both the fire and the impact of the fire response.

Despite the significant amount of water required to extinguish the fire, the mission team did not see any evidence of water damage.



Figure 4 - Aerial view of Jokhang Temple complex showing the area of the fire. Source: Google Earth.

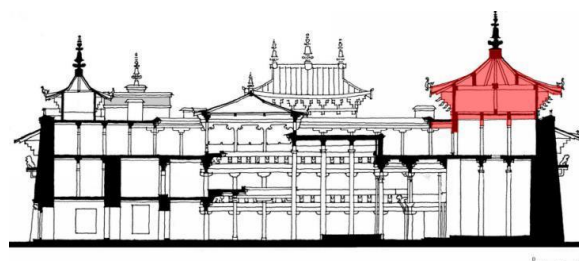


Figure 5 - Section-through Jokhang Temple showing the area of the fire. Base graphic © UNESCO/A. Alexander.



*Figure 6 - Damage to exterior wall murals at the 2nd floor level below the mezzanine, 10 April 2019.*



*Figure 7 - Damage to 2nd floor, exterior ceilings beneath the mezzanine, 10 April 2019.*



*Figure 8 - Fire damage to the roofing at the eaves of the second-floor mezzanine, immediately below the parapet wall, 10 April 2019. Note the unfinished gilding.*





*Figure 9 - Shakyamuni Buddha, protected from the fire three stories above, 10 April 2019.*

### 3.2 New Developments and Development Pressure

The mission noticed many new high-rise residential buildings and new developments. These large new developments are reflective of the response to population pressures, as shown in the following population growth statistics. In the area surrounding the Jokhang Temple, for example, the resident population in the area was **28,391** when the property was inscribed on the World Heritage List. By 2004, that figure had reached **65,506**, and the resident population in the area will soon exceed **80,000**. The rapid population increase, especially in the buffer zone, has imposed great pressure on urban management and has a negative influence on the conservation of the cultural environment of heritage.

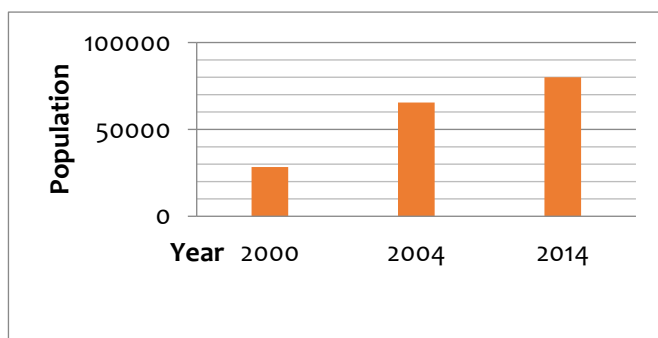
The rapid population growth inside and outside the buffer zone can act as a factor that undermines the image of the traditional religious centre of Lhasa City and the cultural setting of the World Heritage property by promoting high-rise development and commercialization. New high-rise buildings currently being built can be considered examples of these.

It is necessary to check where this population growth mainly occurred, namely how much the population increased in the buffer zone, and how much the population increased at a distance from the buffer zones. Through field investigation with written material, land use regulation of the areas, it is necessary to examine the necessity of adjusting the boundary of the buffer zone by analysing in detail how close the new buildings are to the buffer zone and how they affect the cultural settings and the main views to and from the World Heritage property, even if they are not within the buffer zones.

However, the mission team was not able to visit the buffer zones and could not confirm the location of the new high-rise developments and population increase, whether it is a region that negatively affects the historical context and visual connectivity of the three world heritage sites.

It is necessary to request the Chinese Authorities to provide the following information to analyse the impacts of the new developments on the cultural settings and visual corridors of the World Heritage property and recommend adjustment of the boundaries of the buffer zones and reinforcement of land use regulations and building code.

- The number of changes in the use of buildings from residential to commercial, inside and outside of buffer zone (data and maps showing this information)
- Change in the number of occupants, changes in the number of new buildings, and height of the buildings, inside and outside of buffer zone. (data and maps showing this information)



*Population in the buffer Zone of Jokhang Temple*



*New developments in Lhasa (Taken in April 2019)*

Source: INTRODUCTION TO THE CONSERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY, THE HISTORIC ENSEMBLE OF THE POTALA PALACE LHASA (CHINA), 10 April 2019

### 3.3 Effects of Tourism

Tourism poses a unique threat to the buildings. In 2015, Lhasa received 250,000 international tourists and 15,000,000 domestic tourists<sup>1</sup>. Visitor data from Jokhang Temple indicates that more than 3 million people currently visit the building each year, about half of whom are pilgrims; the overwhelming majority of the visitors to Jokhang Temple are domestic tourists (1.2 million in 2013-14). The protection of historic buildings under these circumstances is extremely complex, but the protection of historic cultural practices which give life and spirit to these places is perhaps the greatest challenge facing the World Heritage sites at Lhasa. Determining what constitutes a safe maximum number of visitors should include both a structural assessment of the buildings (monitoring the building fabric is currently taking place at all sites) and advice from the people who inhabit the buildings and manage the cultural practices within them as living traditions. Maintaining the holy atmosphere of Lhasa and conserving favourable environments for pilgrims should be the greatest management requirement for the World Heritage property 'Historic Ensemble of the Potala Palace'.

<sup>1</sup> An article published 23 April 2019 in China Daily titled *Lhasa attracts 19 million tourists in 2018* states, "In 2018, Tibet received a record number of 33.68 million tourists, up 31.5 percent year-on-year, according to the region's latest government report."

<http://www.chinadaily.com.cn/a/201904/23/WS5cbeda14a3104842260b7d79.html>

## 4 ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY

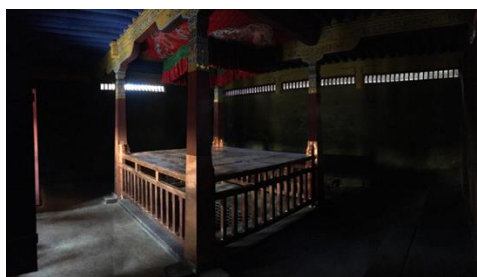
### 4.1 Preventive actions taken following the fire, the restoration plans developed, and the restoration works undertaken so far

**The Ventilation Chamber** has been substantially restored since the fire on 17 February 2018. According to the report forwarded to the UNESCO World Heritage Centre on 16 March 2018, the Ventilating Chamber and its golden ceiling were restored in 1973 and 1984 (repaired in 2013), and the interior line-drawing murals were painted in the 1980s.

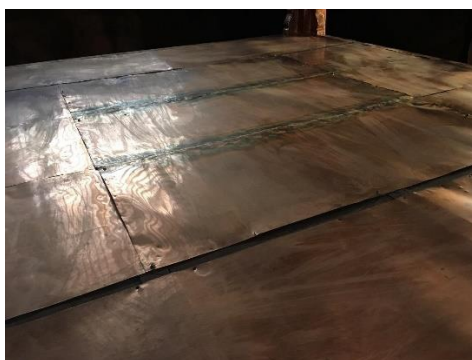
While the quality of the carpentry is good and appears to follow traditional patterns of construction and joinery detailing, the quality of the timber finishes and paintwork varies throughout the structure. Wooden parts appear to have been painted in situ rather than before assembly, resulting in partial coverage; in some areas, the paintwork has been crudely applied owing to the awkward access (see Figure 17).



*Figure 10 - Exterior of Ventilator Chamber after substantial restoration, 10 April 2019.*



*Figure 11: Interior of the Ventilation Chamber after restoration, 10 April 2019*



*Figure 12 - Improvements to the fire resistance of the Ventilation Chamber include a new copper hood above the air inlet, 10 April 2019.*

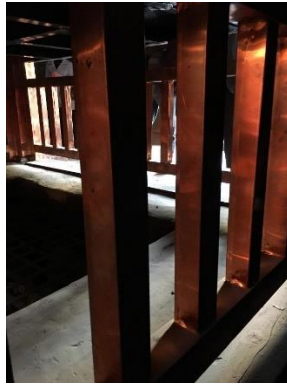


Figure 13 - Wood balustrading around the air inlet has been sheathed in copper, 10 April 2019.



Figure 14 - New awning and decorated ceiling of the Ventilation Chamber, 10 April 2019.



Figure 15 – The original, screened inlet remains in place, 10 April 2019.



Figure 16 - The overall quality of the carpentry is good, 10 April 2019.





Figure 17 - Painted and unpainted surfaces in the eave spaces, 10 April 2019.

Of greater concern is the generally poor quality of the wood that has been used for the reconstruction. All the new timber appears to be fast-grown and relatively low-quality. Additionally, some wooden parts have been poorly graded and these include defects such as large knots, acutely sloping or spiral grain, wane and non-durable sapwood. It is important to understand these characteristics do not match the original parts of the Jokhang Temple, where the standard of materials is excellent.

While the *ICOMOS Principles for the Preservation of Historic Timber Structures* (1999), Part 9, Repair and Replacement, has since been updated, this paragraph from the original document most clearly captures the relevant challenge:

“In the repair of a historic structure, replacement timber can be used with due respect to relevant historical and aesthetical values, and where it is an appropriate response to the need to replace decayed or damaged members or their parts, or to the requirements of restoration. New members or parts of members should be made of the same species of wood with the same, or, if appropriate, with better, grading as in the members being replaced. Where possible, this should also include similar natural characteristics. The moisture content and other physical characteristics of the replacement timber should be compatible with the existing structure. Craftsmanship and construction technology, including the use of dressing tools or machinery, should, where possible, correspond with those used originally. Nails and other secondary materials should, where appropriate, duplicate the originals. If a part of a member is replaced, traditional woodwork joints should, if appropriate and compatible with structural requirements, be used to splice the new and the existing part.”

Mr Dawa Ciren, in charge of the post-fire restoration project, explained that a quantity of dry timber is stored at the Potala Palace for repair works at Jokhang Temple and the Potala Palace. This addresses the need to make repairs with timbers of compatible moisture content but does not necessarily address the issue of timber quality or selection. An example of poor selection can be seen in Figure 17, where a knot representing more than 50% of the section of a common rafter (sprocket) can be seen under the eave.

The issue of access to appropriate wood to repair sites and monuments is addressed in *ICOMOS Principles for the Preservation of Historic Timber Structures* (2017), Parts 32 and 33, which read as follows:

“Because wooden structures may be in a vulnerable state, but still part of a living heritage and contributing to society, the availability of suitable timbers is essential for their conservation. Therefore, the crucial role that forest reserves play in the self-sustaining cycles of maintenance and repair of these wooden structures should be recognized. [...]

“Institutions responsible for the conservation of monuments and sites should encourage the protection of original woodland reserves and establish stores of seasoned timber appropriate for the conservation and repair of the wooden built heritage. This policy should foresee the need for large, properly seasoned wooden elements in future repairs.”

Another consideration is the method of timber conversion used for repairs and reconstruction: the new timbers used to repair the Ventilation Chamber are band-sawn, by contrast to the hewn and adzed finishes of the historic building fabric. The difference to the overall presentation of the work is subtle, but the implication for the preservation of traditional craft/carpentry skills is important: historic timber conversion is only possible through the practice of traditional skills such as hewing and adzing with traditional carpentry tools. Access to these traditional skills (and the traditional hand tools necessary to perform them) becomes particularly important when repairs are made to the primary/structural timber frame because there are many less-decorated parts of the Jokhang temple where it is appropriate to expose the conversion, and where exposed conversion marks contribute to the authenticity of the repairs. Therefore, *ICOMOS Principles for the Preservation of Historic Timber Structures* (2017), Part 14 (c) states that “Any replacement timber should preferably be worked using similar craft methods and tools as the original” (see Figures 18 and 19).



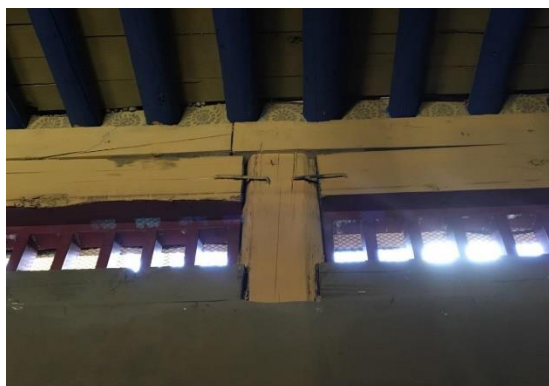
Figure 18 - Carpenters working on the Jokhang Temple, a section of a modern mural (1956-58) at the Norbulingka Summer Palace, 11 April 2019.



Figure 19 - Adzed joist ends in the foundations of the Potala Palace exhibiting tool markings (witness marks) that match the carpentry tools depicted in the mural at Norbulingka Palace, these being typically narrow width adzes hafted on long handles, 12 April 2019.

Observations of the repairs and reconstruction support that newer parts of the structure are easily distinguishable from the original, historic parts of the Jokhang Temple complex because of the generally low quality of timber used and the methods of conversion still visible on many timbers (NB, this is consistent throughout the temple). Particularly noticeable are the smaller, more decay-prone elements such as external brackets, rafters and rafter sprockets, joists, sarking boards, etc. which one would expect to be repaired and/or replaced more frequently than the larger, primary elements. Additionally, there are several non-traditional and poor-quality joinery connections visible in the surviving primary timber elements of the Ventilation Cupola, such as the posts to top plate connections shown in Figure 20. Such repairs detract from the authenticity of the building and diminish its structural

performance. As opportunities arise, poor quality modern repairs should be gradually replaced by repairs of these higher standards. Similarly, there are also many examples of high-quality modern repairs throughout the Jokhang Temple Monastery, exemplified by Figure 21. As opportunities arise, these high-quality repairs should serve as examples for future interventions.



*Figure 20 - Non-traditional and poor-quality connection between the post and top plates inside the Ventilation Chamber, formed with vertically aligned butt joints and reinforcing rod staples, 10 April 2019. This connection predates the fire, but the top plates and joists are new.*



*Figure 21 - High-quality modern repair from elsewhere in Jokhang Temple, 10 April 2019.*

Fires remain a significant risk to the Jokhang Temple complex. The lack of on-site fire protection resources (such as have been implemented at Potala Palace), coupled with poor road access for fire vehicles, means that it will take longer to respond to a fire at Jokhang than at Lhasa's other component sites of the World Heritage property.

Mr Laba, the Executive Deputy Director of the Jokhang Temple Management Committee, showed the mission team the text alert system that provides early warning to more than 50 people concerned with the safety of the temple. This is an excellent use of technology to reduce response times in the event of a fire.

It would be useful to have a more thorough analysis soon concerning prevention and mitigation measures that have been put in place at the temple. Issues such as water availability should be assessed, as should training for the community response (in addition to the 50 people tasked with the safety of the temple) to help in the event of an emergency.

The mission also noticed several improvements that are beneficial to the conservation of the properties, as recommended in the report of the 2015 Reactive Monitoring mission.

#### 4.1.1 Lighting system within the property

The candles were replaced with soot-low liquid oil, and the amount of lighting decreased significantly compared to 2015, which can be seen as a major improvement in reducing the danger of fire and the soot that damages mural painting within the component sites (Jokhang Temple and Potala Palace).

In the future, it is necessary to consider a plan to light candles only from the morning prayer time to the evening prayer time and turn them off when the evening prayer is over. The pilgrims and visitors visit the monastery during the day only, thus extinguishing candles at night will not have a negative effect on the temple's religious atmosphere.



*Fig. 22 - Lighting of Jokhang Temple & Potala Palace*



*Fig. 23 – Soot on a mural painting*



*Fig. 24 – Soot on the wooden craft*

#### 4.1.2 Monitoring System of Erosion & Topography of the Potala Palace

As recommended in the 2015 Reactive Monitoring mission report, an ongoing monitoring system of soil erosion and bedrock conditions has been established. This monitoring system can be seen as the first step for the efficient topography conservation of the Potala Palace. It is necessary to build a long-term database and monitoring measures to assess risks to the traditional structure and materials from hazards related to climate change.



*Fig. 25 – Detector in the basement of Potala Palace*



## 4.2 Impact of the fire on the Outstanding Universal Value of the property

The fire appears to have burned intensely for several hours, destroying perhaps 80% of the Ventilating Chamber roof and damaging approximately 20% of the eastern ceilings of the second floor (i.e. the undersides of the third-floor mezzanine).

Heat from the fire caused damage to exterior paintwork, gilded roofing and wall murals in adjacent areas on both the second and third floors. Wall murals and interior finishes within the Ventilating Chamber were destroyed. Exterior murals on the walls of the second floor (under the mezzanine) were seriously damaged. Traditional materials such as earth and brick, used in the construction of the Ventilation Chamber and surrounding areas, helped retard the spread of the fire, while the roof of the ground floor shrine helped to protect the Shakyamuni Buddha from water damage resulting from firefighting. The fire was partial and did not affect the whole architecture, art and belief system of the Jokhang Temple. Thus, the overall impact on the authenticity and the integrity of the temple was minimum. The areas most severely affected by the fire date primarily to the period of major reconstruction in the 1980s. The OUV of Jokhang Temple Monastery is unchanged as a result of the fire and subsequent restoration efforts.



*Figure 26 - Jokhang Temple during the fire in 2019. Source: Twitter.*



*Figure 27 – Image of the Jokhang Temple made in 1920-21, Pitt Rivers Museum. Note the different roof ornamentation on the ridge of the Ventilation Chamber roof (centre).*

### **4.3 Conservation plans for the component parts of the property and the buffer zone**

According to the 2015 Reactive Monitoring mission report, as the Urban Master Plan (2009-2020) was being revised, it will reflect the cultural heritage conservation plan. The mission team received only the “Excerpts of Draft Master Plan for the Conservation of the Potala Palace, the Jokhang Monastery and Norbulingka”, but not the Urban Master Plan and revised Master Plan for the Conservation of the Potala Ensembles.

Each of the three conservation plans appears to be available in the draft form thus the mission team evaluated the conservation plans based on the Excerpts of the Draft Master Plan for the Conservation of the Potala Palace, the Jokhang Monastery and Norbulingka. Although the draft plan was written in English, the explanations of the buffer zones on the maps were in Chinese, posing difficulty in understanding the content.

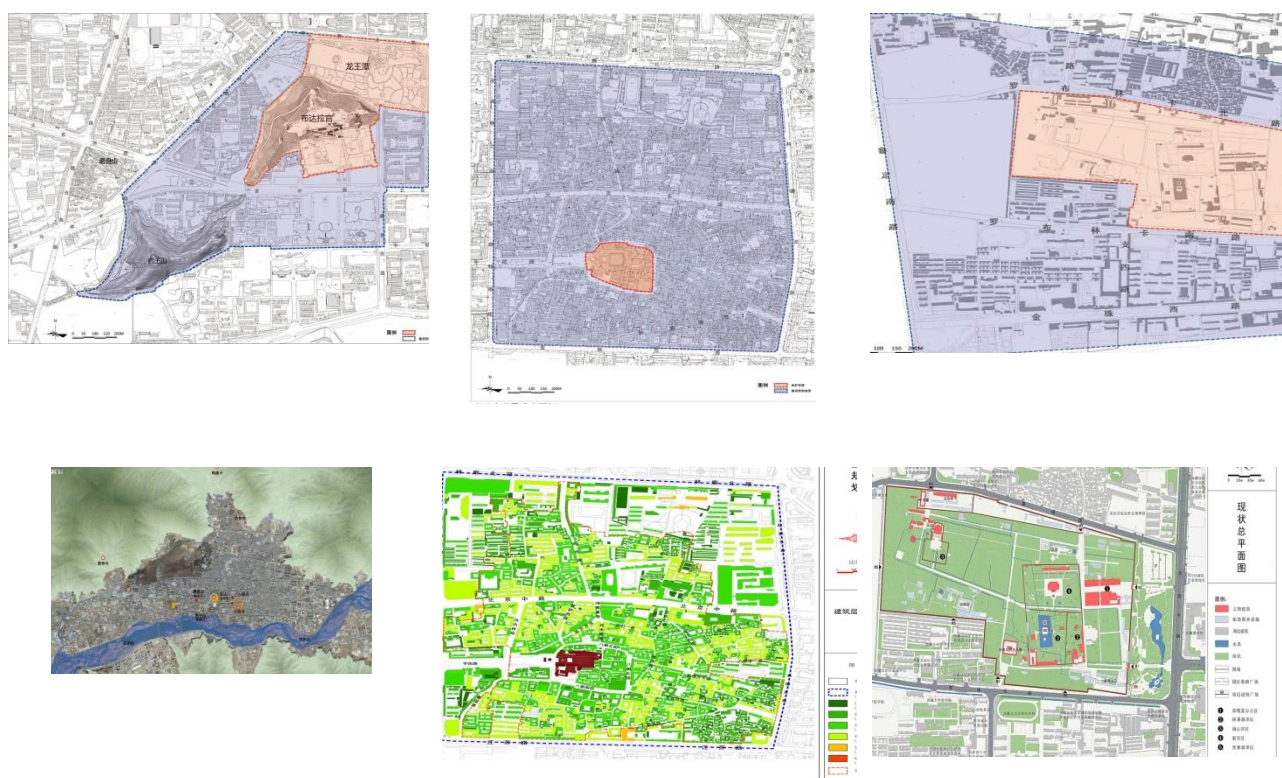
On the Map in the draft Plan, the boundary adjustment of the buffer zone, as suggested in the 2015 Reactive Monitoring Mission report, was not reflected. This was further confirmed, during the discussions, that there was no boundary adjustment of the buffer zones on the Master Plan.

In the written statement of the draft Master Plan, as described below, the mission team noted several improvements to the conservation and management system of the buffer zone compared to 2015. There is a comprehensive planning and permitting process in place to manage development within the buffer zones that are beneficial to the cultural environment of the property. But again, the team was unable to verify the specific guidelines on how this system translates into permissions for new construction, demolition and/or alteration of historic buildings on a practical level due to the lack of information.

The following is a summary of the improvements in the buffer zone Conservation & Management Regulations based on the draft plans.

- (i) The focus on the preservation and management of World Heritage has expanded to include the management of the cultural environment that surrounds it. The regulations on the management of historical environments in the buffer zones of the three component sites improved greatly compared to that of 2015, which focused only on the conservation of individual heritage sites. For example, several new regulations for the preservation and management of the cultural environment and historic urban fabric are noticeable:
  - The Conservation & Management Regulations outline a development permit system by dividing areas into ‘Protected Area’ and ‘Construction Control Area’.
  - All commercial developments are prohibited in the Protected Area. In the Construction Control Areas, all developments must receive approval from the government to ensure they are in harmony with the cultural environment.
  - However, the mission could not check the locations and boundaries of the Construction Control Areas (the buffer zone) at the actual site and the status of construction development of the Construction Control Areas, nor the effectiveness of their implementation concerning spatial relationships, as it was not provided with the required documentation.

Figure 28 – Buffer Zones of the Potala Ensemble



Buffer zone of Potala Palace

Buffer zone of Jokhang Temple

Buffer zone of Norbulingka

Source: *Introduction to the Conservation and Management of the World Heritage Property the Historic Ensemble of the Potala Palace LHASA(CHINA)*, April 10, 2019;

- (ii) The contents of the regulations within the buffer zone are diversified to conserve the cultural environment and the historic urban fabric. A building height limitation was only introduced in 2005. The new rules include regulations on the appearance, colour and size of the buildings as well as their height, which may otherwise affect the historic environment and cultural fabric of the area. To ensure the conservation of the cultural fabric, alterations to the existing streets, alleys and networks within the old district of the protected area are prohibited.

- (iii) Rules have been put in place for the conservation and restoration of the historical environment.

The immovable heritage that has been completely destroyed should be protected as a site and reconstruction shall not be carried out at the original location(s). Buildings that have a negative impact on the historical setting should be torn down or repaired. Structures within the boundaries that have an impact on the historical setting and scenery of the Potala Palace shall be removed or rectified within a prescribed time limit.

- (iv) New regulations have also been prepared to prevent the archaeological property from being damaged by new developments.

During the mission, it was not possible to consult data on how many cultural assets were unearthed from the development project site neither within the buffer zone nor on what kind of historic significance these sites may carry.

The cultural value of the Historic Ensemble of the Potala Palace Lhasa can be enriched when it is linked to the historical and cultural context of the entire city of Lhasa. It is necessary to compile a list of buried cultural properties and their management status.

A database of unearthed archaeological remains will allow to confirm the historical urban fabric of Lhasa city and the spatial context between cultural sites and World Heritage property more clearly, thereby enriching the cultural environment and OUV of the property.

As described in 3.2, the population has been rapidly growing, and new high-rise developments have been ongoing in Lhasa. The rapid population growth inside and outside the buffer zone can act as a factor that undermines the image of the traditional religious centre of Lhasa city and the cultural setting of the World Heritage property by promoting high-rise development and commercialization.

Even though the aforementioned statement specified the conservation of the historical context of the World Heritage property, the main views to and from the World Heritage property and the cultural landscape surrounding the three component sites of the property cannot be said greatly improved. Because the boundaries of the buffer zone were not adjusted, developments just outside of the buffer zone cannot be properly controlled. If urban planning does not reinforce land use regulations on the area around the buffer zone, the effect of the strengthening of regulations within the buffer zones will be limited. As the mission team was not able to visit the buffer zones, the team could not check the development and management status of the buffer zone; this, it was impossible to evaluate the effects or problems of the actual application of the conservation plan. Under these limitations, the team evaluated the conservation plan based only on the written statement of the draft plan.

### **Pilgrim Environment Management**

There have been some positive changes to protect the pilgrims' religious activities and to provide a religious environment. Potted plants were placed in front of the Jokhang Temple, giving refuge for pilgrims to worship. A system has been set up to separate the visiting hours for pilgrims and tourists: Jokhang Temple has advised travel agencies to guide massive visitor groups to the temple in the afternoon and avoid the peak visiting times for pilgrims, who normally visit the temple in the morning.



*Figure 29 – Pilgrims place marked by the potted plants in front of Jokhang Temple*

While the route of pilgrims' circumambulation and/or prostrating around Jokhang Temple is identified by the colour of the pavement, some areas are still hampered by tourist traffic (Figure 30). Additionally, pilgrimage routes are only marked around parts of the Jokhang temple and there is poor connectivity with other parts of the complex such as the entrance, as seen in Figure 31. These issues should be corrected.





*Fig. 30 – Tourists share the route used by Pilgrims circumambulating and/or prostrating around the Jokhang Temple*



*Fig. 31 – Square in front of the Jokhang Temple, the pilgrim route around the temple needs to be extended to the entrance of the square.*

#### **4.4 Development projects and Urban Master Plan**

The mission noticed many new buildings and new developments in Lhasa city, compared to 2015. This is supported by the statistics provided by the Department of Cultural Heritage, Lhasa City, which stated that the population has been greatly increasing. (See 3.2)

This means a higher likelihood that most of the buffer zones of the World Heritage Properties will be surrounded by high rise new buildings, damaging the cultural structure and visual corridors between them. This also will be one of the causes of over-commercialization of the area surrounding the inscribed component parts.

However, the mission team could not confirm the number of new developments within the buffer zone and land use regulations of the zones surrounding the buffer zone, due to the lack of data.

Even assuming that all new development projects are carried out outside the buffer zone, the current buffer zone is only set around individual cultural properties. Therefore, in terms of the religious symbolism of the Historic Ensemble of the Potala Palace Lhasa, it seems to be insufficient to fully consider the historical context, visual connection, cultural environment of the heritages.

For the next monitoring process, development-related information should be requested from the Chinese Authority, such as the number of applications and permits for development, the size and permitted height of the building, and the purpose of the development both within the buffer zone and outside the buffer zone in Lhasa City. It needs to be emphasized that development projects and land use regulations surrounding the buffer zones should be provided to review their proximity to the buffer zones and the impact on the visual setting of the World Heritage property.

The mission team understands that it is very difficult to expand the buffer zone or change the land use plan (zoning) and land use regulations throughout Lhasa City. Like the other cities in the Tibet Autonomous Region, Lhasa is suffering from high development pressure.

If it is difficult to expand the buffer zone, the mission suggests implementing a development control system that is applied within and outside the buffer zone designating Special Management District (exact name to be confirmed) in the principal area surrounding the buffer zones. This will allow the local government to have relative ease in controlling the use of buildings, and the nature of lighting,

signage, façades, and roofing of buildings in the Special Management District. Furthermore, implementing these development control systems will help prevent the destruction of the historical environment and degradation of the OUV of the Historic Ensemble of Potala, at a minimum. This planning permission system is used in urban planning and land use regulation system in many countries, such as the Planning Permission System based on The Town and Country Planning Act of the UK and the Development Permission System of Korea based National Land Planning and Use Act in which public officials may review the impact of the development on the land use, landscape, infrastructure in the surrounding area for the development.

## 4.5 The new Television Tower

The height of the current television tower is higher than the Potala Palace, which impacts its visual characteristics and undermines its sacred image. According to information received from Mr Guonguo and his municipal staff, the new television tower is to be located at the eastern end of the city, where the authorities indicate that it will not impact the OUV of the property. Plans are underway to demolish the existing television tower once the new tower becomes operational. In accordance with Decision **42 COM 7B.2**, the mission encouraged the study to be launched on the potential impacts of the new television tower on the Outstanding Universal Value of the property, in accordance with the 2011 *ICOMOS Guidance on Heritage Impact Assessment for Cultural World Heritage properties*.

## 4.6 General state of conservation of the property

The general state of conservation within the Potala Palace, Jokhang Temple Monastery and Norbulingka are relatively good as compared to the buffer zones of these properties.

The real-time environmental monitoring, fire monitoring and security monitoring currently taking place at the property are both innovative and comprehensive. Some of the systems that have recently been implemented, such as weather forecasting for lightning activity, represent a positive application of 'cutting-edge' technology. The challenge will now be to determine what to do with the wealth of data that is being produced, and how to use this purposefully for the management of the historic buildings and their associated collections.

ICOMOS China's *Principles for the Conservation of Heritage Sites in China* (2015), Article 10 (p. 67) states the following:

"Authenticity resides in the original materials, workmanship and design of a site and its setting, as well as in its historical, cultural, and social characteristics and qualities. Respecting these aspects through conservation retains authenticity. The continuation of long-established cultural traditions associated with a particular site is also a means of retaining its authenticity."

One of the attributes of Outstanding Universal Value of the Historic Ensemble of the Potala Palace generally, and the Jokhang Temple Monastery specifically, is the tangible relationship with living traditions (criterion vi), these being "potent and exceptional symbols of the integration of secular and religious authority" as recognized by the World Heritage Committee when the property was inscribed on the List. Jokhang Temple is an important Tibetan Buddhist monastery, inhabited by monks who perform long-established cultural functions, including the care and stewardship of relics and shrines and the facilitation of the pilgrims' visits. Respecting these living traditions of the Jokhang Temple is essential to retaining its authenticity.

The city of Lhasa is growing swiftly. Growth brings new opportunities and many challenges for the historic built environment. Rapid population growth and urbanization present challenges to maintain historic sightlines along pilgrim routes through the city, which are important to maintain connectivity between the three component parts of the property and the larger cultural landscape of Lhasa.

The rapidly growing population and the scale of new developments have a serious negative impact not just on the conservation of OUV and the cultural environment of the World Heritage property, but also on the religious atmosphere of Lhasa. The development density on the Land Use Plan (Urban Master Plan) should be lowered to reduce the development capacity and control over-commercialization, bearing in mind the carrying capacity of Lhasa.

Visitor data from Jokhang Temple indicates that more than 3 million people currently visit the building each year, about half of whom are pilgrims; the overwhelming majority of the visitors to Jokhang Temple are domestic tourists (1.2 million in 2013-14). Tourism poses a unique threat to the buildings. In 2015, Lhasa received 250,000 international tourists and 15,000,000 domestic tourists.

Within the Jokhang Temple Monastery, it appears that several of the historic earth floors (aga soil floors) have been replaced with concrete. The timber joists of the first-floor mezzanine, which are part of the 7<sup>th</sup>-century part of the temple, are detaching from the outer timber columns in places and have been propped against the two-story inner wood columns. This may be introducing buckling forces to the inner columns that they are not intended to withstand, and these columns may consequently be at risk. This issue should be investigated by structural engineers experienced in historic timber frame construction and repair as a matter of urgency.

#### **4.6.1 Building database of Murals**

There are many murals within the Properties. Some of them are original, but some are restored or newly drawn in recent years. It is not easy for people to distinguish the original murals from the newly drawn ones. And there are possibilities that the restored and newly drawn murals are not distinguished from each other over time. The mission suggests building a database (DB) of the restoration contents, restoration methods, and records of newly painted murals.

## 5 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

The general state of conservation within the Potala Palace, Jokhang Temple Monastery and Norbulingka is relatively good. The real-time environmental monitoring, fire monitoring and security monitoring currently in use at the property are innovative and comprehensive. However, the intangible cultural heritage associated with the living traditions of pilgrims (i.e. their journey through Lhasa toward the Jokhang Temple Monastery, their perambulation and their experience within it) is at risk.

#### 5.1.1 Fire damage

- The fire appears to have burned intensely for several hours, destroying perhaps 80% of the Ventilating Chamber roof and damaging approximately 20% of the eastern ceilings of the second floor (i.e. the undersides of the third-floor mezzanine).
- Heat from the fire caused damage to exterior paintwork, gilded roofing and wall murals in adjacent areas on both the second and third floors.
- Wall murals and interior finishes within the Ventilating Chamber were destroyed. Exterior murals on the walls of the second floor (under the mezzanine) were seriously damaged.
- Traditional materials such as earth and brick, used in the construction of the Ventilation Chamber and surrounding areas, helped retard the spread of the fire, while the roof of the ground floor shrine helped to protect the Shakyamuni Buddha from water damage resulting from firefighting.
- The areas most severely affected by the fire date primarily to the period of major reconstruction in the 1980s.
- The fire was partial and did not affect the whole architecture, art and belief system of the Jokhang Temple. Thus, the overall impact on the authenticity and the integrity of the temple was minimum.

#### 5.1.2 Post-fire restoration

- The reconstruction of the Ventilation Chamber and its golden roof at the Jokhang Temple was carried out to relatively good standards of workmanship and tolerance. The carpentry repairs are substantially complete.
- The painting is approximately 90% complete and the gilding work is approximately 85% complete.
- Restoration of the interior and exterior wall murals has not yet begun.
- Timber grades and characteristics used for the reconstruction and repairs are of lower quality than the original and historic parts of the Jokhang Temple complex.
- Some modifications have been made to the original form of the interior arrangement of the Ventilation Chamber to improve fire protection (e.g. copper cladding of the balustrading and new copper hood above the ventilation inlet). These changes are modest, distinguishable and pragmatic concessions to improve the safety of the building by mitigating the risk of fire.
- Fire remains a significant risk to the Jokhang Temple complex.

#### 5.1.3 OUV of the property

- The Historic Ensemble of the Potala Palace, Jokhang Temple and Norbulingka embody the administrative, religious and symbolic functions of the Tibetan theocratic government through their location, layout and architecture. The beauty and originality of the architecture of these

three sites, their rich ornamentation and harmonious integration in a striking landscape contribute to their Outstanding Universal Value.

- The Golden Roofs of the Jokhang Temple Monastery are highly significant and character-defining aspects of the complex.
- The areas most severely impacted by the fire date primarily to the period of major reconstruction in the 1980s.
- The OUV of Jokhang Temple Monastery is unchanged as a result of the fire and subsequent restoration efforts.

## **5.2 Recommendations**

### **Protection of Wooden Elements**

1. Concerning the restoration and protection of wooden elements, the State Party should ensure the following:
  - a. Forests or woodland reserves where appropriate timber can be obtained for the preservation and repair of the historic timber structures at Lhasa should be designated and protected.
  - b. Timber of appropriate quality should be dedicated to the preservation of historic timber structures in Lhasa, and a reasonable supply of this material should be procured, stored and air-dried in Lhasa for repair purposes.
  - c. Carpenters should be trained to visually grade the wood used for making repairs. This should include consideration of wood characteristics that impact structural performance, aesthetics and durability/longevity.
  - d. Traditional skills and hand tools necessary to convert timbers by hand should be preserved so that they will match the historic parts of the buildings.
  - e. As opportunities arise, poor-quality modern repairs should be gradually replaced by high-standard repairs.
  - f. The *ICOMOS Principles for the Preservation of Historic Timber Structures* (2017) should be adopted and implemented for all future timber repairs.

### **Conservation Plans, Clarification of Boundaries and Buffer Zones**

2. A conservation plan should be developed for each component part of the property (Potala Palace, Jokhang Temple Monastery and Norbulingka). These plans should include maps that clarify the buffer zones of the property and/or its component parts and the regulations that will apply to these buffer zones.
3. The State Party may also wish to consider the following:
  - a. Future monitoring missions should include a walking tour of the boundaries of the buffer zones for each of the three component sites.
  - b. The demarcation of the buffer zone boundaries could be indicated with subtle and appropriate signage throughout the city.
4. The original television tower should be dismantled as soon as possible once the new tower is made operational to restore the historic views and cityscape. No future development that might detract from the historic views and cityscape should be allowed on the hill currently occupied by the television tower.

### **Overall state of conservation of the property**

5. Particular regard should be granted to the property's role as a pilgrimage site and the integrity of the attributes which express its Outstanding Universal Value.

6. When considering the carrying capacity of the three historic sites, the people who inhabit the buildings should be consulted to fully understand the impacts of visitors on living traditions.
7. The holy atmosphere of Lhasa should be maintained. Ensuring a favourable environment for pilgrims should be the greatest management requirement for the World Heritage property.
8. A professional structural engineer familiar with historic timber frame construction and repair techniques should be hired to investigate the capacity of the two-story inner timber colonnade to withstand the loads imposed upon them mid-span by temporary props that have been installed to support the second-floor mezzanine, where it is separating from the outer posts under the load of concrete floors.
9. The State Party should work with the monks and pilgrims of the Jokhang Temple Monastery to examine how visiting tourists are affecting the experience of pilgrims.
10. The State Party should consider implementing reasonable restrictions regarding the visitors' photographs of pilgrims during their procession and ritual practice.
11. The State Party should consider restricting the newly paved central pathway (i.e. the larger, light grey paving stones) around the Jokhang Temple Complex for the exclusive use of pilgrims, and require other visitors (e.g. tourists) to remain outside this pathway as they explore the historic Barkhor area.

#### **Systematic Education System for Traditional Skills and Crafts**

12. Senior Tibetan artisans and local experts participated in the restoration and conservation of various cultural properties. Traditional techniques are being passed on through a personal apprenticeship system. This plays a positive role in the transfer and succession of traditional skills and material.

In addition to this personal apprenticeship system, it is also necessary to create an official qualification system or education system to ensure sustainability and enhance the quality of traditional technology transfer.

#### **Enhancement of Transparency in Cultural Heritage Management and Establishment of a Comprehensive Cultural Environment Conservation Plan**

13. The conservation of the property should not be the only goal in conserving and enhancing the cultural value of the city of Lhasa. Priority should also be given to the conservation of the sacred religious spaces and the atmosphere of Tibetan religious life.
14. In accordance with the 1972 *Recommendation concerning the Protection, at National Level, of the Cultural and Natural Heritage*, Tibetan heritage sites need to be identified following a thorough analysis, ensuring that management systems remain inclusive. For this purpose, a publicly accessible database should be established, comprising the location of cultural heritage sites designated either by local government or central government, excavated archaeological sites, the boundaries of construction control areas, and regulations related to heritage sites throughout Lhasa. Awareness raising about this database should be organised with the general public to stress the need for conservation and to limit excessive or unregulated development.
15. A Cultural Environment Management Plan is also needed to conserve the historic fabric of the city and ensure consistency in the historic environment and visual corridors between the Potala Palace, the Jokhang Temple, and Norbulingka at the eye level of pedestrians by including regulations on the usage, size and shape of the buildings.
16. In addition to the visual corridors between component sites of the World Heritage property, the cultural contexts with the many other heritage sites inside and outside the buffer zone need to be managed. For example, in the Old District of Lhasa (Barkhor Historic and Cultural Quarter), which is the buffer zone of Jokhang Temple, there are eight heritage sites (State Priority Protected Sites), 61 historic buildings and traditional courtyards (autonomous region-level or city-level protection) and 129 historic buildings.

### **Population Growth and Carrying Capacity of Lhasa**

17. The rapidly growing population and the scale of new developments have a serious negative impact not just on the conservation of OUV and the cultural environment of the World Heritage property, but also on the religious atmosphere of Lhasa. The development density on the Land Use Plan (Urban Master Plan) should be lowered to reduce the development capacity and control over-commercialization, bearing in mind the carrying capacity of Lhasa.

### **List of Buildings and Criteria for Demolition or Repair**

18. The mission suggests establishing specific criteria to determine whether buildings have negative impacts on the historical environment and conducting a survey of the buildings located in buffer zones. This should result in a list of buildings that do not fit within the historical environment and a plan for their demolition or alteration.

### **Conservation and Management Guidelines for Archaeological Sites**

19. Specific regulations and guidelines are needed in Lhasa for the management of excavated relics and excavation sites, including how to preserve such sites and/or manage development in and around them. An area where important relics have been excavated should be preserved and managed as a place that is not only indicative of the historical context of sites and properties but also of significance for the history of Lhasa.
20. The mission recommends the establishment of a systematic review and analysis process for excavation results, along with the abovementioned database, to ascertain the relationship between the excavation site and the World Heritage property and/or other heritage sites in Lhasa, notably beyond the property's buffer zone. Archaeological sites of important historical value need to be reflected in the conservation zones of the Urban Master Plan.

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# ANNEXES

## Annex 1 - Terms of Reference and Itinerary

### TERMS OF REFERENCE

#### **Joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring Mission Historic Ensemble of the Potala Palace, Lhasa (China)**

The World Heritage Committee, at its 42nd session, requested the State Party of China to invite a joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission to the World Heritage property 'Historic Ensemble of the Potala Palace, Lhasa' (Decision **42 COM 7B.2**, see Annex I). The objective of the Mission is to assess the damage caused by the fire of February 2018 and the proposed restoration works to be undertaken, as well as to examine other aspects of the state of conservation of the property.

In accordance with Decision **42 COM 7B.2**, the Mission shall:

1. Assess the damage caused by the fire of February 2018, with particular attention accorded to the Golden Ceiling of Jokhang Temple;
2. Review the preventative actions taken following the fire, the restoration plans developed and the restoration works undertaken so far;
3. Evaluate the impact of the aforementioned fire on the Outstanding Universal Value (OUV) of the property;
4. Ascertain the progress made with the three conservation plans for the component parts of the property (Potala Palace, Jokhang Temple Monastery and Norbulingka), in particular the maps contained in these conservation plans that shall clarify the buffer zones of the property and the regulations which will apply to the buffer zones;
5. Provide advice for the study to be launched on the potential impacts of the proposed television tower on the OUV of the property, in accordance with the 2011 ICOMOS Guidance on Heritage Impact Assessment for Cultural World Heritage properties;
6. Assess and provide advice on the general state of conservation of the property, having particular regard to its role as a pilgrimage site, and the integrity of the attributes which contribute to its Outstanding Universal Value.

The State Party is requested to facilitate and accompany the field visit and inspections that occur during the Mission. To enable the smooth preparation for the mission, the following items should be provided to the World Heritage Centre (copied to ICOMOS and ICCROM) as soon as possible, and no later than one month before the mission:

1. All documentation available on all the damage caused by the fire of February 2018, including images, drawings and other graphic illustrations, with particular attention paid to the Golden Ceiling of Jokhang Temple;
2. All documentation available on the restoration plans developed and the restoration works undertaken so far;



3. Three draft conservation plans for the component parts of the property, (Potala Palace, Jokhang Temple Monastery and Norbulingka), including maps that clarify the buffer zones of the property, and related proposed regulations;
4. All information available on the study to be launched on the potential impacts of the proposed television tower on the OUV of the property.

The Mission should consult with authorities at national, provincial and municipal levels. In addition, the mission should consult with all other relevant stakeholders, including i) the staff of the site management authorities; ii) NGOs; and iii) representatives of local communities and (if possible) some pilgrims.

Based on the results of the above-mentioned assessments and discussions with the State Party representatives and stakeholders, the Mission will develop recommendations to the State Party and the World Heritage Committee with the objective of providing guidance to the State Party on actions to be taken to ensure the effective conservation/restoration of the property and its OUV.

Recommendations will be provided within the Mission report but not during the Mission.

The Mission will prepare a concise report on the findings and recommendations within six weeks after the site visit, following the World Heritage Centre Reactive Monitoring mission report Format.

**WHC / ICOMOS / ICCROM Reactive Monitoring Mission to the World Heritage  
Property of the Historic Ensemble of the Potala Palace, Lhasa**

**ITINERARY**

Day 1 (April 8 <sup>th</sup> )	Ms Mie Oak Chae and Mr Gordon Macdonald arrived in Beijing, China
Day 2 (April 9 <sup>th</sup> )	Experts and NCHA staffs, flight to Lhasa from Beijing (CA 4125, 07:35-11:55). Rest in the hotel that afternoon.
Day 3 (April 10 <sup>th</sup> )	A briefing between Experts and staffs at the hotel that morning. Visiting the World Heritage Property of Jokhang Temple and Barkhor Historical Area in the afternoon.
Day 4 (April 11 <sup>th</sup> )	Visiting the World Heritage Property of Potala Palace in the morning, and the World Heritage Property of Norbulingka in the afternoon.
Day 5 (April 12 <sup>th</sup> )	Meeting with the representatives of the stakeholders for Conservation and Preservation of Historic Ensemble of the Potala Palace, Lhasa, in the morning. Experts' internal meeting or Visiting Yak Museum of Tibet in the afternoon.
Day 6 (April 13 <sup>th</sup> )	Experts and NCHA staffs, flight back to Beijing (CA4126, 09:20-13:15).
Day 7 (April 14 <sup>th</sup> )	Experts leave China.

## Annex 2 – List of Participants





### WHC / ICOMOS / ICCROM Reactive Monitoring Mission to the World Heritage Property


#### Historic Ensemble of the Potala Palace, Lhasa








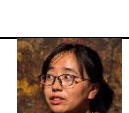
### LIST OF PARTICIPANTS






8 -14 April 2019



National Level		
	<b>Mr SONG Xinchao</b>	Deputy Director-General of National Cultural Heritage Administration of P.R. China (NCHA)
	<b>Mr LIU Yang ★</b>	Deputy Director of Department for the Protection of Monuments and Sites (Department of World Cultural Heritage, NCHA)
	<b>Ms XIAO Li</b>	Director of Division of World Cultural Heritage, Department for the Protection of Monuments and Sites (Department of World Cultural Heritage, NCHA)
	<b>Mr HUANG Xiaofan ★</b>	Deputy Director of Division of World Cultural Heritage, Department for the Protection of Monuments and Sites (Department of World Cultural Heritage, NCHA)
	<b>Ms ZHA Qun ★</b>	Assistant Chief Engineer of Chinese Academy of Cultural Heritage.
	<b>Mr SHANG Jin ★</b>	Project Assistant of General Office, Art Exhibitions China (Interpreter)

Tibet Autonomous Region Level		
	<b>Mr Duoqi Cizhu</b>	Vice-Chairman of the Government of Tibet Autonomous Region
	<b>Mr DU Wei</b>	Deputy Secretary-General of the Government of Tibet Autonomous Region
	<b>Mr LIU Shizhong ★</b>	Director-General of Tibet Autonomous Region Cultural Heritage Administration
	<b>Ms Quzhen</b>	Deputy Director-General of Tibet Autonomous Region Cultural Heritage Administration

	<b>Mr SUN Dan ★</b>	Deputy Director of Division of Monuments and Museums of Tibet Autonomous Region Cultural Heritage Administration
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<b>Lhasa City Level</b>		
	<b>Mr Guoguo ★</b>	Mayor of Lhasa Municipal People's Government
	<b>Mr ZHU Jianhong ★</b>	Vice-Mayor of Lhasa Municipal People's Government
	<b>Mr JIN Yongchun ★</b>	Deputy Director of Lhasa Municipal Culture (Cultural Heritage) Administration
	<b>Mr Mima Ciren ★</b>	Director of Lhasa Municipal Bureau of Natural Resource
	<b>Ms LI Rong ★</b>	Director of Lhasa Municipal Bureau of Housing and Construction
	<b>Mr LI Duoduo ★</b>	Deputy District Chief of Chengguan District, Lhasa City
	<b>Mr ZHU Yalin ★</b>	Deputy Director of Lhasa Municipal Foreign Affairs Office
	<b>Ms Ciren Danzhen★</b>	Interpreter of Lhasa Municipal Foreign Affairs Office

<b>Heritage Site Level</b>		
	<b>Mr LI Linhui ★</b>	Director of Management Office of Potala Palace
	<b>Mr Juedan ★</b>	Deputy Director of Management Office of Potala Palace
	<b>Ms CHEN Nima</b>	Member of Management Office of Potala Palace (Guide)
	<b>Mr Nian Zha</b>	Captain of the Potala Palace Brigade of the Tibetan Fire Detachment
	<b>Mr Youla Cairang ★</b>	Engineer of the Potala Palace Brigade of the Tibetan Fire Detachment

	<b>Mr Laba ★</b>	Executive Deputy Director of Management Committee of Jokhang Temple
	<b>Mr Dawa Ciren</b>	Associate Professor of College of Architecture, Tibet University (Person in charge of the Post-fire Restoration Project Supervisory Units)
	<b>Mr Laba Ciren ★</b>	Inheritor of Thang-ga Drawing Artistry of Miantang Painting and Traditional Tibetan Murals (Person in charge of the Restoration of Murals in Jokhang Temple)
	<b>Mr Zhaxi Lada</b>	Tibet Jiaburi Handmade Bronze Statue & Art Co., Ltd (Person in charge of the Post-fire Golden-roof Restoration and Gilding Project)
	<b>Mr Laba Ciren ★</b>	Director of Management Office of Norbulingka
	<b>Mr Nizha</b>	Protection Technician of Tibetan Library (Person in charge of the Restoration of Tripitaka in Norbulingka)
	<b>Mr Bianba Ciren ★</b>	Representative of Resident of Old Town of Lhasa (so-called Barkhor Historic Area)
	<b>Mr Jinmei ★</b>	Representative of Resident of Old Town of Lhasa (so-called Barkhor Historic Area)
	<b>Mr Guomusang ★</b>	Representative of Resident of Old Town of Lhasa (so-called Barkhor Historic Area)
	<b>Mr Dunzhu ★</b>	Representative of Resident of Old Town of Lhasa (so-called Barkhor Historic Area)
	<b>Mr Cicheng ★</b>	Representative of Resident of Old Town of Lhasa (so-called Barkhor Historic Area)
	<b>Mr Yixi ★</b>	Representative of Merchant in Barkhor Mall

*Note: The persons marked with asterisks (“★”) are the participants of the Meeting with the representatives of the stakeholders on 12 April 2019.*

## **Annex 3 – List of References**

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6. Conservation Areas and Management Requirements Specified in the Draft Master Plan for the Conservation of the Potala Palace, the Jokhang Monastery and Norbulingka Excerpts
7. Heritage Impact Assessment of the TV Tower within the Boundary of the Property
8. The Report on the Fire Accident in Part of the Jokhang Temple, the Historic Ensemble of the Potala Palace
9. Cultural Heritage Administration of Tibet Autonomous Region's Report on the State of Conservation of the Historic Ensemble of the Potala Place
10. SOC Records Historic Ensemble of the Potala Palace in Lhasa 2014-18
11. Conservation and Management of the Historic Ensemble of the Potala Palace

## Annex 4 – Statement of Outstanding Universal Value

### Brief synthesis

Enclosed within massive walls, gates and turrets built of rammed earth and stone the White and Red Palaces and ancillary buildings of the Potala Palace rise from Red Mountain in the centre of Lhasa Valley at an altitude of 3,700 metres. As the winter palace of the Dalai Lama from the 7th century CE the complex symbolizes Tibetan Buddhism and its central role in the traditional administration of Tibet. The White Palace contains the main ceremonial hall with the throne of the Dalai Lama, and his private rooms and audience hall are on the uppermost level. The palace contains 698 murals, almost 10,000 painted scrolls, numerous sculptures, carpets, canopies, curtains, porcelain, jade, and fine objects of gold and silver, as well as a large collection of sutras and important historical documents. To the west and higher up the mountain the Red Palace contains the gilded burial stupas of past Dalai Lamas. Further west is the private monastery of the Dalai Lama, the Namgyel Dratshang.

The Jokhang Temple Monastery was founded by the regime also in the 7th century, in order to promote the Buddhist religion. Covering 2.5ha in the centre of the old town of Lhasa, it comprises an entrance porch, courtyard and Buddhist hall surrounded by accommodation for monks and storehouses on all four sides. The buildings are constructed of wood and stone and are outstanding examples of the Tibetan Buddhist style, with influences from China, India, and Nepal. They house over 3,000 images of Buddha and other deities and historical figures along with many other treasures and manuscripts. Mural paintings depicting religious and historical scenes cover the walls.

Norbulingka, the Dalai Lama's former summer palace constructed in the 18th century, is located on the bank of the Lhasa River about 2km west of the Potala Palace in a lush green environment. It comprises a large garden with four palace complexes and a monastery as well as other halls, and pavilions all integrated into the garden layout to create an exceptional work of art covering 36ha. The property is closely linked with religious and political issues, having been a place for contemplation and for signing political agreements.

The Historic Ensemble of the Potala Palace, Jokhang Temple and Norbulingka embody the administrative, religious and symbolic functions of the Tibetan theocratic government through their location, layout and architecture. The beauty and originality of the architecture of these three sites, their rich ornamentation and harmonious integration in a striking landscape, contribute to their Outstanding Universal Value.

**Criterion (i):** The Historic Ensemble of the Potala Palace is an outstanding work of human imagination and creativity, for its design, its decoration and its harmonious setting within a dramatic landscape. The three-in-one historic ensemble of the Potala Palace, with Potala the palace-fort complex, Norbulingka the garden residence and the Jokhang Temple Monastery the temple architecture, each with its distinctive characteristics, forms an outstanding example of traditional Tibetan architecture.

**Criterion (iv):** The scale and artistic wealth of the Historic Ensemble of the Potala Palace, which represents the apogee of Tibetan architecture, make it an outstanding example of theocratic architecture, of which it was the last surviving example in the modern world.

**Criterion (vi):** The Historic Ensemble of the Potala Palace forms a potent and exceptional symbol of the integration of secular and religious authority.

### Integrity

The Historic Ensemble of the Potala Palace owns tens of thousands of collections of diverse cultural relics. The wall paintings are rich in themes, form the best of Tibetan painting art and precious material evidence for learning Tibetan history and the multi-ethnic cultural fusion. The historic scale,

architectural typology and the historic environment remain intact within the property area and within the buffer zone, carrying the complete historic information of the property.

### **Authenticity**

In terms of design, material, technology and layout, the historic ensemble of the Potala Palace has well retained its original form and characteristics since it was first built and from successive significant additions and expansions, convincingly testifying to its Outstanding Universal Value.

### **Protection and management requirements**

The three components of the Historic Ensemble of the Potala Palace, the Potala Palace, Norbulingka and the Jokhang Temple are all State Priority Protected Sites, and protected by the *Law on the Protection of Cultural Relics of the People's Republic of China*. The Potala Palace was inscribed on the World Heritage List in 1994, the Jokhang Temple in 2000 as an extension to the property, and Norbulingka in 2001 as a further extension to the property. The buffer zone of the property has been confirmed as originally demarcated. Any intervention must be approved by the responsible cultural heritage administration, with restoration strictly in accordance with the principle of retaining the historic condition. The *Potala Palace Management Regulations* have been put into force; measures are formulated and taken for better visitor management. A World Heritage Steering Committee has been established in Lhasa. The conservation and management plans for the three component parts of the World Heritage property have been formulated and will be submitted and put into force as soon as possible.