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# **Report of the Joint ICCROM/ICOMOS Reactive Monitoring Mission to the World Heritage Site of Peking Man at Zhoukoudian, China**



undertaken by

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Cover Picture – View from Pigeon Cave to the main witness section in Locality One.

## **EXECUTIVE SUMMARY**

### **Background**

The Bureau of the World Heritage Committee, at its twenty-third session held at UNESCO Headquarters, Paris, from 5-10 July 1999, examined the state of conservation of the Peking Man Site at Zhoukoudian, China, a site inscribed on the list in 1987. The Bureau recommended that an ICCROM/ICOMOS reactive monitoring mission be undertaken to identify the emergency conservation and site management needs.

This mission took place in September 1999. The aims of the mission were to

- examine the state of conservation of this site;
- identify the urgent conservation needs of the site;
- make recommendations to the World Heritage Committee for the enhanced management of this site; and
- assist the Chinese authorities reformulating an appropriate international assistance request for submission to the World Heritage Committee.

This document reports on the findings of the Mission.

### **The Site**

The Peking Man site at Zhoukoudian (formerly transliterated as Choukoutien) was originally a series of caves or fissures in the limestone of the Western Mountains, some 50 kms southwest of Beijing. Following the initial discovery in the 1920's by the Swedish geologist J.G. Andersson, a number of excavations were carried out at different Localities, numbered 1-15, on the limestone hills near the village of Zhoukoudian.

The World Heritage listing of the site in 1987 is based in the discovery of the remains of *Homo erects pekinensis* together with provenanced artefacts and rich faunal assemblages. The occupation of the site by early man is estimated to have lasted at least 300,000 years (c. 575,000 - 250,000 Years BP). The justification for inclusion on the World Heritage List put forward by the People's Republic of China in their nomination of the site in 1986 was as follows:

'The site of Choukoutien is a world-famous site of early man, and is the richest in discoveries, the most comprehensive and most typical one of sites of the same epoch. It is of very important value in the study of paleoanthropology and the restoration of human evolution.'

The integrity of the site of Zhoukoudian has been maintained intact since its inscription on the World Heritage List in 1987.

## **Management**

The site is owned and managed by the Institute of Vertebrate Palaeontology and Palaeoanthropology (IVPP). The site has a simple management framework including a Site Director and staff, some basic site protective and interpretive features such as pathways, signs, protective fences and a large site museum. The visitor statistics indicate a steady decline in the numbers of visitors to the site. Several factors were identified with the potential to damage the site. Chief among them were vegetation growth on the excavated sections and ground surfaces, erosion by surface water and direct precipitation of rain on the deposits and exposed sections and the development of tourist facilities and the physical impact of visitors.

## **Recommendations**

The report examines these factors in detail at each of the significant localities and makes recommendations for future management. These recommendations are divided into (1) short term, low cost actions at specific localities and (2) longer term actions requiring additional funding. In conjunction with these recommendations for action at specific localities the report further recommends that a simple, systematic, low cost monitoring regime be instituted for the whole site immediately. This would provide a quantitative analysis of the rates of change in relation to key factors such as vegetation growth, erosion of exposed sections and visitor impacts. The results of this monitoring are necessary to assess the need for major and expensive physical site protection measures such as the construction of shelters over various localities.

The principal long term recommendation is the preparation of an overall conservation and management plan for Zhoukoudian by the project manager with the assistance of an international expert. This will require international funding and assistance. Decisions on the construction of major infrastructure to protect the site should be made in the context of this plan. The report stresses that short-term actions and the start of regular monitoring need not await the raising of funds for launching the preparation of the conservation and management plan.

## **ACKNOWLEDGMENTS**

We are grateful to the Chinese National Commission for UNESCO and the Institute of Vertebrate Palaeontology and Palaeoanthropology (IVPP) of the Chinese Academy of Sciences for their invitation to China and to Mr Xuezhong Zhang, Secretary-General of the National Commission, for his gracious hospitality during our visit. Dr Wei Dong of the Institute organised an excellent program of site visits and meetings for us. He also provided us with documents and kindly translated relevant parts of the Decree included here as Appendix 1. We thank Dr Qui Zhudiang, Director of the IVPP, and Dr Zhang Bai, Deputy Director of the State Administration for Cultural Heritage, for meeting us, and Mr Cai Pin-Si, manager of the Zhoukoudian site, for information about visitor management. Finally, we are grateful to ICOMOS and ICCROM for asking us to represent them in undertaking this mission, and to the World Heritage Centre for providing copies of documents.

## **1.1 INTRODUCTION**

### **1.1.1 Background**

The Bureau of the World Heritage Committee, at its twenty-third session held at UNESCO Headquarters, Paris, from 5-10 July 1999, examined the state of conservation of the Peking Man Site at Zhoukoudian, China, a site inscribed on the list in 1987.

In March, 1998, China submitted a technical co-operation request for Zhoukoudian to the World Heritage Centre, which in turn requested a report from the Chinese authorities and the Division of Cultural Heritage of UNESCO on the state of conservation of the site. "Following receipt of a technical co-operation request and an alarming state of conservation report submitted by the Chinese authorities, the World Heritage Centre recommended that an ICCROM/ICOMOS reactive monitoring mission be undertaken to identify the emergency conservation and site management needs. The Bureau was informed that, with the agreement of the State Party, ICCROM, ICOMOS and the World Heritage Centre were organising this mission, which was expected to take place in September 1999...

...The Bureau decided to examine further information expected to be made available at its twenty-third extraordinary session, after the proposed ICOMOS-ICCROM mission is undertaken. The Bureau asked the advisory bodies to co-operate with the national geophysics institutions in formulating recommendations for enhanced management of this site. Finally, the Bureau requested the Secretariat to ensure that the report of the geophysical research conducted in 1997 by Electricité de France (EDF) under the Assistance-Ethno/UNESCO/Chinese Academy of Sciences - Project for Rehabilitation, Protection and Conservation of the Peking Man Site, be made available to the ICOMOS-ICCROM experts for integration into the report to be presented to the twenty-third extraordinary session of the Bureau" (Report of the Bureau, July, 1999).

### **1.1.2 Aims of the Mission**

The aims of the Mission as described in the TOR for the consultants were to:

- examine the state of conservation of this site;
- identify the urgent conservation needs of the site;
- make recommendations to the World Heritage Committee for the enhanced management of this site; and
- assist the Chinese authorities reformulating an appropriate international assistance request for submission to the World Heritage Committee.

Our mission was one of "Reactive Monitoring" as described in §75 of the Operational Guidelines for the Implementation of the World Heritage Convention. As part of our report, we have been asked to provide a full state of conservation report of the kind required by the Periodic Reports due to be submitted by States Parties. In our report, we have therefore followed the format recommended for such Periodic Reports. We would note, however, that some of the information (especially that of an administrative, legal and budgetary nature) required for such Reports is of a nature that only a State Party can satisfactorily supply. Under the proposed regional schedule

for submission of Periodic Reports, The People's Republic of China will be due to report in the year 2002. This will provide an opportunity to amplify and qualify the observations made in this report.

## **1.2 BRIEF DESCRIPTION OF THE SITE OF ZHOUKOUDIAN**

The Peking Man site at Zhoukoudian (formerly transliterated as Choukoutien) was originally a series of caves or fissures in the limestone of the Western Mountains, some 50 kms southwest of Beijing. Following the initial discovery in the 1920's by the Swedish geologist J.G. Andersson, a number of excavations were carried out at different Localities, numbered 1-15, on the limestone hills near the village of Zhoukoudian.

The most important localities (see Figure 1 - Peking Man site guide map on page 26) are:

**Locality 1.** The most famous locality, with a cultural deposit over 40m. in depth, where the first skull of *Homo erectus pekinensis* was found in 1929 by the Chinese scholar, Dr Wenzhong Pei. It has yielded remains of at least 40 fossil humans, more than 15,000 provenanced artifacts and rich faunal assemblages. The excavated pit measures some 80m long, 30m. wide and 40m. deep. The surviving eastern part of the original cave is known as "Pigeon Cave" (see below).

**Upper Cave.** Situated uphill from Locality 1, a cave with its roof partially intact contained remains of *Homo sapiens sapiens* and rich faunal assemblages.

**Locality 15.** Discovered in 1932 and excavated in 1934-37, it yielded a Middle Palaeolithic industry.

**Locality 4.** A partially excavated area now lacking its roof and an adjoining one still taking the form of a cave, it was the scene of the most recent excavations (the "new Cave").

Excavations were carried out in 1921- 1923, and then over a period from 1927 to 1937 when work ceased due to war. They were resumed in 1949 and have continued sporadically until recently. New finds of *Homo erectus pekinensis* were made in the years 1949, 1951, 1959 and 1966. Most of the early hominid finds, including five skulls, were lost in transit during the Second World War, though casts had been made.

Occupation of Locality 1 is estimated to have lasted at least 300,000 years (c. 575,000 - 250,000 Years BP).

## **1.3 RECENT ASSESSMENTS OF AND RECOMMENDATIONS FOR THE SITE**

### ***1.3.1 International Technical Committee (ITC)***

A tripartite agreement on the project for Rehabilitation and Conservation of the Peking Man World Heritage site was signed in March, 1995 between UNESCO, the Chinese Academy of Sciences (CAS) and L'Association Assistance Ethno (created by

the insurance company Mondial Assistance in Paris). The total budget for the project was estimated at US\$2,500,000.

The International Technical Committee established under this project met for the first time in Beijing and Zhoukoudian in November, 1996 and made the following recommendations concerning activities to be undertaken, following three major lines of action;

1. Protection and rehabilitation of the Upper Cave and Locality 1;
2. Promotion; development of the site museum as a major attraction in Asia in the field of prehistory;
3. Research; resuming of archaeological excavations and study of unearthened material.

In terms of priorities amongst these objectives, "the Committee was of the opinion that the maintenance and protection of this world heritage site is the first priority" (Report on the First Meeting of the International Technical Committee (ITC), §25).

The ITC agreed at its first meeting that it would assemble again in March 1998, in Beijing, to examine progress in the implementation of the project. We understand this meeting did not take place.

### ***1.3.2 EDF Report on the investigation of quaternary deposits of the Peking Man site.***

As part of the activities launched by the ITC and arranged through Assistance-Ethno, in 1996 a team financed under the Mécénat Technologique et Scientifique programme of Electricité de France and IVPP undertook a variety of investigations into the location of quaternary deposits that might hold palaeontological material. This study began with a comprehensive geological study of the Zhoukoudian area, followed by a geophysical survey requiring the measurement and cross-checking of a series of parameters including:

- Resistivities or conductivity measured through electromagnetic methods to measure the soil's electrical fields and electric methods (panels and soundings) to characterise the resistivity of the ground subsurface.
- The contrast of density in the substratum using microgravity methods to identify spaces which may be more or less filled with other material.
- Magnetic susceptibilities using the magnetic gradient method to characterise the abilities of the bodies to be magnetised, revealing variations in the nature of the geological structures.

Results once corrected, processed and compared to the geological data were expected to identify possible localities of quaternary deposits, which might contain further palaeontological material (Blais, J.-P. and Delétie, P. 1997:iii).

In the event, all magnetic measurements of the EDF survey proved to be unusable, due to interference from local power lines, buried metal features and possibly from a local radio transmitter (Blais, J.-P. and Delétie, P. 1997, 23-24). The other methods (geological and microgravity analyses) resulted in the identification of 5 zones which may contain subsurface cavities, which may in turn hold quaternary deposits. The zones are located in the following areas:



1. This zone begins at Locality 1 and continues to the access road of the museum.
2. This zone comprises the upper part of the Channel between the Upper cave and the col situated between the Eastern and Western hills.
3. This zone is located in the Western part of the Western hill.
4. This zone comprises the locality 4 and its extension towards the North.
5. This sector comprises the locality 15 and its surroundings.

The report identifies various actions involving clearing of vegetation, geological survey and excavations that could be carried out to further investigate these areas (Blais, J.-P. and Delétie, P. 1997:25 and Fig. 52).

It is to be stressed that the EDF investigation and subsequent report is valuable for the geological understanding of the Zhoukoudian area and its evolution. The geophysical prospection has identified zones that might contain now-buried cavities. One or more of these cavities, it is assumed, might contain cultural material. Some of these zones are on the Western hill, whereas most research hitherto has been conducted on the Eastern hill. The EDF project conclusions are relevant to the question of further archaeological research at the site, and confirms the wisdom of retaining the present protected zone within which all activities are controlled.

### **1.3.3 Report on the present state of conservation of the site 1998**

In 1998 a brief report on the condition of the site was submitted by the Institute of Vertebrate Palaeontology and Palaeoanthropology (IVPP) at the request of the World Heritage Centre, following the IVPP's request for technical assistance (see above, Background). The report identified various factors as having a deleterious effect on the site including:

- damage which occurred before the site was identified as significant, including the effects of quarrying, war, industrial development, and the very act of archaeological excavation;
- subsequent damage from natural factors including erosion, and rainwater which washes the site and enlarges the cracks and fissures on the surface wall of the cave;
- the dangerous state of the roof over the "Pigeon Cave" at the eastern part of Locality 1, which is poorly supported;
- the growth of vegetation on the deposit and walls of the Locality 1 pit, causing root damage to the deposit; and
- danger of the artefacts on display in the on-site museum being damaged due to poor maintenance and lack of temperature and humidity control.

## **2.1 DESCRIPTION OF THE SITE**

**State Party** - People's Republic of China

**Name** - Peking Man Site at Zhoukoudian

**Geographical co-ordinates to nearest second** - 115<sup>0</sup>55'E 39<sup>0</sup>44'N

**Date of inscription on List** - 11 December, 1987

**Organisation or entity responsible for the preparation of the report** - ICOMOS and ICCROM as advisory bodies to the World Heritage [Committee]

**Date of Report -** October 1999

## **2.2 STATEMENT OF SIGNIFICANCE**

The justification for inclusion on the World Heritage List put forward by the People's Republic of China in their nomination of the site in 1986 was as follows:

'The site of Choukoutien is a world-famous site of early man, and is the richest in discoveries, the most comprehensive and most typical one of sites of the same epoch. It is of very important value in the study of paleoanthropology and the restoration of human evolution.'

This justification must be considered as the Statement of Significance of the site as viewed at that time. It emphasises the scientific value of the hominid and the associated finds and its historical value in the study of evolution. Because of its undoubted historical and scientific value the site has also come to have a very strong symbolic value of the Chinese people. The symbolic value is reflected in a number of ways including:

- pride in the fact that the first skull of Peking man was discovered by a Chinese scientist, Dr Pei Wen-Chung;
- the commemorative inscription engraved and painted at Locality 1 in the widely recognised calligraphic style of the first president of the Chinese Academy of Sciences, Professor Guo Moro;
- the choice of Pigeon Cave for the lighting of a torch to inaugurate the 7th Asian Games held in Beijing in 1993; and
- the precedence given to the finds of Peking Man in the Chinese school history curriculum.

These symbolic values should be included in any revision of the Statement of Significance of the site and must be acknowledged in defining appropriate conservation policies.

The historical value of the site has diminished a little with the subsequent discovery of other and older early man sites in China. Specifically, the importance ascribed to Choukoutien in early textbooks because of its providing the earliest evidence for human use of fire is reduced now that yet earlier evidence has been found. But the symbolic importance of the evidence for this fundamental advance in human control of technology remains part of the significance of Zhoukoudian. Moreover, the extraordinarily long sequence exhibited in Locality 1 remains of outstanding universal significance.

### **2.2.1 Criteria**

Following evaluation of the nomination by ICOMOS, the property was included on the World Heritage List as meeting criteria iii and vi. The current World Heritage List lists Zhoukoudian as having been inscribed under these criteria.

Criterion iii reads as follows

*bear a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared.*

Criterion vi reads as follows

*be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.*

While we feel that the use of criterion iii is appropriate, we do not understand the basis on which the property is inscribed under criterion vi (unless the evidence for early use of fire was considered an event of outstanding universal significance). On the other hand, in the formal tripartite agreement between UNESCO, the Chinese Academy of Sciences and the Association Assistance Ethno dated 29 March, 1995, the detailed project description (Annex 1, p.2) states that the site was inscribed on the World Heritage List under Cultural criteria iii and iv.

Criterion iv reads as follows;

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

We feel that Zhoukoudian meets the requirements of criterion iv in being an outstanding example of a technological ensemble illustrating a significant stage in human history. We therefore feel that inscription under criteria iii and iv is more appropriate, even if the original evaluation recommended inscription under criteria iii and vi. We suggest that thought be given to making this minor change to the official listing of the site.

### **2.2.2 Delimitation of the site**

The site lies in an area of industrial activities including coal mining, and limestone quarrying and burning, the activity which led to the discovery of the site and which was greatly expanded during the Cultural Revolution. Because of the threat that the quarries and factories posed to the site, the Chinese Government and Chinese Academy of Sciences since 1983 have spent over \$3 million to remove them elsewhere (Agreement between UNESCO, the Chinese Academy of Sciences and the Association Assistance Ethno dated 29 March, 1995, detailed project description (Annex 1, p.3). Once this process was completed, the nomination for World Heritage status of the site was submitted.

The site is now composed of two zones: a Protected Zone of 0.26 sq. kms. that contains ten fossil sites and which is under the direct control of the IVPP; and a larger 1.7 sq. kms. Construction Control Zone where any proposed developments must meet special criteria before a permit is issued. The latter area contains another 16 fossil sites and is under the control of the local government authority (Agreement between UNESCO, the Chinese Academy of Sciences and the Association Assistance Ethno

dated 29 March, 1995, detailed project description (Annex 1, p.3). The map, dated 1983, included here (Fig. 2, page 27) shows these zones, while Attachment 1 is a partial translation of the Decree of Beijing Municipal Government 1989, No. 1, that deals with the controls in place within the Construction Control Zone. (The exact boundaries of a Park around the site proposed at the time of nomination were defined in a letter to ICOMOS of 20 May, 1987 (not seen by the consultants).

### **2.3 STATEMENT OF AUTHENTICITY/INTEGRITY**

The integrity of the site of Zhoukoudian has been maintained intact since its inscription on the World Heritage List in 1987. The removal of industrial and quarrying installations prior to the inscription and the maintenance of the Zone of Controlled Construction around the site have been important factors. Proposals that might compromise the site's integrity, such as the design for a protective enclosure for the Upper Cave submitted in 1998, have been subjected to external evaluation and rejected for the threat that they constitute. Those controls already in place, both through local regulations and through the mechanisms of the World Heritage Convention, should - if maintained - ensure the continuing integrity of the site.

### **2.4 MANAGEMENT**

The Protected Zone of the site is owned and managed by the IVPP which is part of the Chinese Academy of Sciences. The Institute appoints a Site Director. Currently this position is held by Mr Cai Pin-Si who is responsible for the day to day management of the site and the Museum. There are 30 staff employed at the site. They include the site director, guides, drivers, cleaners, maintenance workers, ticket sellers, cook, waitress and accountant. The guides are given limited training to carry out their work. No staff on site has any conservation training. The management of the site would benefit from the involvement of people trained in site conservation and management.

According to the Minutes of the 1996 ITC meeting of November 1996, the Project Manager, Dr Qiu Zhanxiang, had prepared a master plan of the whole duration of the tripartite project. This document was attached to these Minutes. Several of the proposals in this plan are repeated and elaborated in the present report.

The tripartite project proposed a number of measures aimed at the better preservation and promotion of the site, with the three priority actions being: (1) protection and rehabilitation of the Upper Cave and Locality 1; (2) development of the site Museum as a major attraction in Asia in the field of prehistory; and (3) the resumption of archaeological excavations and study of excavated material. A budget of US \$2,500,000 was proposed.

The implementation of the project has been delayed through lack of success in raising the necessary funds. Contributions have come from Assistance Ethno (US \$90,000), and from EDF (800,000 FF). Since then, Assistance Ethno have indicated that further substantial funding from them cannot be counted upon due to a change in policy. Moreover, Matra Datavision of France has not come through with help promised through Assistance Ethno for provision of software and training in its use. The

Chinese authorities have submitted to the World Heritage Centre (March, 1998) an international assistance request for US \$22,000 for computer equipment, and to the UNESCO/Italy Funds-in-Trust (undated; 1998/99?) for US \$150,000 for a series of five actions including training, preparation of a data base and the drawing up of a management plan for Zhoukoudian.

The relative lack of success hitherto in raising the funds being sought has influenced the form of our recommendations below. One of the aims in our brief is to assist with the reformulation of an international assistance request to the World Heritage [Committee]. We therefore describe below measures that can be taken soon at relatively low cost, and others that could form part of a submission for international assistance.

#### **2.4.1 Research**

There is no active on-site research program at present. The Institute sees the protection and interpretation of the site as its main priority rather than renewed excavation, an opinion with which we agree. There have, however, been two recent research projects aimed at a better understanding of the site. The geological and geophysical survey of the site by EDF had the aim of identifying promising deposits for further excavation. At the same time, Weiner et al. were authorized to clean and take samples from the west witness section of Locality 1 (Weiner et al. 1998). Their claims of lack of evidence for the making of fire at Zhoukoudian, based on analysis of the samples they extracted, have been refuted by Professor Wu Xinzhi (1999). Both projects were carried out in co-operation with the IVPP.

#### **2.4.2 Education and Presentation to the Public**

There is an extensive (approx. 1000<sup>2</sup>m of exhibition space) purpose-built site Museum opened in 1972 (a site museum has existed since 1953). It is built on a conventional model around a central open courtyard. Some problems with maintenance in the form of a leaking roof were reported to us.

The World Heritage status of the site is recorded on a panel in the site Museum, and the World Heritage symbol is also used on a directional sign on the path leading towards Locality 1.

The Museum display begins with a life-sized model of a cave with dioramas and models of hominids, through which the visitor walks to reach the exhibition galleries. There follow extensive displays illustrating the history of excavation, the finds from the site and the significance of *Homo erectus pekinensis* for the study of human evolution in Asia (but not in a worldwide context). All the hominid material is exhibited in the form of casts although this is not always clear to the visitor. There is also a very useful three-dimensional scale model of the Zhoukoudian hills showing the principal features of the site.

There are a small selection of items for sale in the Museum, and a separate gift shop at the parking area also sells a limited range of refreshments. Overall, the Museum does provide an informative introduction to the site, although it is weak on certain

important aspects such as the geological history of the site and its importance in the study of human evolution in a worldwide rather than an Asian context. Despite the recent renovation of parts of the display, the Museum exhibition galleries as a whole do not come up to the currently accepted international standards of museum display, especially given the inscription of the site as of World Heritage status. We return to this point in our general recommendations below.

From the Museum, a signposted trail takes the visitor to five different localities of the site in the following order (see map, Fig. 1):

1. Upper Cave
2. Locality 15
3. Locality 4
4. Pigeon Cave and, finally,
5. Locality 1.

Access to Locality 1 is also signposted directly from the principal entry road to the site and so can be easily visited without following the full trail. Additional sites at Locality 3 and Locality 12 can also be visited by following an unmarked side trail that diverges from the main trail at Locality 4.

The trail is sufficiently well-marked to be self-guiding, especially if the map included here as Fig. 1 is used. However, there are guides available through the Museum for visitors who request one.

Much of the circuit path is hard cement surface with steps in concrete or stone on the steep gradients. Although most of the circuit is in good condition, some maintenance is needed where the surface is broken up.

Signs are in place at each major locality describing its main significance. Thanks to funds raised as a part of the tripartite agreement in 1995, some of the Museum displays were upgraded and new signs of metal, in separate Chinese and English versions, were installed at the Upper Cave and Locality 1.

### **2.4.3 Visitor Statistics**

Approximate visitor statistics were provided by the Site Director from his records as follows:

<b>Year</b>	<b>Domestic Visitors</b>	<b>Foreign Visitors</b>
1989-1991	90,000 p.a.	10,000 p.a.
1992-95	70-80,000 p.a.	10,000 p.a.
1996-7	55,000 p.a.	5,000 p.a.
1998	50,000 p.a.	5,000 p.a.
1999 (1st 8 months)	"lower than 1998"	"constant"

The marked decline in annual visitors that these figures suggest is echoed in the data supplied in the Detailed Project Description of the ITC (p.4). It reports figures of 200,000 [sic] Chinese visitors and 200-400 foreign visitors recorded by the UNESCO/ICCRROM/ICOMOS mission in 1988; and an estimated 80,000 visitors, of

which 7000 foreign, recorded by the UNESCO monitoring mission of 1994. Most of the visitors come to the site in April-May and September-October.

The Site Director explained the decline in visitor numbers as relating to the increased number of visitor attractions that have become available in the Beijing Region in the past 10 years, giving visitors more choice of places to visit.

## 2.5 FACTORS AFFECTING THE PROPERTY

The site of Zhoukoudian lies in an area which is subject to a number of factors which could constitute a risk to it. These are outlined below. The authors, conducting only a brief visit to the site, did not feel that they had enough information to quantify the level of risk posed by each factor. However this is something that the Chinese authorities may consider doing in future.

FACTOR	POTENTIAL EFFECT ON THE SITE
Seismic Activity/Earthquakes	Because of the geological structure and the excavations, a number of the fossiliferous sites are potentially unstable and vulnerable to collapse. These could be triggered by earthquakes or by quarrying activities outside the protected area.
Mining and quarrying activity already referred to is a source of landslides and vibrations through blasting.	Because of the geological structure and the excavations a number of the fossiliferous sites are potentially unstable and vulnerable to collapse. These could be triggered by earthquakes or by quarrying activities outside the protected area.
Industrial pollution caused by the coal mining, lime burning, and other industrial and domestic emissions.	Industrial pollution is visible as deposits on the vegetation on the site and must contribute to the diminished visible distinctions between the archaeological strata in the exposed sections.
Vegetation growth on the excavated sections and ground surfaces.	The growth of vegetation, if allowed to continue, can potentially break up the archaeological deposits through root action, and when it is eventually removed. However, the growth of smaller, shallow-rooted plants, if controlled, could play a role in the stabilisation of the vertical sections. On the other hand the presence of plant growth diminishes the visibility of the archaeological section and the fire risk is proportionally increased.

FACTOR	POTENTIAL EFFECT ON THE SITE
Surface water and direct precipitation of rain and the occasional winter snow.	The growth of vegetation depends on water flow which can also contribute to the physical erosion of the deposits, particularly the exposed vertical sections and cave floors at the dripline.
The potential for fires in the woodland that covers the surrounding hills.	The fire risk is recognised by the site managers and no fire has yet been experienced. A water reservoir is maintained on the Western Hill in the event of an outbreak.
The development of tourist facilities and the physical impact of visitors.	The physical impact of visitors on the site does not appear at present to constitute a serious risk. However at several localities there is evidence of visitors leaving the prepared paths and climbing on the archaeological deposits. The unsupervised presence of many visitors on the site encourages this and also the small amount of graffiti in the form of names written in chalk on rock surfaces. A further contributing factor is the removal of some of the protective grilles at Localities and the present policy of leaving open the doors on protective grilles so as to improve the visitor experience.
Risk to human safety	Although a number of fences are effective in protecting visitors from dangerous areas, others have been removed, exposing the visitors to the risk of falling rocks or holes in the ground.

## 2.6 PROTECTION OF THE SITE

As mentioned above, because of the relative lack of success hitherto in raising the funds sought by the ITC, we have divided our recommendations into measures that can be taken soon at relatively low cost, and others that could form part of a submission for international assistance (identified below as "long-term, requiring funding").

Nevertheless, we would emphasize that the first priority is to develop an overall conservation and management plan for Zhoukoudian. This is one of the requests (Activity 3) made in the application by the CAS to the UNESCO/Italy Funds-in-Trust, in which the services of an international expert are sought who can work with the project manager. We agree that this is of great importance, and is therefore our principal recommendation.

Our other recommendations are listed according to the different principal Localities.



All the Localities are subject to the factors listed in the Table above, but there are a number of specific risks associated with Locality 1 and Pigeon Cave that should be emphasized.

### **2.6.1 Locality 1. Vegetation growth and erosion**

Vegetation growth on the vertical sides and the present floor surface of Locality 1 is a particularly serious problem. In 1995, all the vegetation was removed from the vertical faces and ground surface of Locality 1. This was done manually by operators suspended by ropes from above. Further vegetation removal was carried out in 1996-7 by the archaeological team which investigated the West witness section by cleaning back its surface. Now four years later, on the West face a few seedlings have re-established themselves in scattered zones of the witness section. However this western face is relatively free of vegetation compared to the remainder of Locality 1. On the ground surface where the visitors stand, there is quite a dense growth of saplings and trees up to 4m high. On the vertical faces there are growing small bushes up to 1m high, and almost all surfaces are covered with mosses, lichens, ferns and small bushes. This gives an indication of the rate of recovery of vegetation since the cleaning in 1995.

As indicated above vegetation is a general problem in the excavated parts of the site but is particularly problematic at Locality 1 because of the long stratigraphic sequence in the witness section. The witness section of over 40 m high left by excavation at the western end of Locality 1 displays more impressively than anywhere else at Zhoukoudian the extraordinarily long sequence of occupation at the site. The finer distinctions of the stratigraphy visible following excavation have become obscured through a number of factors including the growth of vegetation. Other factors would include the deposition from above of material being eroded out of the section and the airborne deposition of industrial emissions.

#### **Recommendations - low cost, short-term**

A vegetation control program should be developed in consultation with a botanist who can advise on the ecology and characteristics of the plant species concerned, particularly their root-growth and hence capacity to destabilise or stabilise the prehistoric deposit. The outcome of this study would determine the desirability of regular vegetation removal, its selectivity and its frequency. This recommendation applies especially to Locality 1. (see further section - 2.7 Monitoring)

#### **Recommendations - longer-term, requiring funding**

There have been proposals made for the consolidation of vulnerable breccia deposits at Zhoukoudian, for instance at Locality 1. No technique or consolidant material (natural or synthetic) has been proposed, however, and we would urge the greatest caution in applying consolidation techniques without extensive testing. Any solution would have to be acceptable not only on technical grounds but also from the point of view of aesthetic compatibility with the appearance and nature of these prehistoric deposits. It should also not lead to the exclusion of future dating and analytical techniques because of contamination potential.

## **2.6.2 Locality 1 - Visitor management**

The behaviour of some visitors to Locality 1 exemplifies the problems of visitor safety and control described above in section 2.5. There are a number of threats to both visitor safety and the condition of the site which have been identified in the past, and iron railings were installed to restrict visitor access to the vulnerable areas. Specifically, the West witness section was closed off to visitors by a grille-fence at a distance of 3-4 m from the section to protect visitors from the danger of falling rocks and from falling into a deep excavation sounding which has been reinforced in the form of an open well. On the North face of Locality 1, a smaller iron grille-fence had been installed to prevent visitors climbing up the deposit to reach the carved and painted inscription identifying the "Ape Man Cave". (This appears to be a favourite spot at which to be photographed.) Both these protective grilles are no longer effective and visitors have free access to both areas, exposing themselves to risk and the deposit to damage. Moreover, at the east end of Locality 1, there are signs that visitors climb up a 4m high section of deposit to gain access to the adjacent Pigeon Cave (see below).

### **Recommendations - low cost, short-term**

The protective grille in front of the western section should be closed to visitors since the section can be adequately appreciated from outside it. This would also make possible condition monitoring studies (see below).

### **Recommendations - longer-term, requiring funding**

To reduce safety risks posed by and to visitors at Locality 1, we would recommend the creation of a central viewing area at ground level within which visitors would be asked to remain and from which all points of interest in Locality 1 would be explained by means of written and visual material.

If studies determine that the rate of erosion of the walls of the Locality is moderate to rapid, we would recommend the protective roofing of at least the western witness section. Subject to funds being available, a protective roof that covered the whole of Locality 1 would be desirable. We stress that we refer to a protective roof (or shelter), not a fully enclosed building as was designed for the Upper Cave (see discussion below of the Upper cave).

## **2.6.3 Pigeon Cave**

Pigeon Cave lies directly to the East and adjoining Locality 1. It is one of the very few Localities at Zhoukoudian that still convey to the visitor the form of a cave. It also provides an excellent point at its open, western end from which to view Locality 1. However the surviving cave roof consists of breccia rather than the limestone formations that are the geological bedrock of the site. Therefore concern has been expressed about the stability of the cave roof and the possibility of rocks becoming dislodged from the breccia, particularly in the rainy season. At the ITC meeting in 1996, recommendations were made about consolidating this roof.

The present protective grille across the entrance of the cave is ineffective in keeping out visitors, both because it is not flush with the rock wall and because its door is left open during visiting hours. A good view of the cave can be obtained from outside the grille and a warning to visitors of the danger of entry is painted on the rock wall.

**Recommendation - low cost, short-term**

The grille should be reinforced so as to prevent access;

An engineer should assist in an assessment, in consultation with heritage specialists, of the stability of the breccia roof and, if need be, advise on methods of making it safe (see the cautions regarding consolidation in the discussion of Locality 1, above).

**Recommendations - longer-term, requiring funding**

Subject to the roof being declared safe, Pigeon Cave should be developed as a key point for interpreting the archaeology of Locality 1.

**2.6.4 Upper Cave - Protective structures**

The Upper Cave is the first locality to be visited on the recommended visitor route. It has historical importance as the findplace of skeletal remains of *Homo sapiens sapiens* and associated Upper Palaeolithic assemblages. This importance is difficult to convey to the visitor on site. Although retaining a roofed area forming a cave, it is open on both upper and lower sides and can be seen to be full of stone scree material. A very small area of undisturbed prehistoric deposit remains in the Cave. The view from the upper entrance, fenced off from visitors, is impeded by two interpretative signs erected in front of it.

The ITC recommended that the Upper Cave be protected from rain and water infiltration, and that this project should be a major contribution for 1997. The IVVP engaged the Architectural Design and Research Institute of Tsinghua University to design a protective structure for the Upper Cave. The Upper Cave was chosen due to its relatively modest scale so as to provide a small trial for the design of protective structures which, if successful, could then be adapted and applied to more demanding situations such as Locality 1 and the Pigeon Cave.

The design produced by Tsinghua University (and made available to us) aimed not simply to protect the Upper Cave from water infiltration but also to attract visitors by providing inside it a detailed reconstruction of the life-style of Peking Man. The membrane structure, in total over 30m high with its lower part following the line of slope, is designed as a complete enclosure, to contain museum displays and mannequins of prehistoric people. Its cost was estimated at US \$150,000. The design was submitted to UNESCO which referred it back to the Chinese authorities due to its perceived intrusiveness and capacity to change the nature of the site.

In addition to the reasons given by UNESCO, we would have reservations about the long-term effects of erecting a fully enclosed building over a site such as the Upper Cave. Experience with similar structures at other archaeological sites in climates of seasonal variability has been mixed. Unless fully sealed from the underlying bedrock and fully climate-controlled (itself hard to achieve and very costly in initial costs and

in continuing maintenance), such enclosures often lead to severe problems of condensation in winter and over-heating in summer. Museum exhibits within them can be prone to increased rates of deterioration.

Simple protective roofs (or "shelters") can, on the other hand, be effective in protecting sites from direct precipitation and associated erosion, while also reducing the effects of external climatic fluctuations. We recommend, if studies show the rate of erosion of exposed deposits to be moderate or serious, that a protective roof covering at least the witness section in Locality 1 be given serious consideration. A feasibility study should consider the options, subject to adequate funding, of (1) a protective roof that covers the witness section in Locality 1; (2) a roof that covers all of Locality 1; and (3) a more extensive protective roof that extends from the upper side of the Upper Cave down the slope and, with a lateral extension, covers all of Locality 1. These options would appear to be in ascending order of cost, on the basis of area to be covered. A membrane structure of the type designed by Tsinghua University might prove to be the most cost-effective design, on the understanding that the design is to be a protective shelter and not a complete enclosure.

**Recommendation - low cost, short-term**

Remove the two information signs that at present block the view of the Cave at its upper entrance, and re-install them to the side of the viewing area.

**Recommendation - longer-term, requiring funding**

We recommend, if studies show the rate of erosion of exposed deposits to be moderate or serious, that a protective roof covering at least the witness section in Locality 1 be given serious consideration. A feasibility study should consider the options, subject to adequate funding, of (1) a protective roof that covers the witness section in Locality 1; (2) a roof that covers all of Locality 1; and (3) a more extensive protective roof that extends from the upper side of the Upper Cave down the slope and, with a lateral extension, covers all of Locality 1. These options would appear to be in ascending order of cost, on the basis of area to be covered.

**2.6.5 Enhancing the site as a visitor attraction (rehabilitation)**

The Peking Man site is difficult to interpret successfully to the public. Locality 1 is the most important part of the site for its immensely long sequence and as the findspot of most of the earliest hominid remains. Rather than appearing as a cave, however, as it would have been during occupation, its form is now as a large hole in the ground due to massive excavation of its deposits over the years. (The only remnants of cave structures visible to visitors occur at the Pigeon Cave and Upper Cave.) While the 45m-high witness section at Locality 1 is impressive to the trained eye, it means little to those not conversant with geological processes and archaeological excavation techniques. These difficulties in understanding perhaps explain the declining visitor numbers as visitors who did not understand or enjoy their visit may not return to visit the site and tell others of their experiences.

The Museum displays could be substantially improved to assist the visitor to understand this difficult site and to make their visit more enjoyable. More easily

understood information on how the site was formed and the process of archaeological excavation would be useful, especially if people are encouraged, as now, to visit the Museum prior to their visiting the site.

In order to catch the imagination of the visitor, the Museum could also deal with themes of more general interest such as the mysteries surrounding the disappearance of the original finds from the site in 1937, and the current controversy about the origin and spread of modern humans (the competing "continuity" and "replacement" hypotheses).

The visitor experience on site could also be improved with regular ongoing repair and maintenance of signs and paths. The standard circuit of the site as currently arranged is a good, logical arrangement if visitors follow the recommended route (see Fig. 1).

In the longer term, once visitor safety can be assured, the Pigeon Cave could provide a focal point for the interpretation of Locality 1. Pigeon Cave, with its roof still intact, provides the visitor with some feel of the original site conditions and provides a good view of the whole of Locality 1.

While acknowledging the immense symbolic value of the site of Zhoukoudian, we have some reservations whether it can be successfully promoted to the visiting public because of the difficulty already alluded to of conveying why "the cave of Peking Man" looks the way it does today.

We are aware of few Palaeolithic cave sites - other than those containing rock art - that are successfully interpreted and presented to the public. One exception is the rockshelter of Abri Pataud in the Dordogne in France (part of the World Heritage inscription of the sites of the Vézère Valley). The excavation area at the entrance of the rockshelter has very recently been provided with an extensive protective roof. Visitors have access by means of staircases under the roof, and interpretative signs adjacent to the trenches explain the site's archaeology (A. Garrard, personal communication). Other examples of Palaeolithic caves (lacking rock art) open to the public would include Creswell Crags (UK), Mount Carmel (Israel) and La Cueva del Milodón (Chile).

Most Palaeolithic sites known to us, however significant they may be, are interpreted to the public primarily through displays in a local museum. The site itself may receive the necessary conservation measures for its preservation, but is not often the object of walkways, signs and display panels. So too, at Zhoukoudian, we suggest that improved Museum displays that explain more of the processes of geological evolution and archaeological excavation should help the visitor to appreciate the site more fully.

#### **Recommendation - longer-term, requiring funding**

We recommend a complete re-design of the Museum displays with the aim of making clearer to the non-specialist visitor the nature of the Zhoukoudian site and how it comes to be the way it is seen today. Themes that need further development include (a) the geological evolution of the original caves, (b) the changes in the appearance of the site as investigations proceeded, (c) and the methods used by archaeologists and palaeontologists. More emphasis in the displays could be given to "human interest"

themes such as the Chinese and international researchers of the 1920's and 1930s, and the mystery of the disappearance of the Peking Man skull in 1937. The displays should be brought up to the international standards of museology to be seen elsewhere in China (e.g. Natural Historical Museum, Beijing).

## **2.7 MONITORING**

With regard to monitoring the state of conservation, it seems that no indicators were defined at the time of inscription of the property and none are being systematically used at present. It should be possible to set up simple indicators that the site staff could be trained to use. These could include:

- the rate of plant growth in the excavated areas;
- the rate of erosion of the vertical sections and the cave roofs where still extant;
- the frequency of visitors at different parts of the site.

Useful data on vegetation growth and erosion rates could be obtained at low cost by means of systematic observation using measurements, photography and note-taking, and comparison with earlier recorded states (e.g. in photography). These would provide a quantitative analysis of the rates of change. A simple technique for assessing the rate of deposition from a vertical section is to cover the ground below it with a blanket or similar sheet-like material, and regularly to inspect and weigh the deposited material. (Naturally, the area under observation must be fenced off from human and animal visitors.) A rough idea of the rate of erosion of the witness section at Locality 1 could be gained using this technique over at least six months.

Observations by the site guards/guides on the movement of visitors throughout the site would help monitor condition of the paths, while also providing information on the relative interest that the site appeared to afford them (e.g. how many visitors go directly to Locality 1 without following the circuit path; how many do not visit the Museum? what is the average length of visit?).

## **2.8 SUMMARY OF CONCLUSIONS AND RECOMMENDED ACTIONS**

We summarise here the main conclusions of previous sections, and then the measures to be taken, divided into (1) short term, low cost actions and (2) longer term actions requiring additional funding.

We stress that short-term actions and the start of regular monitoring need not await the raising of funds for launching the preparation of the conservation and management plan. The plan will incorporate the short-term actions and monitoring activities in its own structure.

### ***2.8.1 World Heritage Values - Summary***

The original statement of significance is still appropriate for the site although it does not reflect the important symbolic values of the site to the Chinese people. These

symbolic values should be included in any revision of the Statement of Significance of the site and must be acknowledged in defining appropriate conservation polices.

We recommend that the official inscription of Zhoukoudian on the World Heritage List refer to criteria iii and iv rather than the criteria iii and vi as in the original evaluation carried out by ICOMOS.

The delimitation of the site, its division into two zones consisting of an inner Protected Zone surrounded by a Construction Control Zone and the regulations which control activities in these zones are appropriate.

The integrity of the site of Zhoukoudian has been maintained intact since its inscription on the World Heritage List in 1987.

### **2.8.2 Management and Factors affecting the Site - Summary**

The management of the site would benefit from the involvement of people trained in site conservation and management.

The visitor statistics indicate a steady decline in the numbers of visitors to the site.

Several factors were identified with the potential to damage the site. These are;

- Seismic Activity/Earthquakes
- Mining and quarrying activity already referred to is a source of landslides and vibrations through blasting.
- Industrial pollution caused by the coal mining, lime burning, and other industrial and domestic emissions.
- Vegetation growth on the excavated sections and ground surfaces
- Surface water and direct precipitation of rain and the occasional winter snow.
- The potential for fires in the woodland that covers the surrounding hills.
- The development of tourist facilities and the physical impact of visitors.
- Risk to human safety

### **2.8.3 Protection of the Site - Recommendations**

#### **Recommendations - short term, low-cost**

1. A vegetation control program should be developed in consultation with a botanist who can advise on the ecology and characteristics of the plant species concerned, particularly their root-growth and hence capacity to destabilise or stabilise the prehistoric deposit. The outcome of this study would determine the desirability of regular vegetation removal, its selectivity and its frequency. This recommendation applies especially to Locality 1.
2. The protective grille in the western part of Locality 1 should be closed to visitors since the section can be adequately appreciated from outside. This would also make possible studies monitoring the rate of erosion.

3. The grille at Pigeon Cave should be reinforced so as to prevent access.
4. At Pigeon Cave, an engineer should assist in an assessment, in consultation with heritage specialists, of the stability of the breccia roof and, if need be, advise on methods of making it safe.
5. At the Upper Cave, the two information signs that at present block the view of the Cave at its upper entrance should be removed and re-installed to the side of the viewing area.

### **Recommendation - longer term, requiring funding**

1. Preparation of an overall conservation and management plan for Zhoukoudian by the project manager with the assistance of an international expert (as requested by the CAS in its earlier submission to the UNESCO/Italy Funds-in-Trust). Decisions on the construction of major infrastructure to protect the site, as discussed below, should be made in the context of this plan.
2. To reduce safety risks posed by and to visitors at Locality 1, a central viewing area at ground level should be created within which visitors would be asked to remain and from which all points of interest in Locality 1 would be explained by means of written and visual material.
3. If studies show the rate of erosion of exposed deposits to be moderate or serious, then a protective roof covering at least the witness section in Locality 1 should be given serious consideration. A feasibility study should consider the options, subject to adequate funding, of (1) a protective roof that covers the witness section in Locality 1; (2) a roof that covers all of Locality 1; and (3) a more extensive protective roof that extends from the upper side of the Upper Cave down the slope and, with a lateral extension, covers all of Locality 1. These options would appear to be in ascending order of cost, on the basis of area to be covered.
4. Subject to its roof being declared safe, Pigeon Cave should be developed as a key point for interpreting the archaeology of Locality 1.
5. We recommend a complete re-design of the Museum displays with the aim of making clearer to the non-specialist visitor the nature of the Zhoukoudian site and how it comes to be the way it is seen today. Themes that need further development include (a) the geological evolution of the original caves, (b) the changes in the appearance of the site as investigations proceeded, (c) and the methods used by archaeologists and palaeontologists. More emphasis in the displays could be given to "human interest" themes such as the Chinese and international researchers of the 1920's and 1930s, and the mystery of the disappearance of the Peking Man skull in 1937. The displays should be brought up to the international standards of museology to be seen elsewhere in China (e.g. Natural Historical Museum, Beijing).



#### **2.8.4 Monitoring**

A major problem in assessing the condition of the site is the lack of any precise information in the rate of impact of the potentially deleterious factors such as vegetation growth or erosion. Anecdotal evidence suggests that these are having a significant impact on the site. In order to rectify this deficiency it is recommended that a simple, low cost regime of systematic observation using measurements, photography and note-taking, and comparison with earlier recorded states (eg. in photography) be instituted immediately for the whole site. These would provide a quantitative analysis of the rates of change in relation to key factors such as vegetation growth, erosion of exposed sections and visitor impacts. The results of this monitoring are necessary to assess the need for major and expensive physical site protection measures such as the construction of shelters over various localities as discussed above.

#### **2.8.5 Needs for International Assistance**

This report it is hoped will help the Chinese authorities to reformulate their request for international assistance, if they agree with our recommendations. Some immediate, low cost measures are recommended above that should be able to be instituted with the resources currently available.

It is recommended that the Chinese reformulate their request for assistance to reflect the long-term recommendation (1) above, ie:

Preparation of an overall conservation and management plan for Zhoukoudian by the project manager with the assistance of an international expert (as requested by the CAS in its earlier submission to the UNESCO/Italy Funds-in-Trust).

#### **REFERENCES**

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Weiner, S., Xu, Q., Goldberg, P., Liu, J. and Bar-Yosef, O. Evidence of the use of fire at Zhoukoudian, China. *Science* 281 (10 July 1998), 251 - 253.

Wu Xinzhi. Article in *Science* (January, 1999) (not seen) and personal communication.

## ***Attachment 1 Decree Of Beijing Municipal Government 1989 No. 1***

The Management methods on the protection of Zhoukoudian Peking Man Site, Beijing, is put into effect from Feb. 1 1998.

Beijing Municipal Government

The Management methods on the protection of Zhoukoudian Peking Man Site, Beijing

Article 1

Article 2 these methods are applied to the protected area and construction control zone.

The boundaries of protected area and construction control zone will be set by Fangshan district Government under the guidance of the Municipal Administration for Cultural Heritage.

Article 3 Municipal Administration for Cultural Heritage takes care of the heritage protection of the site, supervise the implementation of this measures. The district Government takes care of the site protection and management. The District Administration for Cultural Heritage takes care of routine management and monitoring under the guidance of the Municipal Administration for Cultural Heritage and the leadership of the District Government. Municipal, district plan, environmental protection, public security, mineral industry, forestry industry, commercial management units etc. Should cooperate with cultural heritage management units for the protection of the site.

Article 4 Zhoukoudian Peking Man Site Management Division of the Institute of Vertebrate Palaeontology and Palaeoanthropology, Chinese Academy of Sciences is the unit of management. Its duty is to do its best to protect the site according to the laws and regulations for cultural heritage protection as well as the present methods, stop the behaviour against these methods and report this behaviour to relevant Cultural heritage administration. Everyone and every unit within the protected area and construction control zone has responsibility to protect the site and follow the methods.

Article 5 The cultural heritage within the protected area and construction control zone should be marked by the Management Division and protect strictly, prevent from damaging; the unearthed fossils and artefacts should be well kept, prevent them from damaging and losing. Any excavation within the protected area should be approved by the State Administration for Cultural Heritage through Municipal Administration for Cultural Heritage, and designate special archaeology unit to carry it out. It should respect the topography of the protected area, maintain and improve reasonably the eco-environment.

Any construction within the protected area should in accordance with the environment and topography of the site; the peasants' housing construction should be approved by District Administration for Cultural Heritage and District Administration for planning, construction engineering should be approved by State Administration

for Cultural Heritage and Municipal Government through Municipal Administration for Cultural Heritage and Municipal Administration for planning.  
Any business should be approved by Municipal Administration for Cultural Heritage within the defined areas. In the construction control zone, it should plant trees on the condition to maintain the original landscape of the site.

Article 6 It is strictly forbid any harmful and damaging activities to the cultural heritage and the site within the protected area.

Article 7 The management division should plan the program to protect and manage well the site and implement the program after approval by the relevant Administration for Cultural Heritage and planning units.