# Landscape and Related Professional Implanted Immovable Cultural Relics Protection Planning Model

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Abstract: Traditional immovable cultural relics protection planning is centered on the heritage of cultural relics and is completed by archaeological background designers. It faces confusion in the new social environment. In this study, from the perspective of landscape planning and design, a set of planning process models are established for the protection of cultural relics. The model is divided into four stages: basic data collation, object evaluation, completion plan and post-implementation evaluation. The team that undertakes the design task is jointly led by archaeological researchers and landscape planners. During this period, various special planners use professional techniques to participate in the solution according to the corresponding problems. Compared with the traditional model, the model has a low degree of process closure and a high degree of freedom for the integration of various professional and technical personnel; landscape planners have always led the advancement with archaeological researchers; the establishment of the scope of protection of cultural relics is based on the regional environment. The evaluation of the project is completed; adding post-implementation evaluation links is conducive to the sustainability of cultural relics protection and utilization.

#### 1. Introduction

The relationship between human beings and human beings and nature on the earth constitutes a complex ecological environment system [1], with cultural heritage as its subsystem, shouldering the mission of understanding human origins and planning human future development. Immovable cultural relics are an important part of cultural heritage, and its protection plan is the cornerstone of the entire cultural heritage protection process.

### 2. Confusion about the Protection Planning of Immovable Cultural Relics

The speed of social development today is not only described in terms of rapid changes, it is even changing rapidly. The protection of cultural heritage must keep pace with the times, and the exploration and research of protection planning must not be slack for a moment. Immovable cultural relics are an important part of cultural heritage. Whether it is located in a city or natural mountain forest, its living conditions are not optimistic. The traditional protection planning model faces no small dilemma:

(1) There are two main problems in determining the scope of protection of cultural relics: First, the protection plan is centered on the body of cultural relics, and the core protection area, construction control area and style coordination area are demarcated in order to protect. This concept is based on the values of people-centredism, which is contrary to the concept of the value of ecological overall interests based on environmental and ecological perspectives and non-people-centredism. [2] The protection of cultural relics and the environment, ecology, and humanities are not a balanced and harmonious relationship, but a priority relationship. In addition, the method of delineating the scope of protection mainly relies on the qualitative evaluation of cultural relics and archaeologists, and lacks analysis of parameter indicators. The value of the surrounding environment and landscape has not been identified, resulting in the protection of cultural relics, but

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the environment on which the cultural relics depend is destroyed! This is more prominent in the process of post-disaster reconstruction of cultural relics. For example, the Pengzhou Reporting Seminary has implanted new social values such as tourism and commemoration after the disaster reconstruction. Its protection plan needs to realize more social functions.

- (2) The team that formulates the protection plan is dominated by cultural relics and archaeology professionals, and it is very difficult when dealing with the traffic organization, space transformation, architectural aesthetic evaluation of cultural relics and the surrounding environment; when facing the linear cultural gallery Dao heritage, [3] needs to deal with the natural systems that may span multiple cultural and administrative regions, carrying different natural systems of mountains, plains, and river valleys, and contain complex value relationships.
- (3) With the development of the times, immovable cultural relics and their environment carry more and more social functions. For example, the Terracotta Army of the Qin Dynasty has become a world-famous tourist attraction, the Summer Palace has become a park, and the reconstruction of the Daming Palace ruins is in parallel with the reconstruction of the old city. You Zunyi meeting site became a patriotic education base and so on. Faced with issues such as social changes, urban planning, and tourism economic development, the traditional planning model is relatively closed, making planning difficult, and requiring a more open and professional system.

With such a dilemma, what is the significance of implementing cultural relics protection planning from the perspective of landscape planning?

## 3. Enlightenment Brought by Modern Landscape Planning

## 3.1 From the Relationship between the Two

All visible objects on the earth belong to the category of landscapes, and immovable cultural relics are no exception. It is a landscape, no matter in which form of architecture, grotto, stone carving, tomb or ruins, it highly reflects the human spirit and human wisdom. Crystallization, a product that maximizes human influence. As a kind of landscape, immovable cultural relics should belong to the category of human landscape in a large system. Then, the cultural relics, its internal and external environments, and a larger range of related areas should be handled by landscape planning.

## 3.2 From the Perspective of Development

Analysis of the development of modern landscape planning: After the 1940s, landscape design inherited the geometric proportion of classicism, and also retained the content of romanticism, maintaining the dynamic and balanced development of the two, and the position of the psychologist in the design team appeared. [4] In the 1960s, McHag put forward the concept of "combining design with nature". The focus is not on design, but on combining, respecting the laws of nature. [5] established a layered cake model with factor layer analysis and map overlay technology as the core for landscape planning. After the 1970s, landscape urbanism rose. Landscape has become the most important means in urban planning. [6]Landscape replaces architecture as the basic element of urban construction [7], to achieve a new integrated approach to urbanization. Landscape urbanism is in line with McHag's proposition, taking the natural evolution process as the designer's basic blueprint and reflecting respect for the site's original context. Then came the "green infrastructure theory": through green infrastructure, the natural areas are connected to form a system, and planning to limit and guide the use of these areas. [8] It can be seen that ecology occupies an increasingly important position. Later, some scholars put forward the concept of "anti-planning" planning led by natural ecology. Professors Simonds and Professor Laurie pointed out that landscape assessment and planning should be carried out on a large scale and based on ecology and natural sciences. Environmental pressure status analysis. [9], [10]

It is not difficult to find that the horizon of landscape planning is extremely broad. At the macro level, cultural and ecological landscape patterns can be built around cultural relics. [11] The cultural relationship between the cultural relics and the surrounding space is handled at the meso level, and

the cultural details can be expressed at the micro level.

### 4. Exploration of Protection Planning Process Based on Landscape Planning Method

## 4.1 Basis of Argument

### 4.1.1 Landscape Planning Methodology

The modern landscape has deviated from the early mode of expanding the space outside the building. Its planning method is no longer a simple human-centered geometric element. It has entered the era of integrated design, which includes visual image, environmental ecology and human behavior. Psychology, [12] This shows that the driving force of landscape planning comes from spiritual culture and nature. Modern landscape planning is to draw on the "bottom-up" design thinking of the management field, and take the basic elements of nature and culture as the starting point on the base map of the earth's ecology [13], establish an interaction mechanism between each element, and seek the coupling of space and ecology behavior. In fact, this method stems from McHag's spirit of "design combined with nature". In decades of practice, this theory is sublimated, and nature and culture are operated as a whole system. On the one hand, nature is analyzed through cultural factors On the other hand, it combines cultural factors based on natural basis. The form of the landscape is in a dynamic space, [14] represents the form in the process, so its planning and design are holistic, evolutionary and comprehensive.

#### **4.1.2 Practiced Methods**

In recent years, many landscape methods have been used in the field of human landscape, with fruitful results. For example, Wang Yuncai established the evaluation system of rural landscape from the aspects of sensitivity and beauty; [15] Li Zhen proposed the ecological evolution sequence of suburban landscape organization; [16] Xie Hualin established a hierarchical evaluation system of rural landscape aesthetics; [17] Huang Qinshi Et al. carried out gene coding and derivative model analysis for traditional settlements; [18] Jiang Zhou et al. studied the visual aesthetic evaluation system of urban cultural landscape. [19]

Facts have proved that the landscape method has been more and more widely used in the field of humanities, and has solved many problems. It can be seen from this that when the cultural relics protection plan is faced with confusion in environmental issues, it can also use the results of a large number of landscape studies and use the corresponding landscape methods to deal with the corresponding points.

### 4.2 Process Step by Step Analysis

#### 4.2.1 Data Sorting Stage

At this stage, archaeological researchers and landscape planners were the earliest participants. In the process of collecting documents and current data in step ①A, the tasks of their two types of personnel have a certain intersection, but the emphasis is different: archaeological researchers mainly sort out the historical evolution and value connotation of cultural relics, and take pictures and questionnaires. It is also focused on cultural relics; landscape planners take pictures to focus on the environment, and the understanding of cultural relics information is more from the perspective of combining with the environment.

Step ② collating the data is that landscape planners and archaeological researchers work together to exchange information and share experiences with local cultural relics managers and researchers.

Step ③ When summarizing information, the basis of all information materials is based on the core value of cultural relics. This part mainly relies on the research of archaeologists and the cooperation of landscape planners.

#### 4.2.2 Evaluation Phase

#### (1) Work content

Step ① In the assessment phase, there are two main types of tasks, one is cultural relics assessment, and the other is environmental assessment. Cultural relics assessment includes: cultural relics value assessment and cultural relics status assessment. The evaluation of cultural relics is generally analyzed from three aspects: historical value, scientific value, and artistic value, and its extended value can also be further explained, such as education and publicity. The evaluation of the status quo of cultural relics mainly shows the authenticity and integrity of the status quo of cultural relics, the protection and management of cultural relics Situation, damage to cultural relics (disease, pest, natural disaster, etc.), etc.

Environmental assessment is from the perspective of planning, thinking from a large area and a large environmental scale, mainly including landscape value assessment and social assessment. Landscape value assessment starts with three aspects: environmental value, aesthetic value and cultural value; social assessment includes: social resource assessment, such as regional location, traffic conditions, regional attractiveness, etc.; economic assessment: includes the impact of cultural relics on the surrounding economy and the cultural relics bring Economic benefits (tourism development).

Step ② is under the overall control of the chief planner, and the landscape planner coordinates various constraints and specifications, establishes the scope of cultural relics protection, and clarifies the protection priorities.

## (2) Participating professionals

There are a lot of tasks in new fields at this stage, so there are also new professional members joining the team. Cultural relics protection and research professionals participate in the assessment of cultural relics damage; archaeology and ancient construction professionals are responsible for cultural relics construction evaluation; each special planner includes space planners, landscape planners, and economic planners. The project participates in the environmental assessment work. The planner has overall control and coordination.

(3) Stage results

#### 4.2.3 Completion Stage

Step ① Plan and design each sub-item and submit preliminary results, including: regional planning, spatial layout of cultural protection scope, transportation system organization, landscape planning and cultural relics protection scheme. Each sub-plan is completed by corresponding professional designers. [20] For example, archaeology and cultural protection researchers formulate cultural relics protection plans, and space planners complete spatial layout and traffic organization design.

Step ② The master planner and landscape planner are responsible for coordinating the interests of various schemes and further improving them, such as adjusting the regional plan and paying attention to the connection with important influencing factors within a large scale; landscape planning is based on the protection of cultural relics, adjusting the transportation organization and balancing the spatial relationship; Consider sustainable tourism industry project coordination, etc.

#### 4.2.4 Post-Evaluation Stage

After the implementation of the protection plan, continue to keep track, and record and feedback the problems in the process in time. During and after the implementation, questionnaires will be returned to local residents and managers; conditional experts, historians, archaeologists, sociologists, architectural planners, etc. may be invited to use expert evaluation methods after the implementation of the plan Evaluation.

#### 4.3 Results Analysis

#### 4.3.1 Workload Analysis

The following results can be obtained from the workload analysis charts of various professional technicians:

- (1) The largest area of work in the analysis diagram is for landscape planning and archaeology professionals, that is, they have the heaviest tasks in conservation planning.
- (2) In terms of time, the professionals who participated in the whole planning from beginning to end, and the longest span are archaeologists and landscape planners.

## 4.3.2 Understanding the Leading Role of Process

The leading roles in the entire conservation planning process are archaeological researchers and landscape planners. The two are like the two tires of a bicycle, driven together, there is no difference between the upper and lower master-slave relationship. On the one hand, from the perspective of landscape planners, the blueprint can be made more macroscopically, and the problem can be solved from the perspective of coordinated development with the surrounding environment and even the city; on the other hand, all landscape planning is around the protection and inheritance of cultural relics. The core value is the center. This core value is mainly excavated by archaeological researchers. At the same time, they escort how to maximize the value of cultural relics in the planning. In short, the two professional teams are the pilots of cultural relics protection planning, sharing research results and making up for each other's professional deficiencies.

## 4.3.3 Open Flow Chart

The process model constructed based on the planning method is an open system. According to different protection objects, professional researchers in different subject areas have joined to bring different technologies to solve the corresponding problems. This open system has significant changes in three areas:

### (1) Coordination of multi-disciplinary majors

In the past, the cultural relics protection planning process was mainly based on technicians with professional background in restoration, ancient architecture and cultural relics protection in the archaeological discipline. In the final plan review stage, experts and scholars in urban and rural planning and historical archaeology sometimes reviewed and participated in the entire process. The disciplines are relatively narrow and relatively closed. However, the newly-constructed process involves a wide range of disciplines. In the process, people with different professional backgrounds join to complete the corresponding tasks. There is no closed boundary, and it can be continuously extended as needed. There are landscape planning, urban and rural planning (including various special plans), and ecology. Science, geology, etc., have different contributions at different stages.

#### (2) Increase in work content

The content of the work involves a wider range. In the past, the study of cultural relics and the surrounding small environment was more concentrated, but now the model is involved from a larger perspective, and it will face a more complicated work interface. For example, the determination of the scope of protection will use regional and spatial planning analysis, landscape planning will use landscape visual aesthetic analysis, and post-disaster reconstruction planning will use 3S technology for site selection.

### (3) Increase in participants

The scale of the protection planning and design team is also unprecedentedly perfect, including landscape planners, archaeological researchers (including historical research, ancient construction research, cultural relics research, ancient construction protection technology research, etc.), urban and rural planners, tourism planning, geological researchers, environmental engineering Technicians, ecological students, social and economic students, etc. It is not necessary for every protection project to have various professionals involved. According to the actual needs of the project, the research team can be compiled with a high degree of freedom and openness. For example, in the evaluation work of Phase 2, there are various special planners to complete the

regional assessment, spatial analysis, transportation system analysis, etc.; if the cultural relics are sensitive to environmental conditions, environmental engineering professionals will also participate in the use of atmospheric, soil, humidity and other detection technologies to participate; If cultural relics are in geologically sensitive areas, geological professionals will also use 3S technology to detect the environment; if cultural relics areas are accompanied by important intangible cultural heritage, cultural heritage experts will also be required to study its sustainable development.

Conclusion and discussion

There are two obvious differences between the established design process model and the traditional cultural relics protection planning process:

- (1) The construction mechanism of the planning team is different. In the past, it was dominated by archaeological researchers. Here, it was co-chaired by landscape planners and archaeological researchers. During this period, they joined the special planners in cooperation with each other. The technical staff participated and left more freely and flexibly.
- (2) The change of thinking in establishing the scope of protection of cultural relics is no longer based on the divergence of cultural relics as the center, but is based on a large regional environment and is completed through multiple assessments.
- (3) Adding post-implementation evaluation links can improve protection effects in real time and achieve sustainable development.

After the above changes, the first two problems faced by the cultural relics protection planning listed at the beginning of the article can be solved. Society is developing rapidly, science and technology are advancing rapidly, and the thinking and methods of cultural relics protection planning also need to keep pace with the times and constantly improve and improve. New problems will keep coming along with changes in the social environment. The use of landscape methods to lead cultural relics protection planning is undoubtedly a bold exploration.

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#### References

- [1] Donald Hades. Ecological Anthropology M. Cultural Relics Press, 2002
- [2] Zhu Xianggui. Research on Cultural Heritage Protection Law M. Law Press, 2007
- [3] Shan Jixiang. Retaining the Root and Soul of Urban Culture--Exploration and Practice of the Protection of Chinese Cultural Heritage M. Science Press, 2010
- [4] Geoffrey, Susan Jellicoe, translated by Liu Binyi. Graphic Human Landscape M. Tongji University Press, 2006
- [5] McHag. Design combines nature M. Tianjin University Press, 2008
- [6] Yang Rui. The application of landscape urbanism in the transformation of industrial wasteland J. Modern City Research, 2008 (10): 71-72
- [7] Yang Rui. The Theory and Practice of Landscape Urbanism J. Chinese Garden, 2009 (10): 60-63
- [8] Li Kairan. Green Infrastructure: Concept, Theory and Practice J. Chinese Garden, 2009 (10): 88-90
- [9] Qiu Jian.. Landscape Design Preliminary M. China Building Industry Press, 2010
- [10] Simmonds, Stark. Landscape Architecture-Site Planning and Design Manual M. China Building Industry Press, 2009

- [11] Wang Lijie, Nie Rui, Wang Shuyang. Research on the protection and development strategy of rural landscape based on regionalism. Chinese Garden J, 2016 (10): 66-67
- [12] Liu Binyi. Modern Landscape Planning and Design M. Southeast University Press, 2010
- [13] Yu Kongjian. On "Reverse Planning" J. Urban Planning, 2005 (9) 64-69
- [14] Zhai Jun. Landscape methodology J. Chinese Garden, 2016 (12): 53-57
- [15] Wang Yuncai. On the theoretical basis and evaluation system of Chinese rural landscape evaluation J. Journal of Central China Normal University (Natural Science Edition), 2002 (3): 389-393
- [16] Li Zhen, Liu Jingyan, Zhang Baochun. Ecological Evolution Analysis of Suburban Landscape in Guangzhou City J. Journal of Applied Ecology, 2001 (1): 52-55
- [17] Xie Hualin, Liu Liming, Xu Wei. Research on the Evaluation of Rural Landscape Aesthetics J. Economic Geography, 2003 (3): 423-432
- [18] Huang Qinshi, Zhu Xigang, Chen Chuwen.. Research on Gene Coding and Derivative Models of Traditional Settlement Landscape J. Chinese Garden, 2016 (10): 89-93
- [19] Jiang Day. Research on the Evaluation System of Visual Aesthetics of Urban Small and Medium Scale Cultural Landscapes. Nanjing University Press, 2014
- [20] Zhang Yongping, Long Ying. Using the main body of the planner to formulate the land use planning plan J. Urban Planning, 2016 (11): 49-59