

# The Fusion of Local Creation and Professional Practice Green transformation in traditional communities in Beijing

Xiyao Zhao

Beijing Forestry University

## Abstract

Hutong is a kind of traditional narrow streets in Beijing. Now many hutong are designated as cultural protection areas. Hutong has the tradition of greening public space in ancient times, but the contemporary hutong pattern has changed greatly. Compared with other parts of the city, residents in Hutong enjoy few open Spaces and green Spaces. This paper focuses on the cooperation method of professional practice and local creation in green renewal in traditional communities such as hutong. One kind of methods is introduced through a series of practical projects from 2018 to the present based on the summary and analysis of the forms of residents' participation in greening, the planting space model of hutong greening and the plant species preference of each space model. Finally, with specific cases, it discusses the ways of realizing green transformation in hutong in terms of spatial pattern, function, participation and publicity, and summarizes the green space transformation experience.

## Background

As a special historical district in Beijing, hutong is a name card of the ancient city of Beijing. Every year, a large number of tourists come to visit hutong. Since 1990, Beijing has designated some hutong areas as urban historical and cultural conservation blocks. In order to maintain the harmony of hutong features, new constructions have been controlled. There is a contradiction between the protected space and the living needs of modern urban people.

Shu yi, a famous Chinese writer, once wrote, "in the past, Beijingers used to plant flowers and trees in the open space of their yards. The tops of the trees were often higher than the ridges of the houses." (Shu, 2016) However, in this century hutongs have very poor environmental conditions. The hutongs are filled with random objects and parked vehicles, and the original courtyard is transformed into a narrow corridor. The number of plants is decreasing, and there is a lack of large-scale public greening and shade space for recreation in the streets.

## Field Research

### *Method*

It's noticed that the residents in Beijing's hutongs are often enthusiastic about gardening, they have planted a wide variety of plants in the crowded hutongs. The growth status and landscape effect of these plants are usually very good in the hutongs, while the plant landscape arranged by the government greening department is often not sustainable, which also contradicts the overall appearance of the hutongs. In order to investigate the adaptive landscape strategies spontaneously formed by hutong residents in the highly urbanized historical space, we investigated the status quo of spontaneous greening in hutong. The field survey was conducted in the outdoor environment of hutong in Beijing. The survey was mainly recorded by taking photos, and students majoring in horticulture were invited to identify plant species. Participants were conveniently recruited on site and joined the survey voluntarily and anonymously.

### *Selected Community*

Dashilar historical and cultural protection area is one of the largest historical and cultural blocks closest to Tian'anmen with the most abundant and best-preserved relics. As the most important



Figure 1. Schematic diagram of 8 types in hutong space. Diagram by Authors.

business district in ancient Beijing, Dashilar has a history of more than 600 years. In the past 20 years, the urban heritage of Dashilar historic district has been protected within the designated area, most of the historic streets, courtyards and buildings have been preserved, and the historical features of the district have been extended. Since 2011, an investment company has initiated the Dashilar renewal plan and invited excellent design and artistic and creative projects from home and abroad to enter the old block. Based on this, we set the survey site in Dashilar area and investigated 8 hutongs with a total length of 1667m.

### Result

The current situation of spontaneous greening in hutongs is analyzed, including three characteristics: space location, plant selection and material selection.

Hutong green space location choice is diverse and has great flexibility. Roof, window eaves, walls, courtyard space, urban grey infrastructure (e.g., electric boxes) can all be used as planting space. (Figure 1)

And there is also a correlation between residents' choice of plant materials in greening and these eight spatial types (Figure 2). The choice of plant materials in independent greening can reflect the preference of local residents for plant materials to some extent. In general, people show clear preference for edible plants and the

edible plants are mainly vegetables suitable for planting in pots and with climbing characteristics such as melons and beans.

The building materials of planting space have the characteristics of cheap and practical, most of which are recyclable materials. The materials also must be portable and stable to accommodate the fragile structure of the house.

### Discussion

The surveyed hutongs may not cover all the local creation of hutong greening, but they can reflect some common characteristics. The spontaneous greening behavior led by residents reflects the actual survival needs of residents and provides a variety of flexible and effective ways for the landscape greening of traditional urban blocks. These practices are part of the way residents manage their lives and how they create street vitality. Their life is alive, the historic district is alive.

People have realized that residents are the real actors in the green transformation of traditional communities. And professional guidance and design participation can make the landscape more sustainable and aesthetic. By combining professional practice with local creation, the community can be mobilized to drive its self-renewal, so as to truly integrate urban renewal into the lives of residents and create a vibrant green space. Combined with the author's

practical projects in Dashilar area since 2018, this paper discusses the approaches to integration from three aspects.

### Spatial pattern

In hutong communities, the public space is very narrow, and the surface is almost 100 percent hardened. So, the traditional way of creating green space by occupying land is difficult to implement here. Inspired by the space location of the residents' plants, the team designed a set of installations to make use of the facade space of the hutong street. The project is called the 'Chinese Rose Plan' because it focuses on growing the city's most popular plant, the Chinese rose. The modular unit form comes from the tree and conforms to the modular ratio of traditional Chinese architecture. The two modules can be combined in different ways and can be flexibly combined according to the size and form of different walls to adapt to the changeable wall space conditions in the hutongs. (Figure 3) The combination of the installation and climbing plants can form a vivid green landscape and also play a decorative role in autumn and winter.

With the participation of professional designers, not only are the existing public spaces utilized, but new green spaces are also discovered through the integration. In No. 12 Courtyard of Cha'er Hutong, the designers transformed the passive corridor space into a natural flower border. In addition to landscaping, runoff from the building roof can flow into rainwater harvesting devices in the plant community. (Figure 4-1)

### Function

Through the investigation, it is not difficult to find that the functional properties of spontaneous greening behavior are obvious. For the community residents with low average income, the added value of simple landscape planting is too low, and people are more inclined to plant fruits and vegetables. Professionals need to respond to users' functional requirements when updating green space, rather than simply pursuing aesthetic effects.

In No. 12 Courtyard of Cha'er Hutong, the designer built a family farming corner by using the residents' daily wastes. Spice plants and fruits and vegetables are grown in recycled containers, and the user can adjust the combination of the containers at any time. (Figure 4-2) The addition of a corridor outside the traditional Chinese house conforms to the

Type	Plant species (scientific name)
A.Eaves greening	<i>Lagenaria siceraria</i> , <i>Vitis vinifera</i> , <i>Ipomoea batatas</i> , <i>Setaria viridis</i>
B.Greening over hutongs	<i>Portulaca oleracea</i> , <i>Cucurbita moschata</i> , <i>Lagenaria siceraria</i> , <i>Luffa cylindrica</i> , <i>Parthenocissus tricuspidata</i>
C.Roof greening	<i>Lablab purpureus</i> , <i>Pharbitis nil</i> , <i>Anredera cordifolia</i> , <i>Parthenocissus tricuspidata</i>
D. Wall appendages greening	<i>Lablab purpureus</i> , <i>Pharbitis nil</i> , <i>Cucurbita moschata</i> , <i>Morden cvs.of Climbers and Ramblers</i> .
E.Metope greening	<i>Bambusa multiplex</i> , <i>Benincasa hispida</i> , <i>Mentha haplocalyx</i> , <i>Capsicum annuum</i> , <i>Portulacaria afro</i> , <i>Epiphyllum oxypetalum</i> , <i>Luffa cylindrica</i> , <i>Parthenocissus tricuspidata</i>
F.Siheyuan gate greening	<i>Hosta plantaginea</i> , <i>Salvia splendens</i> , <i>Mentha haplocalyx</i> , <i>Malus spectabilis</i> , <i>Cymbidium goeringii</i> , <i>Jasminum sambac</i> , <i>Wisteria sinensis</i>
G.Window greening	<i>Hedera nepalensis var. sinensis</i> , <i>Punica granatum</i> , <i>Epipremnum aureum</i> , <i>Luffa cylindrica</i> , <i>Jasminum sambac</i> , <i>Dioscorea opposita</i> , <i>Allium tuberosum</i> , <i>Raphanus sativus</i>
H.Ground greening	<i>Lonicera japonica</i> , <i>Salvia splendens</i> , <i>Aster tataricus</i> , <i>Hosta plantaginea</i> , <i>Impatiens balsamina</i> , <i>Rosa chinensis</i>

Figure 2. Plant species of the eight types of spontaneous greening. Diagram by Authors.



Figure 3. The scenes of 'Rose Plan' (2018). Photo by Shiyang Zhang.

tradition of Chinese architecture, while also creating a comfortable public space. (Figure 4-3)

### Participation

The previous traditional community renewal practice makes people feel that the cultivation process of community participation in China is very slow. In this context, activism becomes a



Figure 4. The scenes of ‘No.12 Garden’ in Char Hutong(2018-2019). Photo by Yixiao Wang & Yang Yang.

guide for designers to take in the process of combining the professional and the local. Through the gradual transformation of the small space, from non-participation to symbolic participation to substantive participation, the residents are constantly attracted and finally truly accept the green renewal. In our renovation practice of Dashilar area, the first courtyard No. 12 of Cha’er Hutong was almost completed by professionals in 2018. After seeing the transformation results, residents of the community took the initiative to participate in the maintenance and management. Meanwhile, more people learned about the concept of green renewal through the exhibitions and social service activities we held in the courtyard. In the ‘Dream Garden Project’, launched in 2019, four families volunteered to make their homes an object of our transformation and visit. The four courtyards were designed and built by residents and designers together. (Figure 5)

The green renewal of traditional communities in China cannot be carried out without the support of social management. With the help of neighborhood committees and urban planning departments in providing financial support and communication channels, professionals and local residents can establish contacts. Their participation makes the implementation of green renewal more reliable and legitimate.

### *Publicity*

For residents of traditional communities, watching TV news and reading newspapers are important parts of daily life. Using public media to sell themselves can quickly generate enthusiasm among residents. Not only residents of Dashilar but also residents of other traditional communities have been able to learn about the benefits of green renewal after reports by Beijing TV and newspapers. Someone took the initiative to contact the design team and provided site information, hoping to carry out the green update project. After reading the newspaper story, some people wrote commentaries praising the green Update and hoping it would spread. These phenomena testify to the effectiveness of media propaganda. It provides the possibility of communication between a broader group of local residents and professionals.

As the focus of the public and professionals is often misplaced, how professionals perceive the focus of the public with the help of media is a problem that needs attention. It can be found that media reports on No.12 Courtyard of Cha’er Hutong focus more on the social benefits brought by the improvement of hutong environment, which reflects that the social value of urban landscape micro-renewal projects is often far greater than the value of the space itself. This suggests that professional designers



Figure 5. Volunteers work with local residents to build their own gardens. Photo by Lu Jiang.

should pay attention to the use and participation of people in space and the function of popular science education when choosing design strategies.

### Conclusion

Through a series of field investigations and construction activities in the Dashilar community in Beijing, this study explores a way to carry out the green renewal of the old city. By introducing local experience into landscape design, the large-scale urban progress is integrated with the daily improvement of the neighborhood scale. The ways and methods of promoting residents' participation are discussed in four aspects. It can provide potential evidence for the formulation of urban landscape micro-renewal planning and design strategy, so as to guide the future urban landscape micro-renewal project to more effectively promote, more deeply rooted in the people and more sustainable.

Despite the positive outcomes of these projects, there are a few challenges for future process of the green transformation in traditional community. First, there is the question of funding. For residents of traditional communities, where incomes are generally low, landscape renovation is far less important than ensuring family life. Secondly, there is the problem of landscape maintenance. For the completed green transformation project, there is a lack of professional greening maintenance personnel in hutong communities, and the residents themselves lack continuity in maintenance, leading to the death of plants.

In the future, we hope to develop platform through cooperation with the government, on the one hand, to provide stable funding support channels, and on the other hand, to incubate local associations and organizations. In turn, a spontaneous green renewal movement has been formed within the community, allowing more projects to emerge in Beijing's intricate hutongs.

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### Endnotes

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