

NEW HOME: CRITICAL LEARNING FROM CHINESE WORK UNIT

From Urban Design To Social Sustainability

Tong Shu, Cardiff University, UK

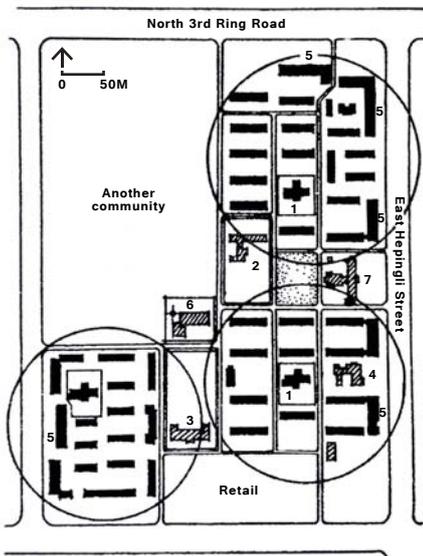


Figure 1
Key: 1-Nursery and kindergarten; 2-Primary school; 3-Middle school; 4-Canteen; 5-Shops (on the ground floor of apartment buildings); 6-Boiler room; 7-Office building
(Source: Duanfang Lu, 2006)

The Chinese work unit (Danwei), which evolved in the Communist era in 1950s to 1980s, is a gated mixed-used settlement form which contains all living and working facilities for residents. It can be thought as a hybrid between the neighbourhood unit (Perry, 1929) and Garnier's utopian industrial city (1918). It used to be a good example of self-sustaining, mixed-used community which also had a good social mixture, environment quality and strong community cohesion (Figure 1). But it is now widely criticized for its low permeability and abusive occupation on public resources etc. Thus, most of the work units are regenerated or replaced by monofunctional developments. However, the increasing longing for the renaissance of the work unit has never stopped among former users. To inherit the past and usher in the future, this project conducts a critical review of from Chinese work unit, and explores the linkage between urban design and social sustainability. The project looks at both physical and non-physical urban design related features which may in some way encourage and embed social sustainability.

AIM

The aim of this project is to identify any urban design features of Chinese work units that can increase chances of residents encounter, encourage interaction and channel social sustainability. It then seeks to apply the findings in a design exercise which develops a new cooperative live-work community in the city of Chengdu, China.

RESEARCH & FINDINGS

The research is conducted with in-depth case studies of three Chinese work units and their context. Two analyses are undertaken:

- Structural Mode

From the research, a structural diagram describing strategic spatial qualities can be drawn regarding public transportation system, pedestrian movement, green space system and locations of major amenities (Figure 2).

It shows the major amenities, gathering spaces and parks are located beside arterial streets. These are accessible to both residents and visitors who drive and park. The service streets, which have less vehicles and lower speeds, are designed as continuous boulevards with pleasant walkways and a series of pocket parks.

Thus, there is a gradual but clear change in terms of increased privacy, reduced noise and slower vehicle speed because of the street and the open space hierarchy. This pattern of open spaces and amenities make

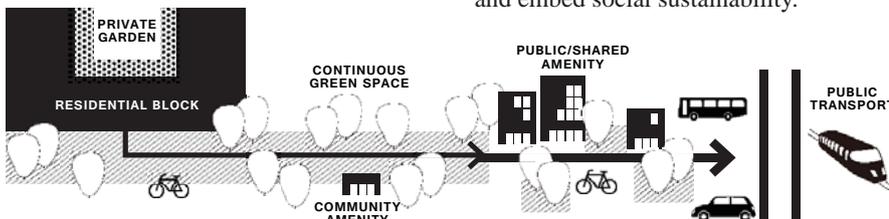
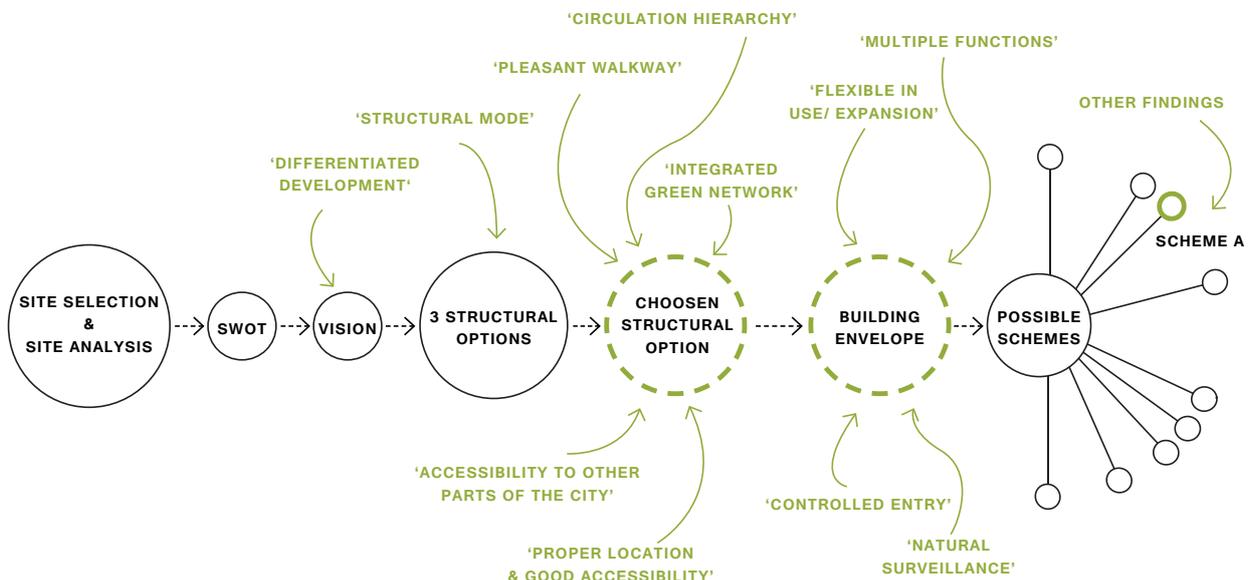


Figure 2



ANALYSIS	STRUCTURAL OPTIONS	FIXED FEATURES	FLEXIBLE FEATURES	POSSIBILITIES	CHOSEN SCHEME
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Figure 3

- ↙ Figure 1: Site plan of the 7th district of Hepingli, Beijing, constructed in 1959–1961
- ↙↙ Figure 2: Structural Mode diagram
- ↙↙↙ Figure 3: Design process and structure
- ↘ Figure 4: Fixed & Flexible Features
- ↘↘ Figure 5: View down the main residential street

it possible for people to go through / pass these places rather than intentionally 'go there' during daily circulation.

• Design features

Ten significant features, both physical and non-physical, are established as supportive features that contribute to social sustainability via the study of Chinese work units, and a wider literature review. They are all adopted in the later design process.

DESIGN PROCESS & STRUCTURE

A loose-fit design approach continuous involving residents, designers and initially, developers is adopted. This initially sees the setting out of a strategic urban design framework within the live-work community and the urban environment that allows social sustainability to take root, grow and evolve. The flow diagram illustrates the design process and structure. It also shows clearly when and how the research findings (green quotes) are adopted (Figure 3). There can be plenty of alternatives in the final outcome of this community consultation at different development stages. These possibilities would be tested against the local circumstances, the diverse nature of the target community and its individual residents. More importantly, the involvement of individual residents during the 'selections of alternatives' process is essential and the very starting point of long term social sustainability.

FIXED FEATURES

Bringing together site analysis information and the research findings, a structural design can be proposed (Figure 4).

The left diagram shows an overlap of public transportation, pedestrian movement, the green space system and locations of major amenities. On the one hand, all daily amenities are allocated along the major movement routes. On the other hand, amenities are connected by a green space system which is integrated with pedestrian movement.

Thus, these fixed features designed intentionally as conducive to encourage social interaction, reduce traffic interference and protect privacy.

FLEXIBLE FEATURES

In subsequent phases of development and the 'lifetime' of the scheme, flexible features can be adopted. There is a certain flexibility in the land use of each block.

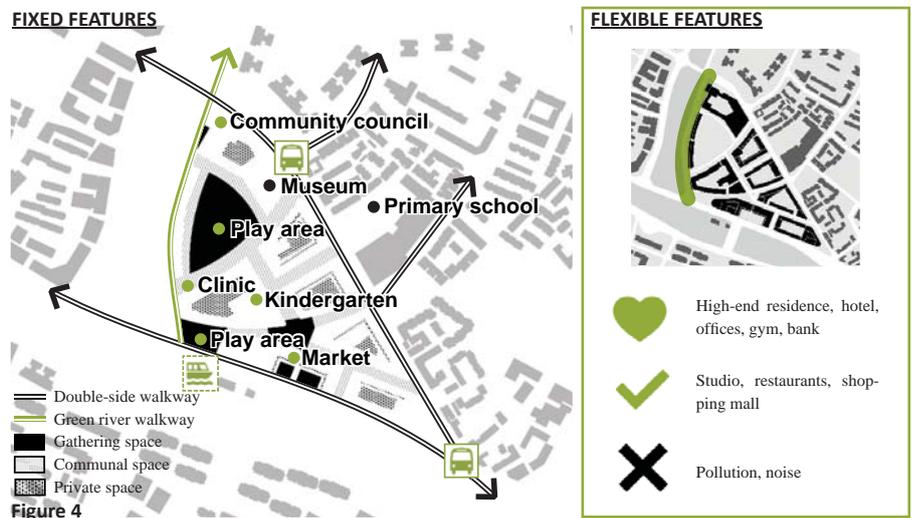


Figure 4



Figure 5

Every building is given land use codes in three categories: 'Recommended', 'Allowed' and 'Not allowed' (Figure 4). These decisions can be made by individual property owners with developers, in the first instance, and later with the management body.

The possibility to have direct off-street entrances and expansion space are afforded where the property configuration allows. Not only does this flexibility encourage cooperative members to stay longer, but can provide convenience and create an income stream for both residential and commercial properties.

Other features can also be used to support sustainability, like sharing amenities with surrounding communities, sharing facilities in start-up offices, time banking etc.

LESSONS LEARNED

In order to better serve the community needs, urban design should pay more attention to the potential that designing can offer the long-term and community-relevant evolution of streets, neighbourhoods and districts, rather than simply the end result of the property development project. Thus design is expected to channel diversity and prosperity both socially and economically.

Designers should play a leading role in developing methods of articulating and applying structural guidelines that both stem from user experience and that enable communities to grow and manage their own urban environment (Figure 5).