Aga Khan Award for Architecture

ARCHITECT'S RECORD

2010 AWARD CYCLE

I. IDENTIFICATION

Project Title: Rural Planning for Shunyi, China

Street Address: Village Wuxiongsi + Nanjuan + Sishang, Shunyi

City: Beijing Country: China

II. PERSONS RESPONSIBLE

A. Architect/Planner

Name: ZHANG Yue

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Principal Designer: ZHANG Yue, NI Feng, SUN Lingbo, ZHANG Jingjing, LI Rongxin, LV Xiaohe, PENG Weizhou, WEI Kailin

B. Client

Name: NI Feng

Mailing Address: No.60 NanLiShi Road, Xicheng District, Beijing Municipal Commission of Urban Planning

City: Beijing Postal Code: 100045

Country: China Telephone: +86-13501119172

Facsimile: E-mail: nfnb@bjghw.gov.cn

C. Project Affiliates / Consultants

Please list those involved in the project and indicate their roles and areas of responsibility (e.g. engineers, contractors, economists, master craftsmen, other architects, clients, etc.). Please cite addresses and telephone numbers separately.

Name	Role
All students of rural studio in Tsinghua Univ. Architecture School 2005-2007	participated students
YANG Weidong, Director of Shunyi Planning Bureau	government official
ZHAO Jianjie, Staff of Shunyi Planning Bureau	government official
WANG Hailong, Staff of Shunyi Planning Bureau	government official
ZHOU Lianbao, Head of Village Wuxiongsi	local offcial
LIU Jie, Senior Engineeror of BIAD	other architect
YU Tongzhou, Senior Engineeror of BMICPD	other planner
WANG Peng, Engineeror of THUPDI	other planner

III. TIMETABLE

(please specify year and month)

A. Commission: July, 2005

B. Design — Commencement: September, 2005, — Completion: to be continued

C. Construction — Commencement: October,2006, — Completion: to be continued

D. Occupancy: planning and construction in the existing villages

Remarks, if any:

Continuous tracing studies and constructions will last in the coming years in the villages

IV. AREAS AND SURFACES

(please indicate in square metres)

A. Total Site Area: 2.5 + 1.0 + 3.4 km2 (village Wuxiongsi + Nanjuan + Sishang)

B. Ground Floor Area: 0.6 + 0.5 + 0.4 km2 (village Wuxiongsi + Nanjuan + Sishang)

C. Total Combined Floor Area
including basement(s),ground floor(s) and all upper floors)

Remarks, if any:

for a planning project, the above site area refers to the territory area of 3 villages, and the gound floor area refers to the area of the construction land.

V. ECONOMICS

(please specify the amounts in local currencies and provide the equivalents in US dollars. Specify the dates and the rates of exchange in US dollars at the time.)

	Amount in Local Currency	Amount in US dollars	Exchange Rate	Date
A. Total Initial Budget	22992540	3381255	6.8	Nov. 1, 2009
B. Cost of Land				
C. Analysis of Actual Costs				
1. Infrastructure				
2. Labour				
3. Materials				
4. Landscaping				
5. Professional Fees				
6. Other				
D. Total Actual Costs (without land)				
E. Actual Cost (per sq. meter)				

Remarks, if any, on costs:

the construction is still going on, thus the actual costs is unavailable now. It is estimated that about 15,000,000 CNY has been spent on the circulation, infrastructure and public service improving, and about 200,00 CNY on a demonstrating house construction. The cost of labour and professional fees is supported by different government departments and institutes, which is not included in the initial budget.

VI. PROJECT DESCRIPTION

[CHALLENGES] Environmental pollution, construction sprawl, encroachment of cultivation, poor living conditions, lack of infrastructure, low-income, unemployment, population aging, loss of government subsidy, absence of planning and surveillance...

[APPROACHES]

1- SURVEY: overall collection of field data, door-to-door interview, databases build & analyze.

2- LANDUSE: set growth boundary of construction, preserve natural resources & cultivations, and carry out a micro-spreading renewal to release more space for public welfare & economic development.

3- ECONOMY: government subsidy repay back to the village; improving of environmental quality will benefits absorbing investments on farm-products processing; new house has more floor area in design for the family-based rural tourism &small handicraft.

4- CIRCULATION, INFRASTRUCTURE & PUBLIC SERVCE: systemize & rationalize the whole network, fill up the necessary functions, improving the living conditions, with a minimum touch to the existing village life.

5- MICRO-SPREADING RENEWAL: renewal will start from abandoned site, spread out 1 household by 1 gradually; the whole neighborhoods shrink in more compact pattern, basically maintain the original social fabric.

6- HOUSE RENOVATION/NEW-BUILD: be more compact & efficient in land-use, respect local traditions in plan layout, building material, color, decoration, technique and etc. any ecological change of the house construction will at the resident own will and be encouraged by government subsidy.

7- ECOLOGICAL STRATEGIES: active/passive solar energy use, decentralized baffled septic tank, exterior insulation, rain collecting and etc. all are integrated & on a optional menu.

8- PUBLIC PARTICIPATION: the project is also a cooperation of academic forces, local authorities & neighborhoods; door-to-door interview, group discussion, project explanation, exhibition & feedback are made in the whole procedure.

VII. MATERIALS, STRUCTURE, AND CONSTRUCTION

The principal building materials are local products of brick, cement and sand. Steel and wood is also used.

The brick-concrete system is the basic structure type of new built buildings. And a light steel system is applied in the construction of community center in village Wuxiongsi . Compared with the traditional buildings, the exterior insulation has been widely adopted in new buildings.

For the sewage system, the technology of man-made wetland sewage farm was experimented in the village Wuxiongsi. And all the village have their residents' toilet renovated, using decentralized 3 baffled septic tanks.

VIII. PROJECT SIGNIFICANCE AND IMPACT

The submission project is a pilot planning & design project for rural villages in Shunyi, Beijing. The project was approved and executed in 2006. Now the constructions on circulation, infrastructure, public services and a demonstrating new farmhouse are almost finished and benefit the local residents. Continuous tracing studies and constructions of the whole community renewal will last in the coming years for the villages.

The project has won the first prize of Beijing rural planning award in 2008, and the third prize of national planning award in 2009. The methodology of such a multi-discipline joint research has set one of role models on rural planning for Chinese planning profession.

[Quantum change and transferability]

The project is trying to find practical ways of sustainable developing for China rural villages. The contributions include: improving environmental quality by integrating adaptable techniques in very low budget, executing the renewal in democracy by a concept of Micro-spreading, and disseminating knowledge in village by public participation & training of how to build/maintain ecological facilities.

[Ethical standards and social equity]

The project is to improve rural living conditions and to narrow the gap between urban & rural areas. Public participations are made in whole procedure to insure political transparency. Circulation/infrastructure improving will be a minimum touch to village existing life. To move into new house, or just renovation with ecological facilities will be at residents' own will and be encouraged by government subsidy. New house design has selection-menu to provide more choices for residents. Village renewal will be long-term for a better emotional reception, and the design also considered the situation that some residents won't move or change. Local forces have the priority to get job opportunities in construction.

[Ecological quality and energy conservation]

A growth boundary of construction is set to protect natural resources & cultivated lands. Decentralized septic tanks & drains system are built for pollution control. According with legislation, the area of 1 new house site will reduce from >300 m2 to 200 m2, with living condition improved & land-saving subsidy paid. New house uses local building materials. It has minimum outer-wall area & exterior insulation to reduce energy consumption, and has an enclosed corridor to the north as temperature buffer zone. Solar energy utility is encouraged by setting glass solar room & roof solar collectors. Vertical ventilation is built to pump the cool/warm air from deep basement to the whole interior space. Rains are collected & trees are preserved for a better micro-climate regulation.

[Economic performance and compatibility]

Budget of 1st house experiment is USD166/m2, low to match local income. It is also to measure how much government subsidy will be to repay residents for their change to more ecological living pattern. Modestly rise of FAR in renewal creates more spaces for family-based rural tourism &small handicraft. Environmental quality improving benefits absorbing enterprise investments on farm-products processing.

[Contextual and aesthetic impact]

To prevent construction sprawl &control pollutions will arouse the traditional scenic rural landscape. Public participation &using local materials/techniques will preserve the vernacular aesthetic value in architecture. The micro-spreading renewal model will avoid a sudden physical change in context. Also such a one-by-one gradual action will mostly keep the original social fabric of the village.

Name (please print) ZHANG Yue

Signature _____ Date Nov. 21, 2009