

Cover Story

Witness the Future of Rammed-earth Architecture

Wu Zhi Qiao had started to mobilize university teams to help villagers affected by earthquake rebuild homes by developing anti-seismic, safe and comfortable rammed-earth houses since 2009. Along with growing awareness on sustainable development in the world, we are glad to see that traditional earth construction, supplemented with modern technology, is gradually reviving, and we believe that it would become a new sustainable and green alternative for rural development in future...



Rammed-earth @ Bi-City Biennale of Urbanism/Architecture 2015

Wu Zhi Qiao fully supported Xi'an University of Architecture and Technology Wu Zhi Qiao team and overseas rammed-earth architects to present the exhibit "Urban Earthworks" at Bi-City Biennale of Urbanism/Architecture 2015 (UABB 2015). The 1:1 scale mockup, demonstrating modern rammed-earth architecture as an eco-friendly, aesthetic, comfortable alternative to sustainable architecture, and successfully attracted lots

of visitors. The biennale lasted for 3 months from December 2015 till this February and attracted over 250,000 visitors. Around 160 exhibits from all over the world were displayed. Wu Zhi Qiao organized over 20 volunteers from Hong Kong as helpers to introduce advanced rammed-earth construction technology and its application in rural China.

Village Rebuild Demonstration Project Shortlisted for TERRA Award for Earthen Architecture

We would like to share a good news that our Village Rebuild Demonstration Project in Maan Qiao Village, Sichuan has been selected as one of the shortlisted projects for TERRA Award, the first international prize for contemporary earthen architectures. The award committee will select the winners among 40 shortlisted projects. The announcement will be followed by an award ceremony in Lyon, France in July.



About Village Rebuild Demonstration Project @Maan Qiao Village, Sichuan

This is our first village rebuild demonstration project in Ma'anqiao Village, Huili County, Liangshan State, Sichuan after Pan Zhihua earthquake in 2008. We mobilized university teams to help homeless villagers rebuild their homes with improved rammed earth construction technique and facilitate them to restart a new life by transferring knowledge of health care.



Macha Village Center to Open soon

Macha village centre construction project is going to be accomplished this summer. Following the success of "Demonstration Project of Advanced Rammed Earth Eco-Dwellings", this project has been launched to help people overcome the stereotype that earth architecture is a sign of backwardness and further showcase quality and modern village earth architecture for future villages.



Rainfall harvesting system lean from the tradition

Water is always precious in Macha Village. To improve drought condition in this area, the team has been inspired from the traditional form of the local courtyard to make a rainfall harvesting system: single-slope roof plan has been applied to three sub-houses in the centre so as to direct valuable rainwater into the courtyard and ultimately to the tanks at lower level.

Brighter indoor lighting

In order to change people's negative impressions of traditional rammed-earth house which has narrow and gloomy indoor environment, the indoor lighting has been improved with larger windows and doors. It would be a more comfortable place for the villagers to enjoy indoor activities with sunlight.



Ecological corn walls

Instead of using traditional wood-based framework with blue tiles, the team has chosen steel framework and composited colored steel roof, which are more economical, reusable and have good heat preservation performance. The space between the roof and rammed-earth walls are filled with thousands of corn cobs to enhance its heat insulation.



Modern anti-seismic earth architecture

Earth is locally and directly available on the project site for all the rammed-earth walls construction. It is therefore highly sustainable. The anti-seismic structure for all buildings is able to make the centre safe in large earthquake according to the local construction requirements for magnitude 8 earthquake.

Media Reports

More about design

Upcoming Projects

Fengshan Village Wu Zhi Qiao



Site Location: Fengshan Village, Baishi County, Qianjiang District, Chongqing
Organizing WZQ teams: The Hong Kong Polytechnic University, Hang Seng Management College, Chongqing University
Sponsor: The Hong Kong Jockey Club
No. of Villagers Benefited: 156

During dry season, the locals usually cross Baishi River by using of stepping stones. But in the rainy season, villagers can't cross it anymore due to the high water level. The students can't go to school as there is no alternative way to bypass. The team will build new footbridge for the locals, and also plan to help improve facilities for the local school, including installing lights, renovating toilet and sports facilities etc.

[Details](#)

Huanglongchang Village Wu Zhi Qiao



Site Location: Huanglongchang Village, Dailin County, Nanchong, Sichuan
Organizing WZQ teams: The Chinese University of Hong Kong, Sichuan University
Sponsor: Mrs. MOK Wong Fung Yee
No. of Villagers Benefited: 500

There is a temporary wooden bridge built by villagers in recent years. But it is dangerous for villagers to use without safety devices. During rainy season, the flood often spilled over the bridge so that villagers can't walk through. Thus the team plan to help villagers build a footbridge and improve livelihoods by organizing electricity safety lecture, renovating school facilities etc.

[Details](#)

Xiejia Village Wu Zhi Qiao I



Site Location: Xiejia Village, Xueshan Township, Weining County, Guizhou
Organizing WZQ teams: The Chinese University of Hong Kong, Xi'an Jiaotong University
Sponsor: Wharf Limited
No. of Villagers Benefited: 800

During dry season, the villagers and students normally make use of stepping stones to cross the river near the bridge site of Mao'ergu. But when the rainy season comes, they can't access the river anymore and it is said that the local students had ever felt into the river in the storm. To help the locals cross river more safely, the team will build a new footbridge and they will work out plans to improve livelihoods, including maintaining water system of the school, building a new incinerator, installing facilities for classrooms e.g. fans and energy saving lamps, and helping document the local folks etc.

[Details](#)

Tianjiaba Village Wu Zhi Qiao



Site Location: Tianjiaba Village, Guilong County, Nanchong, Sichuan
Organizing WZQ teams: Technological and Higher Education Institute of Hong Kong, Chongqing University
No. of Villagers Benefited: 1000

The current stone bridge was built by villagers over 10 years ago. But during rainy season, the locals still can't cross the river safely as the water level of flood is often 2 meters higher than the bridge. It was said that villagers had ever felt into the river and been washed away. The team plans to build a new footbridge and additionally help improve the roads near the bridge site and launch community enrichment projects including repairing circuit and visiting left-behind elderly people etc.

[Details](#)

Naliu Village Wu Zhi Qiao



Site Location: Naliu Village, Ayong Township, Funing County, Yunnan
Partner: Mao Yisheng Science and Technology Education Foundation
Organizing WZQ teams: Hong Kong University of Science and Technology, Chu Hai College of Higher Education, Kunming University of Science and Technology, Beijing Jiao Tong University
No. of Villagers Benefited: 1200

In every rainy season, local students have to be carried by their teachers to cross the river to school. The commutation between villagers are affected as it takes about three hours for villagers to bypass the river if there is no bridge... A new footbridge will be built and a series of community enrichment projects will be conducted such as improving indoor lighting of classrooms and environmental hygiene condition within the school zone etc.

[Details](#)

Xiejia Village Wu Zhi Qiao II



Site Location: Xiejia Village, Xueshan Township, Weining County, Guizhou
Organizing WZQ teams: The Chinese University of Hong Kong, Xi'an University of Architecture and Technology
Sponsor: Wharf Limited
No. of Villagers Benefited: 1000

The bridge site of Yangou is the only access for villagers to the town and the school. During rainy days in summer, the children can't cross the river as the highest water level often reaches 2 meters. Apart from building a new footbridge, the team will join hands with another team in the Xiejia village to help improve the local's livelihood.

[Details](#)

Upcoming Projects



Demonstration Project in Bapa Village of Guizhou: The Conservation and Development of Traditional Village in Mainland China

Site Location: Bapa Village, Gaozeng Township, Congjiang County, Guizhou

In the past four months, Wu Zhi Qiao had mobilized the teams with professional backgrounds in architecture, planning, economics, public health etc. to conduct a series of participatory investigations in Bapa village, discussing with the local government and villagers on village planning. Based on the information collected, the teams are modifying the plans for further evaluation.

With our participating approach of village planning, villagers are considered as the main party in the development process. Therefore the teams keep adjusting the plan as per the villager's needs and capacity, encouraging villagers to participate in planning more actively. Through conducting varied activities, including joining the town meetings and doing photography for the village and making Bapa village special edition calendar as gifts for the locals etc., our teams have gradually built closer connection with villagers.

[Details](#)

Project Updates

Machi Village Wu Zhi Qiao

Site Location: Machi Village, Runxi Township, Pengshui County, Chongqing
Organizing WZQ teams: Tongji University, Chongqing Jiao Tong University, Hong Kong University of Science and Technology
Sponsor: Rotary Club of Channel Islands

With efforts from all volunteers in the construction trip from 25 March to 3 April, Machi Village Wu Zhi Qiao was successfully accomplished, benefiting over 210 villagers. A series of community enrichment projects have also been held, including installing water purification facilities, improving water tanks, organizing educational programmes etc. Special thanks to the generous support from Rotary Club of Channel Islands to make the project possible.

The new footbridge is the first bailey bridge amongst our projects. Considering loading requirement for a footbridge in the rural village, the team made adjustments on the bridge structure to make it lighter, more economical and safe for use. Compared to the traditional way of installation, the team worked out a much easier way for more volunteers to participate. The team is fine tuning the design of bailey footbridge so that it can be adopted in other projects in future.



[Details](#)

Team Building



Welcome New Wu Zhi Qiao Members

The annual welcome gathering was held earlier this year to welcome tens of new Wu Zhi Qiao members. A simulation game was designed to facilitate new team members to understand our missions and projects in rural villages. It's also a good opportunity for students to communicate with each other.

Publicity & Advocacy

Caring Company Partnership Expo 2016

In May 2016, Wu Zhi Qiao participated in Caring Company Partnership Expo, introducing our mission and projects to visitors. The Expo was organized by The Hong Kong Council of Social Service and it gathered around 100 different commercial and social service organizations to explore collaboration opportunities.



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Comments are welcome!

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