ONE UNIVERSITY ONE VILLAGE 一專一村

1U1V Newsletter, Volume 9, November 2024

Gongfang (Community Hall) Rebuilding Project Wins the 2024 Hong Kong Institute of Architects Annual Award

In November 2024, the 1U1V gongfang rebuilding project received two honours: "HKIA Medal of the Year Outside Hong Kong" and "HKIA Special Award - Sustainable Architecture."

HKIA judges commended the project's rare feat of being sustainable in the fullest sense, socially, economically and environmentally. First, the project was realized in collaboration with community members, who participated not only in the planning process through participatory meetings but also engaged in hands-on work at the construction site. Second, the driving principle of the project is that the economical use of resources is crucial, linking expenditures to straightforward implementation methods. Third, most building materials are sourced locally and are environmentally friendly, typically relying on traditional craftsmanship for assembly. By adhering to these strategies, the project demonstrates that architecture can indeed reduce environmental impact without excessive ornamentation, while also enhancing cultural value in the process.

Click here to browse more award information.
Click here to learn more about the project details.

Since 1965, the HKIA Annual Awards have been among the most important architectural awards in Hong Kong, recognising outstanding achievements in architecture. The HKIA Medal of the Year is the highest honour it confers, seeking to establish a benchmark of outstanding quality in the architectural profession.

Our Projects

Site Location: **Gaoliangdi Village, Xiyang Township, Jinning District, Kunming City, Yunnan**

Project Nature: Earth Building (Whole Village Rebuilding Plan)

Teams: CUHK & Kunming University of Science and Technology

Project Duration: Oct 2018 – Dec 2024

Gaoliangdi Village project is the first whole village rebuilding project built by the 1U1V team, consisting of a total of 44 buildings. The planning and design are led by Professor Zhai's team from Kunming University of Science and Technology. The project has faced numerous challenges along the way and is finally nearing completion. Site leveling work was completed in 2021. In early 2022, the construction team finished the foundations for about 20 households and two demonstration houses. During this time, the team actively gathered feedback from local villagers and construction parties, optimizing the housing layouts in response to the site's conditions and fluctuations in building material prices, leading to a comprehensive construction launch in 2023.

Currently, all 44 new rammed earth houses have been completed, and the infrastructure such as roads, drainage, and utility networks has also been finished. Final works like road hardening and community beautification are progressing in an orderly manner, and villagers are expected to move into their new homes by the end of this year.

Site Location: **Baipo Township, Miyi County, Panzhihua City, Sichuan**

Project Nature: Earth Building

Teams: CUHK & Kunming University of Science and Technology

Project Duration: May 2022 – Nov 2024

Although the team began the construction of 8 houses in Baipo Township I May 2022, progress was slow due to the impacts of the COVID-19 pandemic. Additionally, the overall economic situation led to a lack of renovation funds among the villagers, causing further delays.

Ultimately, in November of this year, all 8 houses were structurally completed and passed inspection, and most villagers have moved into their new homes.

Site Location: **Panlian Town, Caochang Town and Binggu Town, Panzhihua City, Sichuan**

Project Nature: Earth Building

Teams: CUHK & Kunming University of Science and Technology

Project Duration: Aug 2022 – Jun 2024

Through the team's ongoing work in the rural areas of Miyi County, an increasing numbers of villagers are interested in participating in the construction of earth houses. Starting in August 2022, the team launched seismic-resistant rammed earth projects in Panlian Town (6 houses), Caochang Town (3 houses), and Binggu Town (1 house). Currently, all the houses have passed inspection and are occupied.

In July 2024, the team revisited the households in Miyi. In addition to interviewing villagers, we also spoke with relevant staff from the Miyi County Housing and Urban-Rural Development Bureau (MCHURDB).

Wan Qishu and Bao Yinghai from Panlian Town: "The new rammed earth houses look great; our family loves this style. They are very safe because the soil is re-proportioned and compacted with machinery, resulting in high strength. The first floor of the earth house is cool and comfortable. The second floor mainly depends on the roof; if the roof has good insulation, it won't be hot. We never use air conditioning at home; we only occasionally use a fan."

Wu Zongming from Panlian Town: "I feel there are no safety issues with the new rammed earth houses. I observed closely during construction; there are ground ring beams and professional design, making the structure very good. The cost of earth houses is not high; although labor is intensive, a lot of money is saved on materials. Earth houses are warm in winter and cool in summer, making them more comfortable than brick houses. The technology is mature, and local materials are used, which is especially necessary for promotion in remote mountainous areas."

Ming Tao (A staff from the MCHURDB): "The modern rammed earth houses promoted in our county are aesthetically pleasing, combining local characteristics with contemporary elements, significantly enhancing the rural landscape. At the same time, rammed earth construction uses environmentally friendly and low-carbon materials, providing a pleasant living experience with warmth in winter and coolness in summer. In terms of structural design, additional upper and lower ring beams have been added, fully considering factors such as structural stress and seismic performance, greatly improving safety compared to traditional earth houses. Personally, I find them very safe and worthy of widespread promotion and application."

Wu Jianying (A staff from MCHURDB): "The earth houses built by modern rammed earth technology are aesthetically pleasing and provide warmth in winter and coolness in summer. Through professional structural design and improved soil, they effectively overcome the shortcomings of traditional earth houses in terms of waterproofing, durability, and seismic resistance, resulting in stronger buildings. I hope we can focus more on promoting this technology so that more people can understand modern rammed earth houses."

Site Location: **Baima Town, Miyi County, Panzhihua City, Sichuan**

Project Nature: Earth Building

Teams: CUHK & Kunming University of Science and Technology

Project Duration: Sep 2023 – Jun 2024

Baima Town in Miyi County is located near Panlian Town and Caocang Town. Many villagers have visited the rammed earth houses built collaboratively by the team and the villagers in Panlian Town and Caocang Town, and they wish to rebuild their own old houses in the same way. In 2023, at the invitation of the local government, the team launched a construction project for 4 new rammed earth houses with 5 households in Baima Town and trained local craftsmen.

All projects were completed and passed inspection for occupancy in June 2024.

Site Location: **Eternal Life Church, Miyi County, Panzhihua City, Sichuan**

Project Nature: Rural Service Facilities Earth Building Project

Teams: CUHK & Kunming University of Science and Technology

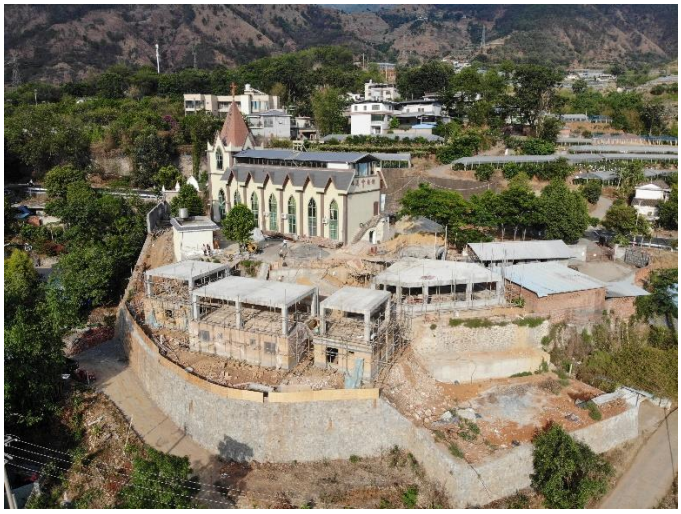
Project Duration: Jul 2022 – Dec 2024

The Eternal Life Church's affiliated facilities in Miyi County include a nursing home and a restaurant. The project aims to serve the surrounding villagers in a low-carbon and environmentally friendly manner, while also serving as a demonstration and showcase for high-quality new rammed earth construction in Miyi County.

The project employs a reinforced concrete frame structure in conjunction with rammed earth maintenance walls. Local soil materials are used, scientifically proportioned with a certain ratio of gravel, sand, lime, and fibers to enhance mechanical properties. The construction is led by 1U1V women's construction team.

Currently, the project has completed the berm and foundation work, as well as the concrete frame construction. The team is now working on the rammed earth wall construction, and the main structural work is expected to be completed by the end of 2024.

In September 2024, the team had a warm exchange with some elderly individuals who plan to move into the nursing home in the future. They discussed optimizing the layout of the courtyard flow and outdoor activity spaces. The team's efforts received unanimous praise from the elderly participants.



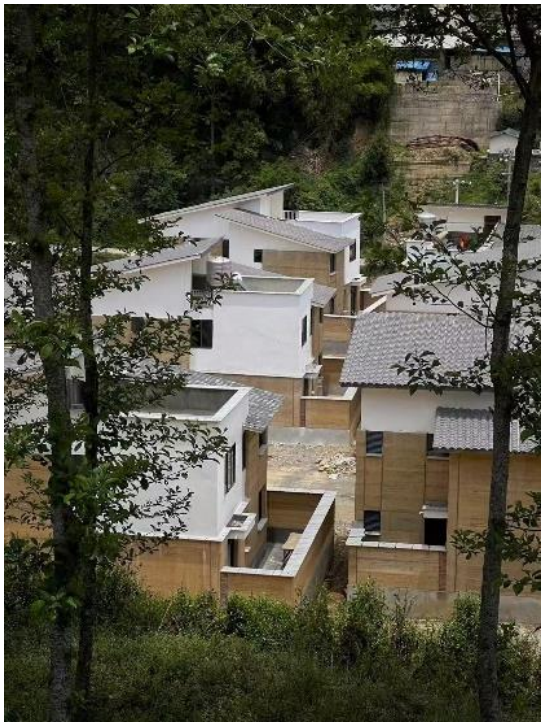
Site Location: **Resettlement Site in Anbang Village, Wama Township, Baoshan City, Yunnan**

Project Nature: Earth Building

Teams: CUHK, No. 10 Architect and Kunming University of Science and Technology

Project Duration: Dec 2022 – May 2024

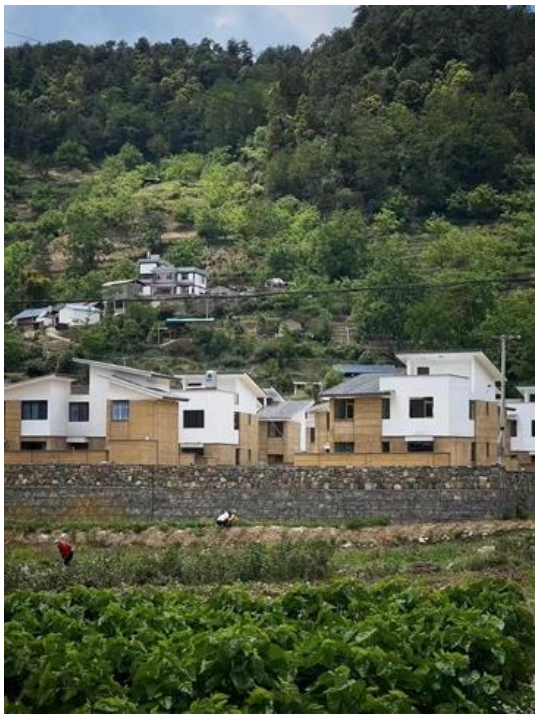
The two resettlement sites in Wama Township were established to address the issue of mudslide disasters and ensure a safe and comfortable living environment for the villagers. The local government plans to relocate affected households in batches, allowing villagers to choose their own construction methods. The first resettlement site is located in Anbang Village, originally planned for 30 households, utilizing the 1U1V new rammed earth technology, with "No. 10 Architect" responsible for planning and design. Construction is supervised on-site by master Dong Yixiang from 1U1V women's construction team and master Lin Yougang, with local craftsmen organized for self-building after training.



Currently, the main structures of 18 houses have been completed and passed inspection, and villagers have begun to move in. The remaining 12 households, due to insufficient land area, have been merged into the resettlement site in Ji Town after consultation between the township government and the villagers.

Feedback from Villagers

A representative from Anbang Village: "The Anbang Village resettlement site has alleviated villagers' concerns about safety, liberating disaster-affected households from a life of fear. The team's work has led to significant improvements in the psychological well-being and daily lives of the affected population, bringing about a qualitative change in villagers' ability to live and work in peace."



Yang Zhenzhi (household): "We are disaster-affected households, and since moving here, we have a safe house, which has greatly improved our lives. The earth houses are more comfortable, warm in winter and cool in summer. The house design is also quite good."

Yang Chaoshan (household): "We thank the government for relocating us here and especially appreciate the help from the 1U1V team in building the rammed earth houses. The appearance of the house is nice, and we are satisfied with various aspects. Compared to the previous earth houses, the new ones are much more comfortable. The soil material has been better proportioned, making it safer."

Site Location: **Resettlement Site in Ji Town, Wama Township, Baoshan City, Yunnan**

Project Nature: Earth Building

Teams: CUHK, Kunming University of Science and Technology and No. 10 Architect

Project Duration: Feb 2023 – Dec 2024

Ji Town is the second resettlement site for mudslide disaster victims in Wama Township, which includes 18 households in Xiaohe Village that require special attention. Along with the remaining 12 households from Anbang Village, this site accommodates a total of 30 households, with planning and design also handled by "No. 10 Architect".

Currently, the main structures of 26 houses have been completed, with 2 houses under construction and 2 houses in the preparation phase for construction.

Terra Centre (The Research and Development Centre for Rural Revitalisation in Yunnan)

In 2024, in addition to the orderly conduct of daily volunteer activities, craftsman training, research, and experiment work on rammed earth construction in the Terra Centre (Centre), active participation in academic events, fully leveraging its role in rural revitalization, discipline development, and quality education.

In January, the exhibition "In the Wild: Research on Yunnan Architectural Traditions" continued as a permanent exhibit at the Centre.

In May, the third "Future Growth" Earthen Music Festival took place as scheduled, with over 400 participants, including students and faculty from the Graduate School, School of Mechanical and Electrical Engineering, School of Arts and Media, and School of Architecture and Urban Planning (SAUP) at Kunming University of Science and Technology (KUST), as well as band members and faculty from various universities in Yunnan. The Centre has become ingrained in the hearts of the students of KUST, integrating into the red earth of Southwest China.

In June, the Rural Revitalization Workstation of the SAUP at KUST held an educational practice activity on the awareness of the Chinese national community. After the teaching session, members and teachers from the workstation visited the Centre for further learning.

In July, the “Summer Countryside" social practice activities of the SAUP formally commenced. The social practice expedition ceremony and pre-departure meeting were held at the Architecture Building and the Centre, respectively. The Centre has long supported university faculty and students in participating in social practice, actively contributing to rural revitalization.

In September, Professor Edward Ng was invited to attend the 70th anniversary celebration of KUST, where he discussed the next phase of work and plans for the Centre with Dean Yang Yi and other leaders of the university.

In October, a delegation of 14 representatives from the Department of Architecture at Khon Kaen University visited. The delegation toured the relevant laboratories at the Centre and the exhibition on traditional Yunnan architecture, and they gave high praise for the facilities.

In November, the National Academic Seminar on Digital Technology Teaching and Research in Architectural Departments was held at the School of Architecture, attracting several experts and scholars from South China University of Technology, Huazhong University of Science and Technology, Xiamen University, Southwest Jiaotong University, and other institutions. They visited the Centre and expressed their recognition and expectations for the achievements and future development.

Promotion & Publicity

Academic Outreach:

In the past year, Professor Edward Ng, Dr. Wan Li, and Dr. Chi Xin'an from the 1U1V team were invited to participate in the Türkiye & Syria after the Earthquakes: Mid-Term Relief and Transitional Programs and the Global Sustainable Development Congress in Bangkok, Thailand, where they shared their experiences.

Additionally, Dr Wan and Dr Chi were invited to participate in several events, including the International Conference on Green Building and Low Carbon Technology hosted by Inner Mongolia University of Technology, the "Soil and Construction" Belt and Road Initiative exhibition and rural regeneration seminar organized by Xi'an Academy of Fine Arts, the Rural Public Space and Rural Development Designers Forum held at the Chengdu Planning Museum, and the 2024 Southwest Settlement Symposium hosted by Chongqing Jiaotong University, where they delivered keynote presentations. Dr Wan was also invited to give academic reports at Xi'an University of Architectural Science and Technology and Southwest University for Nationalities, among other institutions.

Publication:

- 萬麗，吳恩融，邂辛安，柏文峰，周來．基於農村內源性發展模式的新型夯土建築策略——以“一專一村”西南農村地區專案為例[J].建築學報，2024（1）：105-111
- 萬麗，肖旭，史靖原．西南農村地區現代夯土住宅物化階段碳排放研究[J]．西部人居環境學刊，2024（3）：123-128

In addition, the team's publication, “生生不息——綠色建築科學之旅”, participated in the London Book Fair. In October 2024, the first printed edition sold out completely and is now set for reprinting.

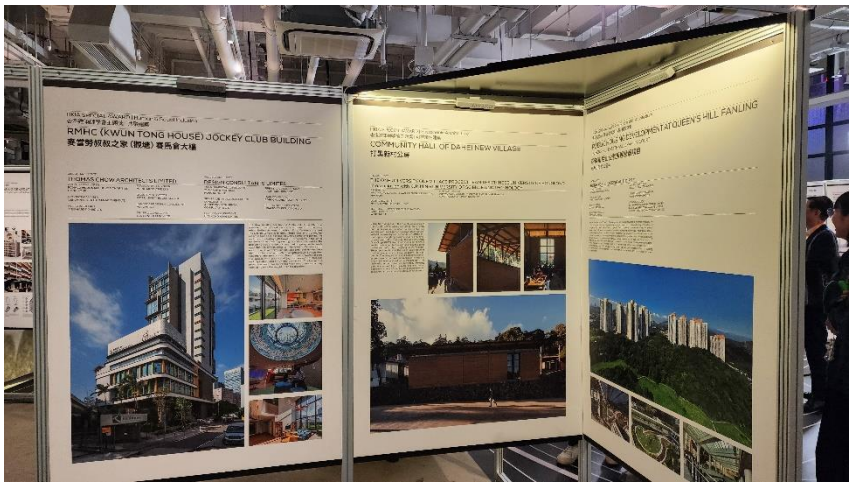
Award:

- The collective housing project in Xialapu Village received the “2023 Platinum Award for Sustainable Design” at the Guangzhou Design Week.
- The gongfang (community hall) rebuilding project in Dahei New Village won the "HKIA Medal of the Year Outside Hong Kong" and "HKIA Special Award - Sustainable Architecture."

Exhibition (by Invitation):

From September to November 2023, the team was invited to participate in the Shanghai Urban Space Art Season 2023. Collaborating with Cao Minghao & Chen Jianjun Studio, they created a series of works themed "Living School". The exhibition concluded successfully.

In November 2024, the gongfang rebuilding project was showcased at the Hong Kong Institute of Architects Annual Awards Exhibition (from 18 November to 28 November 2024).



Contact:

Contact person: Dr Wan Li
Address: Rm 505, School of Architecture, Lee Shau Kee Architecture Building,
The Chinese University of Hong Kong, Shatin, NT, Hong Kong.
Tel: (852) 3943 9428
E-mail: 1u1v@cuhk.edu.hk

Knowledge creates the Future