



**2013 On Site Review Report**

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*by Ahmad Djuhara*

**Museum of Handcraft Paper**

*Gaoligong, Yunnan, China*



**Architect**

*Trace Architecture Office*

**Client**

*Long Zhanxian*

**Design**

*2008 - 2009*

**Completed**

*2010*

# **Museum of Handcraft Paper**

*Gaoligong, Yunnan, China*

## **I. Introduction**

The Gaoligong Museum of Handcraft Paper is located on one side of a street leading to the Longshang household compound in Xingzhuang village, Jietou town, one hour by bus from Tengchong county in Yunnan province of China. The Longshang family still preserves the knowledge and skill of a long tradition of paper making.

The building, as a museum, now serves not only visitors from outside the village, but also acts as a meeting place for the villagers. It links the village to the outside world. The Museum now has access to a more sophisticated market and products reach Beijing. This situation helps the village to achieve better living standards, economically and culturally.

The building stands like an introduction to the village as a traditional handcrafted paper maker. And the whole village becomes, as it were, part of the museum, inviting visitors to learn about and experience the culture of a traditional paper-making society in Yunnan.

## **II. Contextual Information**

### **A. *Brief historical background***

Through his cultural research, the academic Long Wan first saw that Xingzhuang village had great potential to develop its heritage in handcrafted paper making. He asked a product designer, Wang Yan, to draft a museum project and proposed an architect friend, Hua Li, to design it. Construction was led by local builder, Long Zhanwen, who used local workers on the authentic wooden structural system. Coordinated and inspired by Long Zhanxian, academic and main researcher of the paper-making heritage as well as social guarantor, the project then began to be built as a museum.

The project was an architectural and cultural experiment. Dealing mainly with the process, the architecture programme consists of displaying the various stages in handcrafted paper making and its history. Six gallery spaces illustrate the material, exhibiting and demonstrating all the paper-making procedures. The locals are also becoming involved in learning about their own culture again and discussing their future in the business accommodated in workshops at the Museum. Equipped with supporting facilities such as a shop, tea room and accommodation for resident-artists and visitors, the Museum not only functions as a museum, but also as a small and essential cultural centre for the village. It is now also becoming more important as a cultural power in the region, due to increased attention from local society as well as the global community.

## **B. *Local architectural character***

In Yunnan, as well in most parts of China, wood is a common construction material for houses. Provided and supported by a building material system throughout the country, wood houses are affordable and sustainable.

Other materials such as volcanic stone are also used largely in common construction business. Skilled labour is quite reliable and organised in groups led by people acting as contractors or master builders.

As for shape, the pitched roof is common, since the basic logic of how it deals with the climate and solutions for any problems are widely known among the local population. From the outside, the building usually looks like a brick house, but actually it has a wooden structural system that carries the load from floor to roof. Brick walls are free standing, protecting the interior from the climate outside.

## **C. *Climatic conditions***

Wikipedia:

- Tengchong county has a subtropical highland climate, with mild temperatures all year round, an annual mean temperature of 14.9°C (58.8°F) and rainfall of 1,480 millimetres (58 inches);
- winter is dry and features abundant sunshine; days remain mild, though lows at night can drop below freezing. The daily mean temperature in January is 7.8°C (46.0°F);
- summer is extremely humid, with sustained periods of rain that sometimes turns heavy. August, the warmest month, averages 19.8°C (67.6°F).

## **D. *Site and surroundings***

The landscape surrounding the site is predominantly rapeseed fields. Accessible from the village road, the Museum is sited in front of a group of village houses owned by the Longshang family group (they all have the same family name, Long). The group is headed by Long Zhanxian, and is part of Xingzhuang village, led by Huang Yinfang.

## **E. *Topography***

The surrounding site is gently contoured for the purpose of managed water flow to the rapeseed fields. The paved stone road is raised about a metre above the fields. The Museum is on the paved road that leads to the Longshang's compounds.

### **III. Programme**

#### **A. *History of the inception of the project***

Through his cultural research, the academic Long Wan first saw that Xingzhuang village had great potential to develop its heritage in handcrafted paper making. He asked a product designer, Wang Yan, to draft a museum project and proposed an architect friend, Hua Li, to design it. Construction was led by local builder, Long Zhanwen, who used local workers on the authentic wooden structural system. Coordinated and inspired by Long Zhanxian, academic and main researcher of the paper-making heritage as well as social guarantor, the project then began to be built as a museum.

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The village has greatly supported the museum project. The village head, Huang Yinfang, helped the Museum gain administrative standing. In China, land ownership is quite a complicated matter. To make sure that the Museum was then appropriately supported by the government, the family groups and the village had to solve this issue themselves. In the case of Gaoligong Museum, every government official now seems very proud with what they have in their territory.

#### **B. *How were the architects and specialists chosen?***

The architect Hua Li was chosen through his friendship with Wang Yen. Being offered the project to design was a great challenge for a young architect at the start of his career.

The coordinator-curator Long Zhanxian was essential to the project since he researched the culture of handcrafted paper. Long Zhanxian then suggested that the architect Hua Li should work with local builder Long Zhanwen.

#### **C. *General programme objectives***

- the Museum should exhibit, preserve, promote and develop the authentic handcrafted paper making of Xingzhuang village;
- the Museum should accommodate the institution;
- the Museum should promote further research for handcrafted paper in the academic sphere.

#### **D. *Functional requirements***

- exhibition gallery
- bookshop
- workshop
- meeting room
- tea room
- kitchen
- curator's office
- guest rooms
- bathrooms

### **IV. Description**

#### **A. *Building data***

##### *Volumetry*

The volume in the Museum serves the space intended for each function.

On the ground floor, the entrance is enhanced with a high foyer decorated with the paper produced by the locals. The rest is occupied by displays of products for sale made of Gaoligong paper. Large folding window openings show views of the rapeseed farm on the east side of the Museum.

Visitors are led through a series of galleries to learn more about the history and the art of making Gaoligong paper. In the first and sixth gallery spaces, the volumes are enlarged with seven-metre-high ceilings and the window openings are covered with paper to let translucent light into the room. Tilted planes of folded ceilings match up with the non-rectangular walls, which can be found throughout the Museum. In the fourth gallery a person demonstrates the art of paper making on the spot, illustrating the different degrees of wetness required by the process.

The tea room in the centre of these seven masses offers a view over the rapeseed farm, the street and rapeseed fields. Outside, a big terrace provides space for enjoying the fresh open air.

Small connecting links between galleries have glass windows for visitors to peek outside for more views as they move to another gallery.

Upstairs, on the first floor, space for a workshop dominates the area, again with the same set of folding windows facing east towards the farm. Next door, a meeting room faces the other side of the building providing views towards a wider horizon to the west.

The second floor accommodates bedrooms with views to the east that enjoy the rising sun, while an open-air terrace enjoys the sunset and star-viewing at night. Another terrace under paper-covered glass provides sheltered views in the case of bright sunshine or rain. From this area spectators can

see the detailing of the bamboo roofs that contrast with the rapeseed fields and Gaoligong Mountains.

### *Massing*

The architect intentionally designed the non-rectangular layouts to induce tension in between the masses. Dividing the masses into several volumes with different heights also orchestrates the whole when seen from the street, and, at the same time, creates varied views over the landscape from spaces inside and also from different heights in the building.

### *Number of units*

The series of galleries is perfectly sufficient to provide exhibition space illustrating the Museum's storyline about handcrafted paper.

The series of bedrooms also provides enough accommodation for appropriate needs.

### *Surface area*

Ground floor	Main hall	50.0	m <sup>2</sup>
	Gallery 1	17.5	m <sup>2</sup>
	Gallery 2	15.5	m <sup>2</sup>
	Gallery 3	23.6	m <sup>2</sup>
	Gallery 4	22.6	m <sup>2</sup>
	Gallery 5	16.3	m <sup>2</sup>
	Gallery 6	15.5	m <sup>2</sup>
	Kitchen and toilet	11.0	m <sup>2</sup>
	Tea room	19.4	m <sup>2</sup>
	Terrace	40.2	m <sup>2</sup>
	Circulation	16.4	m <sup>2</sup>
	<b>Total</b>	<b>248.0</b>	<b>m<sup>2</sup></b>
1 <sup>st</sup> floor	Workshop	34.9	m <sup>2</sup>
	Meeting room	19.6	m <sup>2</sup>
	Curator's office	9.6	m <sup>2</sup>
	Stairs	3.8	m <sup>2</sup>
	Circulation	1.7	m <sup>2</sup>
		<b>Total</b>	<b>69.6</b>
2 <sup>nd</sup> floor	Guestroom 1	9.0	m <sup>2</sup>
	Guestroom 2	6.9	m <sup>2</sup>
	Guestroom 3	7.2	m <sup>2</sup>
	Guestroom 4	8.5	m <sup>2</sup>

Toilet 1	4.2	m <sup>2</sup>
Toilet 2	3.6	m <sup>2</sup>
Balcony – under roof	8.7	m <sup>2</sup>
Balcony – open air	14.7	m <sup>2</sup>
Stairs	3.8	m <sup>2</sup>
Circulation	14.8	m <sup>2</sup>
Total	81.4	m <sup>2</sup>

## **B. Evolution of design concepts**

### *1. Response to physical constraints*

The architect chose the site with the clients. They had to go through several processes since there is no ownership of the land. Instead, the land belongs to the village from which definite approval was needed. A site next to the road in front of the Longshang sub-village was chosen because it provides a perfect setting in the landscape. The distance to other groups of buildings also meant the Museum stands out prominently.

The climate is quite cold and humid. The building provides pleasant rooms that function well. Holes through the lower part of the stone wall on the ground floor were designed to provide sufficient cross ventilation throughout the interior. Every room has openings to allow each space to breath and enough light during daytime.

Occupying almost 100% of the given plot with its stone base, the Museum does not destroy the density of the environment since it sits in the middle of a rapeseed farm.

### *2. Response to user requirements*

The requirements were all provided in the design, given the fact that all the rooms still serve their initial function.

### *3. Purely formal*

Massing is arranged in a balanced equilibrium to accommodate the function required. The open space in the middle surrounded by the galleries provides a clear orientation to the layout. Visitors are invited to explore not only the objects exhibited, but also the architecture, which offers several locations that provide views over the surrounding landscape.

### *4. Landscaping*

Given the beautiful landscape setting, there was nothing more to be done.

## C. *Structure, materials, technology*

### 1. *Structural systems*

The main structural system is wooden with mortise and tenon joints.

### 2. *Materials*

The main materials are:

- volcanic stone;
- wood for structure, construction and exterior walls;
- paper for interior walls;
- bamboo for additional roof structure.

Structural members:

- base and foundation are volcanic stone;
- upper structure comprises wood columns and beams connected with mortise and tenon joints;
- roof structures are made of timber beams with timber planks as the roof plane, covered with a waterproofing agent. Above that, bamboo was laid to give different appearances to the building.

Infill materials:

- timber planks are the dominant element in this building. To cover all of the building, the wood planks were arranged in modules to make an efficient usage of materials;
- in openings, simple wood windows were installed with accessories provided in the local market;

Renderings and finishes:

- the wood was covered with local coating;
- from observation, the wooden walls seem to be functioning well, although the architect expects the colour to change over time.

### 3. *Construction technology*

With all the labour available locally, the target cost was low. The structural system was inspired by local construction methods, with many adjustments made on site. Some problems occurred while erecting the columns and constructing the beams: following the shape of the roof was challenging. The builder made models to help everyone understand the building processes.

### 4. *Building services, site utilities*

- in the Museum, some rooms needed water and plumbing facilities and so by locating the bathrooms at the same point in the plan for each floor, the layout of pipes for the plumbing was cheaper overall;
- night lighting was provided by TL fluorescent lights;
- the perimeter area is covered by open gutters, which collect rainwater and channel it to the ground.

## D. *Origin of*

### 1. *Technology*

- the building design is based on the local indigenous timber structural system, using traditional mortise and tenon wood joints;
- The builder used the local traditional Chinese measuring system: *zhang* (the traditional Chinese length measuring unit which corresponds to about 3 metres) and *chi* (10 *chi* equal 1 *zhang*);
- when working and drawing, this system was generally used although it is easy to calculate and switch between that and the metric system;
- the architect says the 1:3 scale model that is usually made prior to construction relates to the traditional measuring system.

### 2. *Materials*

Structural system:

- volcanic stone for the foundations cost 40 RMB per *zhang* (6.47 USD);
- all stone was locally bought in the market in Jietou town;
- The superstructure is a timber construction made with traditional Chinese mortise and tenon joints. Column bases cost 2,000 RMB (323.48 USD);
- all were bought in the local market in Tengchong; the price is based on different elements:  
1000 RMB per 9-metre-long column (161.74 USD)  
90 RMB per metre for other columns ( 14.56 USD)

Beam prices vary

Roofing:

- local timber planks from Jietou and small bamboo trunks;
- zinc guttering;
- small bamboo trunks (diameter about 1cm, quite consistent dimension for lengths of 4 metres) from Tengchong.

Facade construction:

- timber planks;
- local volcanic stone for the base.

Interior wall finishes:

- local timber planks from the market in Jietou town;
- wood board for the walls at 180 RMB per 3.3 x 2 metres (29.11 USD);
- handcrafted paper of 45 x 45 centimetres – all locally made in the village.

Door and windows:

- all made by local carpenters on site;
- some hardware (like folding doors), ironmongery and insect screens were shipped from Beijing.

Floor:

- local volcanic stone;
- local wood parquet.

Insulation:

- the architect judged that there was no need for insulation;
- the wall is a cavity wall, with air space inside which can also function as an insulation wall;
- the wood material itself is also an insulating material.

Sanitary wares:

- stone sink basin made on site; the rest from Tengchong.

Plumbing and Electrical work:

- workers from Jietou town;
- some pipes and light fixtures were bought in Tengchong.

### 3. *Labour force*

- stone mason: 60 RMB per day (9.70 USD), later raised to 80 RMB (12.94 USD);
- carpenter: 60 RMB per day (9.70 USD), later raised to 80 RMB (12.94 USD);
- plumbing and electrical worker – not available: workers provided by contractor, included in the contract.

### 4. *Professionals*

Client:	Wang Yan and Long Wan Local paper-making master and Museum director – Long Zhanxian
Leader of local builders:	Long Zhanwen
Architect:	Hua Li
Design team:	Huang Tianju Li Guofa Jiang Nan Sun Yuanxia Xu Yinjun Yang Hefeng

## V. **Construction Schedule and Costs**

### A. *History of project design and implementation*

- commission 2008
- design 2008 – 09
- construction 2009 – 10
- completed 2010

**B. *Total costs and main sources of financing***

- overall budget: about 500,000 RMB (80,820 USD)
- target budget: initially about 400,000 RMB (64,656 USD)

The financing was not paid all at one time, but by construction stages. During the construction process, a budget shortage arose. The client Wang Yan ran out of financing after spending 350,000 RMB (56,574 USD), and so, in order to complete the project, the architect Hua Li invested first a further 100,000 RMB (16,164 USD) and then 50,000 RMB (8,082 USD): the architect thus became also part client and part owner.

**C. *Comparative costs***

The building cost for a similar building type is a little higher than local vernacular houses by about 15%.

**D. *Qualitative analysis of costs***

The building construction cost per square metre was about 1,500 RMB (242.46 USD).

**E. *Maintenance costs***

Operational cost is about 6,000 RMB (96.98 USD) per month, including salary and utilities. Maintenance is not regularly done. It mainly concerns cleaning and repairing the paper wall and some carpentry.

**F. *Ongoing costs and “life performance” of building***

Ongoing cost is not available.

There was initial concern about the bamboo roof. The architect first proposed another kind of bamboo (diameter of one cm), which is more beautiful in architectural terms, but the present bamboo was laid because it is considered to last longer when exposed to sun, rain, extreme temperature and humidity. It is expected that the bamboo will have to be repaired/replaced after five years, and it will not be an onerous problem since labour and material costs are very low.

**VI. *Technical Assessment***

**A. *Functional assessment***

The building functions very well for the purposes required: to function as both a museum and as a workshop for visitors and local villagers.

The accommodation area also functions well. However, for budget considerations, insulation was not fully implemented and consequently the rooms are a bit cold in the evenings. But, it is easily bearable and an extra blanket makes it a pleasant place to stay in.

## **B. *Climatic performance***

### *Lighting*

The architect specifically chose low energy TL fluorescent lamps to cut initial costs and operational costs. It has no pretentious design intention other than to light the rooms as required.

### *Natural and/or mechanical ventilation*

Holes through the stone base of the ground floor provide air flow. This functions well during the day. There is only one opening in the meeting room on the first floor overlooking the field. The initial design was to have many of these windows, but the architect decided to minimise the construction of these windows as a design decision and, in minimising openings on elevations, to optimise costs. In any case, the ventilation functions well despite the reduced number of windows.

### *Sun control*

The whole building is covered by timber planks on the walls and these are all cavity walls, so insulation was not installed. The architect felt it was not necessary.

### *Insect control*

There are insect screens on the windows. There were minor problems with this on the folding windows since this element was innovative for the builder. Lack of familiarity meant a few problems with the initial installation, which were soon overcome.

### *Acoustics*

There was no intention to install any acoustical device in the building since there is no need to have one. There is no surrounding noise that would disturb the Museum and its functions.

### *Orientation*

The layout and openings of the building were carefully designed by the architect. The entrance to the street, which is to the north, only has the door entrance and fixed glass windows in between the building masses. On the east, openings lead the visitor to the rapeseed field and the sunrise. The main hall on the ground floor and the workshop area on the first floor enjoy the view to the village side. The lounge area on the second floor also has views both to the east and west, and enjoys open-air but covered seating. To the west, facing the street along which visitors arrive, openings are limited from the tea room on the ground floor and maximised on the terrace on the second floor; the latter serves many functions, especially for tea, and is also used as a meeting room on a pleasant day.

The south facade is rarely seen. It stands alongside an old village cemetery that contains three tombs belonging to the Long family. It is rarely shown to visitors. Instead, chickens are kept in this area as livestock for the village.

**C. *Response to treatment of water and rainfall***

There is no problem with water management. Rainfall falls on the roof and stone paving of the terrace and balcony and is channelled through drains and waterspouts to the ground.

**D. *Environmental response***

*Adaptation to the natural environment*

Environmentally, the museum building does not disturb anything. Of course it sits on a piece of land that was previously the site of a rapeseed field. Water management was adjusted to control water for the fields and is managed well. Rainfall drains into the ditch on each side of the village road.

*Adaptation to native flora and fauna*

The rapeseed fields are not disturbed in their function. Instead, rapeseed (*Brassica napus* – cultivated mainly for its oil-rich seed) increases the beauty of the setting around the building.

**E. *Choice of materials, level of technology***

The architecture was intentionally designed to use local material and traditional timber structural systems. Using a mortise and tenon wood joint system (SunMao connection), the construction was built by local builders using local skills. Even so, the architect attempted to adapt the new form inspired by the constellation of house forms in the village. The unusual rectangular shapes with non-parallel lines in plan and section challenged the builders. They solved the problem by making their own model in order to understand the forms, the structure and joints, and consequently to better manage the necessary building strategies.

Wood is the main structural element and was also a strategic construction method choice as well as being ecological and economical. Constructing in wood ensured that local building skills available that understand and have experience of dealing with local issues such as climate and earthquakes could be drawn upon. Wood columns and beams are also available in the region at an affordable price.

Ecologically, it is true that it takes a long time for trees to grow in order to cut them for timber for building. But in comparison to steel and cement, which require enormous amounts of energy, a timber structure is considered more ecological.

Architecturally, this project would prove that new forms can be built with traditional indigenous construction systems and with local skill available in the rural context of contemporary China.

The design and construction of the Museum was a self-evolving process, which is very different from normal professional projects where the initial design defines every detail on the drawing board and a precise cost estimate is made before construction starts. In this case, a lot of details would not be understood through drawings but had to be discussed with local builders during the construction process since the aim was to make a local rooted building and to use local builders' experience and know-how as much as possible. Some details and building elements (glass details, window hardware, toilet and accessories) are not familiar to local builders. So the cost estimate at an early phase cannot be very precise.

The construction had to stop during harvest time since builders are also farmers. Frequently, a lack of electricity also delayed the schedule.

Another challenge was communication. When the on-site architect was absent, it was difficult for him to find out about construction progress because there is no fax or Internet in the village. The builder does not use modern communication devices. Some details had to be revised and redone when the architect visited the site and found they had not been done correctly.

All these factors made the final cost go over the initial budget. However, this situation was expected by the client, the architect and the builders, since the way they worked on the project was very unique. It was a new experience for all of the people involved.

#### ***F. Response to, and planning for, emergency situations***

Since the site is located in high land, flooding is not considered a danger for people or the building. The disaster most expected is fire and earthquakes. Earthquakes were dealt with by choosing a timber structure with mortise and tenon joints since it will be flexible and not easily breakable. Stairs are sufficient to provide escape for people if there is a fire.

#### ***G. Ageing and maintenance problems***

The building skin is comprised of a stone base and wood for most of the exterior wall. Fir wood for exteriors was considered the best and logical material since it is quite durable to rainwater and heat from the sunshine. It is also considered good for its waterproofing capability. It will change colour gradually over times, but it is affordable, and, as the architect as well as other parties add, also beautiful.

The stone is durable and can withstand the climate outdoors. It was also laid as interior flooring throughout all the ground-floor areas.

#### ***H. Design features***

Given the programme to be fulfilled by the building on the appointed site, instead of having one big mass, the architect decided to divide the building into three groups of massing:

- main hall – containing the two-storey-high volume of the reception foyer, souvenir shop and a room initially designed for a kitchen. This is now being used as storage;

- tea room and meeting room;
- six exhibition galleries.

This approach gave the architect the chance to have in-between spaces and to articulate the overall appearance of the building. Making it not rectangular also gives the opportunity to create a unique shape, since the roof is also broken down into parts in an uncommon approach and “folded” in diagonal lines. If the roof were laid according to a “normal”, common trajectory, then the appearance would not be nearly so striking.

The chosen site, which is detached from the other buildings and houses in the village, also gave the architect freedom to express this strong shape and formal character. Attached to the sloping ground contours also offered the advantage of setting it in an appropriate site with forms and shapes that are appropriate to their content.

#### ***I. Impact of the project on the site***

The new Museum has already given a huge boost to the village. Visitors come from Jietou after visiting that town as tourists.

These changes have not been too excessive, in terms of traffic congestion, although this situation could become uncontrollable in the future if the Museum becomes much more famous. However, since the Museum is not too close to the village (about 50 metres to the closest house), it will be able to deal with this if/when the problem arises.

#### ***J. Durability and long-time viability of the project***

As a single building, it may have some problems of decaying elements since it is made of natural building materials such as wood and bamboo. But the architect and owners are aware of this situation. Changing these elements is quite easy and affordable in terms of costs of material and labour, as well as availability.

As for social and cultural sustainability, it will be durable and viable in the long term, since it has been well accepted by the family, the village and Jietou town. It is possible that in the near future it will become a prominent tourism and cultural destination in the Gaoligong Mountain area and Yunnan region.

#### ***K. Interior design and furnishing***

The only furniture that the architect designed was the bamboo table for displaying products in the shop area in the main hall on the ground floor.

Another intervention was to choose and buy, together with the villagers, the traditional wooden tea-time table, which is a completely non-modern item in the building.

Both of the two elements show the capability of the building to adjust to several possibilities within a certain appropriate scale.

The paper finishes for the wall, which are 45 x 45-centimetre modules, always bring freshness to the interior, since the method of repairing it does not entail changing the paper, but rather attaching it to the wall on top of the old paper. So it always brings fresh newness to the space inside.

## **VII. Users**

### **A. *Description of those who use or benefit from the project***

Culturally, the people of the village will benefit from the Museum, since it will not only link them to the outside world, but also help them to preserve their paper-making skills and, even more, to change their outlook about future development and possibilities of the paper-making culture.

Economically, this Museum fosters the possibility for upgrading the quality; it will certainly be economically advantageous for Gaoligong paper products and processes. Inviting designers like Wang Yan and perhaps resident artists in the future will attract broader attention to the creative industry.

Socially, people have already adopted this Museum as part of their daily life, even in an unconscious manner, taking it for granted. They almost do not realise that they have been given a better chance compared to other villages.

### **B. *Response to project by clients, users, community, etc.***

#### **1. *What do architectural professionals and the cultural “intelligentsia” think about the project?***

This Museum has won several awards in the architectural sphere which proves that peers have already endorsed the Museum and the architect. We may see more acknowledgement come from other fields such as product design. With even greater effort to promote this Museum, it will be brought to a further level of exposure and acknowledgement.

#### **2. *What is the popular reaction to the project?***

For the locals, ordinary people are amazed by the number of outsiders arriving, which gives them different experiences throughout the day.

Administrators and bureaucrats are even more sensitive to these changes; they react adaptively by accommodating to the needs of the villagers as well of the visitors.

3. *What do neighbours and those in the immediate vicinity think about the project?*

They are amazed with the changes. They are happy and interested to meet different kinds of people who come into their lives.

It also brings a new consciousness about their own heritage; it is extremely precious and it is worth keeping, developing and preserving this handcrafted paper culture.

## VIII. Persons involved

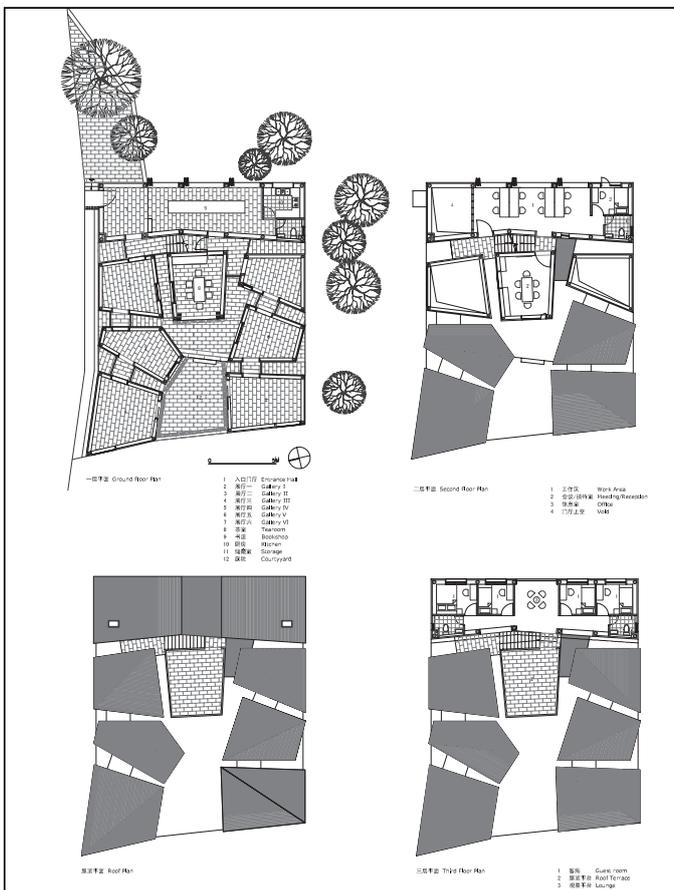
Client:	Long Wan, academic Wang Yan, product and graphic designer Local paper-making master and Museum director – Long Zhanxian, head of Longshang family group
Leader of local builders:	Long Zhanwen
Architect:	Hua Li
Design team:	Huang Tianju Li Guofa Jiang Nan Sun Yuanxia Xu Yinjun Yang Hefeng

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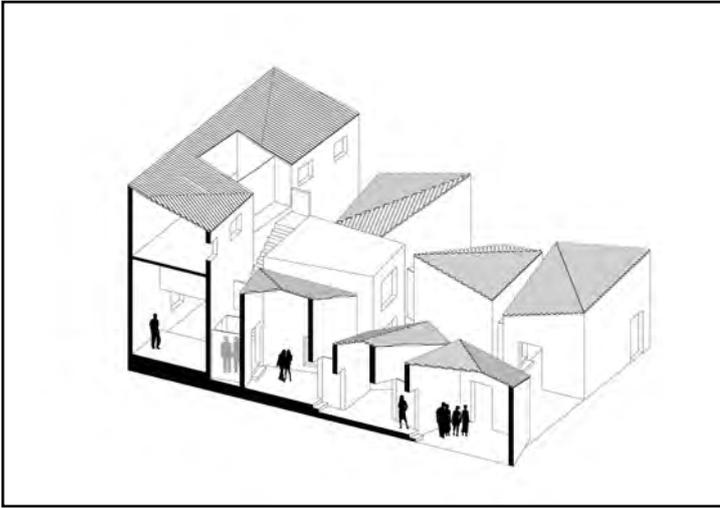
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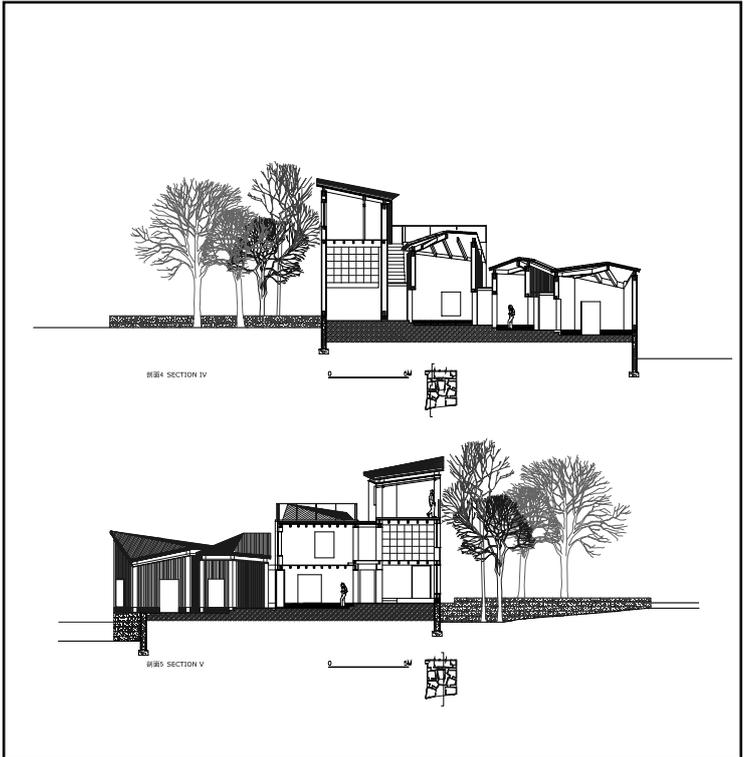
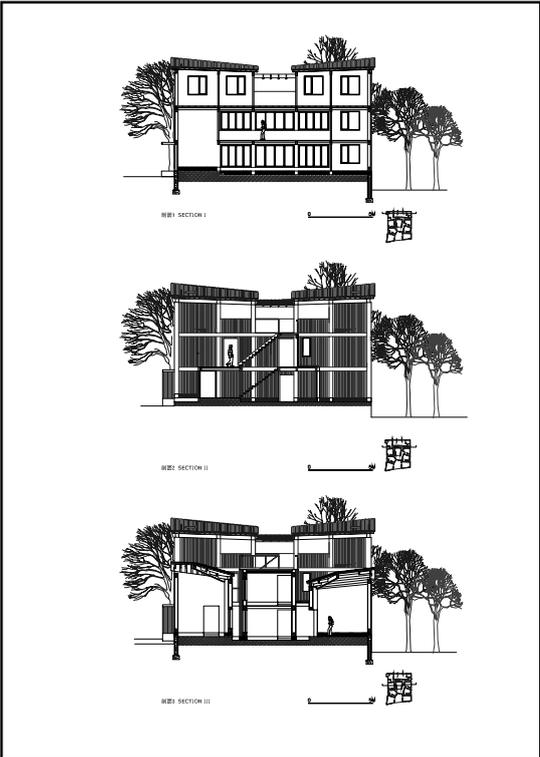
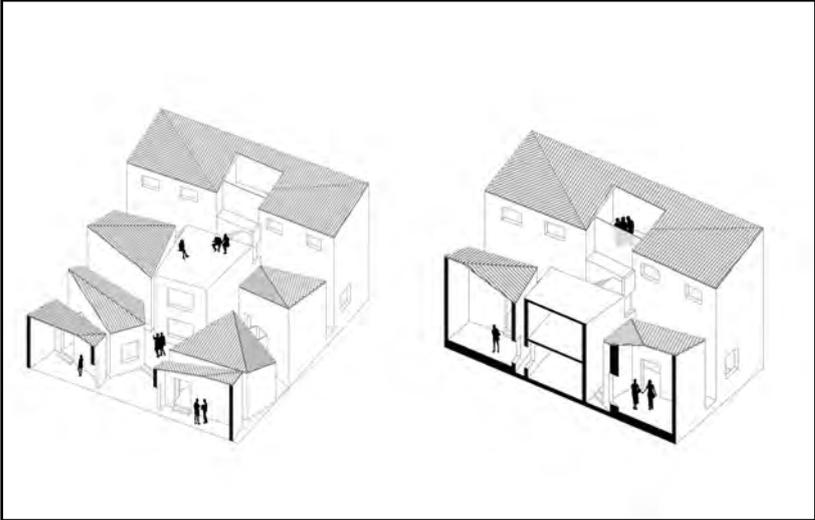
**Ahmad Djuhara**  
**April 2013**



Floor plans.



Axonometries and sections





On the east, openings lead the visitor to the rapeseed field and the sunrise.

To the west, facing the street along which visitors arrive, openings are limited from the tea room on the ground floor and maximised on the terrace on the second floor; the latter serves many functions, especially for tea, and is also used as a meeting room on a pleasant day.





Construction process.



The building skin is comprised of a stone base and wood for most of the exterior wall. Fir wood for exteriors was considered the best and logical material since it is quite durable to rainwater and heat from the sunshine. It is also considered good for its waterproofing capability.

To the West, facing the street along which visitors arrive, openings are limited from the tea room on the ground floor and maximised on the terrace on the second floor; the latter serves many functions, especially for tea, and is also used as a meeting room on a pleasant day.





On the first floor, the large room functions as a workshop for guests and villagers. There is another room facing west that serves as a meeting room.

Passing through the entrance the visitor arrives in a large, long space that serves as a bookshop and souvenir shop.

