

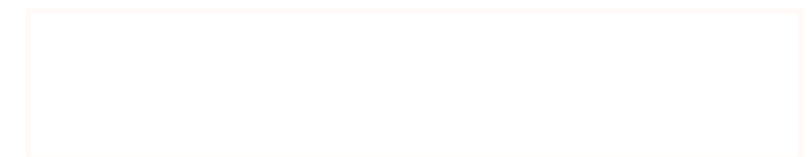
Xin Bu Village Development Plan



China Field Research Studio | Summer 2007

Dr. Daniel Abramson

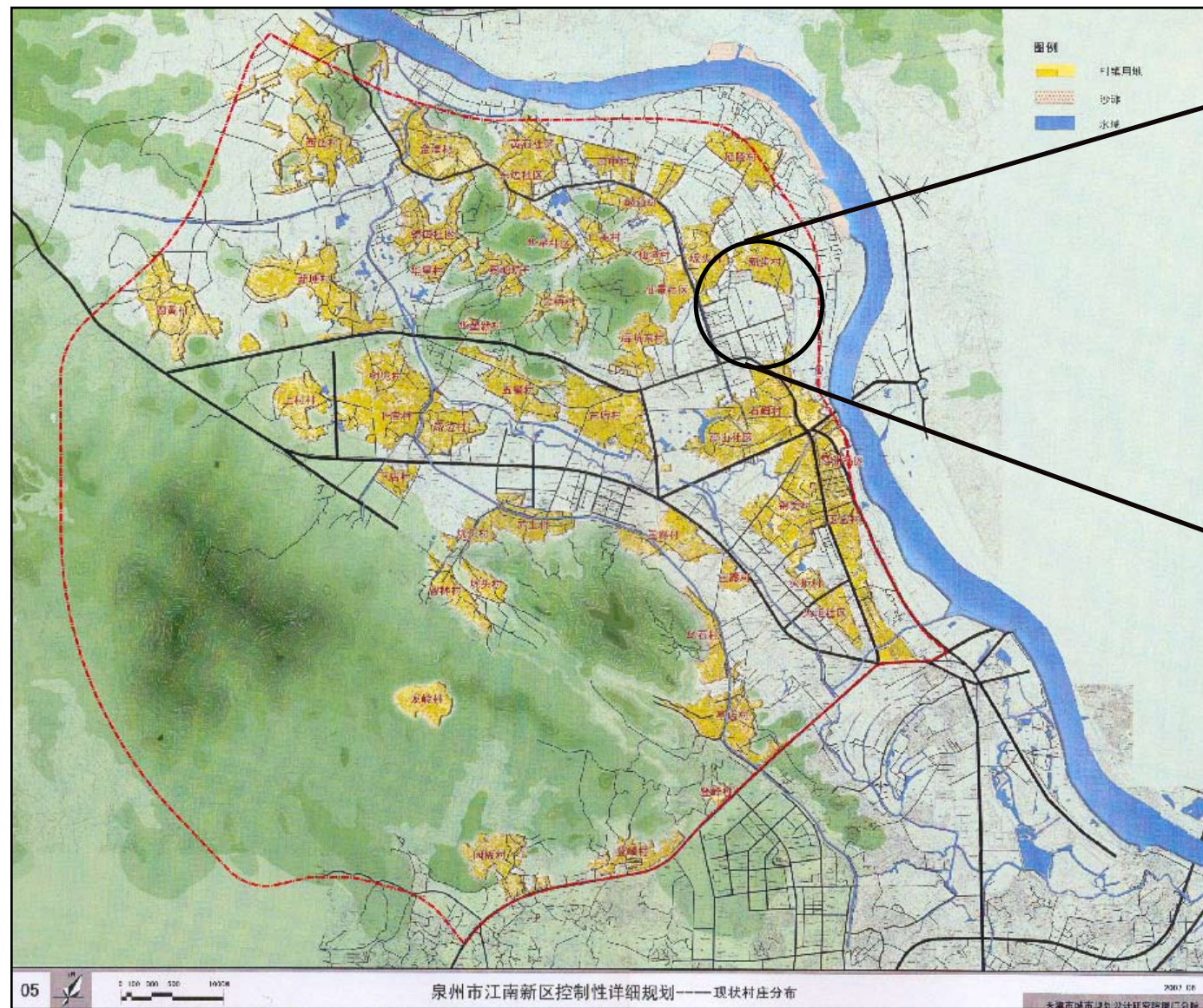
Vivian Chang | Ian Macek | Angie Salicetti



Introduction

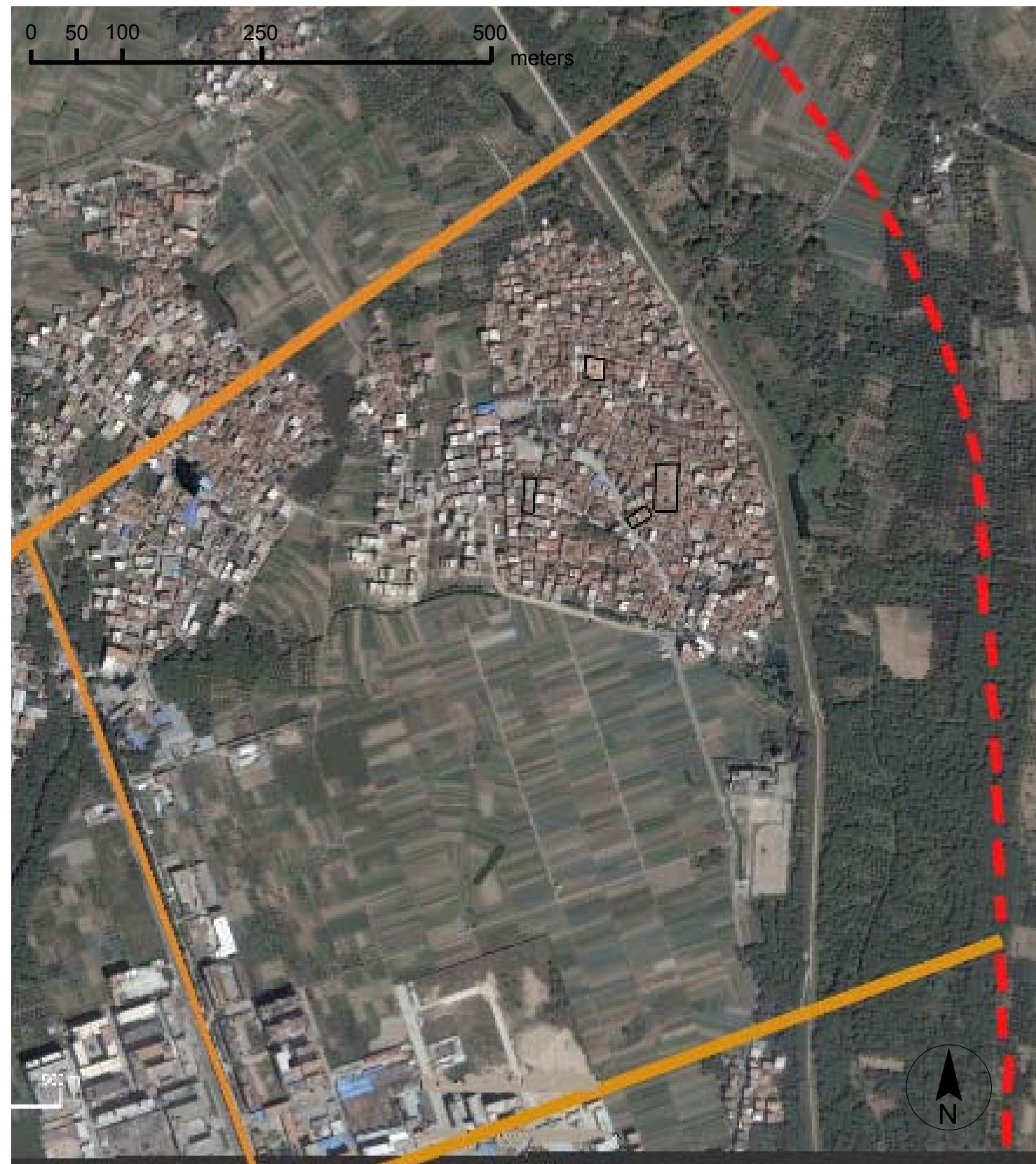
The village of Xin Bu is bound by a river in the west, villages in the north, east, and south, and agricultural land in the east, west, and south. The government of Xin Bu village is interested in developing the area in the future in order to accommodate the projected population growth. While the efforts of the Development Control Plan are ambitious and seek to make great changes in Xin Bu, this report will focus on ways that the village can maintain its cultural heritage through historic preservation, as well as making sure that environmental factors are taken into consideration. Such factors include floodplain management, preserving green space and agricultural land, wetlands, and waterbodies.

This report will look at the village in two different scales: the first is the larger scale, which include future land use and alternative future land use, whereas the smaller scale will focus on preserving the village core.



Larger Study Area

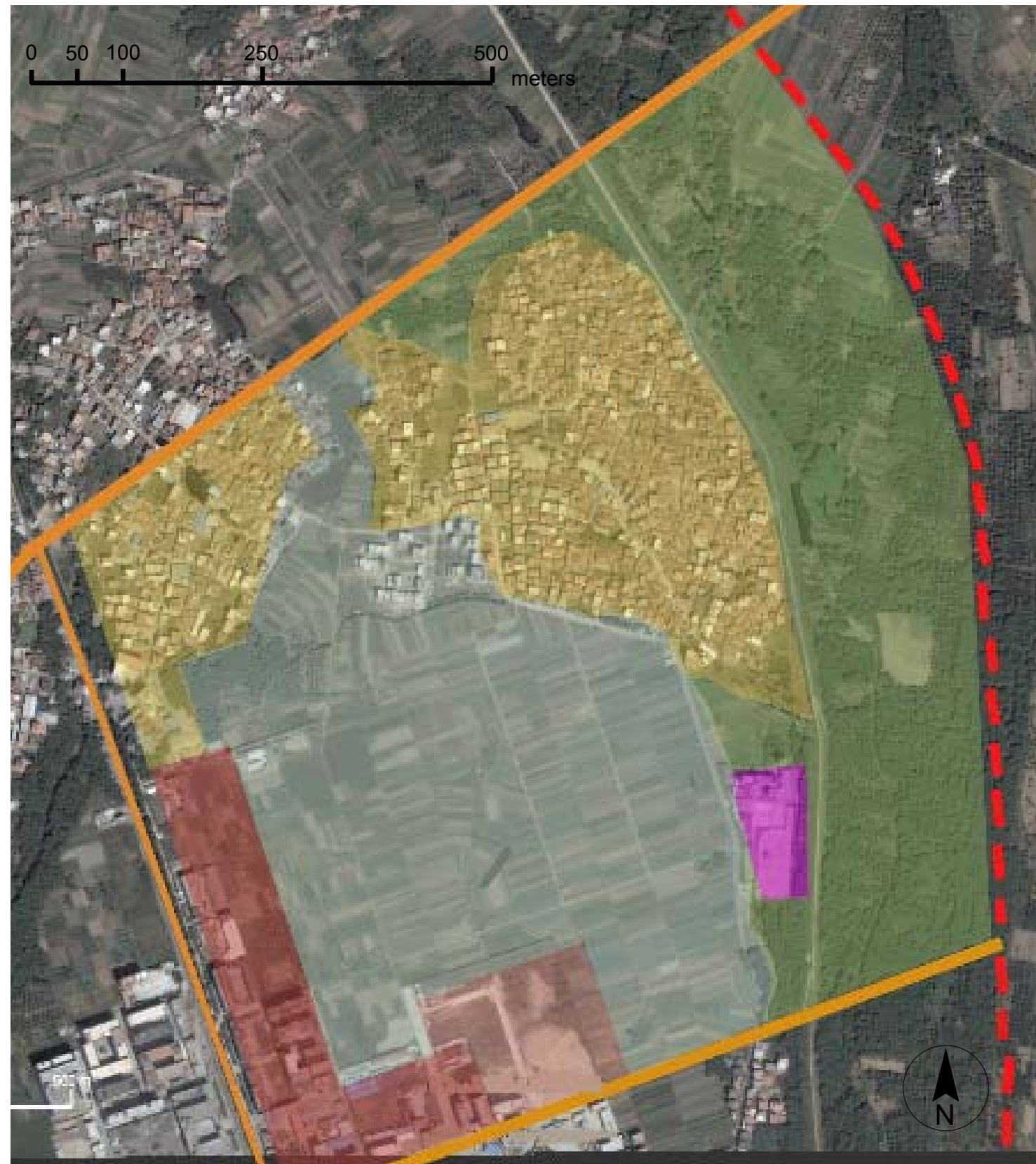
This map depicts the larger study in aerial view. To the east, a river flows past the village and is prone to flooding every year. Also, note the water bodies that are dispersed throughout the site. These water bodies, such as wetlands, ponds, and streams, contribute to the overall well-being of the ecosystem and is an important element to preserve and protect. The green belt to the east of the site is an important leverage tool against seasonal flooding, and is another element to preserve and protect. The agricultural land located in the southern portion of the study area currently supports fruit trees and vegetables. The village can sustain itself through farming and selling and consuming of local goods, which is another goal of the Xin Bu Development Plan.



Current Land Use

The current land use map includes water bodies, agriculture, orchard, industrial, residential, mixed use commercial and residential, and a high school. The areas of each category are listed below in the table.

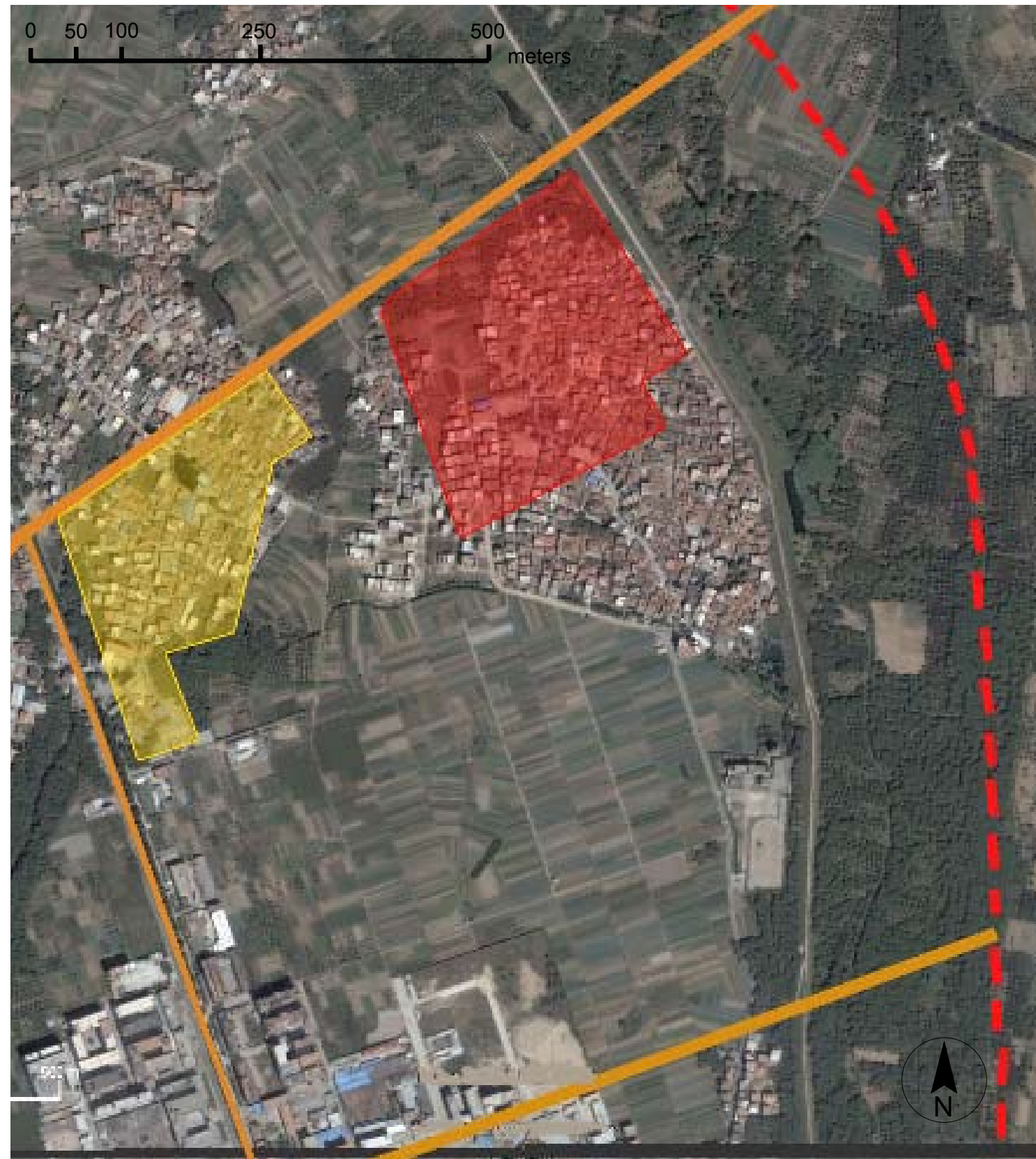
| Land Use (m2) | Land Use Area |
|-----------------|---------------|
| Water Bodies | 14,932 |
| Agriculture | 246,821 |
| Orchard | 213,206 |
| Industrial | 63,000 |
| Residential | 200,000 |
| Mixed Com & Res | 27,000 |
| High School | 13,875 |



- Existing Village
- Industrial
- Mixed Use Commercial and Residential
- High School
- Agriculture
- Orchard

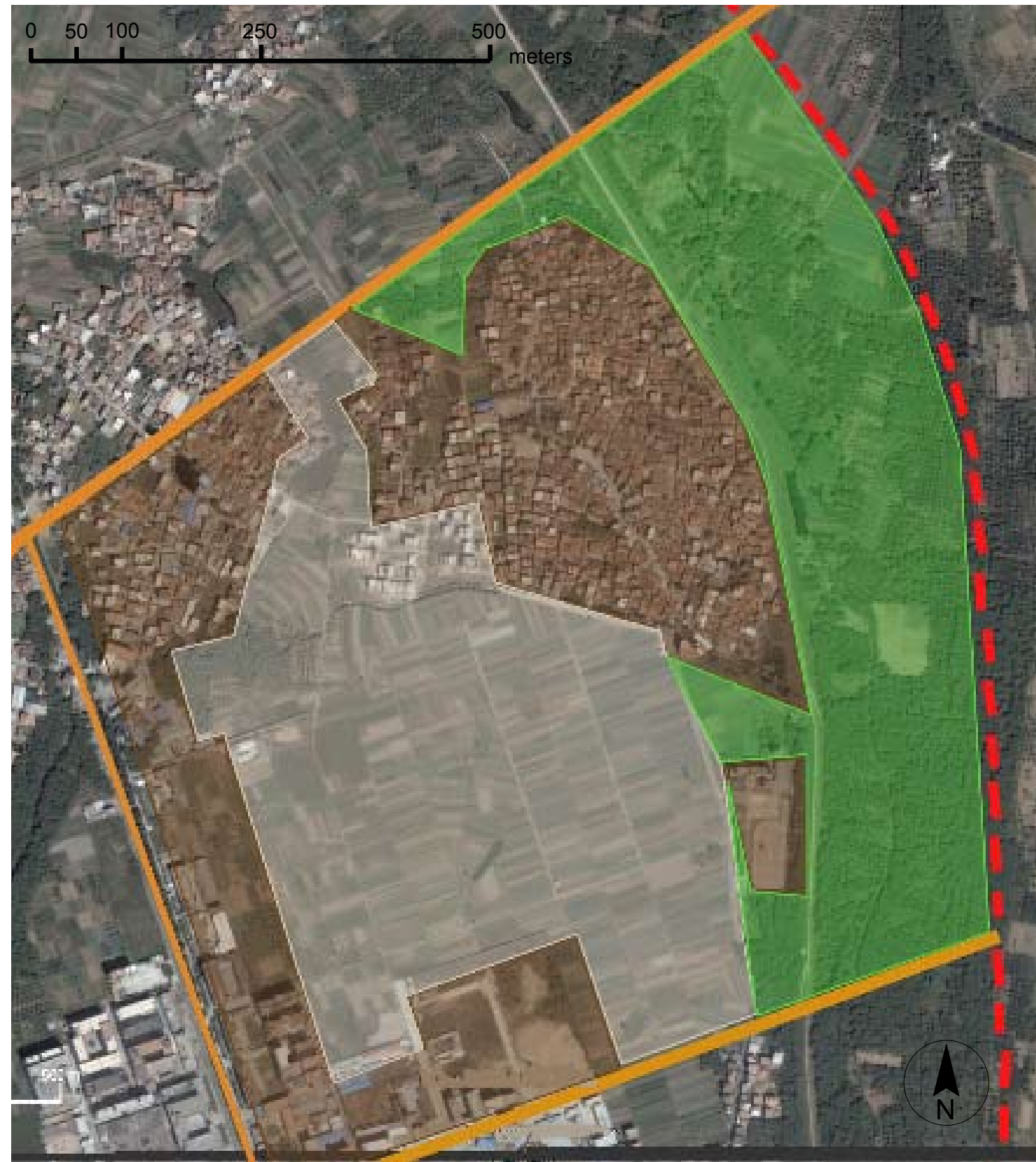
Village Relocation

The relocation plan for Xin Bu village is to move a third of the village elsewhere, and another third will be re-housed in place in newer, perhaps less affordable residential units. The southern portion of the village will be redeveloped, with most houses, including the village center, torn down.



Development Feasibility

The Development Control Plan has determined that all of the open spaces (including agricultural land and orchards) can be easily re-developed. The existing village and industrial parcels, on the other hand, will be difficult to redevelop due to existing infrastructure, costs, and relocation of current residents.



- Difficult to Develop
- Easily Developed
- Green Space

Development Control Plan: Future Land

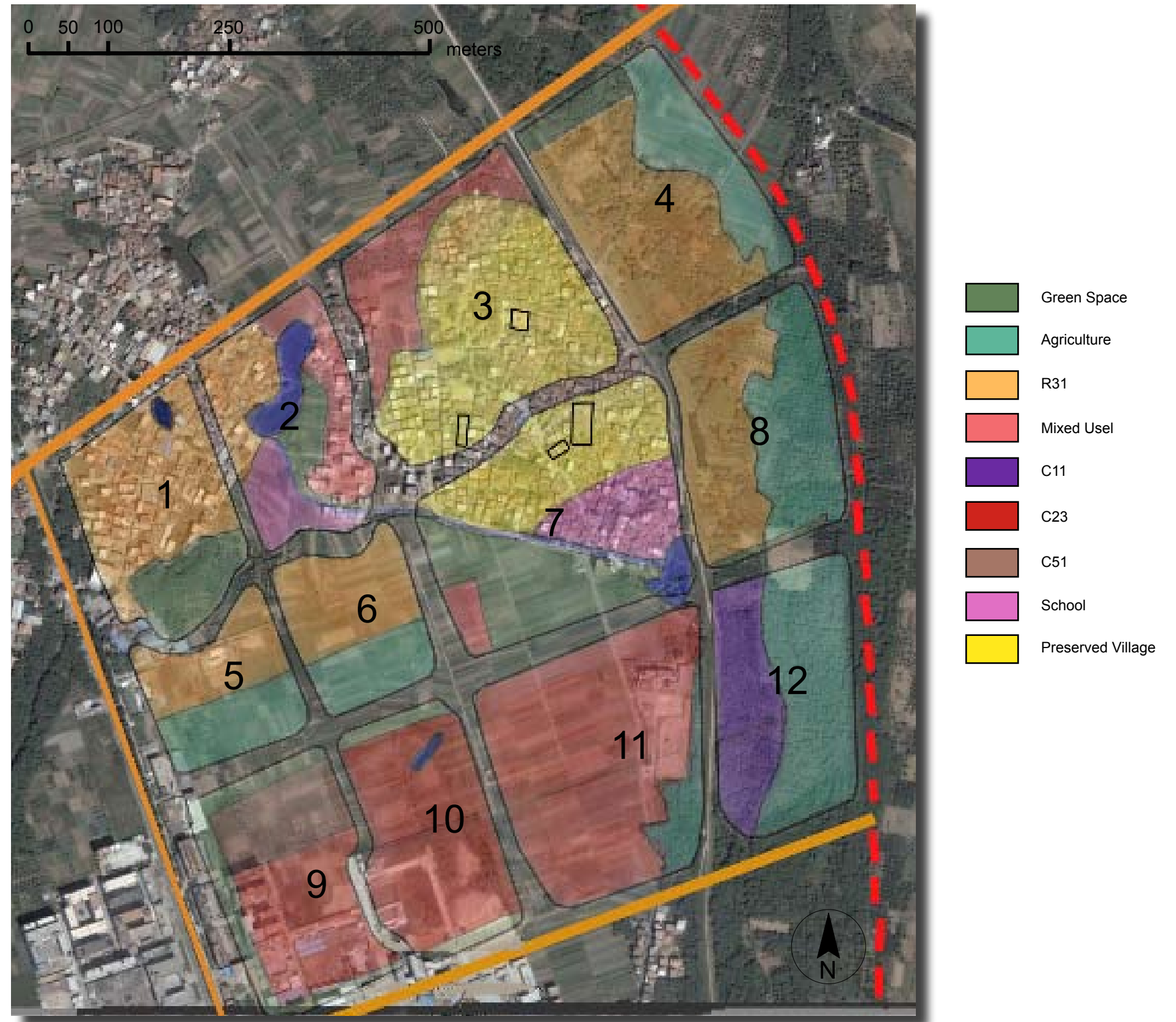
The Development Control Plan has planned for the creation of wide arterials that will connect the village to neighboring areas. Some of these roads will re-route existing ones. Major changes include three blocks that will be developed in the floodplain where the orchard is. This poses a threat to tenants as well as whole village, because the trees will no longer be able to act as a buffer against flooding. There are large commercial blocks slated for development in the southern portion of the study area, which is currently agricultural land. Narrow green strips line most of the blocks, which provide a more scenic view for automobile drivers, but take away villagers' way of sustaining themselves through agriculture. The proposed school take up one and a half blocks, which is fairly large for a village at this scale.



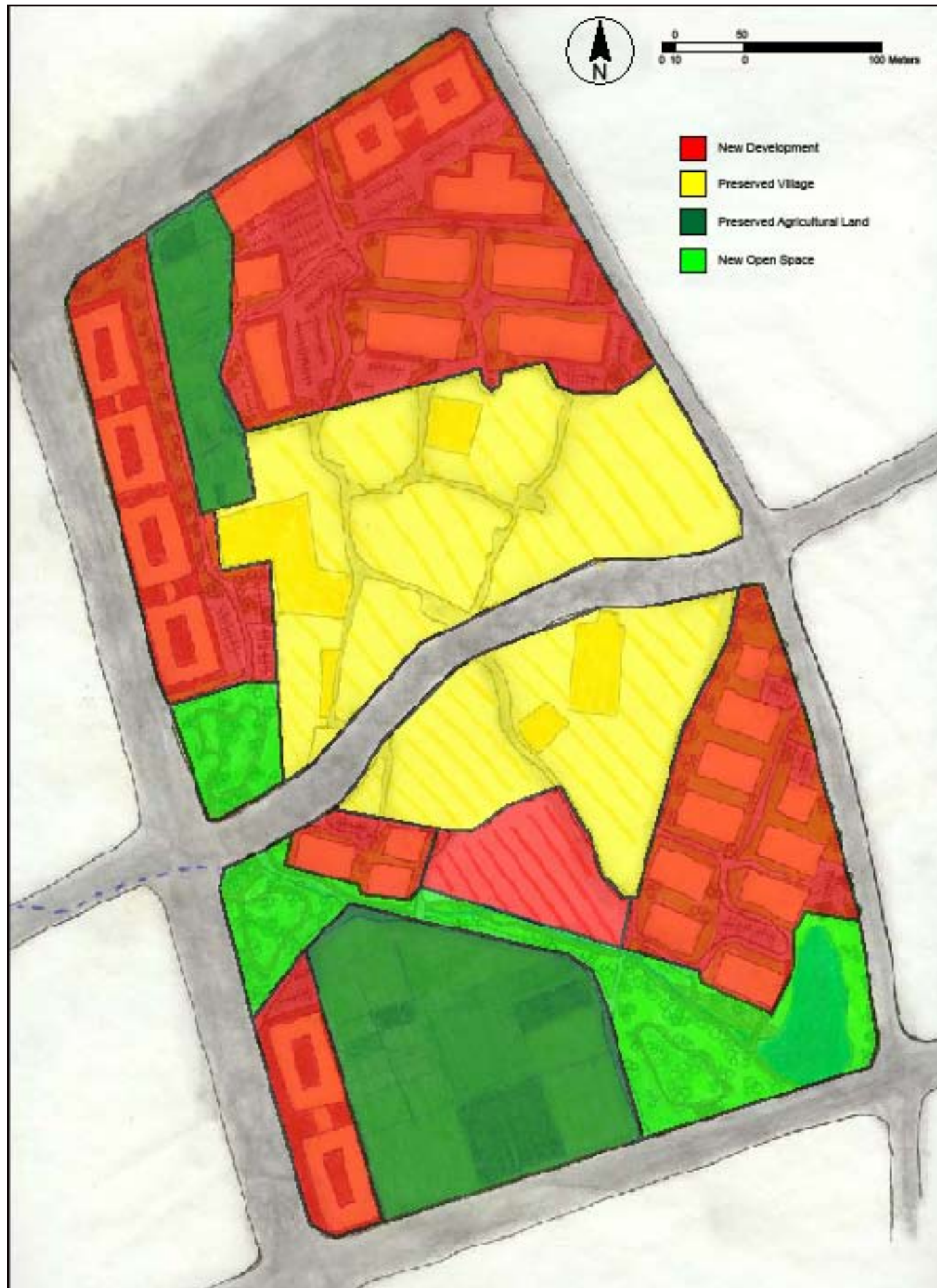
- R-21 Residential
- G-11 Green Space
- CR Mixed Use Commercial/Residential
- R02 Proposed High School
- C11 Commercial
- C23 Commercial
- G22 Grass
- R31 Residential
- C51

Proposed Alternative

The proposed alternative shows an increase in agricultural land, as well as allowing for denser development in residential and commercial areas. Major roads have been realigned to follow existing roads as well as to preserve valuable green space, such as existing orchards and waterbodies. This conceptual diagram illustrates that the future land use goals of the Development Control Plan can be actualized through different ways that both seek to preserve the cultural heritage of the people as well as protecting their safety through enhanced environmental protection and preservation.



Development Plan



New Development

Mixed use development will be located along the northern and western edges of the site. The adjacent streets are engineered to handle larger traffic flow, so the first floor retail space will be highly visible.

Dense residential development will be located along the eastern edge and some interior portions of the site. The dense residential allows housing for those in the village that may be displaced, as well as housing for residents of nearby villages that may be relocated. The height of the structures provide a smooth transition from the village to surrounding development with smaller buildings located closer to the village and taller ones along the peripheral (building heights shown on following page).

New Open Space

14.13 hectares of open space will be created. The two parks located on the western edge of Xin Bu act as a green gateway into the historic village. Section D illustrates how the parks can incorporate signage into the gateway. In addition, the creek running diagonally through the southern block would be daylighted, and walking paths would be installed (Sections B & C). The creek terminates at the small lake that is located in the southeast corner of the site. This lake not only acts as a community gathering place, but also a visual amenity for the nearby residential development.

Village Preservation

A majority of the historic Xin Bu village will be preserved. The following sites were determined to be a high priority for preservation due to both their historic significance, as well as their contribution to the overall village.

- Wu Jia Mian House
- Heritage Site
- Wu Lineage Hall
- Xin Bu Village Government Complex
- Temple/Opera Stage

Agricultural Land Preservation

Adjacent to Xin Bu village are numerous agricultural fields that have historically sustained the community. As agricultural land becomes more scarce, it is vital that urban agricultural areas be preserved for continued use. The two preserved areas are strategically located adjacent to the mixed use development. This strategy was used to ensure that local farmers would have close access to nearby markets, which is illustrated in Section A.

Site Analysis

Our analysis focused on how the preservation of Xin Bu village could be incorporated into the Development Control Plan proposal. Consequently, this brought our analysis to focus on the two larger blocks that have been drawn around the majority of the village.

The north block is divided into three sections (N0901, N0902, and N0903), while the southern block is considered one unit (N1001).

The following site analysis was conducted to determine the how our proposal would proceed. We looked at four scenarios:

- No Change- develop according to the Development Control Plan
- Preserve Agriculture Land
- Preserve Village Land
- Balance of Preservation and Development

Our four scenarios are included on the following two pages, as well as the one that was ultimately chosen.

Preserve Agriculture Land



Maximized Preservation of Agricultural Land

This scenario shows the maximized preservation of agricultural land, which has as much new development as possible is concentrated in existing built (village) areas.

Water bodies and wetlands are included in agricultural areas.

| Block | FAR |
|-------|-----|
| N0901 | 2.7 |
| N0902 | 1.7 |
| N0903 | --- |
| N1001 | 1.4 |

Development Control Plan



Allow Proposed Development

If the Development Control Plan proposal were to take place, neither the village center nor agricultural lands would be preserved. Therefore, it is vital to create alternatives that can preserve both existing villages and agricultural lands.

| Block | FAR |
|-------|-----|
| N0901 | 3.0 |
| N0902 | 1.5 |
| N0903 | --- |
| N1001 | 1.0 |

Preserve Village



Maximized Preservation of Existing Village

New development should be concentrated in agricultural areas, for cultural reasons, short-term ease of development, and diversity of housing affordability. This scenario does not allow for any agricultural land.

Future development occurs outside the village boundaries, which is in current agricultural land. This is not an ideal situation since there is no space for agriculture.

| Block | FAR |
|-------|-----|
| N0901 | 6.3 |
| N0902 | 6.2 |
| N0903 | --- |
| N1001 | 1.9 |

Balance of Preservation and Development



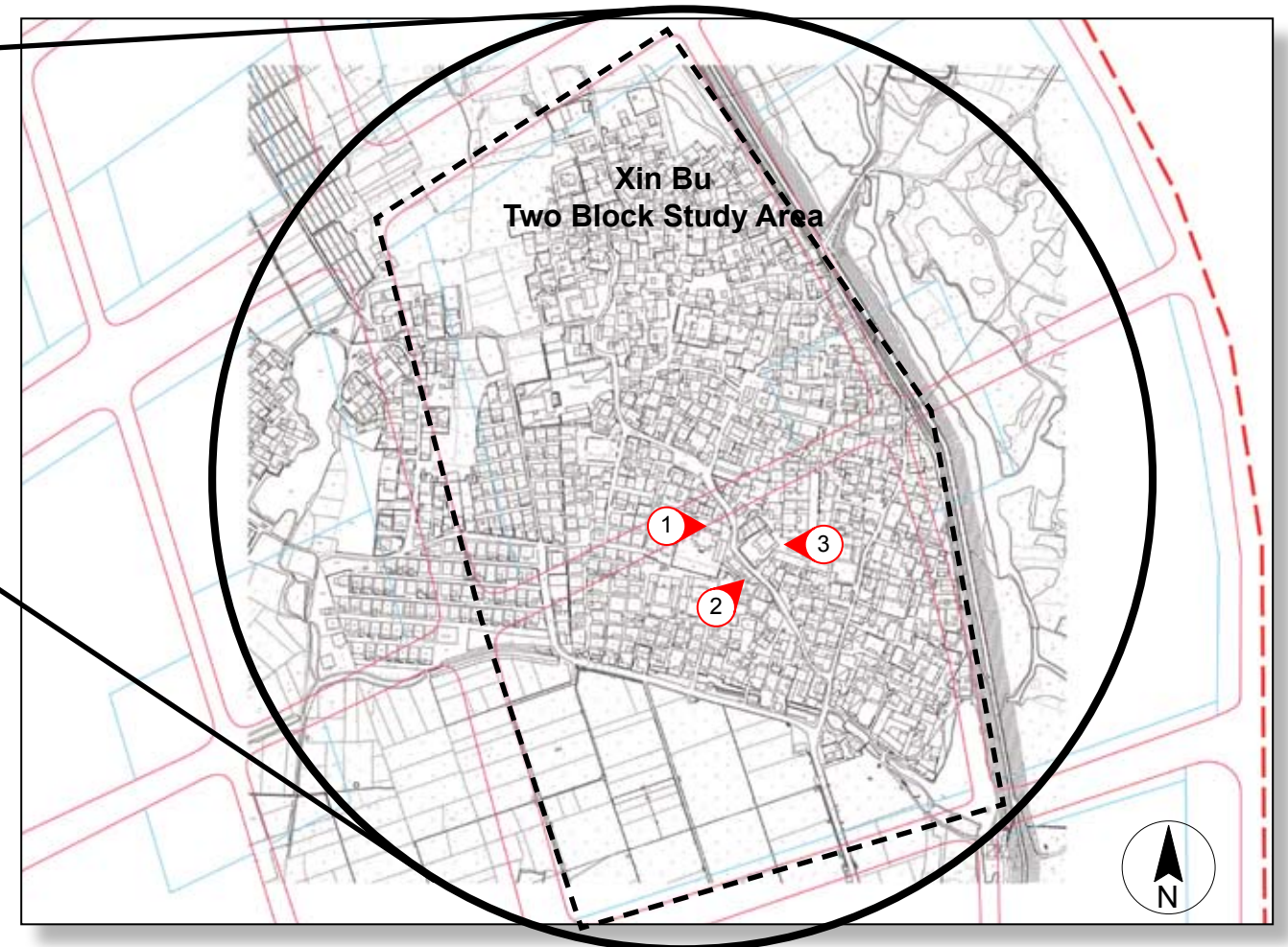
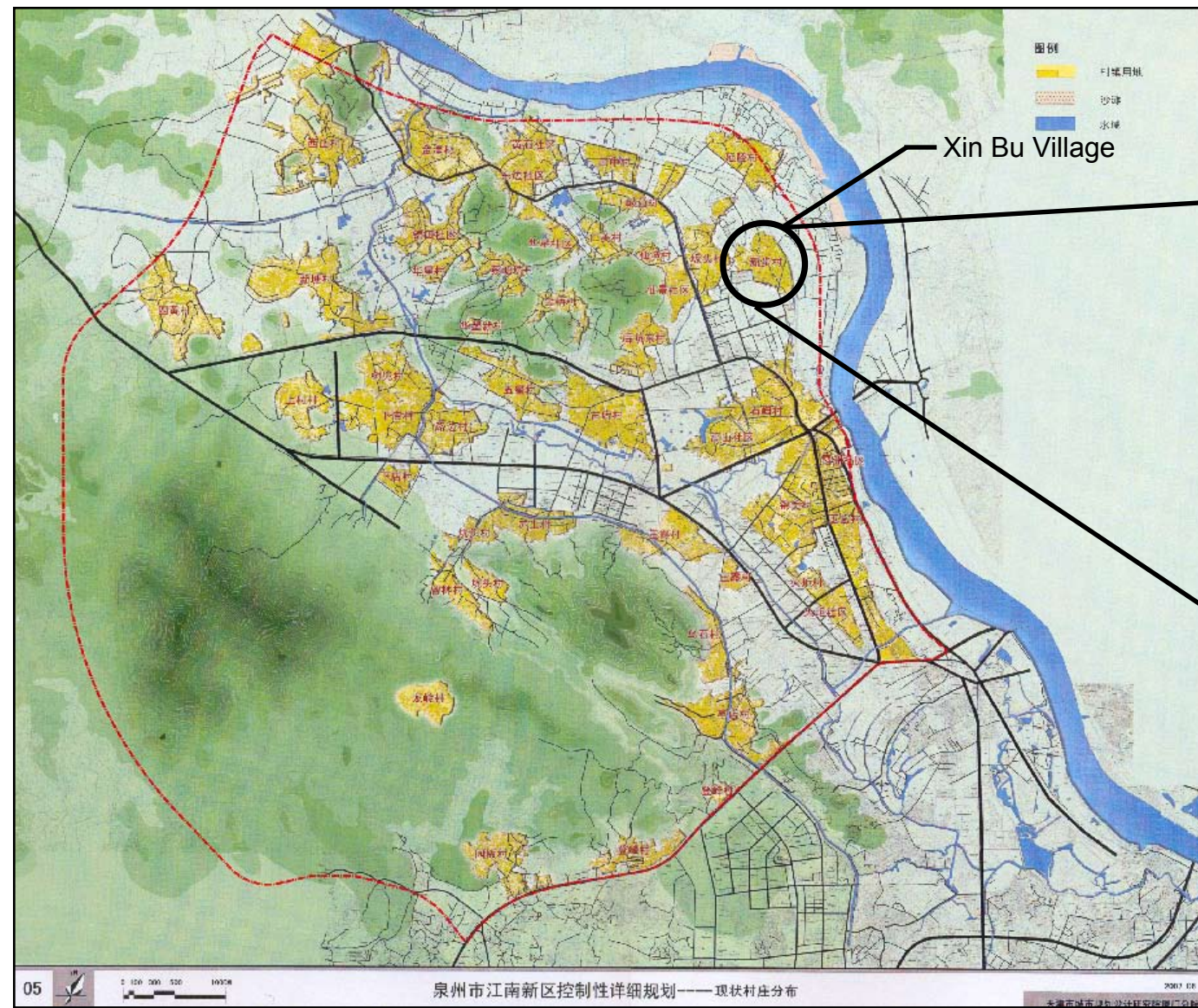
Balance of Development and Preservation

Development is combined with both agricultural and village preservation in this proposal.

Development can be concentrated along arterials for easier access for homeowners and workers. Also, denser mixed-use housing can be built in the northeast corner of the site.

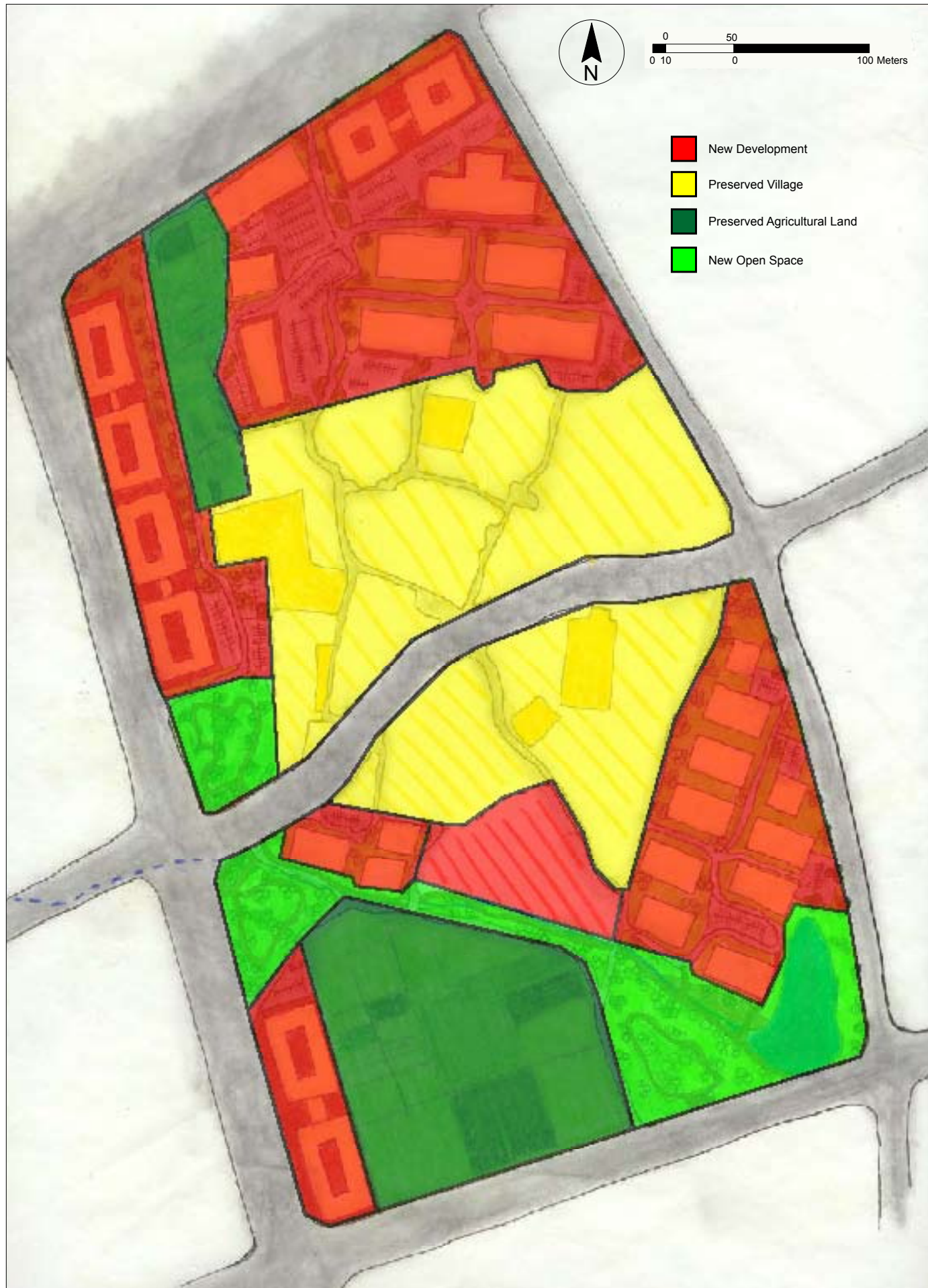
Further analysis can be seen on the following pages.

Site Context



The following photos were taken to show the neighborhood surrounding the Wu Jia Mian Home. The direction of each picture is indicated on the map above.





Development Plan

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-

A detailed plan showing how village preservation can look is included after the overall site plan.

Agricultural Land Preservation

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Site Plan Statistics

| FEATURE | MEASURE |
|--|---------|
| Total Site Area (hectares) | 29.09 |
| Total Floor Area (m ²) | 312,768 |
| Total FAR | 1.08 |
| School Floor Area (m ²) | 6,968 |
| Retail/Commercial Floor Area (m ²) | 12,500 |
| Residential Floor Area (m ²) | 293,300 |
| Residential FAR | .94 |
| Total Dwelling Units (Apt size=75 m ²) | 3,910 |
| Number of Garage Parking Spaces | 4,020 |
| Number of Surface Lot Parking Spaces | 520 |
| Gross Project Unit Density (unit/hectare) | 134.41 |
| Gross Residential Density (unit/hectare) | 133.31 |
| Open Space "Green" Area (hectares) | 14.13 |
| Preserved Agricultural Area (hectares) | 3.8 |
| Preserved Village Area (hectares) | 7.6 |
| New Park Space Area (hectares) | 1.9 |
| Wetland Area (hectares) | 0.83 |



Detailed Site Plan

Development Control Plan Statistics

| Block | Land Use Area | FAR | Bldg. Coverage | Ground Floor m ² | Green Area | Bldg. Total m ² |
|-------|---------------|-----|----------------|-----------------------------|------------|----------------------------|
| N0901 | 12,854 | 3.0 | 0.35 | 4,498.9 | 0.30 | 38,562 |
| N0902 | 106,512 | 1.5 | 0.30 | 31,953.6 | 0.30 | 159,768 |
| N0903 | 6,451 | | | | 0.90 | |
| N1001 | 116,068 | 1.0 | 0.20 | 23,213.6 | 0.40 | 116,068 |

Balanced Scenario Statistics

| Block | Land Use Area | FAR | Bldg. Coverage | Ground Floor m ² | Green Area | Bldg. Total m ² |
|-------|---------------|------|----------------|-----------------------------|------------|----------------------------|
| N0901 | 20,400 | 1.80 | 0.34 | 7,000 | 0.56 | 36,750 |
| N0902 | 119,300 | 1.34 | 0.15 | 17,700 | 0.75 | 159,950 |
| N0903 | 9,700 | | | | 0.90 | |
| N1001 | 141,500 | 0.82 | 0.12 | 17,200 | 0.78 | 116,068 |

Notes

Residential Apartments

The standard apartment size is 75 sq m (based on US standard of 800 sq ft). The total number of new residential units is 3,910. This increase will help to sustain the nearby retail, as well as offer housing for displaced and relocated villagers.

Parking

The current development plan stats that only 463 total parking spaces are needed in the study area. This number is inadequate due to the increase in the number of drivers in the region since the plan was developed. In addition, the parking should coincide with the proposed road network which will be developed to handle a large traffic flow.

The number of parking spaces for each building was determined by providing one parking space per residential unit, plus 15% for guests and an additional 5% if the building is mixed use. The standard parking size used is 30 sq m which includes the parking space as well as circulation area.

Open Space "Green" Area

Preserved village and agricultural lands were lumped into the open space figures due to the way the local government recognizes the land after it has gone through preservation.



Section Drawings: Courtyard Buildings



The mixed use buildings will have a enlarged courtyard space in the center. This space can serve as an outdoor market.

Located adjacent to the nearby agricultural fields, the market space is ideal for fresh produce and provides a nearby place for residents to sell their crops.

The concept of the live-work buildings is the ideal prototype for this region of China. It not only provides for the high density of future growth but for a sustainable way to create business and income for residents of the village.

A precedent to this project and with similar architectural features and geographical climate is the Miramar Town Center in the City of Miramar, Florida. The 54-acre master plan project presents the concept of a **city within a city** with its unique blend of business, retail, residential and cultural facilities. The project is a complex of buildings featuring live-work towers with retail at the first level; a series of townhouses and condos, a civic center with library and cultural arts center, a fitness center, transportation hub, and offices.

For XinBu Village, the concept of the inner courtyard replaces what in Miramar Town Center is the transit hub. Since we are assuming that the Development Control Plan will provide for proper transportation infrastructure, we have focused on the sustainability aspect of the village.



Miramar Town Center Master Site Plan. For more information on this project please visit: http://www.miramartowncenterfla.com/index_over-view.html (Interactive Site Plan is helpful).

Section Drawings: Creek Daylighting and New Open Space



Daylighting the creek is environmentally and recreationally smart.

The creek can work in conjunction with the nearby fields to mitigate flooding. Water will flood the agricultural areas as levels rise because the fields are at a lower elevation.

A path running alongside the creek can be utilized as a pedestrian and bicycle trail. In addition, the open space around both the creek and pond provide places to relax and escape from the city.

The creek and pond also act as an amenity for the nearby residences.

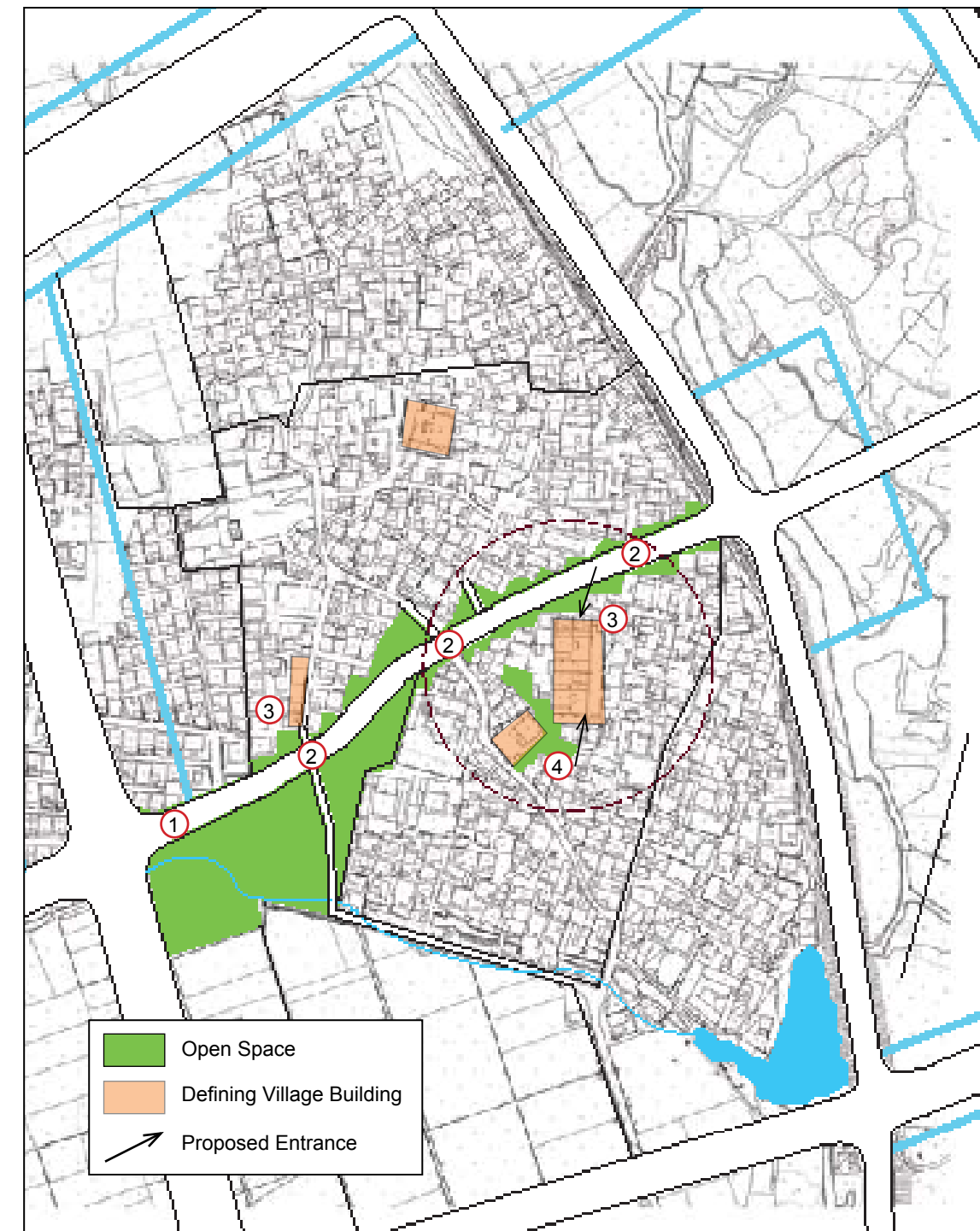


Preserved Village Site Analysis

- ① Due to the addition of a proposed road through Xin Bu, some of the buildings in the center of the village would be demolished. Care has been taken to save as many as possible, while also preserving some of the defining buildings in the village. The following illustration shows how the new road will provide an additional redevelopable land that can provide both additional open space and mixed use development.

The road width has also been changed Development Control Plan "Road Type I". This change should be considered because the proposed road does not serve any main traffic flow purposes to the east or west.

- ② The redevelopable area will provide additional retail and housing within the center of the village. New open space will also be added along this new corridor. Main interior street crossings have been retained or realigned for better traffic flow.
- ③ Both the temple and the heritage site will be visible from the new street. The landscape around both of these structures can be used to enhance each structure.
- ④ Additional open space can be created around the Wu Jia Mian Home, extending their current public gathering space into the surrounding community. There is also the opportunity to enhance the entrance to the heritage site that is adjacent to the Wu property.

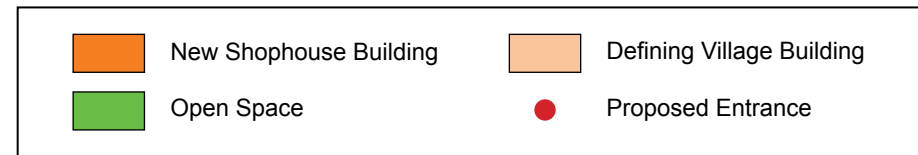
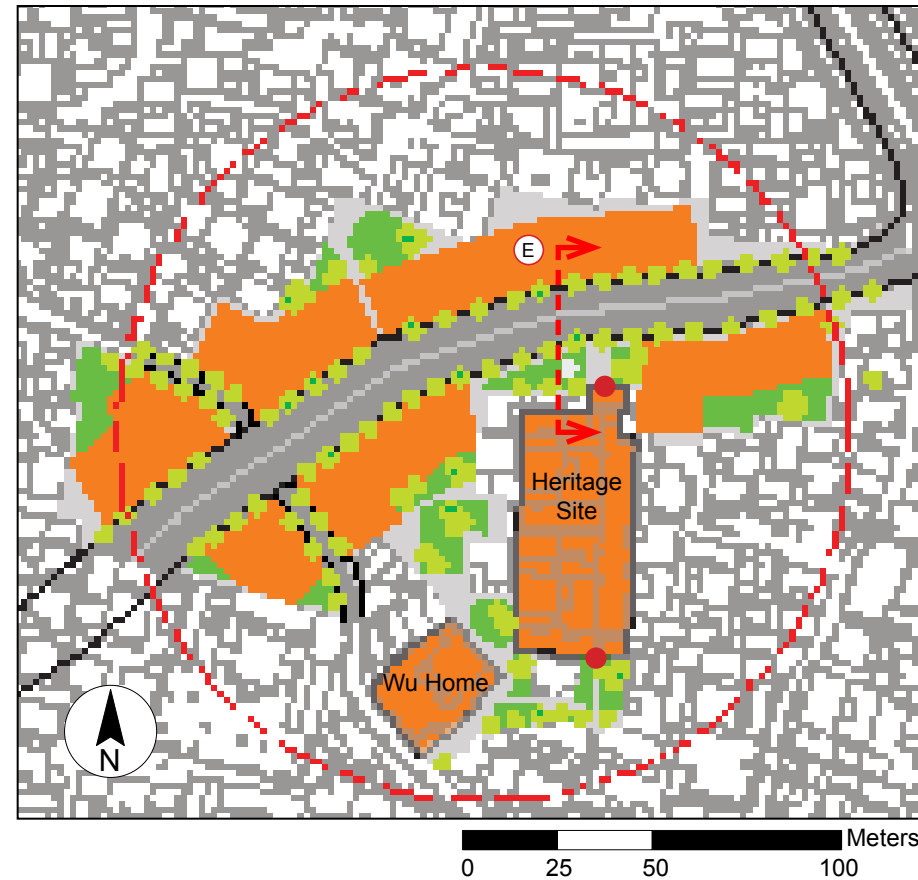


Preserved Village Site Analysis

The detailed site plan and section show how development and preservation can work together.

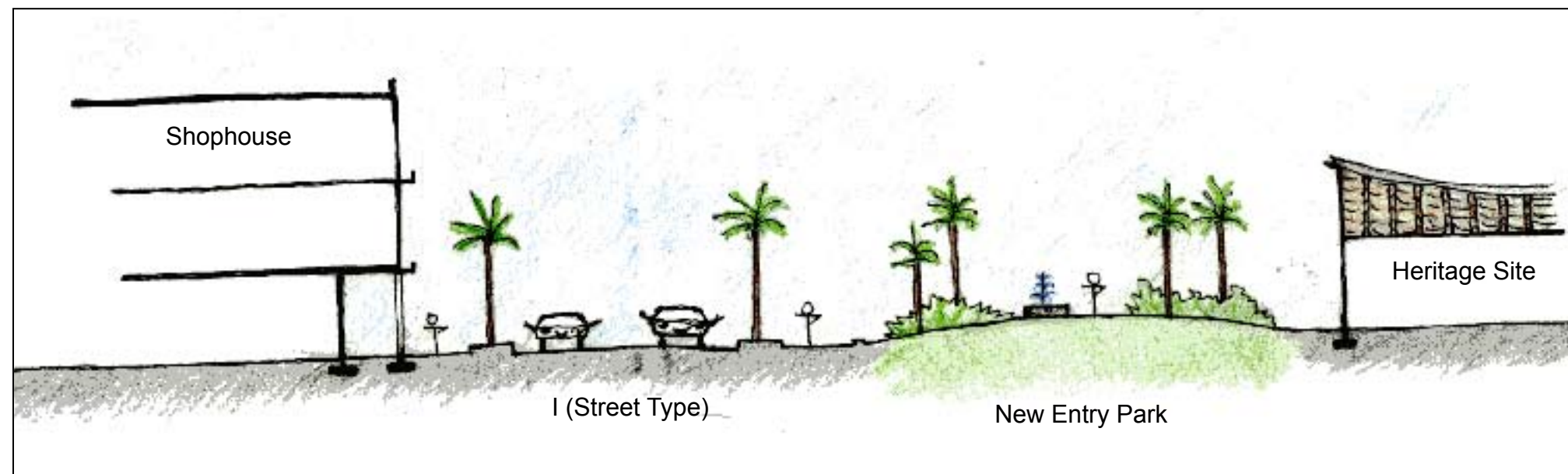
The Development Control Plan proposes a road which cuts through Xin Bu, causing the demolition of some village buildings. Two design techniques can be used to maximize both preservation and new development: to narrow and slightly curve the proposed road. A narrower road will work because the street is neither an arterial nor significantly eases traffic congestion. The slight curve in the street will allow for the preservation of many defining buildings while still maintaining the current intersection locations.

The space that is created along the road can be redeveloped as shophouses as well as new green space. Entrances to buildings that define the village, such as the heritage site, can be enhanced. The shophouses can maintain the village scale by restricting the height to three stories.



HOW PRESERVED AREAS AND NEW DEVELOPMENT CAN WORK TOGETHER

- 1) Addressing future growth
- 2) Creating new open/green spaces
- 3) Enhancing Village entrances
- 4) Preserving human scale



Section E: Village Preservation/Redevelopment

Thank you....

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