

小桥 · 流水 · 人家

The Bridge · The Stream · The Home

Interactive Social Housing Typology in Wuxi

Weiwei Xia

Instructor: Ryan McCaffrey

Directed Research: Regional Building Group
Rhode Island School of Design / Architecture

Abstract

Wuxi is a city built on the regional river system. For thousands of years, the city layout developed along with the river channels. The rivers served people's daily living, farming, and transportation needs. Social life among residents had also developed at the communal and transitional space along the rivers, mainly at the intersections where the bridges were. As Wuxi's industry and commerce developed rapidly in the 20th century because of the convenient water transportation system, Wuxi's urban area expanded widely in a short time. However, Wuxi's overwhelming urban expansion happened too fast and lacked sophisticated urban planning consideration. This decision has isolated the urban zones and landscape zones, as well as cut off citizens' daily access to natural areas. Meanwhile, there are both overdevelopment and underdevelopment situations in residential areas in the city. While there are plenty of enclosed, single-use zoning residential communities newly built with high rises, there are also old derelict neighborhoods abandoned in the old town at the core of Wuxi.

As such two extreme situations existing at the same time in Wuxi, citizens' living quality still has a large room for improvement that would recur the beautiful vision of living in a "natural city" with the "natural" traditional lifestyle. In response, this design proposal proposes a solution in the middle for a new residential area development typology. It is reconstituting areas of my research into new housing type. In this new scenario, the standard high-rise residential area's spatial and structural layout is redesigned for mix-used purposes. Nature here is not just a landscape attraction for aesthetics, but also an incentive that stimulates and leads more social activities to happen in the residents' contemporary daily life in the high rises, as the traditional lifestyle had. The site is one of the derelict and abandoned residential areas in the city core, with a total area of around 2 million square feet. Since the existing houses are heavily damaged and have no value for preservation, this design proposal tears down the entire area to build a new diverse residential neighborhood with a new social model for 3000 households.

Table of Contents

| | |
|---|----|
| Historical / Current Transformation of Nature in Wuxi | 03 |
| Residential Community Development Issues | 04 |
| Site Research | 12 |
| Design Proposal | 14 |
| Conclusion | 18 |

Region



Wuxi is a city in southern east China and an important node city between the two first-tier cities, Shanghai and Nanjing. Wuxi has four distinctive seasons, mild climate, sufficient rain and sunlight through the year. Wuxi is connected to the Yangtze River on the north and embraces Lake Tai in the south. The Grand Canal goes through the city center and connects with the rich natural river system that spread through the whole city.

Wuxi had developed relying on the regional river system. For thousands of years, the city layout developed along with the river channels. The Grand Canal as well as the rivers served people's daily living, farming, and transportation needs for thousands of years. Social life among residents had also developed at the communal and transitional space along the rivers, mainly at the intersections where the bridges were.



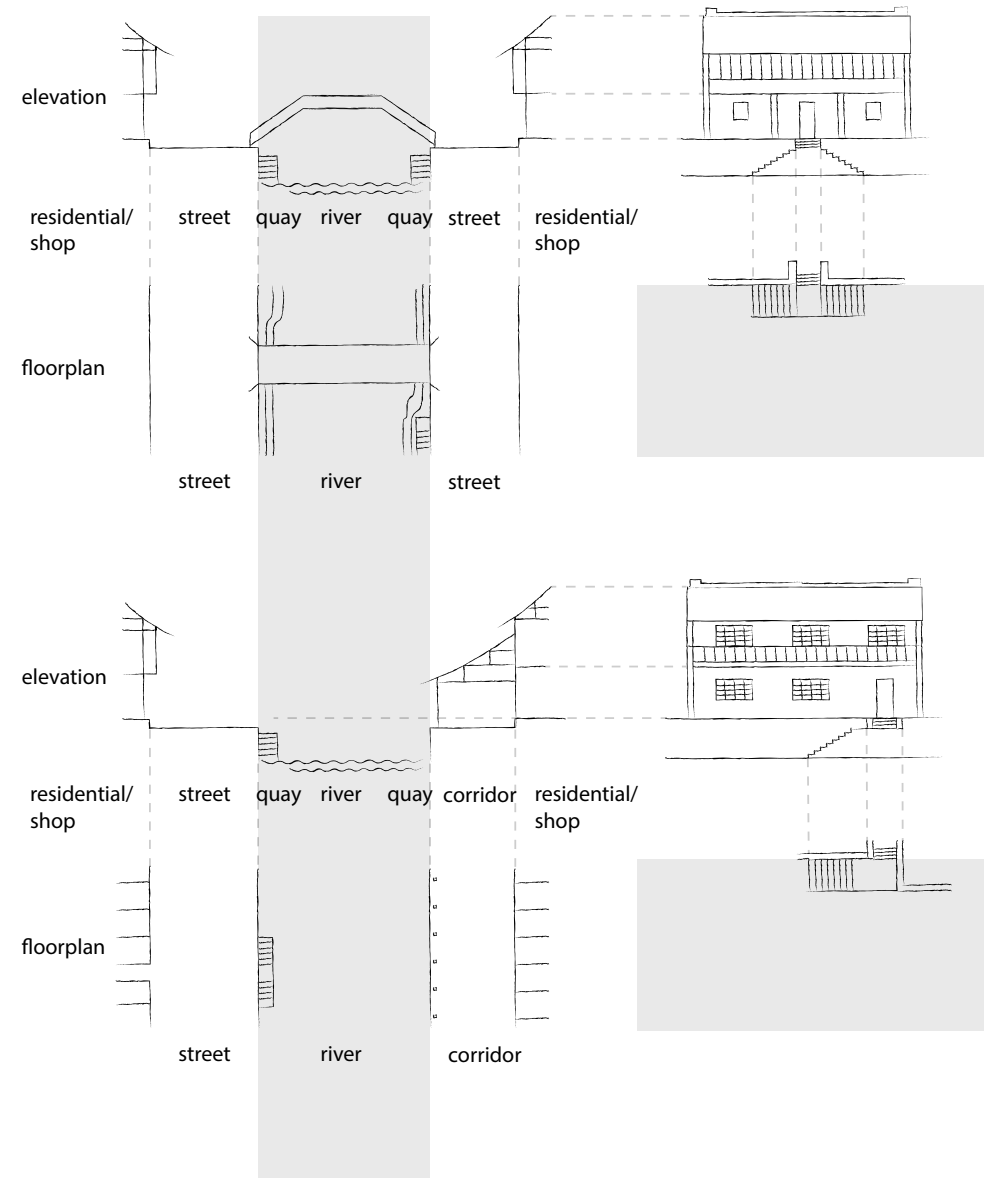
Historical Transformation of Nature in Wuxi



As Wuxi's industry and commerce developed rapidly in the 20th century because of the convenient water transportation system, water markets started to form and develop prosperously on the water around the quays. The architectural and spatial layout of the residential buildings along the river started to develop along with the economy booming as well.

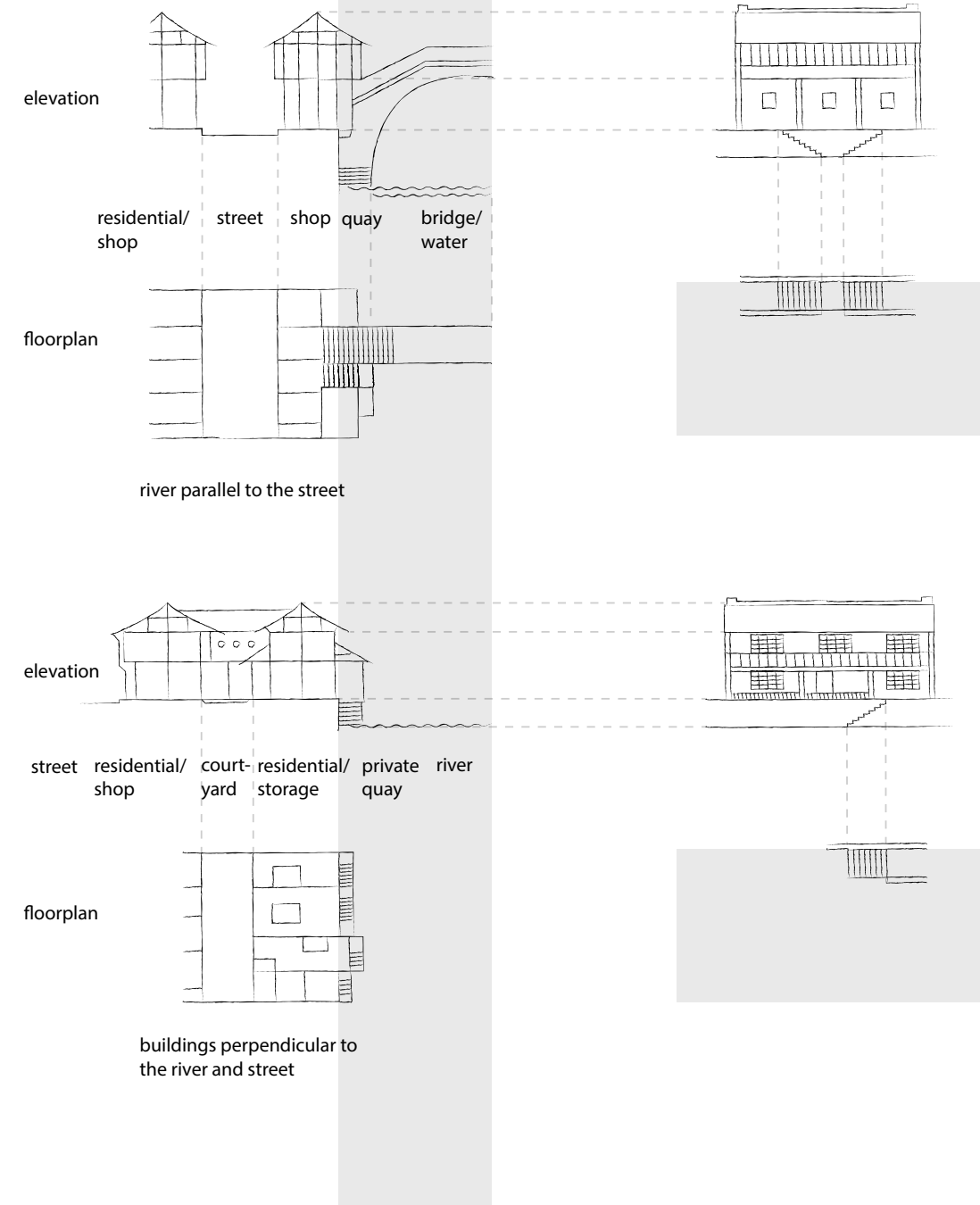


Face-to-river waterfront spacial layout

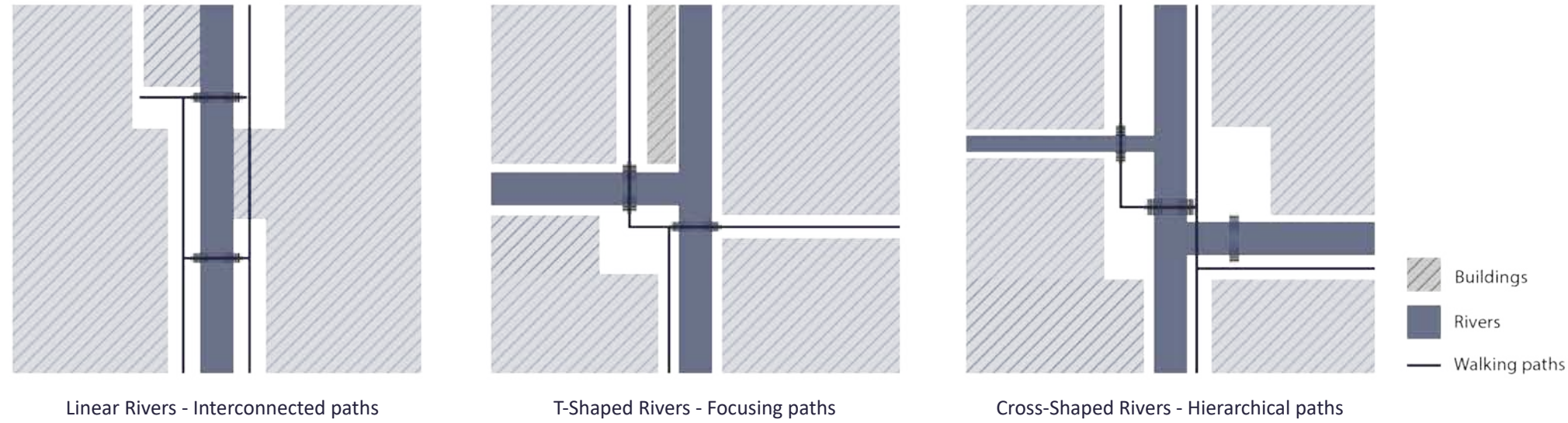


The buildings along the water hosted both residential and commercial functions. In the building facing the water market, the first floor became commercial space while the second floor remains private for residential use. Residents also have easy accessibility to the water with the quay in front of the house.

Back-to-river waterfront spacial layout



When the building is facing the street market and its back is toward the river, the front of the building became commercial space and the back was for residential use with the private quay. With the courtyard and corridor in between, the transition from public to private spaces in the same building is organized smoothly and intuitively.



Social life among residents had also developed at the communal and transitional space along the rivers, mainly at the intersections where the bridges were. The elevation changes in the spatial elements such as the river, river bank, the bridge, etc, at such space also create a varied visual hierarchy.



Bridgehead

River

Bridge

Revetment

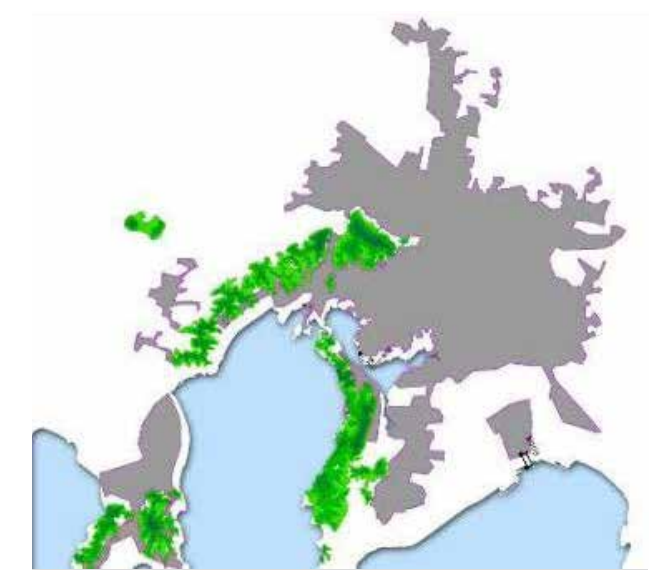
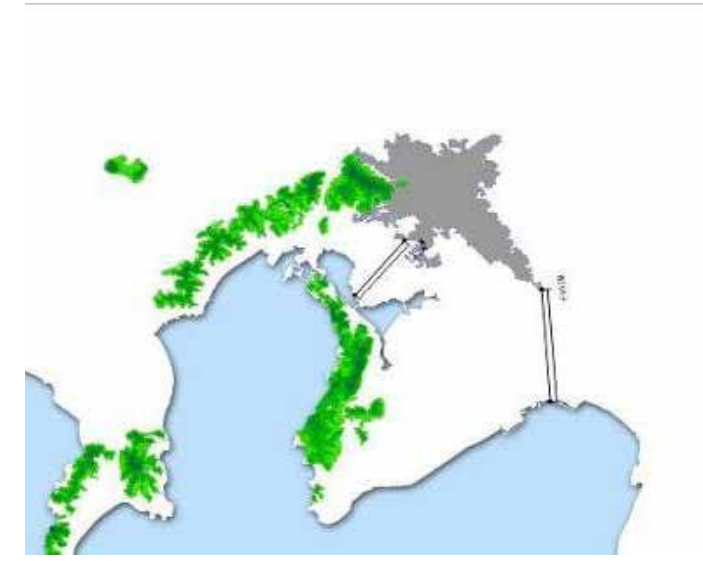
Spatial elements' combinations generate space for different optional and social activities

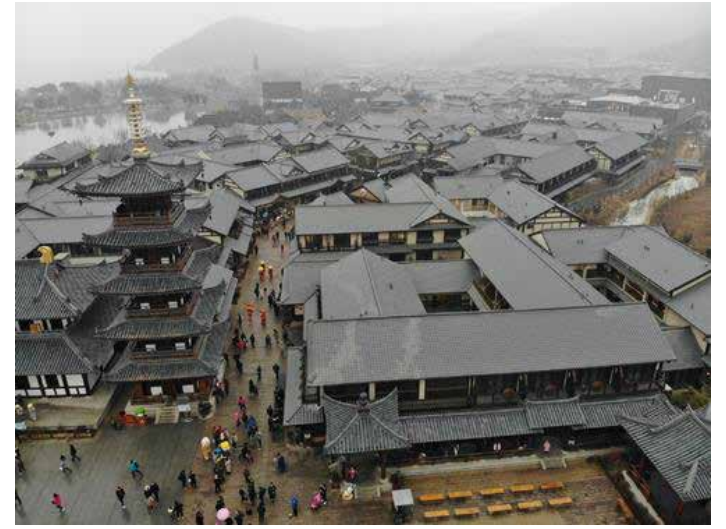
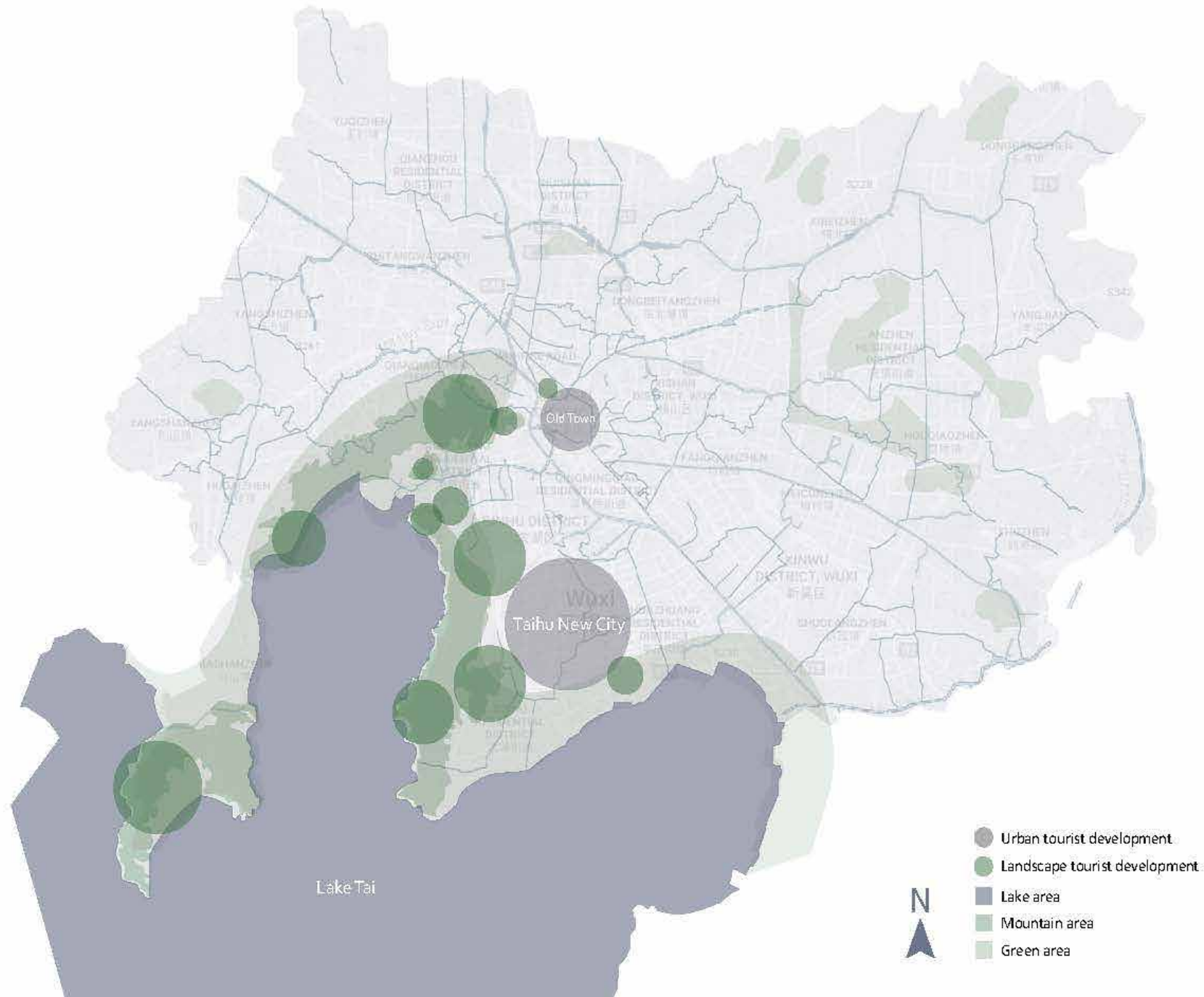


- > Main river channel
- Water taking spot
- > Core development

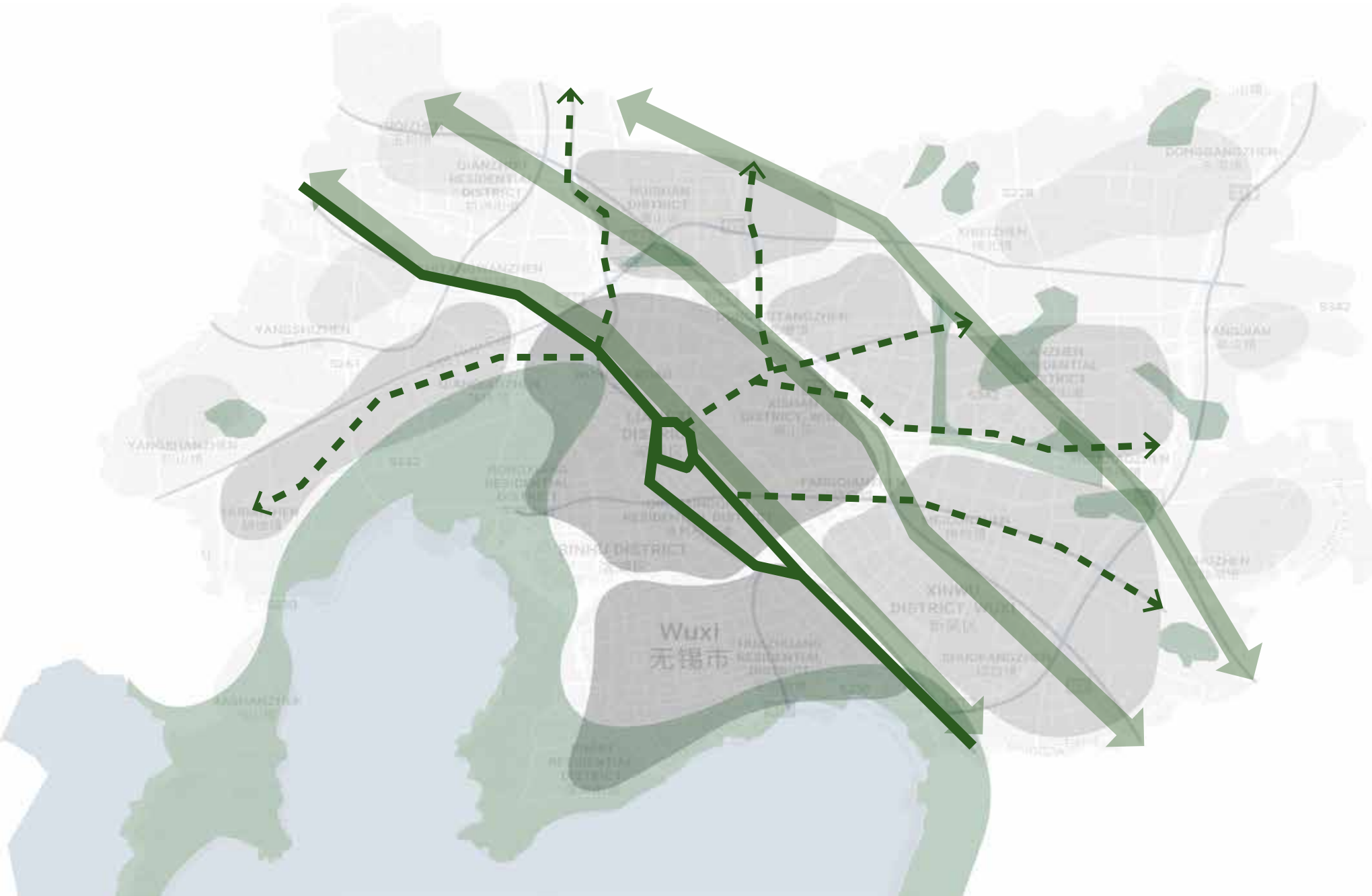


Wuxi's urban area expanded widely in a short time along the river network. However, this urban expansion happened too fast and lacked sophisticated consideration. It has broken the urban-nature balance formed in the old town and the nature has been overwhelmed as shown in the picture on the right.



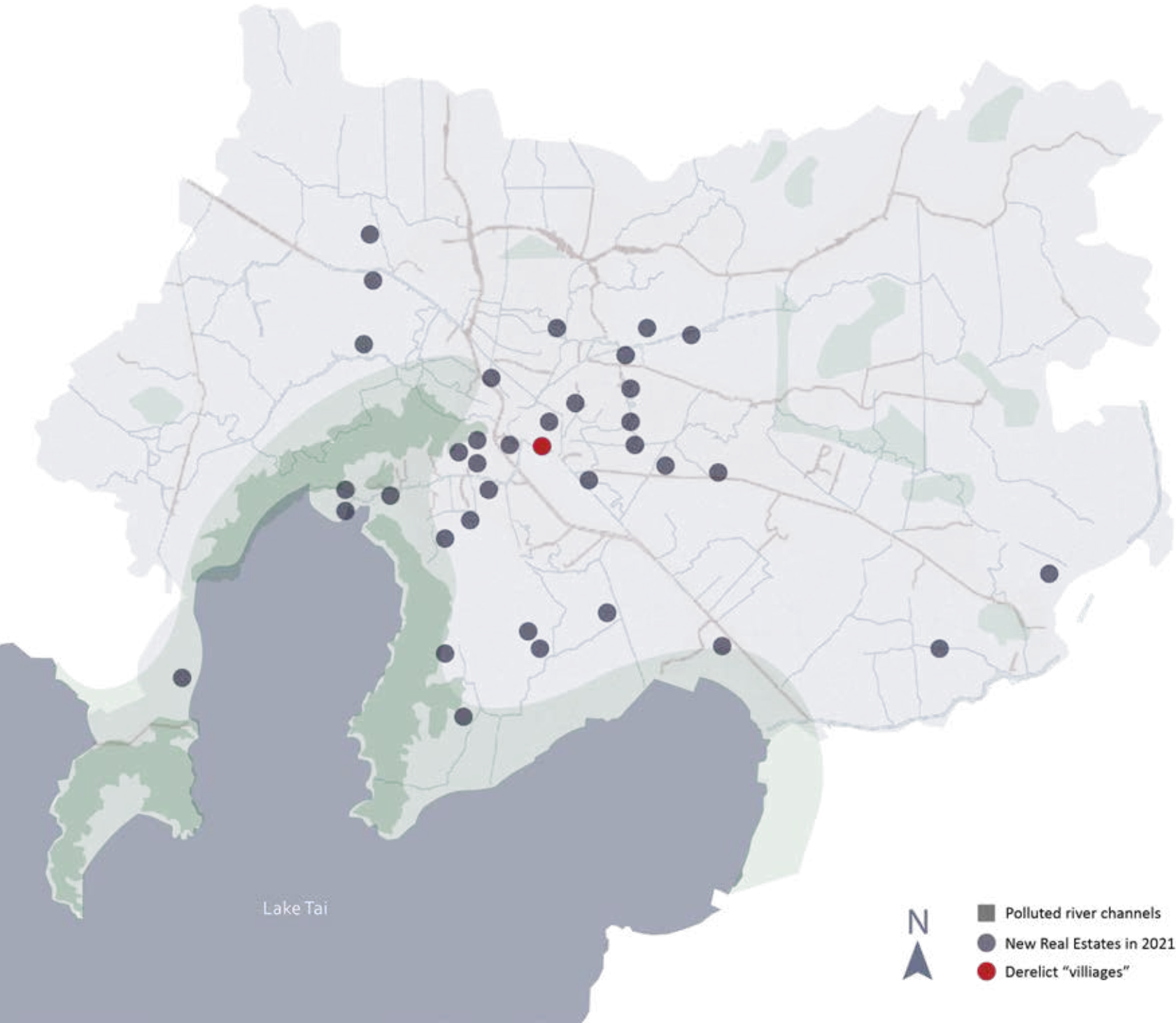


Although government has realized this issue and been trying to rebuild a “Shan-shui” city, which means the natural city, they have focused on developing the profitable tourist projects. In the urban area, they turned traditional buildings into shopping area. In the landscape area, they build new tourist town with buildings constructed in the traditional style. This has also isolated the urban zones and landscape zones, as well as cut off citizens’ daily access to natural areas.



In the plan of building the shanshui city, For the next decade, the government is planning on dividing the urban area into zones based on their different functions.

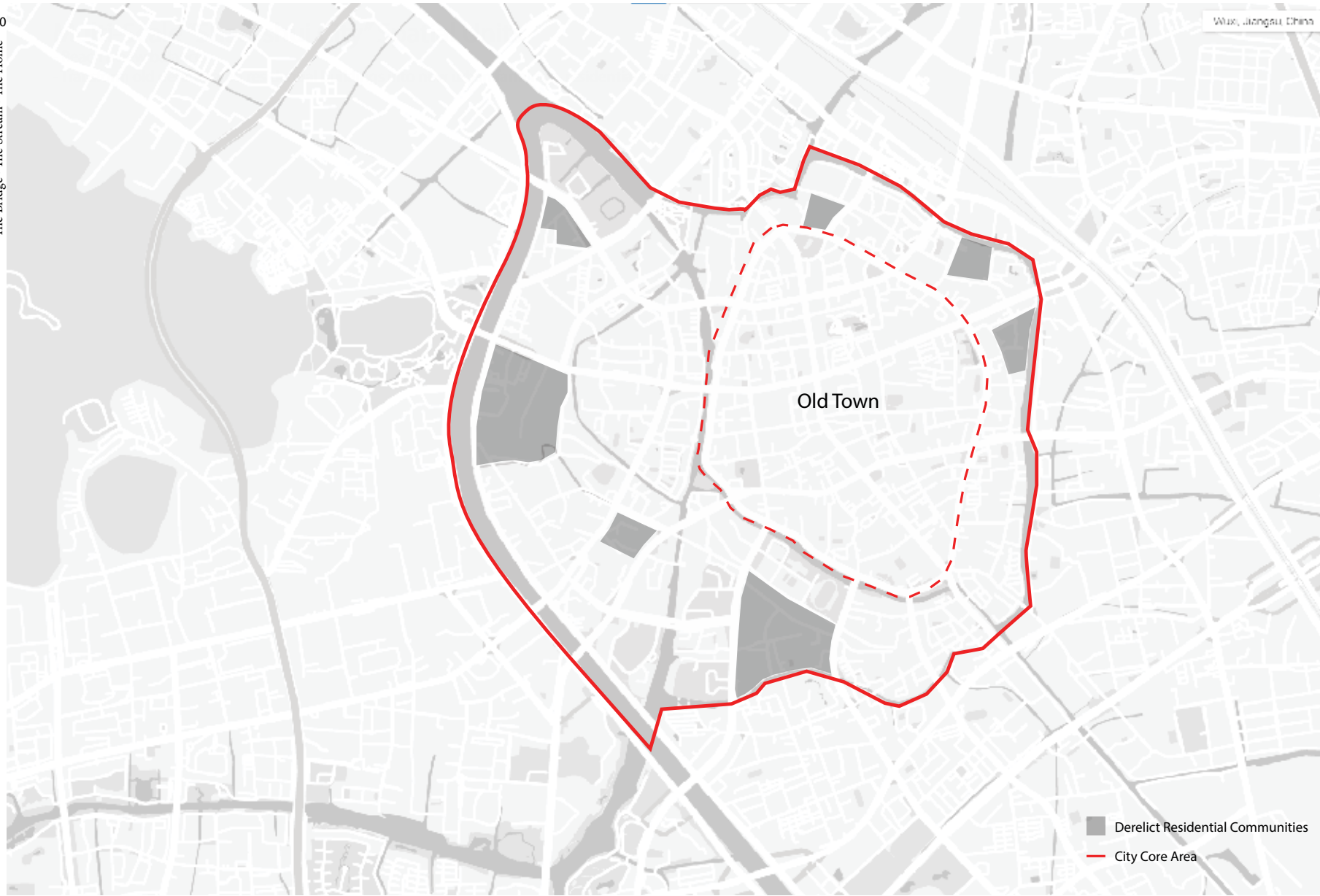
The urban planning decisions also include plugging in green corridors along the existing major rivers that have no interaction with the existing or the future urban zoning. Thus, natural elements have still not integrated with citizens' daily urban life in this plan.



The future urban plan also does not address the current overdevelopment and underdevelopment issues in the residential area. There are plenty of residential communities newly built every year with duplicated high rises and small scale landscape design as a kitsch. The layout of the area around has no hierarchy changes but only wide main roads. Thus, there is less communal space and less social activities happen between residents.



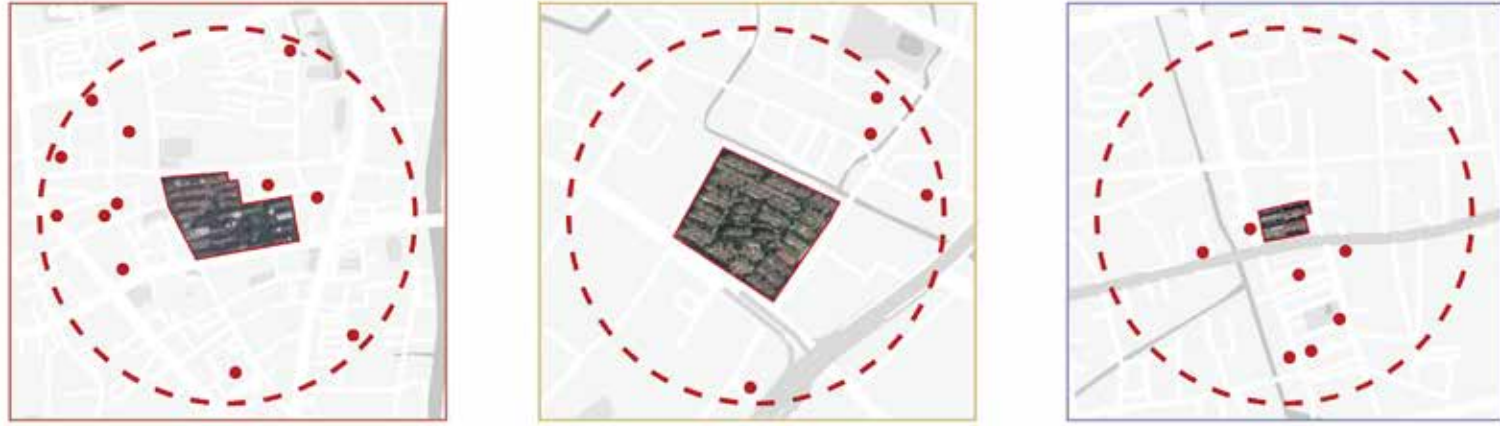




Meanwhile, there are also old derelict neighborhoods abandoned at the core area of Wuxi. These low-density underdevelopment areas have richer spatial hierarchy. Smaller scale space gives a more intimate atmosphere that allows residents to interact with each other like the traditional lifestyle. However, the living condition is severe for ppl to continue living there. And the low-density housing does not meet the population needs nowadays anymore.

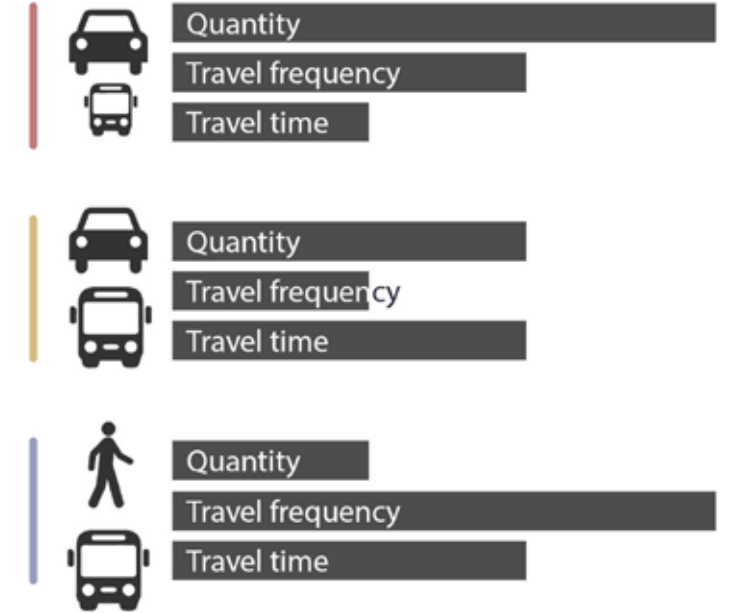




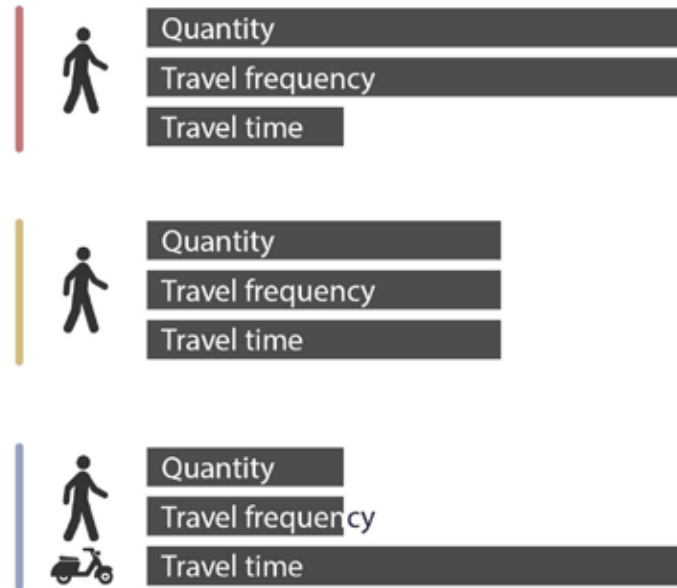


Within 500m range

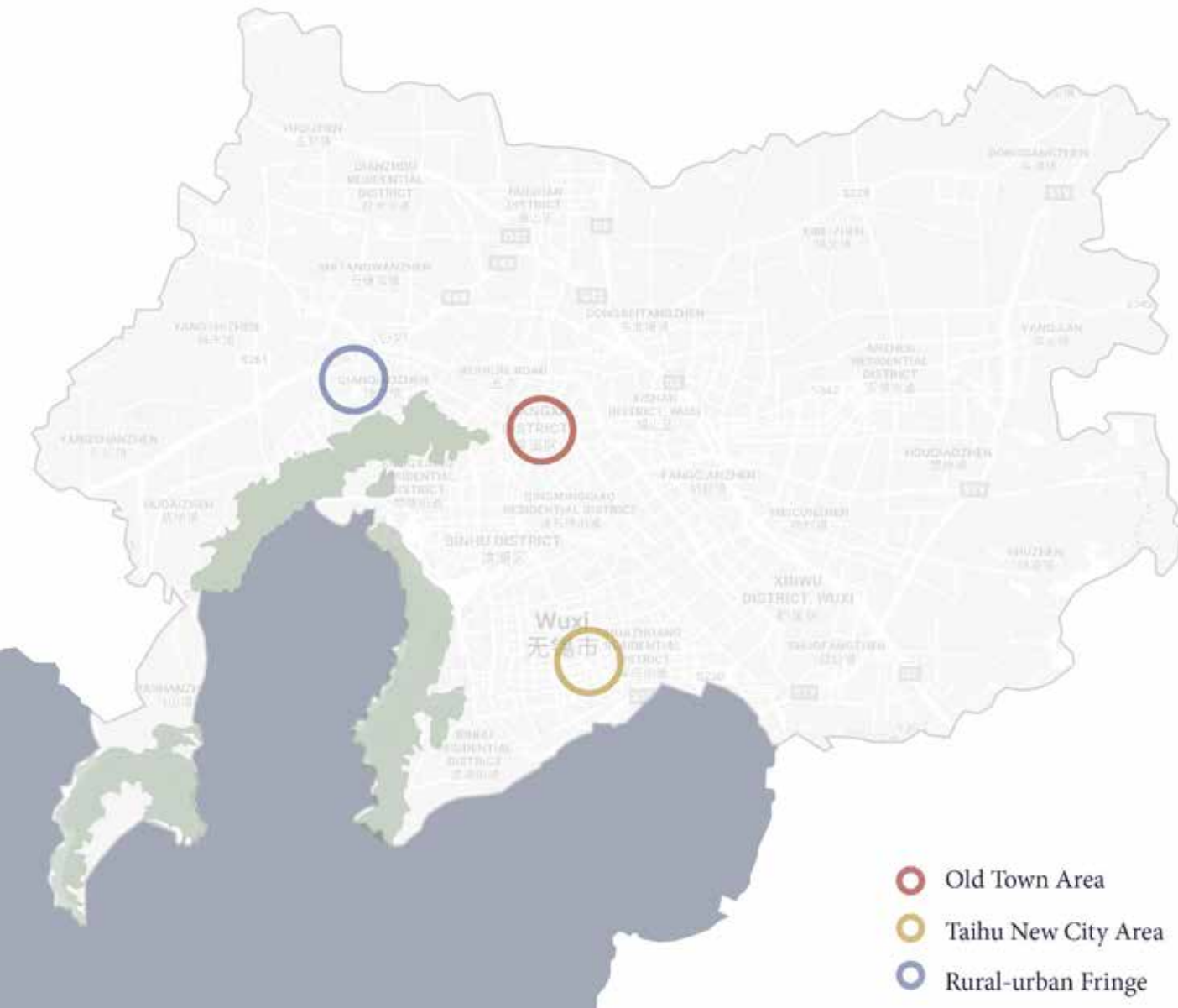
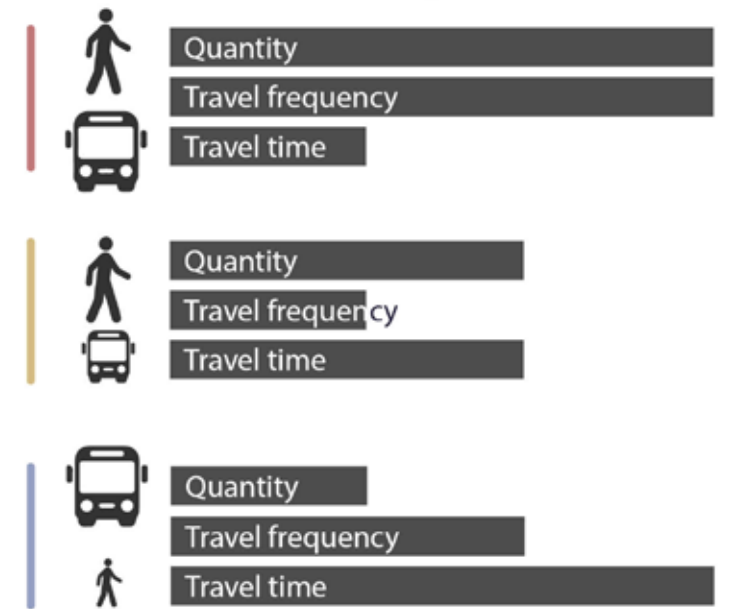
Commercial Facilities



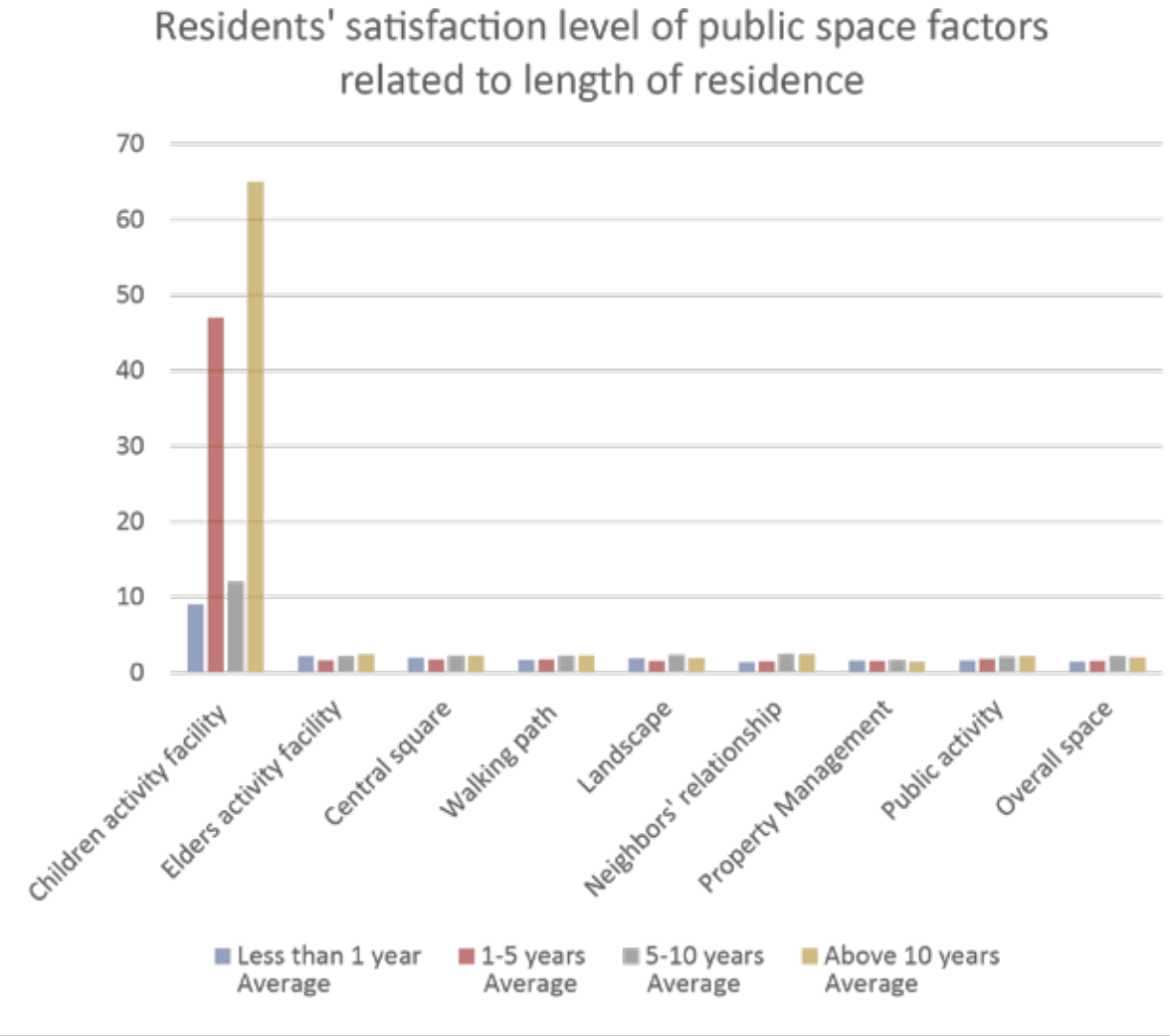
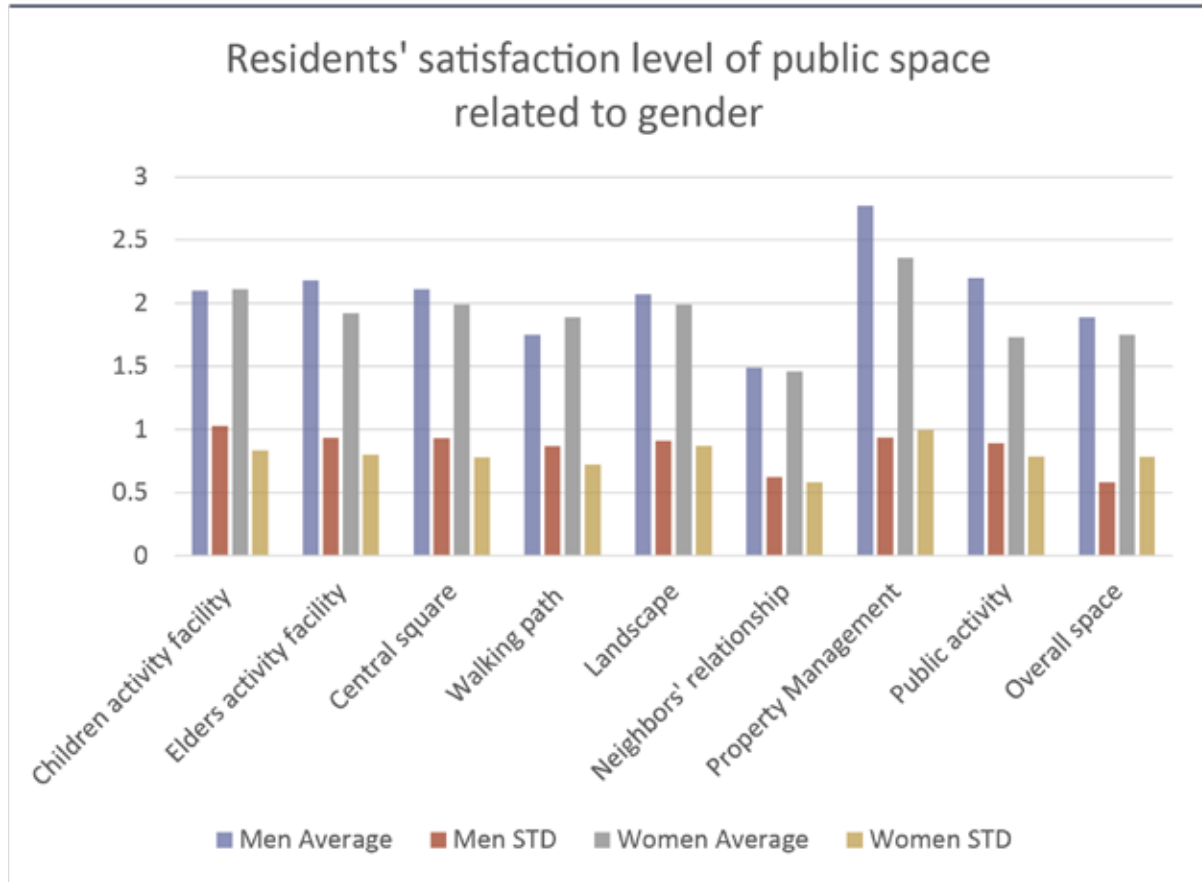
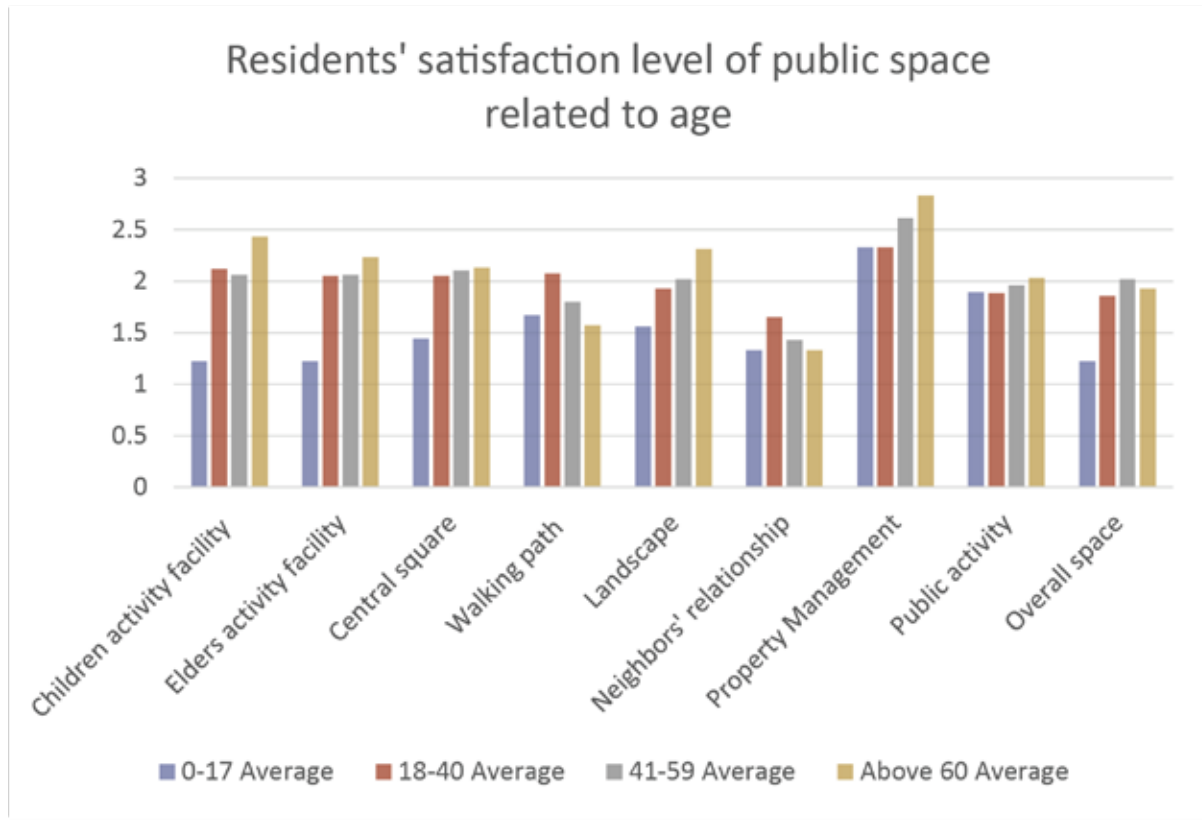
Food Market



Cultural and Entertaining Facilities

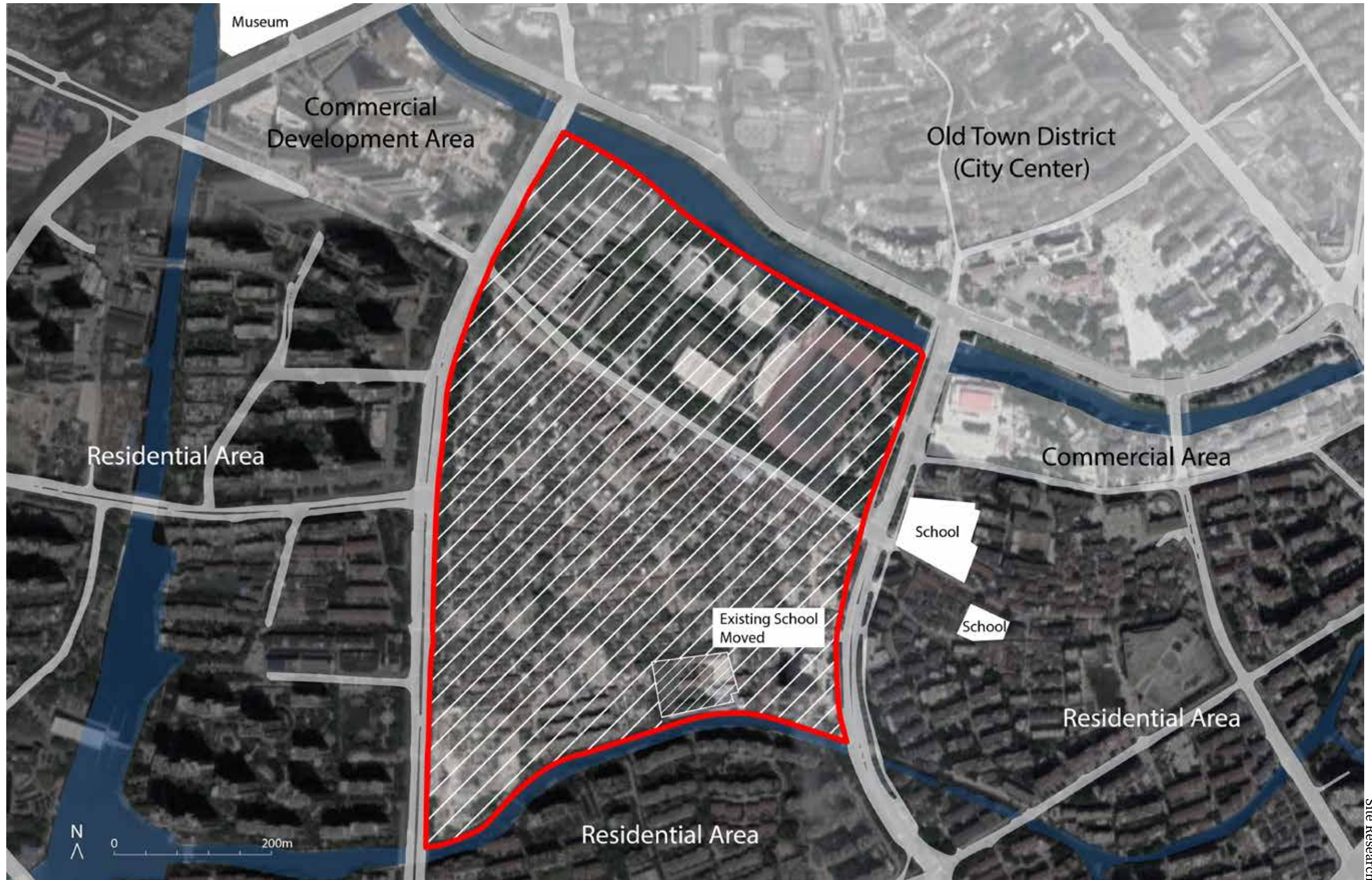


- Old Town Area
- Taihu New City Area
- Rural-urban Fringe

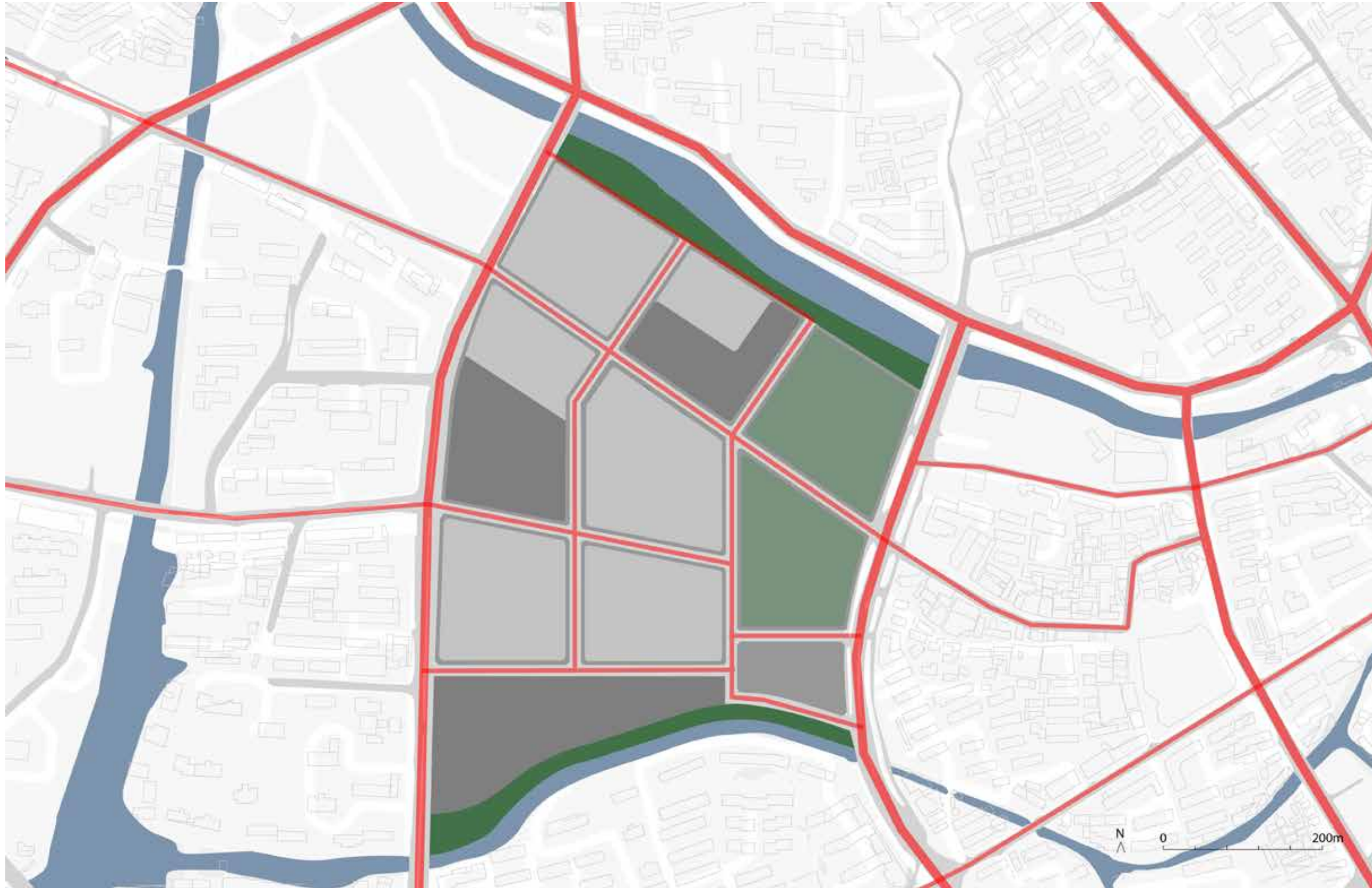


These charts showing the resident's satisfaction level of the public space and facilities based on their age, gender and length of residence. The conclusion is the residents are in need of safe communal space and facilities for children and elders. They also need better designed walking system for exercise and transportation purpose.



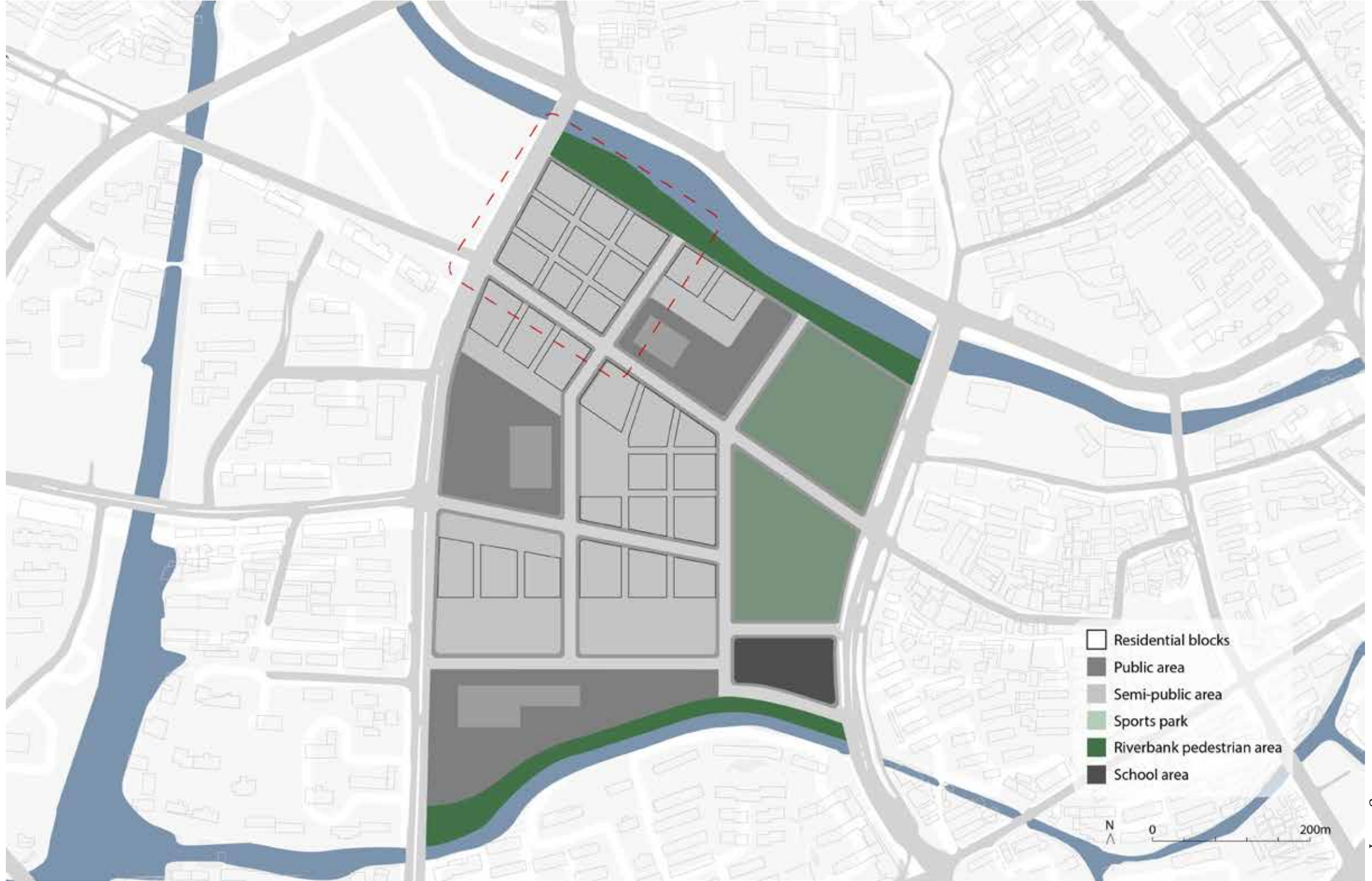


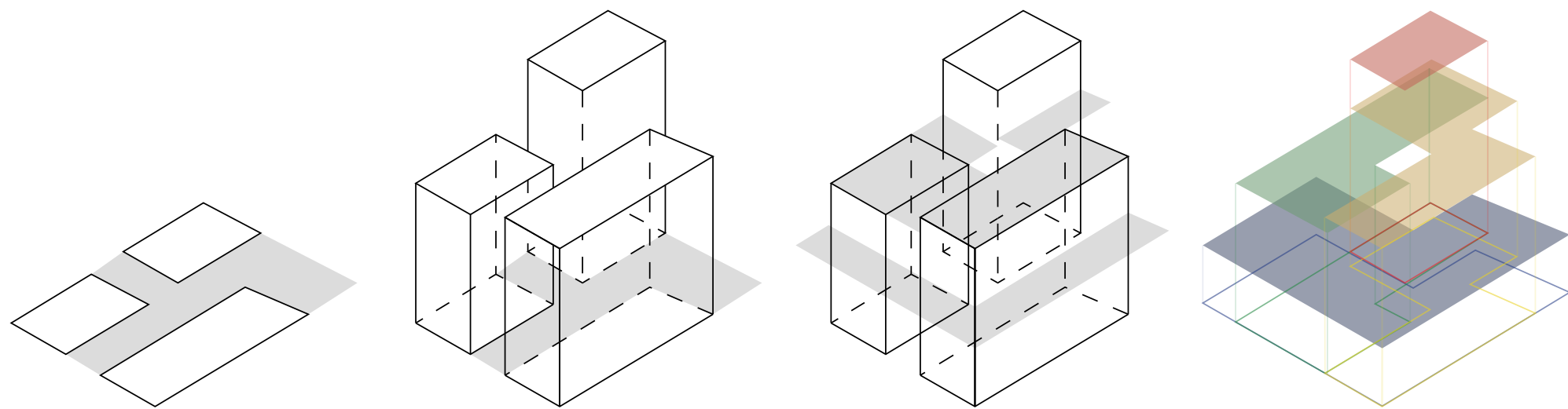
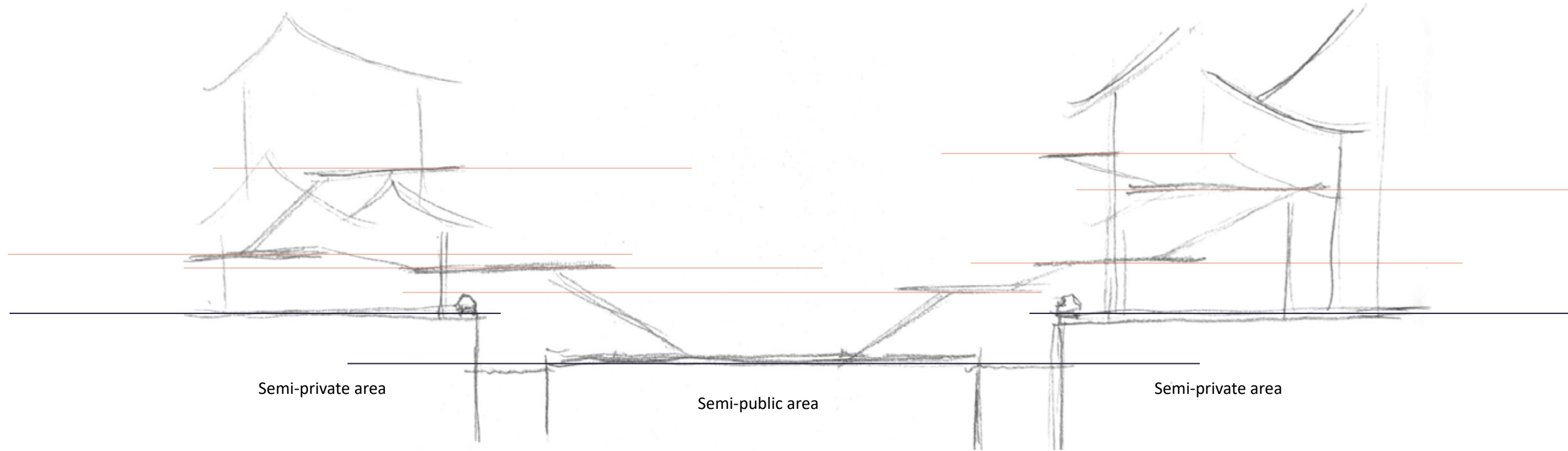




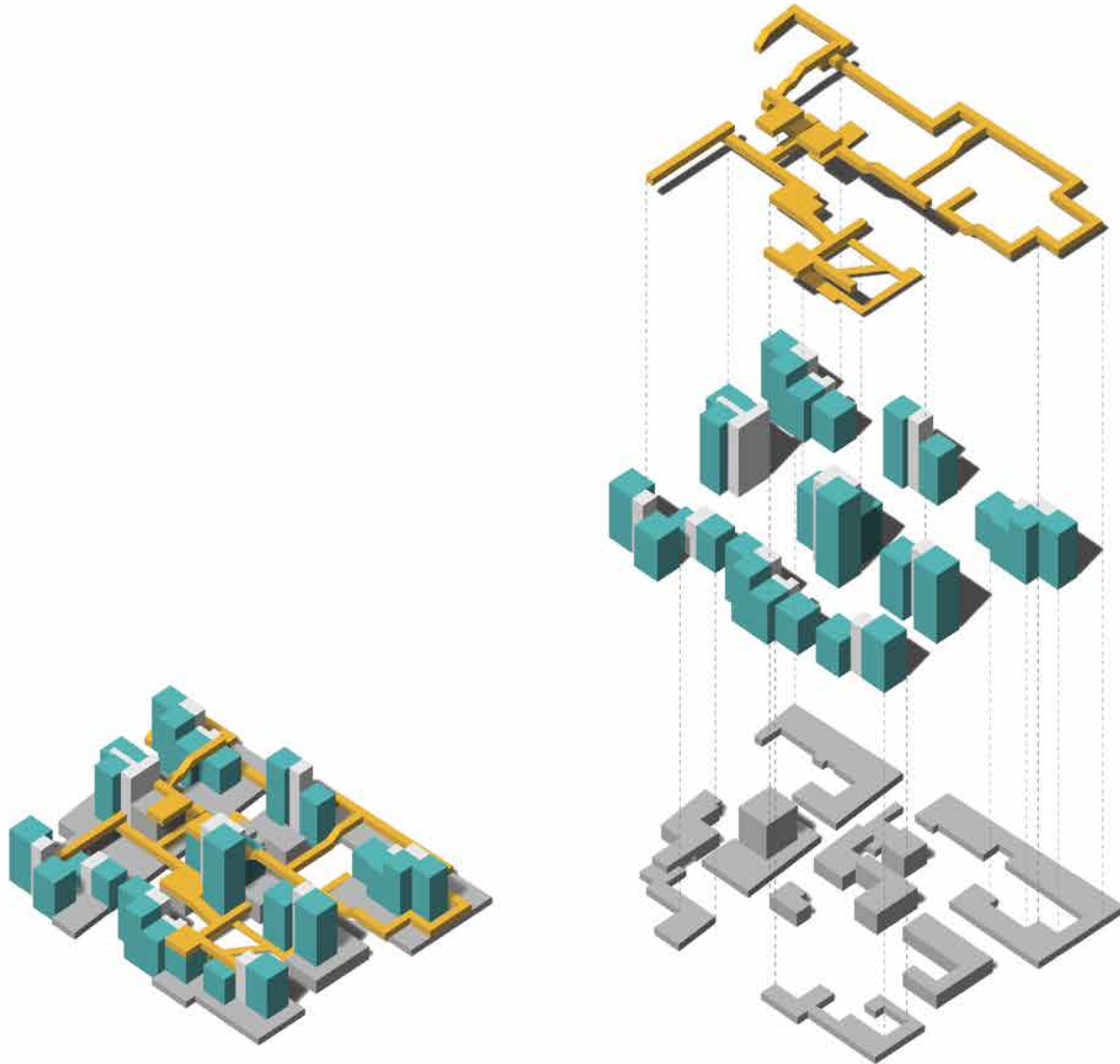
Since the existing houses are heavily damaged and have no value for preservation, this design proposal tears down the entire area to build a new diverse residential neighborhood for 3000 households. The masterplan is redesigned to open up the area to the public.

Spatial hierarchy is introduced to the area, from public to semi-public area, to more semi-private and private residential blocks. This design proposal is focusing on designing one of the residential blocks in detail.





In this new scenario, the standard high-rise residential area's spatial and structural layout is redesigned for mix-used purposes. The highrises have the common issue of lacking communal space. And theoretically the meaningful interaction can only happen between ground floor and first four floor. Therefore, the early stage concept is adding more communal platform space and bridges every three or four floors to create shared "backyards" where the residents from different households can have meaningful interactions close to their private space. And these will be a semi-private and safe space.



Semi-private

Transitional Space / Communal Space
(Veranda / Bridge / Platform / Community Gardening)

Private

Residential Space
(1 Bedroom, 2 Bedroom, 3 Bedroom)

Public

(Community Center, Commercial Facilities)



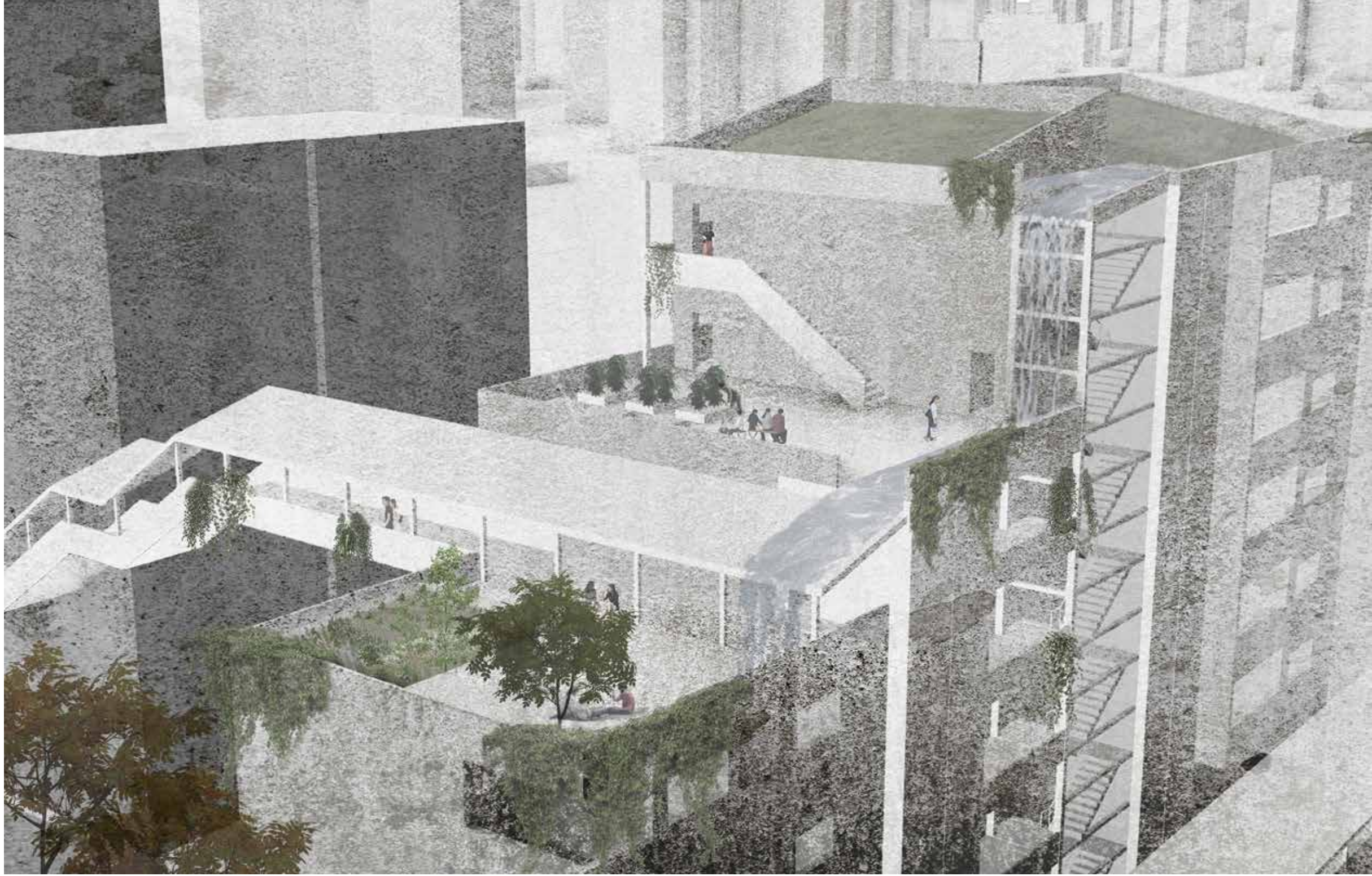












Conclusion

This design proposal is not only designing the residential buildings but also an alternative lifestyle where the traditional living and social styles are adopted to the contemporary settings that increase the urban vitality.

It raises the question of rethinking what role nature could play in contemporary urban life in China. For contemporary urban development, which is controlled by the government, the historical “Shan-shui” concept becomes a cliché metaphor and represented as the rapidly developed landscape tourist programs. Meanwhile, this design proposal proposes a way to integrate nature into people’s lives much more functionally and spatially. However, here come more questions. Is it possible to do such a development anywhere in China? Can we separate this historical and natural concept from contemporary politics? Is this a Chinese problem or it is a globalization problem? What could “Shan-shui” city look like in the future? These are the questions worth us, the designers, consider in the long term.