

How Should We Live:

An Alternative Process of Land Development for Chinese Villages

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

A class of migrant workers in China that have left their official rural residence in search of work and wealth in the more developed coastal cities have created a new process of urbanization. The 'floating population' numbering 150 million has created immense demand for low-cost housing. Village enterprises within the city region of expanding metropolises have self-organized to supply affordable housing.

However, economic incentives and ownership constraints on rural land deter long-term considerations and favour rapid development. The building (and destruction) of a country cannot be recklessly left to coincidental solutions of profit opportunities in remnant policies. An understanding of the systemic political, economic and social properties that generate the built fabric of today and of traditional villages can allow us to manipulate the current process of development.

The village of Zhangpeng in Dongguan city of the Pearl River Delta region is on the brink of explosive growth. Major infrastructural developments have been constructed and planned on its expropriated lands. Without proper guidance, the status quo process of urbanization will destroy the village overnight.

The proposed alternative is to manipulate market-demand through village-led investment in its public space network in order to spur private development of village properties. The method is through strategic and incremental investment on village public space and property and monitoring the catalytic effect of these changes on private redevelopment. Adjustments in land development is made to steer the built fabric into a form between what the village wants it to become and what it has the propensity to be. The aim is to create a system of land development that will preserve, adapt and extend traditional village fabric and its way of life.

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Sincerely grateful to my committee members:

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Dedication

To my family.

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Foreword

In the visits back to my home village, seeing and talking to relatives and other villagers have always left a feeling of helplessness and a sense of their apathy to life. When I asked what problems they had in the village and what could be done to improve their lives it was difficult for them to suggest any possibilities. And when I tell people in China my thesis is on village redevelopment, I hear in reply scoffs in dismissal.

Many Chinese accept that there is no life and future in the village. The society sees peasants as the lowest social class of people. (fig.1) Why does Chinese society hold such disdain and bias towards anything rural? For one, it reminds them of their bitter agrarian past during the era of feudal landownership and of the Great famine under Mao's reign. Experience has told the Chinese people to stay away from a life in the village because they say, "It can only lead to poverty."

But the other reason why the Chinese see no future for rural life is very real. Rural citizens are given a small piece of land to live and farm on. This land is enough for life at a level a little above subsistence. Their land is forbidden to be sold or used for non-agricultural purposes. Without much choice in the village villagers leave to look for life away from the hardship and poverty of farming.

Rural land's past failures and present restrictions disallow any real form of development in rural China. The loss of empowerment both psychological and institutionalized into legal restrictions create a condition of stagnation creating an attitude of exploitation of rural resources by local governments, developers and even villagers that is harming the economy and, more importantly, destructive to the Chinese society. This closed system of land development is reaching a catastrophic tipping point. At stake is the country's development of its economy and its people.


The thesis title, "How Should We Live," references a new paradigm of life where the opportunity and choice to develop is a possibility. The "rural" in China will no longer be seen as the dead-end of society. Instead, it will propose a new way of life that marries the heritage of villages with modern living that contributes an alternative answer to the question, "How to live the Chinese Goodlife?"

Class Structure

by status as adapted by the Chinese Academy of Social Sciences 2004

- 1 State and society leaders
- 2 CEOs
- 3 Entrepreneurs
- 4 Professionals
- 5 Clerks
- 6 Shopkeepers
- 7 Commercial services staff
- 8 Industrial workers
- 9 Agricultural workers
- 10 Non-employed, unemployed, semi-employed

Fig. 1. Class structure in China.



An unfamiliar past:

shrimp galaxy

My grandfather told me about the time when he was young. How before dinner time, he would take a small wicker basket to the riverbanks of the rice paddies and fish out shrimp by hand to make up a meal.

One night, him and his cousin noticed tens of thousands of glowing dots surfacing in the river. They were the beady reflective eyes of the millions of shrimp spawning. They quickly fetched a raft and jumped into the water to scoop out the shrimp onto the raft, there were so many the raft sunk!

I don't know where the shrimp I buy from the market comes from.

Introduction

Despite China's economic ascendance to become the world's second largest economy from a largely agrarian nation merely thirty years ago, it retained remnant institutions from a pre-reform era that is proving destructive to China's long-term social and economic development.

The institution of urban versus rural status of land and citizenship was an organization of a socialist past when rural commune units were responsible for producing food for the country. But today, this dual-status distinction delimits the rights and opportunities for all Chinese citizens. One unequal right is the ability for rural citizens to develop and sell their property.

Rural citizens are entitled to land in their villages of birth for subsistence and for the construction of their village homes. But a limitation is tacked on which bars any villager holding such property from transferring its ownership outside of the village and from using said properties for purposes other than agricultural. This has resounding consequences for the system of social and economic development in rural and greater China.

The choice in livelihoods for a rural villager who wishes to stay in the village is one of near-subsistence farming as their allocated farmland is restricted from other uses and barred from sale or lease. He must leave the village with their young and old behind to look for work in cities. The village itself is devoid of youth and life. Remote villages across China inevitably become economically and socially lifeless.

In villages within the circle of economic influence of cities, the rural villager may ignore restrictions and illegally redevelop their village lots. They build multi-storey concrete blocks in the restricted footprint of their traditional village homes to maximize building area in order to lease them as rental housing for Chinese migrant workers. The redevelopments extrude up and extend out over the pedestrian alleyways below, inches from butting right up against one another. The original low-rise village becomes a massive housing slum without access to light and air with the original village fabric decimated by these developments.

Traditional villages are exploited because the non-transferability of rural land discourages the valuation of long-term improvements on village properties. Villagers have little use for a home title when it is not recognized as having value other than the utility of shelter. Any investment on a property cannot be appraised, appreciated and valued. There is no incentive to invest in the village's future. The problem of rural development comes down to this: there is no mechanism for urban development.

The thesis proposes to introduce a new process of development that manages and manipulates development forces in order to preserve, adapt and extend traditional village fabric. To create a socially and spatially integrated living environment in the context of the rural village that provides a true alternative to the dominant form of life.

The inability to invest in the villages' future creates the perception that any development is short-term and disposable. There can never be capital to revitalize

the village if village property cannot be valued in a transaction. In this case, village life will always be perceived as the dead-ends of society. It is this perception that this thesis proposes to change.

It will demonstrate that a institutionally guided bottom-up transformation of the village can integrate classes and create a quality living and working environment while preserving the village from damaging development processes.

This thesis proposes to achieve this by creating the conditions for natural socio-economic growth. The ownership use-rights of village properties are proposed to be freely traded. With anyone owning or buying individual property in the village becoming an owner as well as shareholder of the village co-operative.

The village co-op relates all shareholders to the interest of the entire village. Free capitalism is not believed to be the only requisite in generating positive, sustainable development in the village. The right environment has be encouraged to grow by guidelines set by the co-op and applied to all village shareholders.

With this system of private ownership and public guidance the design will demonstrate how physical and organizational change in the village will operate through time to create revitalized neighbourhoods from traditional village fabric without compromising but instead adapting and extending traditional village life.

The village of Zhangpeng is in the region of the Pearl River Delta and will be used as the site for this proposal. It has been sheltered from the destructive effects of rapid growth because of its relative inaccessibility, but recent developments to the infrastructural networks will mean this village can be touched and destroyed by over-development overnight.

This thesis is separated into three parts.

Why is the 'rural' so despised by the current Chinese collective? What place in culture did it hold in the past? What is the rural villages role in the future?

The **first part** introduces the problem with urbanization and land development in China. It describes the current land ownership system in China, how it came to be this way and how it affects the process of building development in China today. It then focuses on the how the current land system is destroying the rural economy and society. Studies on specific phenomenon in China's urbanism spin-off from the rural development issue to show its inter-connectedness.

The **second part** is a historical, cultural and ecological holarchic study on how Chinese villages in southern China came to be what they are. To understand and better appreciate the agricultural heritage of Chinese villages and how the traditional world-view belief system influenced the development of modern China. The section will feature the study on the village of Zhangpeng, the design case study of the third section.

The **third and final part** is the thesis design proposal. It describes the precise changes in law and village institution that is required to create the proposed new process of development. We will apply the proposed institutional changes to the current village of Zhangpeng to illustrate how the village will change physically, through time. It will be described by text, diagrams and maps as well as time-elapse renderings.

PART I - PRESENT: DESTRUCTION BY DEVELOPMENT

The first part of the thesis illustrates the power and pervasiveness of the market to distort anything that is exploitable in the economy and in the political system.

Land development at the establishment of the strictly socialist People's Republic of China was centrally planned and controlled. Mass mobilization of peasants was initiated upon single line directives.

Thirty years into the birth of new China, Deng Xiaoping opened up its economy to foreign capital and marketization. Governments and businesses seized upon China's land ownership system where land for development had no inherent capital costs.

Collectively-owned rural land industrialized on converted farmland to become manufacturing hubs of the world. China's cities sprung up on real-estate speculation of land expropriated from village collectives.

The development imbalance towards the export-manufacturing industry and inefficient land use leading to the property bubble came at the expense of destruction to China's villages. The unequal land system allowed the market to take advantage of the rural for the benefit of the urban.

Can China afford to lose its agricultural heritage that half of the population is part of for the sake of wealth and modernization? If not, it needs to come up with an alternative model to the current form of development.

In the following chapter, we will look at how the historical remnants left by the creation of communist China created the system of urban development in process today. We will look at the distinct products of urbanism that the remnant policies have produced as China's economy progressed through marketization. And we will look at the social and cultural effects that this system of urban development has produced.

China's landownership system is separated by rural-urban distinction with the State as the ultimate authority on use of land.

China's current system of urban development is a direct result of its land ownership system. The amassing of state land began during the civil war that established the Communists in control of the People's Republic of China (PRC) founded in 1949. The Communist Party of China (CCP) at the time promised the landless masses the elimination of the feudal landownership system and to redistribute the farmland confiscated from landlords to every peasant tiller in exchange for their support of the Communists to take control of the new nation.

Once new China was established, the Communist Party practiced the socialist public ownership of land. Where tenure of all land in China was by the public by one of two entities; 1) the "whole people" of the Republic and 2) by the collective ownership of the "working people."

1) The whole people of the Republic refers to all the people of the PRC with their representative being the State. The State owns the land of cities and urban areas, known as *state-owned land*.

2) The collective ownership of the working people refers to the rural peasant population and the Communists' promise of distribution of all farmland in China. The whole population of each village became the single entity of the "village collective." This collective became the legal owner of each village's land. All of China's *collectively-owned land* or *rural land* is owned by village collectives.

State-owned land-use rights can be sold to individuals and enterprises in limited term leases for different types of development depending on the land's designation. Collectively-owned rural land, however, is required by law¹ to be used only for agriculture and barred from sale but it is guaranteed a lease in 30-year intervals to villagers born of that village.

The state may also increase its supply of land by expropriation of collectively-owned rural land. State expropriation is written into China's "Land Administration Law" that says the State may, in the interest of the public, lawfully appropriate land for public use. This includes expropriating land for sale of use-rights to private developers.

The State is to compensate village owners on the principle of "ensuring not reducing living standards" of peasants whose land is expropriated. It is required only to compensate on the basis of the land's "original purpose of use," namely, for farming.

Thus, with the State and collectives as the only legal owners of all land in China, the State effectively holds a monopoly on the marketable and tradable supply of land for commercial development. It can also replenish its supply by the expropriation of rural land. This system only works one-way, village collectives cannot expropriate land from the State.

The State used the segregated land system in China to harness rural land and assets to fuel the country's rapid industrialization.

¹ Land Administration Law or Land Reform Act - stating rural land set for agriculture

China's urbanization began in 1979 at the "open door" economic liberalization in which the country had been strictly socialist for thirty years prior. Deng Xiaoping, China's premier at the time, encouraged foreign investment and economic development in the region of the Pearl river delta (PRD) bordering Hong Kong as a testing ground. As a way to increase income to villages, it allowed village collectives there to form profit-seeking companies known as "Township and Village Enterprises (TVEs)."

The collectives took what asset they had available: farmland and cheap labour, and married it with foreign demand for production of cheap consumer goods. From this model and on the collective land of rural villages became the export-led factory floor of the world.

Two characteristics particular to China's land ownership system has made this rapid development possible. The first is the direct ownership of rural land from village collectives, the second is the absolute authority the State has over the use of all land in the country.

Village collectives are empowered with self-governing initiative and power of ownership to use their land for industrial development free-of-charge. Value comes from figuring out how to put it to the most productive use. But township and village enterprises are specifically exempted by the State to use collective land for non-agricultural development.² All other collective land is banned from uses other than farming.

In this way, the State has deliberately allowed rural collectives license to benefit from capital-free rural land in a market driven environment to build a low-cost but low-efficiency industry. This was not so much playing favourites as much as the experimentation for what worked to improve livelihoods in China based on what was existing and available of assets and organizations at the time.

But the selective opening up of communal assets to the market economy has created great social and economic imbalance. Market forces always find a way to exploit an unequal system.

State-owned urban land continued to integrate with the free market while rural China's stagnant land policies became a source of exploitation for the economy.

In the late eighties, the PRD economic testbed allowed the sale of state-owned land to private buyers. Soon after, "State-owned Land Land Use Rights" was written into the 1988 amendment of the national Constitution to be freely traded as a commodity.³ Commercial real-estate development in cities took off with the laying of real-estate property's legal foundation.

Collective rural land on the other hand remained non-tradable. The small parcels of farmland distributed to each village household remained non-tradable and barred from any use other than farming. Although each village household held legal titles to their free allocated housing lots, their ownership remained non-transferable.

² Land Administration Law 43

³ 1988年宪法修正案第2条规定：“任何组织或者个人不得侵占、买卖或者以其他形式非法转让土地。土地的使用权可以依照法律的规定转让。”

The restrictions were meant to protect rural land from entering the market for development and thus threaten the food security of the country, but instead it has left rural China out of the country's market-led development in the past three decades and created a large rift in the equality of wealth and status in Chinese society.

The restrictions on rural property removes the foundations for capitalistic economic development in rural China. The inability to trade ownership of property meant that rural property cannot be measured in monetary terms. Its value lies only in its use. Since the allotted rural assets can only be used for farming and shelter, the rural economy can change little.

But in reality rural land in China has seen even more dramatic changes because these limitations have become loopholes exploited by market forces. The lack of an open market and monetary value on rural land has encouraged governments to expropriate farmland without any measure of true costs.

The country's real estate economy is largely built on the conversion of rural land to urban jurisdiction as urban areas expand by expropriation. It has led to local government corruption and land grabs by developers as rural land expropriated by the State only requires compensation for the value lost to farming. The institution of State expropriation has been taken advantage of by market speculation of real-estate. Under these circumstances, rural China and rural land loses out.

The rural economy and society is exploited by market forces through China's ownership system. The agricultural heritage inherent in the village physical fabric and cultural way of life is destroyed through irreversible and destructive development.

In villages influenced by urban economies across China, a spontaneous and illicit development process is destroying the traditional rural village and its way of life. Seeing the demand from migrant labourers in nearby factories and towns for low-cost housing as the quickest way to increase their rural income, villagers redevelop their traditional houses to maximize rental area.

But redevelopments tend to focus on short-term financial gain at the expense of destruction to the village environment. They are built to six-storeys in height in what was once a one to two-storey fabric, the upper floors cantilever beyond their lot boundaries over the narrow pedestrian-only alleyway below.

The permanent resident population move out as the living environment worsens and the village is replaced by a transient migrant population who see the village as a temporary stepping-stone on their path to their dream home in high-rise flats.

Left vulnerable by restrictions in the land system, market forces takes its toll on rural villages.

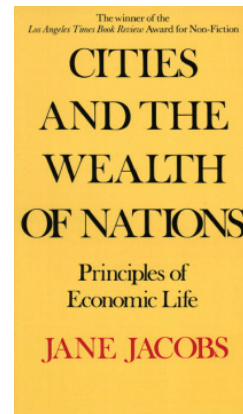


Fig. 2. Jacobs. Cities and the Wealth of Nations.

Jane Jacobs influenced my view on city's as organisms.

A radical reorganization of the understanding in global economics in the spatial context of cities. Chapters on import replacement and supply regions influenced my perspective of Zhangpeng.

The Effect of China's Land System on Rural Development

1. Capital investments based on short-term gains are made on land with a termed lease.

Whereas China's metropolises have secured private property ownership (but not land ownership) by newly written regulations, building developments of village enterprises cannot be privately owned by villagers and are still built upon an expiry date. Besides their land-use rights, their status as rural villagers with claims to a share of land will also expire when they die. In order to pass on the capital investments made on leased land, their descendant heirs will have to be born in the village and continue to hold residency there. **{A} (The binary land and birth registration system - a choice forced to make by rural citizens where rural development loses out.)**

{A}~{G}: Please refer to next section "Current Issues Created by China's Binary Land Development System."

However, the majority of young people move out to cities as soon as they can to work and live. **{B} (The source of China's supply of cheap labour.)** And to be employed in a considerable position, they will also need to transfer their villager status to the city status of their work. The demand from the market for state expropriation of their farmland increases the supply pressure on their land. **{C} (Expropriation and its contribution to the development of China's manufacturing industry and commercial property market.)** These political and social circumstances form a ticking clock that drives villagers to cash out on their village assets at the expense of its future development.

This phenomenon is similar to the one found in the years after the government instituted the household responsibility system. **(D) study: land development in the early PRC** In which agricultural production shot up exponentially as the introduction of farm management at the scale of individual households proved to be more efficient. But after a period of increased yields came a period of stagnation. Because 30-year land-use rights had not been introduced, their land was subject to periodic redistribution. This encouraged over-exploitation rather than capital investment in future productivity.⁴

(photo and diagram study of typical village development process)

2. Overdeveloped migrant housing is extremely capittaly intensive to redevelop.

Like the agricultural exploitation of land, the built capital investments made in these villages responded directly to short-term dominant market forces and disregarded the future consequences of their investment decisions. The villages expropriated farmland to build factories and warehouses and invested heavily on the supportive infrastructure. **(E) study: the factory floor of the world)**

These are attempts to attract the booming manufacturing business into their village. They also leveled large areas of arable land in order to construct housing for the surging migrant population. The result is the loss of arable land and emigration of original villagers. Eventually leading to a complete alteration of traditional village life at the total mercy of market forces. Extending current circumstances, land supply will eventually run out or the existing development will be redeveloped to

⁴ Chen, Wang, and Davis 1998

contain more inhabitants.

But pragmatic return to investment ratios of property development states a three-fold increase in floor-to-area ratio (FAR) from the original development to gain a profitable margin. Typical migrant housing is densely populated with a FAR average of 4. A FAR of 12 will translate into fourteen 30-storey highrise apartments in the constraint of one hectare of land. **(F) study: the dominant form of property development - megablocks)**

Cheap, expansive and densely populated migrant housing developments known as “handshaking” buildings are quick to develop but difficult to redevelop. **(G) study: villages-in-the-city)** The density of the new development requires large capital investment. Demolition of 1 billion RMB’s worth of migrant housing to construct 3 billion RMB’s worth of hypertowers is economically unreasonable. Commonly, overdeveloped migrant housing is likely to fall into disuse and disrepair, its poor living environment corners itself to become dilapidated slums. Although villagers have benefited from the incoming capital and have “broken free” from their rural life, the physical village they have left behind has suffered irreversible and unsustainable development.

However, villages do provide vital and necessary cheap housing, relieving demand pressures from the migrant population. It offers them a viable opportunity to enter the economic ladder. Village housing has always been seen as temporary in relationship to the ambitions of the population.

3. Migrant populations perceive village housing as transitory stepping blocks to the socio-economic ladder.

The following is a typical scenario for someone climbing the socio-economic ladder: Floating migrant arrives city and rents cheap housing in village. He is able to save his earnings due to his low rent and eventually secures a mortgage on a city apartment. The dream is to finally pay off the apartment and move into a single-family villa.

This relentless “upgrading” of lifestyle drives the core of the development process. Yet each of these steps create socially and spatially damaging environments:

Migrant housing over-exploit village land as well as the institution of the village enterprise. It encourages villagers to take advantage of the current market opportunities and they leave behind a defaced village as they leave with their profits and search elsewhere for a new lifestyle.

Middle-class estates usually take the form of mid-rise apartments and highrise residential blocks. They are segregated from the surrounding spatial and social environment by walls and gates. Forming a disintegrated city based upon wealth and class.

Villas are the epitome of wealth and prestige, marking the final ascendance into a western standard of living. Like the suburbs of North America, they are built outside of the city and their alienation requires intensive infrastructural support.

The lack of incentives for villagers to make long-term investments on their village, coupled with profit margin ratios that condemn overdeveloped villages into development dead-ends and the persistent view of migrant housing as temporary, create a process of urbanization that is unsustainable for China and irreversible for Chinese villages.

Current Issues in Land Development Created by China's Binary Land System

China's binary land system has led to a host of economic and social issues. The debate within society is overwhelmingly for reforms because the current system is vulnerable to exploitation by local governments and enterprises and at the mercy of economic forces, causing great social discontent. However the central government is reluctant to ideologically convert "communal" land belonging to communist collectives into private holdings for rural villagers even though they are promised land to the tiller by Mao Zedong.

{A} The binary land and birth registration system.

One's place of birth in China decides whether one is a rural or urban citizen in China's household registration system. Property on urban, state-owned land can be bought by anyone. Use of farmland or housing-base land in rural China however is the reserved right of rural citizens.

But this privilege has restrictions. Besides it being illegal to sell ones' rural holdings, it is, strictly speaking, not allowed for non-agricultural use.

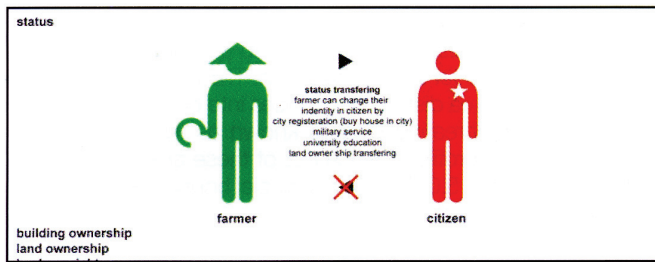
And whereas property on urban land is owned and can be passed on to one's descendants, the use of rural farmland and the ownership of rural buildings cannot be passed on to descendants if they are not born in the same village.

But the crux is that because of all these restrictions on rural development, no one would want to keep a village registration. Many are forced to find a better livelihood as urban citizens.

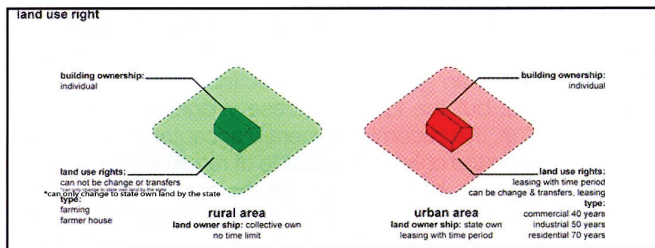
Therefore, rural citizens are first stuck in between the choice to either stay with limited opportunities in the village or take a chance for their child to have a better future by changing to a city registration and forfeiting their rural land privileges.

What happens generally is that the young families by urban registration in the city, leaving their elderly parents as rural citizens to keep possession of the village home.

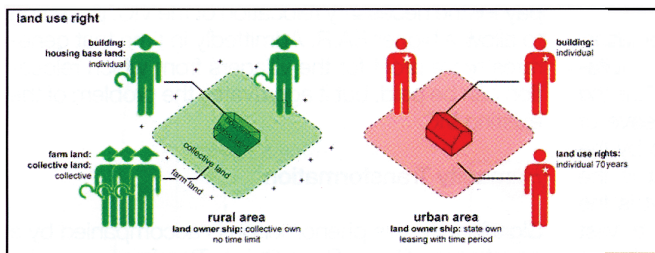
Because the future heirs all look towards life in the city, rural properties are neglected and exploited. And thus we get the villages-in-the-city developments.



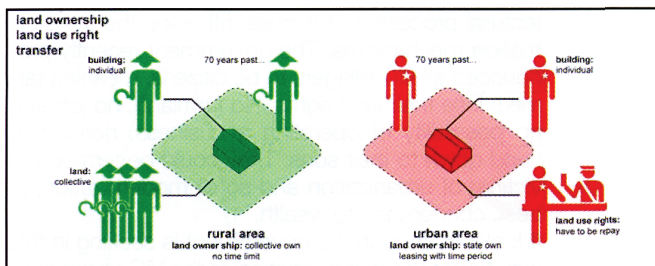
How to change from villager to citizen status: normal farmers are willing to accept citizenship, but the VIC villager is less willing to change.



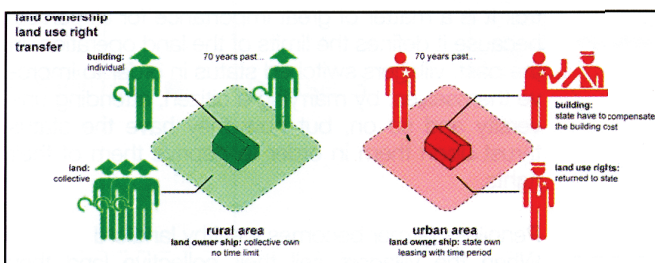
Different time frame for collectively-owned land and state-owned land.



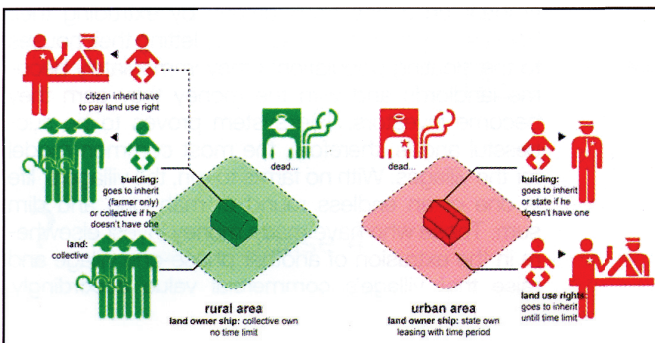
In the rural area, individuals have the right to live on the Housing-Based-Land (HBL), while the collective owns the farmland.



In the urbanized area, if an individual wishes to maintain building ownership after the expiration of the land-use right, he/she must extend this right by paying a new land-use fee.



Otherwise the land-use right will revert to the state (as the original owner) and the state will compensate the building costs.



On the other hand, the farmers' land-use right is automatically extended if that farmer's child is also a farmer. But if the child has citizen status, he/she has to pay a land-use right fee.

Fig. 3. Ownership differences between rural and urban land. Uehara, *Urbanism of victims*, 56.

{B} The source of China's supply of cheap labour.

The creation of this massive demographic can also be attributed to rural land policy.

Most migrant labourers are from villages in the interior provinces of China. They are entitled to farmland in their respective villages but are bound by the rule that prohibits them from using their farmland for any other means. Hence, they must leave their village to search for a higher standard of living if they want more than an income that is slightly above subsistence.

Given the means of land but not the right to develop it as they wish, rural citizens are indirectly forced to look for work in urban areas that receive more development. The massive abundance of the work force keeps their wages low. Rural land policy not only supplies the cheap land for building factories but also the cheap labour to run them.

{C} Expropriation and its contribution to the development of China's manufacturing industry and commercial property market.

China's strict rural land policy that rural land is only for agriculture was broken by the encouragement for village enterprises to develop. Villages, because they had legal ownership, had power to bring rural land in for development. The other entity that could do that was the State, and it is through a process called expropriation.

Land in China has been of two types since the establishment of the People's Republic in 1949. The first type is rural land. Rural land is owned by each respective village collectively and includes all villages of China. This was a promise kept by the Communist Party of China for an equal redistribution of farmland if the peasant farmers supported the establishment of a Communist state.

The other type is urban land. It is officially known as state-owned land because it is, simply, the rest of all Chinese land not of villages owned by the Chinese State.

Today, the land where China's real-estate building boom happens is leased to private entities by the state in 50, 70 or 90-year land use rights (the ultimate ownership belonging to the Communist state). The source of state-owned land of cities was small in pre-reform 1980's. But the government found a way to meet the growing market for commercial real-estate by sourcing land from the countryside.

The State and government may appropriate rural land into state possession and sell it for non-agricultural development. The villages themselves, however, cannot sell their land on their own, except, to the State. Therefore, all land for new development must basically be expropriated from peasant farmland by the State.

The government is legally obliged to compensate peasants merely for the land's lost agricultural income. This has invited government-developer collusion that has fueled the country's rural land disputes.

The government also has full authority to dictate the price, the use and the buyer for each piece of land expropriated. This process does not get any feedback from an open land market, it involves few numbers of actors and stakeholders driven by the motives of the local government and corporate developers.

The Discourse in China...

陈荣文。“生存保障vs资源优化：我国农村宅基地使用权制度的解构与重建。”
(Chen, Rongwen. "Social safety net vs resource optimization: The deconstruction and restructuring of China's system of rural housing land use rights.")

Chen Rongwen points out that the restriction on the transfer of all rural housing property is to protect the social security of shelter in rural China. However, it neglects the villagers the right to further develop their housing property.

He supports continuing to ensure rural housing land for every villager but without restricting the transfer of rural housing.

To achieve this he suggests the creation of a legal framework for the trade and sale of rural housing to allow villagers their developmental rights.

韩松。“论对农村宅基地的管理与《土地管理法》的修改。”
(Han, Song. "Discussion of the management of rural housing-base land in the amendment of the "Land Management Law.")

Other authors such as Han Song believe that the system of rural housing-base land is a social welfare given by the State to rural citizens without compensation and therefore they should not financially gain from it by allowing them to sell it.

徐中伟。“宅基地使用权限制转让对房屋执行的影响。”
(Xu, Zhongwei. "Housing-base land use right restrictions and its effect on housing transfer.")

But authors such as Xu Zhongwei believe there is an inherent contradiction in China's land system and property laws.

From the point of view of the "household registration system," the <Land Management Law> explicitly states only rural members are eligible for housing-base land and he/she may not transfer said property. However the physical building ontop of the housing-base land itself is protected as personal property under the <Property Law>, where personal property includes the owner's right to use and to dispose of said property.

Therefore, this last article brings us back to the point introduced in the first; should we ensure social security and land security at the expense of rural citizens to develop their housing properties?

The result is an exploitation of rural assets that does not reflect the resources true costs leading to the wasteful development of land that can be characterized as Chinese urban sprawl.

The export-manufacturing hinterlands surrounding all major urban settlements in China is the result of rural owners exploiting their own assets. By the time the manufacturing industry was established in China, the Chinese market demanded commercial housing and the Chinese dream home we see in each housing brochure today is the outcome of rural land exploitation by State expropriation for real-estate development.

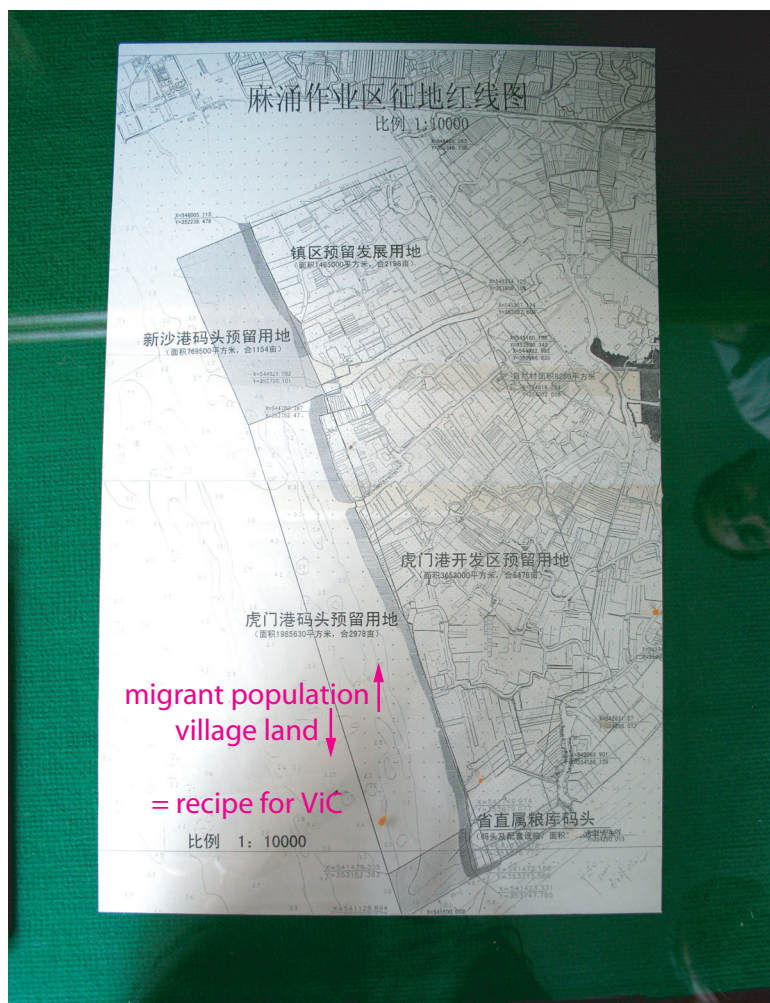


Fig. 4. Expropriation plans of the village of Zhang-peng for the construction of Xinsha container port.

{D} Land development since the beginning of the People's Republic of China. (Fig.5)

Land development in the first three decades of the PRC is characterized by central-planning and top-down directives from the State. State factories in urban areas adhered to the production quotas set by respective tiers of the central government. Construction of structures for production, living quarters and other buildings corresponded to the central government's goals and quotas. The State also set agricultural production quotas for the countryside and the working communes of rural China moved earth and constructed accordingly.

Central planning has allowed great and singular operations to be carried out through mass mobilization. Communal farms, backyard furnaces, large-scale irrigation projects introduced during the Great Leap Forward were very expensive disasters. The Great Leap Forward failed as a plan to utilize China's vast population to transform the country from an agrarian economy to a modern communist society through rapid industrialization and collectivization.

Economic success came in the second half of the PRC's sixty-year history using a similar plan. But this time it liberated its large population and abundance of collective land to industrialize but this time through capitalistic means. This period of development is known as the great "opening up" of China's economy.

The Discourse in China...:

Fewsmith, Joseph. "Tackling the land issue - carefully."

Brings up ownership issue in the Third Plenary of the 17th Central Committee meeting with focus on cadres and peasant contentions over land rights, income gap, urban services not extended to rural migrants; summarizes debate if peasant got rights to sell it will facilitate land concentration, give farmers recompense, encourage flow of farmers to cities, see also importance of ownership: in mortgage rights that may help enliven operations in village or move to city. Clarification of ownership rights also critical in addressing imbalance between cadres and farmers in rural areas.

Summarizes that the Communist government is reluctant to make any major reforms to the land systems because on one hand it wants to ensure farmers of their right to use rural land but on the other it wants to speed up the consolidation of farmland for commercial farming to develop. The author finishes saying that this leaves farmers vulnerable to pressures from local governments and enterprises and economic pressures, but the CCP's announcement that rural land use rights would "not change for a long time" and call for the orderly marketization of rural land use rights may open the way for greater future change.

		SOCIOPOLITICAL EVENT	LAND OWNERSHIP AND MARKET CHARACTERISTICS	
	Before 1949	Imperial and Nationalist China	Private. Accretionary. Oligopolistic.	Land can be privately owned. Over the years, peasants unable to pay government land taxes sold their land and ownership became concentrated to the wealthy landlords. Tenant farmers did not hold means of production and their harvests went to paying rent.
"Mao era"	Oct 1949	Establishment of the People's Republic of China	Public. Redistributive. Socialistic.	Communist government seized land from landowners and redistributed it to erstwhile tenant farmers. The playing field to the means of production was leveled.
	1958-1961	Great Leap Forward	Communal. Collectivized. Command-economy.	Individual parcels of land was collected from farmers and transferred to the ownership of the Commune. Means of agricultural and industrial production was operated by the Commune and production quotas were commanded by the State.
	Early-1961	Great Famine	Communal. De-centralized. Command-economy.	Land was still owned by the Collective but production units were de-collectivized to better manage farming and industrial processes. Farmers and labourers still had to meet State production quotas.
"post-Mao era"	Late-1970	Household-responsibility system	Communal. Tenureship. Marketization.	Land was owned collectively by dismantled Communes (now towns & villages) but was broken up into small lots and leased to individual farming households. Farmers were allowed to marketize their surplus crop.
	Early-1980s	Town and village enterprises	Village land. Privatized assets. Enterprise formation.	Private ownership of productive assets became legal. Towns and villages were encouraged to form into companies to promote self-management.
		Open door policy	Village assets. Foreign capital. Export-economy.	Villages provided land and cheap rural labour, foreign firms provided investment capital, the result is low-cost manufacture of goods exported to the global economy.

Fig. 5. Time-line of land reform and economic system.

{E} The factory floor of the world.

The first and most influential economic development in China was the creation of factories that produced low-cost goods for export. The simple economic model of joining available land and low-cost labour was applied across China as the defacto standard of development, subsequently turning the country into the factory floor of the world. But the conditions that laid China's economic bedrock is attributed to the dependence on its problematic rural land policy.

Rural villages heeded the central party's call to build village enterprises by inviting foreign manufacturers to build factories on their farmland. Since the village collective had ownership of such land, turning it into factory grounds was at no capital cost to the village or to the government.

In the Pearl River Delta area, the initial experimental ground for China's opening-up, cities like Shenzhen, Dongguan, Foshan have expanded by this pattern of growth. Now it is ubiquitous of urban landscapes across China. Yet, the land on which these cities grow belongs to the village.

Studying the developments from aerial photos, the blue corrugated metal roofs of factories can be spotted with ease. The land on which they are built have been parcelled out from rural villages. And nearby, one will always find the nucleus of a traditional rural village.

The factory towns developed quickly and singularly; local authorities pumped money in and offered up land in a rush to build one industry. But like all ecosystems that develop rapidly at the expense of diversity, developmental distortions can build up leading to catastrophic crises.

The 2008 financial crisis revealed the vulnerability of China's export-dependent manufacturing to the consumer confidence and credit of western buyers. Rural towns and villages that gave way to global market demands the most readily have developed into over-specialized factory towns supplying parts for single producers. The local economy and government finances became entirely dependent on these industries.

When work orders stopped, factories went bankrupt along with their suppliers. Whatever economy that trickled down from the migrant workers of the factories to the local towns and villages have evaporated along with their dismissal.

The economic dependence created by the exploitation of village land ownership turned into another problem. When the job security of 200 million migrant labourers is at stake, this becomes more than an economic issue; it threatens the social stability of the nation.



Fig. 6. Socio-economic ladder in China. Uehara, *Urbanism of victims*, 56.



Fig. 7. Landuse in typical rural village: Daluoshu, Dongguan.

1000m

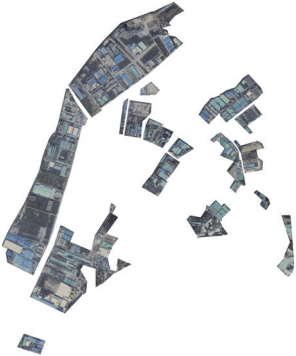


Fig. 8. Factories.



Fig. 9. Farmland.



Fig. 10. Built fabric.

{F} Megablocks: the dominant form of property development.

The government allocation of development land for urbanization has few feedback loops and is driven by the motives of very few actors. This has created inefficient market-dominated forms of urbanism that provide few alternative ways of life and threaten the physical fabric and livelihoods of existing traditional communities.

Chinese cities expand by expropriating rural land from its boundaries to increase the area for urban development. Large scale street grids are overlaid on top of newly acquired land to order new development zones, bring vehicular and utility access, and parcel land for sale to developers. This parceling of ‘megablocks’ has been the mode of urbanization for new cities and the expansion of existing cities across the country.

Although their planned density is not low, their discontinuous location from existing city centers and from each other (segregated by multi lane soviet-style thoroughfares) is equivalent to North American suburban sprawl; requiring intensive infrastructural investment and creating socially and economically disconnected communities.

But whilst there has been a large increase in the number of cities and the size of cities under this type of expansion, the density of them and of existing cities have not changed significantly. Rural regions that have been jurisdictionally swallowed by expanding metropolitan areas have maintained a constant population density and total population over time. This is contrary to the urbanization of other developing countries that experience the building of slums or the densification of old neighbourhoods through room parceling and cramming. Top-down Chinese urbanization is much less organic.

The current system of Chinese urbanism produces homogeneous developments because the process involves a limited number of stakeholders and their motives are purely market-driven.

For one, local governments judged on their performance of economic growth have few incentives to do more than to maximize municipal income by selling land and gaining taxes from developers. Officials auction whole megablocks that see only large corporations as single buyers who are able to afford it.

These circumstances result in the predictable, extruded high-rise residential towers atop commercial podium-blocks that are ubiquitous across China. These block by block developments are isolated from the adjacent megablocks by the city-grid of thoroughfares which bisect them.

But despite their shortcomings, they are still highly sought after because the process of Chinese urbanization produces no alternatives.

The Discourse in China...

项继权。城镇化“中国问题”及其解决之道。
(Xiang, Jiquan. "Urbanization "China problem" and its solutions.")

This article points out that the area of urban jurisdiction expanded faster than growth in urban population between 1999-2007.

It points to the phenomenon that local governments hog land by expropriating surrounding farmland at cut-throat prices from the villages and then sell it to developers for large sums, to fill municipal coffers and usually involving shady transactions between businesses and local government cadres.

Fig. 11. Time-lapse photo of megablock development in Baoan, Shenzhen. *Googlemaps*.

Fig. 12. Typical megablock residential development. High-rise residential towers sit atop a commercial podium. As this rendering tellingly illustrates, they are not designed in relationship with their immediate site or surroundings.



{G} Villages-in-the-city.(VICs)

"Village-in-the-city" is a term given to rural villages that have developed into urbanization anomalies due to China's market forces acting upon the rural villages' particular restrictions.

They occur when ever expanding urban areas grow to engulf rural villages by expropriating all of the village's farmland, leaving only the village's housing and built-up areas such as factories behind.

The residential area of the village also goes through dramatic change. Despite the <Land Management Law> forbidding the non-agricultural use and illegal expansion of rural housing, villagers neglect the law and redevelop their small, traditional village lots into five-six plus storey concrete blocks to take advantage of the large demand for affordable rental housing by migrant workers in the city.

The non-tradability of village buildings has encouraged villagers to exploit and overdevelop their village lots as rental housing, as farmland has all but been expropriated and ceased to be a possible source of income. Because there is no transferable deed to speak of and no effective means of punishment in hard to enforce villages, the villagers become eager to cash-out of their transformed villages. Because it is illegal, there is a pervading attitude of financial exploitation before the authorities decide to catch them. Villagers in these villages would rather move their money into mega-block highrise apartments.

Real estate on state-owned land is considered the only reliable form of property investment in China. The trading of property built on rural land does occur in many of the VICs around Chinese metropolises because of the relatively high price of urban real estate. Even though authorities have not acted to reverse these sales because they recognize the demand in society for cheaper housing, yet the trading of these "minor property rights" is not recognized by Chinese authorities.

What happens to these VICs once they are overbuilt? When the land that the VICs sit on is surrounded by commercial developments of the city and become valuable and attractive enough for redevelopment, it is again expropriated by the government that will bring the final solution. The VICs are demolished and the villagers are compensated then the land converted to state-owned land and sold to developers for commercial development.

In VICs in Guangzhou, these enterprise redeveloped VICs are required in the redevelopment deal to compensate villagers in the form of housing flats on this original land. Plus the commercial developments on such land may continue to bring rental income to the village shareholder collective.

曾雅，许蕾，袁丁。“广州城中村复建成本住宅最低每平米2257元。”南方报业网。
Zeng, Ya, Lei Xu, Ding Yuan. "Guangzhou village-in-city redevelopment cost of residential flats at least 2257 yuan/sqm." Southern media.

Nfmedia, part of the Southern Metropolis Weekly media group reports that the redevelopment cost of clearing old villages-in-the-city in Guangzhou has reached 2257 rmb. The cost of building a residential tower in Guangzhou is generally between 1500-2000 rmb.

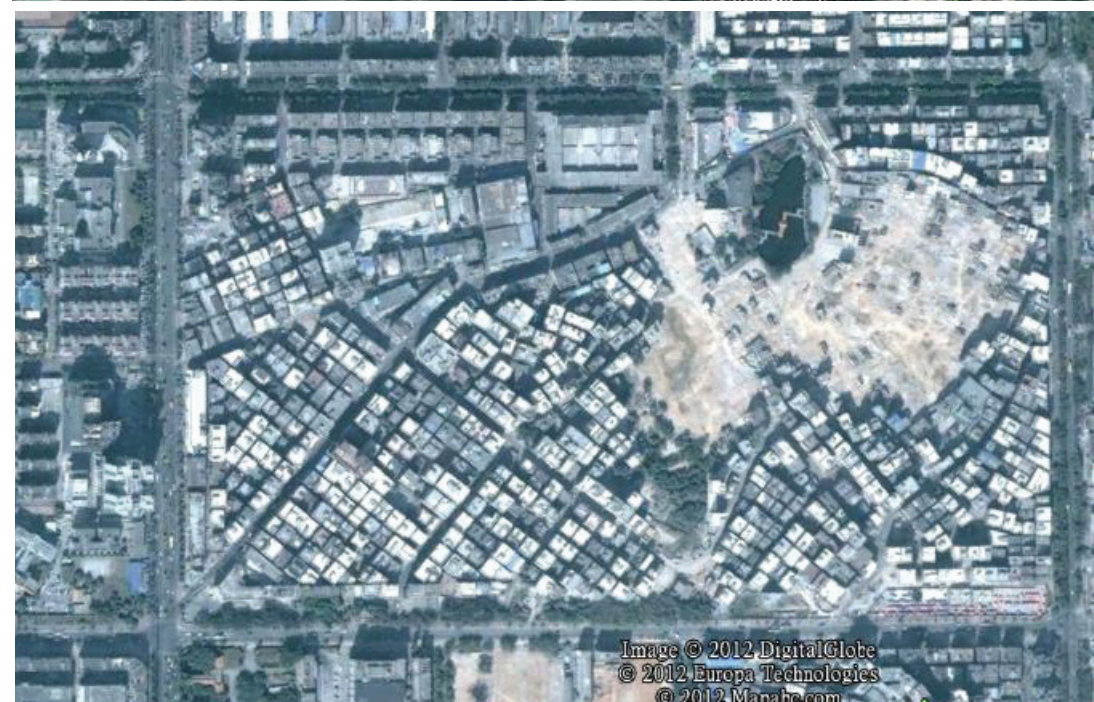
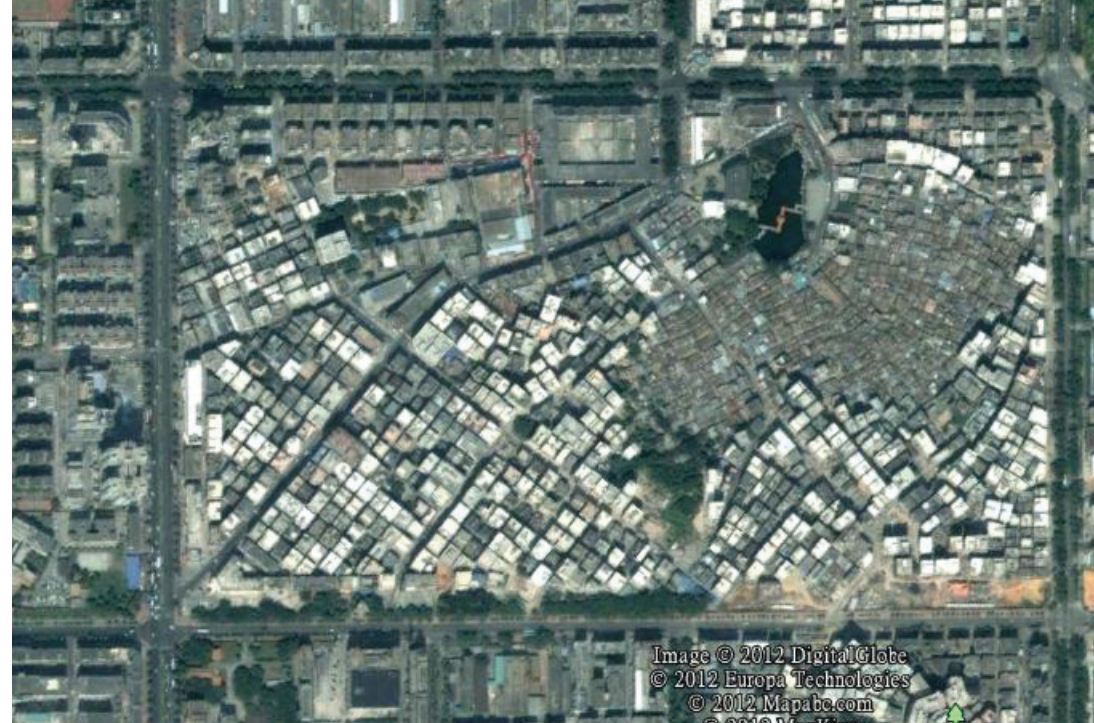
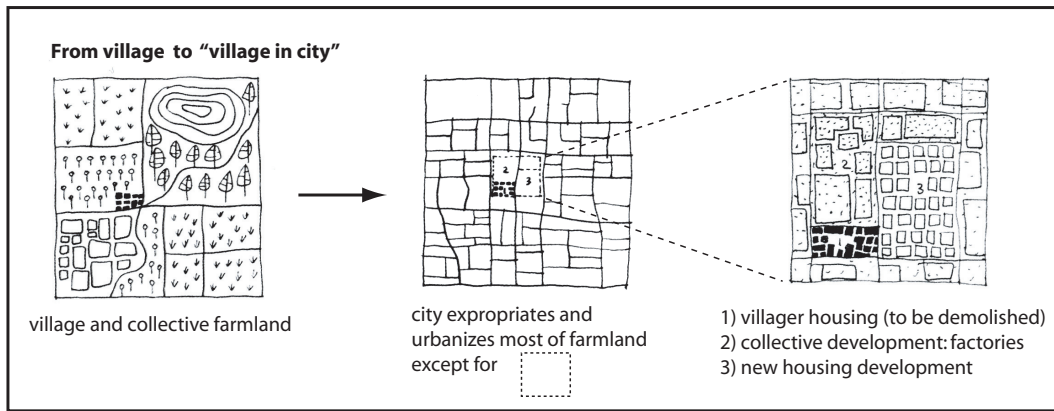


Fig. 13. Time-lapse photo of VIC development in Baoan, Shenzhen. *Googlemaps*. Top image shows the vernacular village surrounded by gridded new housing-base development. Center image shows the vernacular village housing demolished. Bottom image shows manicured urban infrastructure portioning the now sellable and developable land off.

Development Process of "The Village in the City" (ViC)



3) new housing development

- new housing development land divided up amongst villagers
- Shenzhen building code regulates:
 - villager housing lots shall not exceed 100 sqm
 - floor area shall not exceed 240 sqm
 - 8m min spacing between houses front and back
 - 3m min spacing between houses side to side
- therefore in a typical city block of 100 x 100m:
 - 10x10m lots, 8m streets, 80 houses, 4 storeys
 - FAR 1.3
- new village housing, assume 80 households, 5.01 people/hh (2004)
- 400 people/100x100m block

demand driven

- influx of migrant workers drive up demand for low rent housing
- original codes and laws are broken
 - villagers expand houses vertically and horizontally
 - adding, remodeling, reconstructing
 - space between houses are infilled with new buildings
- the current housing conditions of ViC
 - 7-11 storeys
 - 1-3m between buildings
 - FAR 3.5-5.0
- ViC, assume FAR 4.0, 21 sqm/person
- 1900 people/100x100m block

redevelopment dilemma

- problematic issues of these villages have promoted proposals for reconstruction
- city officials favour total demolition
 - completely demolish everything within 100x100m block
 - 100 mil RMB of demolished ViC housing
 - 300 mil RMB reinvested in new highrise housing
- profitable financial returns dictate
 - 3 times floor area of original development
 - FAR 12
- highrise redevelopment, assume FAR 12, 25 sqm/person
- 4800 people/100x100m block

Fig. 14. Development process of ViCs. Urbanus, *Village/City, City/Village*. 2006.

Zhangpeng cannot be too eager to transform into a ViC,
it stands to lose a lot more than it gains.

ViC; A Problematic Neighbourhood

<p>Legal/ Economic</p> <ul style="list-style-type: none"> - no government regulation, approval or planning process - illegal; does not meet building code requirements - property rights not recognized - property rights non-transferable - lease-only; financially high-risk demographic - unsustainable and capital intensive to redevelop <p>Urban</p> <ul style="list-style-type: none"> - fire-fighting inaccessibility - lack of urban infrastructure - high building density - insufficient public space and community services - difficult to make full use of street level commercial space <p>Social</p> <ul style="list-style-type: none"> - class segregation; homogenous low-income, migrant population - lack sense of order and safety - loose reinforcement leads to crime, drugs, prostitution
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Fig. 15. Problems with the villages-in-cities.

The Discourse in China...:

黎云, 陈洋, 李郁。"封闭与开放: 城中村空间解析-以广州市车陂村为例。"
(Li, Yun, Yang Chen, Jun Li. "Closed up and opening out: spatial analysis of villages-in-city- a case study of Chebei village, Guangzhou.")

Clearly illustrates the process of evolution and morphology of the village-in-city phenomenon through the case of Shibe village in Guangzhou city.
It succinctly documents the changes to the traditional morphology of village fabric and the relation of this fabric to traditional village culture.

It presents strategies to improve the spatial quality and integration with surrounding urban fabric of the village-in-city's. It's suggests are not unlike the proposal of this thesis. By opening up open space and circulation in the saturated village fabric and by making its edges more porous and integrated with th

夏璐。从“小产权”看我国《物权法》。”
(Xia, Lu. "Looking at our nation's "minor property rights" from the perspective of the <Property Law>.")

Legal status of "minor property rights," which are basically property rights of housing on village housing base land. The author states that currently "minor property rights" have no legal status. Because only property on state owned land in cities have their full rights clarified under <Property Rights Law>. Minor rights property is not on State-owned land and is not covered under this law, yet, reverse this argument, minor property rights is also not restricted by this law because it is not property on State-owned land.

The Property Rights Law does state clearly that the use of housing-base land is the right of villagers to build housing in the collective land of their village for the purpose of living. The rights to villager housing extends from land belonging to the collective, therefore the rights to develop belong to the collective and not the villager.

The author proposes to acknowledge "minor property rights" by acknowledging villagers of the collective as the owners of housing on collective, housing-base land.

Also, the author suggests to clarify the method of "minor property" transfer, by resembling the property rights on State-owned land; the ownership lies ultimately with the State, but the transfer of property rights on it is allowed, minor property rights similarly can also be traded with ultimate ownership belonging to the Collective.

Part I Summary

China's entire land development system is founded upon the binary separation of rural and urban land. The source of new development land for cities come from rural collective land.

The system of expropriation of rural land does not reflect the fair value of the land leading to exploitation and inefficient development.

On the one hand the system is encouraged to sell over rural land and demolish their traditional villages for urban development. And at the same time new cities are realized based upon ubiquitous, homogenous spatial models that are alienating.

China's land development system is destructive to traditional rural communities and to the social dynamics of new communities (ie: factory town spatial conditions).

Is there room for another way of life besides China's current form of commodification of land?

In the next chapter we will look at the historical and cultural background and makeup to the way of life in traditional rural communities especially in southern China.

PART II - PAST: CHINESE AGRICULTURAL HERITAGE AND THE 'MINGTANG PSYCHOLOGY'

In part one, we looked at the condition that has restricted rural development and induced its exploitation. This condition has created the impression of rural China as the dead-end of society. This cultural attitude is fundamentally damaging to the country's development. How can the country view half its land and people as a source for exploitation?

However, the thesis does not believe in the Chinese village as an idyllic and static prior condition that we should return to in order to solve today's problems. Like the course of greater humanity's development, the Chinese civilization has always moved forward. The landscapes and ecosystems it touched has been permanently and irreversibly altered.

Instead, the thesis believes the cultural world-view that has generated China for the past 5000 years is still the same cultural world-view affecting its development today.

Across China, people still use the ancient practice of fengshui to site their settlements and houses. It is especially popular in the historic and cultural frontier of southern China, otherwise known as Lingnan.



Fig. 16. Etymological regions of China. Zhongguo ke xue yuan, *The National Economic Atlas of China*.

Regions of China

The etymology of major historic region names reflect this sino-centric world view:

中原 (zhongyuan) or "central plain" has always been seen as the center of not just the Chinese world, but all of middle earth.

江南 (jiangnan) or "river south" is used to describe the entire region that references the longest river in China, the Yangtze.

嶺南 (lingnan) or "range south" refers to the territory that is south of the Nanling (南嶺) mountain range that separates the Yangtze Watershed with that of the West River Watershed.

Southern China was the frontier of Han Chinese migration and expansion over centuries during successive Mongol invasions that pushed populations to the south. The Pearl River delta is the hub of economic and cultural activity in southern China today. It is the initial location for the implementation of the 'open door' economic policy that changed the fate of the Chinese economy.

This frontier of China adopted the slogan, "To get rich is glorious," espoused by Deng Xiaoping. And this attitude can be summarized in the microcosm of the ideal model in the practice of fengshui.

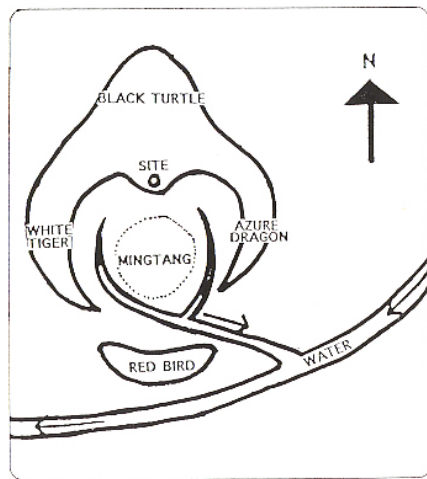


Fig. 17. The ideal fengshui model.

Feuchtwang, "An Anthropological Analysis of Chinese Geomancy. 1974.

In the ideal classical fengshui setup, the settlement is situated on the southward side of a large hill or mountain, protecting it from northerly winds and the historic malice of 'the north'. It is flanked on either side by the ridges of the hill so that it resembles a protective armchair. And within the seat of the armchair at the base of the mountain is the *mingtang* (明堂), the location of the most fertile farmland and the place of bounty.

The Chinese civilization, past and present, has been on a search for this physical and psychological *mingtang*. The model was used to site locations to settle entire clans permanently after migration and now it represents the psychological bounty to the modern Chinese.

The challenge today is to change the cultural attitude of what constitutes the *mingtang*. The deltaic settlements of the past has become the economic centers of bounty today in Beijing, Shanghai and Guangzhou. The land of rice and fish in the villages of these deltas has changed from providing food to supplying cheap labour and expropriated land for economic development.

I think in this light, the scenes of hand-shake buildings in over-exploited villages become comprehensible.

In this chapter, the 'primary elements' of Chinese geography will be presented to illustrate its influence on 'mingtang psychology' and the influence of this culture's world-view on the landscape. These maps are shown at the national and regional scales, XL & L.

Subsequent diagrams and maps at the local scales M & S depict the fundamental aspects of the urban condition today such as natural forms and man-made

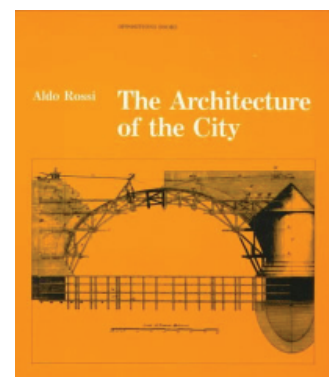


Fig. 18. Rossi, The Architecture of the City.

Aldo Rossi's "primary elements" of a city plan refer to the underlying conditions, natural or man-made, that determine the characteristics and trajectory of its development.

Aldo Rossi, "The Architecture of the City." 1984.

constructions.

In scale XS, the case village of Zhangpeng is presented in different maps that describes the villages physical fabric and infrastructure. The infrastructural connections and building typologies are detailed in diagrams. The villages public space network is analyzed in photos and graphics in order for the viewer to understand this Chinese village spatially.

XL_China

The eco-political centres of Beijing, Shanghai and Hong Kong are the front-offices to each of the three main regions of China that they serve. These regions are watershed areas separated by geographical features within China. The geography has also imprinted its unique cultural views on the Chinese population.

The story of China begins in the lower river valleys of the Yellow River upon the period of rule of the five mythological god-emperors and the birth of the first historical dynasty, the Xia, around 3000BC. Its history is one of a singular culture's expansion and integration of encountered cultures and territories from the initial cradle of Chinese civilization in the Yellow River valley.

The etymology of the three regions trace the general direction of expansion. Today, southern China, particularly Guangdong, is still seen as the frontier of new livelihoods and opportunities.

L_Lingnan

Many believe the recent developmental take-off in the Pearl River Delta was due to a change in economic policy some twenty years ago. However, several occurrences had to happen centuries ago in the Lingnan region for the PRD to become the world's factory floor. Robert Marks in "Tigers, Rice, Silk and Silt" lists these landmarks and their interdependent relationships that make Lingnan region the way it is today.

The first was the construction of the Ling Qu canal that linked the Yangtze river watershed with that of the entire watershed of Lingnan. This marked the beginning of Han Chinese settlement into the Lingnan region.

However, fear and reality of malaria restricted settlement in the drier hills and mountains of northern Lingnan. It was the historically contingent event of the Mongol sacking of the Song capital of Kaifeng in the 12th-century that started a chain reaction of human migration southwards. The invasion pressured the population to abandon fields in northern Lingnan and forced them to settle in the coastal region and deltaic islands. The population developed waterworks that captured the alluvium washed down into the delta and thus created well-irrigated and extremely fertile farmland that is known as the Pearl River Delta. The waterworks allowed the control of water and decreased the chance for

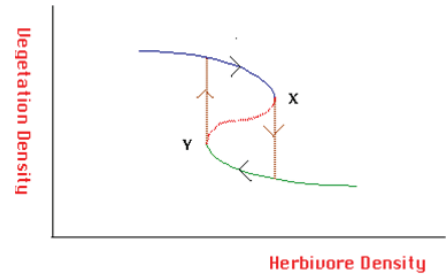


Fig. 19. Self-organizing holarchic open systems: benthic and pelagic attractors in shallow lakes. Kay, *An ecosystem approach*, 731.

Above. As the herbivore population increases, the vegetation is eaten and decreases until the blue line reaches point X. Where the population of the grazing animal crashes because of overgrazing. This crash and subsequent bloom of vegetation are catastrophes inherent in ecosystems.

China's land development system can be viewed in complex ecosystems terms; however with many more variables playing out on the initial restrictions on rural development.

Below. Holling's "figure 8" model of ecosystem dynamics. "This vision of ecosystem behaviour is a richer version than the traditional model of succession to a climax community. It eliminates notion that ecosystem management is about maintaining an ecosystem in a single, stable ,stationary state." - Val Rynnimeri, "ARCH 623: Complex Ecosystems and Design Methodology."

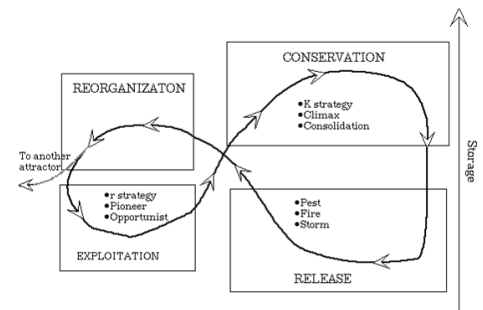
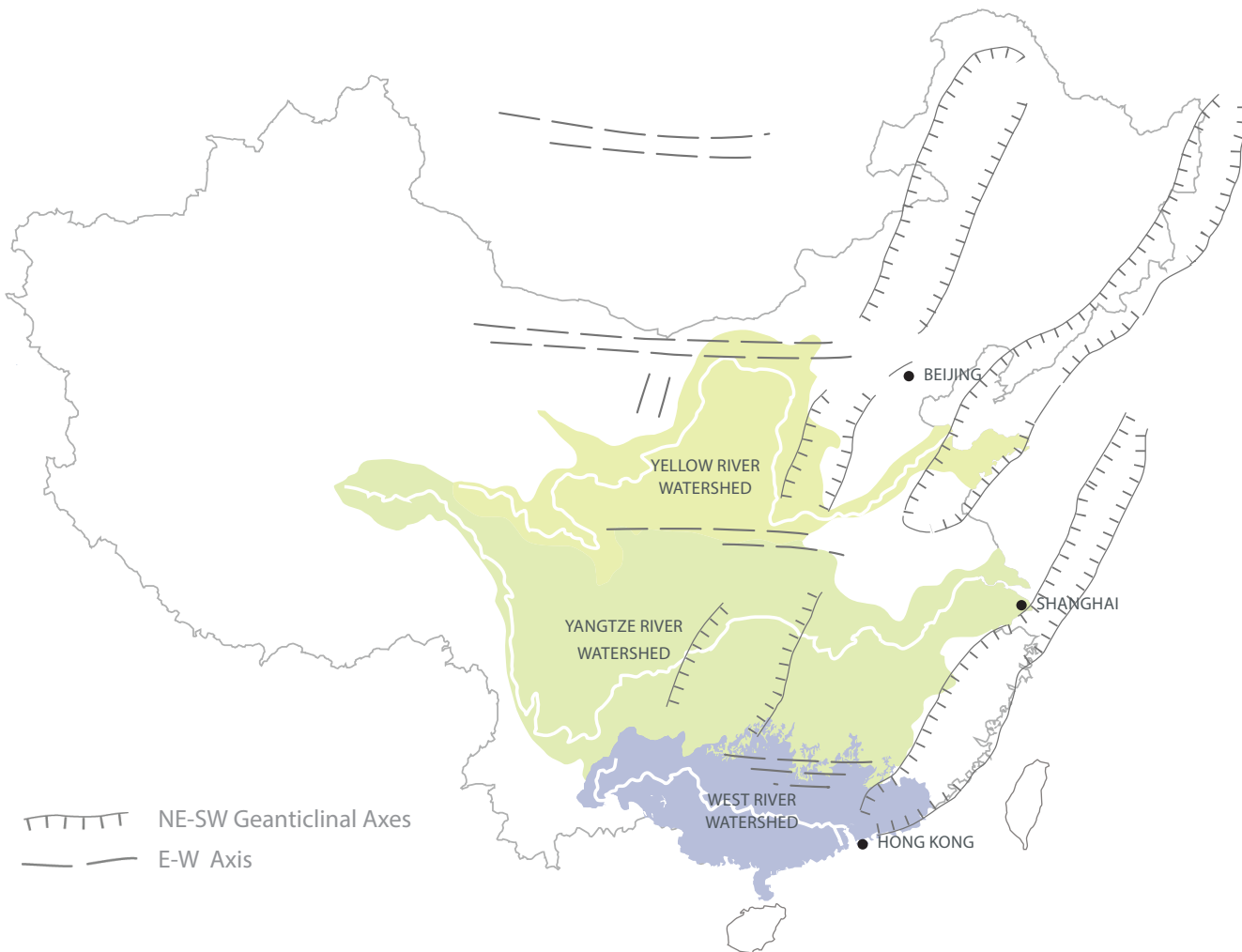


Fig. 20. Holling's figure 8 model of self-organizing ecosystems. Kay, *An ecosystem approach*, 731.



Major Watersheds and Geo-Structural Patterns

Fig. 21. Major watersheds and geo-structural patterns of China.

The geography of China is the result of the intersection between two major sets of structural lines. The geanticlines and geosynclines are a succession of upfolds and downfolds in the earth's mantle. These folds intersect with the less geographically obvious east-west mountain ranges. These mountains create the three major watersheds of China.

The map on the next page locates the specific geographical features.

the spread of malaria, in turn making settlement into this region more attractive.

The third major event was the commercialization of the PRD and Lingnan that began in the mid 16-th century. The creation of new markets turned the farmland in the PRD over to producing cash-crops, such as silk and sugarcane. The PRD turned to the rest of Lingnan, especially Guangxi province, for the supplement of its food supply. This process connected Lingnan into a single market and agro-ecosystem by turning rice grown in the rest of Lingnan into a cash-crop as well. The clearing of forest cover in northern Guangdong and Guangxi province produced ever more alluvium to be eroded into the Pearl river. Most of the land of the Pearl River Delta today is built on alluvium captured by waterworks during the 18th and 19th centuries.

Finally, the destruction of the original ecosystems of Lingnan was the result of the combination of above events. An expanding population and demanding market forced the Qing emperors to reclaim more cultivated land. Deforestation across the entire region permanently altered the natural landscape of Lingnan.

M_Pearl River Delta

The PRD has become one of the world's most important manufacturing hubs in just 25 years of development. Its GDP has grown 17% per annum for the past quarter-century. It accounts for about one-third of China's exports and imports. Two-thirds of the world's toys, 45% of its wristwatches and one-third of its consumer electronics, garments and footwear are made there.

Yet it will not continue to rely as heavily on its manufacturing sector in the future. Wages in the region have risen. Local and foreign firms are looking to expand their supply chains into regions with cheaper labour. A "Pan PRD initiative" will cover the nine southern provinces of China and help spread development from the congested coast to the poorer inland regions. Hong Kong wants to be positioned as the hub of a region of 474m people.

These moves do not necessarily mean the decline of the PRD. They are only signs that the PRD is moving upmarket and aiming for a service economy. The middle-class population is surging. Their expectations and demands on the living environment of the region for their children will intensify.

S_Dongguan & Machong

The village of Zhangpeng is part of the town of Machong. Machong is in turn part of the metro area of Dongguan.

Whereas a large area of Shenzhen was trying to create and maintain an urban centre, Dongguan's villages were free to adopt the most laissez-faire policies in order to aid economic development.

Each of Dongguan's 32 towns and 546 villages tried to lure investors to rent their factories or build on their ex-farmlands. Chang'an, not so long ago, was a village smaller than that of Zhangpeng. Its geographic location and proximity to the planned expressway has made it one of the most productive administrative units of its type in China.

Zhangpeng's relatively remote location in the deltaic lands has left it relatively untouched in the last two decades. But the construction of the Shensha Container Port and Factory Facilities on the banks of the village land will bring dramatic changes to the surrounding area.

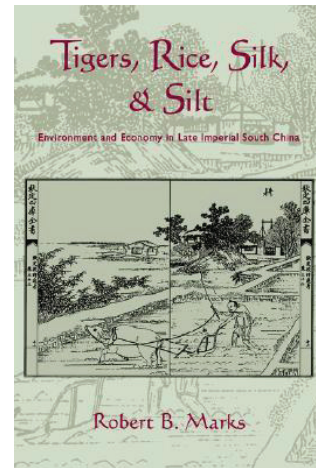


Fig. 22. Marks, *Tigers, Rice, Silk and Silt*. 1998.

With facts and statistics painstakingly compiled from centuries old Chinese gazettiers and other direct sources of information, this book illustrates the interdependence of human activity on the natural ecosystem in the Lingnan region of southern China from the 2nd century to the 1800's.

It provides wide-ranging evidence that the geography and ecosystem of the Pearl River delta and surrounding Lingnan region of today was created by human activity over centuries. That the modern problems in China did not only begin with its opening up. The "mingtang psychology" had been operating from the past until the present.

The new Coastal Expressway will link Hong Kong to its doorstep more readily than before.

XS_Zhangpeng

The built fabric of Zhangpeng and other villages in the region evolved from an agro-economic system of trade and centuries-old traditions and social structures that has networked all of Lingnan into a single market. Zhangpeng exported the cash-crops that it grew and bought what they needed from the rest of Lingnan. Their built environment was relatively compact in order to allot more land for production. The village roads and path possess different spatial qualities and inherently appropriated the level of intimacy to match a diverse range of social interactions. The developments in recent years do not have this gradated spatial aspect; roads became efficient connections to get one from A to B. As in the homogeneous grid of the new villages, and exemplified in the staircase core that characterize new village homes.

The developmental forces that dominate Zhangpeng today are related to the original forces that created the land the village is founded on. Northern migrants centuries ago came to search for new livelihoods and opportunities. They discovered that fertile land can be made by capturing the silt that washed into the delta, and there they settled. Today, local villagers, foreign investors and floating migrants are, again, looking to benefit from this land of bounty.

The village of Zhangpeng has a population of 12,000. But like most other underdeveloped villages, the people of working age move to the nearby towns and cities to look for work. The agricultural productivity of the village is only a fraction of the money villagers working away bring back. The village thus wishes for development by attracting factories to build on their land and workers to rent out their buildings.

The villagers are unconscious of their eagerness to turn their own environment into a factory-floor for the greater economy, nor are they aware that they are inviting the erasure of the village's accumulated knowledge solidified in their built environment.



"Looking North"
View of Jiangxi province
from the Meiling Pass.

Fig. 23. Jiangxi province from Meiling pass,
photograph.



Fig. 24. Lingnan region.

Figures

National Ranking & Percentage

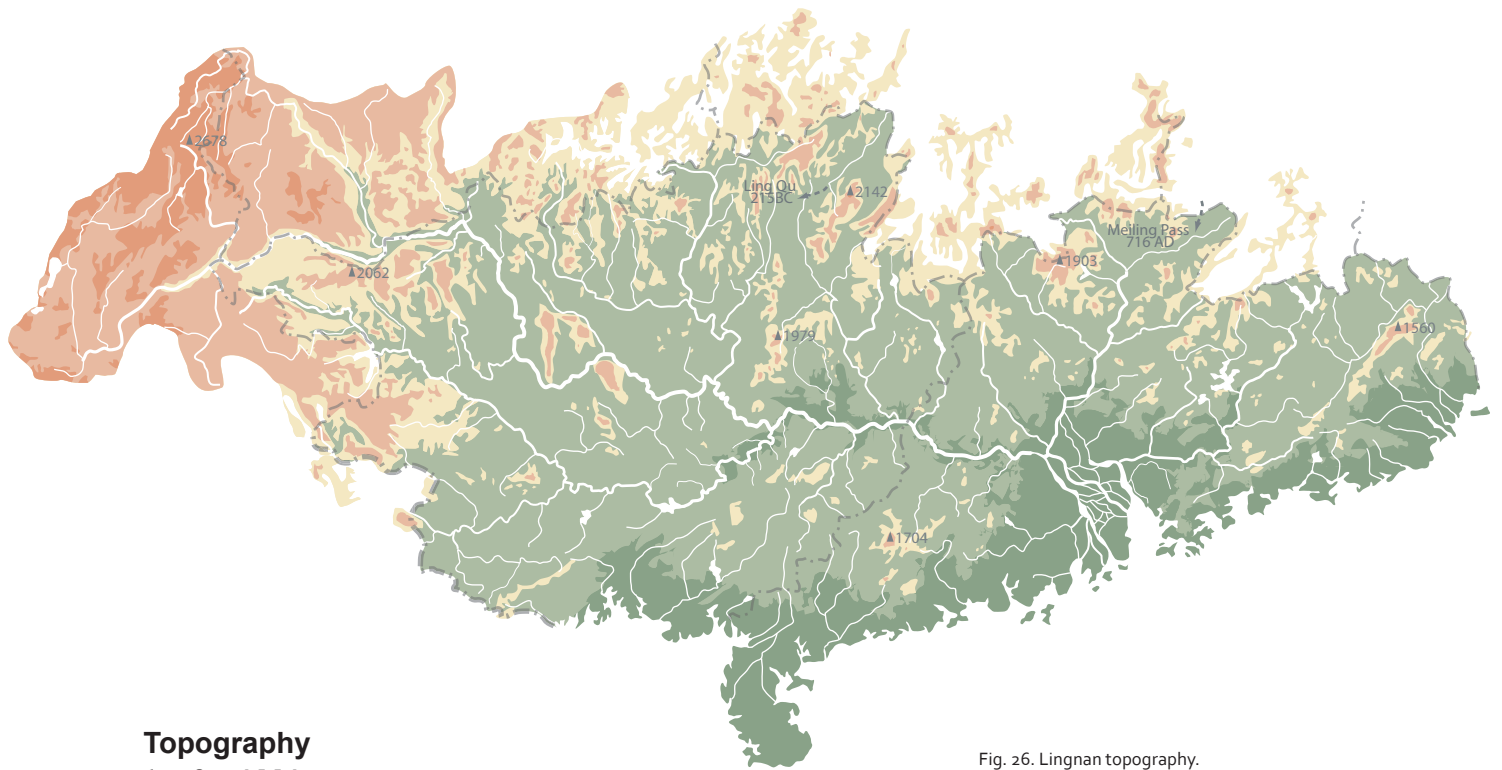
2 Provinces
131,930,000 people
GD- \$276 billion GDP 1st, 12.3%
GX- \$41 billion GDP 17th, 1.8%
GD- \$2383 GDP per capita 140%
GX- \$838 GDP per capita 49%

(numbers for Guangdong & Guangxi only)



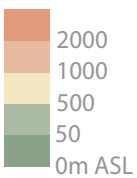
"To Our Father's Fathers"
Zhujiaxiang was the historical migration and trade route that passed through Meiling Guan. It now hosts the ancestral shrines of more than 100 clans.

Fig. 25. Zhujiaxiang, photograph.



Topography
1: 8 million

Fig. 26. Lingnan topography.



The landscape of entire Lingnan region is covered with low-lying hills and small mountains. The elevation increases in the west towards the Yunnan Plateau. In the north, the Nanling Mountain Range separates the Lingnan watershed from the Yangtze watershed.

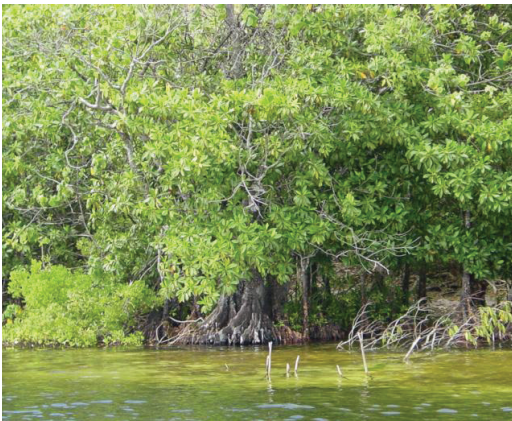
In 225BC, the Qin emperor subjugated the indigenous Yue kingdom that once resided in Lingnan. He commissioned the construction of the Ling Qu canal that effectively linked central and southern China. The Meiling Pass paved in Tang dynasty is also a major point of entry for the major migrations in subsequent dynasties.



Evergreen broadleafed forest:
Inland hills and mountains



Tropical rainforest:
Elevations below 100m asl



Littoral forest:
Coastal area and
river banks

Fig. 27. - 29. Land cover 1-3000 ya. UCSD Libraries.
East Asia Collection China Studies Resources.

Original Land Cover (ca. 1000-3000 years ago)

A study published in 1982 by Wang Chi-wu on the original botany of Lingnan found that the region was covered with three main types of forests before human populations dramatically altered the environment.



Cultivated land:
10-15%



Forests:
1 - 5%



Savanna:
Remainder

Fig. 30. - 32. Land cover 1930s. UCSD Libraries. *East Asia Collection China Studies Resources*.

Land Cover (1930s)

Western and Chinese botanists estimated that forests only cover a maximum of 5% of land area in Lingnan. However much forest did exist in the 1930s, scientists agree that most was secondary growth of pine forests intermixed with some broadleaf.

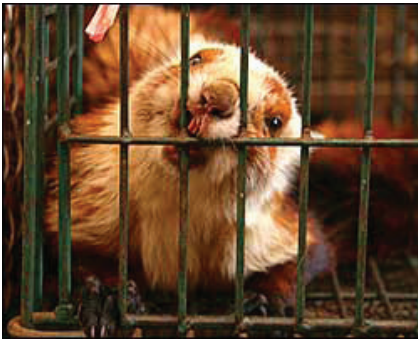
The remaining expanse of savanna-covered hills and mountains was determined by scientists to be "climax" vegetation established after earlier existing forests had been burned off.



Hedgehogs



Wild boar



Red and white flying squirrel



Barking deer or Muntjac



Foxes



Leopard cat



Nutria



Civet cat

Animal Markets

The range of species diversity can be witnessed at Zhaengcha Live Animal Market in Guangzhou. As "anything with four legs, except a chair, and anything that flies, except an airplane" (Southern Chinese saying) is sold there for human consumption.

The customers belief these exotic and extravagant dishes have medicinal and aphrodisiac qualities and are also eaten in restaurants to prove the host's wealth and social status.

Fig. 33 - 40. Wild animals of Lingnan. *Animals Asia*. 2007.



South China tiger
last wild sighting - 1990



Asian elephant
extinct from Lingnan - 1400's

Star Species of Lingnan

Although there was some deforestation and hunting of elephants during the Song and Yuan dynasties (960-1279, 1279-1368), Robert Marks synthesized that the disappearance of the elephants coincided with that of a climate change beginning in the 13th-century towards a cooler and drier climate.

The disappearance of the South China tiger, on the other hand, had a direct relationship with deforestation. Because its habitat was also the habitat of its food sources; a single adult tiger will require between 20 and 100 sqkm of forest cover in order to sustain it.

As the population of Lingnan doubled during the 18th century, the state promoted land reclamation programs into the forested hills. The deforestation and cultivated land expansion correlated with the increased number of tiger attacks during this time.

Fig. 41 - 42. Star species of Lingnan.
Animals Asia. 2007.

Estimated Population of Lingnan

Fig. 43. Historical population of Lingnan. Marks. *Tigers, Rice, Silk and Silt.*

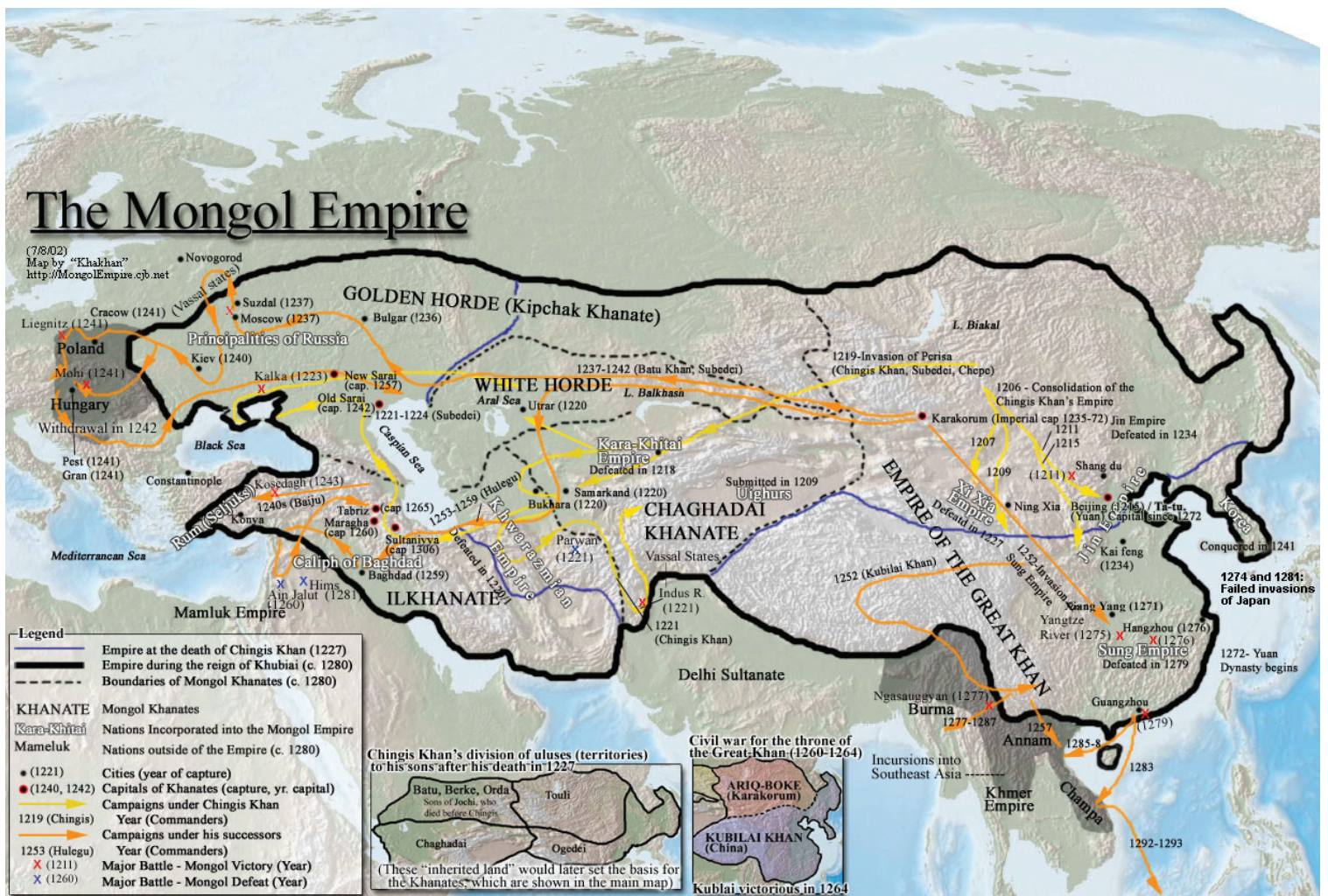
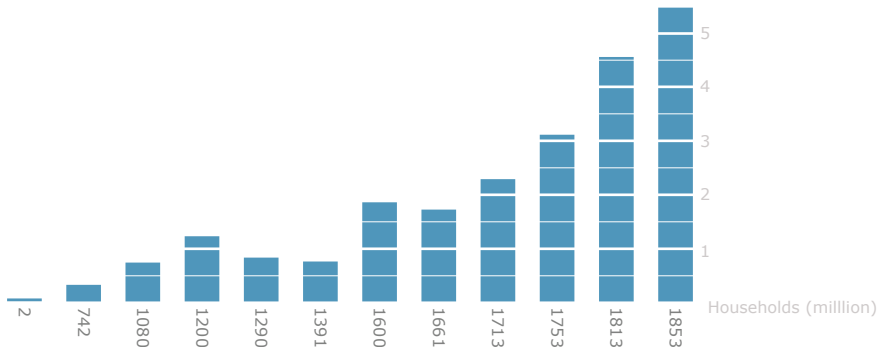


Fig. 44. Major migrations affected by Mongol invasions. Web-mongol.

Chinese Migration and Settlement of Lingnan

The Han Chinese migration into Lingnan came in three principal waves:

1) Qin subjugation of Yue kingdom 225BC;
brought 100,000 troops which married with indigenous Tai women.

2) "Yonjia Panic" early 4th-century;
The invasion of the imperial capital at Luoyang by nomadic tribesmen sent a wave of inhabitants southwards.

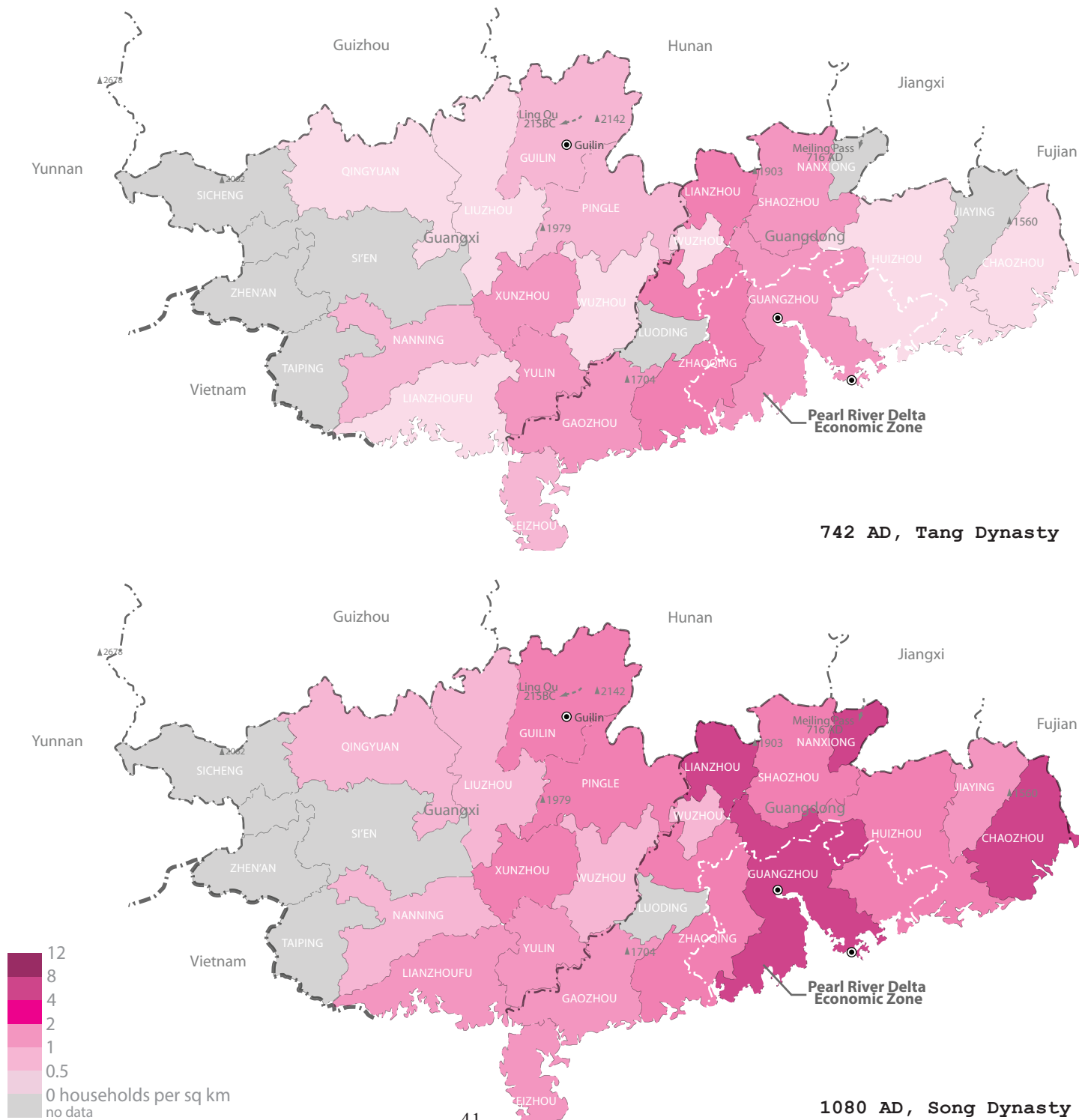
3) Mongol invasion 1126-1270AD;
Mongols first took the Song capital in Kaifeng in 1126, forcing the Song to relocate their capital to Hangzhou. This sent a chain reaction wave of migrants into Lingnan all the way through until the Mongol empire expanded to Guangzhou in 1270AD.

Historical Population Distribution

1: 8 million

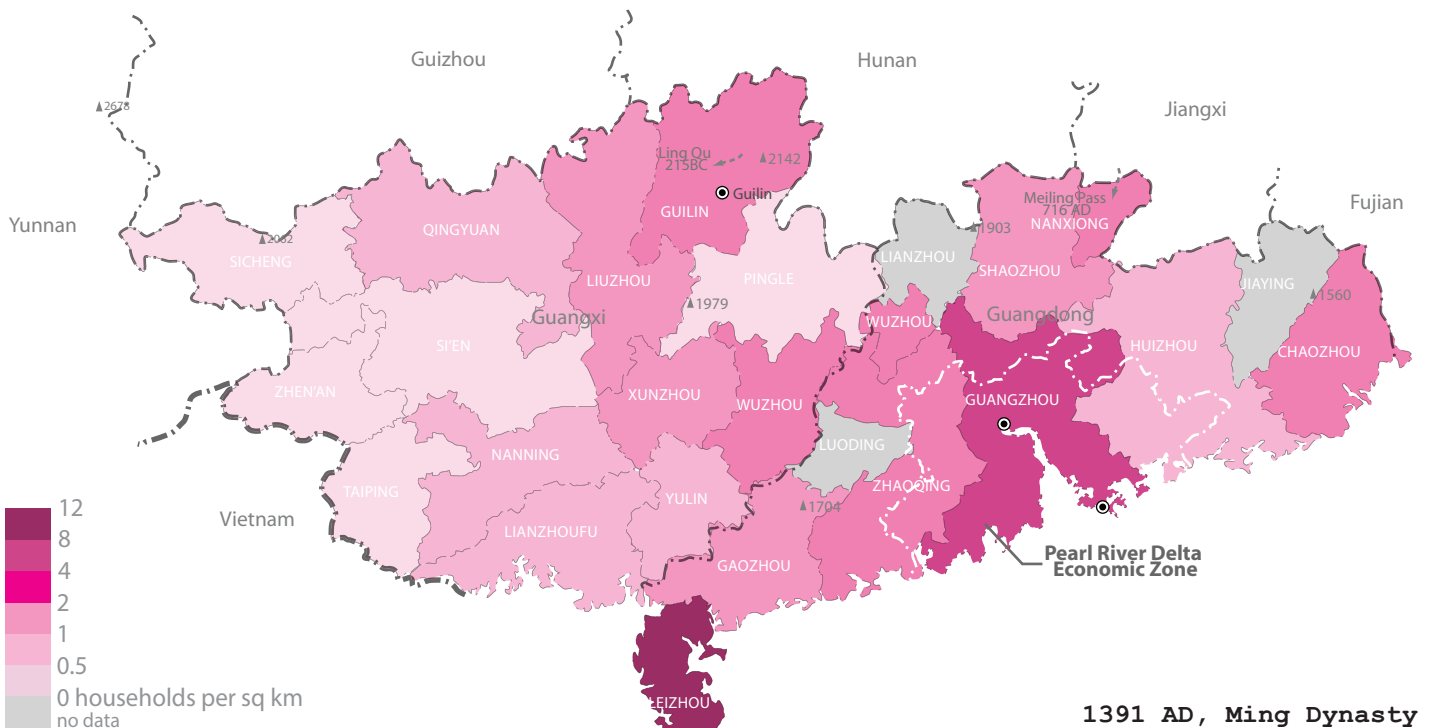
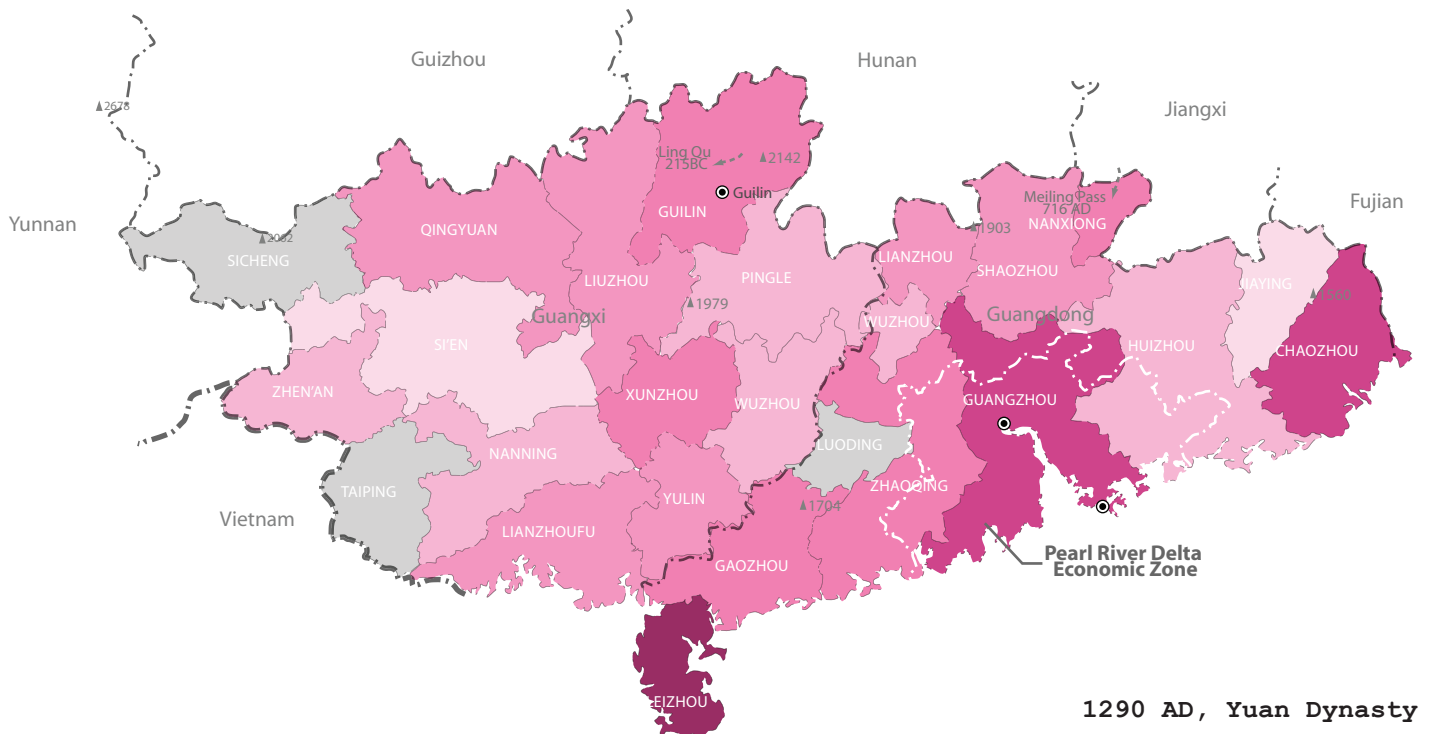
The Han (202BC–220AD) population configuration is not shown in the maps below because of the differences in administrative boundaries. But what is known from official tabulation was that most of the population in Lingnan was in the Guilin region near Ling Qu Canal. The least populous region then, was the area of the present day Pearl River Delta.

Fig. 45 - 48. Population distribution of Lingnan. Marks, *Tigers, Rice, Silk and Silt.* 1999.



The PRD in first millenia China was a swamp. For fear of contracting malaria, the population of Lingnan did not venture into the region until malaria resistance was developed and marshland was drained by waterworks.

In 1290, the Mongol invasions in China rearranged the regional structure of Lingnan. Previously populated areas of northern Guangdong were decimated. Refugees spread west and southwards. The Leizhou peninsula was densest. In Guangzhou, farmers began to reside on sandbarred islands in the middle of the delta for fear of attacks. Thus began the making of the PRD.





"Development"
Landscaping along the
Jingzhu (Beijing to Zhuhai)
Expressway.

Fig. 49. Photograph.



Fig. 50. Lingnan region in the context of greater China.

Statistics

- 23 Provinces
- 5 Autonomous Regions
- 4 Municipalities
- 2 Special Administrative Regions (SAR)

1,315,844,000 people
 \$2260 billion GDP
 \$1700 GDP per capita

(2005 nominal figures)

World Ranking

1st, India 1.1 billion
 2nd, 76% of US
 84th

(2005 PPP adjusted)



Fig. 51. China topography. Zhongguo ke xue yuan, *The National Economic Atlas of China*.

Topography

Total Land Area	9,596,960 km ²
Percentage Water	2.8%
Terrain	Plains, deltas and hills in the east. Mountains, high plateaus and deserts in the west.

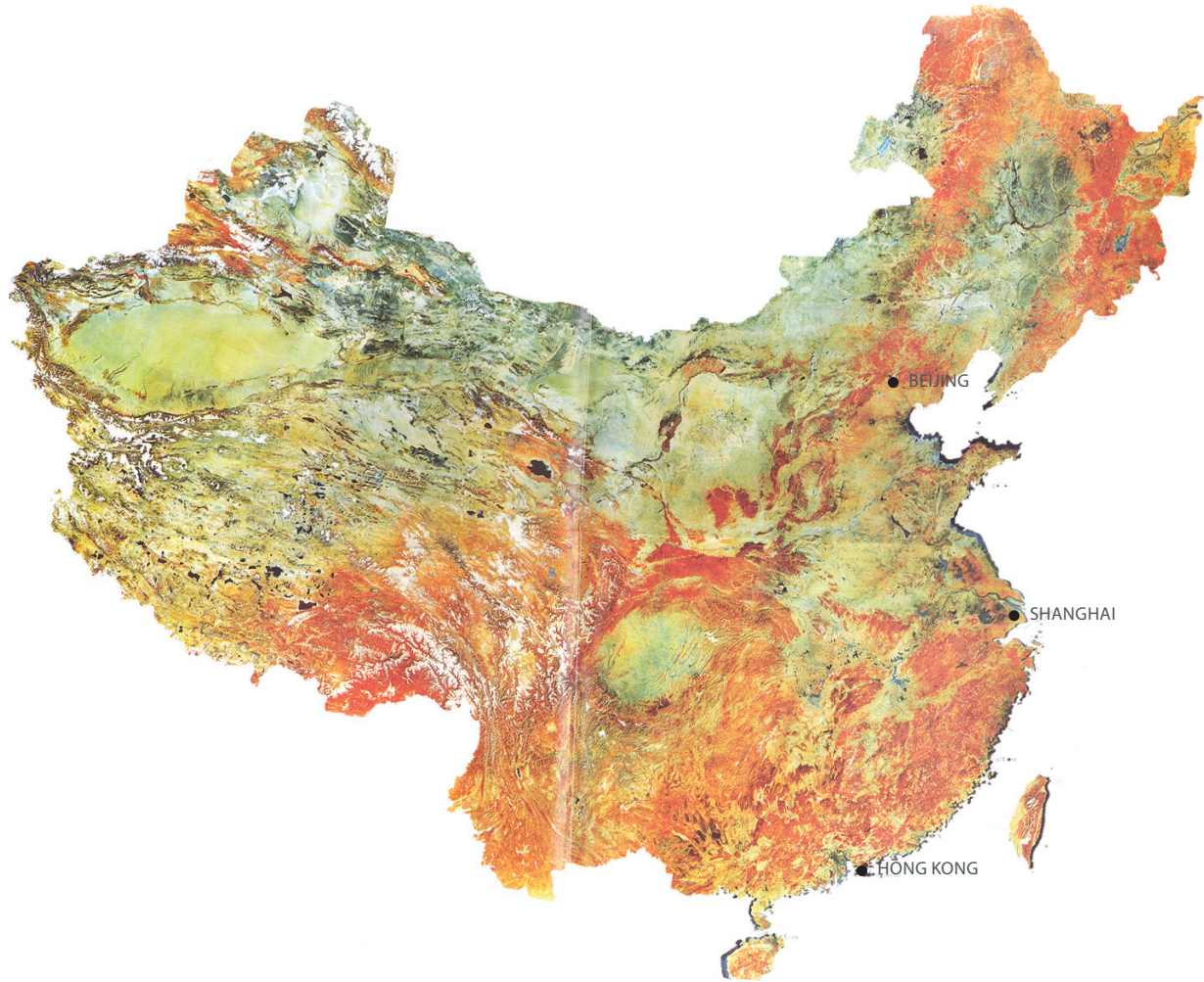


Fig. 52. China satellite image. *Ibid.*

Satellite Image

 Farmland	 Forestland	 Grassland	 Saline Land
 Swamp	 Reed	 Desert	 Gobi
 Snow	 Glacier	 River	 Lake
 Reservoir	 Ancient Channel	 Seabeach	 Island
 Salt Field	 City	 Cloud	 Fog

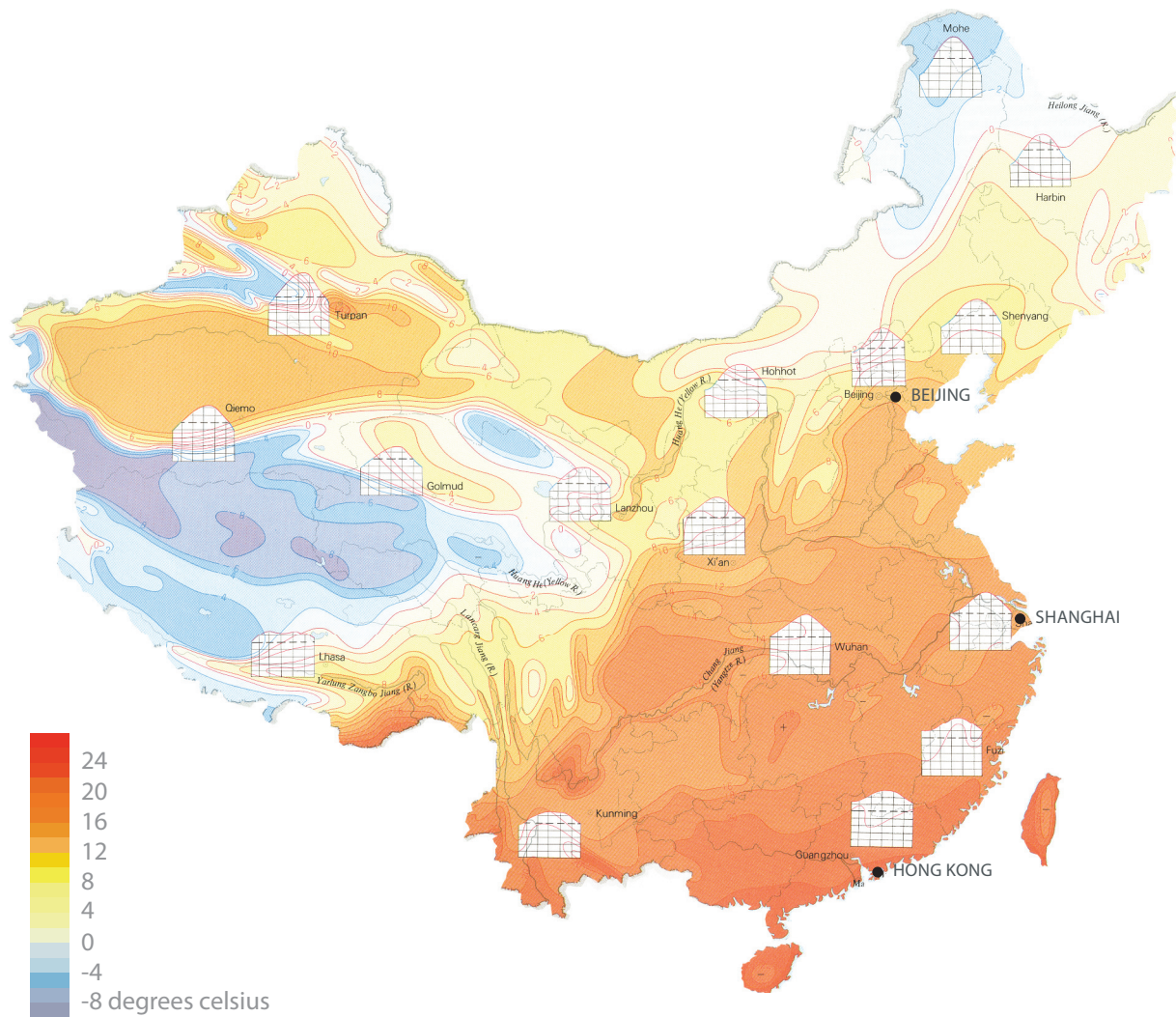


Fig. 53. China temperature. *Ibid.*

Mean Annual Temperature

The Nanling Mountains are not a high enough mountain range to create a climatic dividing line in southern China.

The map above shows gradual temperature change the coast to the mainland.

The dominant feature of climate throughout China, and not just Lingnan, are the summer and winter monsoons.

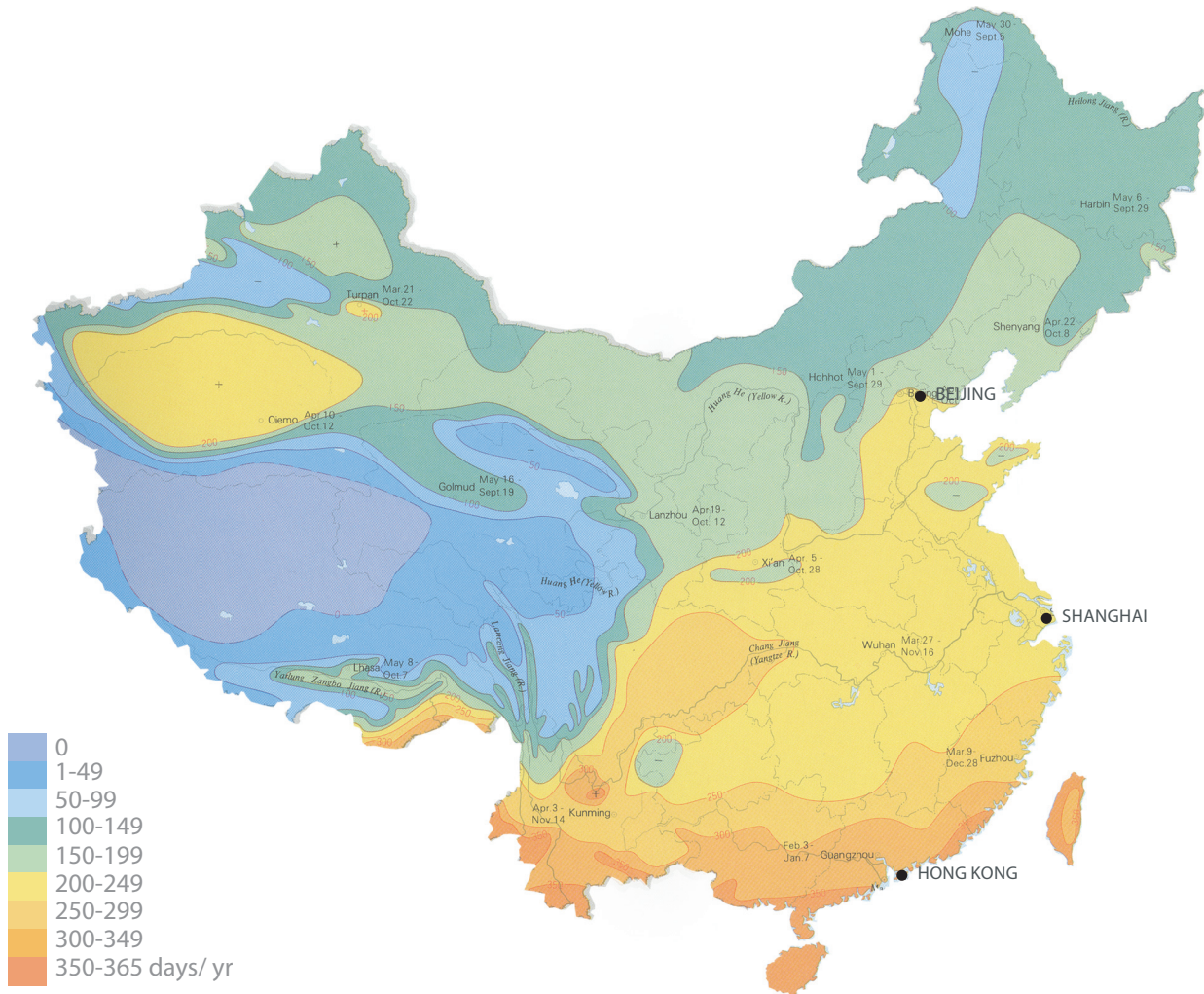


Fig. 54. China temperature above 10C. *Ibid.*

Mean Annual Temperature Above 10°C

10°C is the minimum temperature for growing rice.

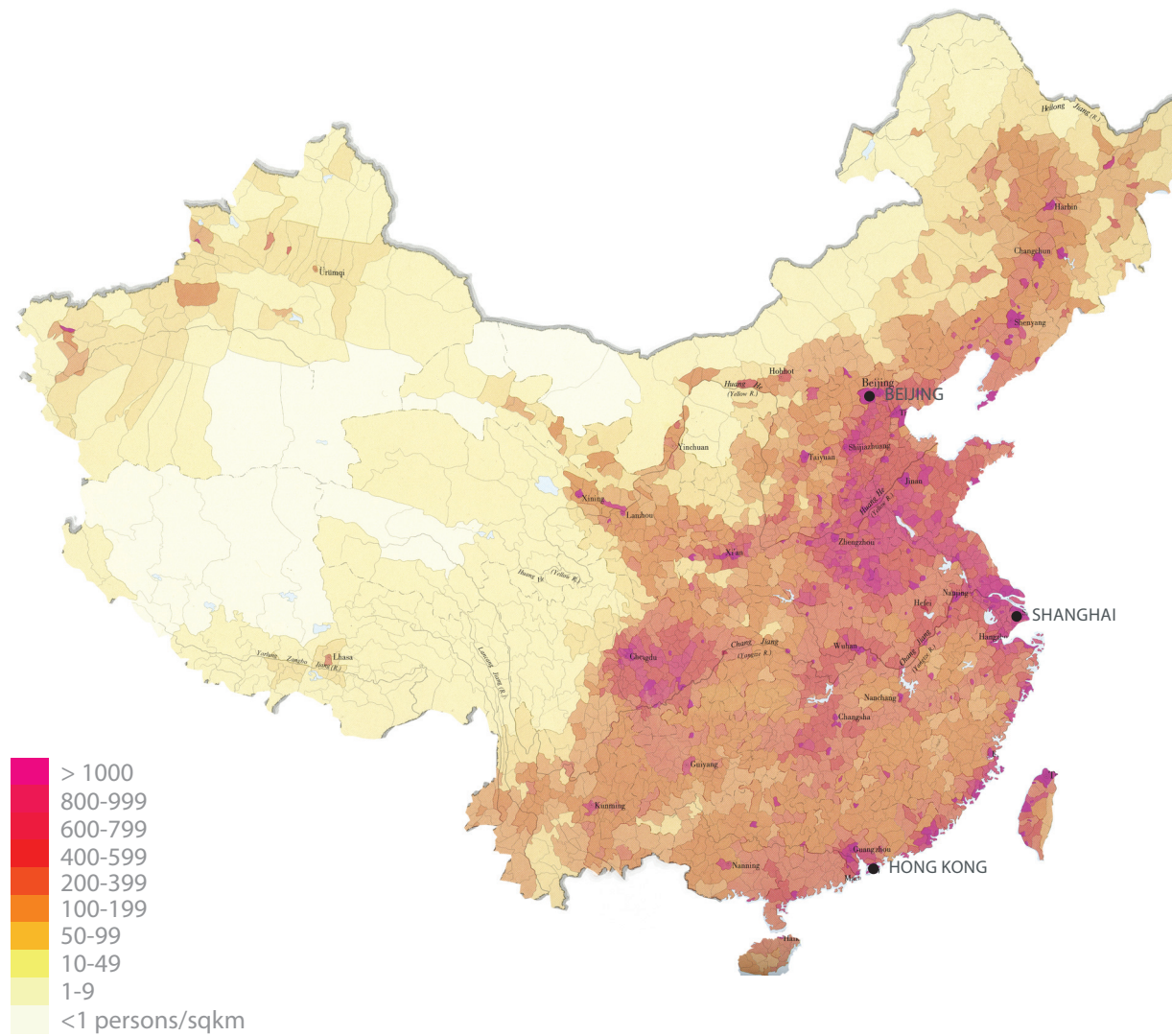


Fig. 55. China population density. *Ibid.*

Population Density

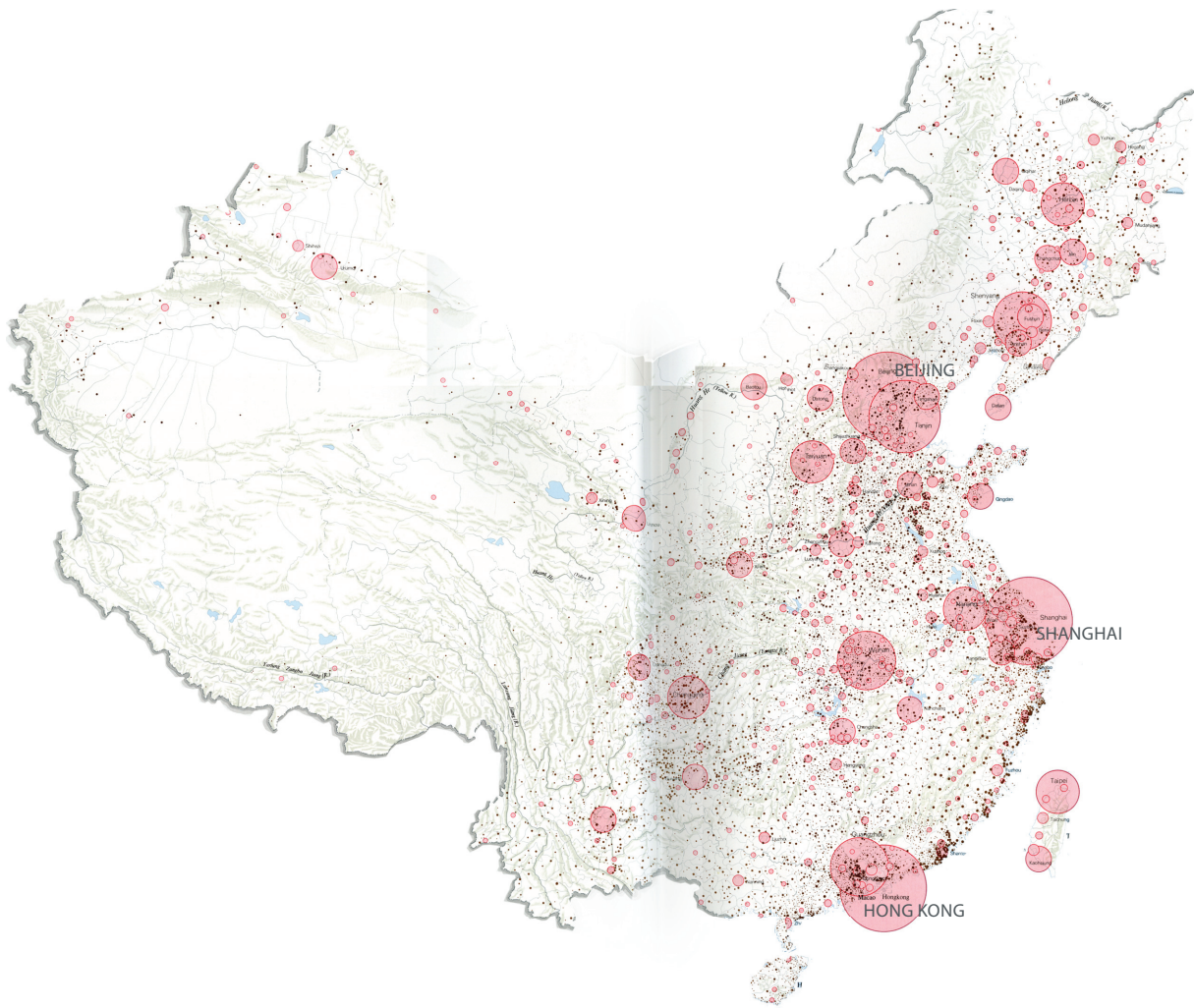


Fig. 56. China city population. *Ibid.*

City Population

Total Population	1,315,844,000 (1st)
Population Growth	0.6%
Ethnic Groups	Han-91.9%; Others-8.1% (Zhuang, Manchu, Hui, Miao, Uygur, Yi, Mongolian, Tibetan, Buyi, Korean, and other)
Literacy	89%
Work force (2001 est)	711 million (Agriculture and forestry 50%, Industry and commerce 23%, Other 27%)



"Tuan Nian Fan (Family Dinner)"

Workers at a hot springs resort are treated to a New Year's dinner at their own workplace.

Fig. 57. Photograph.

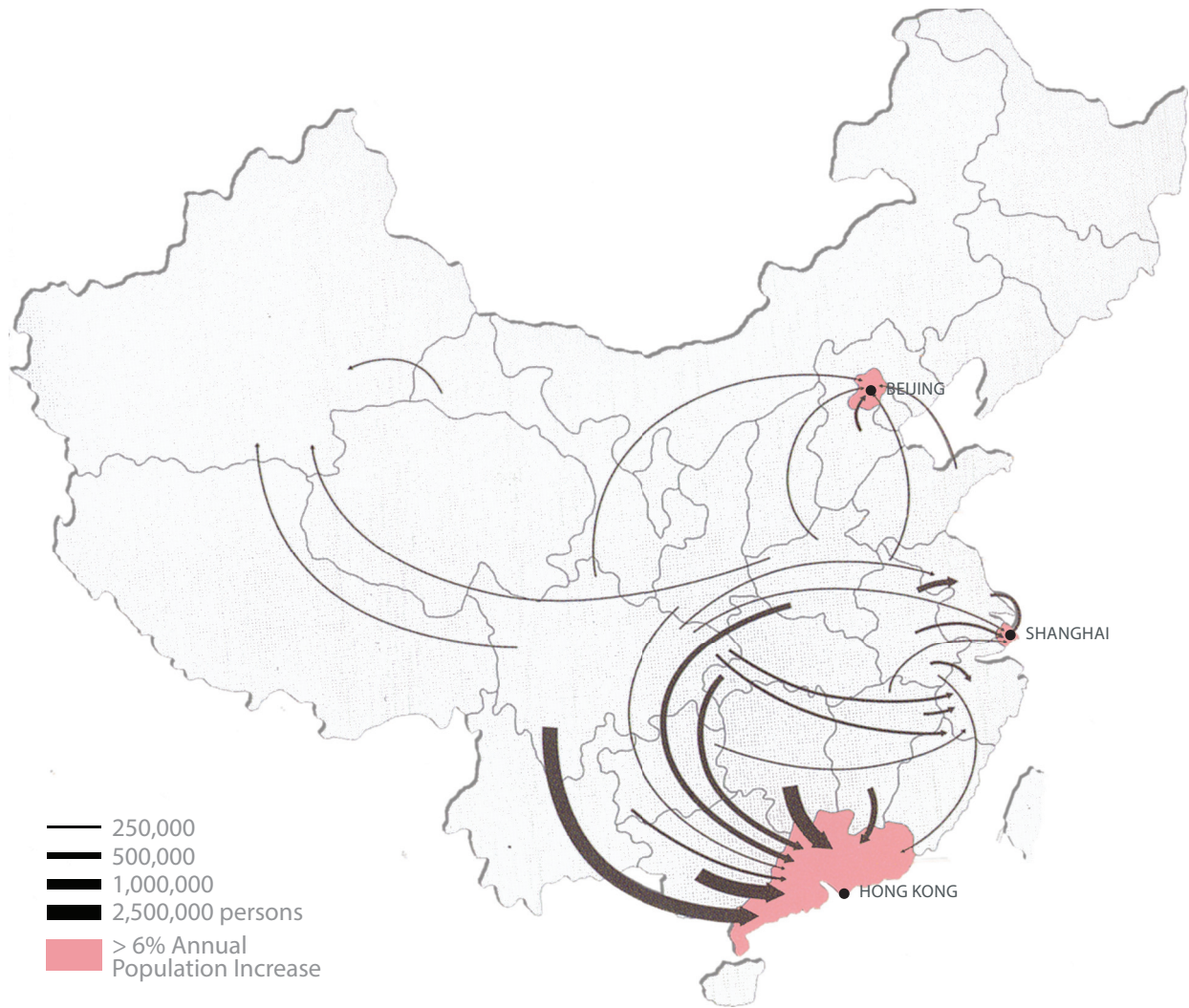


Fig. 58. China labour migrations. Donald, *The State of China Atlas*.

Net Interprovincial Migration

The National Bureau of Statistics of China estimates the floating population at 140m. More than half of this population move only within their province.

Guangdong province has less than 7% of the national population but absorbs 27% of China's floating population.



Fig. 59. China habitat types. NatGeo, *Global zoo*.

General Habitat Types



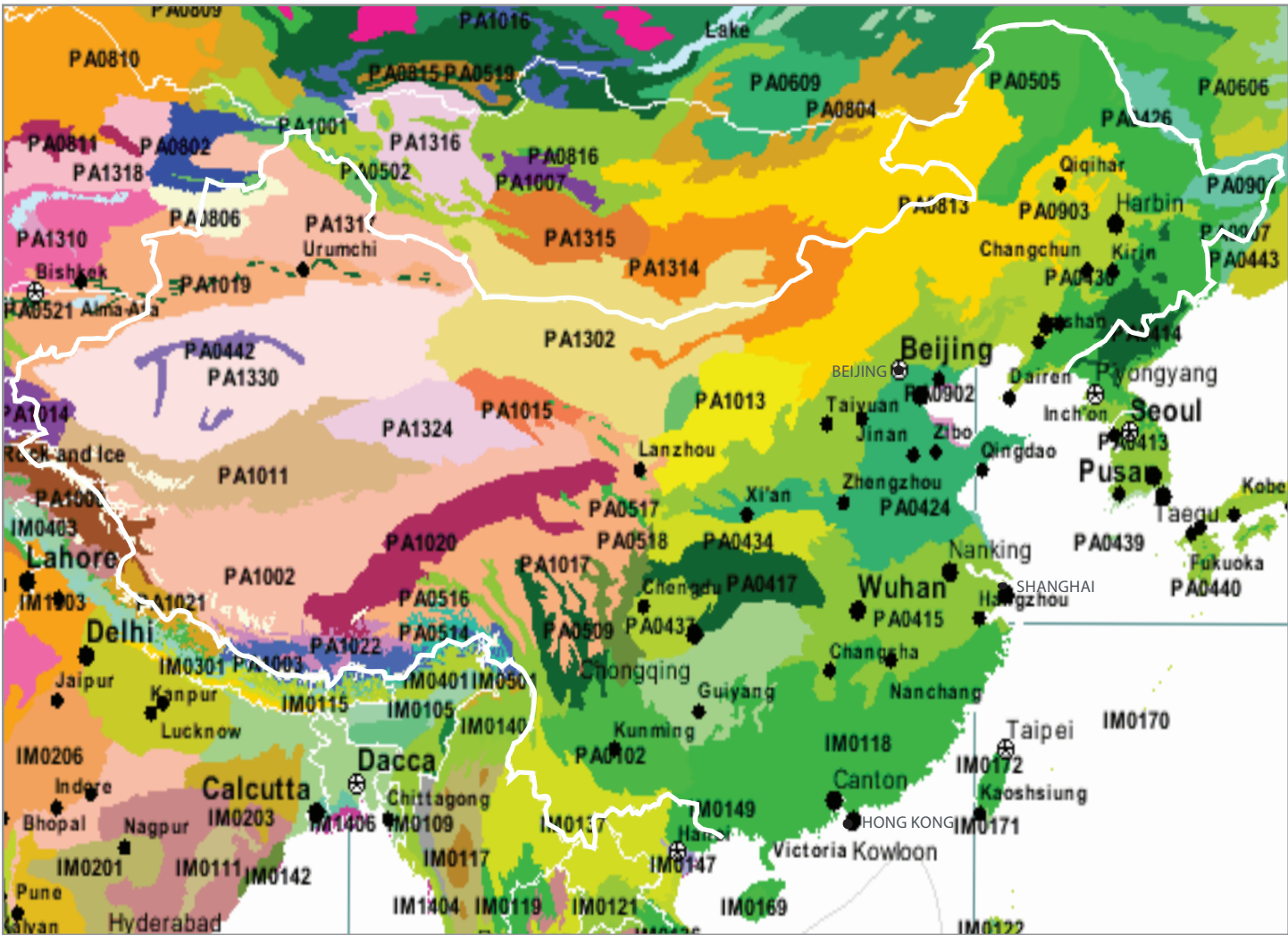


Fig. 60. China "Global zoo" ecoregions. *Ibid.*

Terrestrial Ecoregions

Distinguished by shared ecology, climate, and plant and animal communities.

Fig. 61. Images of terrestrial "Global zoo" ecosystems in China. *Ibid.*

PA0813
Siberian Steppe



PA0907
Ussuri-Wusuli Meadow & Forest Meadow

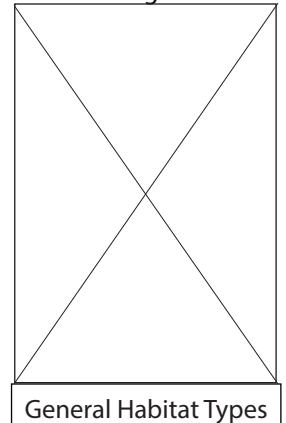


PA0901
Amur Meadow Steppe



Flooded Grasslands and Savannas

Ecoregion Code
Ecoregion Name

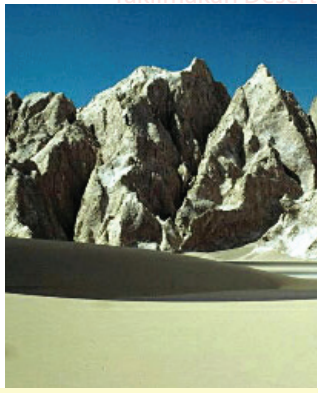


General Habitat Types

PA1317 Junggar Basin Semi-desert



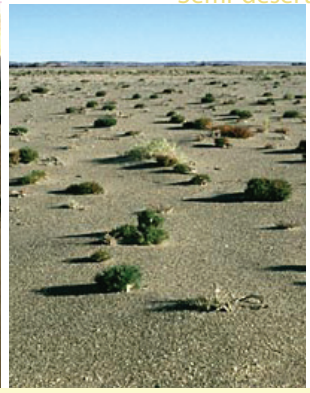
PA1330 Taklimakan Desert



PA1324 Qaidam Basin Semi-desert



PA1302 Alashan Plateau Semi-desert



Deserts and Xeric Shrublands

PA1011

Kunlun Mtns Alpine Desert



PA1002 Cent'l Tibetan Plateau Alpine Steppe



Tibetan Plateau Alpine Shrub & Meadows



PA1020

Southeast Tibet S



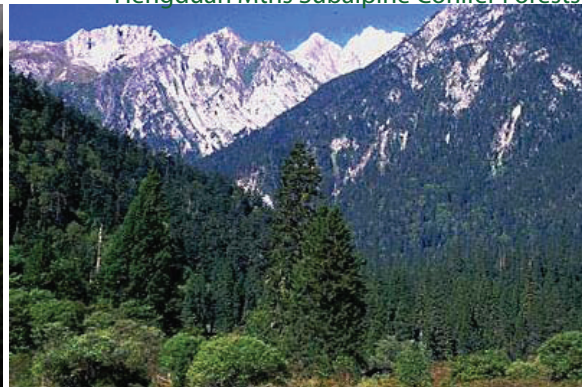
Montane Grasslands and Shrublands

PA0516

Nujiang Langcang Gorge Alpine Conifer & Mixed Forests



Hengduan Mtns Subalpine Conifer Forests



PA0509

Qionglai-Minshan C



Temperate Coniferous Forests

IM 0137 Northern Indochina S.Tropical Forests

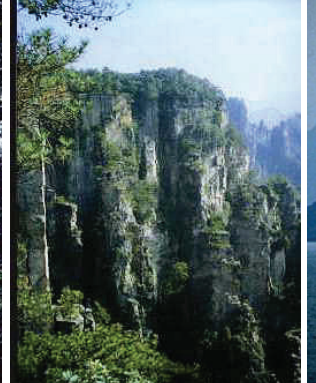


Yunnan Plateau S.Tropical Evergrn Forests



PA0102

PA0101 Guizhou Plateau Broadlfl & Mixed Forests



South C

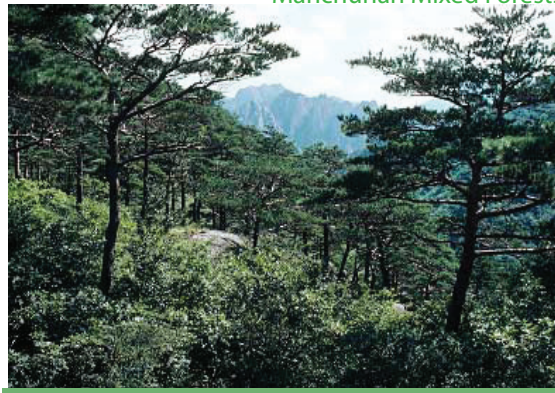


Tropical and Subtropical Moist Broadleaf Forests

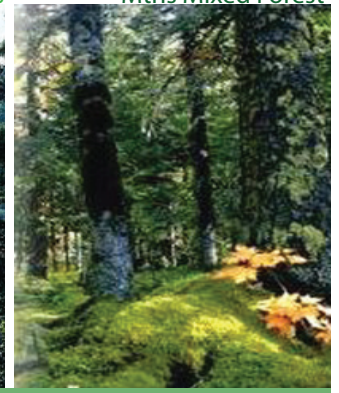
PA1013
Ordos Plateau Steppe



PA0426
Manchurian Mixed Forests



PA0414 Changbai
Mtns Mixed Forest



Temperate Broadleaf and Mixed Forest

PA1017
Shrub & Meadows



PA0434 Qinling
Mtns Deciduous Forests



PA0411 Central China
Loess Plateau Mixed Forests



PA0411
Huang He Plain Mixed Forests



Temperate Broadleaf and Mixed Forest

PA0518
Conifer Forests



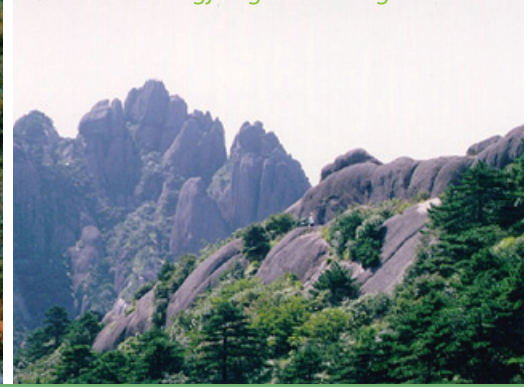
PA0437 Sichuan Basin
E.grn Broadlf Forests



PA0417
Daba Mtns Evergrn Forests



PA0415
Changjiang Plain Evergreen Forests



Temperate Broadleaf and Mixed Forest

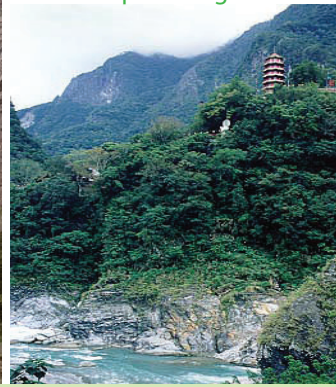
China-Vietnam S.Tropical Evgrn Forests



IM0118 Jian Nan
S.Trop Evgrn Forests



IM0172 Taiwan
S.Tropical Evgrn Forests



Tropical and Subtropical Moist Broadleaf Forests

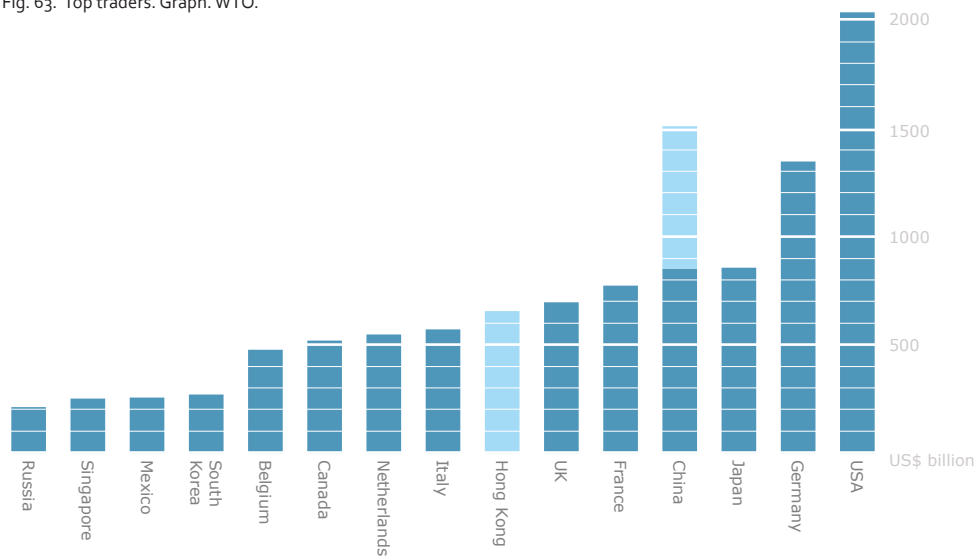
Fig. 62. Images of terrestrial "Global zoo" ecosystems in China. *Ibid.*

“China has 166 cities with populations over 1 million; the USA has 9.”
- The State of China Atlas

Top 15 World Traders

total value of merchandise
exports and imports, 2003

Fig. 63. Top traders. Graph. WTO.



Source: WTO

Share of World GDP*
% of total

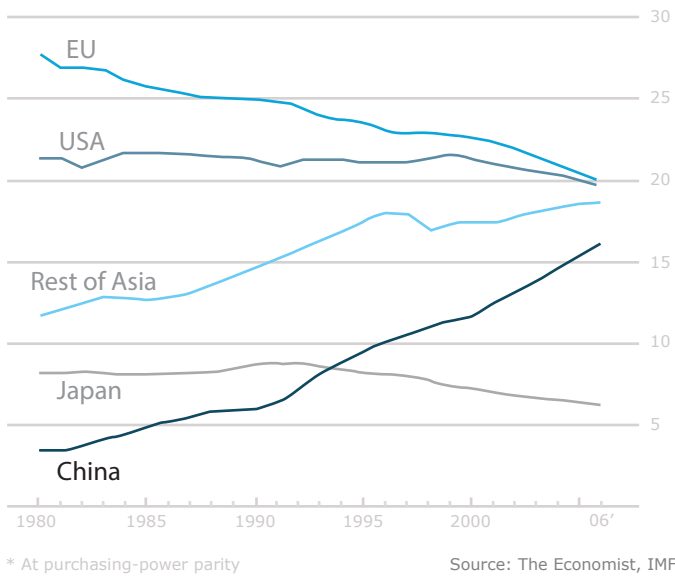


Fig. 64. Share of GDP. Graph. The Economist. "Share of world gdp."

China's Historic Share of World GDP*, %

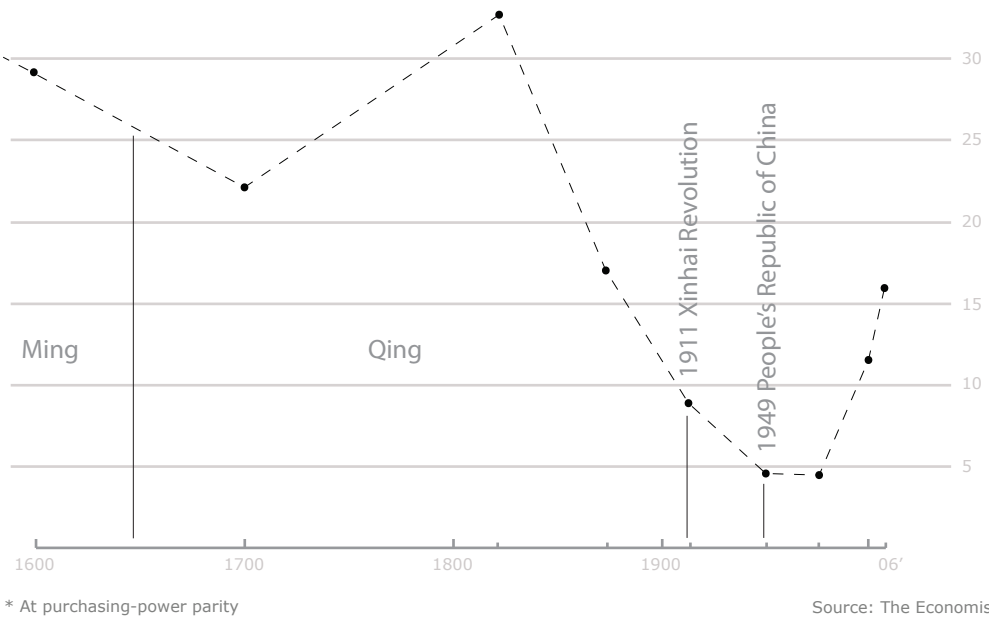


Fig. 65. World historic GDP. Graph. The Economist. "The world economy."



招租
豪华装修
一室一厅
二室一厅
内装电梯
对门门牌
环境安静
宽带网络
电话电视
保安管理
租期不限
联系电话
13820111592

"No Place Like Home"
Rental units in Dongguan
for the floating population.

Fig. 66. Photograph.

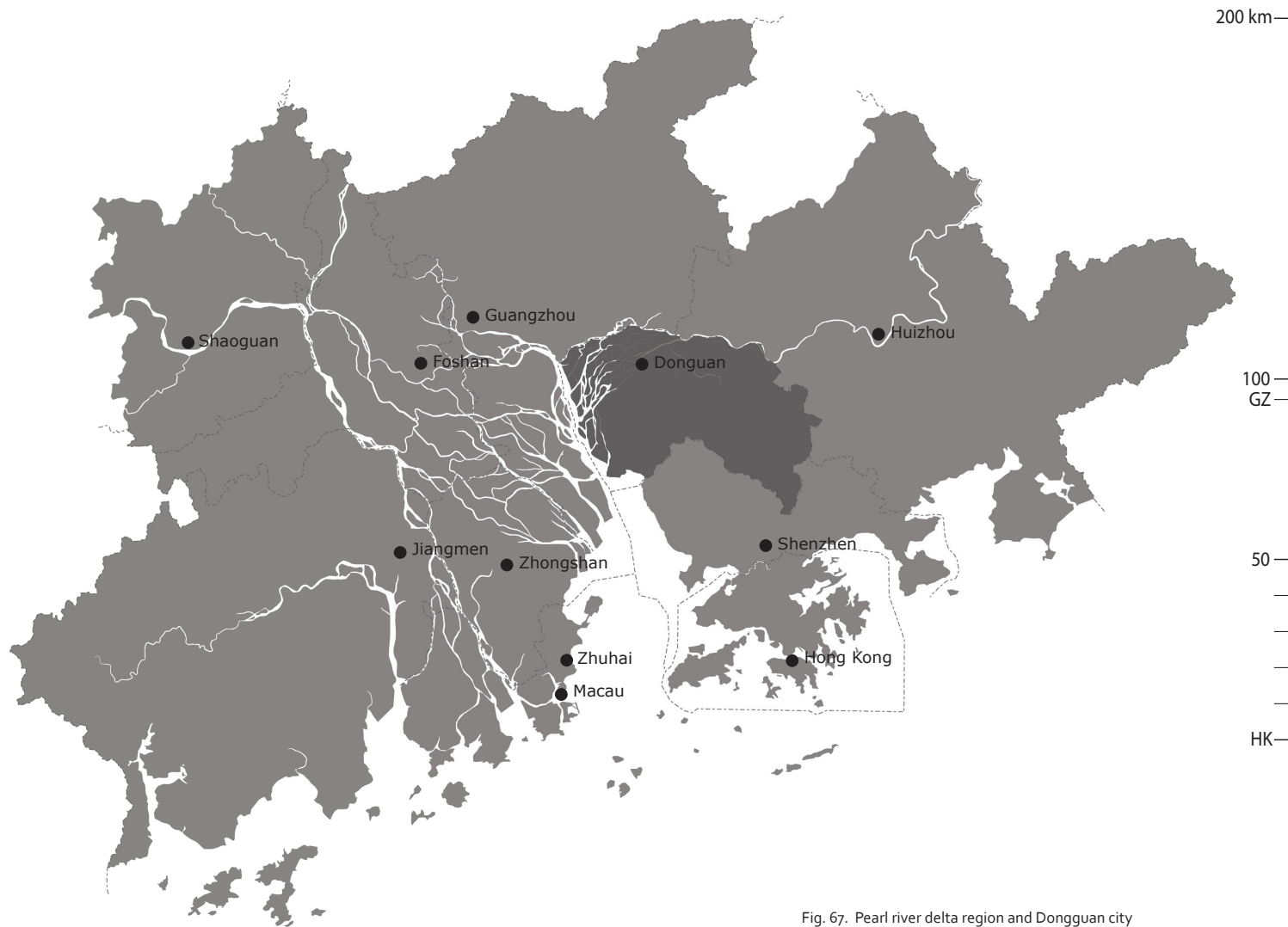


Fig. 67. Pearl river delta region and Dongguan city shaded.

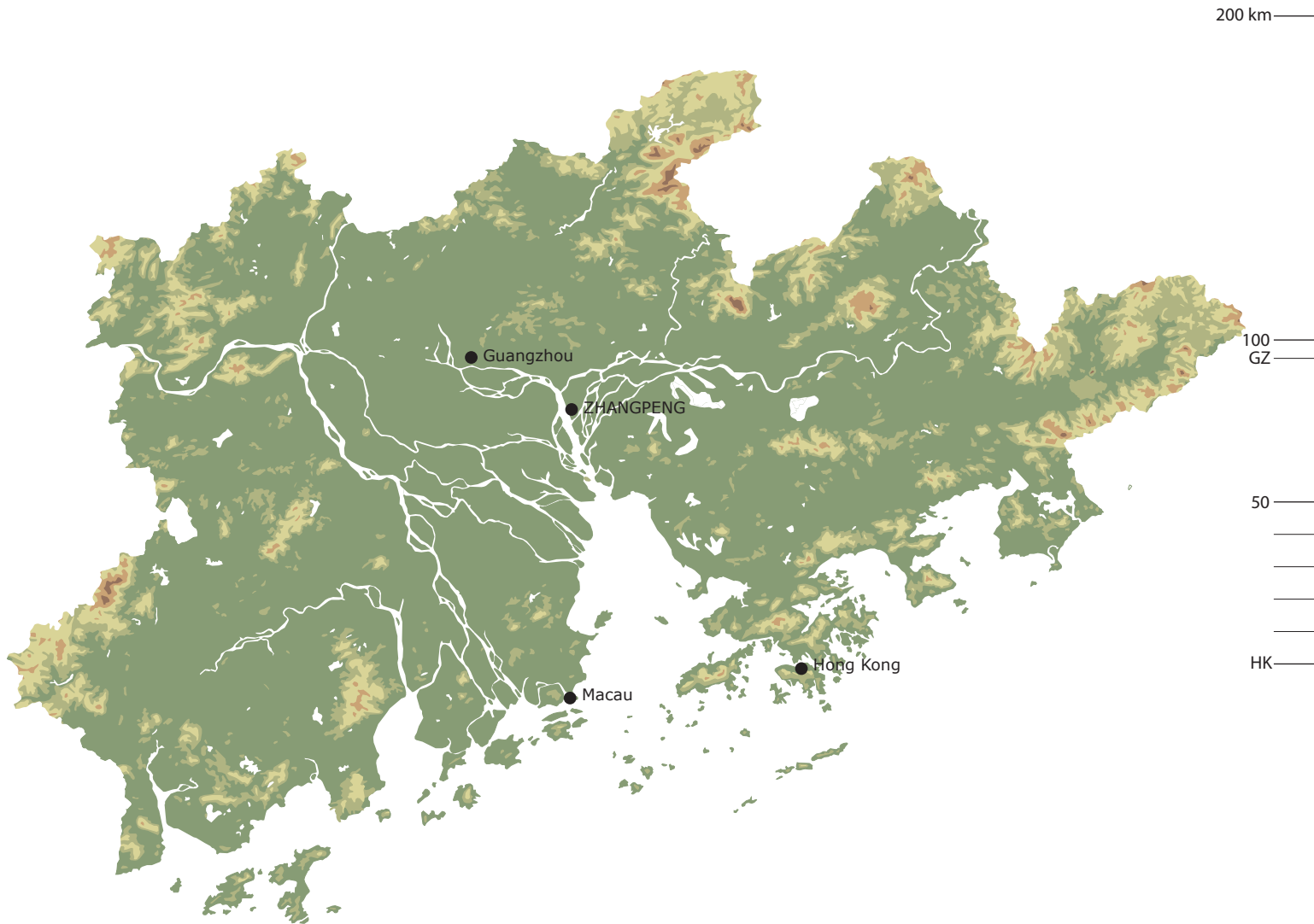
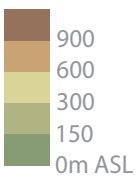


Fig. 68. Topography of the PRD region. Geological Map of China. *Geology, Stratigraphic China Maps Geology China.*, 1990.

Topography
1: 2 million



There are few geographical barriers to physical developments in the PRD

Most of its topography is flat low-land area deposited by silt washed down from the three major rivers of Lingnan that converge at the delta. Namely, the West (Pearl), North and East rivers.

Hong Kong is part of a range of igneous rock formations that protrude and border the coasts of southern China.

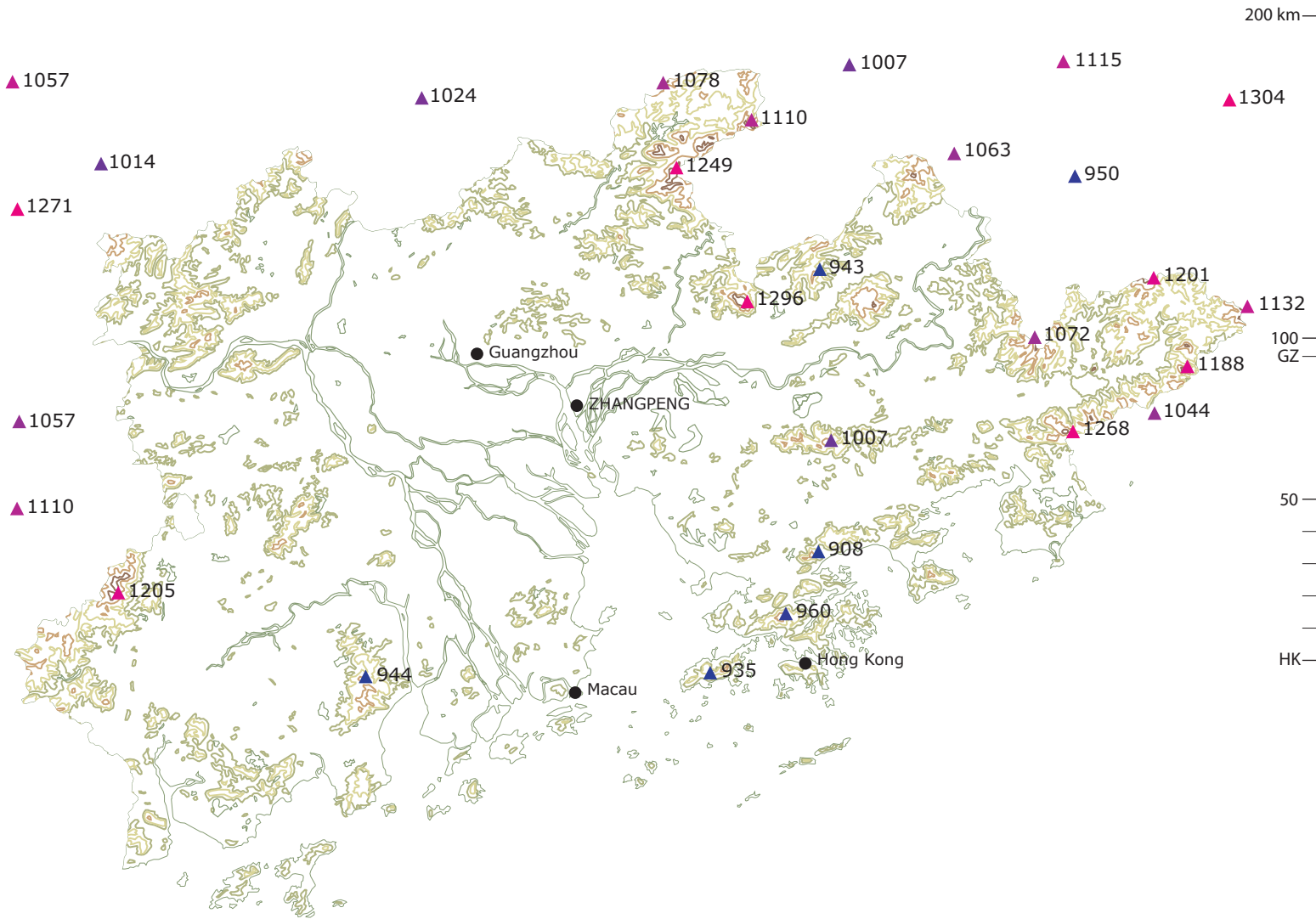
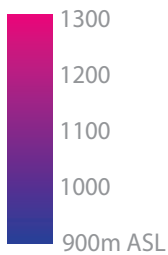


Fig. 69. PRD peaks above 900m. Geological Map of China. *Geology, Stratigraphic China Maps Geology China.*, 1990.

Elevation
1: 2 million



Small mountains and peaks surround the low-lying PRD region. Most urban and industrial developments and cultivated areas are on flat land. The hills and mountains remain largely undeveloped and are used as parks and reserves.

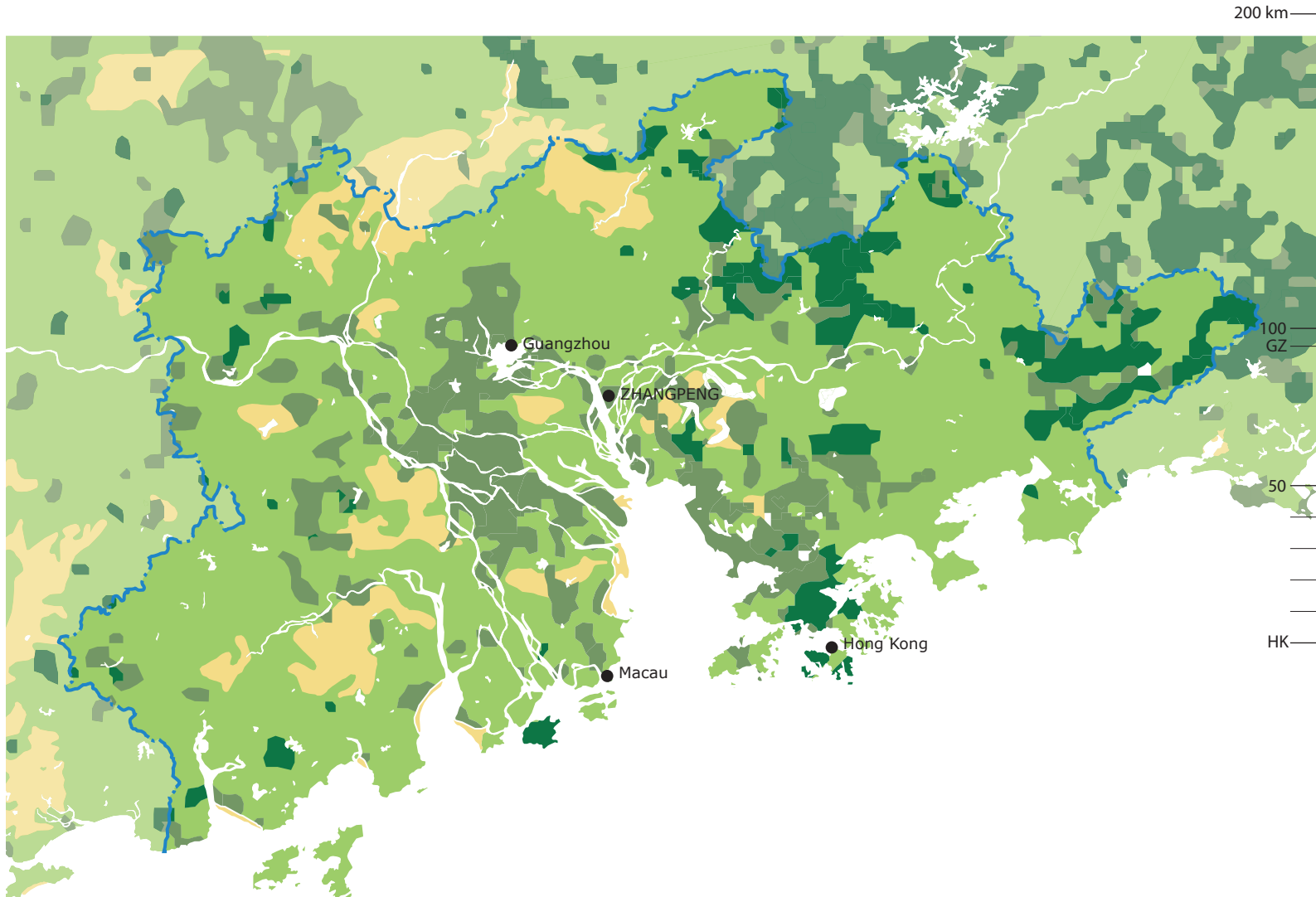


Fig. 70. PRD land cover. Geological Map of China. *Geology, Stratigraphic China Maps Geology China.*, 1990.

Land Cover
1: 2 million

- Forest
- Grassland
- Crop
- Sand

Most land is used for crops. Therefore, new building developments usually take the place of farmland. The loss of cultivable land to urban development is a serious national issue in China. Government measures are beginning to ban developments that take over farmland and promote densifying the in urban areas.

Because industrial developments first began independently in the various village coops that are dotted across the region, the urban landscape is dispersed and lacks recognizable centres.



"The World's Factory-floor"
Typical landscape of the
PRD.

Fig. 71. Photograph.

200 km

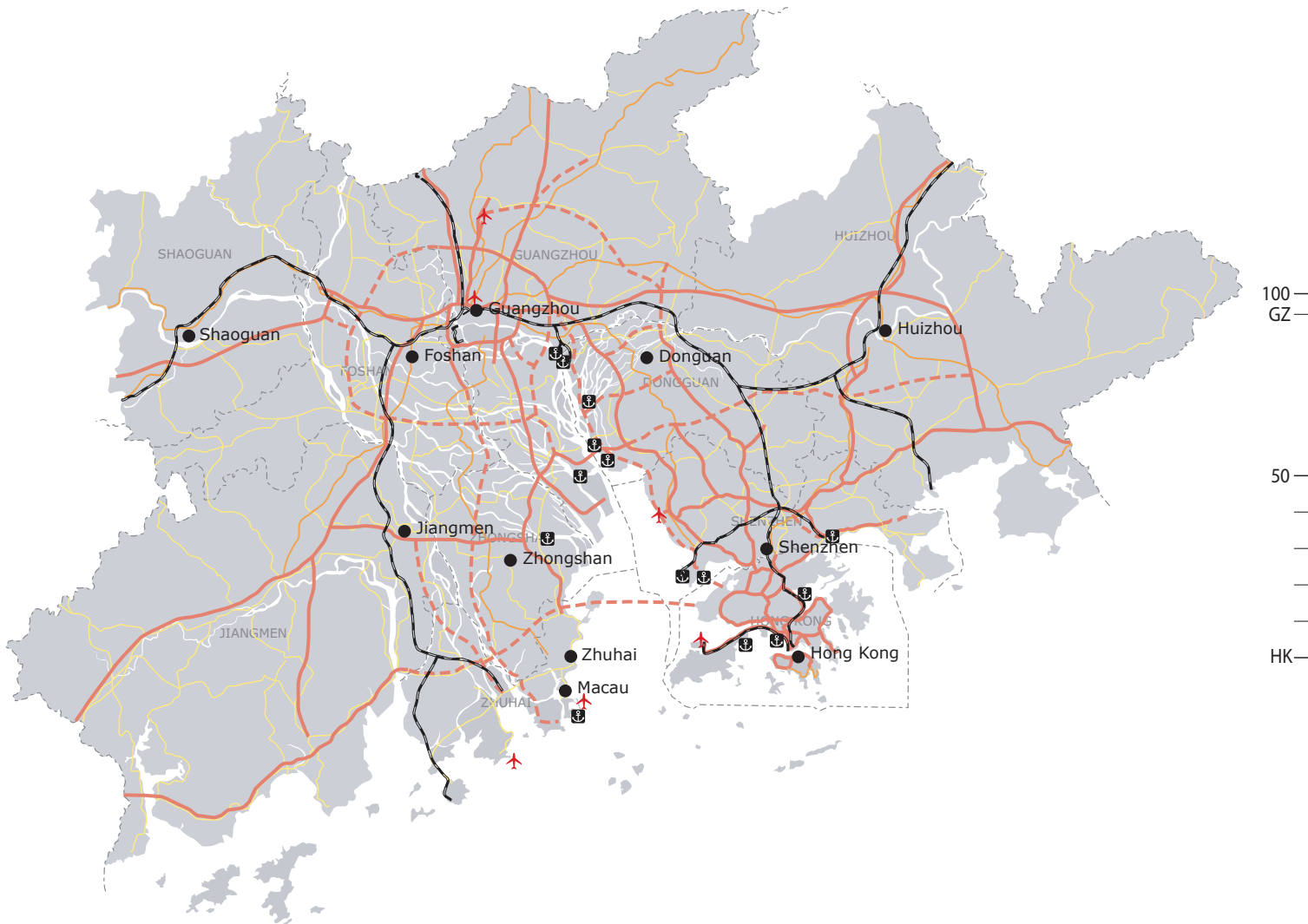


Fig. 72. PRD transport infrastructure. Donald. *Ibid.*

Infrastructure

1: 2 million

- Expressway
- - - - Expressway (under-construction & planned)
- Highway
- Provincial highway
- Rail
- ✈ Airport
- Container Port & Ferry Terminal

The PRD invests heavily on infrastructural developments in order to handle the large volume of goods going on import and export.

But a large part of the investment goes to stringing together the dispersed industrial towns and villages.

200 km

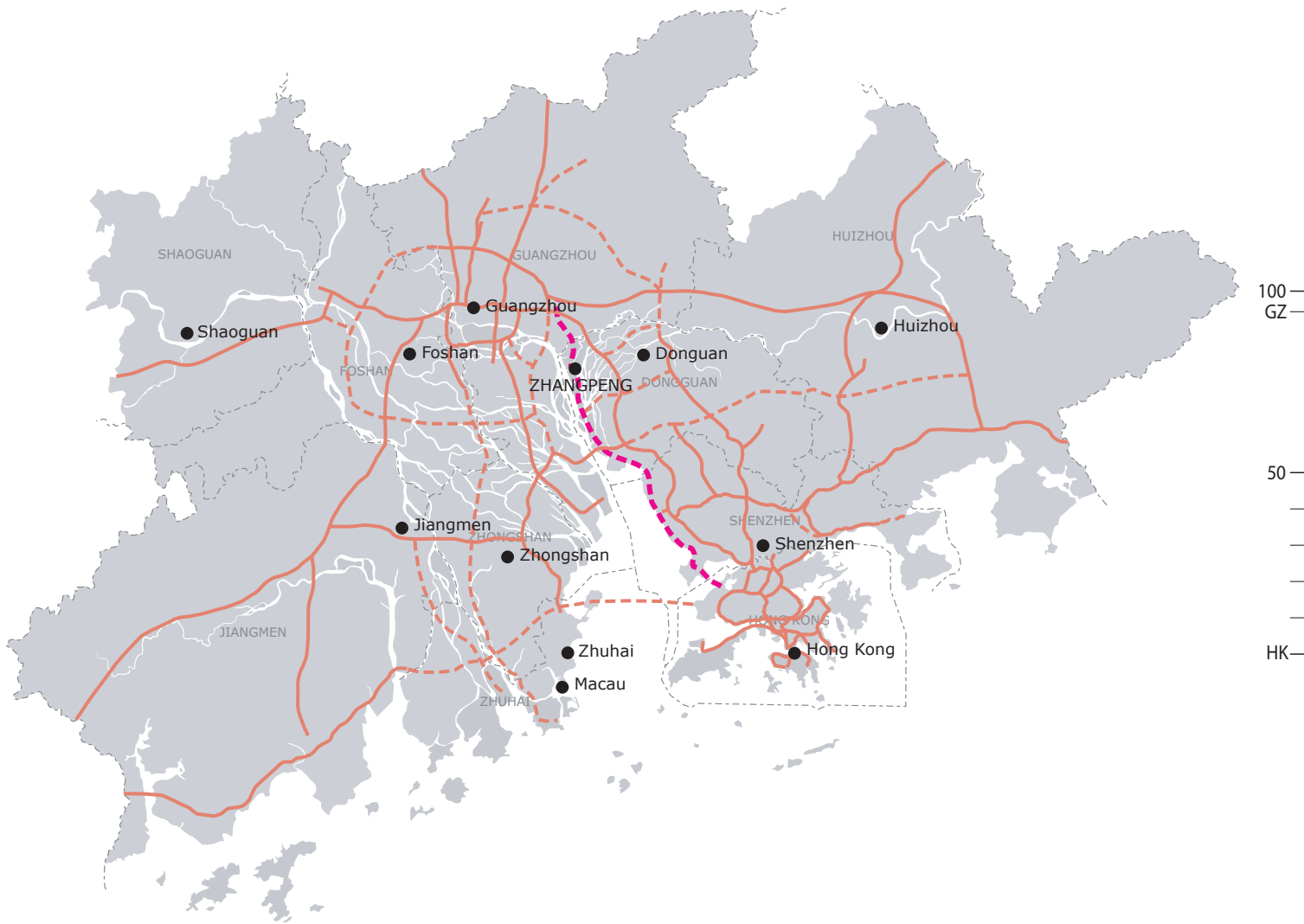


Fig. 73. Guangshen coastal expressway. Donald. *Ibid.*

Coastal Expressway

1: 2 million

- Expressway
- - - Expressway (under-construction & planned)
- - - Coastal Expressway (under-construction)

The Coastal Expressway under-construction will be the second express connection between Hong Kong and Guangzhou, the first being the GuangShen Expressway.

The new expressway places Zhangpeng directly along the intermetropolitan link.

200 km

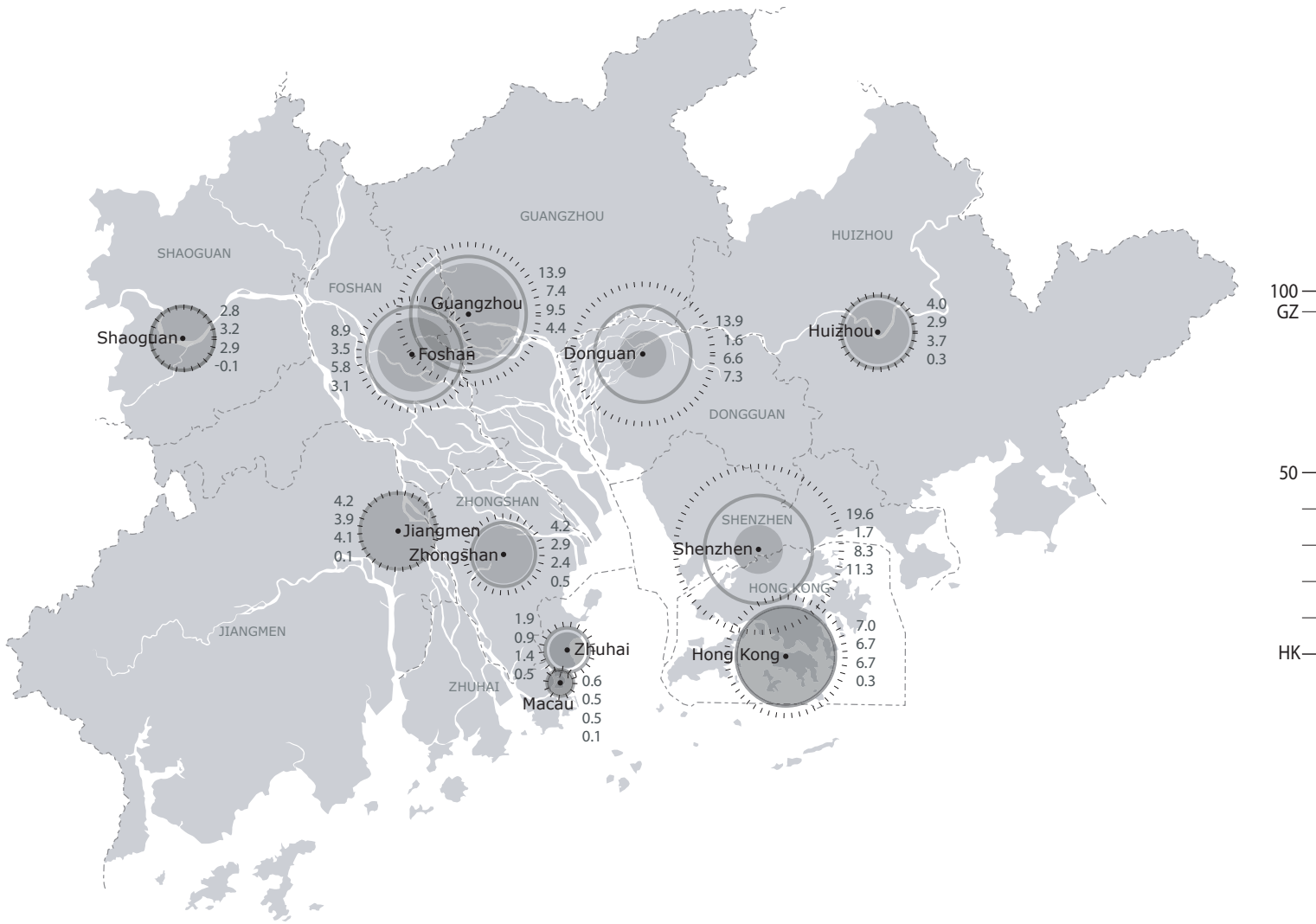
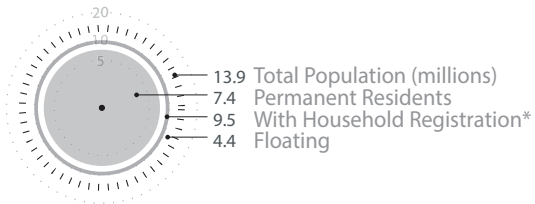


Fig. 74- Population structure of PRD by city. Guangdong Bureau of Statistics. 2005 Guangdong Statistical Yearbook.

Population Structure (2004)

1: 2 million



*Population with household registration includes permanent residents as well as registered migrants.

~Shaoguan is a city of net emigration.

Total Population of the PRD

39% Permanent Residents
22% Registered
39% Floating

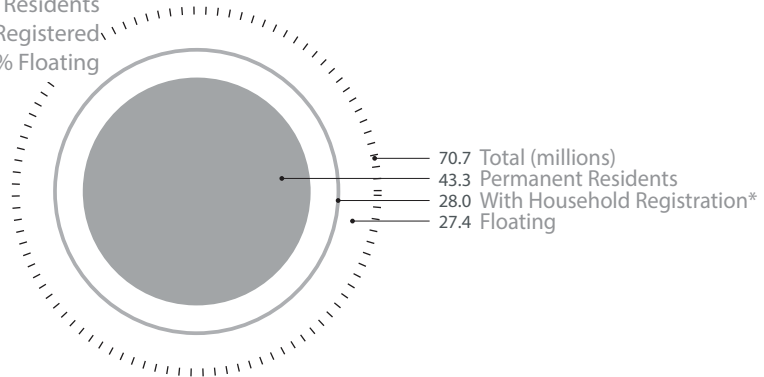


Fig. 75. Total population of PRD. Guangdong Bureau of Statistics. 2005 Guangdong Statistical Yearbook.

Most of the 27.4m floating inhabitants of PRD reside in Dongguan and Shenzhen due to the concentration of factories in those metropolitan regions.

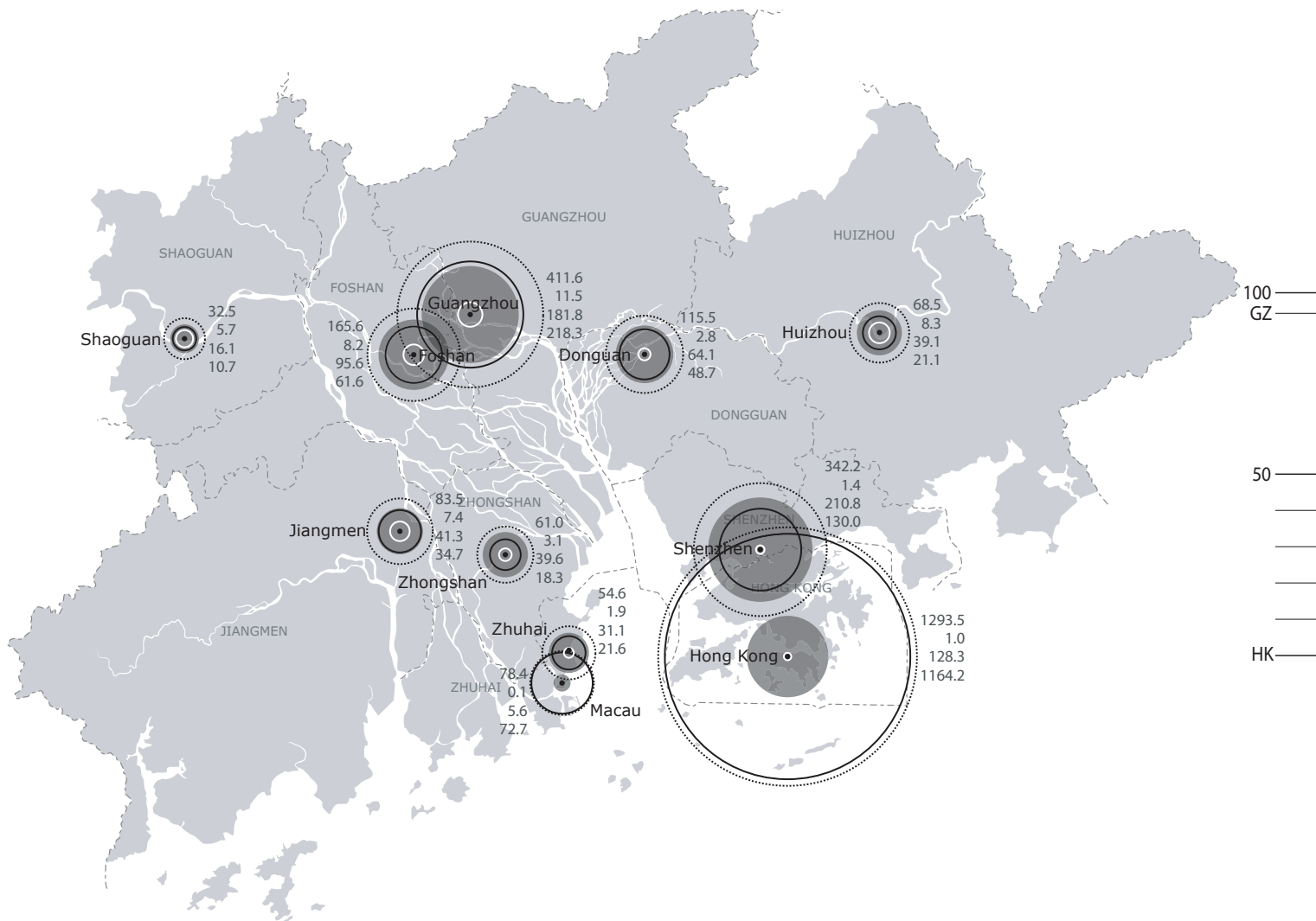


Fig. 76. GDP by industry sector by city in the PRD. Guangdong Bureau of Statistics. 2005 Guangdong Statistical Yearbook.

Gross Domestic Product Composition by Industry Sector (2004)

1: 2 million



As a service economy, Hong Kong tops the scales in GDP. It has played as the front office to the workshop that is the rest of the PRD.

Shenzhen and Guangzhou's service sector is maturing and expanding. This is a sign of an economy moving upscale.

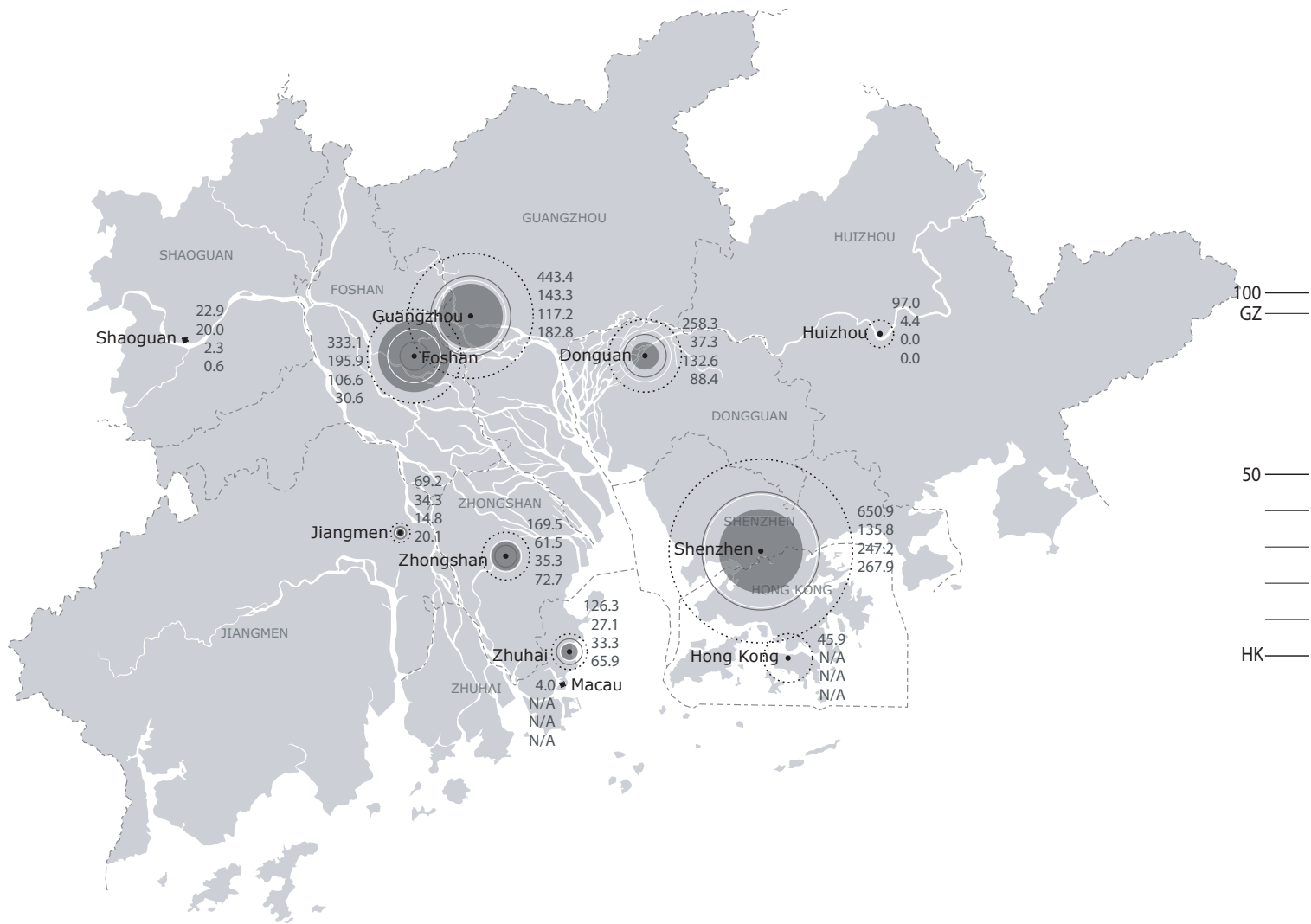


Fig. 77. Industrial output by source of capital by city in the PRD. Guangdong Bureau of Statistics. 2005 Guangdong Statistical Yearbook.

Industrial Output Value by Capital Source (2004)

1: 2 million



The PRD has achieved annual rates of growth at 17% for the past quarter center is made possible by the injection of foreign capital.

Hong Kong alone accounts for two-thirds of the foreign direct investment in the region.



"Ex-farmer, Neo-villager"

Mr. Lai is a native of Chang'an, Dongguan, the richest town in China. He lives in this house developed by his village co-op.

Fig. 78. Photograph.

200 km

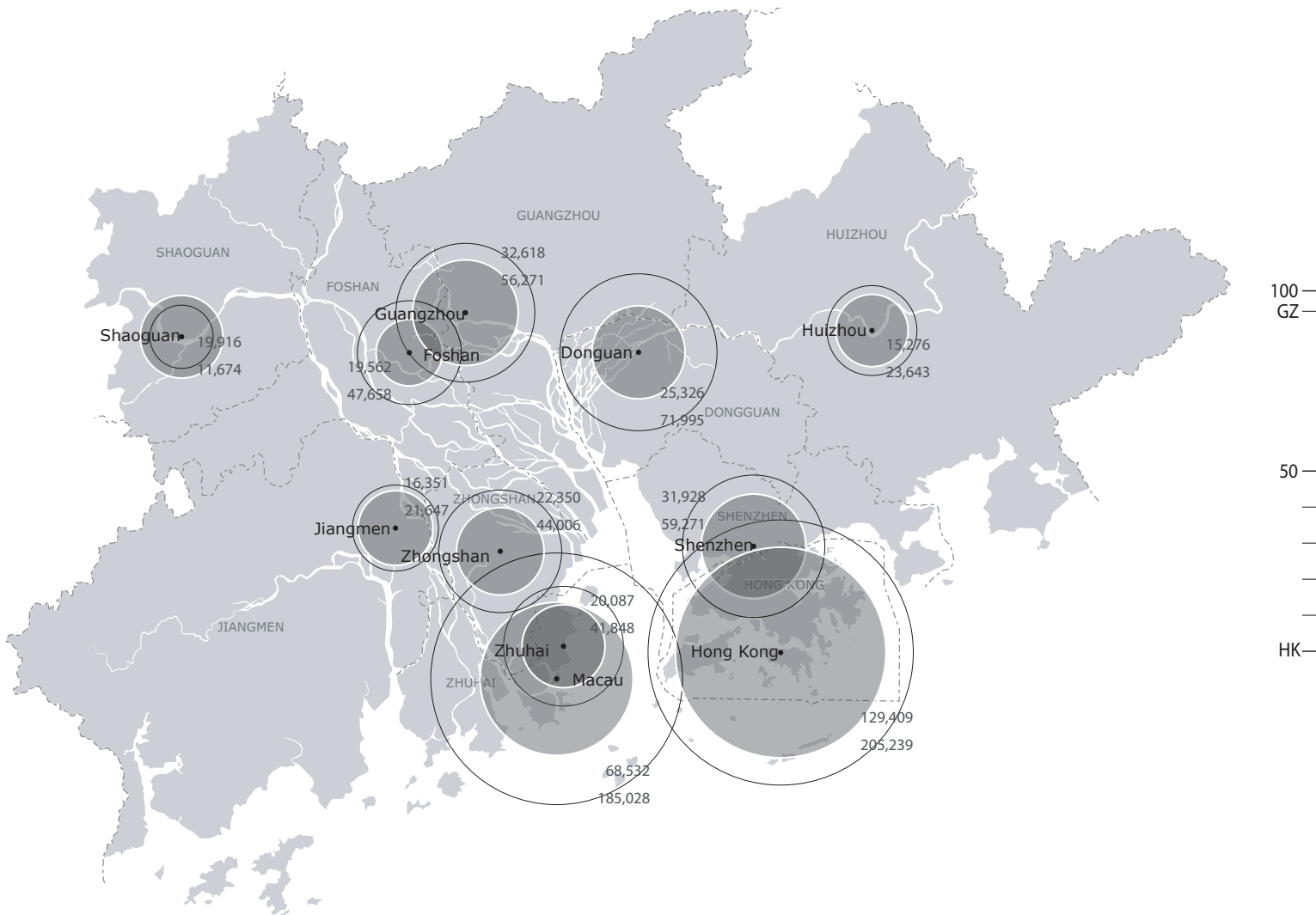
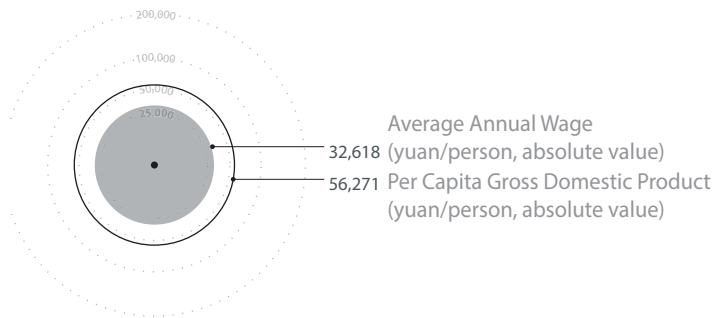


Fig. 79. Per capita GDP and average annual wage by city in the PRD. Guangdong Bureau of Statistics. 2005 Guangdong Statistical Yearbook.

Per Capita GDP & Average Annual Wage (2004)

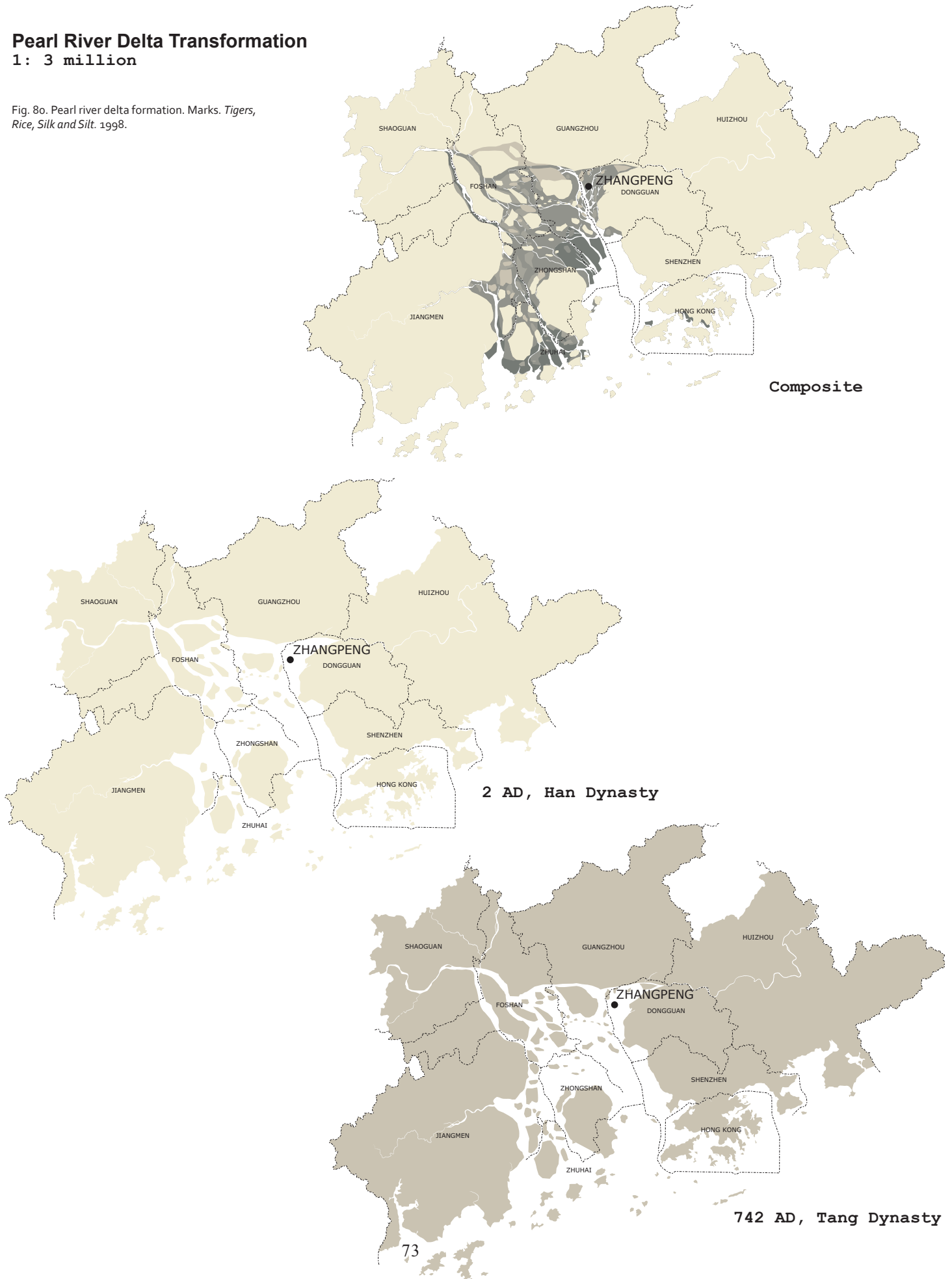
1: 2 million



The large gap between annual wages and per capita GDP in Dongguan is due to the small number of registered citizens, factored with the large revenues from manufacturing sources in that region.

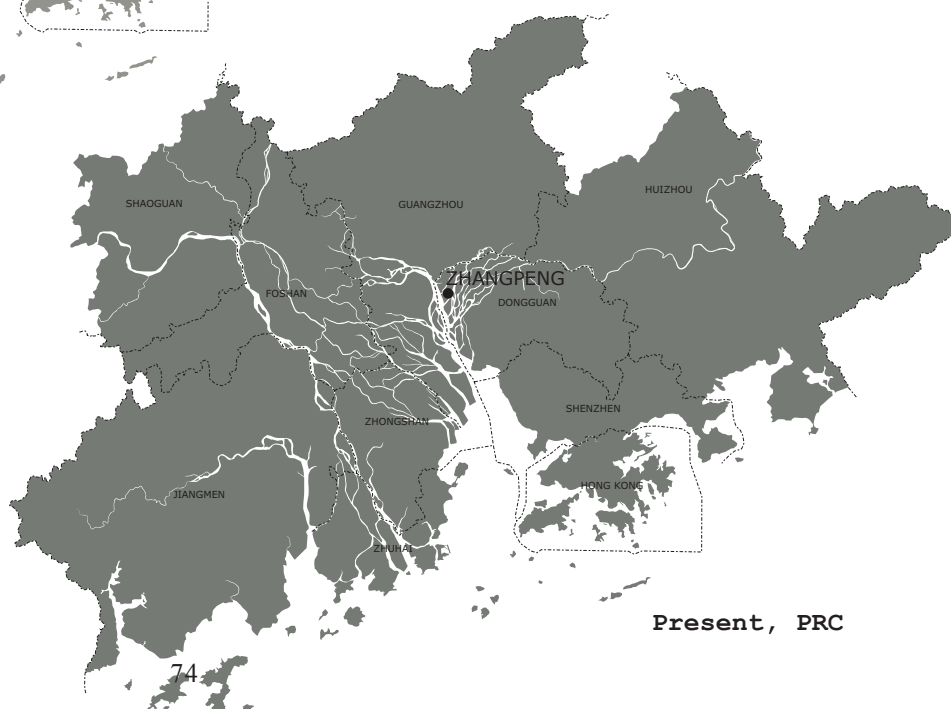
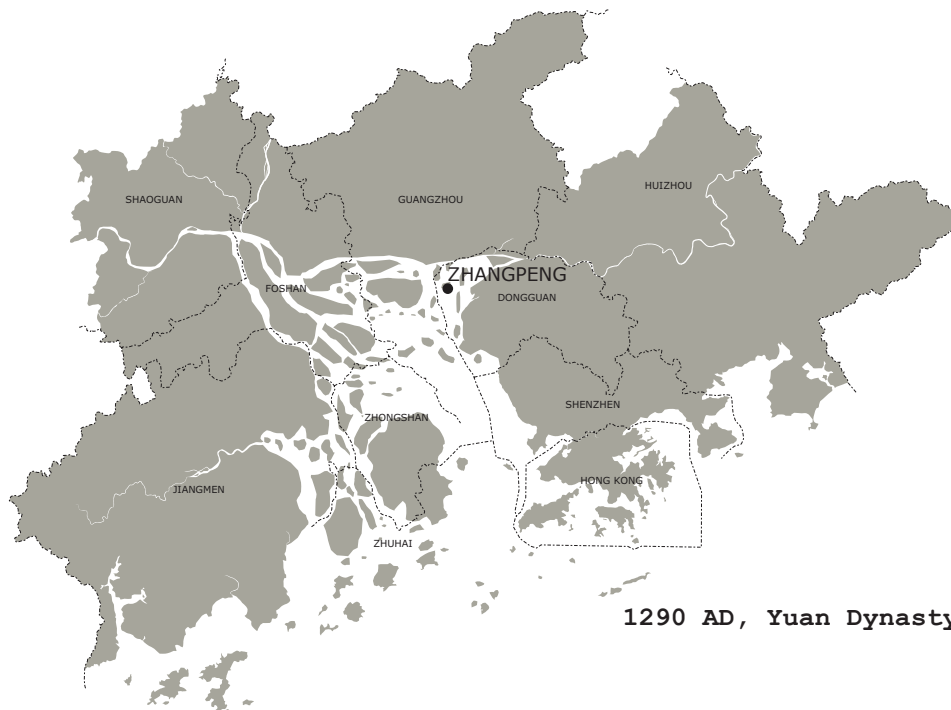
Pearl River Delta Transformation 1: 3 million

Fig. 8o. Pearl river delta formation. Marks. *Tigers*,
Rice, Silk and Silt. 1998.



Creation of deltaic land in the PRD largely took place after the Mongol invasion in 12th-century AD.

Land reclamation projects are still undergone today.





"Perpetual Peace"

Named after the Tang imperial capital, Chang'an turned from a village of 5000 into a town of 1m in a quarter-century.

Fig. 81. Photograph.

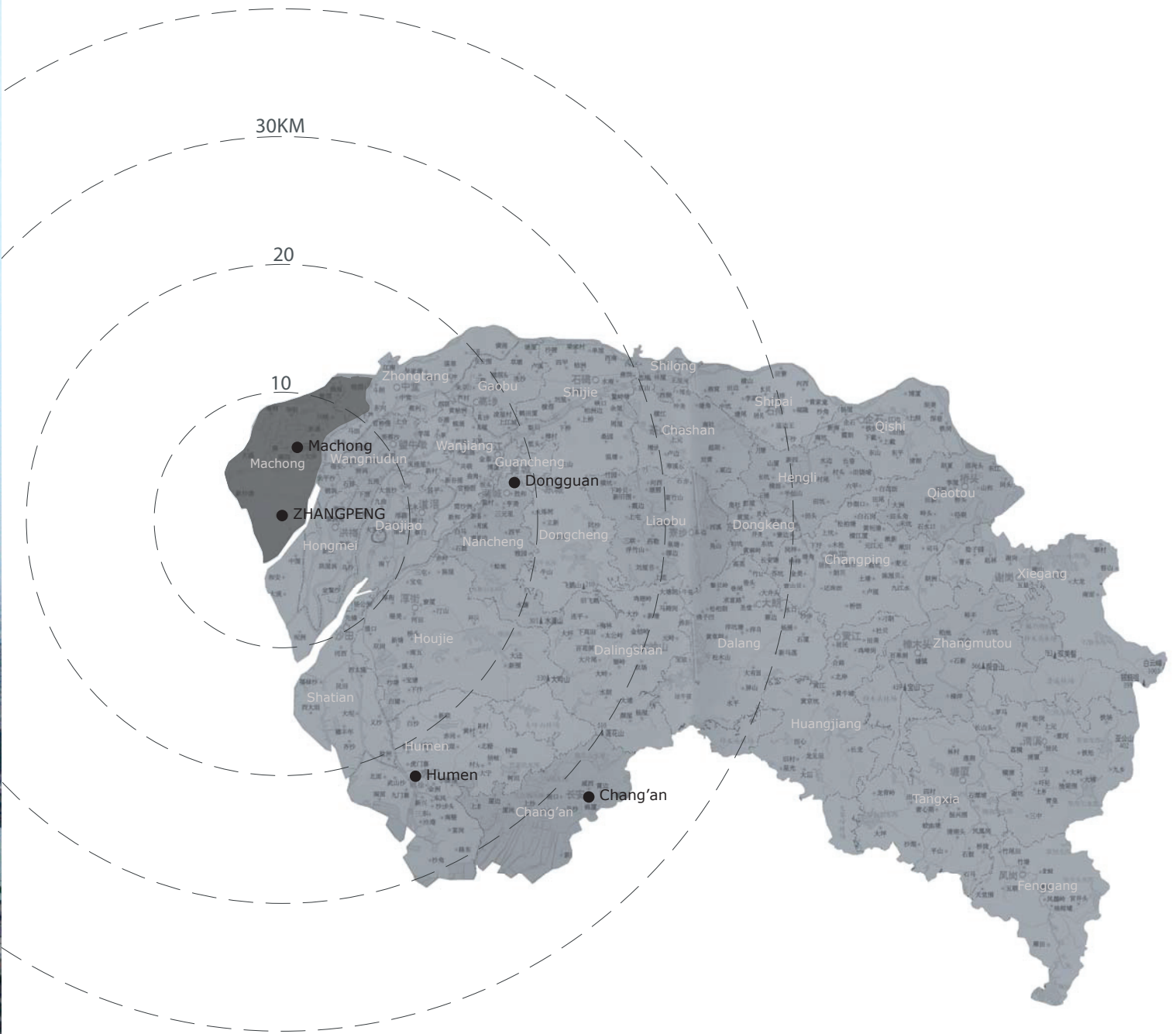


Fig. 82. Dongguan city with Machong town shaded.
New Dongguan City Map Book, 2006.

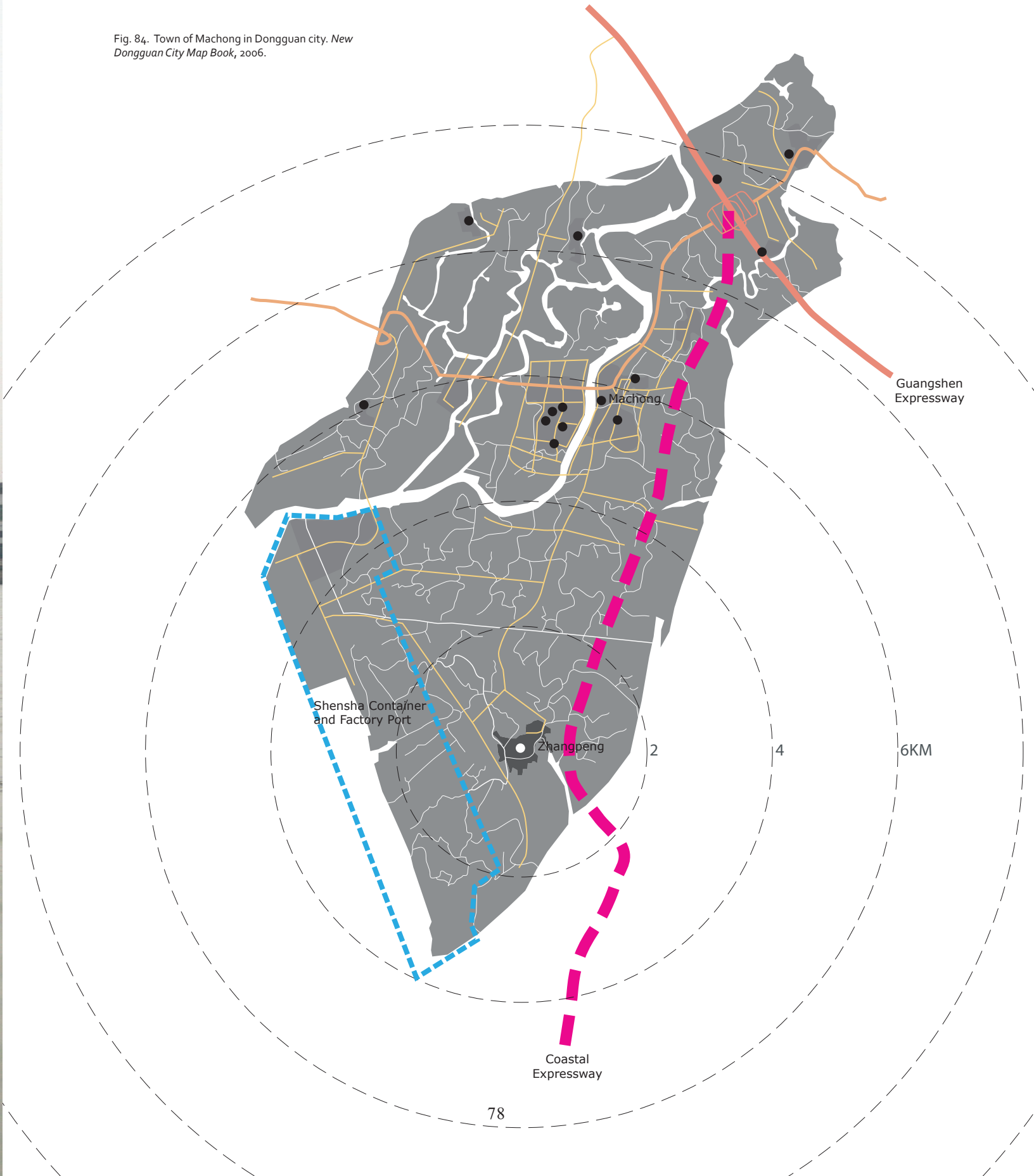


"On Our Mighty Banks"

The Shensha Container Port will expropriate more than one-third of Zhangpeng's village farmland.

Fig. 83. Photograph.

Fig. 84. Town of Machong in Dongguan city. *New Dongguan City Map Book, 2006.*



The global financial crisis, or credit crunch, affected China's economic principle of connecting its cheap supply of land and labour to the abundant foreign demand for goods. Western buyers stopped orders of products from Chinese manufacturers as their credit liquidity and consumer wealth plummeted. The cut-off of product orders caused half of all manufacturing firms in the PRD to go bankrupt. Migrant workers all across China are left without work. Some are rioting, claiming back-pay from employers that have shut down their plants and have fled. Many have given up looking for work and had returned to their home villages. Government officials are worried about the increasing incidents of social unrest as the economy slows. As businesses lose their investments, workers lose their jobs and the government's control of social order slips; China is left to question the stability of the country's socioeconomic foundation.

Like almost all villages of the special economic zones, Zhangpeng's development is primarily driven by the existence of manufacturing firms. The revenue from the sale and leasing of village land for factory use goes towards building schools, parks and markets but is primarily reinvested into infrastructural developments to support the manufacturers' industrial needs. Zhangpeng has invested in collective dormitories for migrant workers. The influx of migrant workers into the villages' factories also generate business for shops, restaurants and rental properties of the village.

Rural economic growth in the PRD is almost entirely dependent on the manufacturing sector. Furthermore, public and private investments are all made to develop the village as a factory town because this is seen as the only source of economic growth available to rural China.



Fig. 85. Dormitory blocks built by village collective.

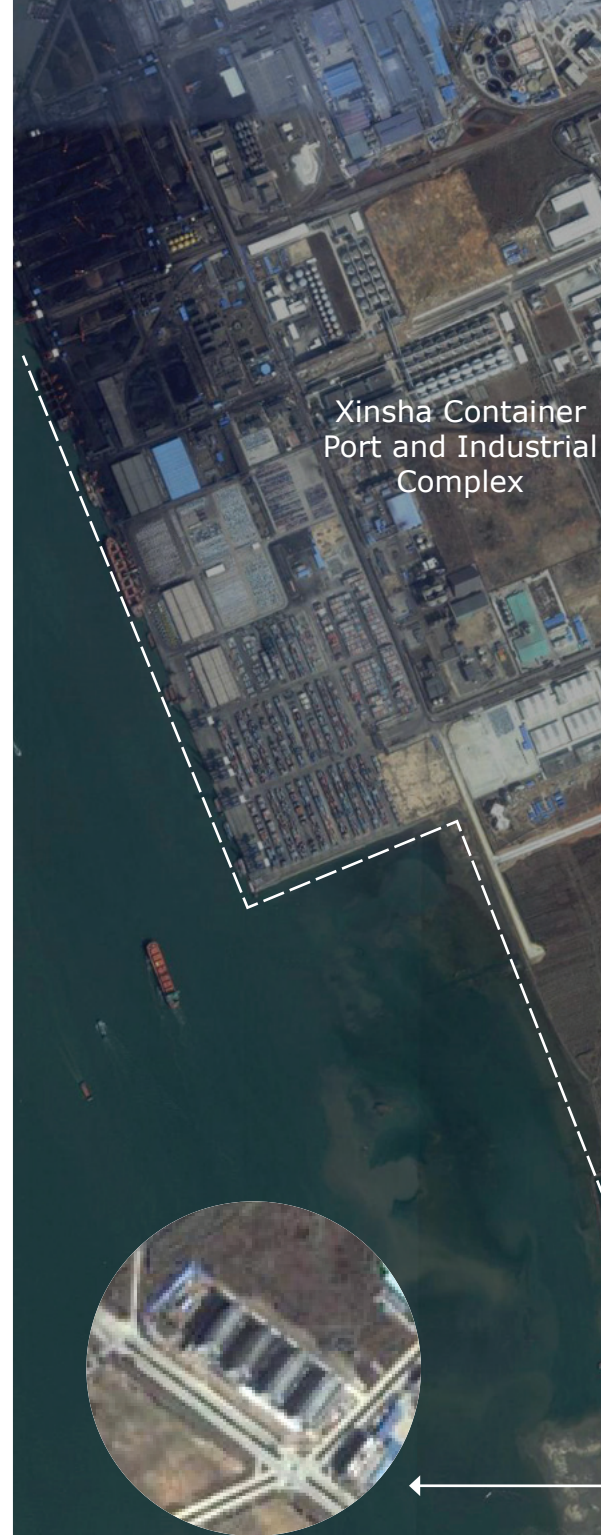
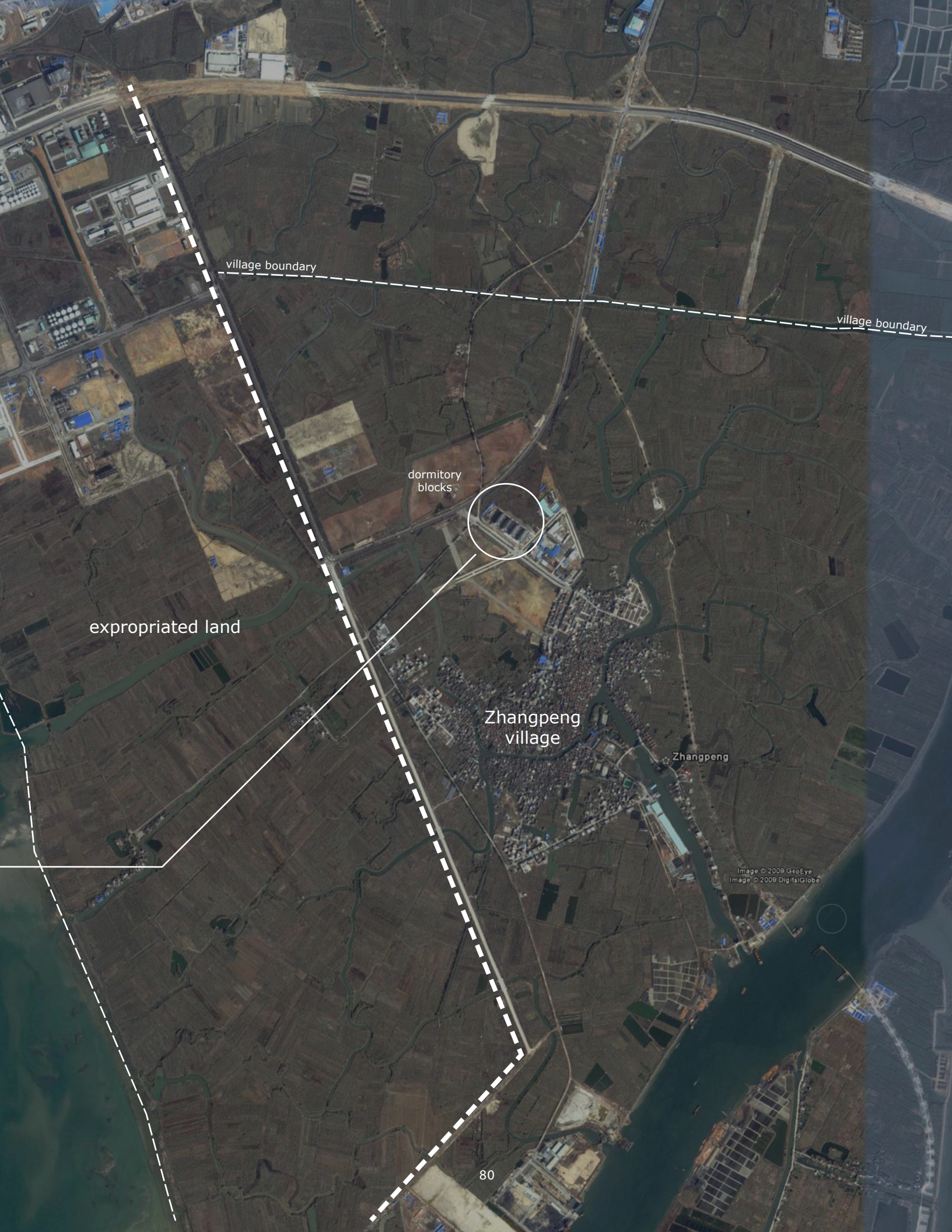


Fig. 86. Satellite image of extent of expropriation of Zhangpeng village land.

As the Xinsha Industrial Complex grows on the banks of Zhangpeng's expropriated lands, the village has anticipated the need for worker's housing by constructing large collective dormitory blocks as a village enterprise investment. (Above & left)

Zhangpeng will not see any returns until foreign demand restarts manufacturing plants that have been put on production hiatus since the financial crisis and migrant workers are summoned back to the factory floors again.



village boundary

village boundary

dormitory blocks

expropriated land

Zhangpeng village

Zhangpeng

Image © 2009 GeoEye
Image © 2009 DigitalGlobe



"Fourth-storey"

A view from a four-storey home that will replace a traditional village house in the heart of Zhangpeng.

Fig. 87. Photograph.

Village Map
1:5000

Fig. 88. Figure/ground. Dongguan Planning Bureau.
Zhangpeng village map. 2006.





"Twenty-eight"

Two more days until Chinese New Year. Companies now do not let employees go on holiday until New Year's eve.

Fig. 8g. Photograph.

expressway >

Aerial Photograph 1 : 5000

Fig. 90. Satellite imagery of Zhangpeng. Google-maps.



shops >

< rental housing

bus station

< market

bridge >

wholesale market >

< pavilion

bridge >

< highschool

Leung family >
temple

Chan family >
temple

< village admin

pavilion >
stores >

< bridge

< market >

pavilion >

village square

< shops and restaurants

< bridge at
water nat

pavilion >

bridge >

< elementary
school

< Zhangpeng park

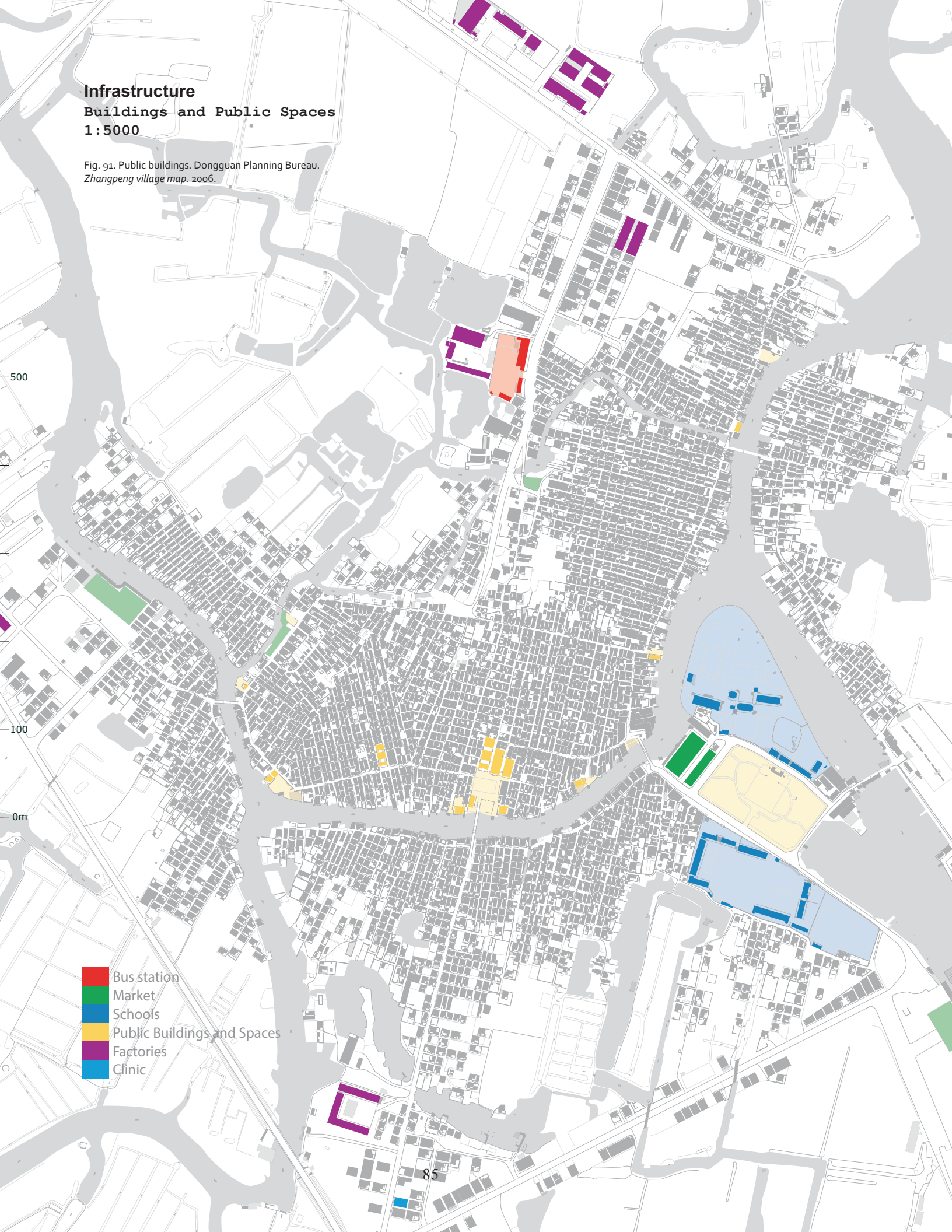
fish farms >

B

< fish farms

Infrastructure
Buildings and Public Spaces
1:5000

Fig. 91. Public buildings. Dongguan Planning Bureau.
Zhangpeng village map, 2006.



- Bus station
- Market
- Schools
- Public Buildings and Spaces
- Factories
- Clinic

Infrastructure
Bridges
1:5000

Fig. 92. Bridges. *Ibid.*

Distance from any village home
to the closest bridge is no
more than 200m.





Fig. 93.

"Orientated Core-type on Podium"

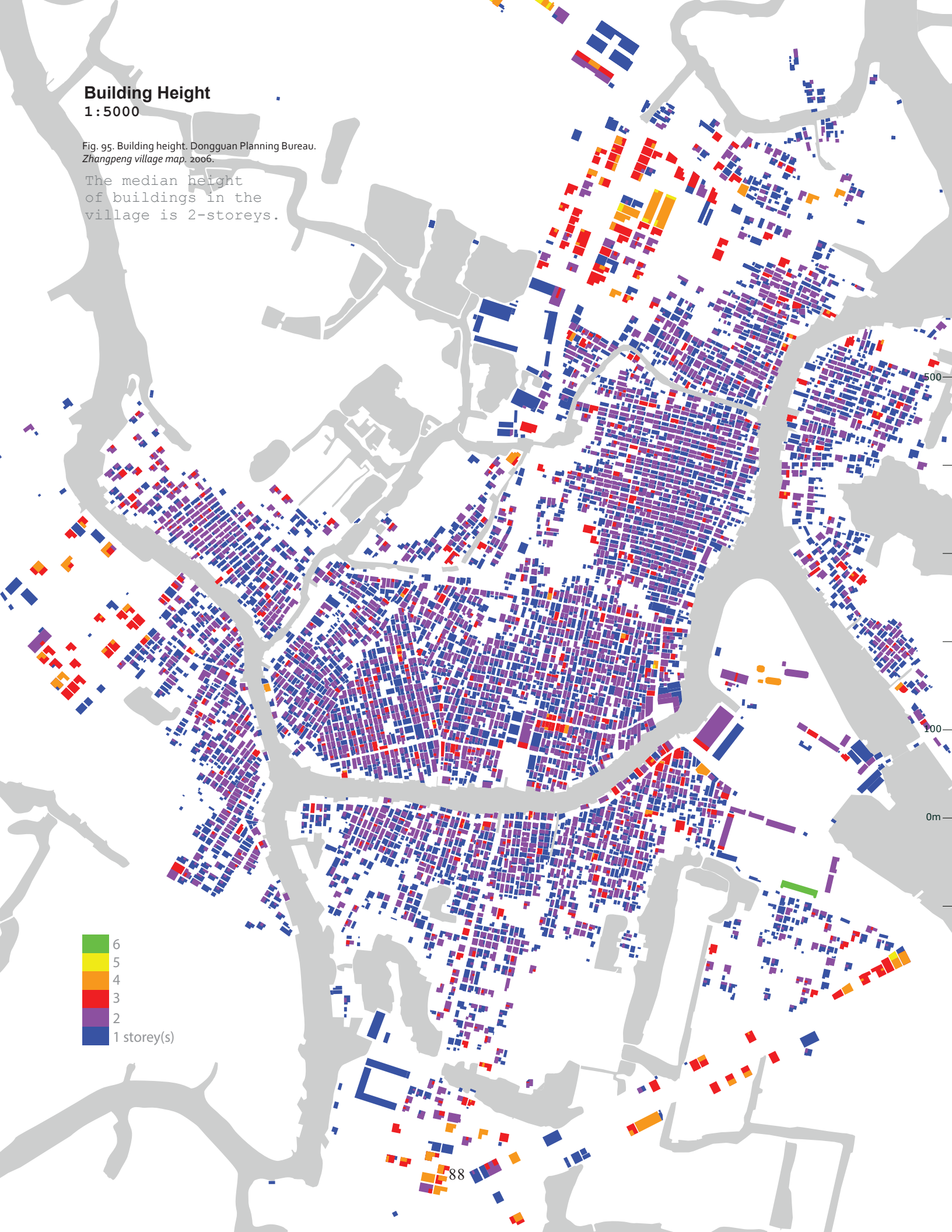
Mr. Cheung stands in front of his typologically new home.

Fig. 94. Photograph.

Building Height 1:5000

Fig. 95. Building height. Dongguan Planning Bureau.
Zhangpeng village map, 2006.

The median height
of buildings in the
village is 2-storeys.



Buildings Three-storeys and Above 1:5000

Fig. 96. Buildings three-storeys and above. *Ibid.*

Most of the tallest buildings by mass are built on the peripheral new-village. Homes are built in gridded allotments and mixed-use and commercial buildings line the major vehicular roads.

The large quantity of small three-storey built-forms provided rooftop access to the two-storey vernacular homes.

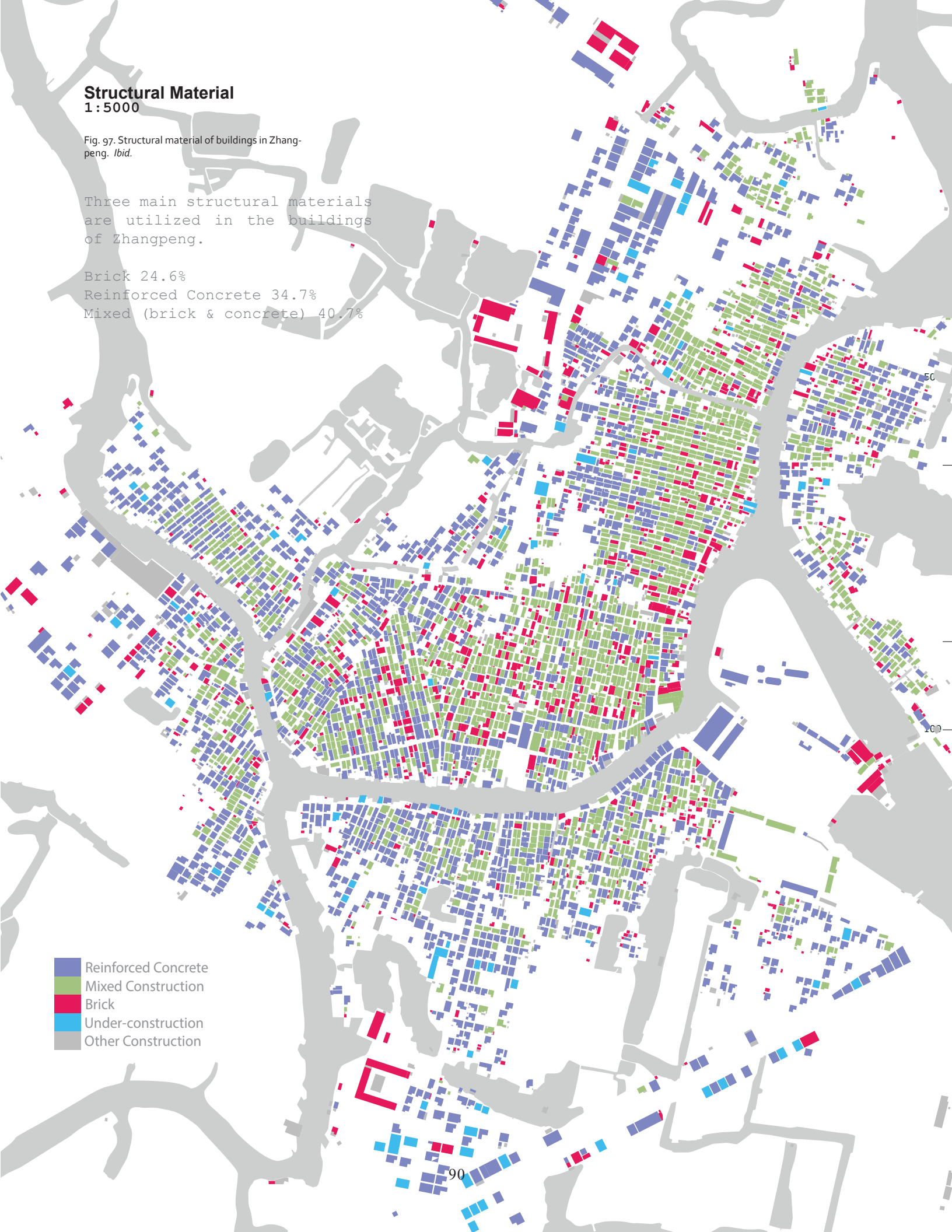
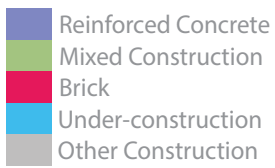


Structural Material 1:5000

Fig. 97. Structural material of buildings in Zhangpeng. *Ibid.*

Three main structural materials are utilized in the buildings of Zhangpeng.

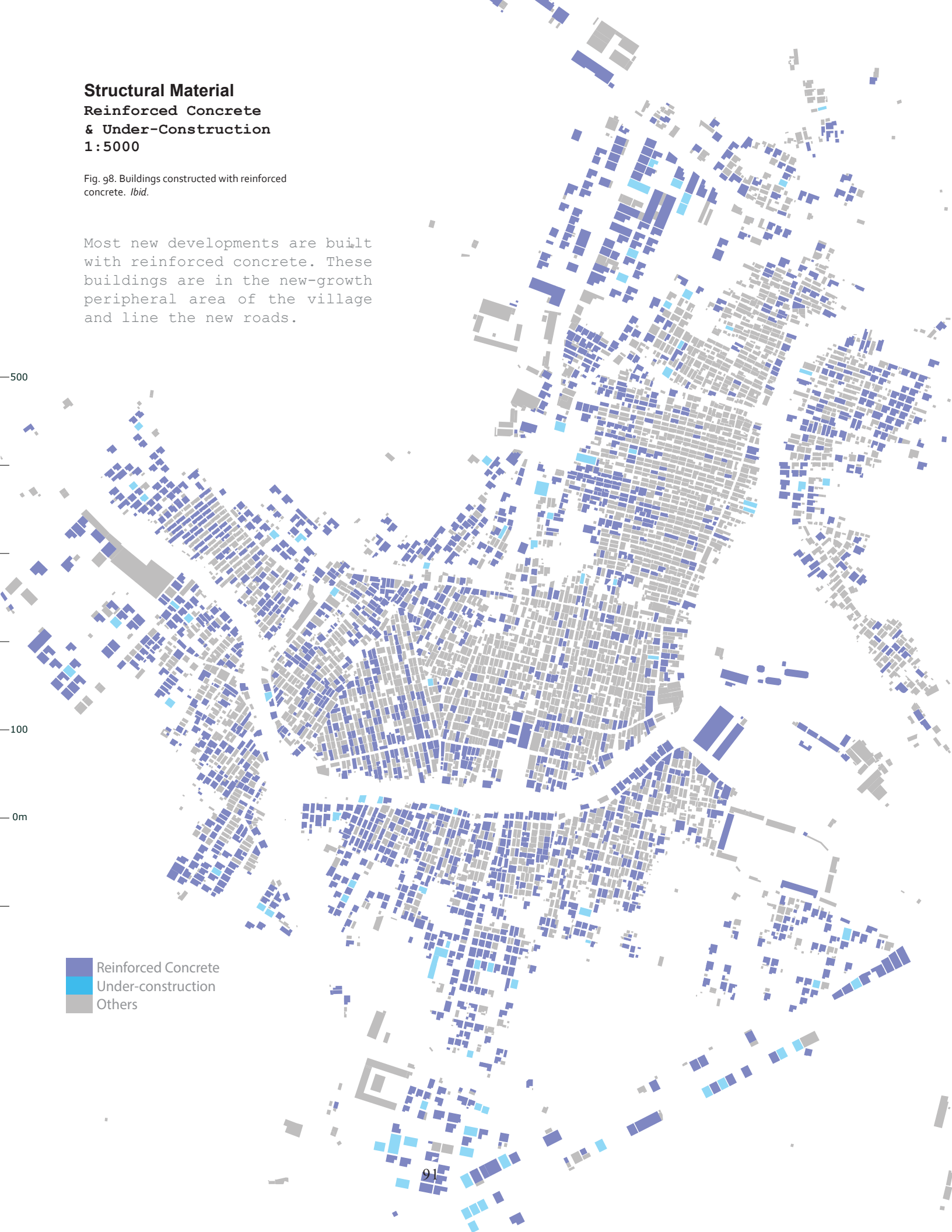
Brick 24.6%
Reinforced Concrete 34.7%
Mixed (brick & concrete) 40.7%



Structural Material
Reinforced Concrete
& Under-Construction
1:5000

Fig. 98. Buildings constructed with reinforced concrete. *Ibid.*

Most new developments are built with reinforced concrete. These buildings are in the new-growth peripheral area of the village and line the new roads.



Structural Material

Brick
1:5000

Fig. 99. Buildings constructed with brick. *Ibid.*

The first generation of buildings in the village are made of brick. The speckled distribution of the brick homes shown in the map demonstrate that they have been replaced and rebuilt with other materials that have less height limitations.





“Chillout”

The public spaces at arterial junctions usually have open-air canopies and a large banyan tree for shade.

Fig. 100. Open-air chess pavilion. Photograph

Structural Material
Open-air Shelters
1:5000

Fig. 101. Open-air shelters, canopies. Dongguan Planning Bureau. *Zhangpeng village map*. 2006.

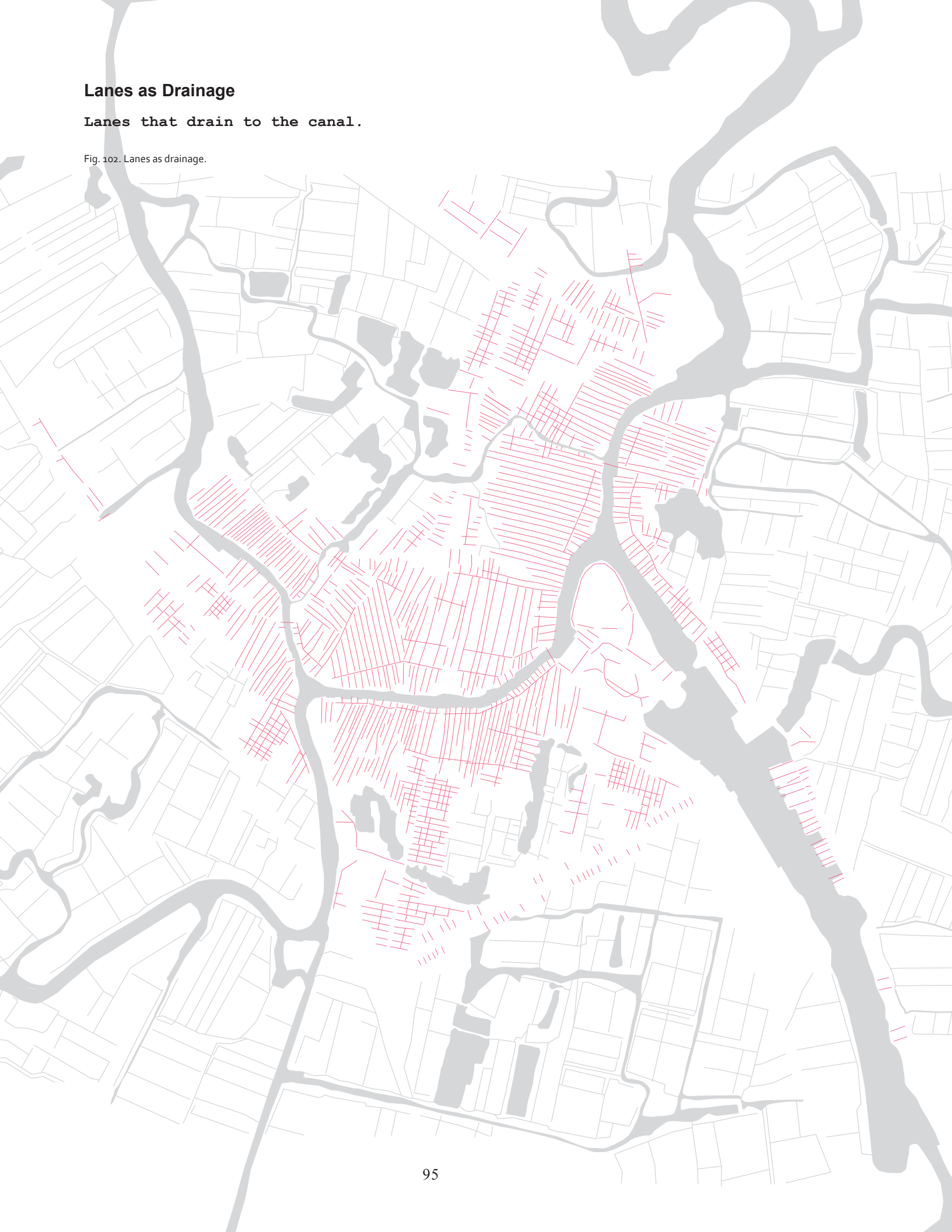
Open-air constructions play a significant role as markets and public gathering spaces built at the public space junctions of arterial paths.



Lanes as Drainage

Lanes that drain to the canal.

Fig. 102. Lanes as drainage.



Public Space Network

1 : 5000

Fig. 103. Public space network.

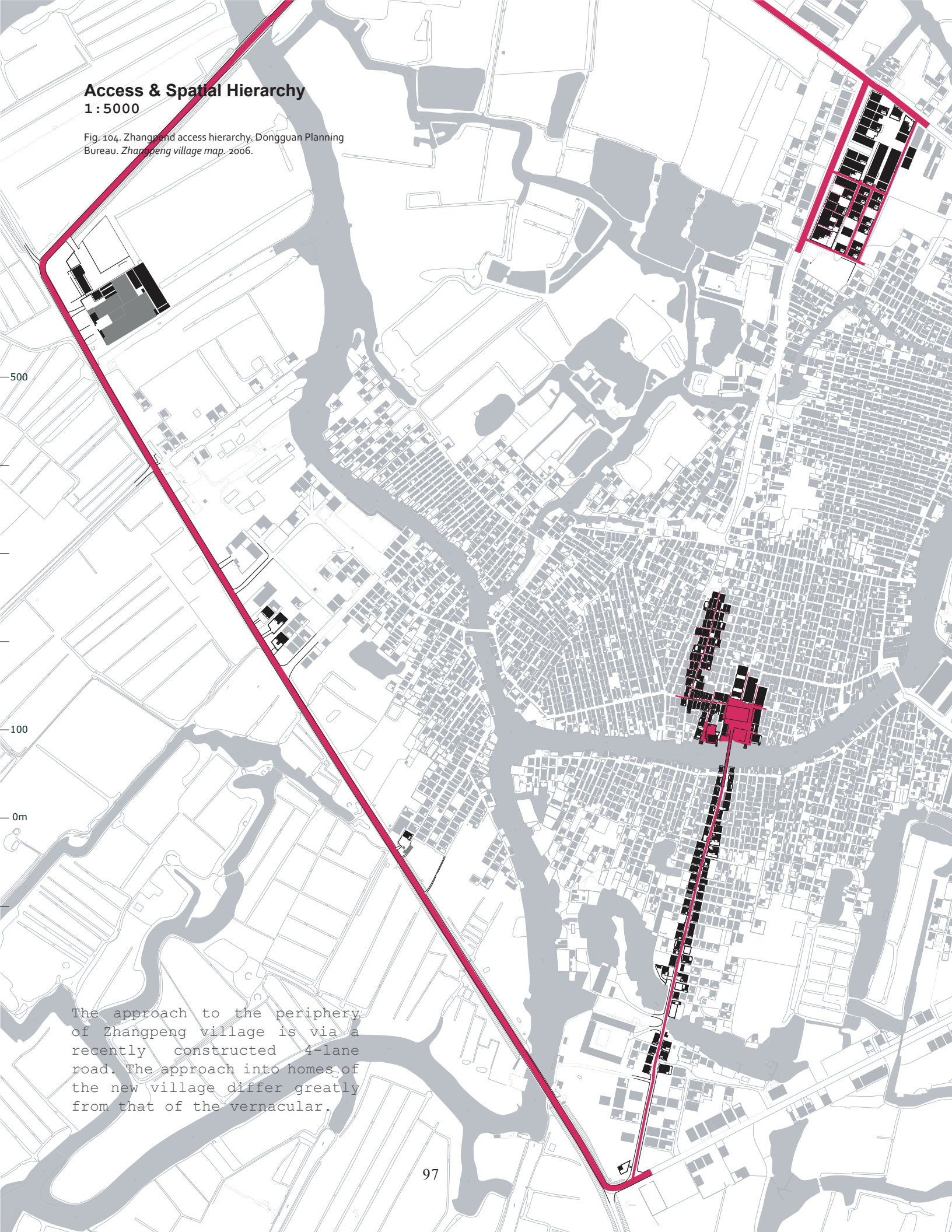


Zhangpeng Village 1:4000

- vehicular
- public space network
- built fabric
- canal

Access & Spatial Hierarchy 1 : 5000

Fig.104. Zhangpeng access hierarchy. Dongguan Planning Bureau. Zhangpeng village map, 2006.

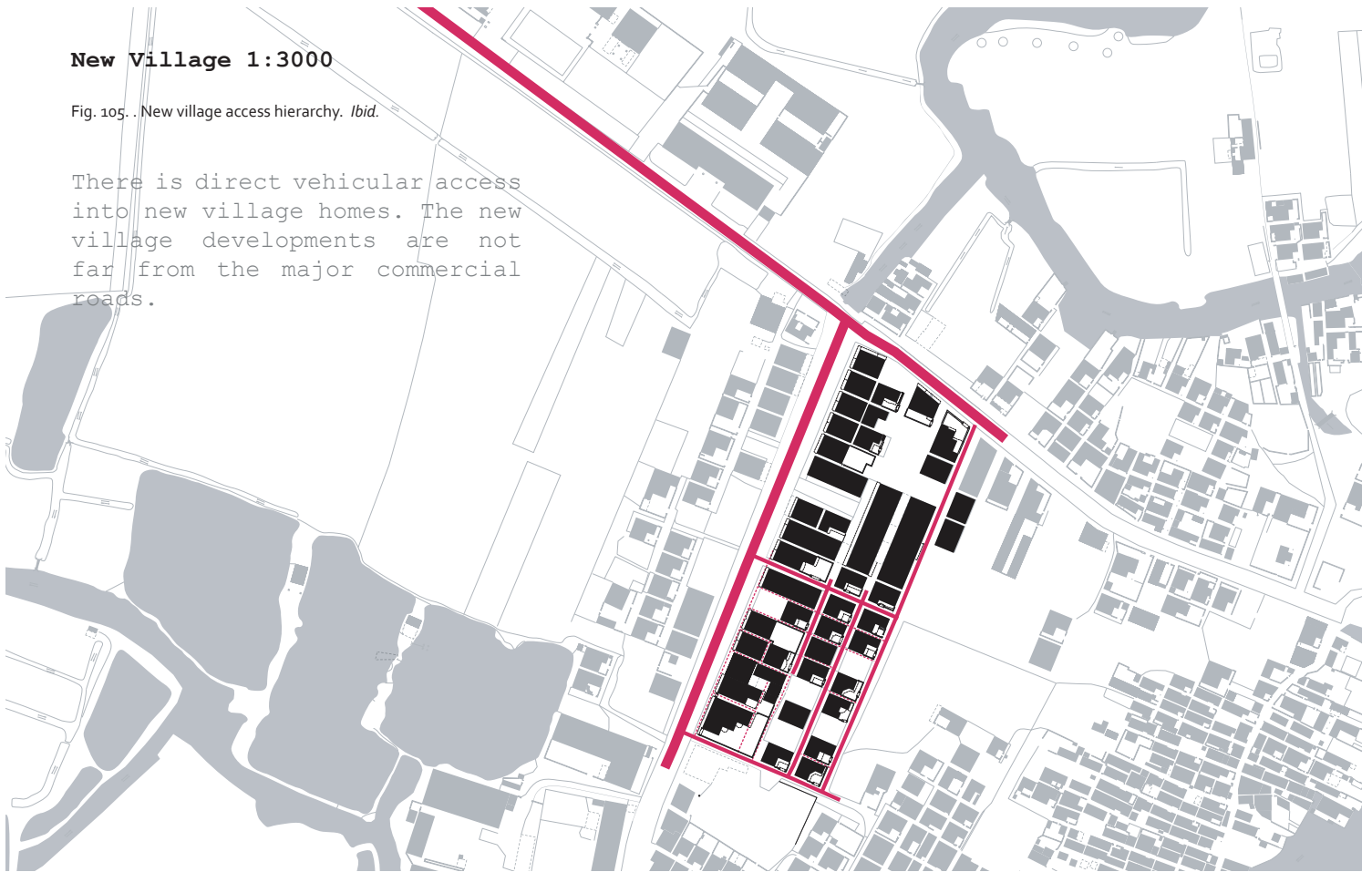


The approach to the periphery of Zhangpeng village is via a recently constructed 4-lane road. The approach into homes of the new village differ greatly from that of the vernacular.

New Village 1:3000

Fig. 105. New village access hierarchy. *Ibid.*

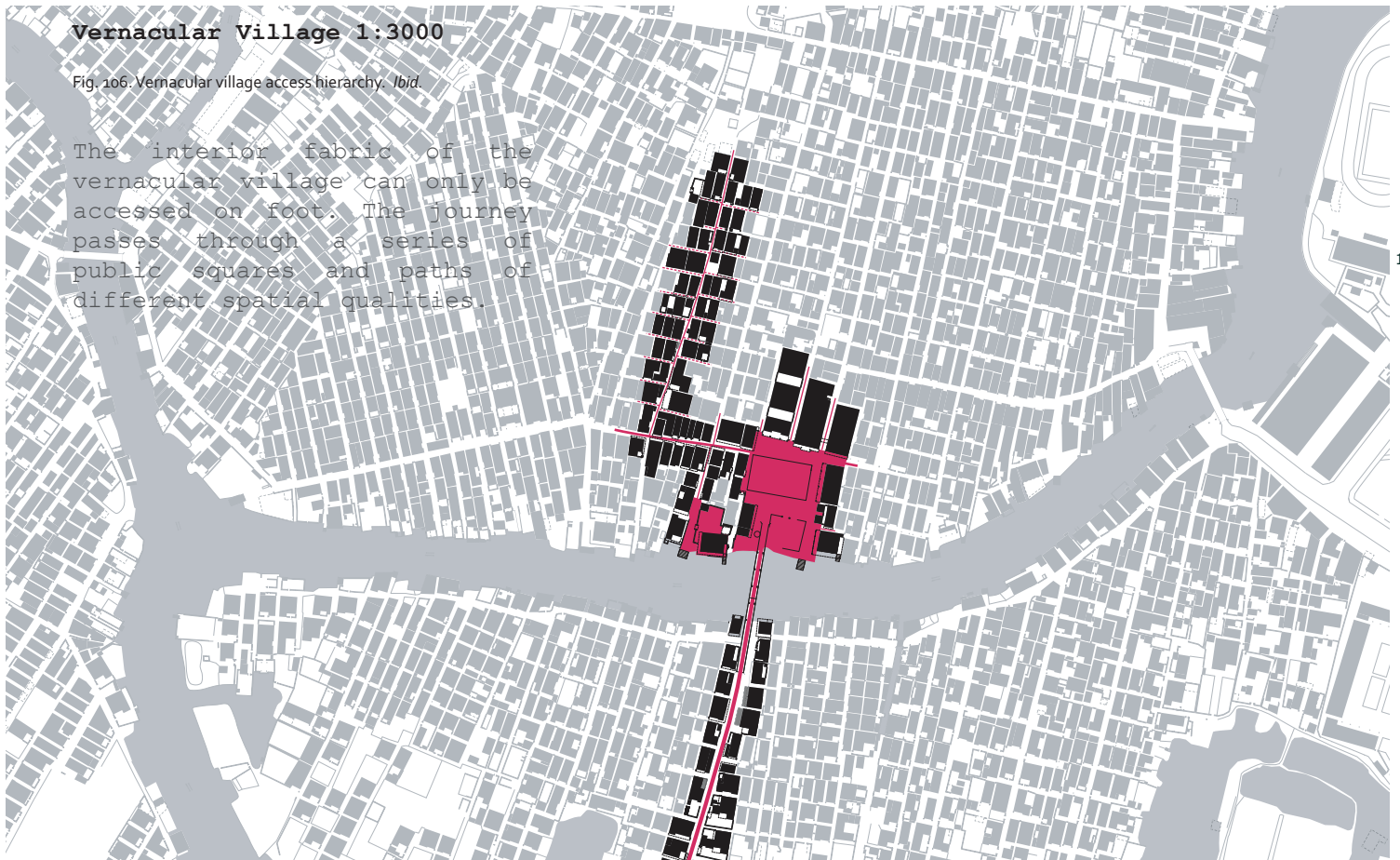
There is direct vehicular access into new village homes. The new village developments are not far from the major commercial roads.



Vernacular Village 1:3000

Fig. 106. Vernacular village access hierarchy. *Ibid.*

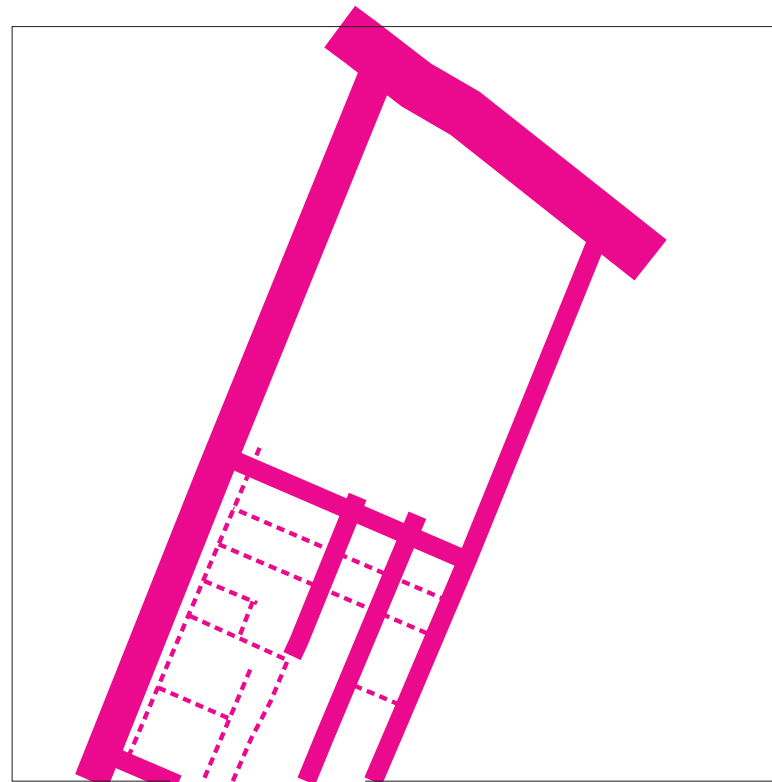
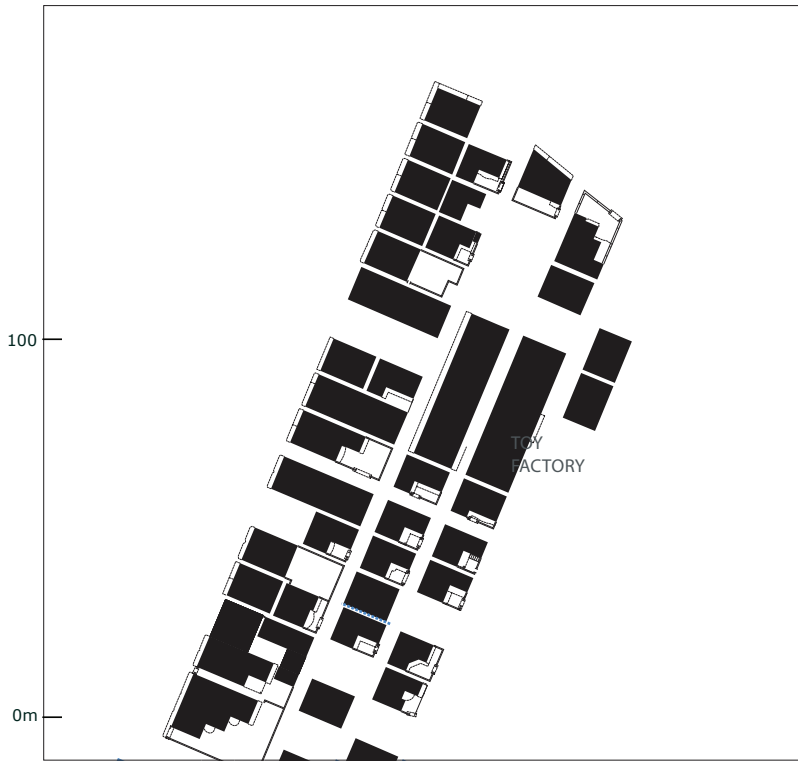
The interior fabric of the vernacular village can only be accessed on foot. The journey passes through a series of public squares and paths of different spatial qualities.



Access & Spatial Hierarchy

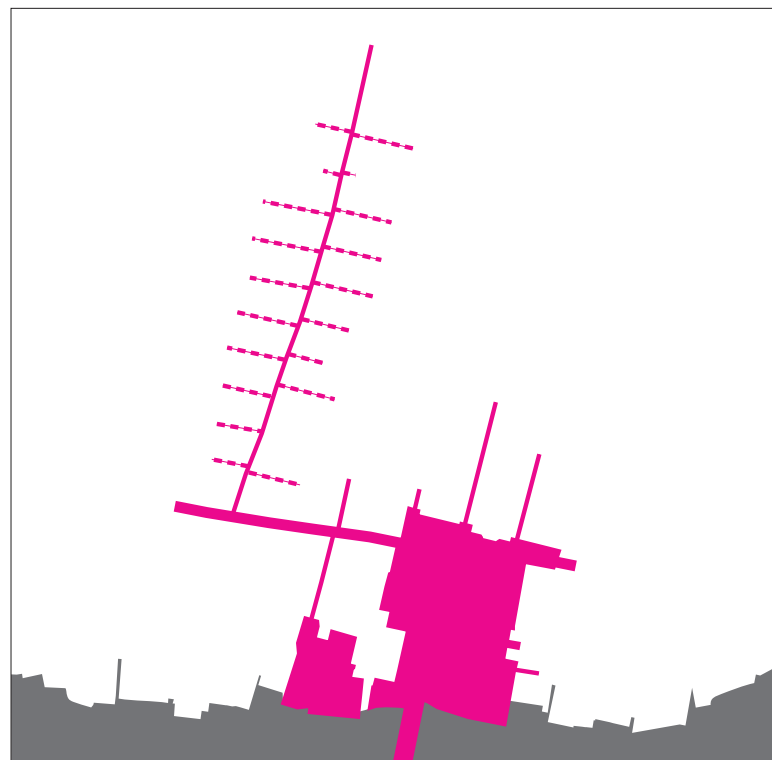
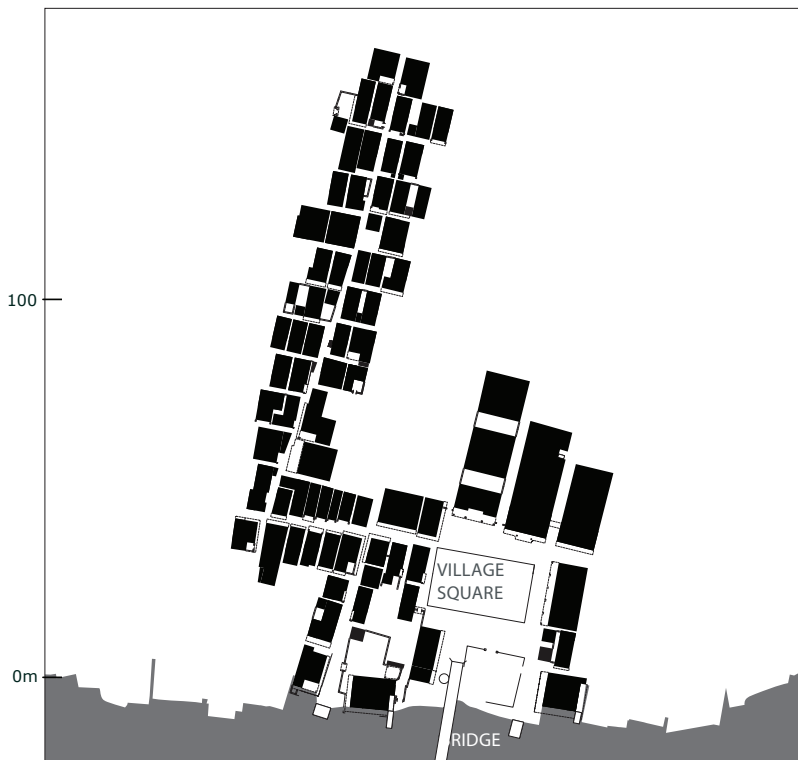
New Village 1:2000

Fig. 107. New village access hierarchy.



Vernacular Village 1:2000

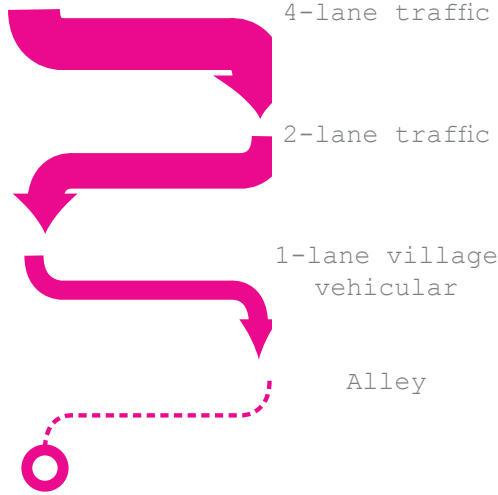
Fig. 108. Vernacular village access hierarchy.



Access Hierarchy

Description

Context



4-LANE VEHICULAR TRAFFIC



2-LANE VEHICULAR TRAFFIC



1-LANE VEHICULAR

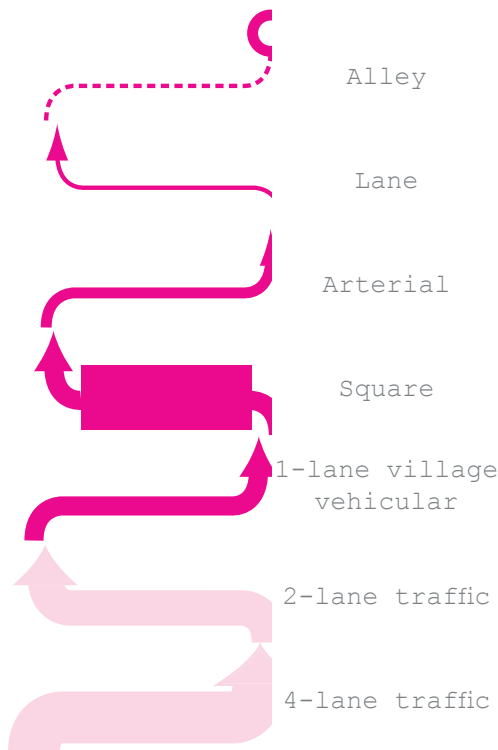


ALLEY



NEW VILLAGE HOUSE

Fig. 109. New village access hierarchy. Photographs.



VERNACULAR HOUSE



ALLEY



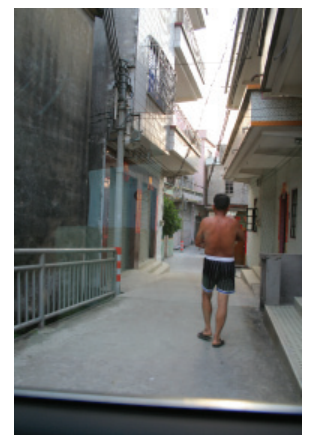
LANE



ARTERIAL



VILLAGE SQUARE



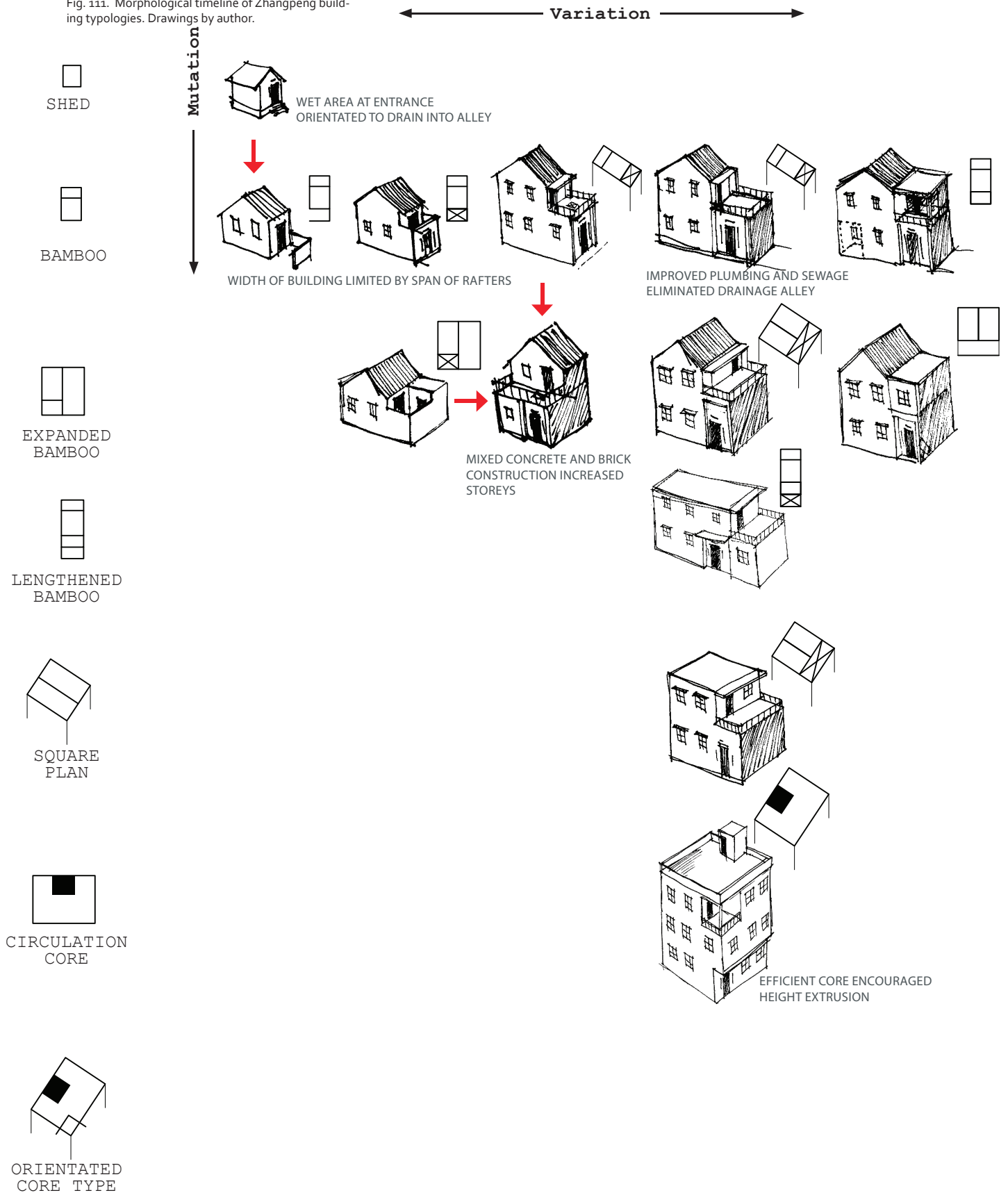
1-LANE VEHICULAR

Fig. 110. Vernacular village access hierarchy. Photographs.

Zhangpeng Building Typologies

TYOLOGIES

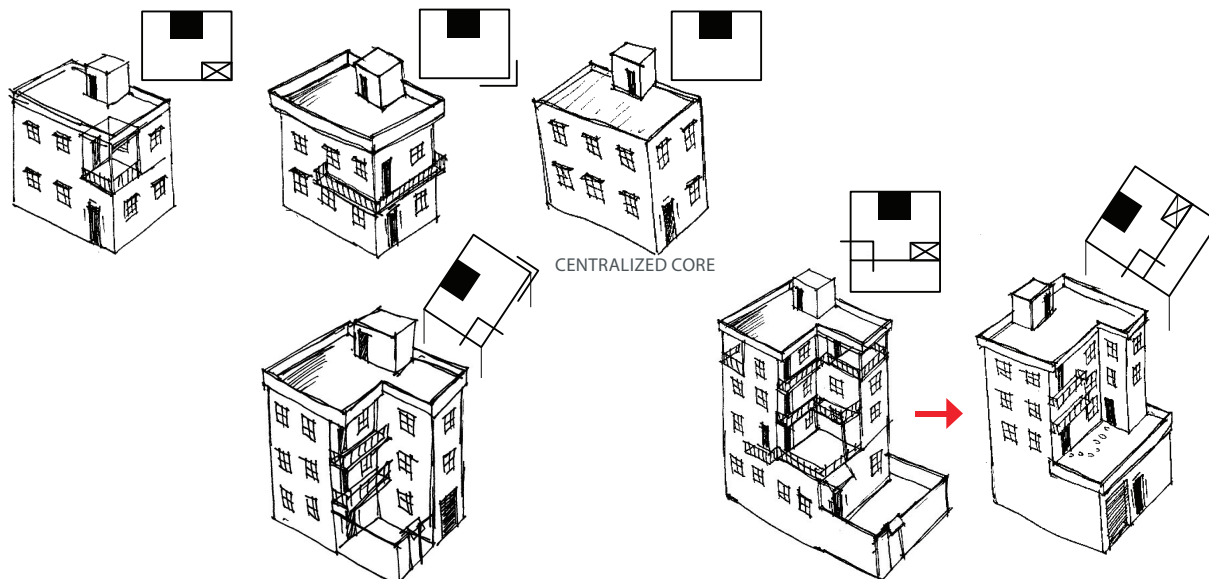
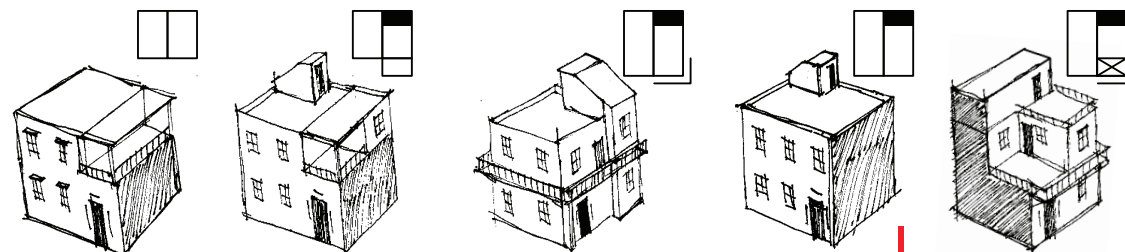
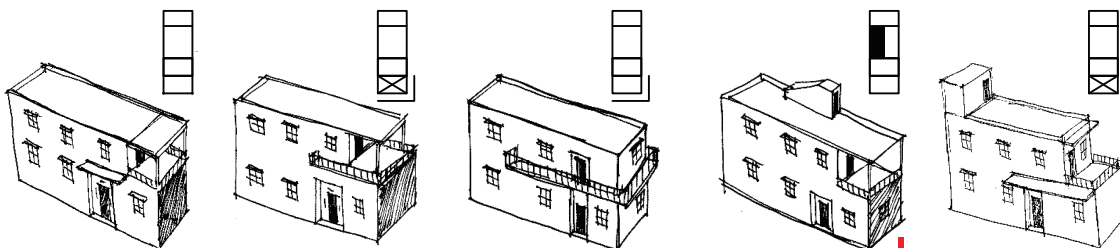
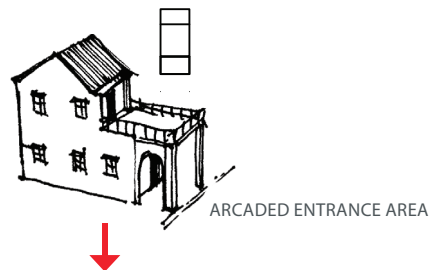
Fig. 111. Morphological timeline of Zhangpeng building typologies. Drawings by author.



← Variation →

The built fabric of Zhangpeng and other continuous vernacular developments evolved slowly, with small modifications added to the original vernacular typology. The accumulated variations give a range of adaptations to meet the villagers' needs.

Occasionally, the village is confronted with a problem that the existing range of variations cannot solve. In that case, a seemingly "new" type is invented, but this chart shows that new typologies are simply mutated forms of existing variations.





L1. BAMBOO
TYPE ENTRANCE
L2. KITCHEN/
VESTIBULE



R1. NEW
VILLAGE HOUSE
R2. STAIRCASE
CORE



L. LIVING ROOM



R1. LIVING
ROOM



L1. UPPER
LIVING ROOM
L2. BEDROOM



R1. BEDROOM
R2. BATHROOM



L1. BALCONY
L2. BATHROOM



R1. BEDROOM

Fig. 112. Hierarchy of rooms in vernacular village house. Photographs.

Fig. 113. Hierarchy of rooms in new village house. Photographs.

Hillier space syntax diagrams.

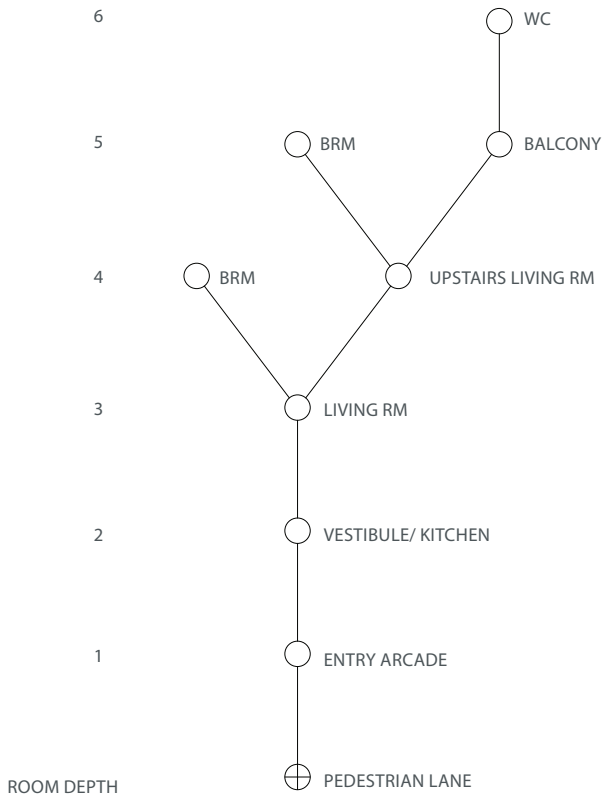


Fig. 114. Vernacular house space syntax diagram.

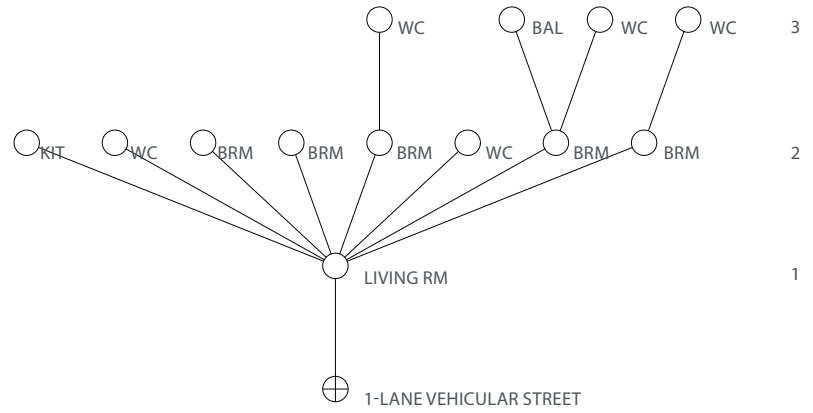


Fig. 115. New village house space syntax diagram.

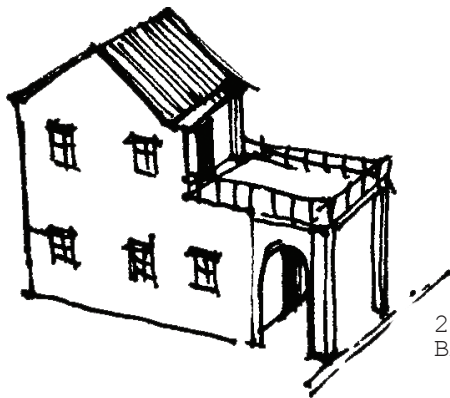


Fig. 116. Vernacular house. Drawing by author.

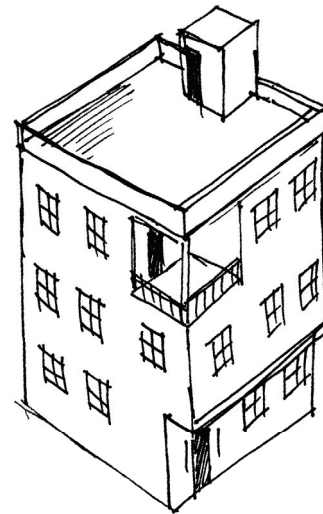


Fig. 117. New village house. Drawing by author.

The Difference between Old and New

The difference between the access system of the vernacular houses versus the new village homes are the number of gradations between the most public streets and the most private alleys. The successive levels of paths regulate privacy and provides different spatial settings for the corresponding social interactions.

The same difference is true of the room configurations in the vernacular versus new village homes. Above, the Hillier diagram maps out the rooms and spaces of a house and the connective relationships between them. The higher the room depth, the more rooms you have to pass through to reach it.

The 2-bedroom bamboo type house has a maximum of 6 levels. The 5-bedroom new village home has a 3.



A Description of the Village Public Network of Zhangpeng Village

Zhangpeng village is representative of villages in the Pearl river delta region in culture and geography. It has been created on the alluvium of deltaic land during the 18th century. Its customs and built form is representative of canal villages in the Lingnan region.

Lingnan canal villages share the physical characteristics of being physically dense leaving more land for agriculture. Its connections throughout the village are by boat in the canals and on foot by narrow laneways. At the junction of larger, higher-traffic arterial lanes are plazas and open-air tree-shaded pavilions that serve as social meeting places and commercial destinations.

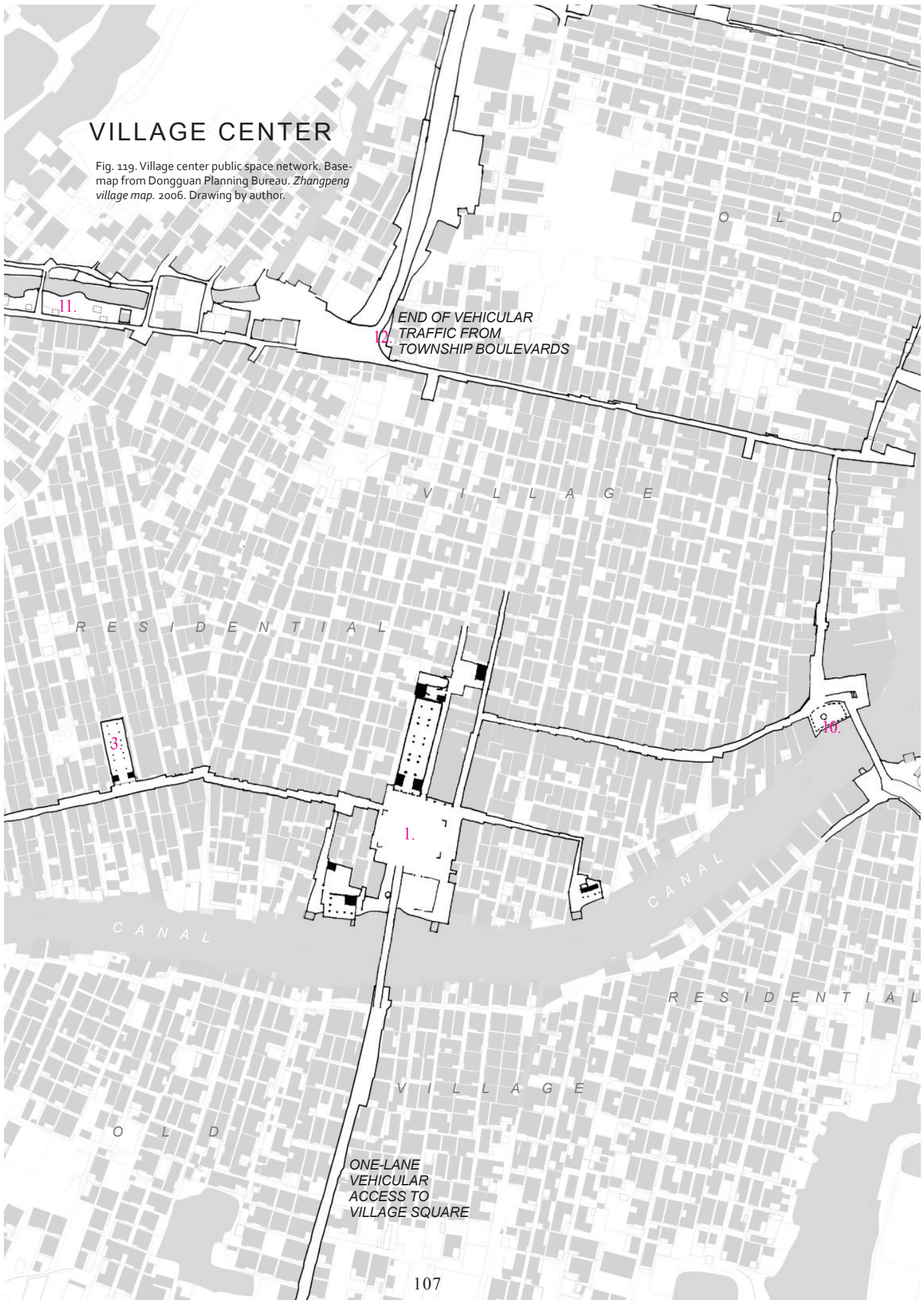
The following pages will describe village public spaces in detail with maps and photographs. This method hopes to illustrate the diverse spatial scale of the village public space network.

Opposite page, the highlighted public spaces of Zhangpeng. At 1:5000.

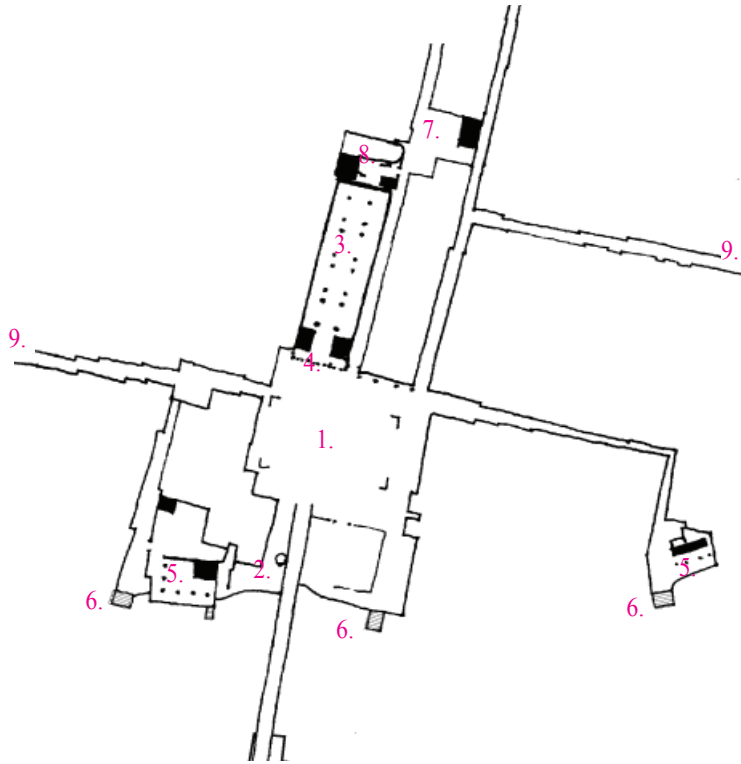
Fig. 118. Public space network of Zhangpeng. Base-map from Dongguan Planning Bureau. *Zhangpeng village map*. 2006. Drawing by author.

VILLAGE CENTER

Fig. 119. Village center public space network. Base-map from Dongguan Planning Bureau. *Zhangpeng village map*. 2006. Drawing by author.



Opposite page, village centre public space network. At 1:2000.



LEGEND

- 1. Village Square
- 2. Banyan Tree
- 3. Family Shrines
- 4. Loggia
- 5. Pavilions
- 6. Docks
- 7. Brownfields
- 8. Public Lavatory
- 9. Arterial Streets
- 10. Chess Pavilion
- 11. Canal banks
- 12. End of vehicular traffic.

Fig. 120. Detail of village center. By author.

Left, detail of public spaces in village centre. At 1:1500.



Fig. 121 - 123 Village center. Photographs.

Village square (1):
 Left, panorama.
 Bottom left, from bridge.
 Bottom right, from shrine loggia.





Fig. 124 - 126. Chan clan shrine. Photographs.
Chan family shrine serves as gathering place (2).



Below, docks (6) for access to water.

Fig. 127 - 128. Access to water from village center. Photographs.





Above, public pavilions (5) by canals.
Below, brownfields (7) as open spaces.
Fig. 130 - 132. Public pavilions. Photographs.
Fig. 133 - 135. Brownfield. Photographs.







Vehicular traffic ends (12) at an informal parking lot at the north boundary of the old village. Pedestrian-only circulation begins here.

Fig. 136-137. End of vehicular road, beginning of pedestrian village fabric. Photographs.

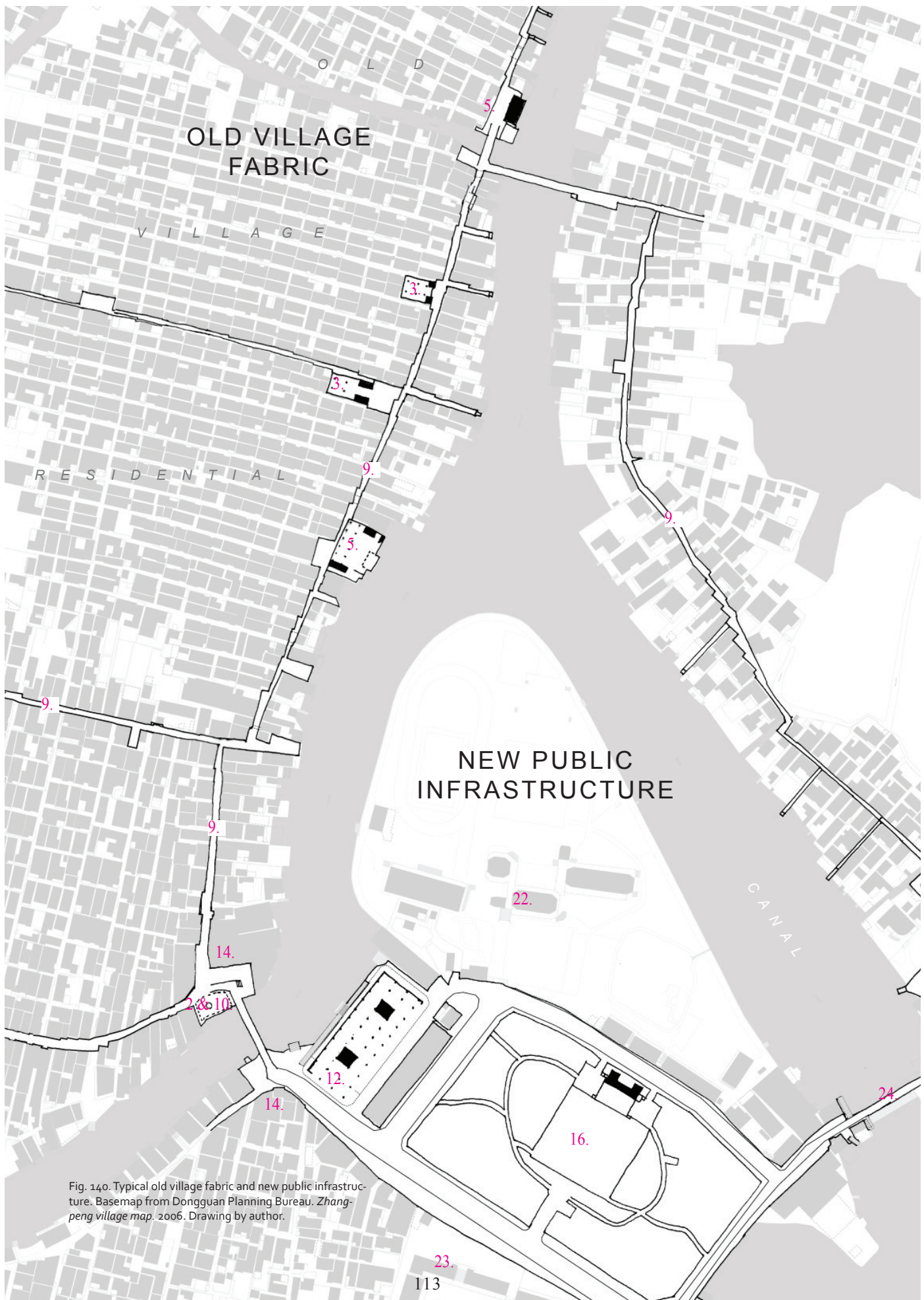


Fig. 138. Arterial street. Photographs.

Opposite, arterial streets (9) serve as the major pedestrian circulation path. Some parts are lined with shops and stores.

Below, seasonally dried-up canal riverbeds (11) are used as parks to sit

Fig. 139. Riverbeds. Photographs.



OLD VILLAGE FABRIC

VILLAGE

RESIDENTIAL

NEW PUBLIC INFRASTRUCTURE

CANAL

Fig. 140. Typical old village fabric and new public infrastructure. Basemap from Dongguan Planning Bureau. *Zhang-peng village map*. 2006. Drawing by author.



Left, a bridge and chess pavilion (2 & 10) separate the residential neighbourhood from public facilities.

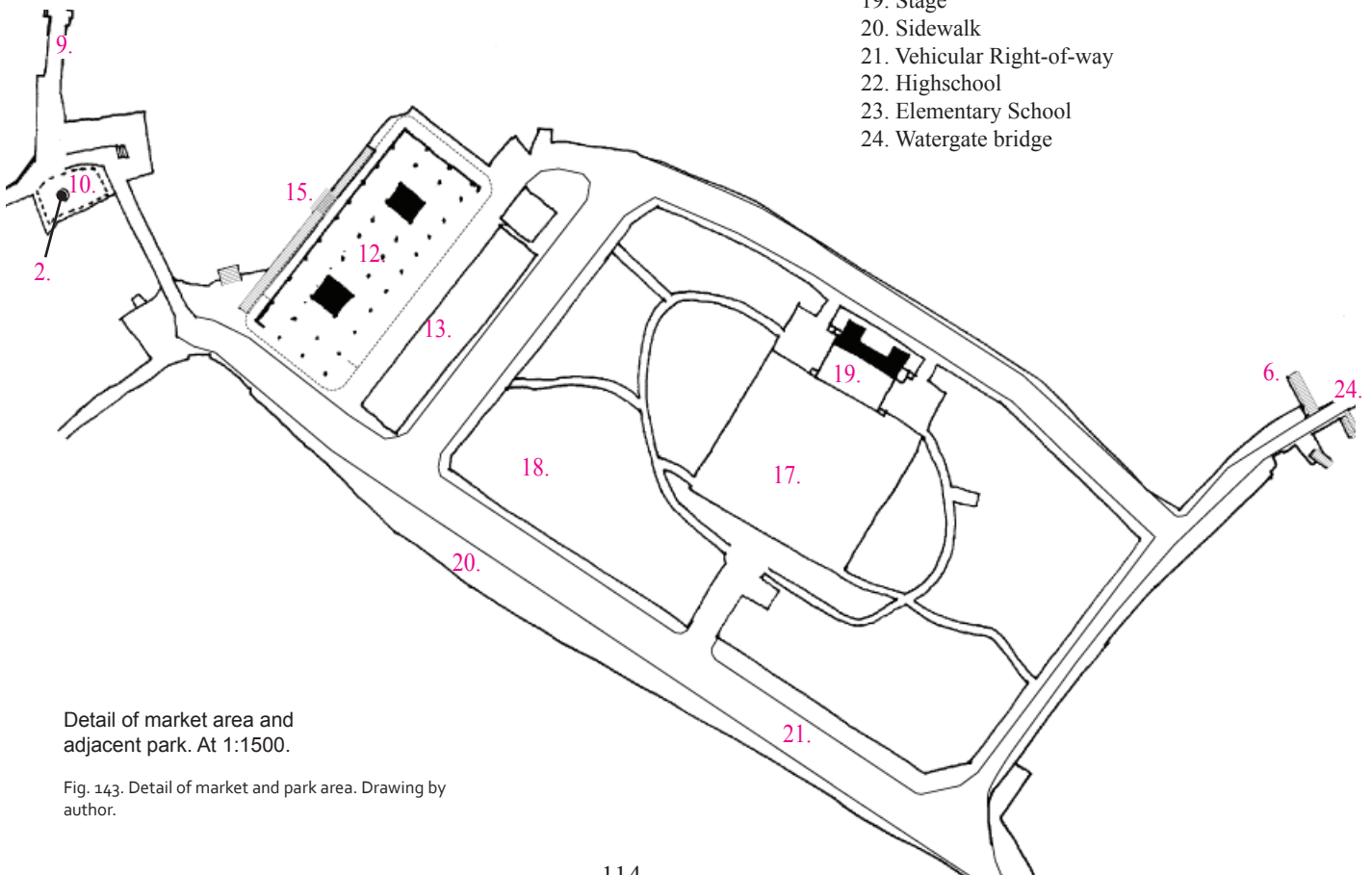
Fig. 141 - 142. Above, bridge and chess pavilion. Bottom, the public market and street market.



Opposite page. Typical old village neighbourhood and new public infrastructure. At 1:2000.

LEGEND

- 2. Banyan Tree
- 3. Family Shrines
- 5. Pavilions
- 6. Docks
- 9. Arterial Streets
- 10. Chess Pavilion
- 12. Market
- 13. Supermarket
- 14. Shops & Restaurants
- 15. Market docks
- 16. Park
- 17. Hardsurface
- 18. Lawns
- 19. Stage
- 20. Sidewalk
- 21. Vehicular Right-of-way
- 22. Highschool
- 23. Elementary School
- 24. Watergate bridge



Detail of market area and adjacent park. At 1:1500.

Fig. 143: Detail of market and park area. Drawing by author.



Fig. 144 - 146. Chess pavilion and banyan tree. (2 & 10)



A chess pavilion (10) and banyan tree mark the junction between the older residential village from the new public infrastructure of schools and parks.

Below, the village owns the marketplace (12) and leases out counters and stalls to sellers and vendors.



Fig. 147 - 148. Public market. Photograph.



Left, the broad sidewalk (20) is used as spill-out space for shops and restaurants.

Fig. 149 - 151.

Left, there is vehicular access to marketplace. Below left and right, shops and restaurants (14) on the bottom floor of buildings in this area.



Fig. 152 - 154. Zhangpeng highschool and elementary.

Below left and center. Zhangpeng highschool (23) and elementary school (22) are part of extensive and new infrastructural developments on canal-reclaimed land. But the elementary school is close as youth population decline due to one-child policy and from villagers moving to cities.



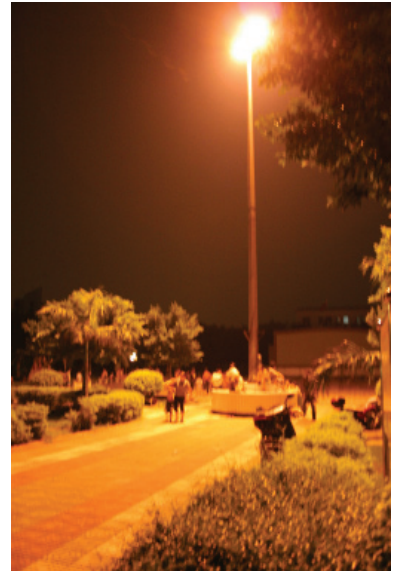


Fig. 155 - 157.

The Zhangpeng Public Park (16) is a landscaped, hard and soft-surface park with multivariuous uses. Above right, the outdoor stage (19) holds large formal gatherings as well as serving as an open,



Fig. 158. Zhangpeng watergates. Photograph.

The watergate (24) is part of a system of infrastructure that controls the water levels within the canals of Zhangpeng. It is also a bridge for people and vehicles and its height a regular platform for dives by canal-



Fig. 159. Typical residential village fabric. Drawing by author.

Above, residential public space network in the old village. 1:1800.

Left, old village fabric from a village home rooftop.



Fig. 160. Residential rooftop. Photograph.

LEGEND

- 2. Banyan Tree
- 3. Family Shrines
- 5. Pavilions
- 6. Docks
- 7. Brownfields
- 9. Arterial streets
- 25. Residential variety store
- 26. Infill parkette
- 27. Residential Lane
- 28. Alley
- 29. Covered walkways



Fig. 161 - 162.

Another banyan tree marks the junction between bridge (5a, above left) and arterial street. The pedestrian arterial street circulates through the old village residential neighbourhood (9, below left).



Fig. 163 - 165.

Below, the consolidation of the arterial street (9) through old village fabric produced peculiar covered walkways (29) used by residents for various activities.





Fig. 166 - 167.

Above, a residential variety store (25) along an arterial street with a privately owned loggia acts as public space.



Fig. 168 - 170.

A family shrine (3, above left) and infill parkette (26, far left) are kinds of public spaces that break up an otherwise dense and continuous building fabric.





Docks are another type of break in the residential building fabric. Besides for access to boats (6b, left), they serve as access to water for activities like laundry (6a, below left).

Fig. 171 - 172.



Fig. 173. Residential brownfield. Photograph.

Residential brownfields also provide momentary pauses in a labyrinthian system of lanes and alleyways (7).



Fig. 174. Lane. Photograph.



Fig. 175. Alley. Photograph.

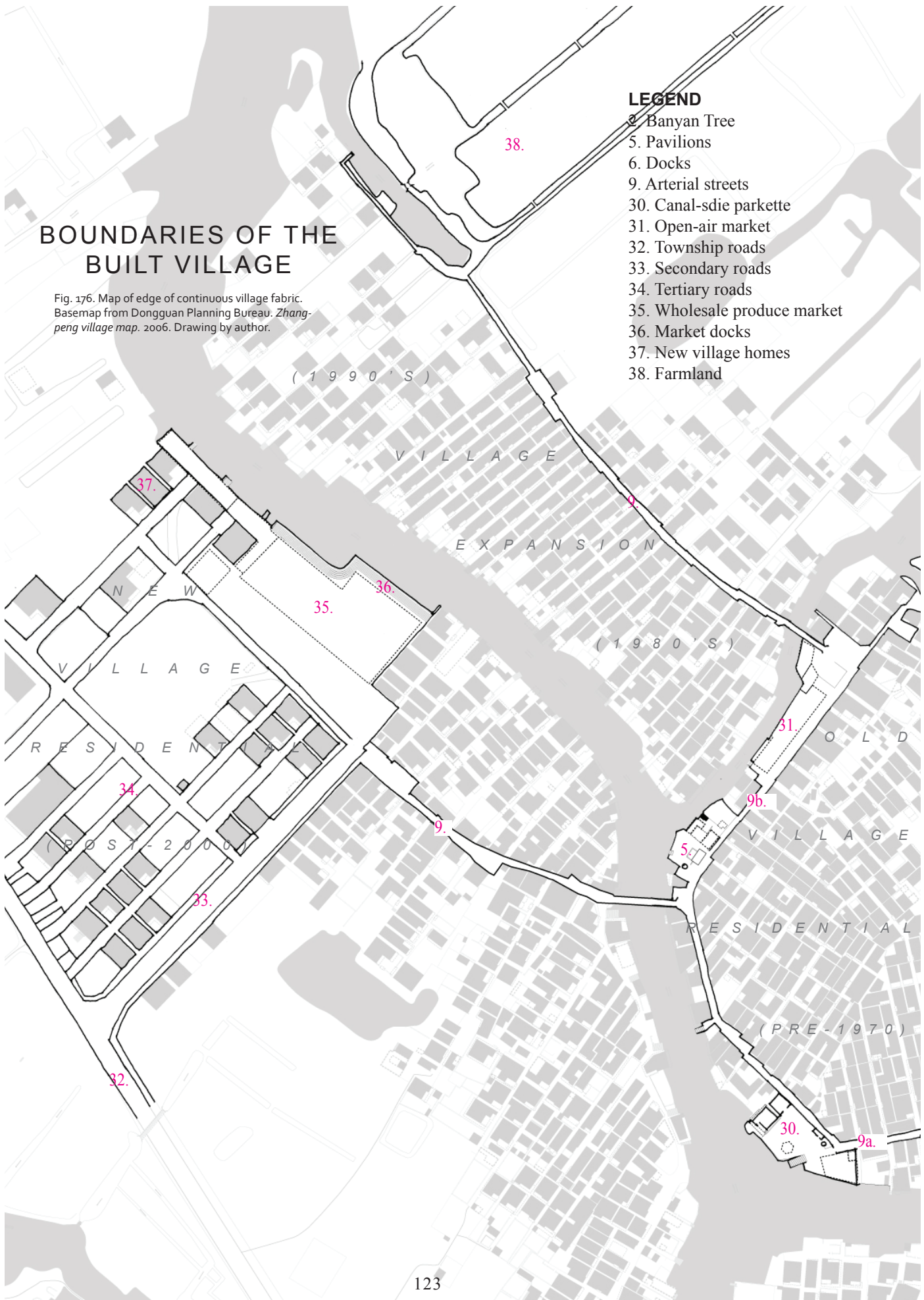
Turning off of the arterial street will lead to a residential lane (27, far left). Off this lane are alleys which are entrances to village homes (28, left).

BOUNDARIES OF THE BUILT VILLAGE

Fig. 176. Map of edge of continuous village fabric. Basemap from Dongguan Planning Bureau. *Zhang-peng village map*, 2006. Drawing by author.

LEGEND

- ② Banyan Tree
- 5. Pavilions
- 6. Docks
- 9. Arterial streets
- 30. Canal-side parkette
- 31. Open-air market
- 32. Township roads
- 33. Secondary roads
- 34. Tertiary roads
- 35. Wholesale produce market
- 36. Market docks
- 37. New village homes
- 38. Farmland





Opposite page. New village expansion and boundaries between built fabric and farmland. At 1:2000.

Fig. 177. Arterial street leading to parkette. Photograph.

Fig. 178. Banyan tree and canal-side parkette. Photograph.

A banyan tree shades and identifies a canal-side parkette. and (2, left). People gather outside an arterial street convenience store across from the parkette (9a, far left).



Fig. 179. Canal-side parkette. Photograph.

Fig. 180. Ibid.

This parkette (30, left & bottom) is equipped with gazeboes, a public washroom, indoor shelter and pool tables. The adjacent canal acts as open space.





Fig. 181. Open-air sheltered market. Photograph.

Fig. 182. Canal by market. Photograph.

This open air shelter for a meat and vegetable market (31) is closing for the day (left). Produce is transported by boat along the market's flanking canal (below left).



Fig. 183. Transporting goods through arterial street by open-air market. Photograph.

A worker moves goods through the old village arterial streets (9b, left).



Fig. 184. Open-air market for other uses. Photograph.

This shelter is also leased for uses other sale of produce. As in this pool club (left).



Fig. 185. Township road encircle village. Photograph.



Fig. 186. Factories along township road. Photograph.

The township roads (32, top left) encircle the traditional built village. New factories are built along it. (above).

New village developments like the new housing-base below (33, below) is accessed by the township road.

Fig. 187. New housing-base. Photograph.

Fig. 188. One-lane vehicular roads around new housing-base houses. Photograph.



Tertiary or local roads of new housing-bases have one-lane vehicular traffic (34, above right) that lead directly to new village homes (37 bottom).



Fig. 189. New village housing-base home. Photograph.

Fig. 190. View of expanding new village housing-base from new village home balcony. Photograph.



LEGEND

- 39. Village road
- 40. Dirt path
- 41. Reservoir
- 42. Lock/dam
- 43. Irrigation channels
- 44. Plantations plots
- 45. Fish ponds

Fig. 191. Map of farmland around built village fabric. Basemap from Dongguan Planning Bureau. *Zhang-peng village map*. 2006. Drawing by author.

The bananas are the village's major export and traditional source of income. The physical village sits within this environment of canals, waterways and plantations and can be reached by boat or by foot on dirt paths between irrigation channels. 1:2000.



Fig. 192. Farmland panorama on the edge of built fabric. Photograph.



Houses develop transversely along laneways that branch-off from the village road (39, left). The demarcation between the built fabric and plantation is distinct and is determined by the existence of new laneways that connect newly parcelled lots.

Fig. 193. Right of paved laneway are village houses, left is farmland. Photograph.



Fig. 194. Irrigation channels. Photograph.



Fig. 195. Path between farmland. Photograph.

The organization of spaces in the farmland is configured by a system of waterworks that bring water from the canals to plantation plots.

It begins at locks (42) that control the amount of water let in from canal inlets into reservoirs (41), far left. It consequently flows into irrigation channels (43, right) that deliver water and delineate plots of land (44, bottom left) farmed and maintained by individual household. The lock, and plantations within a set of irrigation channels is collectively maintained by farming teams made up of several households.



Fig. 196. Irrigation channels surrounding farmland. Photograph.

Fig. 197. Aquaculture. Photograph.



Some households use their land for other crops and as fish farms on occasions. The water is supplied by the same irrigation network. (45, above)

LINEAR NEW VILLAGE DEVELOPMENTS

Fig. 198. New village developments. Basemap from Dongguan Planning Bureau. *Zhangpeng village map*, 2006. Drawing by author.

LEGEND

- 46. Vehicular road end/parking lot
- 47. Bus station
- 48. First vehicular road to village
- 49. Roadside marketplace
- 50. Restaurant/banquet hall
- 51. Mixed-use buildings
- 52. Secondary roads with sidewalks
- 53. Primary median-divided boulevards
- 54. Toy factory

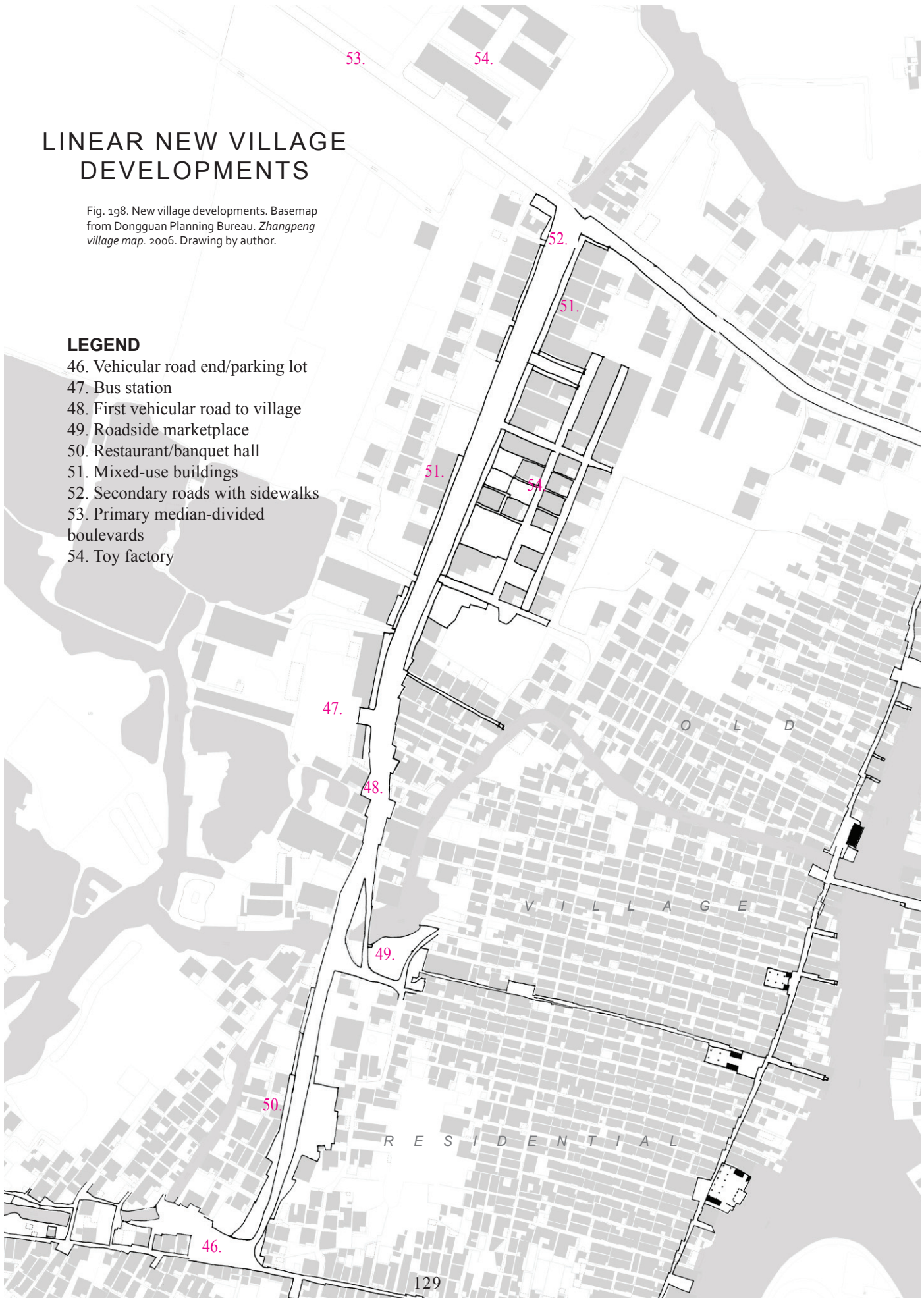




Fig. 199. End of vehicular road. Photograph.

New economic development of commercial and industrial nature is creating a very different spatial condition for villages in the PRD. It is characterized by linear development along major vehicular roads.

In Zhangpeng, it begins at a dead end informal parking lot at the edge of the old village. (46, fig 1-198.)

Opposite page. The earliest forms of commercial development began along this first vehicular road into the village. 1:2500.

Fig. 200. First vehicular road. Photograph.



Fig. 201. Bus station. Photograph.



Buses from a major hub on this road takes people to the greater township and beyond. (47, above)

The road bustles with activity. It is the link between the village and outside world. (48, left)



Consumer goods for sale at a market alongside the road. (49, above & left)

Fig. 202. First vehicular road open-air market. Photograph.

Fig. 203. Ibid.



Fig. 204. Villagers on bikes and walking out of village on first vehicular road. Photograph.



Fig. 205. Motorbike-taxis loitering. Photograph.

Motorbike-taxi loiter for fares at the end of the vehicular road from villagers walking out of the old village. (46, above)



Fig. 206. Banquet hall restaurant along first vehicular road. Photograph.

Left and below. This large restaurant banquet hall may be spatially restricted or too inaccessible to be built within the old village. (50)



Fig. 207. Ibid.



Further away from the old village, the developments are characterized by mixed-use buildings with ground floor commercial use. (52, left)

Fig. 208. Commercial developments along first vehicular road. Photograph.

Commercial uses range from retail and supermarkets to light-industrial garages. The sidewalk becomes an extension to the businesses within. (51, bottom left & right)



Fig. 209. Supermarket. Photograph.



Fig. 210. Light industry retail. Photograph.



Fig. 211. Toy factory. Photograph.

Large median-divided boulevards (53, left) are meant to bring manufacturing and industrial development to villages.

Left, the toy factory is the single largest employer of the Zhangpeng village. (54, left)

Part II Summary

Part I showed us China's binary system is behind the current land development process and is also the underlying cause of development and social problems.

Part II illustrates the interdependent conditions that generated the traditional rural culture of southern Lingnan China. For this is to illustrate that traditional culture was not static and idyllic but in a dynamic process of evolution, influenced on by natural and man-made forces.

Part III will synthesize these two perspectives to create a new form of influence (new process of land development) in the spatial context of the rural village. What will this new life look like? What needs to be introduced to establish this development process?

PART III - FUTURE: AN ALTERNATIVE CHINESE GOODLIFE IN A REDEVELOPED RURAL VILLAGE

In order for natural socio-economic growth to occur in the village, a mechanism for urban growth must exist. The thesis proposes a binary approach that incentivizes private owners to reinvest in their village properties as well as establishing a village corporation that has the power to catalyze and guide redevelopment of the village built fabric.

To do so, the current laws governing rural property must be altered. First, the ban on trading of rural property should be lifted. This will allow villagers to legally buy and sell their real assets, releasing their properties' development potential.

Secondly, a village corporation should be created to represent the interests of the village as a whole. The corporation will utilize its financial resources to actively invest in building sites and public spaces that will catalyze renewal of public spaces and the private redevelopment of the built fabric. As representative stakeholder of the whole village, it also has the power to draw and enact building and development guidelines to control exploitative overdevelopment of individuals.

The process of development involves a public development strategy administered by the village corporation aimed at catalyzing the private development of villagers' property. Building guidelines and investment strategies will be drawn

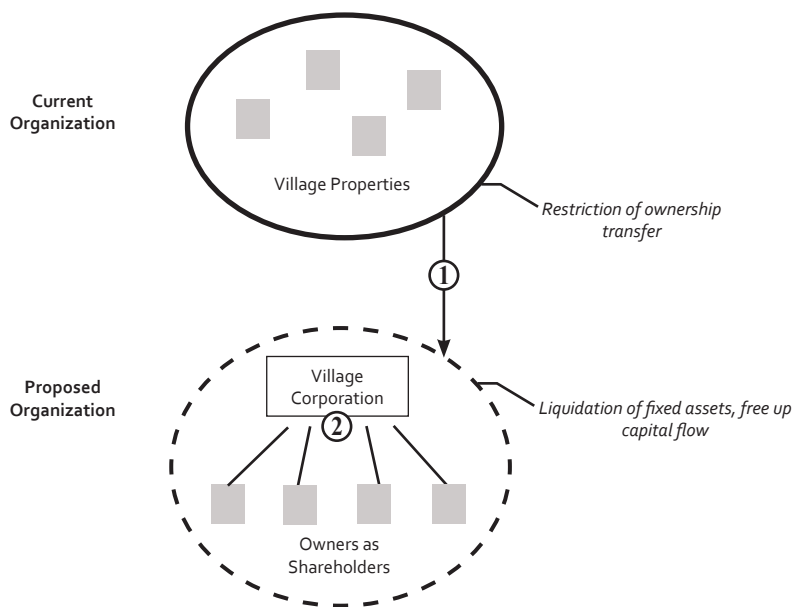


Fig. 212. Change in process of village development.

Organizational changes needed to create a new process of urban development in rural villages:

1. Lifting of restriction on the transfer of rural building property ownership.

2. Establishment of a village corporation with village property owners as shareholders.

and implemented by the consensus of the village corporation shareholders. The development of a public space network will be augmented by public guidance and private investment to foster the natural development of a modern, economically and socially sustainable Chinese village of the future.

The following chapter will illustrate the village corporation in detail. Beginning with its organizational structure, the drawing of building guidelines to control private development, and the description of the public redevelopment strategy that will initialize redevelopment. These three mechanisms will be demonstrated in the redevelopment proposal on the case village of Zhangpeng, in the city of Dongguan of Guangdong province.

To achieve the former, the restriction on the transfer of village property and land should be raised. The ownership and transfer of rural property should be legally protected. This will establish the marketization of village property. Owners will have confidence that investing on their property will reflect in the appreciation of value of their homes. They will be able to apply a full range of financial actions on their property; to buy, sell, lease, mortgage or redevelop as they need. This unleashes the real estate's financial liquidity, giving villagers the right to grow.

The establishment of a village corporation and enacting all villagers as company shareholders will unify the village as the new stakeholder whose interest is in the sustainable growth of the entire village. It will be responsible for the passive roles of drawing and enforcing building guidelines. As well as taking a proactive role by using its funds to invest in sites in the village that will catalyze redevelopment and foster change. Public guidance is necessary because free-capitalism alone is not believed to be enough to ensure sustainable urban development.

For her family:

the modern chinese villa
in the future rural village



Fig. 213. Photograph.

Chen Xiaoning is 30 years old in the year 2025. Although she was born a registered rural resident in the village of Zhangpeng she does not farm. Like many in this village of Dongguan city in Guangdong province, her allotted farmland has been expropriated for commercial development. In addition to the \$250CDN/year compensated for her land, she also makes \$1800CDN/year working in a food processing factory in her village. Due to her village's extensive commercial development, her husband is also able to work and live in the village together with their young child. Unlike many rural families across China, they have the fortune of living as one family in proximity to their relatives in the village they grew up in. They have decided to move out of the in-laws' house and find a home of their own in the same village. How should she live?

我

們

How should we live?

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For his family:

the modern chinese villa
in the future rural village



How should we live?

Fig. 214. Photograph.

Chen Xiaobo is 38 in the year 2025. He forfeited his allotted farmland to his parents and left the village when he was 15 to look for a job in Dongguan city. Years of saving and a few well-timed investments in his businesses has made him a millionaire. He now owns several factories. He has decided to buy a piece of land in his home village to build a villa for his parents to retire comfortably in and also provide for the occasional visit from the family. How should he live?

我

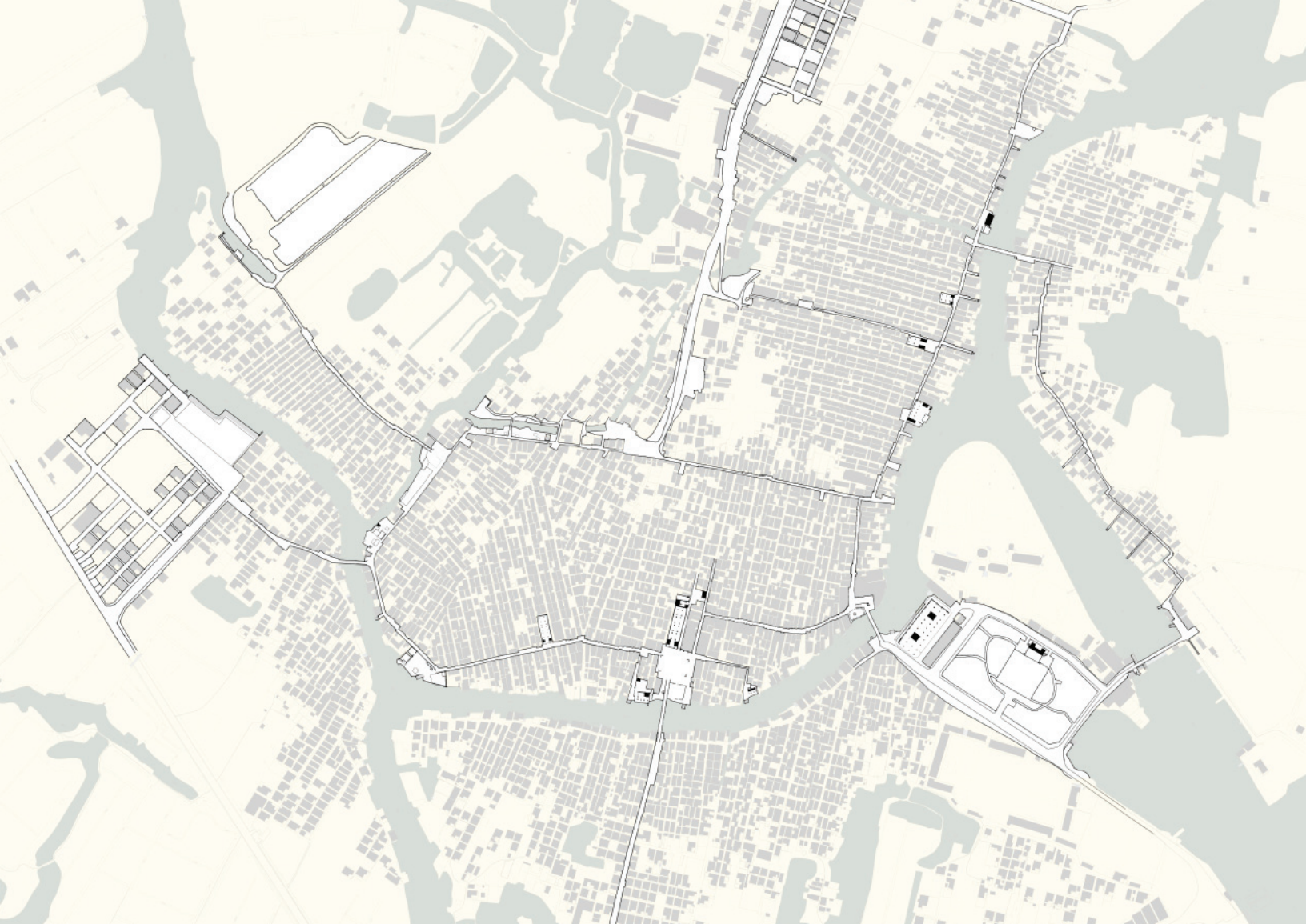
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Private Development Controls

One of the major problems affecting current village development is the destruction of the living environment and future investment prospects of the entire village as villagers rush to overdevelop and cash out of their properties. The lifting of ownership transfer restriction in this proposal will open up long-term prospects for the owners. But a great rift still exists between the affordability of town and city properties to that of village accommodations built on free land. Until this gap is narrowed there is still the incentive to speculate on village developments.

Thus, it comes down to the control of private actions on the properties of individual homeowners. The design guideline is a top-down control mechanism that sets the boundaries for private, independent, bottom-up village property redevelopment. The guideline as written and enforced by the village corporation are designed to have broad village-wide interests in consideration; with long-term development possibility, and quality living and working environment of the village as objectives. Individual village property owners must follow such guidelines and in instances of rule infringement the village corporation has the authority to fine and revoke the owner's status as village corporation shareholder with voting rights.

Above, diagram of the public spatial network in the village today. The strategy is to create pockets of new public spaces that are anchors to newly redeveloped neighbourhoods, these pockets are in turn connected to the larger public space network.

Fig. 215. Public space network of Zhangpeng. Base-map from Dongguan Planning Bureau. *Zhangpeng village map*. 2006. Drawing by author.



Public Redevelopment Strategy

The village is attractive and familiar to us because its environment is ‘imageable.’¹ The system of arterial streets and lanes have an unwritten hierarchy from most public to private that allow us to understand where we are and how to behave socially. This physical and psychological orientation helps us create a sense of place.²

This system has emerged spontaneously from the environmental conditions, living habits and social customs of each village. Traditional villages have strong correspondence between its social life and customs and its built form.

But the forces that change the Chinese villages of today place capital growth, not village life, at its center. In order to reproduce the imageability in the redevelopment of the village, priority has to be returned to the physical public realm.

The natural village attains its legible arrangement as a result of the everyday needs and customs particular to vernacular settlements. Open drainage channels and pedestrian only traffic create a hierarchy of streets from the most travelled public arteries to the wet-alleys in front of every house used as areas for cooking and cleaning.

Above, aerial view of the village of Zhangpeng and its building fabric.

Fig. 216. Aerial 3D model of Zhangpeng. Rendering.

1 Lynch, Kevin. ‘Image of the City’

2 Norberg-Schulz, Christian. “Genius Loci”

Village Corporation

The **purpose** of the village corporation is to promote sustainable village redevelopment. It is a special task organization that combines ownership of public and private village property into a single organization in order to merge stakeholder interest, centralize management and increase leverage.

The **company structure** of the village corporation will be made up of shareholders in an incorporation. Each village property owner is a shareholder and management is made up of members hired by the shareholder collective. Non-villagers can become a shareholder of the village corporation by buying property in the village.

The **assets** of the village corporation is made up of the ownership of village homes of the shareholders, the roads, infrastructure and public space of the built village. Other farmland and commercial enterprises owned by the village collective can be incorporated into the village corp. to increase leverage in financing and integrate economic planning with the redevelopment of the physical village.

Financing for redevelopment may come from internal revenue or outside financing. Internal revenue can be sourced through selling or leasing village building sites or from other incorporated assets from village collective enterprises. External financing may use village property as leverage for loans.

The **task** of the village corporation is:

- 1) Create building guidelines for the private redevelopment of villagers' housing lots.
- 2) Develop and maintain the public spatial network.
- 3) Catalyze and augment redevelopment in the village by proactively investing to redevelop sites and public space network.

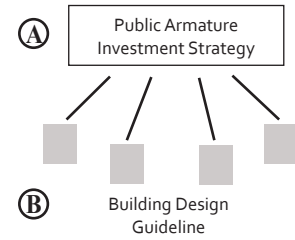


Fig. 217. Village corporation structure.

Redevelopment Process

The redevelopment process to modernize the Chinese village is by the catalyzation of private development with public controls.

The village corp can use three types of **measures**:

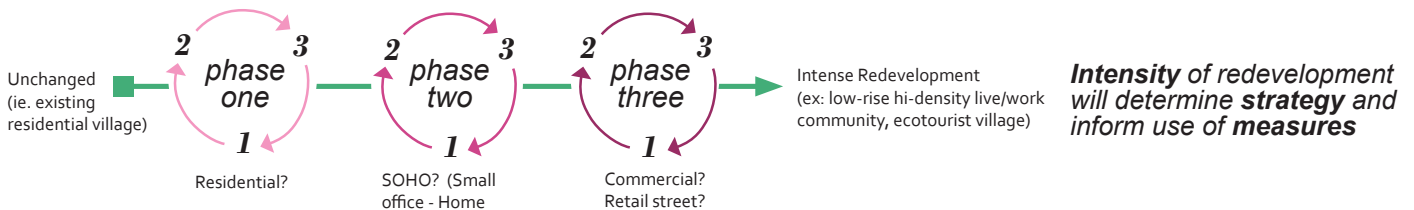
- a) Refurbishment and extension of **public space network**.
- b) Changes to **design guideline** regulation.
- c) Proactive **property investment**.

All for the purpose of inviting new homeowners and businesses to move in and to live and work. And spur village property owners to redevelop their sites to catalyze a chain reaction of village revitalization.

There are three **phases** in the process of development characterized by different opportunities and the intensity of revitalization. The actions by the village corp are in response to the development events, not based on absolute timing. The different phases distinguish the type and level of intervention by the village corp. Depending on the level of revitalization, the renewing neighbourhoods may remain similarly traditional in construction and demographic or its mixture of new public open spaces and building developments may transform it into a new neighbourhood focal point. The village corp will reorganize and make new connections to the public space network as the neighbourhoods develop organically.

Fig. 218. Redevelopment process.

The redevelopment process moves from a low level of change in the existing village fabric to intense change that may require public interventions by the village corp. Changes are guided and catalyzed by the village corp with the intention to spur organic private development. Each phase of the development process will therefore have feedback loops to monitor and adjust changes.



Intensity of redevelopment will determine strategy and inform use of measures

Phase of redevelopment corresponds to intensity of change requiring a different mixture of measures

Measures

The redevelopment process of the Chinese village is not a masterplan applied from top down. It relies on the collective force of individual owners. To steer this force to redevelop the village sustainably, there are three measures that the village corp can use.

The village living environment, its spatial structure, is the defining aspect of the village. It reflects the cultural heritage of village life. And it is the one aspect that if destroyed will take away with it the village way of life. So in order to sustain the heritage of the village, its spatial structure must be protected.

To maintain the spatial structure of the village, we must understand that the village buildings and the public space network intertwine to form the fabric of the village. The figure of buildings and the ground of the public network form a reciprocal relationship. The hierarchy of paths and lane connections influence the typology of the buildings within this network and vice-versa.

Therefore, to preserve, adapt or extend existing village fabric, we only need to control the these two variables.

- Three Measures to Guide & Catalyze Redevelopment:**
- A. Property Investment**
 - B. Public Space Network**
 - C. Design Guideline Regulations**

Interdependence of Farmland Division and Building Morphology

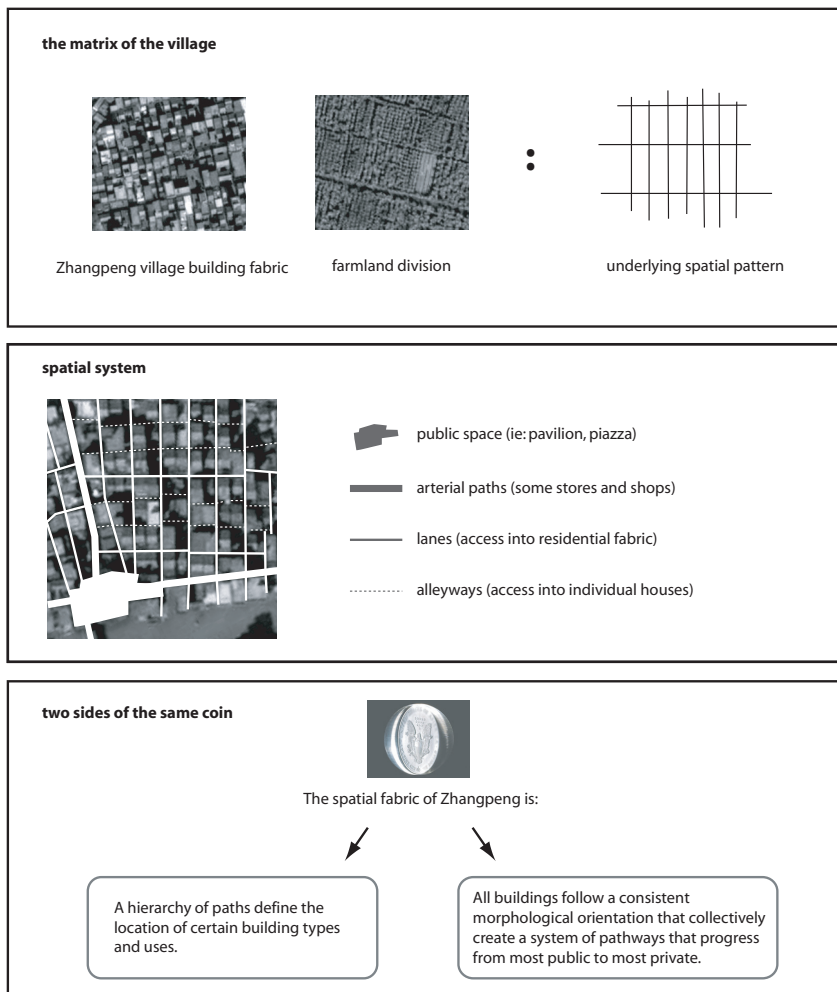


Fig. 219. Interdependence between building typology and spatial network.

Left, the interdependence of the building typology and public space network that make up the village spatial fabric. To change one is to influence the other.

a) Public Space Network

To achieve control of the public space network the village corp can adjust and adapt the spatial system made up of squares, pavilions, paths, lanes and alleys to augment and encourage redevelopment.

It can control the size of connections to control the traffic of people. Opening up properties in the dense fabric as open space allows light and air to infiltrate the monotonous fabric and creates a place of congregation in the community for social and/or commercial purpose.

The traditional village public pathway network had an intrinsic hierarchy from public streets to private alleys that structured the village way of life. Washing and cleaning was done in the private alleys, travelling within the village and shopping done in the higher traffic arterial streets, and meeting was done in the banyan shaded open pavilions at the street junctions.

The revitalized village aims to encourage more people to live and work in the village. Therefore, the readapted public space network is likely to open up spaces in the densified building fabric. With widened laneways that will bridge these neighbourhood focal open spaces to the existing arterial pathways.

b) Building Design Guidelines

To control damaging overdevelopment that destroy traditional villages and turn them into exploited villages-in-the-city's, a village corp must bind shareholders responsible to adhere to a set of building design guidelines.

The guidelines are designed to be as simple as possible to allow for variety in the new redevelopments. It will control 4 variables:

i) building height

The existing lot footprints of the traditional village are small and close to each other. Houses built too tall will decrease amount of light and air that reaches ground level. Therefore a maximum building height should be set.

3-storey buildings can be 9 meters max in height. 2-storey buildings can be up to 7.5 meters in height. Taller buildings require a larger percentage open air aperture area to allow more space for light and air to reach the ground.

ii) open air aperture

In the forthcoming design scenario 3-storey buildings will require 20% of the property footprint to be open air spaces. 2-storey buildings will require 15% open air space.

To encourage a richer indoor/outdoor relationship half of the required aperture space may be in the form of an open air terrace on the second floor. This space can be used for outdoor chores and provides another datum for social interaction between tenants especially with the encouragement of "above street connections."

iii) above street terraces

The laneway parallel to a property is it's right-of-way. Two properties that are across the laneway from each other share a mutual right-of-way.

Height limit and open space requirement:

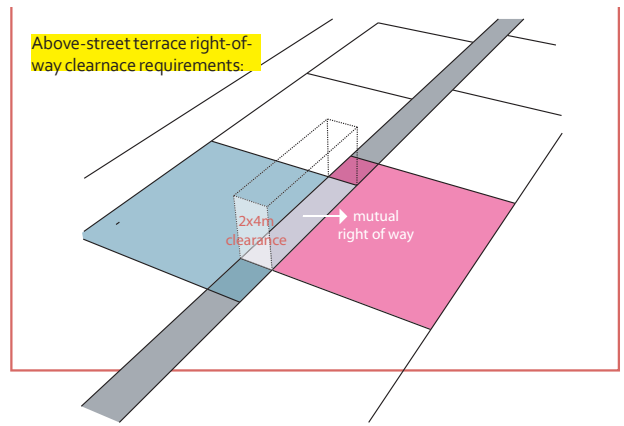
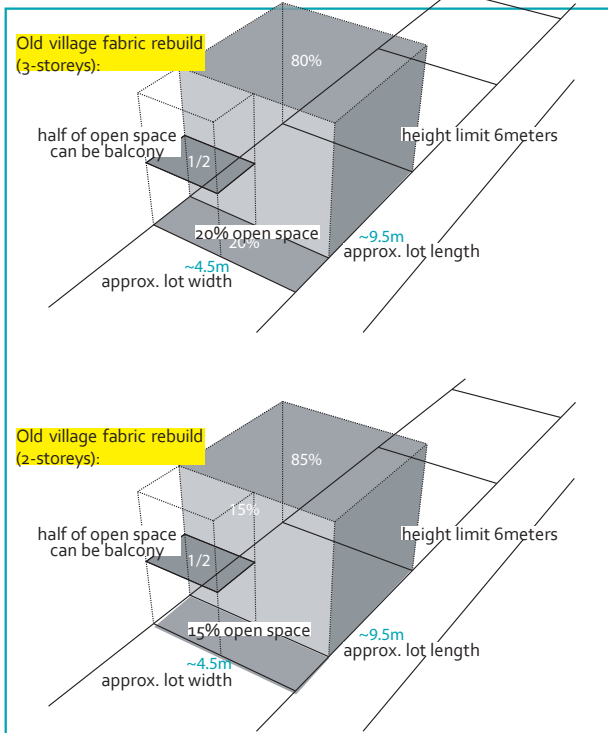


Fig. 220. Lot size, height limit and open space requirement for village building construction.

Above, diagram of the "Building Design Guideline." Property owners and shareholders of the village corp are obligated to follow these guidelines in the redevelopment of their homes.

This design suggests that owners are allowed to build a terrace over their mutual right-of-way, on the second floor connecting the two homes.

Private properties built over public pathways exist in the traditional village because space is at a premium. They provide a varied physical feature for use and social interaction.

iv) consolidation of lots

The lot sizes of the traditional village fabric are small (usually 4x9meters). To allow for uses that need to be at larger scales (ex: office, apartment) the rule of lot consolidation is established.

In our scenario limits the width of consolidation to the number properties between laneways, which is usually two, at most three. And a maximum of three lots may be consolidated longitudinally.

The aperture requirements of the consolidated lots can also be consolidated to form a single aperture in the consolidated building footprint.

Strategic demolition and consolidation of buildings and lots:

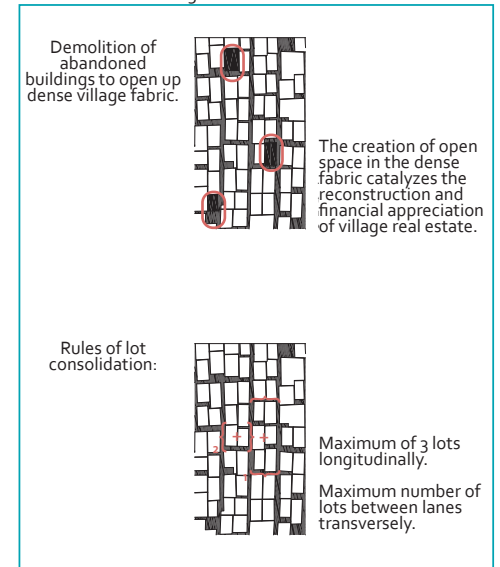


Fig. 221. Demolition and consolidation of buildings and lots.

c) Public Property Investment

To achieve control of the latter, the village corp can enforce building design guidelines and participate in the redevelopment of individual buildings themselves. These village corp developments serve as examples to the public that modern typologies can exist in a new alternative of village life.

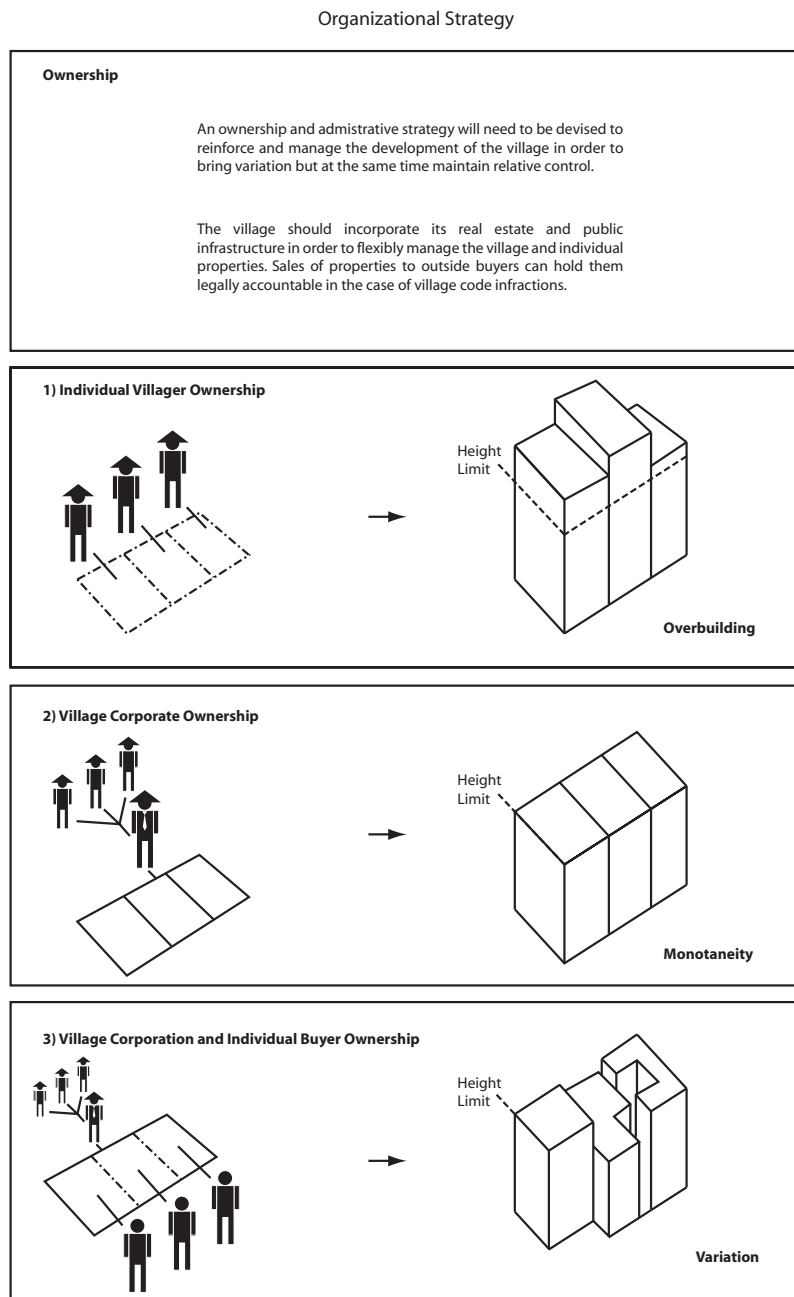


Fig. 222. Village corporation and shareholder ownership encourages building variety.

Left, the village corp organizational strategy and building design guidelines are meant to encourage variety in the redeveloped village and its new way of life.

Phases of redevelopment

The phase of development correspond to the intensity of redevelopment activity. Characterized by little or heavy involvement by the public village corporation. Higher involvement using more public measures to guide redevelopment will mean the progression to a higher phase of development.

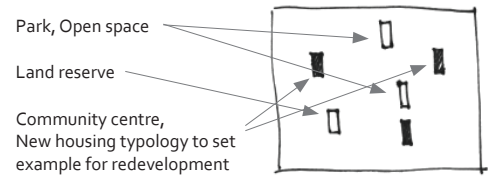
Phase 1: Seeding and catalyzation- The first phase the village corp will map and identify the **mantle sites** which are locations of high potential for redevelopment. Dilapidated buildings, unused lots and one-storey brick constructions cost the least to expropriate and use in a seeding strategy. (mantle sites) But with little capital to work with, low-intensity of development and uncertainty as to where in the neighbourhood revitalization will take off, the village corp will clear old buildings to open isolated public spaces or resell cheap expropriated lots to gain working capital.

Phase 2: Fostering and augmentation- Phase two of the development process is characterized by the fostering growth from the initial seeding phase. Private sites may respond to the improved environment surrounding cleared buildings and new open spaces and redevelop. The village corp will monitor and map the changes and find possible connections from the existing public space network to some of these new neighbourhood anchors (open space and new developments) in order to strengthen and extend the public space network.

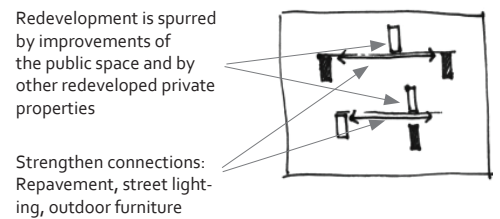
Phase 3: Maturation and intensification- In phase three the seeded mantle sites are well on their way to redevelopment naturally without village corp input. The corporation's job at this point is intensification of larger infrastructural support. Ie: reopening roads and canals within the pedestrian built fabric, reclaiming open spaces in the densifying fabric. Village corp and shareholders may consider changing design guidelines to allow for higher density neighbourhoods.

Fig. 223. Phase of development characterized by redevelopment intensity.

Phase 1: Expropriate dilapidated buildings to seed as "mantle sites" to catalyze redevelopment.



Phase 2: Strengthen public space network as neighbourhood goes through redevelopment.



Phase 3: Private development runoff, which is happening on its own. Village corp's job is to manage the intensity by providing infrastructural and regulatory support.

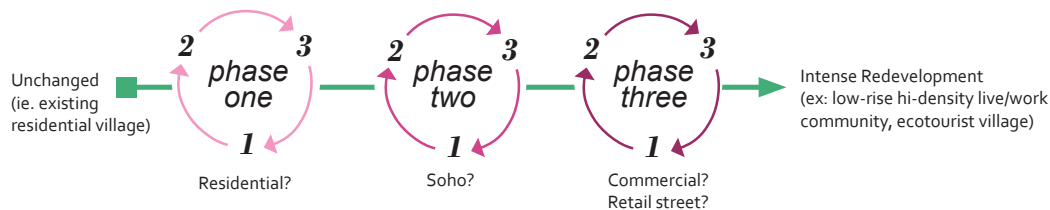
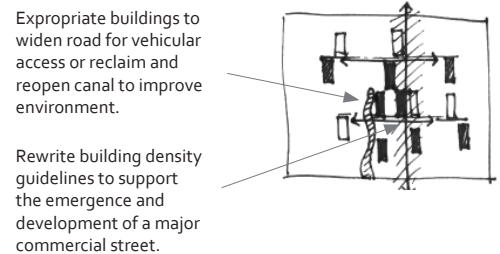


Fig. 224. Process of development through phases.

Steps of action acting as feedback

The tasks within each phase of development is cyclic and self-evaluating in nature. It creates a **feedback loop** that as measures are applied, the effect is monitored. The changes are taken into account and informs the village corp on the right mix of measures in the next action.

3 Steps - constant feedback loop

- 1) Identify - sites of potential for investment, expropriation, sale in order to catalyze and steer redevelopment sustainably.
- 2) Apply - measures may be active such as buying properties outright and developed solely by the village corp. Or involve infrastructural support of the public spaces and networks that improve the conditions for redevelopment.
- 3) Monitor - observe trajectory of effect from the application of measures.

The village corp may split the village into its various "quarters" consisting of separate administrative blocks in the village to individually **designate properties** to serve as mantle sites and vote on their use.

- 1) Individuals nominate suitable mantle sites and suggest use.
- 2) Nomination is submitted to village quarter administration to do cost benefit analysis. (picks the most feasible choice)
- 3) Submit to village corp for project appraisal to decide if it can provide infrastructural support. (clean up costs, street furniture, etc)
- 4) Village corp monitors performance of all mantle sites and its surrounding properties.

Do conditions in the area point to a propensity for high intensity redevelopment?
Will it become a high-traffic live/work hub? Or is it favoured by single-families steering it towards a quaint residential neighbourhood?



<<freeway to town and city center

new village fabric

end of vehicular access>>

oldest village fabric

<<village center

<canal>

Strategy

The type of development outcome and the measures used to guide the redevelopment form a reciprocal relationship. I.e, a similarly scaled traditional village fabric but modernized to become new residential neighbourhood might require opening of public space to improve environment and spur middle income families to move in. Whilst a higher density commercially-orientated change might require a public network that can handle higher traffic and even regulation changes to building height to increase capacity for growth.

But the factor that decides whether the type of development will happen along that path lies with private owners. The emergence of patterns in their collective market decisions must be monitored constantly by the village corp to determine the trajectory of the development and select the proper measures to direct this change.

Site

The **site** for the design proposal is the area highlighted. It is the oldest part of the village with the highest concentration of mantle sites. This site is also chosen because it is a cross-section from the new areas of the village through traditional village fabric to the original foundation of the village along the canal's edge.

Steps in each phase form a feedback loop to evaluate & adjust measures:

1. Identify
2. Apply
3. Monitor

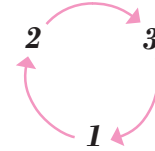
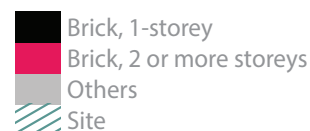
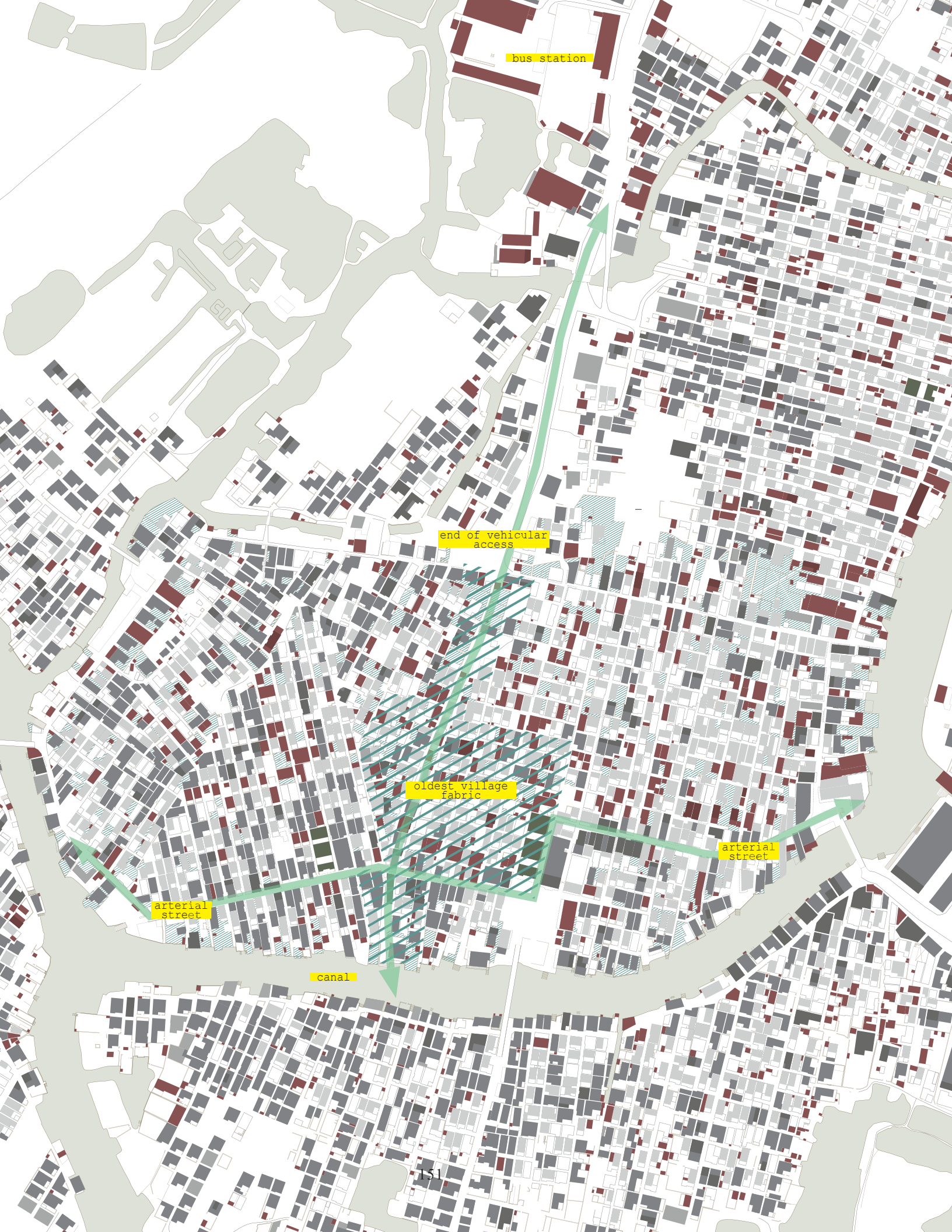


Fig. 225. Map of built of village of Zhangpeng, with site and brick buildings hatched and highlighted respectively. Basemap from Dongguan Planning Bureau. *Zhangpeng village map*. 2006.

Left, hatched in green is the site of the design proposal. It has been chosen because it is a representative cross-section of the village fabric, encompassing the oldest part of the village, its edge at the canal, and its connection to new parts of the village and the town.





bus station

end of vehicular access

oldest village fabric

arterial street

arterial street

canal

Mantle Sites Diagram

Mantle sites are the sites with the highest potential and easiest to redevelop. Open spaces within the village fabric that are abandoned and lay idle can be expropriated at a low cost or may already belong to the village collective. Private open spaces that are unused building sites can be expropriated but those within the walled terrace of existing houses are used for everyday chores and form an inseparable part of the utility of the house.

Buildings highlighted in red are constructed with brick. Brick buildings are the oldest in the village, rendering them most likely in need of rebuilding. Many, in fact, are dilapidated and abandoned. (see photo below) The lateral instability of brick walls limit their heights to mostly one-storey, two-storeys maximum. This decreases the amount of square footage to be compensated if sold or expropriated.

These sites, if chosen for nascent redevelopment will become the seeds of the redevelopment process and anchors to the new redeveloped fabric.

Later "mixed" construction methods incorporate reinforced concrete columns which allow it to be built higher. Still, most mixed constructions are two-storeys in height. They can be thought of as the plume because this type is the most ubiquitous form of construction in the village fabric. They are the second oldest form of construction after brick and are expected to be redeveloped if surrounding mantle sites begin to change their physical and thus investment environment.

Reinforced concrete constructions are sites least likely to be immediately redeveloped. They are newer, with at least two-storeys. They can be thought of as the quill of feathers, giving structure and delimiting the redeveloped village fabric.

Fig. 226. Mantle sites diagram of Zhangpeng. Base-map from Dongguan Planning Bureau. *Zhangpeng village map*. 2006.

Opposite, "Mantle Sites Diagram."The various construction materials of buildings are colour-coded to reveal the oldest buildings and brownfield sites suitable to begin redevelopment. Red denotes buildings made of brick that are the oldest constructions in the village of Zhangpeng. Green hatch are brownfield open spaces. These are suitable as anchors to new development because of its ease of expropriation and yield difference after redevelopment.
1:2500

Highest potential for redevelopment >>

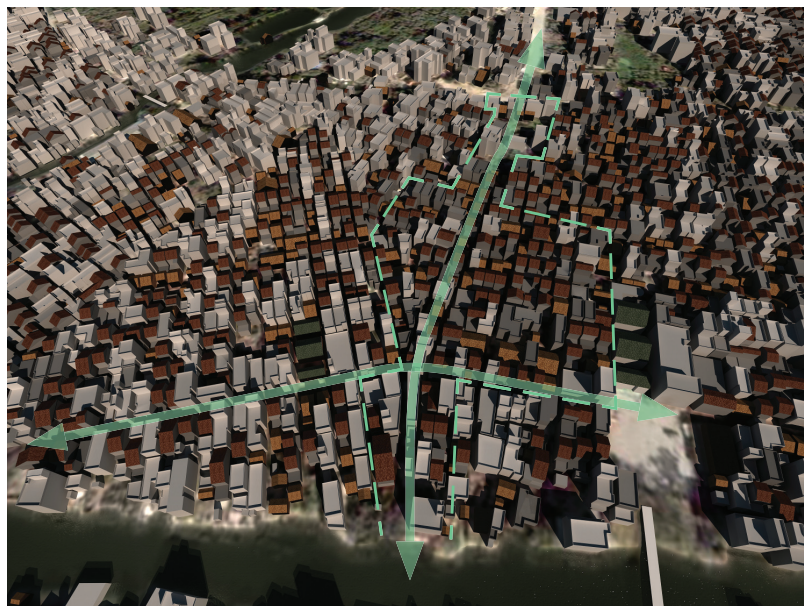
Unclaimed open spaces
Private open spaces

Brick, 1-storey
Brick, 2 storeys or more

Mixed, 1-storey
Mixed, 2 storeys or more

Reinforced Concrete, 1-storey
Reinforced Concrete,
>> 2 storeys or more

Least likely to be redeveloped



Left and far left, the site is a cross-section of many representative parts of the village. The site's residential fabric is the oldest in the village, it holds the position to connect the arterial street in the south, which is an 'inner' village artefact, to the vehicular road to the north, part of the new urban planning of Chinese towns. The vehicular road is a major commercial and transport link for the village to the outside world of Machong town and Dongguan city beyond.

Fig. 227. Aerial rendering of site in Zhangpeng village.

Attractors as Site Strategy

The site strategy or 'attractor' is a combination between the natural conditions of the site and the intentions of the village as a whole. Speaking in terms of complex ecosystems design, highlighted in yellow is the 'attractor' type of development likely to emerge based on existing conditions (highlighted in green) as derived from the 'mantle sites' diagram.

For example, the 'Arterial Street' attractor is a major existing commercial street in the village. Highly travelled by villagers to move within the village. Its propensity in redevelopment is likely a more developed form of the street with modernized shops. It turning into a residential area, for instance, is not likely because commercial developments are more likely to be able to afford the cost to redevelop there.

The village co must constantly monitor conditions of redevelopment after it has implemented measures as well as monitor how private development have altered conditions to determine if there is deviation from the outcome intended by the village corporation.

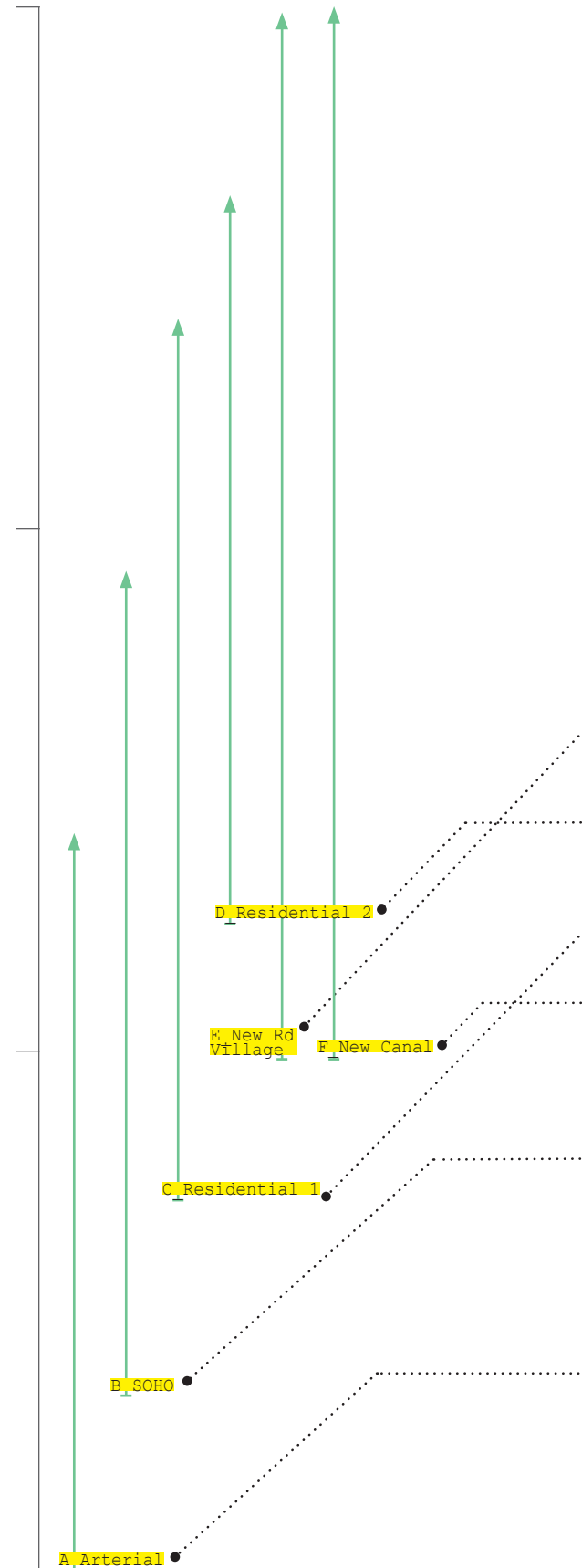


Fig. 228. Chronology of different redeveloped neighbourhoods.

Fig. 229. Redevelopment strategy diagram. Basemap from Dongguan Planning Bureau. Zhangpeng village map, 2006. Drawing by author.



- Unclaimed open spaces
- Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more
- Sell to
- Keep
- Lease to
- Finance by
- ▲ Redevelop by
- △ Addition by
- ▣ Expropriate by

New Road Village
Extension of vehicular access into traditional village fabric

Residential 1
Modernization of typical village residential fabric

Residential 2

New Canal
Allow dominant natural feature to reclaim parts of village to improve village ecologically and aesthetically

SOHO
Create a quality live/work neighbourhood

Arterial Street
Take advantage of flow of people in existing retail-orientated public street network

Sequence of Redevelopment

Each colour represents an intended redevelopment neighbourhood attractor and a strategy to develop it into its aim. Each number represents a transaction or redevelopment of property. Transactions are recorded in tables below that show the transaction number, the type of development attractor, the former owner, former building type and properties, the symbol represents the transaction that took place, the party involved in the new transaction, and the characteristics of the new property.

1.	V.co	2-storey	Warehouse	◇	V.co	3-storey	Mixed-Retail
2.	Bo.	2-storey	Residential	○	An.		
3.	Chu.	1-storey	Residential	□			
				■	V.co		
				▲	V.co	3-storey	Mixed-Retail
				○	Dao.		

The transaction symbol is a visual metaphor of the transaction involved. Major changes such as owner change is in black, no change in owner is unfilled, financing is partially filled. Redevelopment of the property is represented as a filled triangle, additions are unfilled triangles and the expropriation of property by the village corporation is a square mosaic.

The graph to the right is a simulation of the sequence of transactions in all the attractor neighbourhoods organized by order of events from the sparse transactions that occur first in Phase 1 to the established redevelopment process and the many transactions in Phase 3.

The map to the far right show the locations of the transacted properties as they exist. The map illustrates properties in the manner of the 'mantle sites' diagram. The oldest brick buildings are in red, their age and construction make them most likely to redevelop first because of the higher yield difference after development. The sharp colour highlights its catalytic nature as 'mantle' sites, to be molten and molted into new developments. The reinforced concrete homes are recently redeveloped and so are taller and less likely to change in the near future. They are coloured dark to represent their stability.

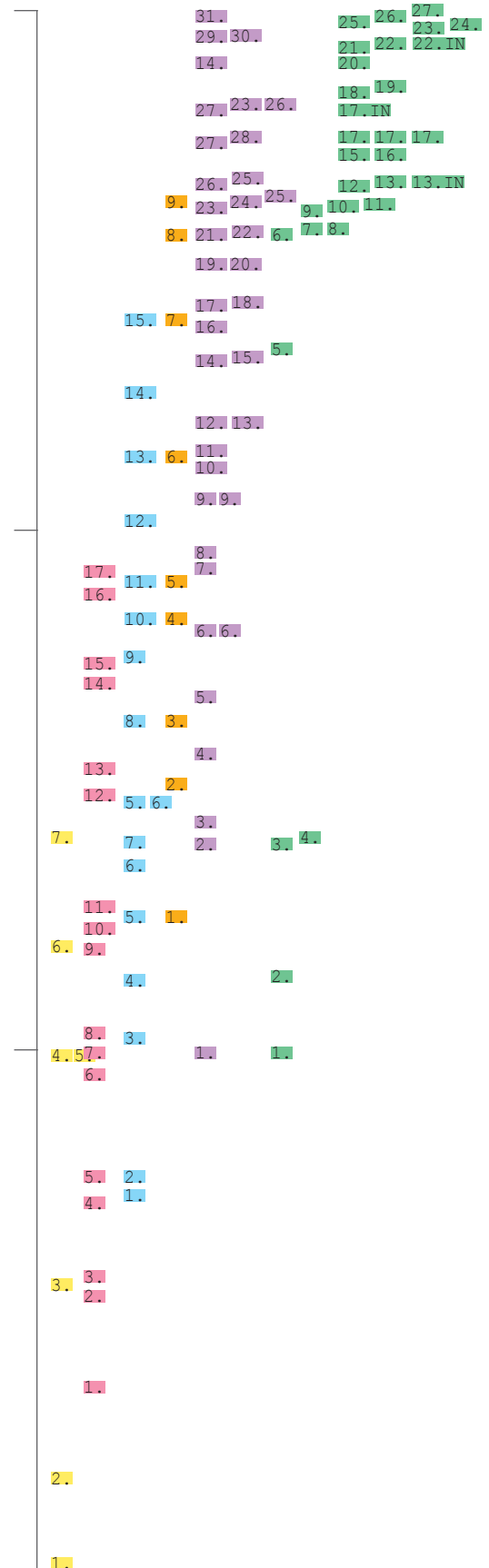


Fig. 230. Chronology of individual property transactions in this particular simulation of redevelopment.

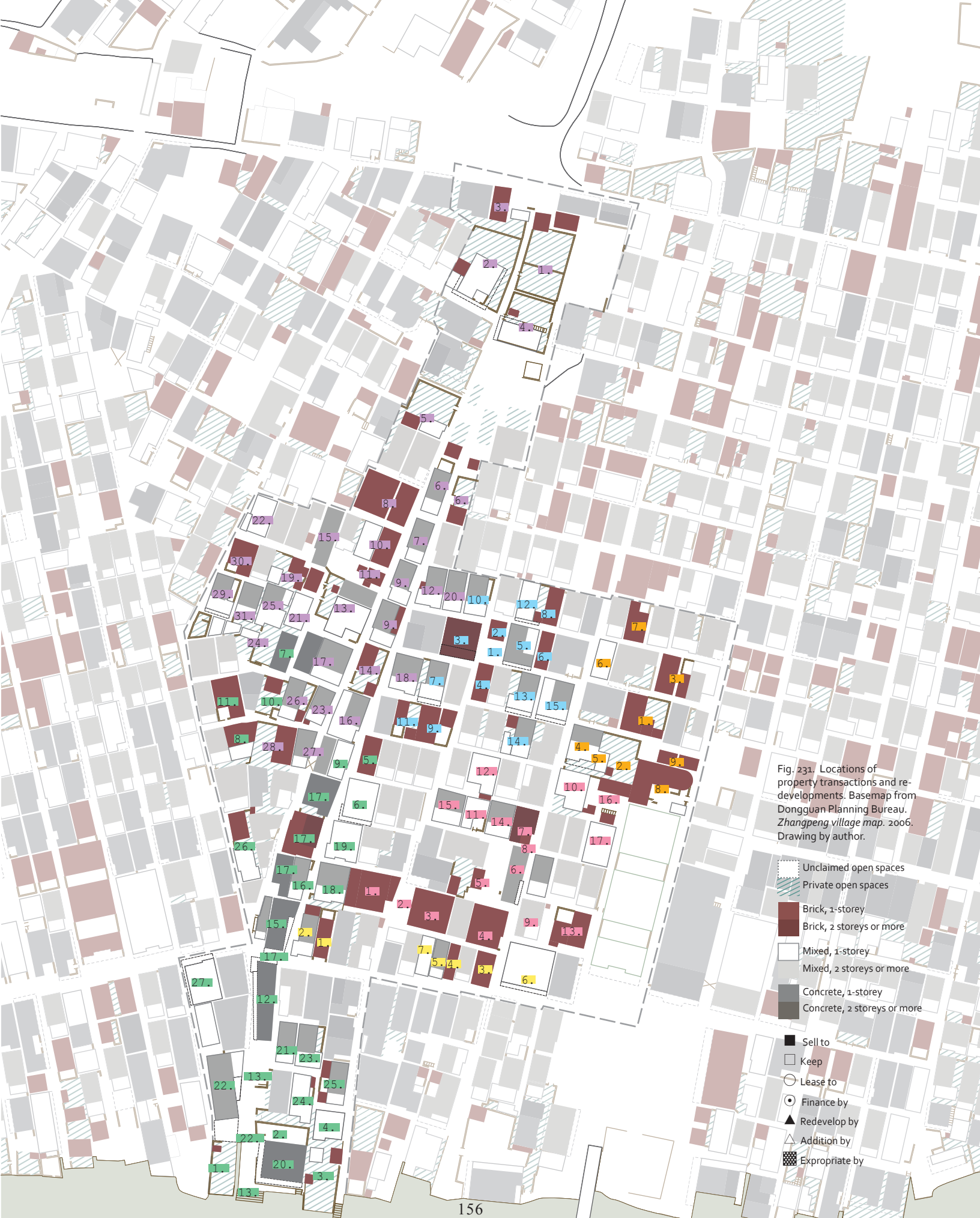


Fig. 231. Locations of property transactions and redevelopments. Basemap from Dongguan Planning Bureau. Zhangpeng village map. 2006. Drawing by author.

- Unclaimed open spaces
- ▨ Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more
- Sell to
- Keep
- Lease to
- Finance by
- ▲ Redevelop by
- ▲ Addition by
- ▣ Expropriate by

A_Arterial Street Upgrade: Low Hanging Fruit

The arterial street is an essential feature of the traditional Chinese village. It is not only a means of travel throughout the village but located in its junctions are pavilions and piazzas where villagers congregate to shop, eat and meet.

Redevelopment of any site requires the expectation of future profits to lure investors. The arterial street's high traffic and indispensable nature as an intra-village physical and social connector is part of an established public space network.

The village corp only needs to catalyze redevelopment by letting investors know it intends to revitalize the area and also by making it easier for investors to buy, rent or operate these properties.

The village corp may first redevelop properties that it owns along the street to set an example.(1) With a modernized typology that caters to retail and commercial activity. It can lease these properties to create a steady cash flow.(1,3)

Seq	First Owner	Height	Type/ Material	Trans- action	New Owner	Height	Type/ Material
1.	V.co	2-storey	Warehouse	◇ ○	V.co An.	3-storey	Mixed-Retail
2.	Bo.	2-storey	Residential	□			
3.	Chu.	1-storey	Residential	▣ ▲ ○	V.co V.co Dao.	3-storey	Mixed-Retail

The village corp can then expropriate other properties and lease or resell to investors.(3,4) Households may put their properties up for-sale or for-lease notices on a centralized bulletin. Investors only have to come to one place to browse for available properties.(5)

When the village corps has more capital to work with, it may help finance villager properties by lending them the money for building redevelopment, earning them direct interest and indirectly spurring the revitalization of the village fabric.(6,7)

4.	Eng.	1-storey	Residential	▣ ■	V.co Feng.		
5. 4+5.	Guo.	2-storey	Residential	■ ▲	Feng. Feng.	3-storey	Mixed-Retail
6.	Han.	1-storey	Retail	⊙ △	V.co Han.	3-storey	Mixed-Retail
7.	Ju.	1-storey	Residential	▲		3-storey	Mixed-Retail

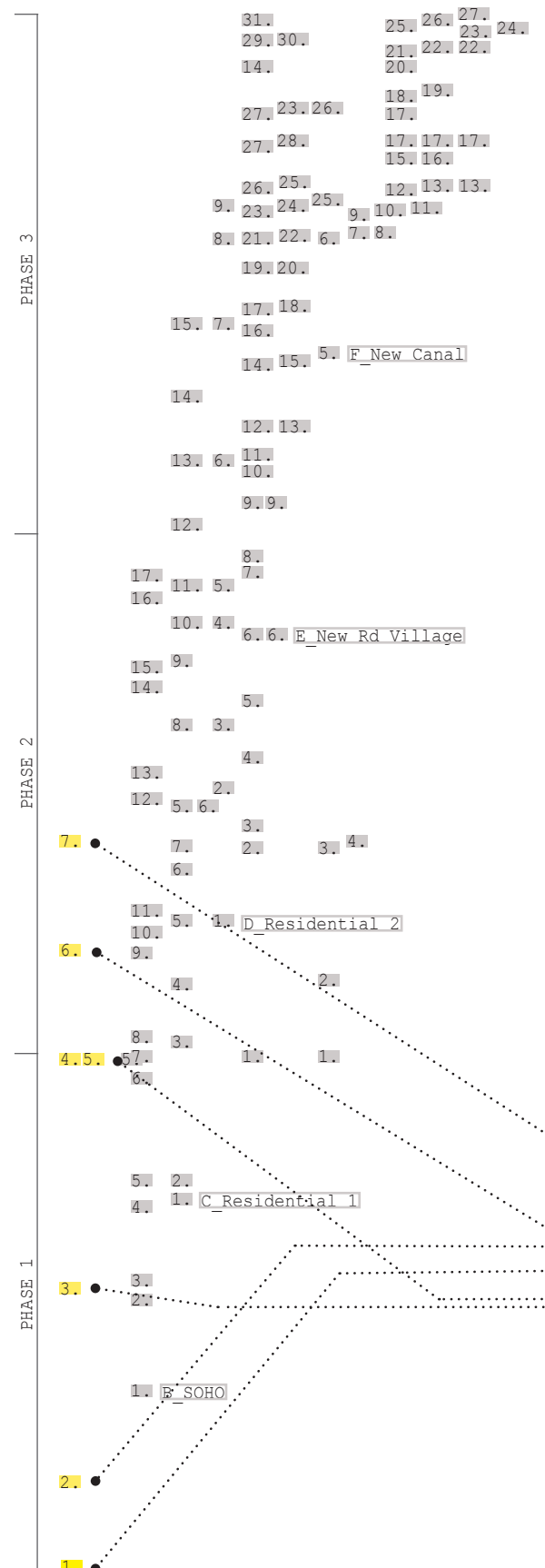


Fig. 232. Chronology of arterial street redevelopment.

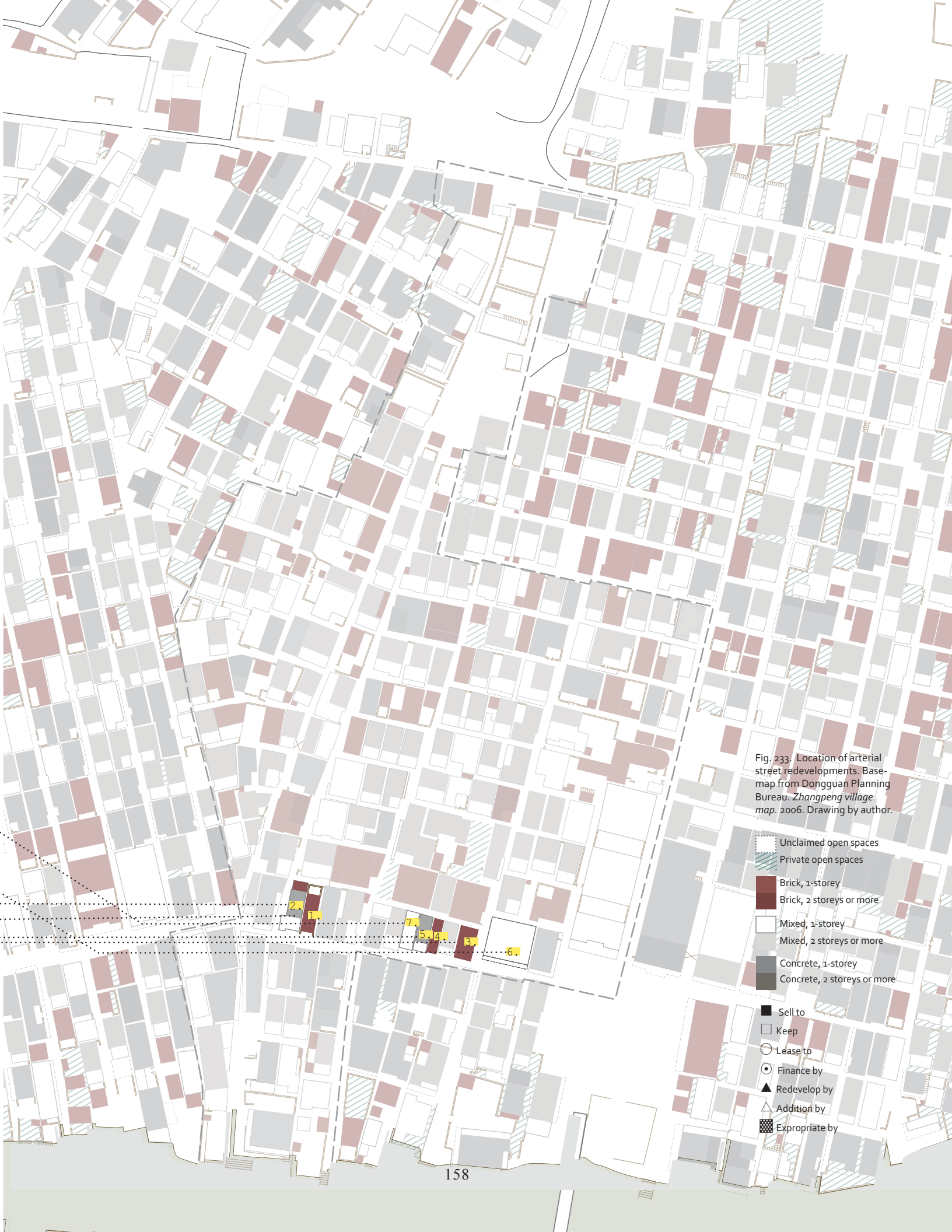


Fig. 233. Location of arterial street redevelopments. Base map from Dongguan Planning Bureau. Zhangpeng village map, 2006. Drawing by author.

- Unclaimed open spaces
- ▨ Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more
- Sell to
- Keep
- Lease to
- Finance by
- ▲ Redevelop by
- △ Addition by
- ▣ Expropriate by



The arterial street is an integral part of the village public space network and village life.

Fig. 234. Location of arterial street interventions. Ibid.

(2) Owner of this house decides to keep it as is. He tends to clan matters in the village, his son has a steady upper middle-income job. He picks his grandchild from boarding school back to the village on weekends.

Fig. 235. Photograph of arterial street.





(1) This brick building was used as a village labour team warehouse and meeting space during the collective farming era. The disused properties can become mantle sites to kick-start redevelopment.

Fig. 236. Old brick buildings along arterial street.

Villagers that own houses along the arterial street have variety stores from their first floor house-fronts.

Fig. 237. Existing store in house along arterial street.



Fig. 238. Buildings along a section of the arterial street of project site.



The arterial street network is a central public circulation corridor.

Fig. 239. Diagram of arterial street as part of village public space network. Basemap from Dongguan Planning Bureau. *Zhangpeng village map*, 2006. Drawing by author.



The arterial street is a place for socializing. It's junctions end at public pavilions by the water side with banyan trees for shade. Villagers congregate there to play chess and socialize.



Fig. 240. Arterial street with shops and entrance to households.

Fig. 241-242. Banyan tree and park.



Clan shrines along the arterial streets serve as public spaces for congregating.



Fig. 243. Shrine along arterial street. Photograph.

Fig. 244. Children in park. Photograph.



Fig. 243. Rendering of new typologies along arterial street. Rendering by TT.

Right, the redeveloped arterial street will happen incrementally. Instilling modern typologies and retail outlets one building at a time.



B_SOHO (Small Office Home Office):

Opening Up Village Fabric to Catalyze Redevelopment

Introduction of open spaces to alter original village fabric and become basic unit for anchoring new development and public life. Essentially, the redevelopment of the village envisions a community with a mixture of industry and residences. In a traditional farming village where the fabric is made of villager residences, what would a live/work environment evolved from this fabric look like? And how do we encourage private owners to adhere to a public vision?

Like the redevelopment of the Arterial Street, the strategy to use in the beginning of development should be using "four taels to move a pound" (四两拨千斤). Utilizing limited resources to influence the greatest effect. And again, it is either through 'figure' or 'ground', the village house or the surrounding public space network.

In this simulation, the village corp is presumed to use its funds to actively buy and redevelop a village house and open space into mixed-use structure and an open air garden respectively.(1,2) The aim is to break the mould of the traditional residential neighbourhood by injecting new uses for buildings and new spatial arrangements in public spaces. It serves as a physical example of how the village fabric can be transformed, spurring private owners to imagine new improvements.(3)

1.	Ang.	1-storey	Residential	■	V.co	3-storey	Warehse-Retail
2.	Chen.	Private	Dilapidated	○	Bao.		
3.	Deng.	1-storey	Residential	▲	V.co	Public	Garden/Stall
				●	V.co		
				▲	Deng.	3-storey	Commercial

The aim is for private development and transactions to take off on its own.(4)

4.	Er.	1-storey	Residential	■	Fan.
----	-----	----------	-------------	---	------

The scale of the public space intervention is proportional to the redevelopment area it catalyzes. Developments (4-8) surround a larger private courtyard turned public space to handle more public traffic. The smaller courtyards (2,5) form part of the whole public space network by widening and improving existing lanes and alleyways.

5.	Gao.	Private	Courtyard	■	V.co		
6.	Hong.	2-storey	Residential	▲	V.co	Public	Courtyard
7.	Ing.	2-storey	Residential	●	V.co		
8.	V.co	Open alley		▲	Hong.	3-storey	Home Office
				▲	Ing.	3-storey	Residential
				△	Hong.+Ing.	Above-st. terrace	Mixed

The establishment of new public spaces within the traditional fabric, along with active redevelopment by the village co, and its aid to private developers is expected to encourage the surrounding area to modernize. (10-16) Bringing in new capital, a different demographic and varied uses into a diversified community.

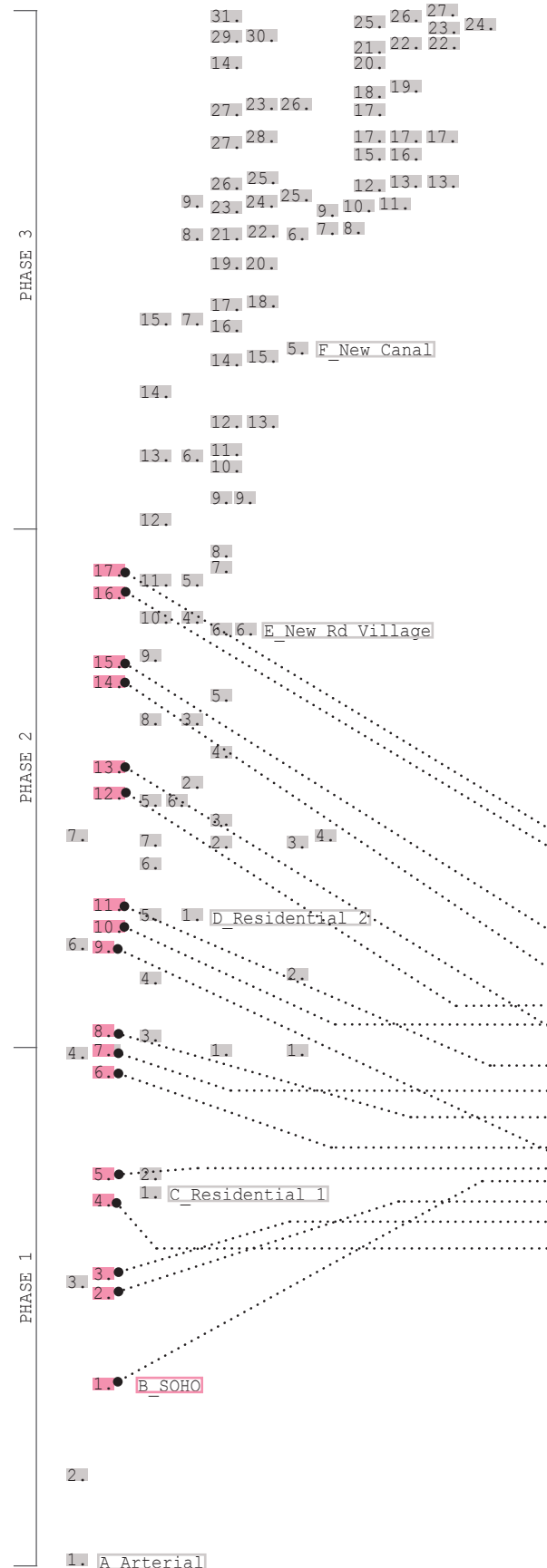


Fig. 246. Chronology of SOHO redevelopment.

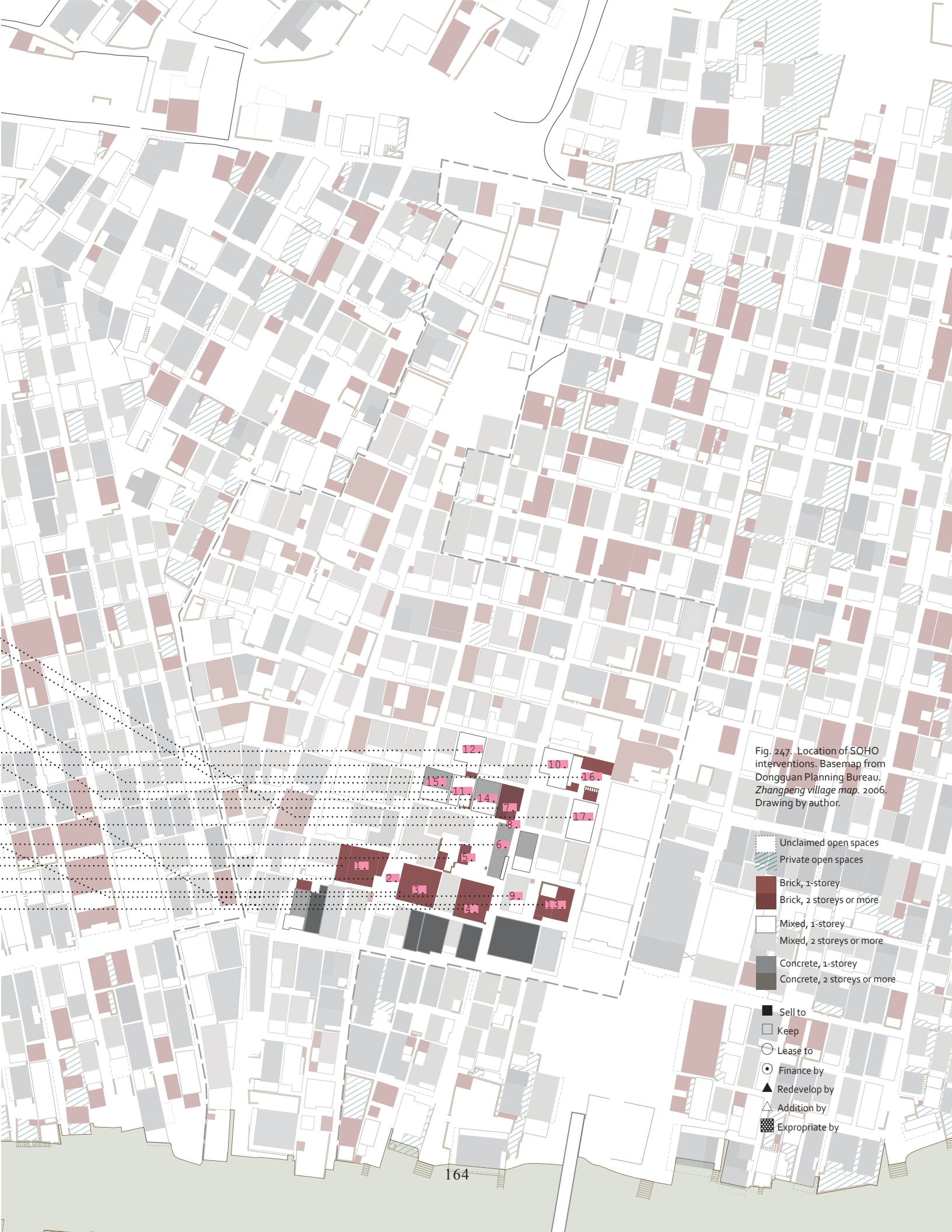
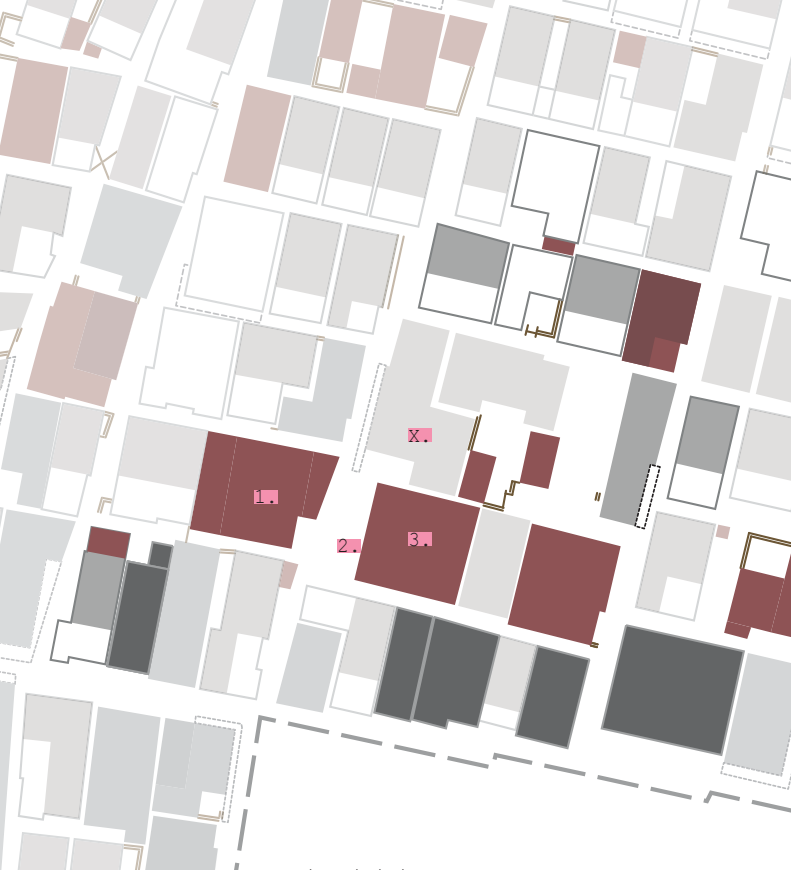


Fig. 247. Location of SOHO interventions. Basemap from Dongguan Planning Bureau. Zhangpeng village map, 2006. Drawing by author.

- Unclaimed open spaces
- ▨ Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more
- Sell to
- Keep
- Lease to
- Finance by
- ▲ Redevelop by
- △ Addition by
- ▣ Expropriate by



The mantle sites that will initiate the SOHO redevelopment are within a concentration of dilapidated brick buildings and unused private spaces.

Fig. 248. Location of first interventions in SOHO area. Ibid.



Brick buildings are the most traditional type of material used in construction and therefore the oldest. They have high conservation value.

Fig. 249. Overview of site of first intervention. Photograph.



The redevelopment will inject new uses and arrangements of public spaces and new building typologies that host a diversity of uses. Above, abandoned open space (2) turned into bookstall and dilapidated brick house (3) with addition.

Fig. 252. Rendering of redeveloped brick house.



'Green' brick buildings were traditionally the homes of the richest families in the village.



3. abandoned brick house, 1-storey



2. abandoned open space



3. dilapidated brick house, 1-storey

The design proposal takes the approach to conservation by revitalization. Bringing new life to the traditional village in a controlled manner by the management and extension of the traditional public space network.

Fig. 250. Dilapidated shed. Photograph.

Fig. 251. Abandoned old brick house. Photograph.



3.



1.

2.

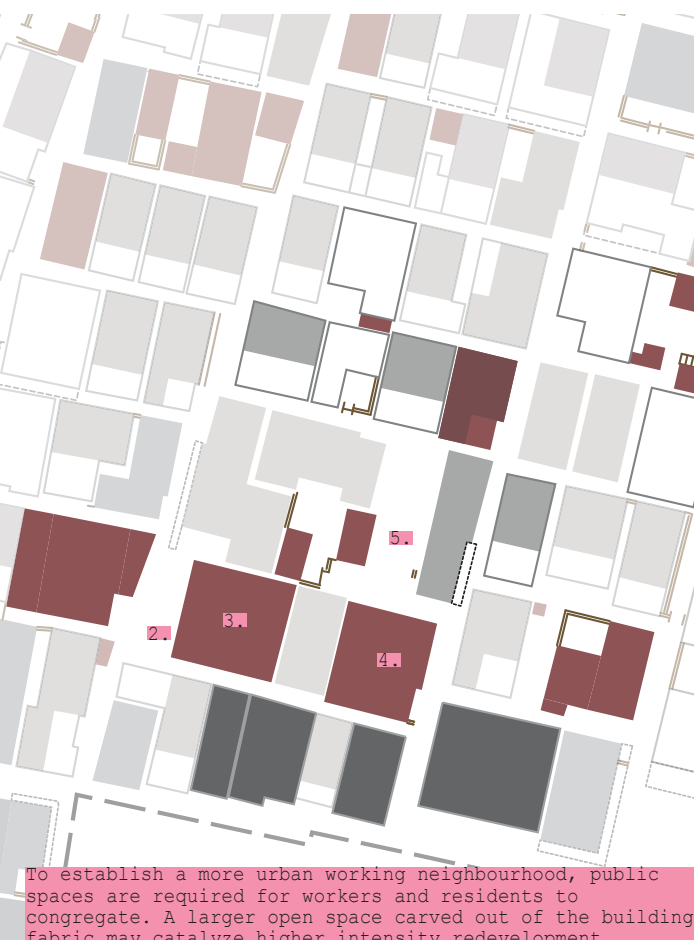
Fig. 253. Abandoned brick house. Photograph.

New developments in the village are constructed of reinforced concrete. It allows for larger spans and cantilevers that are responsible for closing up light and air in handshake developments. Design guidelines can manage overbuilding, reinforced structural grid allows for flexible and adaptable building uses.

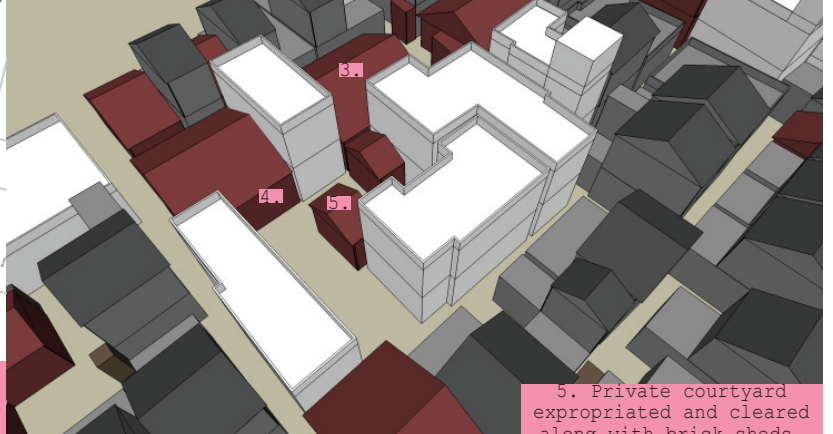
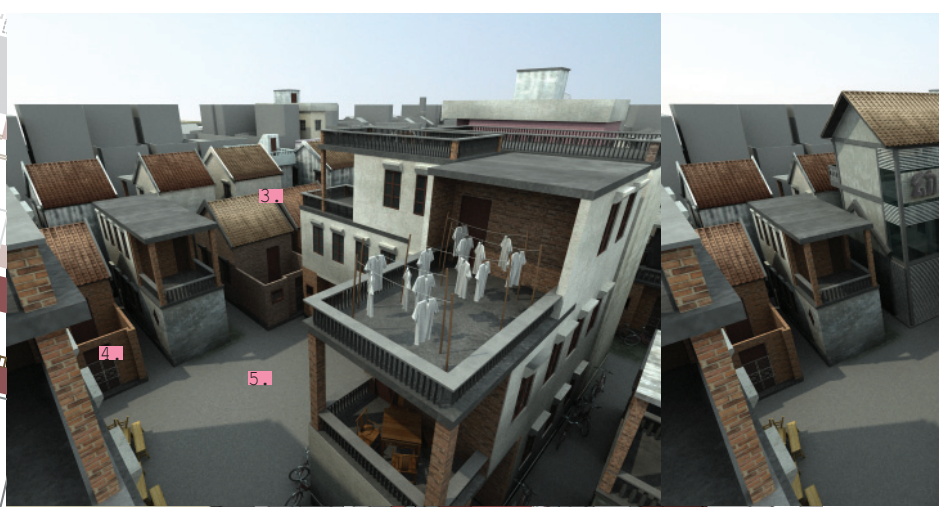
Fig. 254. Redeveloped brick house and dilapidated shed.



Roof of 3-storey redeveloped house within village fabric.



To establish a more urban working neighbourhood, public spaces are required for workers and residents to congregate. A larger open space carved out of the building fabric may catalyze higher intensity redevelopment.



5. Private courtyard expropriated and cleared along with brick sheds.

Fig. 256. Second area of intervention in SOHO

Fig. 257. Aerial 3D model of second intervention area.



Fig. 255. Panorama of new redeveloped open space in SOHO area.

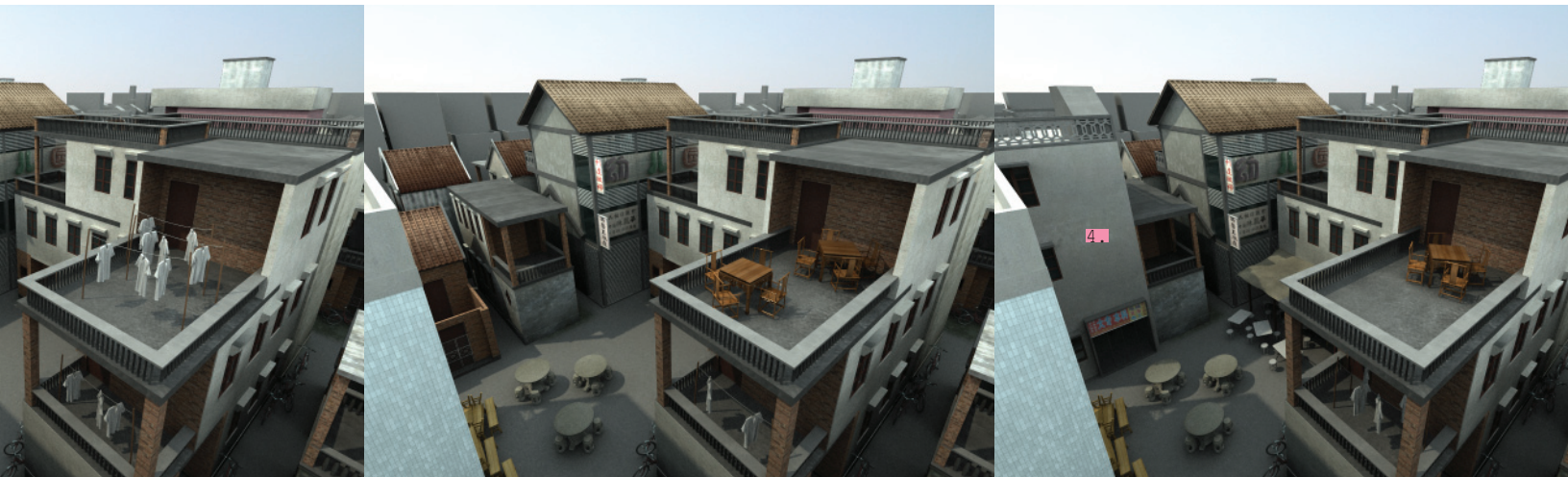


Fig. 258 - 261. Rendering of sequence of redevelopment in new open public space of second intervention area.



Private courtyard expropriated by village co, cleared of brick sheds.



Two dilapidated brick buildings is converted into a commercial building by the original owner with financing from V.co.



Traditional houses hosting bottom-floor shops.

This is a newly constructed piazza in the Liwan district of Guangzhou. The buildings to the right are large-scaled new developments while the left of the photo and the area beyond is composed of housing fabric typical of villages in the Pearl River Delta region.

Fig. 266. Panorama of public space in old residential area of Xiguan, Guangzhou.



Fig. 262- 265. Sequence of redevelopment around open public space of SOHO area.

Reinforcement of the public space establishes it as an anchor for redevelopment. Improved environmental quality incentivizes owners to redevelop their homes (4,6) near this place.

The Alternative Chinese Goodlife:
The SOHO Neighbourhood



The strategy of using open spaces to spur redevelopment and create anchors for new neighbourhoods can be used in different parts of the village at different scales to create pockets of redevelopment connected through improved spatial network.

Fig. 267. Possible scenario of SOHO redevelopment.

New Village, New Lifestyles, New Typologies

The revitalization of the village will spur the innovation of new building types to meet the diversifying demand in the changing village neighbourhood.

Public developments by the village corporation may develop avant-garde examples for villagers to copy and also create one-of-a-kind buildings to catalyze urban development.

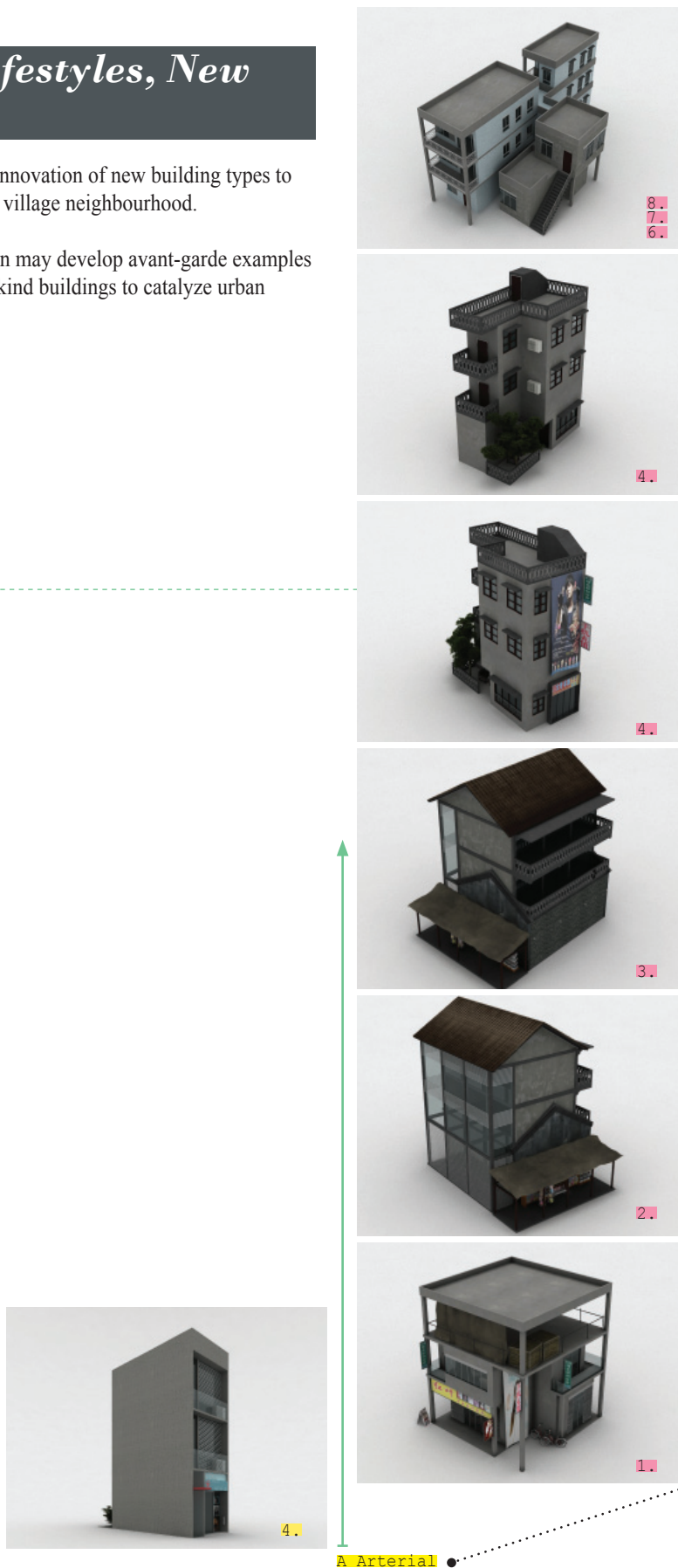


Fig. 268. New building typologies in arterial street and SOHO village redevelopment.

Fig. 269. Location of new typologies. Basemap from Dongguan Planning Bureau. Zhangpeng village map, 2006. Drawing by author.



- Unclaimed open spaces
- Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more

SOHO

Arterial Street



Fig. 270. New building typologies in residential, new road and reclaimed canal village redevelopment.

Fig. 271. Location of new typologies. Basemap from Dongguan Planning Bureau. Zhangpeng village map, 2006. Drawing by author.



- Unclaimed open spaces
- Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more

New Road Village

Residential 1

New Canal

C_Residential 1: New Regular Residential Fabric

In order for the perception of the traditional village to change from the current view as a deadend of society to a place suitable for families to take root and build a future, it must appeal to the middle-class family. Therefore the typical traditional village housing fabric must readapt to become a new model for living.

Village houses traditionally built on single lots built for a single household must change to suit small households and more families per lot. Sequences 1 and 2 (below) expropriates small and dilapidated buildings to create open space in the dense fabric. The third development (3) is a project funded and developed by the village corporation as an example of a new typology in the new residence for the middle-income family.

It will be a taller, larger, multi-family residence that takes the place of the original one-storey brick house. The village co may lease the different floors of the apartment to families within and outside of the village population.

1.	Au.	Private	Open space	○	V.co	Public	Garden, Park
2.	Bian.	1-storey	Residential	▲	Bian.	Private	Garden, Park
				○	V.co	Public	Garden, Park
3.	Chao.	2-storey	Residential	○	V.co		
				▲	V.co	3-storey	Residential
4.	Dan.	1-storey	Residential	⊙	Bank		
				▲	Dan.	3-storey	Residential
				■	Fei.		

As redevelopment of the traditional residential fabric takes hold, mantle site owners may hold out on cashing out in anticipation of increase in property value. Villagers might lease their properties for private and also public use instead of selling them outright.(1,2) More varied ownership arrangements will appear.(3,4)

We may find cases of villager properties leased to the village co to serve as part of the public space network.(1) Open spaces 'redeveloped in anticipation of use' by the village co as part of the public space network.(2) And private properties in strategic locations where the village co. might rent the properties to redevelop and sublet.(3)

This option will not require the village co to put up with the full capital for land, as in a full expropriation. It is another way for the village co to obtain properties in strategic locations as part of its public network strategy.

Sequence 4 illustrates a villager homeowner using the financial resources of a bank to obtain financing, and using it to invest in the redevelopment of their property. And selling the upgraded estate to outside buyers as a result. As confidence in the villages redevelopment increases, it will be easier to find financing from ever more sources. Sequences 4-15 illustrate the steady and incremental redevelopment of the traditional village fabric.

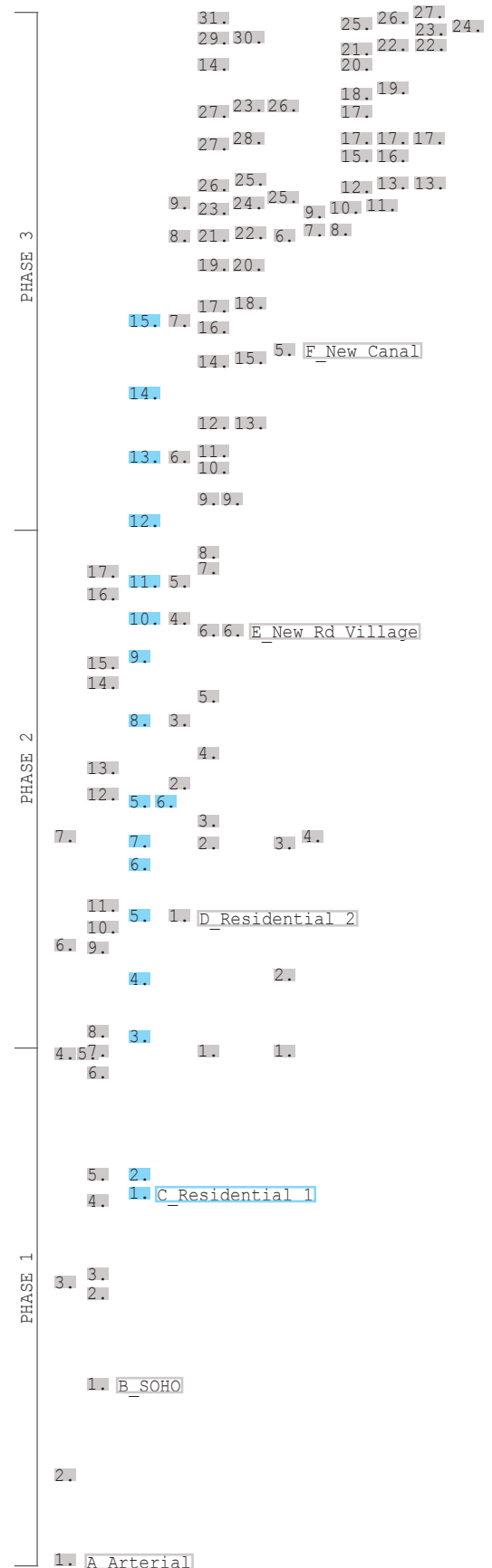


Fig. 272. Chronology of residential redevelopment.

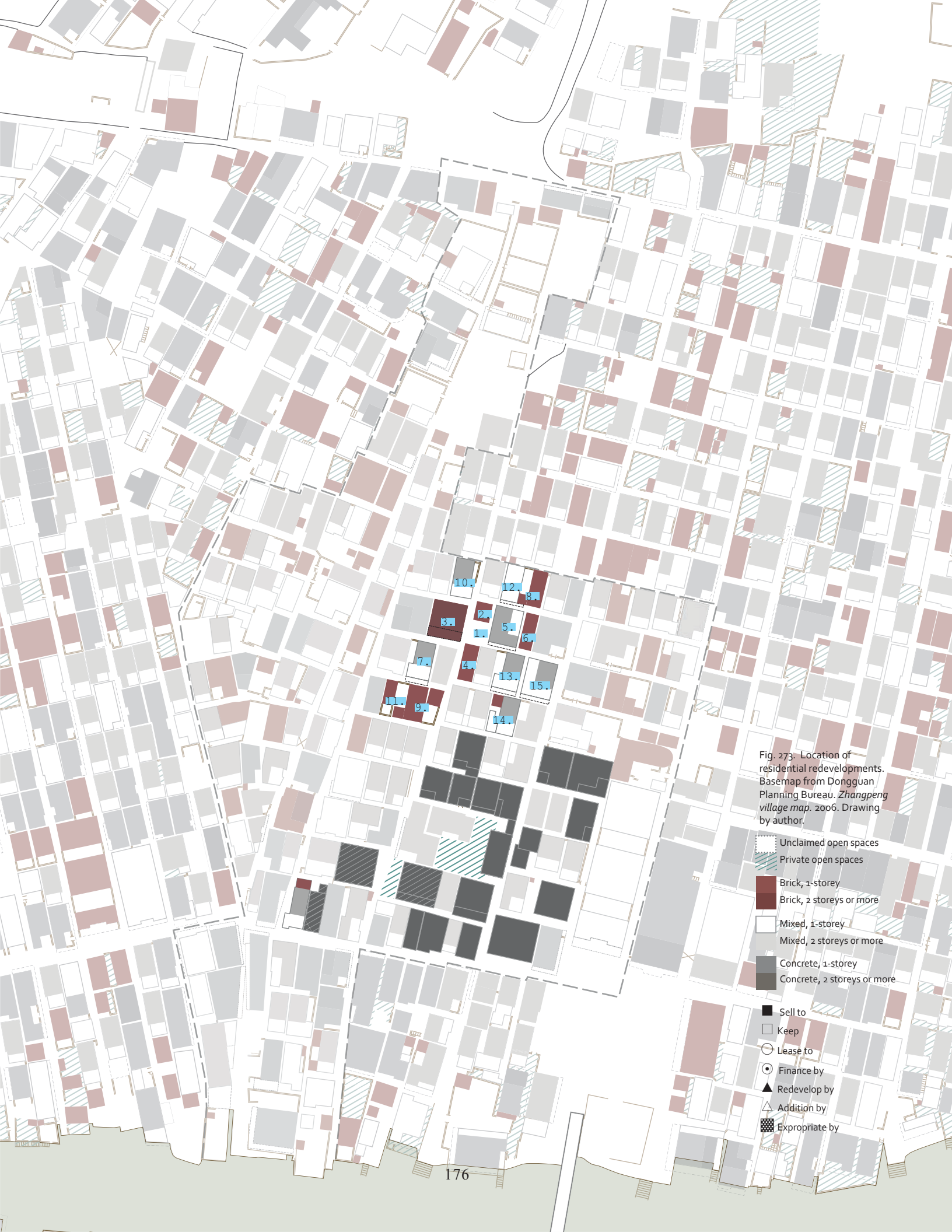
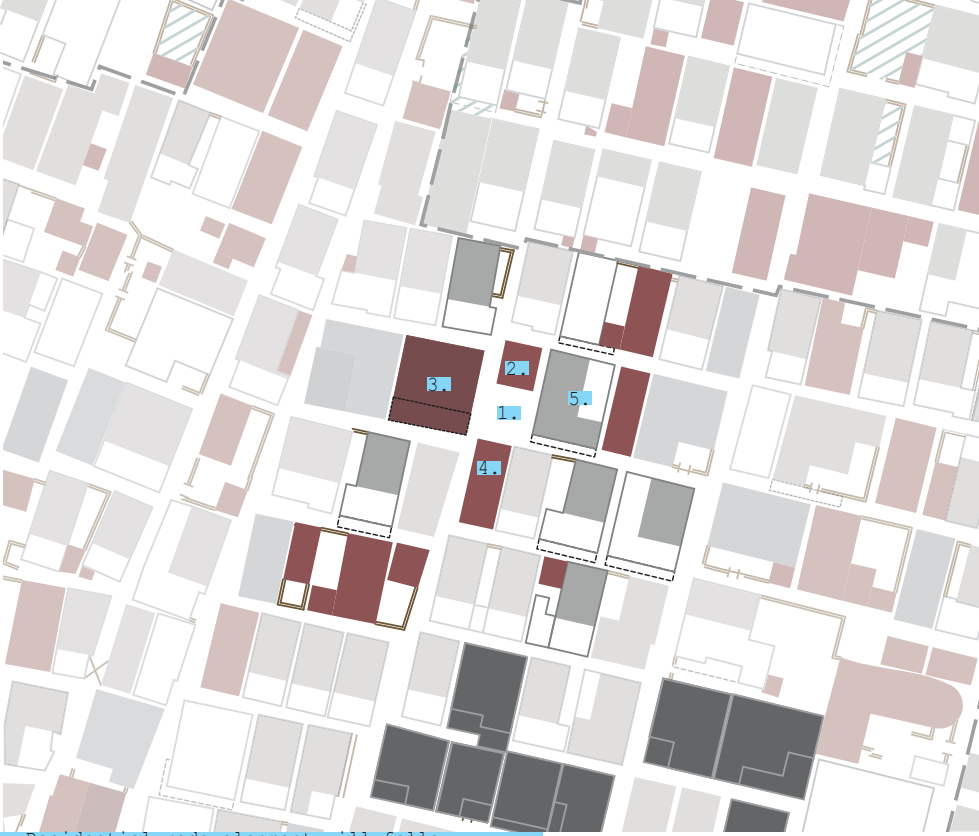


Fig. 273. Location of residential redevelopments. Basemap from Dongguan Planning Bureau. *Zhangpeng village map*, 2006. Drawing by author.

- Unclaimed open spaces
- Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more
- Sell to
- Keep
- Lease to
- Finance by
- Redevelop by
- Addition by
- Expropriate by

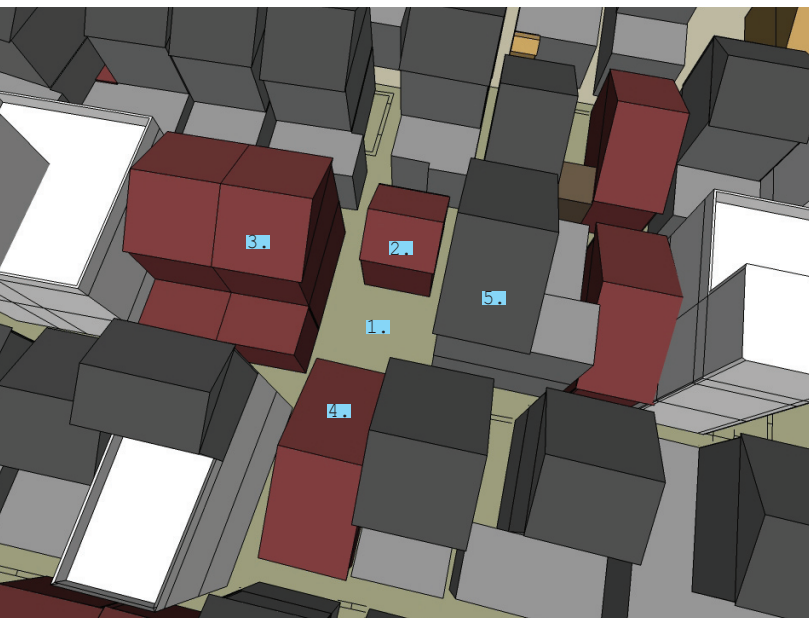


Residential redevelopment will follow the same strategy as creating SoHo neighbourhoods by catalyzing redevelopment with insertion of new public spaces within the dense village fabric.

Fig. 274. Location of residential redevelopments. Ibid.

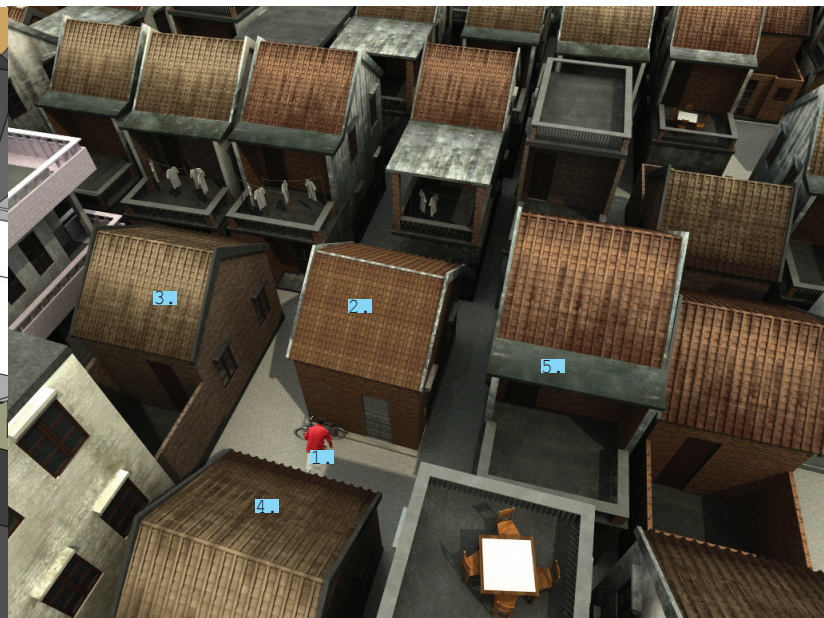


1+2. Unused private open space and brick shed rented by the village co to use as public space anchor to redevelopment.



The mantle site is within a concentration of unused open spaces and older brick buildings.

Fig. 277. Aerial 3D model of redeveloped residential area.



The redevelopment of the existing village fabric will come from the combination of changes to the public space network as well as individual redeveloped buildings themselves.



Fig.275. Residential brownfield.



Fig.276. Residential brownfield.

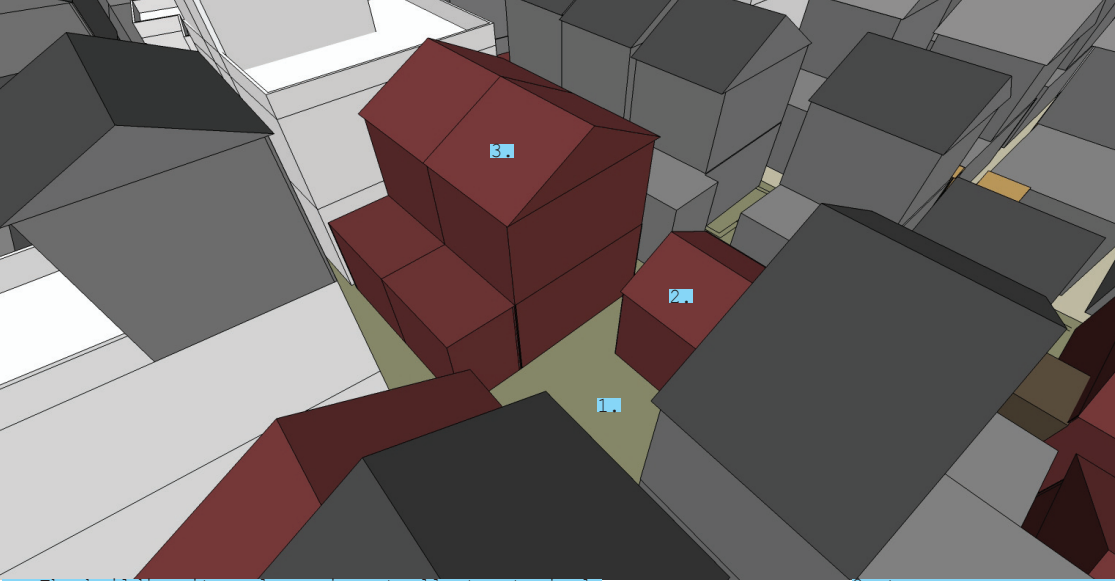


What sort of innovative redevelopments should be built in place of the traditional village houses?



Redevelopment number 3 in the sequence, developed by the village co can set a new example of how to redevelop besides it being a source of rental income or sale.

Fig. 278 - 280. Sequence of redevelopment in residential area.



The building it replaces is actually two typical traditional village house side-by-side. Which are two two-storey bamboo type house constructed of brick.

Fig. 281. 3D model of redeveloped typical village house in context.

2-storey
Bamboo-type
Brick construction
Indoor area 56.5m²
Balcony 8.2m²
3-bedroom (not entirely independent)



Fig. 282. Typical brick village house. Photograph.



Entrance alley. Balcony above. Owners of this house no longer live here regularly. They have moved away to for work for most of the year.



Immediately through the entrance is the kitchen. It is placed at the entrance traditionally because the kitchen was the 'wet area' for cooking and cleaning chores and the alleyway in front drained into the open sewers in the laneways.

Fig. 284 - 288. Photographs of typical village house.



Traditionally this type of home is for a single family. Family size usually reach at least four or more people. These two homes probably had one immediate family member establish a new household and built their home directly adjacent.



Fig. 283. Back view of house. Photograph.

Note the cement rendering of the two homes are covered over together as if a single structure.



As this photo shows, the kitchen had a lightwell open to wind and rain.



Living room, stair to second floor, and this picture is taken from the entrance to the back bedroom of the first floor.





The first floor back bedroom is open to the mezzanine on the second floor.



Fig. 289 - 292. Interior of typical village house.

The second floor is the an open bedroom. The entrance through the rear red-brick wall leads to the mezzanine open to the first floor.



The traditional two-storey brick house has been converted to (3), a three-storey multifamily apartment. Private open space (1) has been turned into a public park.

Redevelopment (4) follows suit and is redeveloped into single lot 3-storey house.

Fig. 293 - 294. Sequence of residential redeveloped.



If the mezzanine counted as a separate room, the 56.5m² house has three bedrooms.



The balcony, with sheet plastic roofing to cover the lightwell to the kitchen below.

The Alternative Chinese Goodlife:
The New Village Residential Neighbourhood



The public space anchor to a neo-village paradigm.

D_Residential 2: New Lifestyles, New Typologies

The incremental transformation of the village fabric is by the redevelopment of village buildings one by one. How do we design new building typologies that will fit into current spatial surroundings, yet evolve to house new, modern ways of life?

We should allow existing and potential owners to freely resolve this based on their conditions. Individuals will always place their best interests first, as long as design guideline controls are in place to stop overbuilding and the public space network is sustained to provide a convenient and quality living environment the most adapted innovations will emerge.

Transactions of property in phase two and three of the redevelopment process will require less encouragement from the village co. All it may take is a little 'nudge' from the village co, such as an open park in midst of the dense building fabric (1) and private owners will speculate on increasing the value of their homes through redevelopment.

1.	Ai. 1-storey Ai. Private	Residential Courtyard	■ V.co ■ V.co ▲ V.co Public	Garden, Park
2.	Biao. Private	Courtyard	▲ Biao. 3-storey ○ Chun.	Residential
3.	Deng. 1-storey Eng. 1-storey	Residential Residential	□ Deng. + Eng. 3-storey	Residential
4.	Biao. 2-storey	Residential	■ Frank. 3-storey	Residential
5.	Biao. 2-storey	Residential	■ Gabe. 2-storey	Mixed

The rules for lot consolidation and separation increases the variety of physical, social and financial arrangements in the building redevelopment. In sequence (3), two related villagers consolidate their lots to build a three-storey house each with their own floors with a third floor serving as the office to their joint business.

The owner of the redeveloped courtyard in sequence (2) parcels off his old house to separate buyers in sequence (4) and (5). In sequence (5) an outside buyer redevelops a two-storey brick house as his creative studio apart from his high-rise apartment home in nearby Guangzhou city.

The follow pages are studies into housing design and typologies that suit a diversity of lifestyles. They are not in the context of the residential_2 project site.

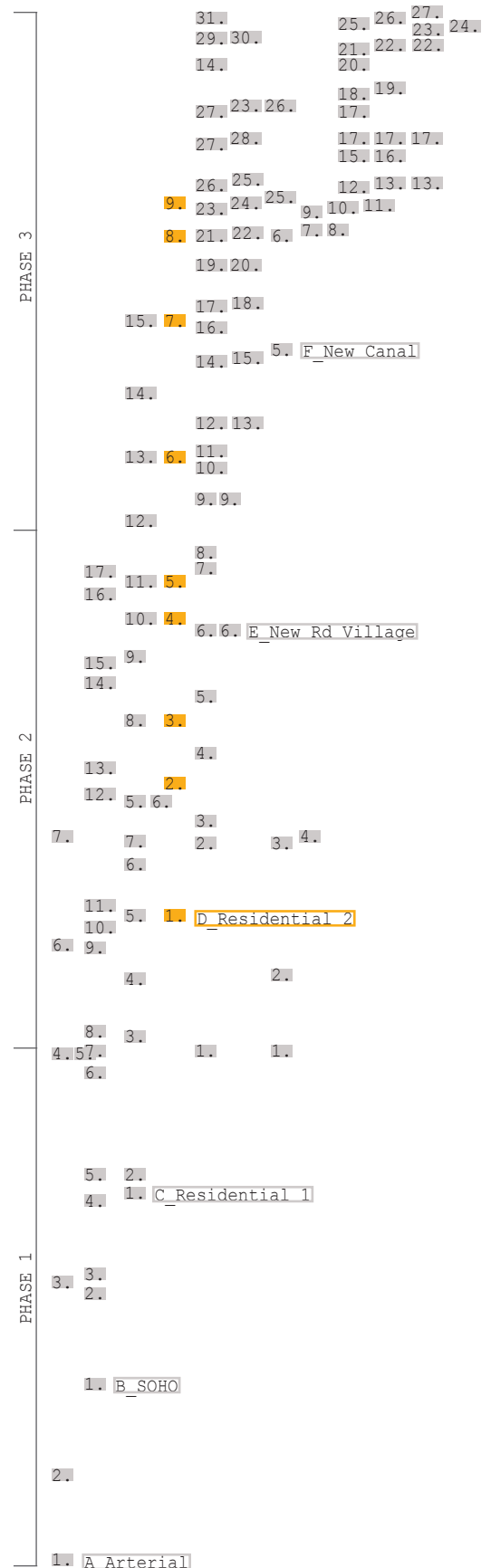


Fig. 296. Chronology of second residential redevelopment.

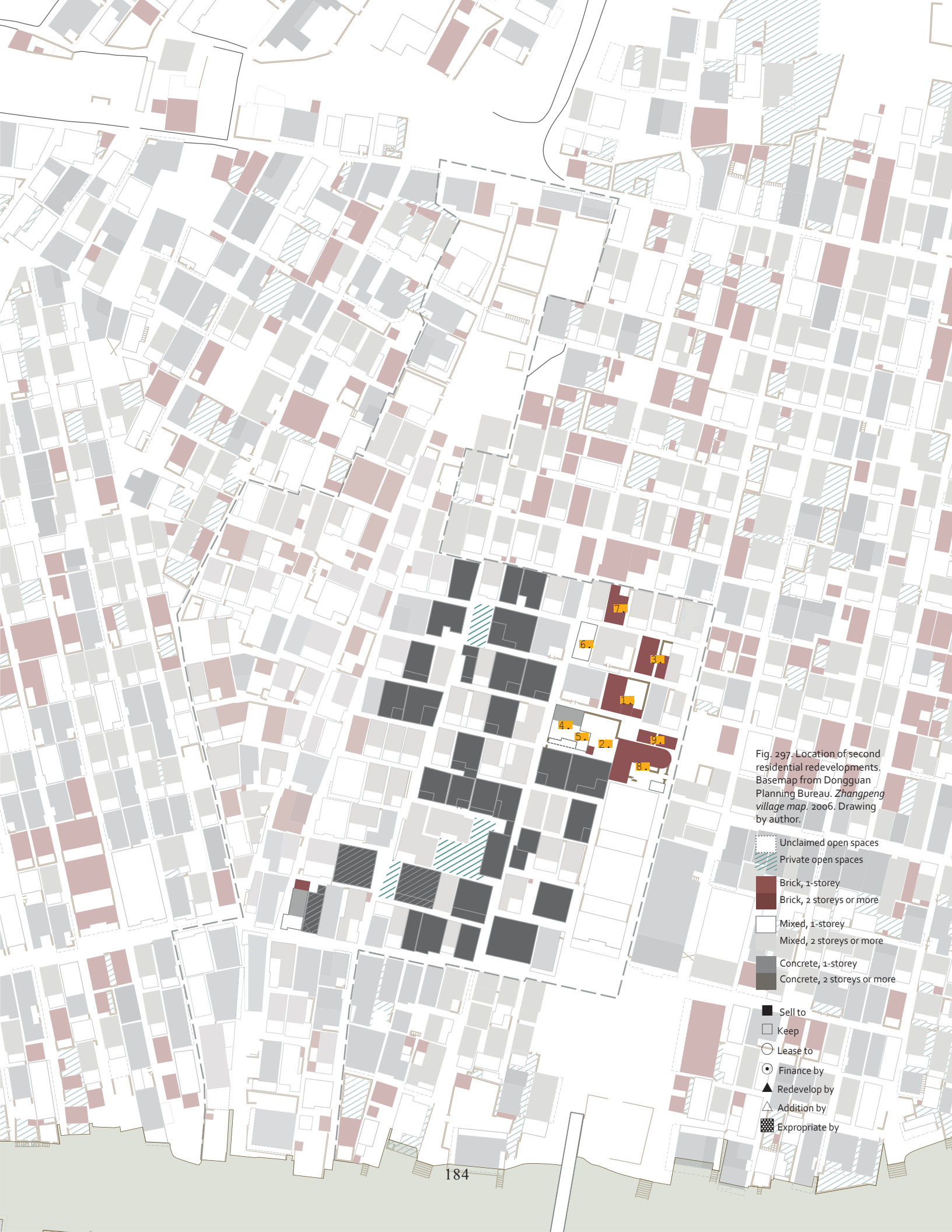
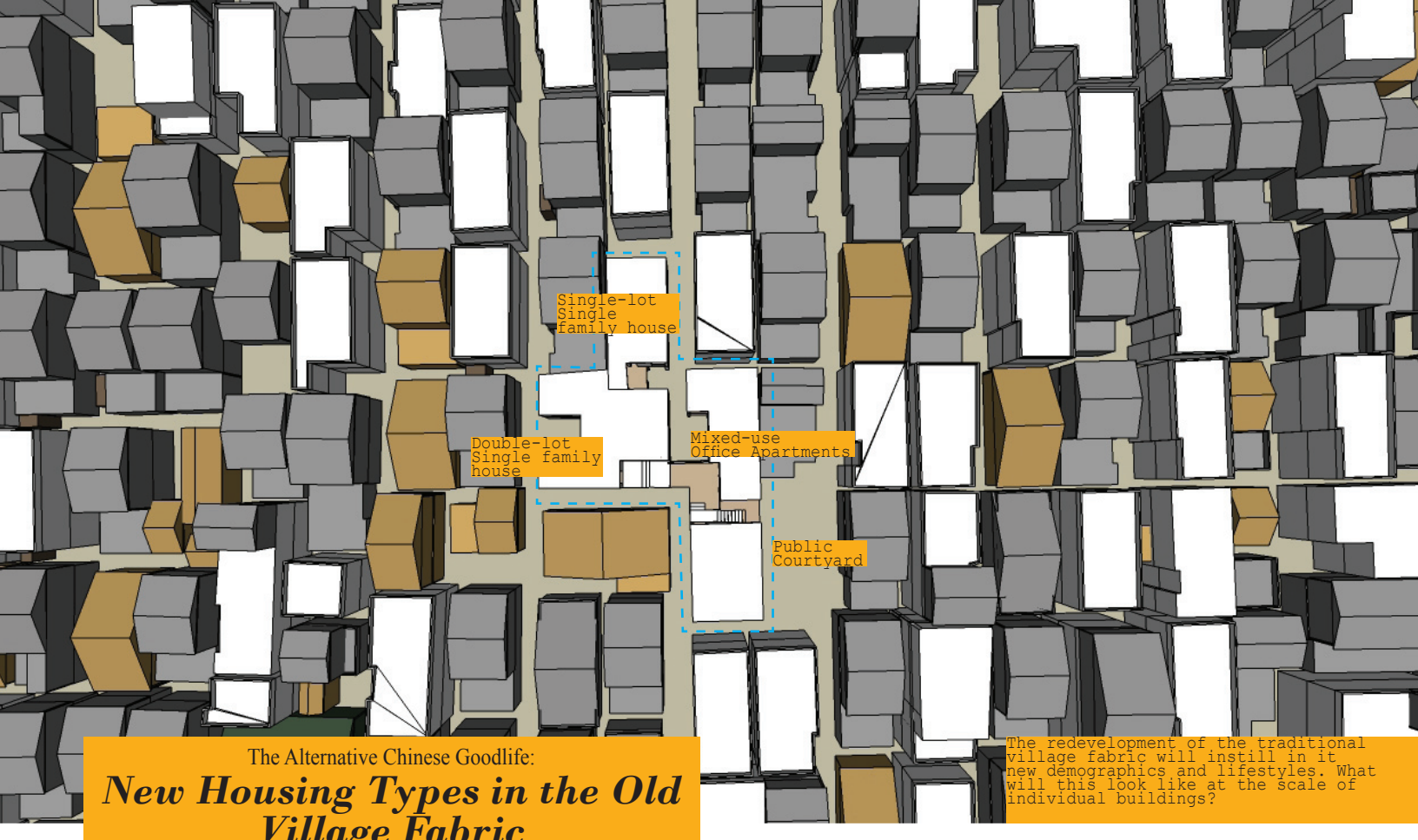


Fig. 297. Location of second residential redevelopments. Basemap from Dongguan Planning Bureau. *Zhangpeng village map*. 2006. Drawing by author.

- Unclaimed open spaces
- Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more
- Sell to
- Keep
- Lease to
- Finance by
- Redevelop by
- Addition by
- Expropriate by



The Alternative Chinese Goodlife:
New Housing Types in the Old Village Fabric

The redevelopment of the traditional village fabric will instill in it new demographics and lifestyles. What will this look like at the scale of individual buildings?

Fig. 298. Three innovative typologies in traditional village fabric.

New Developments in Traditional Village Fabric

A mix of old and new demographics will undoubtedly lead to an instillation of new lifestyles into the traditional village. The thesis views this as a positive influence if promoted correctly.

By integrating different lifestyles around public outdoor spaces, villagers of different backgrounds have more opportunities to meet or see their neighbours. More interaction leads to better communication and stronger relationships.

First of all, villagers already share the relationship as shareholders of their village corporation. There are many opportunities for owners to collaborate in property redevelopment and village enterprise.

To multiply the chance for mutual interaction beyond the ground level public space network, property owners are required to design a percentage of the lot as open-air spaces that increases light and air access, and are allowed to agree upon building an open air terrace spanning over laneways that mutually connect two properties.

What will these foundations for encouraging a socially and economically sustainable redevelopment produce?



Fig. 299. Rendering of aperture courtyard space (Fig. 220) in "mixed-use office apartment" required by building guideline (Fig. 305).

G. Courtyard of office with direct access from laneway. Used for access to light and air as well as an informal meeting space. Beyond, is the above-lane terrace that connects two properties and can be used



Fig. 300. Public courtyard by village corporation.

Traditional village fabric redevelopment

The redevelopment design is actually three separate buildings involving five typical village housing lots.

Lot 1: is redeveloped into a two-storey small single-family home. It shows what a typically sized village lot will look like if redeveloped for the typical Chinese three-person family.

Lot 2+3: is a two-storey latitudinally consolidated 3-bedroom home. An attempt to create a more comfortably-sized single-family home in the space restraints of the dense village fabric.

Lot 4+5: is a half three-storey and half two-storey, longitudinally consolidated mixed-use building. It houses offices on the bottom floor and small apartment/dormitories above. Suitable for the working demographic.



Lot dimensions, 4.5x9m
 Height limit, 6 or 7.5m, 2-3 storeys
 Aperture size, 15 @ 6m or 20% @ 7.5m hgt limit
 480 people per hectare
 20-34sqm per person
 FAR 1.7-2.4

Fig. 301. Per hectare site context diagram.

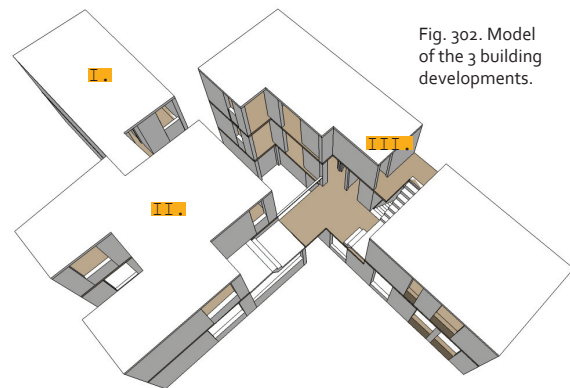


Fig. 302. Model of the 3 building developments.

I.
 2-storeys
 2 bedroom, 1 bath
 Lot area 40.8m²
 Total floor area 73.0m²
 Open aperture req't 15%, 6.1m²

II.
 2-storeys
 3 bedroom, 2 bath
 Lot area 72.7m²
 Total floor area 124.2m²
 Open aperture req't 15%, actual aperture area 19.4% @ 14.1m²
 Above-lane terrace, 1.4m²

III.
 2 & 3-storeys
 1 office @ 86.0m²,
 2 x 1-bedroom apt @ 30.5m², 35.8m²
 1 x 2-bedroom apt @ 35.8m²
 Shared facilities @ 7.2m²
 Lot area 91.1m²
 Total floor area 197.7m²
 Open aperture req't 2-storey @ 15%, 3-storey @ 20% = 17.5%, actual aperture area 22% @ 20.0m²
 Above-lane terrace, 1.4m²



Fig. 303. Terrace over laneways.

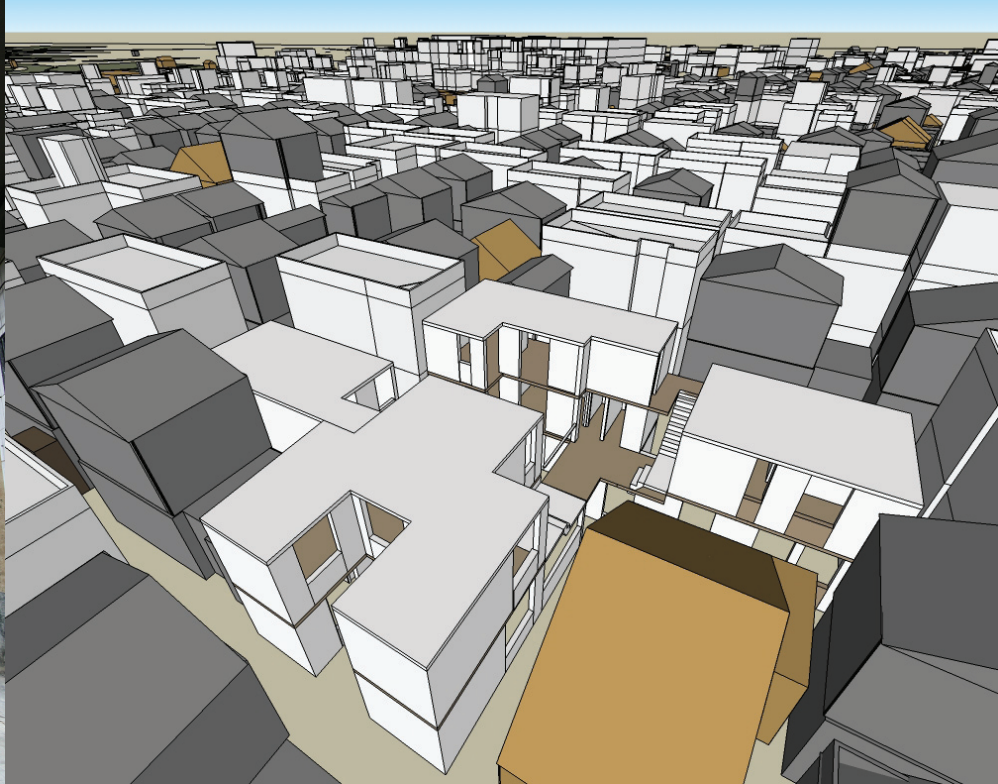


Fig. 304. New developments in site context.

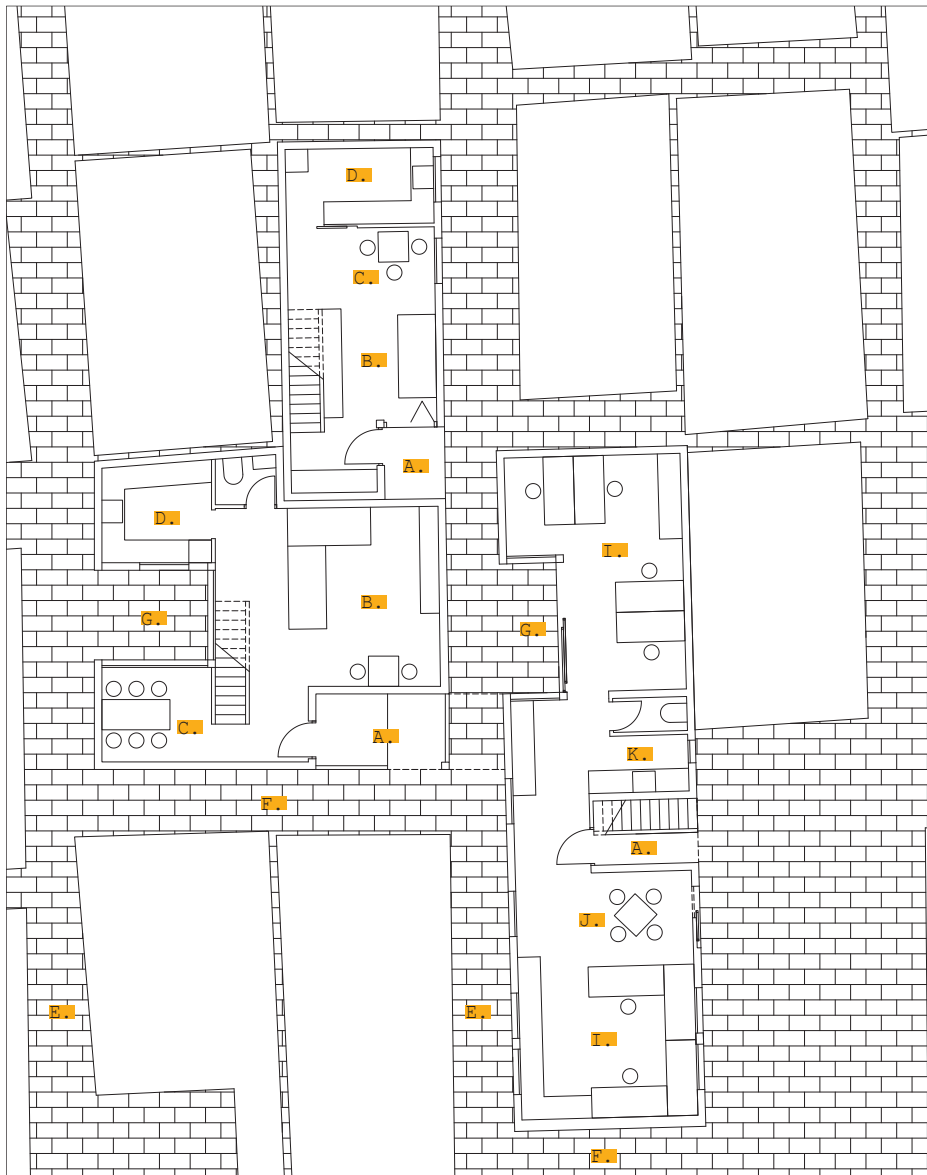
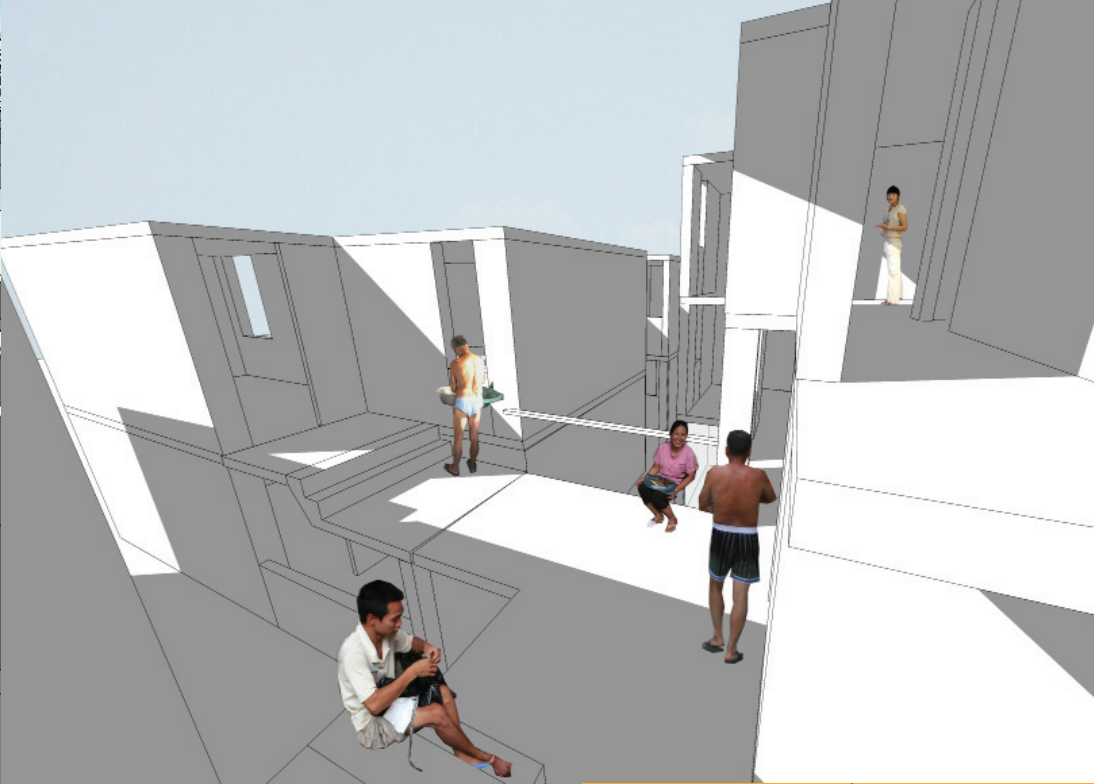


Fig. 305. Another example of terrace over laneway.

Fig. 306. Plan of 3 innovative typologies.

- Ground floor plan 1:250
- A. Entrance
 - B. Living room
 - C. Dining room
 - D. Kitchen
 - E. Lane
 - F. Alley
 - G. Aperture Courtyard
 - H. Public courtyard
 - I. Open plan office
 - J. Office meeting space
 - K. Kitchenette



The above-street open-air terrace connects two properties, bridging over a laneway. It can be a datum for new resident interactions.

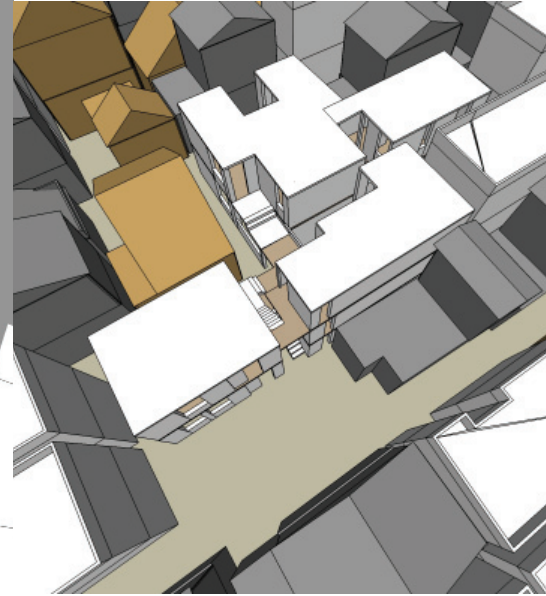


Fig. 307 - 308. Rendering of above-street terrace spaces that connect the double lot house and office apartment.

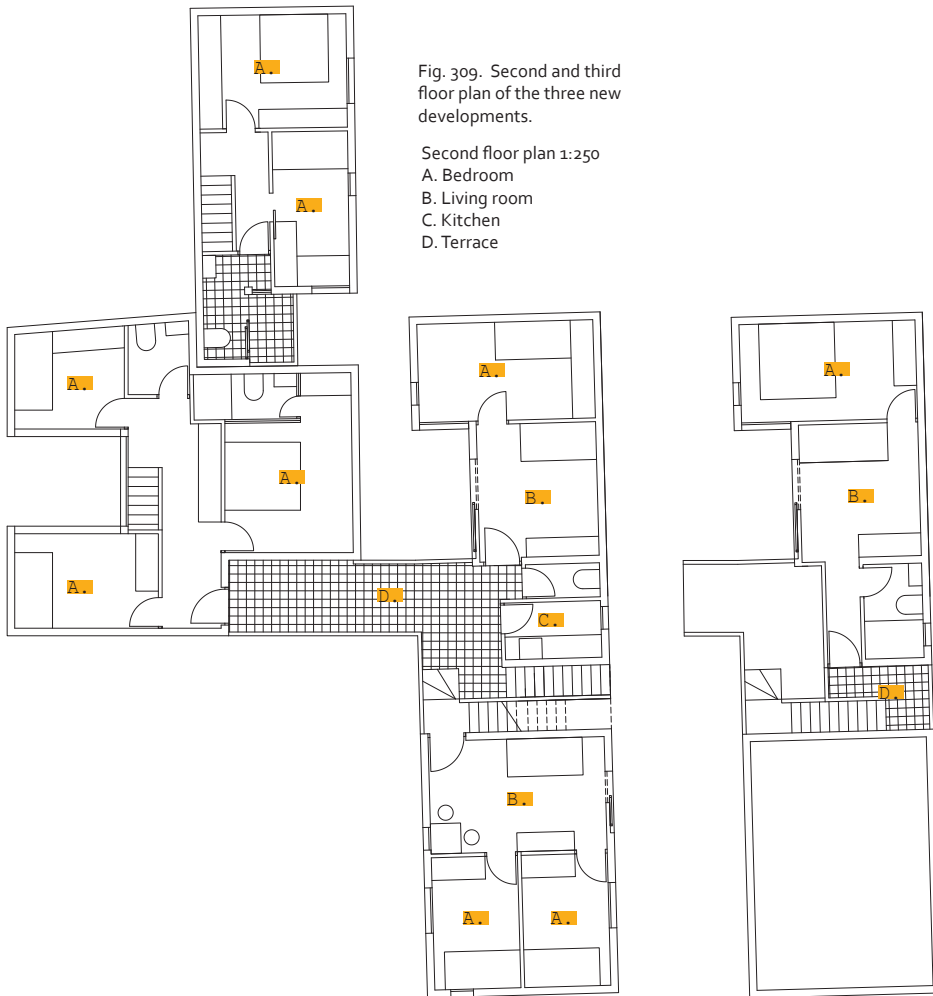
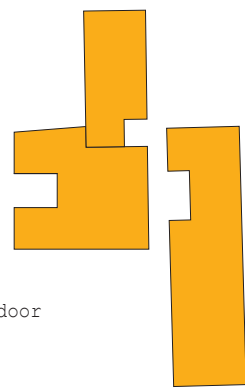
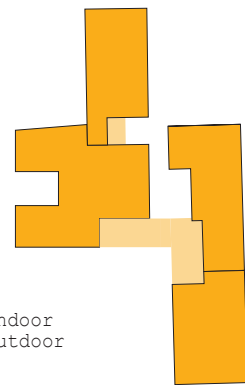


Fig. 309. Second and third floor plan of the three new developments.

- Second floor plan 1:250
- A. Bedroom
- B. Living room
- C. Kitchen
- D. Terrace



First floor indoor spaces.



Second floor indoor spaces with outdoor terraces.



Third floor indoor apartment and outdoor terrace.

Fig. 310. Indoor-outdoor space massing diagram.



Fig. 311. Collage of renderings of new housing typology in village greenfield.

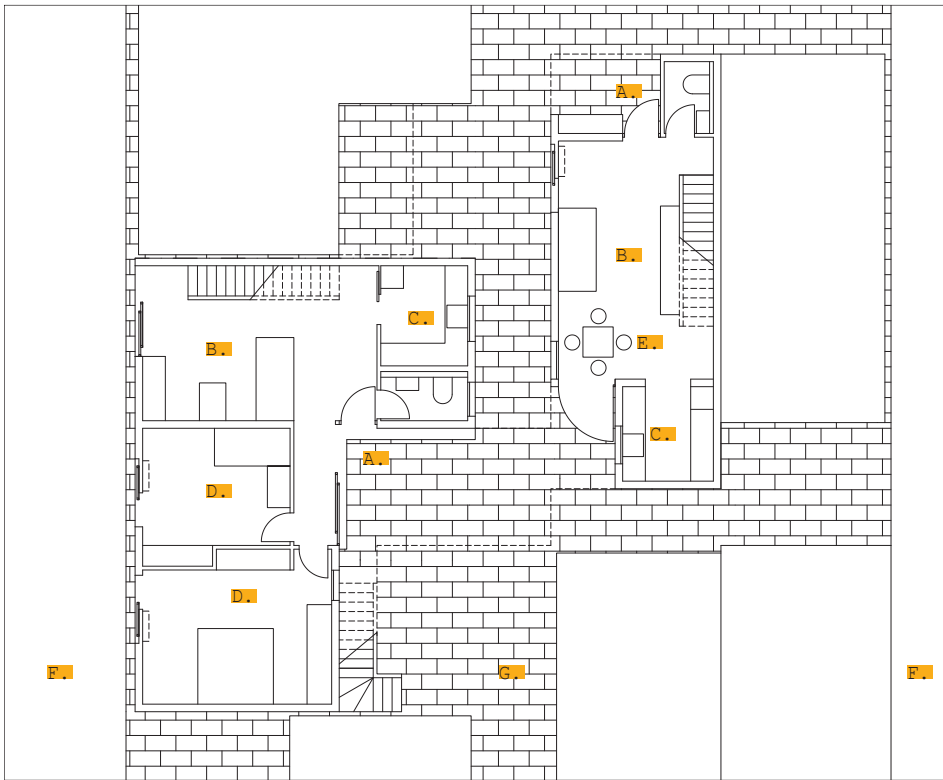


Fig. 312. Plan of two farmland building developments across from one another from laneway.

- Ground floor plan 1:250
- A. Entrance
 - B. Living room
 - C. Kitchen
 - D. Bedroom
 - E. Dining
 - F. Artificial wetland
 - G. Pedestrian lane and septic tanks beneath



Fig. 313. Section of two buildings between artificial wetland canals.

- Section 1:250
- A. Entrance
 - B. Bedroom
 - C. Kitchen/Kitchenette
 - D. Terrace
 - E. Pedestrian lane
 - F. Artificial wetland canals
 - G. Septic tanks



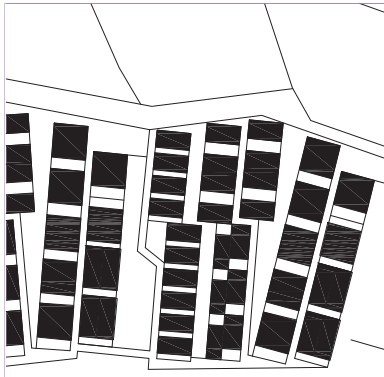
The Alternative Chinese Goodlife:
Single-family Housing on New Development Farmland

Greenfield developments, expansion of village fabric

High quality, low-density living environment on new land for the upper middle-class is a design that caters to the demand for expansion of the village fabric in an ecologically and socially sensitive manner.

The housing fabric is accessed by pedestrian lanes, cars are parked at the beginning of the lanes. Reconstructive wetland canals separate the rows of single-family homes, that are 9 by 12 meters in size and can be subdivided to create more compact single-family lots.

Fig. 314. Per hectare site diagram.



Lot dimensions, 9x12m
 3m pedestrian lane, 4m artificial canals
 Height limit, 8m, 2-3 storeys
 Aperture size 25%

500 people per hectare
 25 sqm per person
 FAR 1.3



Fig. 315. Second storey plan of greenfield village housing.

- Second floor plan 1:250
- A. Entrance
 - B. Working area
 - C. Bedroom
 - D. Kitchenette
 - E. Dining
 - F. Terrace
 - G. Storage
 - H. Studio bedroom

High-density, Single-family Apartments with Good Quality of Space



Fig. 316. Collage of single-family apartments in high density setting.

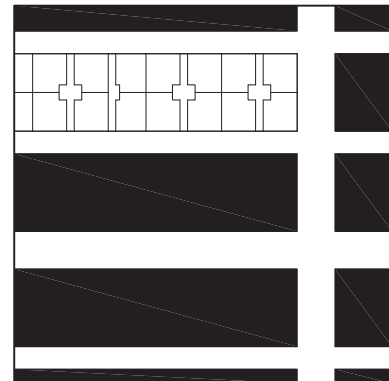
High-density Apartment Blocks

What does the typology of a dense and efficient form of single-family apartment block look like?

Each apartment block in this design consists of two units per level. Although each unit is open to the street only on one side, the open-air stairwell together with the central lightwell brings light and air to the interior of the unit.

The building height limit, lightwell aperture percentage can be written into the village's building code and enforced by the village corporation. The individual property developers will adhere to the block sizes and restrictions drawn out for them. Developers and homeowners have freedom to design the interior as they wish.

Fig. 317. Per hectare site context diagram.



Lot dimensions, 10x20m
Road, lane, alleys: 5m road
Open space, 3x4m lightwell, 2x3m
entrance balcony
Height limit, 5 storeys
Aperture size 13%

Two-three bedrooms per unit @
94m²
9 Units per building @ 2 units
per floor
28.8 people per building @ 3.2
people per unit
360 units per hectare @ 40
buildings per hectare
1152 people per hectare

FAR 4.23

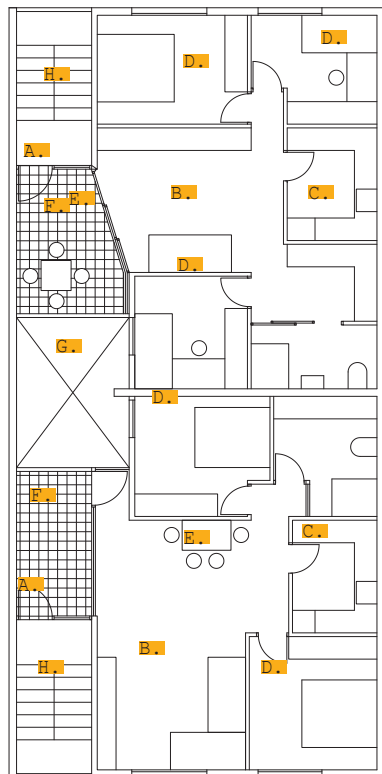


Fig. 318. Typical apartment floorplan.

- 1:250
 A. Entrance
 B. Living room
 C. Kitchen
 D. Bedroom
 E. Dining
 F. Lightwell balcony
 G. Lightwell
 H. Open-air stairwell

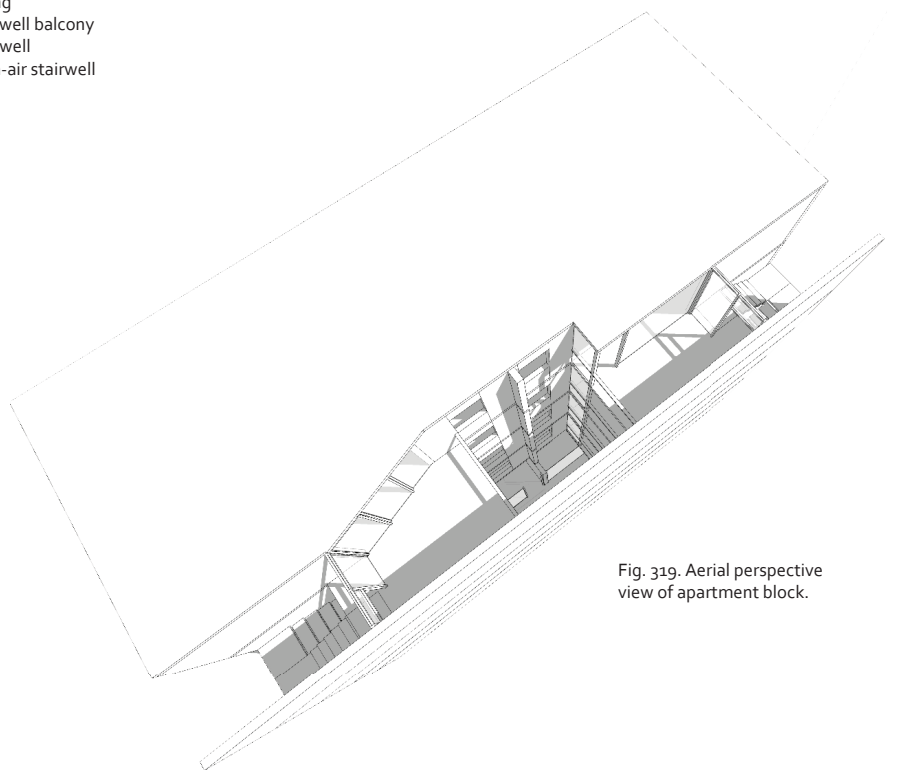


Fig. 319. Aerial perspective view of apartment block.

The Alternative Chinese Goodlife:
***Flexible Collective Dwelling for
 Village Newcomers***



Fig. 320. College of scenes from public shared spaces in collective housing design.

Collective Housing

To use space effectively and integrate different income levels in the new village, a type of collective housing is recommended that is flexible, affordable and creates a sense of community.

The reinforced grid is flexible enough to be partitioned into bedrooms, living rooms, offices, dormitories. The dining, cooking, bathroom facilities are shared by residents, these face the open-air courtyard of the building.

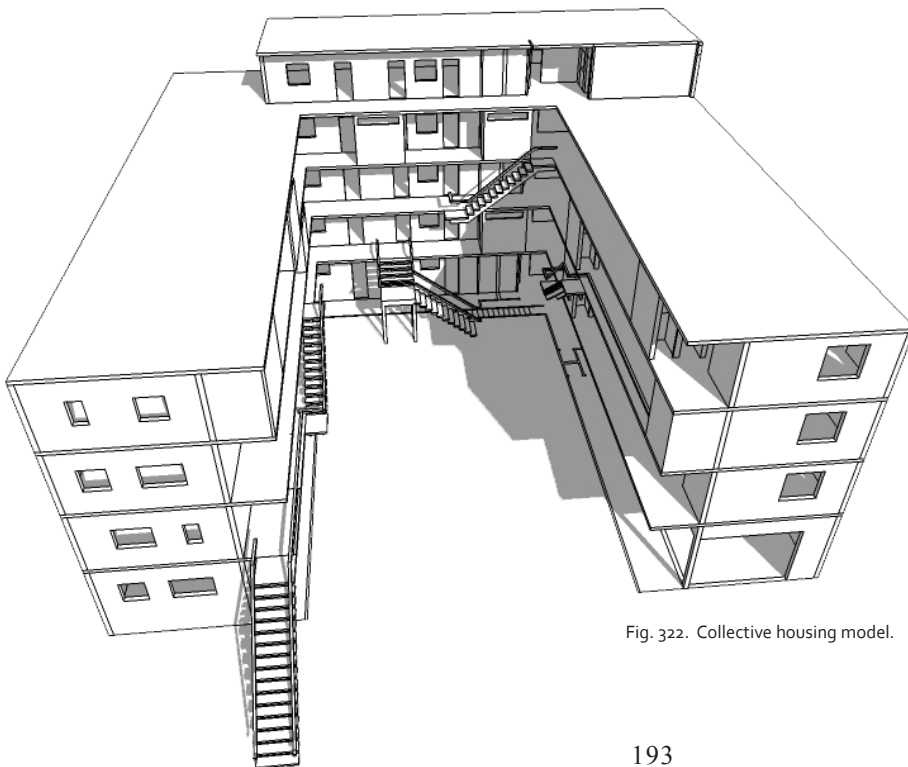
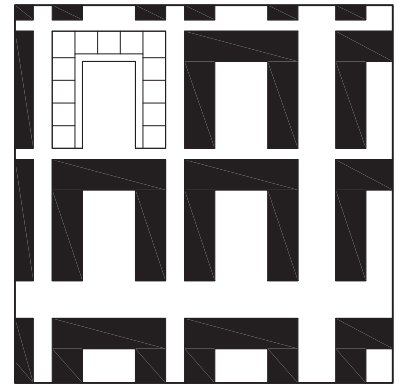


Fig. 322. Collective housing model.

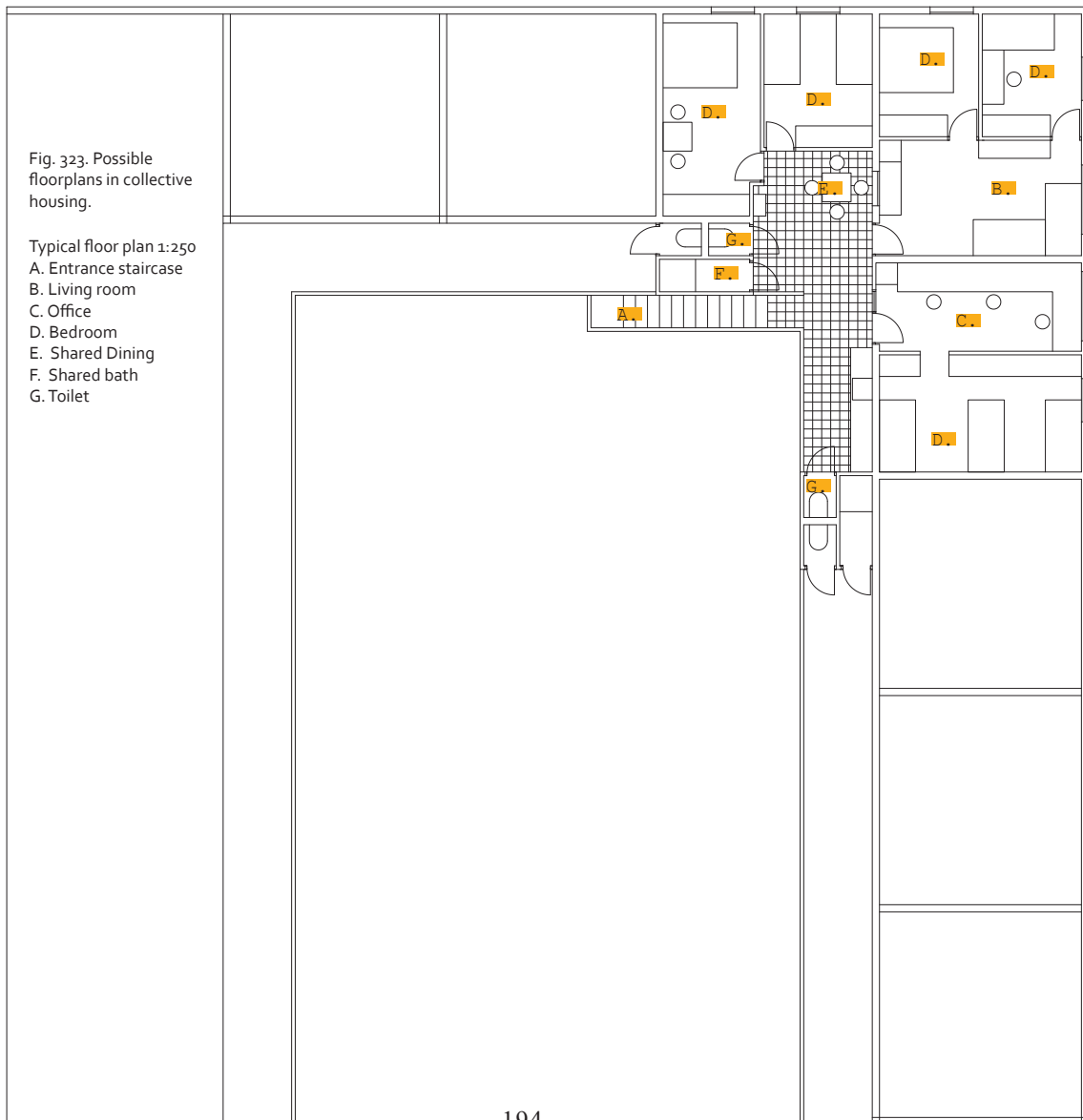
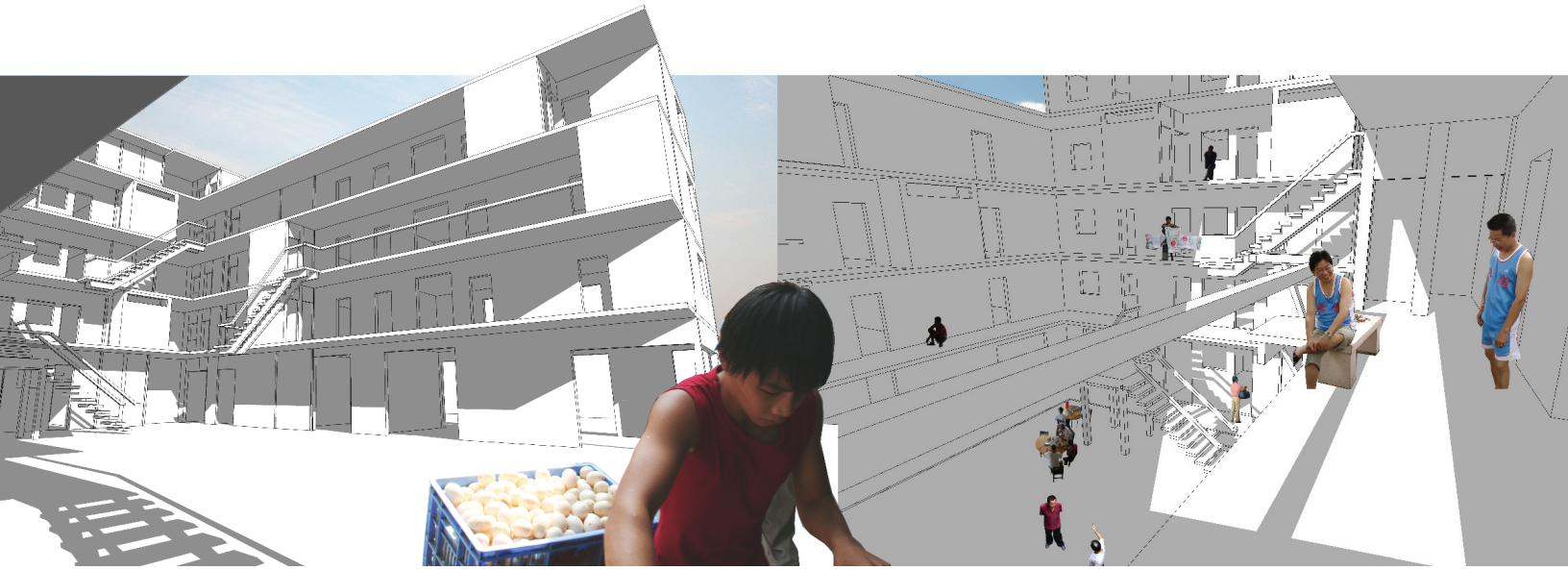
Fig. 321. Per hectare site context diagram.



Lot dimensions, 30x30m
 Road, lane, alleys: None
 Open space, 15x22m courtyard
 Height limit, 5 storeys
 Aperture size 36.6%

Unit dimensions, 6x6m
 Units per building, 48 @ 4.5 floors
 96 people per building @ 2 people per unit
 432 units per hectare @ 9 buildings per hectare
 896 people per hectare

FAR 2.85



E_New Village Road: Bringing City Infrastructure into Village Neighbourhood

The 'New Village Road' strategy of redevelopment brings elements of high-intensity urban developments directly into the village fabric in the form of a vehicular road and larger scale density-carrier developments. The aim is to extend the convenience of commercial and retail developments and vehicle access into the village fabric. And create a new way of transition for the vehicular road dominated new developments at the fringes of existing villages into traditional building fabric.

This strategy can be characterized into two phases. The first takes place in Phase 2. Phase 2 developments (1-8) are characterized by larger scaled developments ten to fifteen-storey mid-rises aimed at working individuals and small households. Their role are as density-carriers in the redevelopment. A base population of new villagers from urban families are much needed to inject new life into 'empty[ing] nest' villages.

A vehicular road is maintained as new developments create a gap into the heart of the traditional built fabric. This increases the convenience in the village by direct car access and the slow-traffic road also provides much needed parking spaces.

The second part of the "New Road" strategy in Phase 3 involves mid-scaled redevelopments more driven by the market rather than led by village initiative. With the expectation that improved 'urban' conveniences of car access will spur the redevelopment of the traditional lots.

The redevelopment of buildings will be driven by the market but car access and parking development can be maintained by village co planning and expropriation or by attaching such stipulations in redevelopment guidelines.

Developments 1-5 involve expropriation of larger properties, the redevelopment of them into mid-rise apartments and the opening of car access.



Fig. 324. Chronology of new village road development.

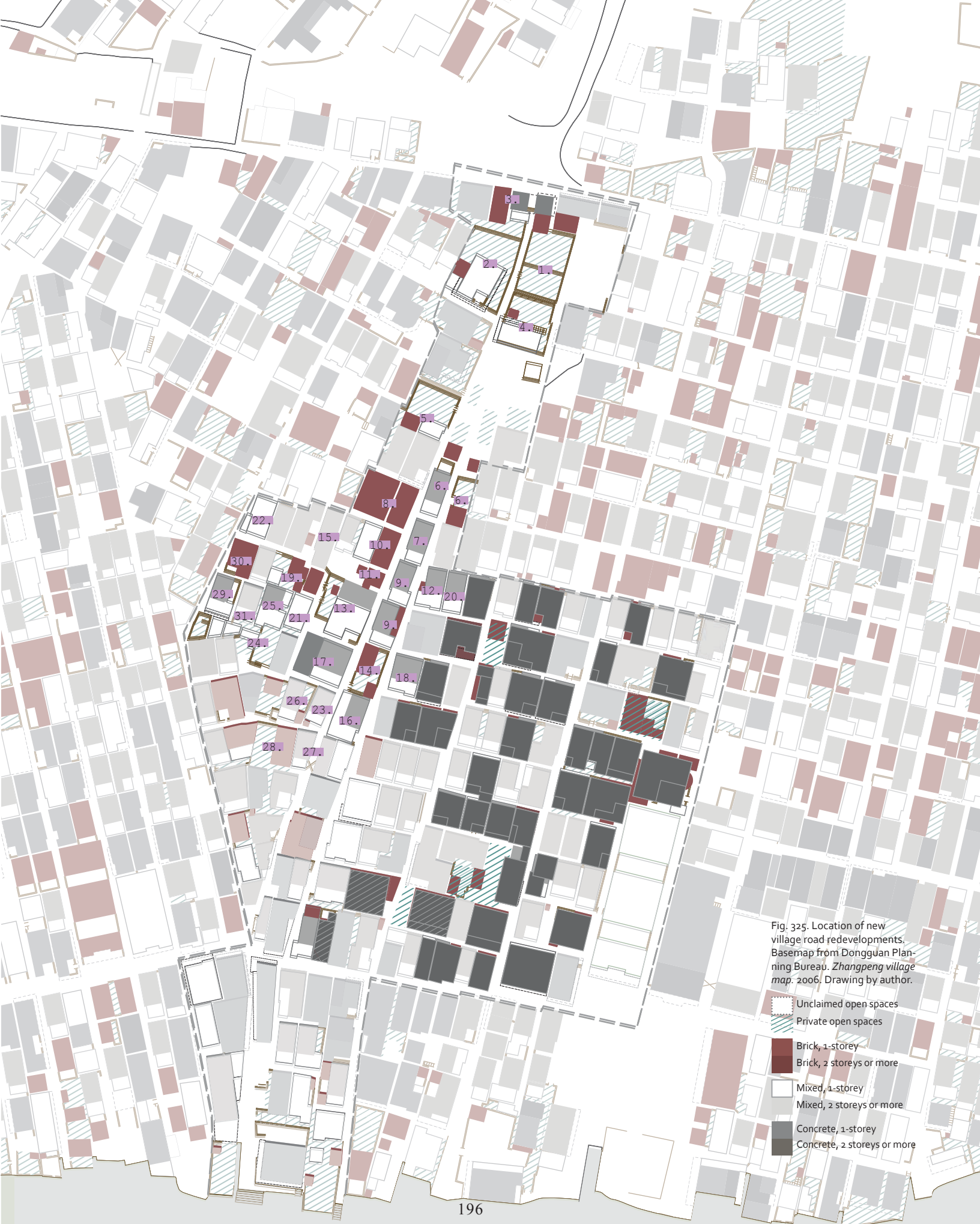








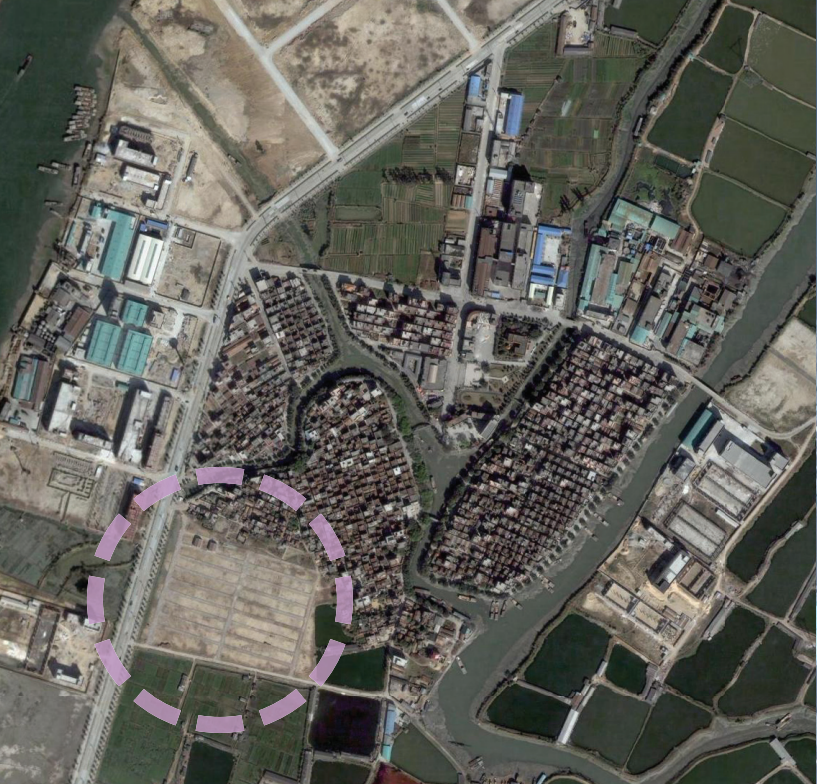


Fig. 325. Location of new village road redevelopments. Basemap from Dongguan Planning Bureau. Zhangpeng village map. 2006. Drawing by author.

-  Unclaimed open spaces
-  Private open spaces
-  Brick, 1-storey
-  Brick, 2 storeys or more
-  Mixed, 1-storey
-  Mixed, 2 storeys or more
-  Concrete, 1-storey
-  Concrete, 2 storeys or more



New village developments, are usually assigned or sold in new parts of the village called housing base land. Housing-base land take the form of orthogonal street grids in rectangular lots discontinuous from the traditional village fabric.

Fig. 326. Aerial photograph of Daluoshu village. 2006. Googlemaps.



The images above is a village in the nearby town of Daojiao. It is a typical village of the PRD. Encircled is the housing-base land converted from drained farmland. The image to the right is the housing-base development three years later. The new village fabric is different and separate from the existing village fabric.

Fig. 327. Aerial photograph of Daluoshu village. 2008. Googlemaps.



Fig. 328. Daluoshu new village housing-base.

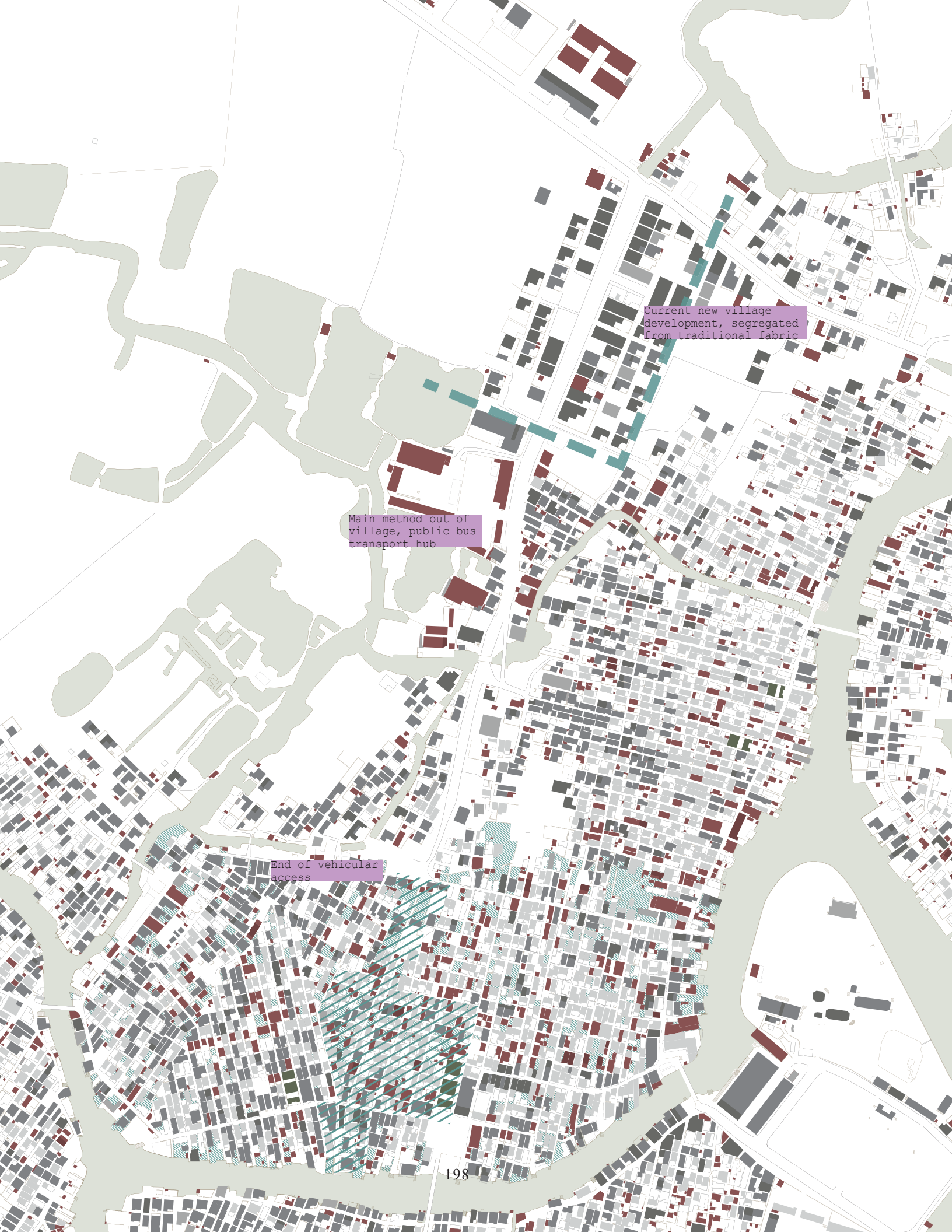
This image is taken on the housing-base land of the village from the town of Daojiao soon after the draining of farmland to create tabula rasa.



New village construction are more homogenous because of the square grid and new buildings try to maximize indoor square footage.

Fig. 329. Typical linear spatial developments in new development areas of village.

Fig. 330. Location of typical new village developments and "new road" redevelopment of this thesis. Basemap from Dongguan Planning Bureau. *Zhangpeng village map*. 2006. Drawing by author.



Current new village development, segregated from traditional fabric

Main method out of village, public bus transport hub

End of vehicular access

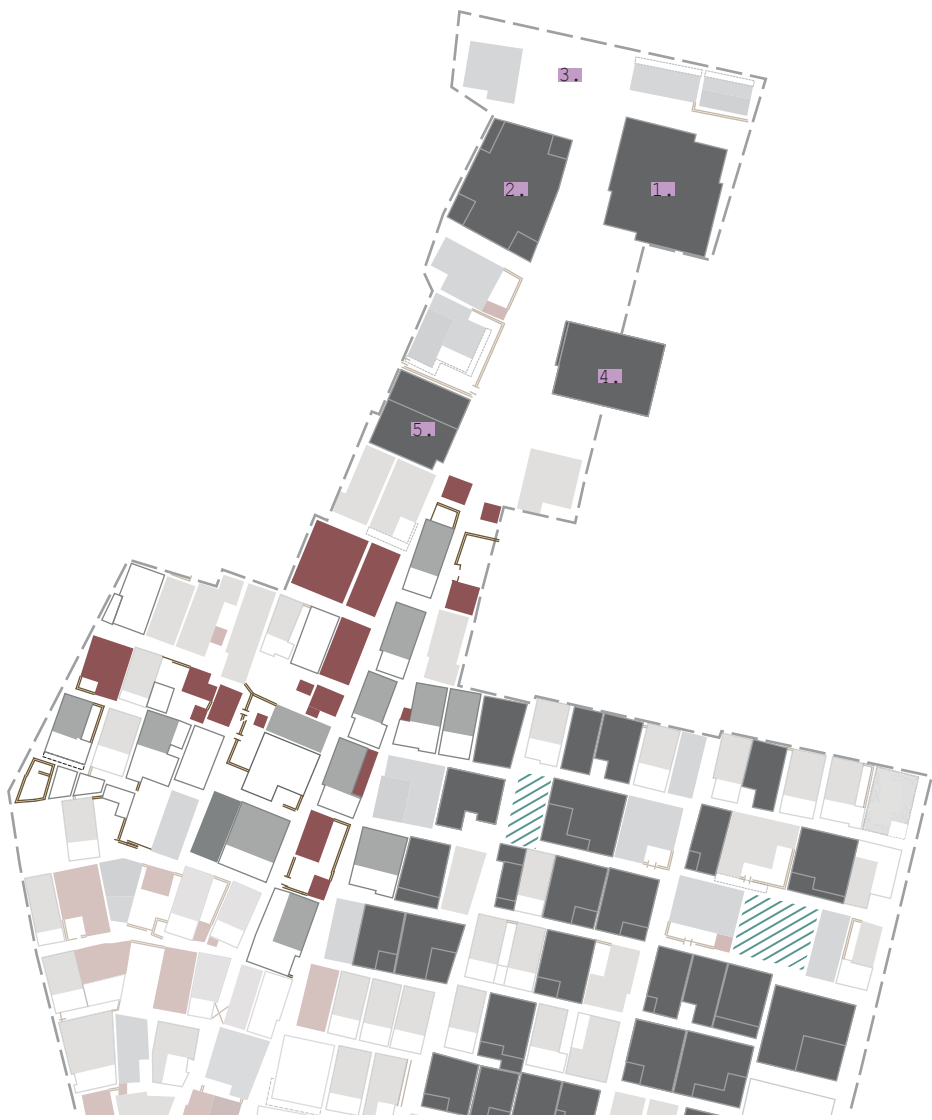


Fig. 331. Map of redevelopments in "new road" sequence.

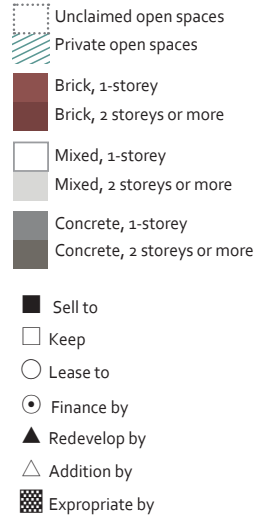


Fig. 332. Twelve-storey residential new development.

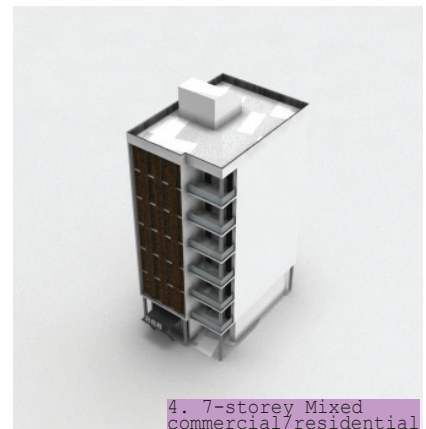
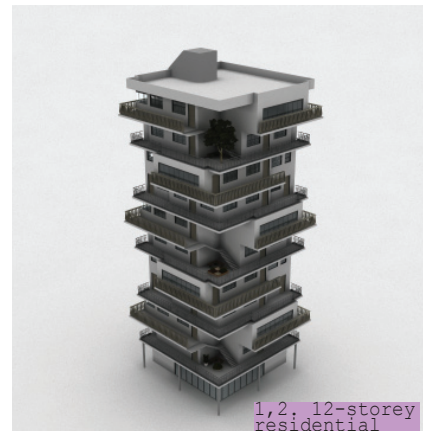
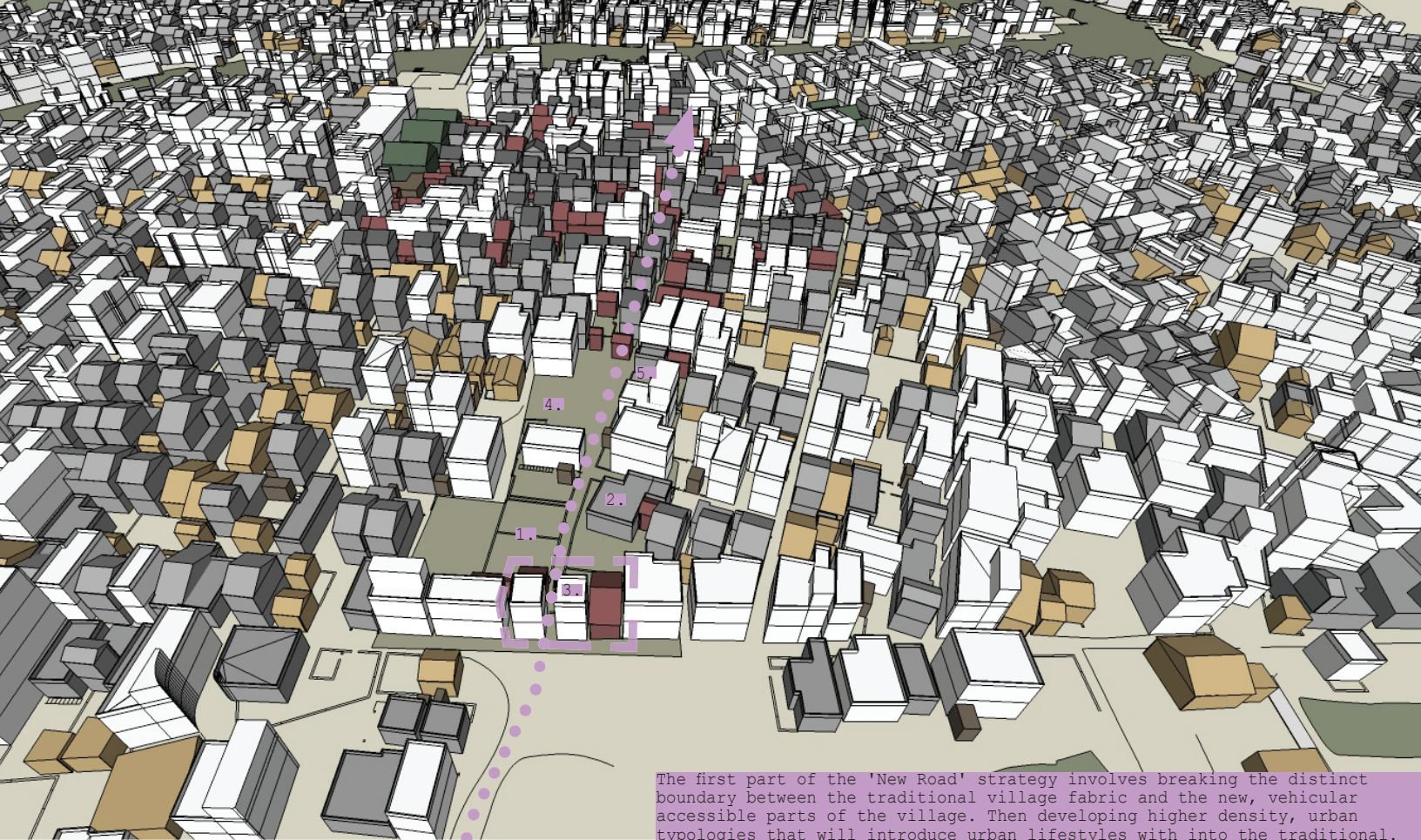


Fig. 333. Seven-storey mixed use.

1.	Ang.	1-storey	Residential		V.co		
	Ang.	Walled	Pigsty		V.co		
						15-storey	Mid-rise
						Tenants	
2.	Bing.	1-storey	Residential		V.co		
	Bing.	Private	Orchard		V.co		
	Bing.		Outhouse		V.co		
3.	Cao.	1-storey	Residential		V.co		
	Dun.	2-storey	Residential		V.co		
	Fo.	2-storey	Residential		V.co		
						15-storey	Mid-rise
						Tenants	
4.	Gong.	1-storey	Residential		V.co		
	Gong.	Private	Coop		V.co		
	Gong.	Private	Sheds		V.co		
						15-storey	Mid-rise
						Tenants	

Sequences 6,7,9,14,16 is the expropriation of individual village lots to extend road into village fabric.

6.	Heng.	Private	Shed, Outhse.		V.co		
	Heng.	Private	Walled Yard		V.co		
6.	In.	2-storey	Residential		V.co		
	In.	Private	Outhouse		V.co		
						V.co	10-meter Vehicular Road



The first part of the 'New Road' strategy involves breaking the distinct boundary between the traditional village fabric and the new, vehicular accessible parts of the village. Then developing higher density, urban typologies that will introduce urban lifestyles with into the traditional.

Fig. 334. View of "new road" redevelopment extending end of vehicular access into village fabric.



This is the end of vehicular traffic in the village of Zhangpeng. A wall of village buildings draw a clear boundary between the old, pedestrian only village and the areas with car access. The intention is to extend the vehicular road through this boundary to the traditional village beyond.

Fig. 335. End of vehicular access. Photograph.

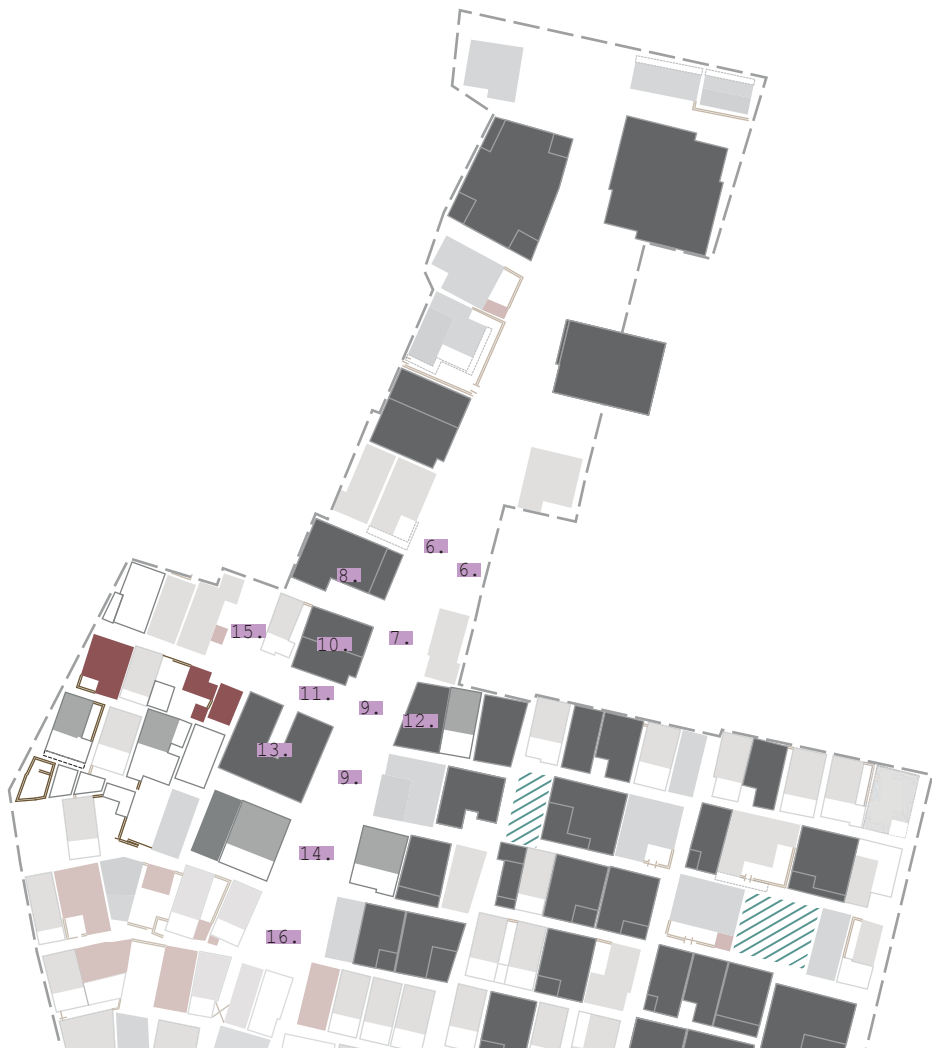
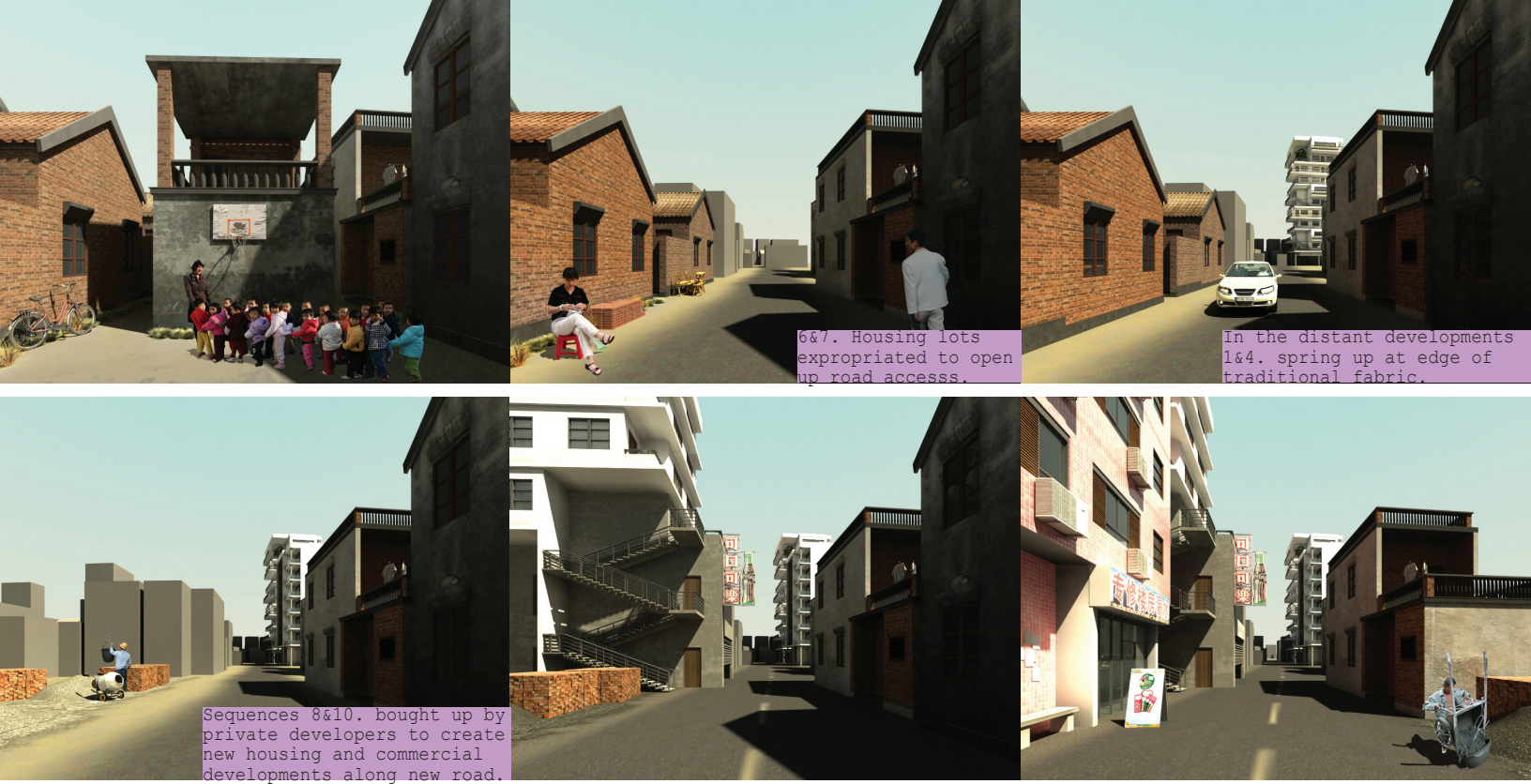


Fig. 336. Map of redevelopments in "new road" sequence.

- Unclaimed open spaces
- Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more
- Sell to
- Keep
- Lease to
- Finance by
- Redevelop by
- Addition by
- Expropriate by



7.	Jing.	2-storey	Residential	○	V.co	
8.	Kan.	1-storey	Residential	▲	V.co 10-meter	Vehicular Road
	Ling.	1-storey	Residential	■	Marks.	
				■	Marks.	
				▲	Marks. 7-storey	Comm/Residen
9.	Nian.	2-storey	Residential	○	V.co	
9.	Ou.	2-storey	Residential	○	V.co	
	Ou.	Private	Shed	○	V.co	
10.	Pang.	1-storey	Residential	▲	V.co 10-meter	Vehicular Road
	Qu.	1-storey	Residential	□	Pang.	
				□	Qu..	
11.	Pang.	Private	Shed/Outhse.	▲	Pang. + Qu.	5-storey Residential
12.	Ren.	2-storey	Residential	■	V.co	Public Parking/Park
13.	Shu.	2-storey	Residential	■	Stevens.	
	Shu.	1-storey	Residential	▲	Stevens. 5-storey	Retail/Comm
	Shu.	Private	Walled Yard	○	Bank	
				○	Bank	
				○	Bank	
				▲	Tang. 10-meter	Vehicular Road



6&7. Housing lots expropriated to open up road access.

In the distant developments 1&4, spring up at edge of traditional fabric.

Sequences 8&10. bought up by private developers to create new housing and commercial developments along new road.

Fig. 340. Sequence of "new road" village redevelopment.

The Alternative Chinese Goodlife: *New City Road in Old Village Fabric*



A sustainable village development does not have to exclude urban type high-rises and commercial development. In fact their integration is the most important aspect in merging the old of the village with the new of the city.

Fig. 341. Rendering of "new village road" redevelopment outcome.

F_Reclaimed Canal: Restoration of Natural Elements to Become New Village Focus

At the pinnacle of the village redevelopment process, if the strategies exemplified in the earlier phases have paid off, the process will require less catalyzation to kick-start private development but the focus of the village corporation will shift to managing this force.

At this point, short-term economic considerations are not as pressing, village finances can afford larger-scaled infrastructural investments that may not bring direct economic returns, and there is generally no shortage of financing or confidence in the redevelopment process.

Therefore, at the pinnacle of the redevelopment process, the village co may ultimately progress to restoring the natural environment to improve the quality of the village environment.

In deltaic villages like Zhangpeng, the dominant natural feature are the waterways that flood and ebb according to the tides, conducting the cycle of estuarial natural life, as well as the daily life of village residents in their chores (laundry, bathing), livelihoods (cargo shipping, fishing) and festive rituals (dragonboat festival).

The final strategy in this simulation will involve the restoration of a water canal from built village fabric. It can serve to improve the village natural environment (wildlife), improve the living environment for residents but also allow festivals and rituals to take place and become a destination for tourism.

The opposite development is taking place in villages where existing canals are filled and paved over to create vehicular roads that conveniently create car access into the pedestrian village fabric.

In the new redevelopment process where ownership transfer is allowed and a market for the village's redevelopment is established, the village may find value in keeping its natural water assets and instead create new opportunities through the expropriation of a new village road into old village fabric.

The few developments in the beginning of the strategy in Phase 2 involve the purchase of prime real-estate by the water's edge (1-4). Private developers buy into such estates speculate on improving real estate market, the village corporation may buy it and set it aside as isolated public spaces for now but include them as part of a larger public space network plan in the future.

The 'New Canal' strategy is coordinated with the 'New Road' strategy as the end of car access meet up with the end of the restored canal in a public space with a pavilion (14), village community centre (27,28) and other hi-density developments (17,23,26).

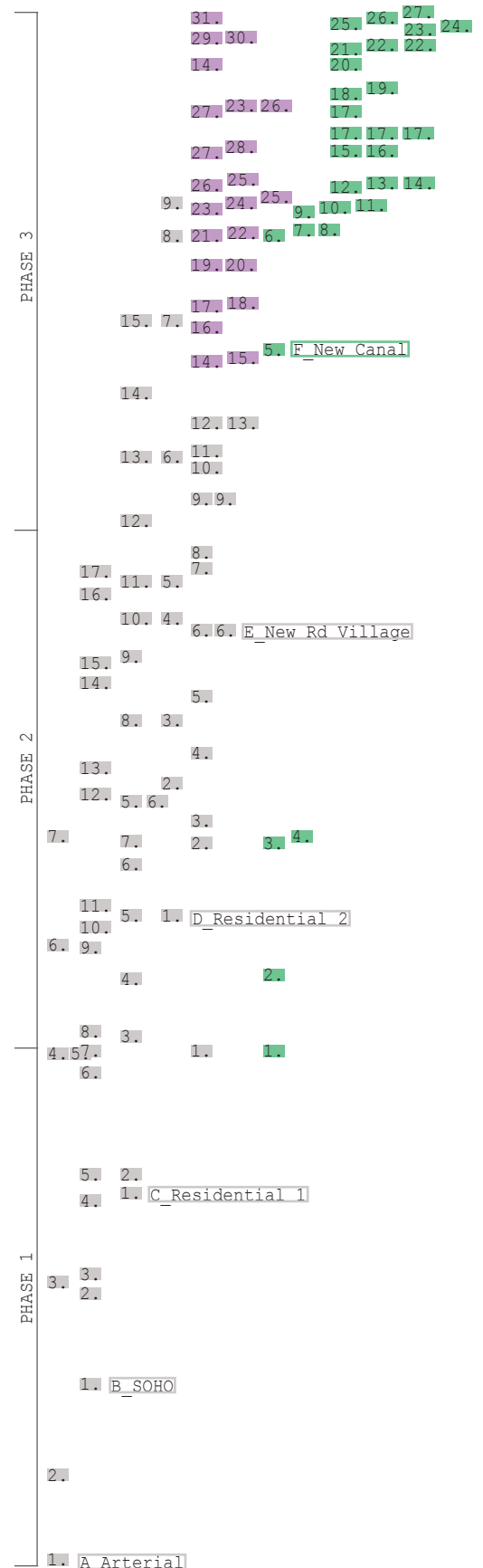


Fig. 342. Chronology of reclaimed canal redevelopment sequence.



Fig. 343. Panorama of main canal from village center bridge. Photograph.

Traditional village life surrounded the canal and followed its rhythms. Like washing clothes and bathing when the tide was high and clean. The public pavilions like the one to the left of the bridge above is used by villagers socializing and playing mahjong.



Fig. 344 - 345. Dragonboating is one of the rituals of villages in Southern China that take place in village waterways.

The canal is also the setting for rituals like the Dragonboat festival, and Qingming festival when families would row to their ancestors' grave in the small tributaries to pay respects.



Fig. 346 - 348. Redeveloped pavilion into tourist-friendly tea house.

The reclamation of the canal will beautify the village and attract tourists to the life that happens around the canal.

Sequences 5-11 are redevelopments catalyzed by the redeveloped area of the 'New Road' strategy. Sequences 12 to 17 are expropriations for recreating the canal. The canal itself occurs after expropriations 13 and 17. Spurts of redevelopment of the residential building fabric follow after the creation of the canal (18-27).

14.	Tang. Tang.	Private Private	Shed, Outhse. Walled Yard	○ ◼ ▲	V.co V.co V.co 10-meter V.co Public	Vehicular Road Market Pavilion
16.	Wei.	2-storey	Residential	○ ▲	V.co V.co 10-meter	Vehicular Road
17.	Xu. Yi.	2-storey 1-storey	Residential Residential	◼ ◼ ▲	V.co V.co V.co 5-storey	Restaurant
12.	An.	2-storey	Residential	◼ ▲	V.co V.co Reclaimed	Canal
13.	V.co	Public	Dock steps	▲	V.co Reclaimed	Canal
14.	Bei.	Private	Walls	◼ ▲	V.co V.co Reclaimed	Canal
27.	Au.	2-storey	Residential	◼	V.co	
28.	Bai. Bai.	1-storey Private	Residential Walled Yard	◼ ◼ ▲	V.co V.co V.co 4-storey	Community Ctr
15.	Cong. Du.	2-storey 2-storey	Residential Residential	◼ ◼ ▲	V.co V.co V.co Reclaimed	Canal
16.	Eng.	2-storey	Residential	◼ ▲	V.co V.co Reclaimed	Canal
17.	Fei. Gen. Heng.	2-storey 1-storey Private	Residential Residential Residential	◼ ◼ ◼ ▲	Bank Bank Bank V.co Reclaimed	Canal

Sequences 14, 16, 17, 27 and 28 are part of the 'New Road' sequence of redevelopments but happen concurrently with the 'New Canal' developments at the point when the new road meet the reclaimed canal.

At the junction of the major infrastructural investments of the road and canal are major public projects. For example the market pavilion (14) is a covered market below a chess pavilion terrace. Sequence 17 of 'New Road' is a five-storey restaurant commercial tower is developed and owned by the village corporation, the restaurant is operated by a winning bidder and will serve residents and visitors of the village. Its proceeds will be divided amongst shareholders of the village co. And the 'Village Community Center' (28) is built at the intersection of a new center of village public life.



17. A true crossover between public and private interests and spaces. A restaurant, chess pavilion and open-air market.

Fig. 349. Rendering of multi-level restaurant and market/chess pavilion complex.



Fig. 350. Location of redevelopments in reclaimed canal sequence. Basemap from Dongguan Planning Bureau. Zhangpeng village map. 2006. Drawing by author.

- Unclaimed open spaces
- ▨ Private open spaces
- Brick, 1-storey
- Brick, 2 storeys or more
- Mixed, 1-storey
- Mixed, 2 storeys or more
- Concrete, 1-storey
- Concrete, 2 storeys or more
- Sell to
- Keep
- Lease to
- Finance by
- ▲ Redevelop by
- △ Addition by
- ▣ Expropriate by

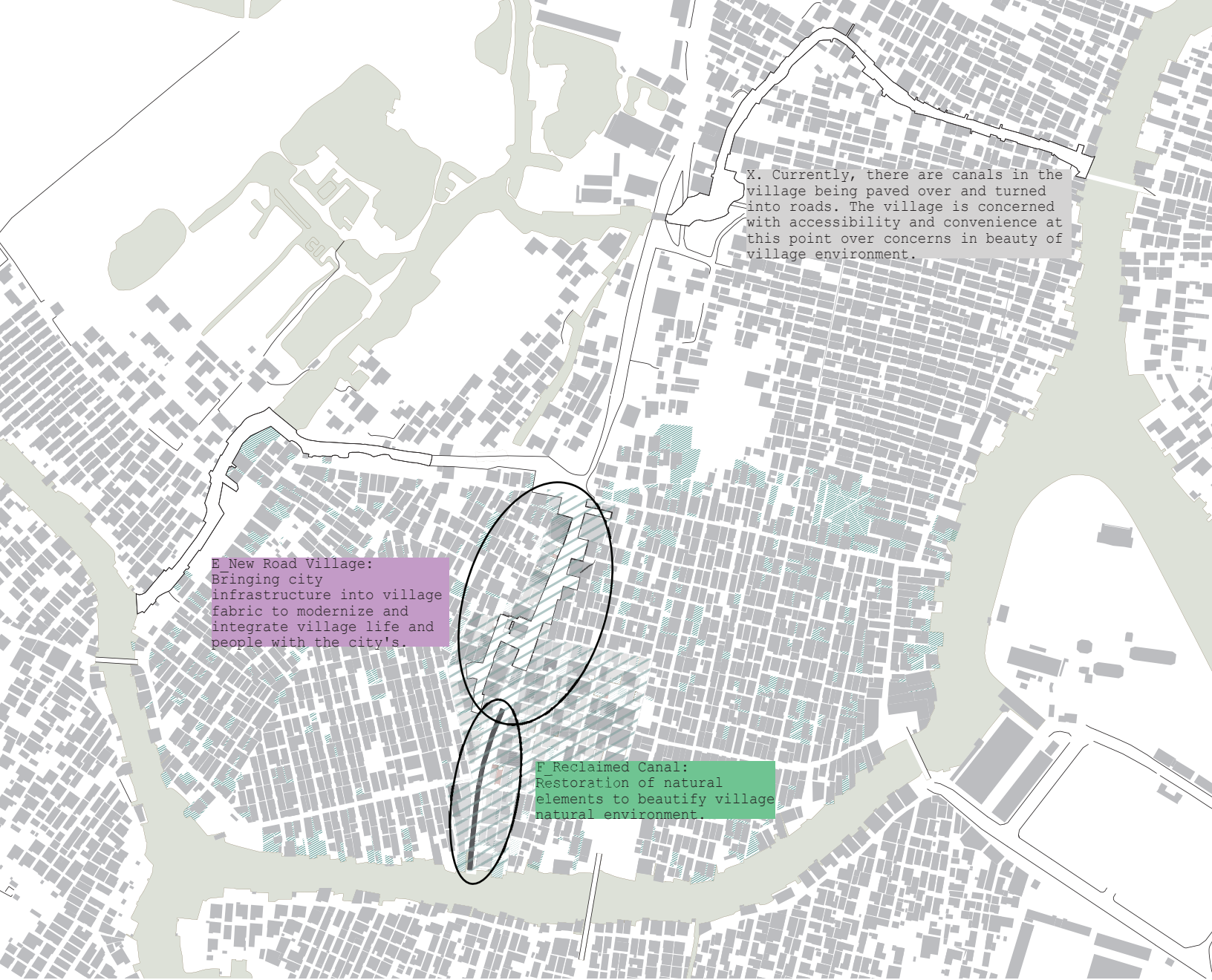


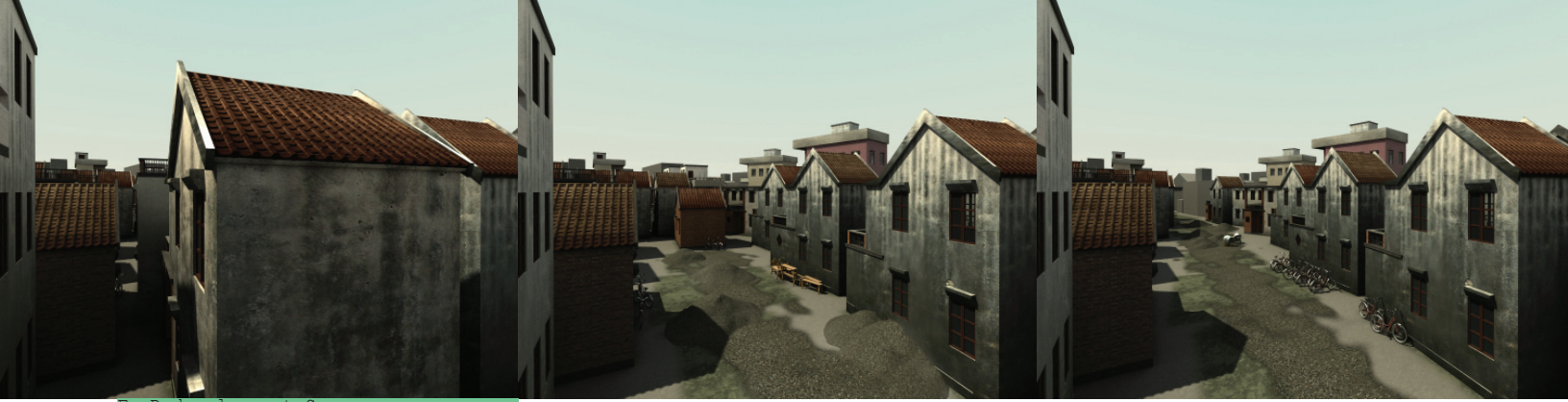
Fig. 351. Map of proposed reclaimed canal and current locations of canals turned into roads.



Fig. 352. Canal X before. Photograph.



Fig. 353. Canal X after filled with earth and turned into vehicular road. Photograph.



F. Redevelopment Sequence:
Canal reclaimed from housing fabric.

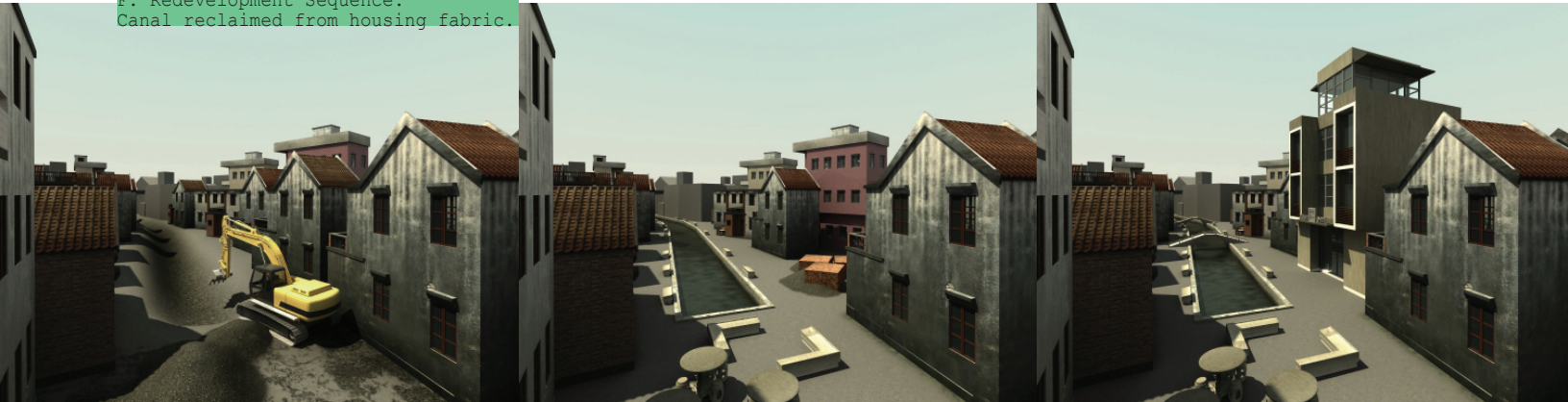


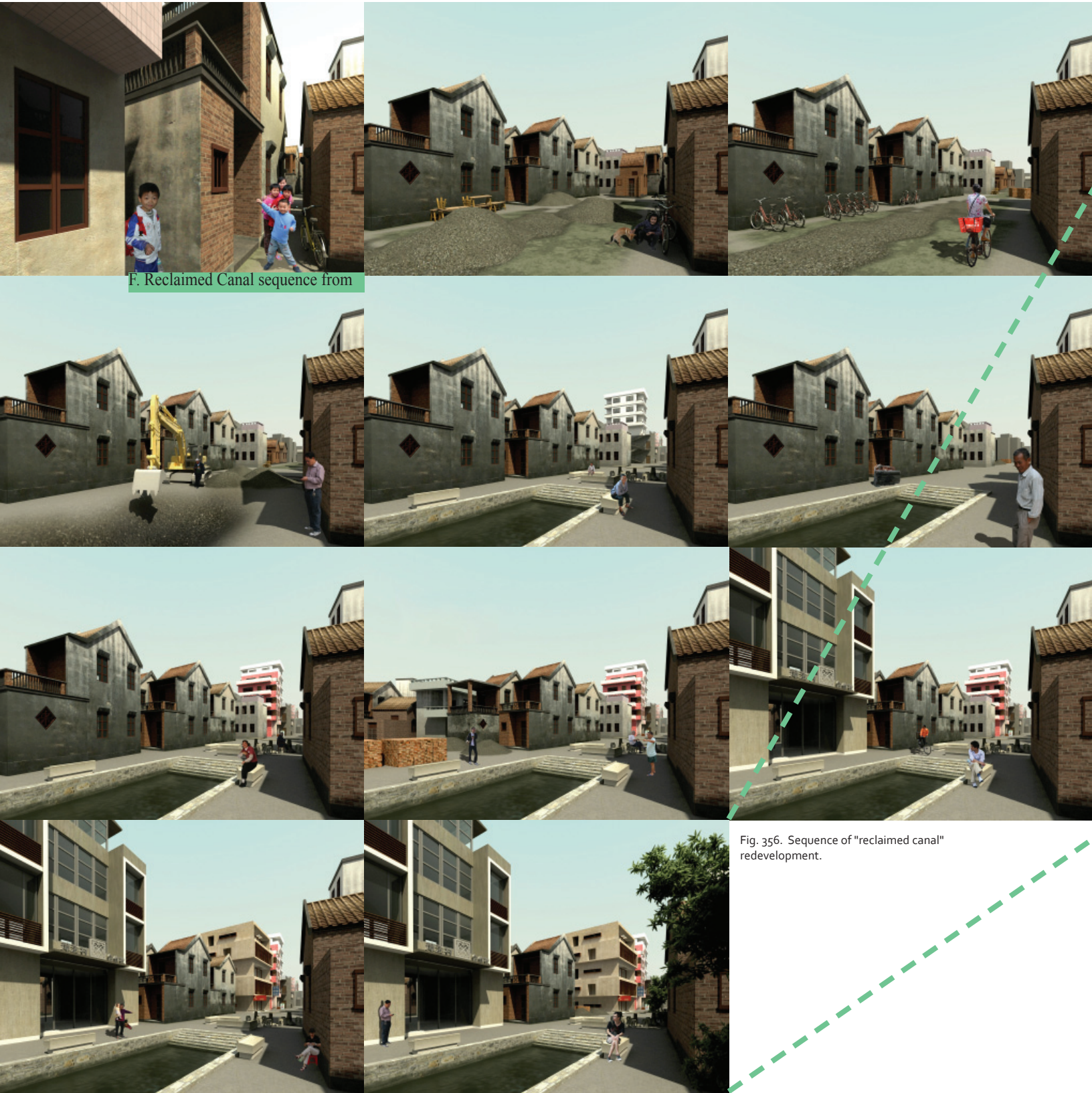
Fig. 354. Sequence of "reclaimed canal" redevelopment.

The Alternative Chinese Goodlife:
*Reclaimed Canal as New
Gathering Space*



F. Reclaimed canal creates new focus
in new village life.

Fig. 355. A possible result of "reclaimed canal" redevelopment.



F. Reclaimed Canal sequence from

Fig. 356. Sequence of "reclaimed canal" redevelopment.

The Alternative Chinese Goodlife:
*Reclaimed Canal as New
Gathering Space*



Fig. 357. Result of "reclaimed canal" redevelopment.

Conclusion

The thesis began as a question into Chinese society's attitude towards rural villages and of the villagers towards themselves. Of the many that I've come across scoffing in dismissal at the mention of my thesis subject, one of them was my father.

He grew up in mainland China during the civil war that finally saw the Communists take control. His father, my grandfather, was a Nationalist general opposing the Communists. On top of this our village family clan was from a long line of landlords. In a new China founded upon the revolution of classes, my father and his family inherited the most negative of class brandings and received vehement discrimination during China's tumultuous revolution.

My father and his four siblings were effectively orphaned when my grandmother escaped the mainland and his mother died from the physical and psychological torture by Communist labour camps, although my father never talked about it I asked around the elder generation for clues.

Instead of staying in an urban orphanage as all his brothers and sisters did, he decided as a solitary ten year-old, to go back to our home village and live on his own. After ten years, instead of staying behind in the village doing unwanted labour that was left for the politically ousted, he escaped to Hong Kong to make a new life. And after another ten years of hard work and ingenuity he finally made that new life in his first bucket of gold.

Though my father was one of the people who scoffed at the concept of village development, the first thing he did after he made his first bucket was to return to his home village and build his house. And from that year thirty years ago to donating bridges, rebuilding the old ancestral shrine, and spending millions more on a new shrine in the village, he never lived a night in his village house. To him, life in the village is forever the symbol of one's backward past to be conquered. Without any hope and because of a lack of a future life in the village has no meaning.

Real progress does not happen in the village. The mixture of institutional restriction on rural property trading and one-way government expropriation turned rural land into an exploitable commodity for the benefit of urban growth at the expense of the rural.

The primal motivation of this thesis is to regain a rural life of meaning. And to do this the thesis proposes to combine the process of urban land development with the spatial and neighbourhood qualities of rural villages that are lacking in modern, alienating cities but inherent in traditional neighbourhoods with a strong sense of community.

The first part of the thesis was to show the power and pervasiveness of the market to distort anything that is exploitable in the economic system. How any physical developments with variety and diversity like VICs are only anomalies. The market and rules in the system dictate the dominance of singular, large-scaled developments. The village and its scale of urbanism is doomed to lose out.

Consumer developments in China in recent years have pointed to an interest and inspiration in intimate, varied, human-scaled developments adapted from traditional villages and historic neighbourhoods. The first of these is Xintiandi in

Fig. 358. My father's house in Zhangpeng village.



My father's village house, circa 1983. Two-storey reinforced concrete construction resting on stilts floating in an enclosed fish pond. Built after "making it" in Hong Kong.

Shanghai, there is the overwhelming tourism success of Gulang Island in Xiamen, and are popping up even in second-tier cities like Xiaba village of Dongguan city.

Their commercial successes point to the public's interest in the slower-paced and human-scaled amidst the market dominated society. But these are nevertheless still anomalies sustained by consumerist industries that supply the hip and cool in the form of bars and tourism.

And just as it is happening to all the above examples, the developments are consolidating and turning monotonous because these developments have only occurred because they are profitable, not because there is a system to encourage and sustain the development of the slower-paced and intimate-scaled that I think holds deep meaning to modern Chinese society.

Therefore the challenge in the thesis was to create a process of development so that it can ensure the development of the desired environment by coding it into the redevelopment system.

It has done so by managing two simple things. One is to control and maintain the transformation of the village public space system, the other is to set limits on building height and densities. These two things are essential in dictating the scale and connections of the redeveloped village.

The rest is left to the market, and this includes developments invested by the village co., as it is also an actor in the market. Albeit one whose interests are not only in profitability but tied to all the shareholders of the village and to the village's overall vision and success. The village co. as a goal will use its financial clout to lead an example and initiate neighbourhood transformation.

This is an experiment in building an alternative Chinese dream. What system can create a platform for the rural village to function economically as a modern place to work and live and allow a new life with new meaning to evolve? Not just as a temporary market demand, but in a long-term evolution of a new scale and new way of life.

The present life in the village have no way of physical and economic development: *"Cannot-make-a-living-in-the-village > move-out-of-village > move-into-handshake-building > make-it-big-somehow-in-a-minimum-wage-job > save-enough-to-buy-a-highrise-flat > quadruple-wealth-and-buy-a-detached-house."* If they do decide to come back and build a house in the village it is more of a symbolic act.

A possible story after thesis proposed changes may allow for a life in the village: *"Villager-wants-to-start-business > obtains-capital-by-financing-his-village-home-with-village-corporation & by-partnership-with-brother > company-makes-profits > villager-rebuilds-village-home > villager's-family-stays-with-brother-for-the-while > villager-buys-out-adjacent-lot-rebuilds-new-house > everyone-moves-into-new-house > brother's-old-house-rebuilt-into-company-office-and-rental-apartments."*

To create the space for meaning to develop in the new village is the intention of this thesis.



Fig. 359. Property ladder to reach Chinese dream.

Existing ladder to the Chinese goodlife.

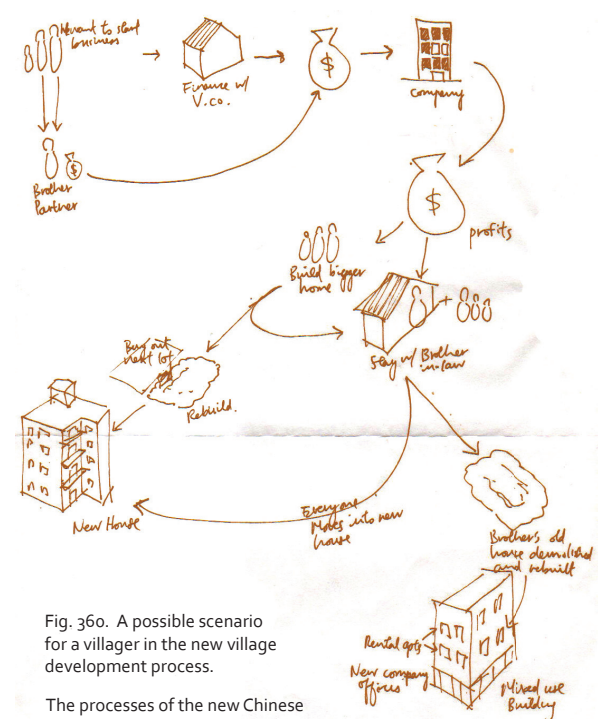


Fig. 360. A possible scenario for a villager in the new village development process.

The processes of the new Chinese goodlife.



Fig. 361. My father's house in enclosed pond from across village canal.

Father's house and walled in fish pond on the bank of a major village canal.

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Summarizes that the Communist government is reluctant to make any major reforms to the land systems because on one hand it wants to ensure farmers of their right to use rural land but on the other it wants to speed up the consolidation of farmland for commercial farming to develop. The author finishes saying that this leaves farmers vulnerable to pressures from local governments and enterprises and economic pressures, but the CCP’s announcement that rural land use rights would “not change for a long time” and call for the orderly marketization of rural land use rights may open the way for greater future change.

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arable land and that privatization goes against the system of social
security of housing-base land to secure shelter for rural citizens,
if rural housing social security is a welfare provided without com-
pensation to rural citizens, according to the author, they should not
be able to financially gain from it.

He points to the lax punishment and enforcement of villagers who
illegally obtain more housing-base land than they are legible for,
and on illegal overbuilding on such land. Punishment is not clearly
stated in the “Land Management Law,” the village collective itself is
responsible for enforcing and punishing offenders. Which without the
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Guangzhou city.

It succinctly documents the changes to the traditional morphology of
village fabric and the relation of this fabric to traditional village
culture.

It presents strategies to improve the spatial quality and integration
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The Property Rights Law does state clearly that the use of housing-base land is the right of villagers to build housing in the collective land of their village for the purpose of living. The rights to villager housing extends from land belonging to the collective, therefore the rights to develop belong to the collective and not the villager.

The author proposes to acknowledge “minor property rights” by acknowledging villagers of the collective as the owners of housing on collective, housing-base land.

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Zhou, Yong. "Building a system of free trade for housing-base land use rights." Beijing College of Politics and Law Journal. No.1 (2011): 64-67.

This is a straightforward case arguing that the binary system of urban and rural rights and laws is the remnant of the planned economy, which in the current state of China as a transitioning market economy, the binary system is out of touch and unequal.

The author suggests lifting the restriction on the free trade of rural housing property by creating a legal framework and market.

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Du, Juan. "Xi village redevelopment financing will be sold end of year, village residents rental income will increase 50%." Guangzhou Daily Online Edition. 20 May 2011. 21 May 2011. <http://news.southcn.com/g/2011-05/20/content_24352737.htm>.

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The economist changed database structure since first access, the graph could be found in the above section of their website.

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郭爱娣。“中国社科院称:宅基地永久使用权应允许买卖” 京华时报。22 April 2009. 6 August 2011. <<http://china.findlaw.cn/fangdichan/zhaijidi/zjdgldt/20149.html>>.

Guo, Aidi. “Chinese Academy of Social Science says: Housing-base land use rights should be allowed trading.” Jinghua Times. 22 April 2009. 6 August 2011. <<http://china.findlaw.cn/fangdichan/zhaijidi/zjdgldt/20149.html>>.

厉以宁。“浅谈农村宅基地使用权抵押制度。” 找法网。22 December 2010. 6 August 2011. <china.findlaw.cn/fangdichan/zhuanti/>.

Li, Yining. “Brief discussion on the system of mortgage for rural housing-base land use rights.” findlaw.cn. 22 December 2010. 6 August 2011. <china.findlaw.cn/fangdichan/zhuanti/>.

Author is for the liberation of transfer rights for rural housing-base property. The sale or mortgaging of rural property can still adhere to government designated land use. He believes this will free the capital in rural property and solve a rural development problem that is the lack of capital.

刘显仁, 骆昌威。”广州首个整体改造城中村回迁 分配6千余复建房。” 广州日报网络版。2 September 2010. 21 May 2011. <http://www.china.com.cn/news/local/2010-09/02/content_20846409.htm>.

Liu, Xianren, Luo Changwei. “Guangzhou’s first singularly redeveloped village-in-city to return original villagers, distributing more than 6000 compensated flats.” Guangzhou Daily Online Edition. 2 September 2010. 21 May 2011. <http://www.china.com.cn/news/local/2010-09/02/content_20846409.htm>.

士恒。“香港模式的深刻教训-地产新说 (六)。” 南方周末。5 August 2010. 21 May 2011. <infzm.com/content/48617>.

Shi, Heng. “The profound lesson of the Hong Kong method - new discussions in real estate (6).” Southern Metropolis Weekly. 05 August 2010. 21 May 2011. <infzm.com/content/48617>.

Author discusses the Hong Kong form of real estate development where the government controls a limited supply of land, allows and encourages developers to build high capital, low efficiency, ultra dense megablock developments that rather than lower the per square meter cost of housing, artificially inflates it with its limited and unplanned supply of land.

The author believes this creates a low quality of life for Hong Kong residents and this form of development should not be pursued by cities in China.

王卫国。“穗城中村改造标准: 村民每户统一按280平米回迁。” 南方都市报。19 January 2011. 21 May 2011 <www.39city.cn/News_Info10.asp?NewID=327>.

Wang, Weiguo. "Huicheng village-in-city redevelopment standard: every village household uniformly gets 280 sqm redeveloped flat." Southern Metropolis Daily. 19 January 2011. 21 May 2011 <[ww-
w.39city.cn/News_Info10.asp?NewID=327](http://www.39city.cn/News_Info10.asp?NewID=327)>.

Because of non-uniform overbuilding in village-in-cities, the compensation process for the redevelopment of them is usually in contention and dispute between the village government that represents the villagers, the city, that is the mediator and initiator of redevelopment, and the developer.

In this report, the case village of Huicheng reached a uniform decision to recompensate onsite apartments redeveloped by the developer at 280 square meters to each villager household, regardless of the size and building of their original housing constructions.

徐中伟。"宅基地使用权限制转让对房屋执行的影响。" 江苏法制报。9 December 2010. 6 August 2011. <china.findlaw.cn/fangdichan/zhuanti/zhaijidi>.

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Author points out that the two legal frameworks that dictate the transferability of rural housing-base land use rights is in contradiction. From the point of view of the "household registration system," the <Land management law> explicitly states only rural members are eligible for housing-base land and he/she may not transfer said property. However the physical building ontop of the housing-base land itself is protected as personal property under the <Property law>, where personal property includes the owner's right to use and to dispose of said property.

殷国安。"真为农民着想, 就让农民带地进城 (政论)。" 中国青年报。14 June 2011. 6 August 2011. <www.wyzxsx.com>.

Yan, Guoan. "If earnestly considerate of rural citizens, then let them carry their land to the city." China Youth Journal. 14 June 2011. 6 August 2011. <www.wyzxsx.com>.

曾雅, 许蕾, 袁丁。"广州城中村复建成本住宅最低每平米2257元。" 南方报业网。28 January 2011. 21 May 2011. <[http://
news.nfmedia.com/nfrb/content/2011-01/28/content_19670041.
htm](http://news.nfmedia.com/nfrb/content/2011-01/28/content_19670041.htm)>.

Zeng, Ya, Lei Xu, Ding Yuan. "Guangzhou village-in-city redevelopment cost of residential flats at least 2257 yuan/sqm." Southern media. 28 January 2011. 21 May 2011. <[http://news.nfmedia.com/
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Nfmedia, part of the Southern Metropolis Weekly media group reports that the redevelopment cost of clearing old villages-in-the-city in Guangzhou has reached 2257 rmb. The cost of building a residential tower in Guangzhou is generally between 1500-2000 rmb.

朱楠。"2008年全国土地出让金大减26%。" 东方早报。4 February 2009. 20 May 2011. <<http://www.fdctimes.com/SupSite/?ac>>.

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