OUR HONG KONG FOUNDATION
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Land and Housing Policy Research Report:

Building a Global City of the Future — Envisioning Sustainable Urbanisation of the New Territories

July 2021

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Executive Summary

Land shortage is the root of many social and economic ills in Hong Kong.

Hong Kong's ongoing housing crisis and skyrocketing home prices have weighed heavily on many of the citizens' mind, extinguishing their hope for a better livelihood and starting a family of their own. We raised the alarm that Hong Kong has got bogged down in a deadlock of "triple lows", respectively in spade-ready land supply, housing completions, and quality of living reflected by the shrinking average size of new housing units. If no resolute action is taken promptly, the society will continue to bear the poor living environment with great despair.

The current land shortage is mainly attributed to the fact that no new town has been built in the past twenty years. Previously, Hong Kong has created substantial land supply by building nine new towns since the 1970s, but such effort halted in the 2000s. At present, Hong Kong's urbanised area with well-planned usages only consists of 20% of its total landmass, which is remarkably low compared with other cities or regions, such as 47% in Shenzhen and 73% in Singapore.

To build a better living environment, Hong Kong must envision and invest in its future. Our society needs to take collective action and commit to increasing land supply via multi-pronged approaches. In addition to reclamations, the New Territories presents a promising opportunity for large-scale development. With comprehensive planning and effective policies, developing the New Territories will mark another turning point for Hong Kong in creating a truly liveable community and inject new vigour into its economic growth.

The society has been desperate for a way out of the hopeless land shortage — a holistic vision based on the broader aspiration of liveability, economic development, and sustainable growth is needed to sow the seeds of hope and drive change. With the right policies, we can secure a timely supply of land to realise this vision. Future land creation initiatives will undoubtedly bring new opportunities, hopes, and more diversified economic and social activities to Hong Kong people from all walks of lives.

Planning for the future

In the upcoming three decades, Hong Kong will need at least 9,000 hectares of land according to our estimate based on practical needs. The major land supply measures planned by the Government of the Hong Kong Special Administrative Region (the Government) has so far contributed 5,000 hectares, including the Lantau Tomorrow Vision (LTV), and the two ongoing New Development Areas (NDAs), namely Hung Shui Kiu (HSK) and Kwu Tung North / Fanling North (KTN/FLN). These two NDAs have been re-activated more than a decade ago. Still, the implementation process has been slower than desired because of various reasons, most notably the bureaucratic red tape.

The LTV is an integral part of the long-term land supply strategy. It will not only act as an important "catalyst" in speeding up potential land clearance and resettlement issues in the negotiation between the Government and different stakeholders, but also provide a new strategic transport network that unleashes the development potential of the New Territories.

Strategic planning, however, is a continuous effort — a halt in land development will only risk an inability to meet future needs. With the expected commencement of construction work for the LTV and the New Territories North (NTN) in several years, we identify a paramount need to start looking for the next batch of NDAs to succeed these two projects. In anticipation of the dynamics ahead in the long-term future, we bring forth the development blueprint for a liveable New Territories, to lay out a visionary and pragmatic roadmap towards the 2030s and beyond.

But what about the immediate housing shortage?

One of the direct consequences of the current land shortage is the housing crisis. Many people live in small and unaffordable private flats, while many wait in an ever-lengthening queue for public housing units. We have scrutinised the short-to-medium land and housing supply in our previous research reports and put forward recommendations on this front. While this report gives emphasis to long-term land supply, the suggestions herein can also facilitate the NDA development that is currently underway.

To increase housing completions for the short term (i.e. next 3–5 years), the only way is to expedite development on spade-ready land. Currently, the average development cycles from land acquisition to construction completion for public and private housing are more than five years, even assuming spade-ready sites are immediately available. We advocated the need to cut the administrative red tape to shorten the development cycles for both public and private housing.

In the medium term (i.e. next 5–10 years), the Government needs to expedite the creation of spade-ready sites in its pipeline. A spade-ready site, be it a small rezoning site or a large NDA, takes at least five to ten years to be created. Previously, we have also identified two sites of "unzoned hills" at Shap Sze Heung that are mostly government-owned and free from obvious legal restrictions to development.[1] In this report, we also explore various measures to speed up the development procedures of spade-ready land, especially for the two ongoing NDAs of HSK and KTN/FLN.

Re-imaging the possibilities of the New Territories

For Hong Kong to continue to thrive in the future, comprehensive development that meets our various land demand, be it housing, economic activities, community facilities, recreation space, transport, and infrastructures, is of the essence. As comprehensive planning and development must be accompanied by the availability of large and flat landmass; the New Territories, extending over almost 90% of Hong Kong's landmass, will be a key enabler for Hong Kong's future growth.

[1] For further information about our policy recommendations on cutting red tapes in development cycles and utilising "unzoned hills", please refer to *Cutting Red Tape to Catch Up with Shortfalls in Land and Housing Supply* (OHKF, 2020a), and *Lacunae in Land Planning: Undersized, Undersupplied and Underestimated* (OHKF, 2018).

Hong Kong's development pattern hints at society's subconscious "Central perspective" in city planning. The main urban area in Hong Kong Island and Kowloon is not only our Core Business Districts (CBDs) but also the epitome of cultural activities and transport infrastructures. On the other hand, the New Territories is merely seen as the outskirt of the city.

However, when we break away from the traditional framework and expand the planning vision to the wider region, the New Territories presents enormous development potential. The New Territories can be the cradle for industries that cannot afford the soaring rent in the CBDs, allowing Hong Kong to diversify its economies. Enjoying a strategic position with proximity to the Greater Bay Area, a well-developed New Territories would reinforce Hong Kong's role as a gateway between China and the world, thereby strengthening its prime position as a regional hub. In this regard, Hong Kong can continue to win over talents, business, and capital, which are essential to its sustainable development. Nonetheless, Hong Kong can only catch this window of opportunity if we plan with comprehensive visions ahead.

Ultimately, an urbanised New Territories will take our city to the next level, as urbanisation and the associated clustering of human capital facilitate the exchange of ideas and stimulates innovation, which eventually drives technological and economic development. This notion has been supported by some renowned urban economists including, for example, Edward L. Glaeser and Paul M. Romer.[2]

Development blueprint for a liveable New Territories

In this report, we present nine Potential Development Areas (PDAs) for further study. They are extended from existing new towns and planned NDAs, forming a massive development belt with over 3,000 hectares that is comparable to Hong Kong's core urban area. With thorough planning intended for large-scale development, new infrastructures can be constructed to fully release the development potential of fragmented brownfield areas, farmlands, and other underutilised areas.

The planned NDAs and the proposed PDAs are categorised into three development themes to complement the planning intentions of the ongoing projects implemented by the Government.

(1) Culture & Technology Corridor

Building on the planned San Tin / Lok Ma Chau Development Node, KTN/FLN NDA, and NTN, the Culture & Technology Corridor extends the developable area further to sites along the Northern Link, Kwu Tung North extension, Kwu Tung South & Fanling South, and the east of NTN. Abutting the boundary to Shenzhen, the Culture & Technology Corridor enjoys the strategic locational advantage. It will provide expansion space for innovation hub and serve as an anchorage of enterprises and academic institutions. The ecosystem for the local arts and cultural sector can be fostered by capitalising on the cultural resources of the New Territories.

[2] For further details, please refer to *Edward Glaeser on the Economics of Cities and the COVID-19 Pandemic — "On Cities" Masterclass Series* [Video] from Norman Foster Foundation (2021) and Paul Romer's *Interview on Urbanization, Charter Cities and Growth Theory* (2015).

(2) Modern Logistics & Business Circle

The Modern Logistics & Business Circle encompasses the Government's planned HSK NDA and Yuen Long South Development, together with the proposed PDAs in Hung Shui Kiu extension and Yuen Long South-east. This area is designed to further the development of Hung Shui Kiu, which is planned as a regional economic & civic hub for the North-west New Territories. The development of this Circle also focuses on the provision of a quality living environment that appeals to talents and enterprises.

(3) Living & Recreation Space

The Living & Recreation Space stretches across the planned public housing development at Kam Tin South and three PDAs, namely Kam Tin North, Kam Tin South extension, and Lam Tsuen. These PDAs provide expansion space for neighbouring planned residential and suburban communities, foster a living environment close to nature, and promote nature and heritage tourism.

Furthermore, the development blueprint factors in how these PDAs and the planned NDAs could synergise with Hong Kong's territorial development and take it to the next level. With the proposed development in the New Territories, we will open a vital window of opportunities for Hong Kong to transcend its many constraints and transform into a liveable world-class city.

Forge ahead the challenges for our aspiration of a liveable city

While the previous three generations of new towns saw their first population intake within 7.5 years on average, it takes approximately 17 years for the recent NDA projects to do the same. Land development is often complicated by many factors, such as infrastructural capacity, site conditions, nearby land use, compensation and rehousing of existing occupants, to name a few. The long lead time required to untangle these issues has prolonged the NDA projects. This report identifies three major hindrances in urbanising the New Territories, namely the under-provision of infrastructure, difficulties in aligning stakeholders' interests, and failing land and housing policies.

As we envision a strategic plan for the New Territories that could revolutionise Hong Kong's territorial development, we can connect the dots among the NDAs and PDAs, which amalgamate into one massive region. In this regard, the strategic vision gives grounds for untangling the predicaments and necessitates investment in new infrastructures. The policy recommendations in this report will equip the society and the Government with more tools to expedite both the ongoing NDA projects and the forthcoming ones.

Prerequisite for expediting land development

Provision of Infrastructure

In anticipation of the development in the New Territories, the Government should expedite planned transport infrastructure projects and provide additional corridors to enhance the overall connectivity of the New Territories. In particular, the new strategic transport network under the LTV is a vital prerequisite to unleash the development potential of the New Territories, as it provides additional routes to bridge the North-west New Territories with the urban area. This report also puts forward alignment proposals for new major roads and railways that worth further study.

Infrastructures play an irreplaceable role in making a city function properly, and hence, an infrastructure-led development approach and timely investment are crucial to development realisation. In assessing the benefits of new transport infrastructure, the Government should consider a wider range of economic benefits, such as increased economic activities, revenue from the land sale, and higher development density of the railway catchment area. Similarly, we call on the Government to ensure timely provision, expansion and upgrading of other supporting infrastructures including sewerage network.

Stakeholders' interests

Recent development often meets strong opposition from the affected tenants and occupants. To minimise their resistance towards development plans, the Government should provide specific and targeted resettlement and compensation arrangement for each of the identified groups, i.e. brownfield operators, squatter residents, and farmers. As the earlier land resumption and clearance are commenced and completed, the sooner the subsequent construction work can begin.

Currently, development in the New Territories relies heavily on Government-led effort, as limited public-private partnership channels are available. To adopt a proper mechanism and unlock private-led development on lands without official plans, the Government should put together a toolbox of multiple land assembly approaches. With reference to overseas experiences and past cases in Hong Kong, this report suggests several options for the Government's consideration.

Policies and Administration

Considering the natural resources of the New Territories, the Government should promulgate suitable policies and actively balance the needs for conservation and development. We also call for a comprehensive review of all the key statutory and administrative process of new town development. These include public consultations, environmental impact assessments, and town planning procedures, et cetera.

This report also calls attention to reviewing the organisational structure of the Government. In the 1970s–1990s, we managed to build nine new towns for a rapidly growing population. Credit should be given to the then organisational structure that efficiently organised departments and bureaux to drive urban growth. Upon the citizens' earnest expectation for a way out of the dire land shortage, the Government should establish a dedicated department to spearhead the development of NDAs. We also call on the Government to enhance high-level steer on strategic planning and enact an outcome-based management approach in land creation.

A clear vision unites Hong Kong on land creation

City design and our well-being are inextricably linked. A poorly planned city cuts off people from social bonding and incites mental stress. On the flip side, a well-thought city enables its residents to feel more enthusiastic and engaged with the community. Despite the acute housing shortage, we cannot put the cart before the horse and neglect liveability elements in creating land supply. Society at large and the Government, the de facto urban planner for Hong Kong, should set their eyes on comprehensive planning and large-scale development to create liveable communities. We envision this report to set out a clear vision of a liveable New Territories, which will rekindle hope, inspire actions, and pull in support from the community on future land creation initiatives.

1

Hong Kong needs more land

Hong Kong is now under a land and housing supply crisis

Hong Kong has been confronted with an acute housing crisis for years without signs of improvement. The home ownership ratio recorded a 20-year low of 49.8% in 2019. In particular, the share of young people aged below 35 heading home-owning families has slumped from 22.1% to just 7.6% since 1997 (Research Office, Legislative Council Secretariat, 2021). Our citizens are disheartened by the difficulties of having a comfortable home.

This is hardly surprising given the acute shortage of housing. In our report issued this April, *Decisive Moment — Can Hong Kong Save Itself from the Land and Housing Supply Crisis?*, we pointed out that Hong Kong is caught in a deadlock of "triple lows", respectively in spade-ready land supply, housing completions and quality of living.

Good-quality land that is ready for large-scale and high-density housing development has become rarer and rarer, since there has been a lack of large-scale and well-planned new town development over the past 20 years. As a consequence, the average completions for private housing are forecasted to be reduced to only 15,000 units annually in the next five years (i.e. 2021 — 2025), 28% lower than the 20,900 units completed in 2020. Even worse, our citizens will be confronted with an ever smaller living space, as the average gross floor area of new private residential completions will shrink to a record low of less than 600 square feet in three years.

At the same time, public housing supply in the next four years (i.e. 2021/22 — 2024/25) is estimated to be only 21,800 units on average annually, lagging behind the LTHS target by almost one-third. The average waiting time for a Public Rental Housing (PRH) unit shoots up to 5.8 years, setting a record high in 22 years (Hong Kong Housing Authority and Housing Department, 2021). Over 200,000 people are now living in run-down subdivided units, waiting endlessly for a PRH unit.

Not only do we find it more challenging to set foot on the property ladder, but the severe land shortage has crippled our abilities to meet other needs. High rent is stifling many businesses and choking off innovation. Our community land for open spaces, parks, and community facilities, such as kindergartens and elderly homes, is the lowest per capita among Asian cities. Each of our citizens only enjoyed a tiny area of 2.7 square metres.

We can hardly call Hong Kong a liveable city

Liveability is more than home ownership; it concerns a wide spectrum of factors affecting a city's quality of life — economic prosperity, availability of education, social stability, cultural activities, recreation opportunities, quality infrastructures and many more. A liveable city is a place that cares for and promotes the health and well-being of people. **In the next 30 years, can Hong Kong be where people aspire to live and work?**

Hong Kong is far from being a liveable city. The high population density alone is a testament to the fact. With 27,400 people per square kilometre, Hong Kong's population density is remarkably higher than comparable developed cities or regions, such as New York, London, and Singapore (Figure 1). In particular, we are at least twice more crowded than in Singapore. It is almost impossible to tell apart which is more crowded, Hong Kong or Mumbai, even though Hong Kong's GDP per capita is more than six times that of Mumbai.

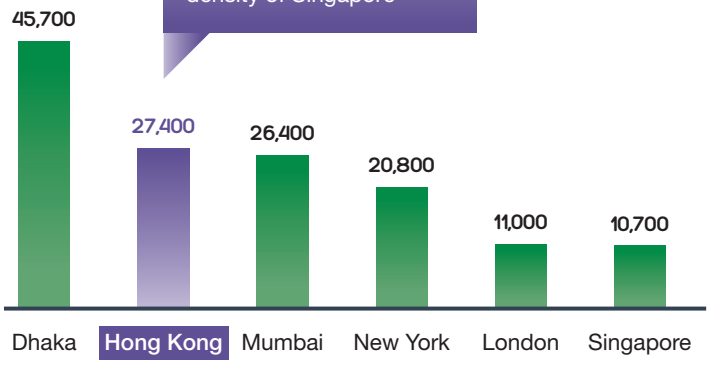
In our previous report, *Re-imagining Hong Kong with a Game-Changer: Enhanced East Lantau Metropolis*, we have presented an in-depth analysis of the detrimental effects brought by a high population density (Our Hong Kong Foundation, 2018b). Apart from traffic and railway congestion, our health is also constantly under the threats posed by air and noise pollution in a highly compact city.

Statistics also revealed another appalling fact about per capita living space in Hong Kong. Every resident in Hong Kong enjoyed only 170 square feet of living space, which is barely larger than a standard 134-square feet parking space. The per capita living space of Hong Kong is the lowest compared to other major cities or regions in Asia, such as Tokyo, Singapore, and Shenzhen. A 60% increase in our living space is required if we wish to keep up with Singapore.

Figure 1. **Hong Kong's high population density and small living space**

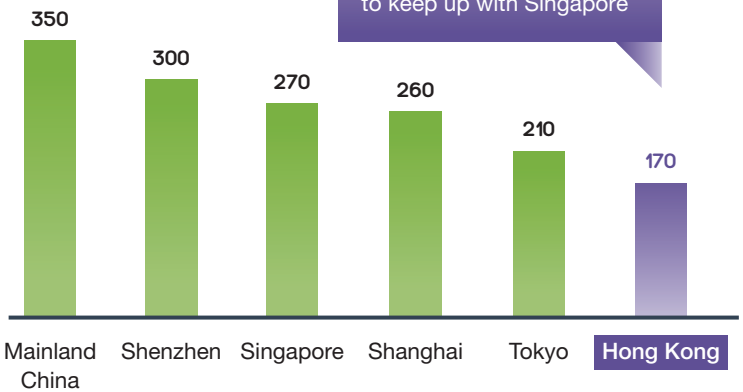
Population density in built-up area
(people per sq. km)

2.6x
more than the population density of Singapore



Average living space per capita
(sq. ft)

60%
increase in our living space to keep up with Singapore



Note: Living space per capita is calculated by net floor area

Sources: Hong Kong Census and Statistics Department, Development Bureau, Commission on Strategic Development, Rating and Valuation Department, Hong Kong Housing Authority, *Demographia*, Shanghai Academy of Social Sciences, *South China Morning Post, Real Estate Japan,* Centaline Property Research Centre, and Our Hong Kong Foundation

We have already lost three decades in land development

The land supply crisis confronting Hong Kong has not arisen overnight. Indeed, it is the consequence of diminishing land creation effort for the past three decades.

Developing new towns has been indispensable to Hong Kong's success. Back in the early 1970s, Hong Kong initiated its New Town Development Programme and underwent a phase of large-scale urbanisation (Figure 2). New towns blossomed in different parts of the New Territories, such as Yuen Long, Tuen Mun, Shatin, and Tai Po, and provided comfortable homes to Hong Kong's rapidly expanding population. Currently, these new towns house approximately half of Hong Kong's population and are expected to accommodate 3.7 million in 2024 (Civil Engineering and Development Department, 2020).

However, the development of new towns has come to a halt after the completion of Tung Chung new town in the late 90s. In the aftermath of SARS, the Government scaled back the planned development in the North-west and North-east New Territories. As the population continued to grow steadily, land supply could no longer keep pace with the soaring demand for land. Nonetheless, in the absence of a continuous strategic land supply plan, another new round of new towns like Tung Chung New Town Extension, Kwu Tung North & Fanling North (KTN/FLN), and Hung Shui Kiu (HSK), will only be completed in the 2030s. **In other words, there would have been no new town development for more than 30 years.**

Figure 2. **Hong Kong's development of New Town and NDA**

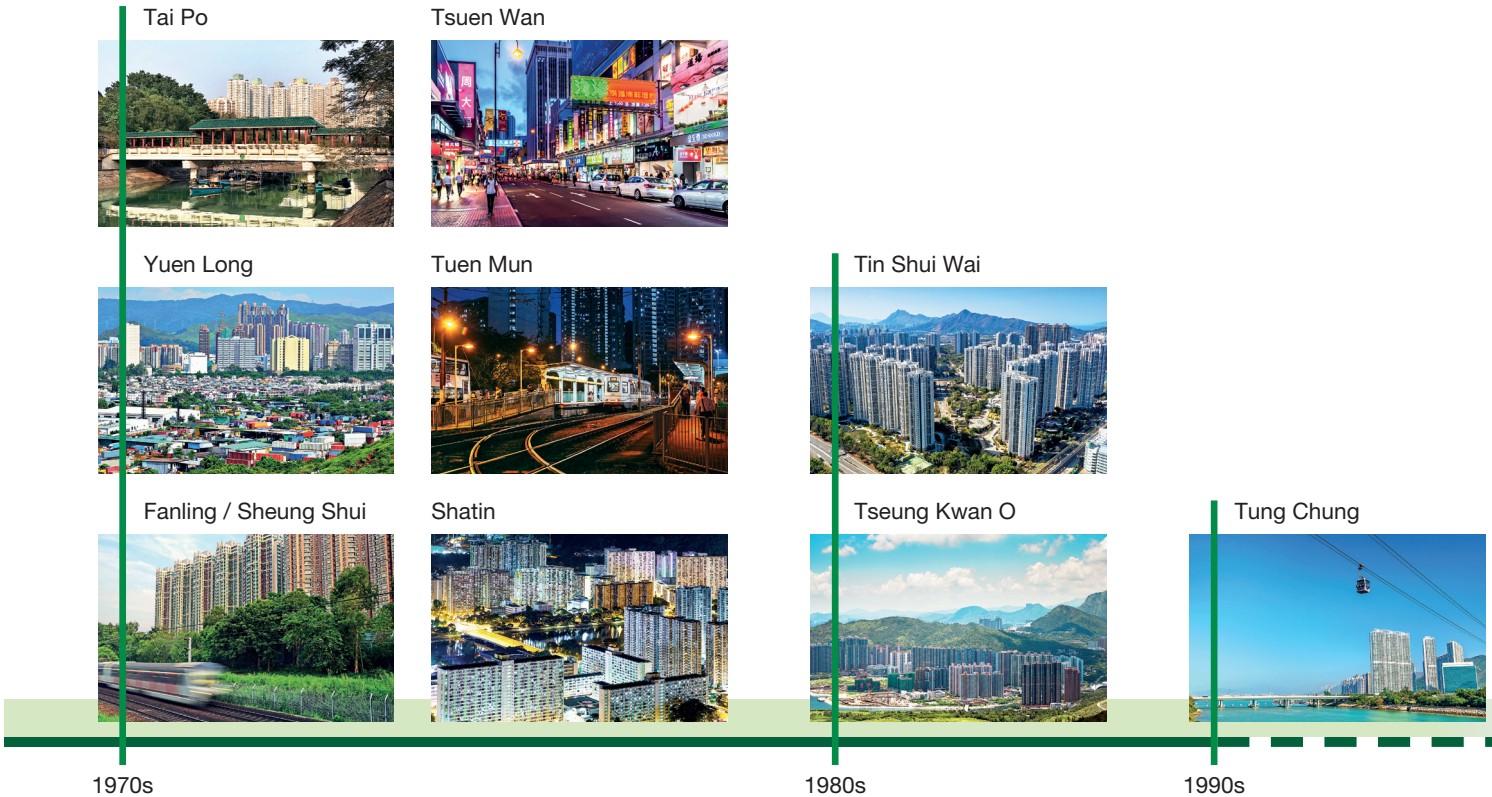


Image sources: gary yim / Shutterstock.com (Tai Po), TungCheung / Shutterstock.com (Tsuen Wan), colourinmylife / Shutterstock.com (Tuen Mun), Wpcpey / Wikipedia.org (Hung Shui Kiu and Yuen Long South), Civil Engineering and Development Department (Kwu Tung North / Fanling North and Lantau Tomorrow Vision), and Development Bureau (Tung Chung New Town Extension and New Territories North)

Suspension of 30+ years in new town development

2000s

2030s

Tung Chung New Town Extension

Kwu Tung North / Fanling North

Hung Shui Kiu

Yuen Long South

The distant future

New Territories North

Lantau Tomorrow Vision

2 Planning for the future

We need 9,000 hectares of land in the next 30 years

Sufficient land is the prerequisite for making Hong Kong a liveable city. If we wish to make Hong Kong a better home for everyone, we need to provide our citizens with adequate housing and reasonable living space, as well as ample supporting infrastructures and community facilities that are crucial to comfortable living. Without land capacity, there is no way to tackle all these concerns.

How much land do we need? According to the "Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030" (*Hong Kong 2030+*) study promulgated by the Government in 2016, Hong Kong will need about 4,800 hectares of new land over the next 30 years to 2046. The forecasted land demand comprises land required for housing, economic activities, various community facilities, and other uses.

However, this figure is too conservative — it did not consider public aspiration for a more spacious living environment, demand arising from emerging industries, ageing population, or buffer for unforeseen situations. The actual land demand is thus grossly underestimated. For Hong Kong to prosper as a liveable metropolis, we cannot turn a blind eye to these considerations in planning. In our previous report, *Lacunae in Land Planning: Undersized, Undersupplied and Underestimated* (Our Hong Kong Foundation, 2018a), we pointed out that Hong Kong needs more than 9,000 hectares of new land in the next 30 years.

To keep up with other international cities, Hong Kong requires a 60% enhancement in residential land, or an additional residential land of 3,520 hectares, to enable our citizens to enjoy a decent living space. Also, to tackle unprecedented challenges like "double ageing" (population ageing and building stock ageing) and maintain Hong Kong's competitiveness, an extra 760 hectares of facility land is required to provide various infrastructures and facilities. Combing these two figures with the estimated demand in the *Hong Kong 2030+* study, **the total reaches 9,080 ha, which is equivalent to the size of three Shatin new towns combined (Figure 3).**

Indeed, the Government also acknowledged the long term demand for land in *Hong Kong 2030+* has been underestimated. To avoid the bottleneck to the city's development, the Government would empower the Planning Department (PlanD) to make bolder forecasts considering the need for land reserve when revising its forecast on land demand. The revised estimation is expected to be in the final report of *Hong Kong 2030+* later this year (Development Bureau, 2019).

Figure 3. **Hong Kong's land demand**

"Hong Kong 2030+"

Total land demand for the next 30 years

4,800 ha

Enhancement 1

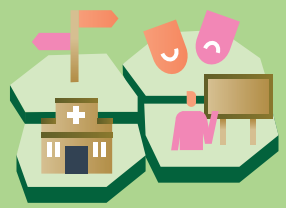
Increasing living space per capita

Extra residential land demand

2046 residential land*		Living space enhancement
5,870 ha	✕	60%

+ 3,520 ha

Enhancement 2



Increasing facility land

Extra facility land demand

2046 facility land^		Facility land enhancement
7,580 ha	✕	10%

+ 760 ha

Total land demand with living space and facility land enhancement

9,080 ha

Notes: * Calculated by adding current residential land (4,200 ha) with forecasted residential land demand in "2030+" (1,670 ha)
^ Calculated by adding current facility land (6,500 ha) with forecasted facility land demand in "2030+" (1,080 ha)

In our calculations, current "facility land" only includes commercial, industrial and GIC land, and excludes land used for transportation, warehouse and open storage, utilities, cemeteries and crematoria or other vacant land, while forecasted facility land demand only includes land for "population-related facilities". Therefore, our estimation tends to be conservative

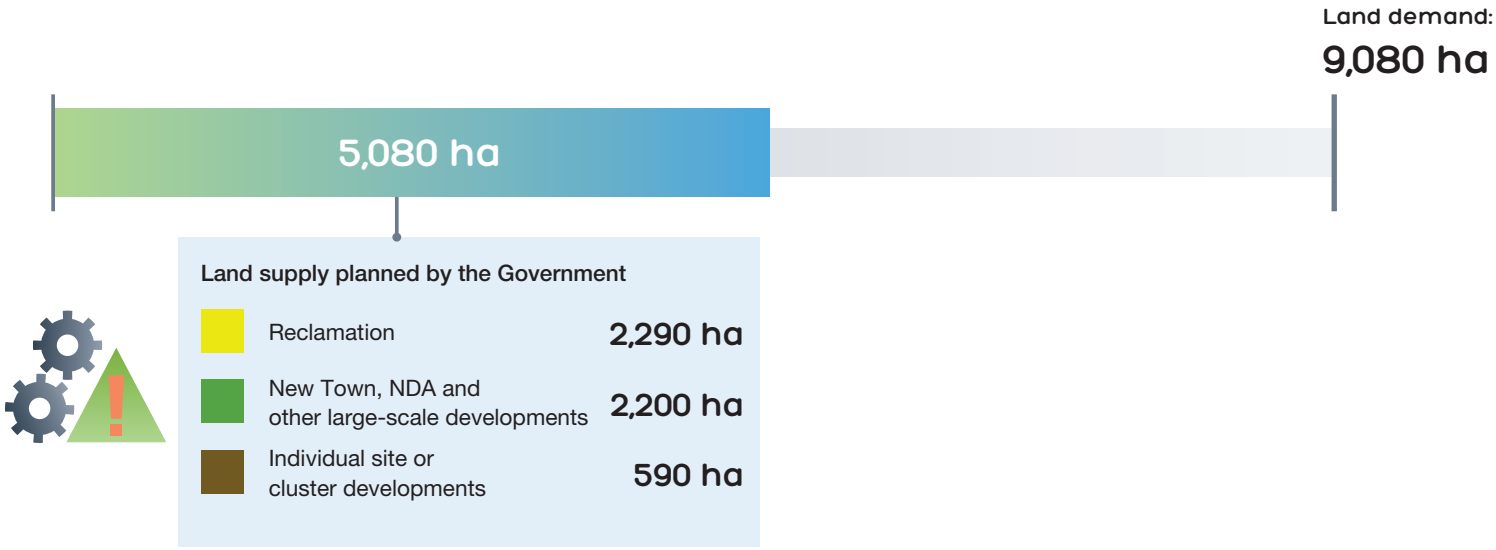
Image source: Planning Department

The existing land supply measures planned by the Government can only provide 5,000 hectares of land

Planned and committed land supply measures by the Government can provide around 5,080 hectares of land, which is still far from meeting the land demand of 9,080 hectares (Figure 4). Out of 5,080 hectares, approximately half (2,290 hectares) is contributed by reclamation projects, including Lantau Tomorrow Vision (LTV), Lung Kwu Tan reclamation, and Siu Ho Wan reclamation. New towns, New Development Area (NDA), and other large-scale development will provide 2,200 hectares of land. Individual site or cluster developments, namely rezoning, developing brownfield clusters, and redeveloping urban squatters, could bring about 590 hectares (Figure 5). It is evident that we need more large-scale land development strategies to create more land.

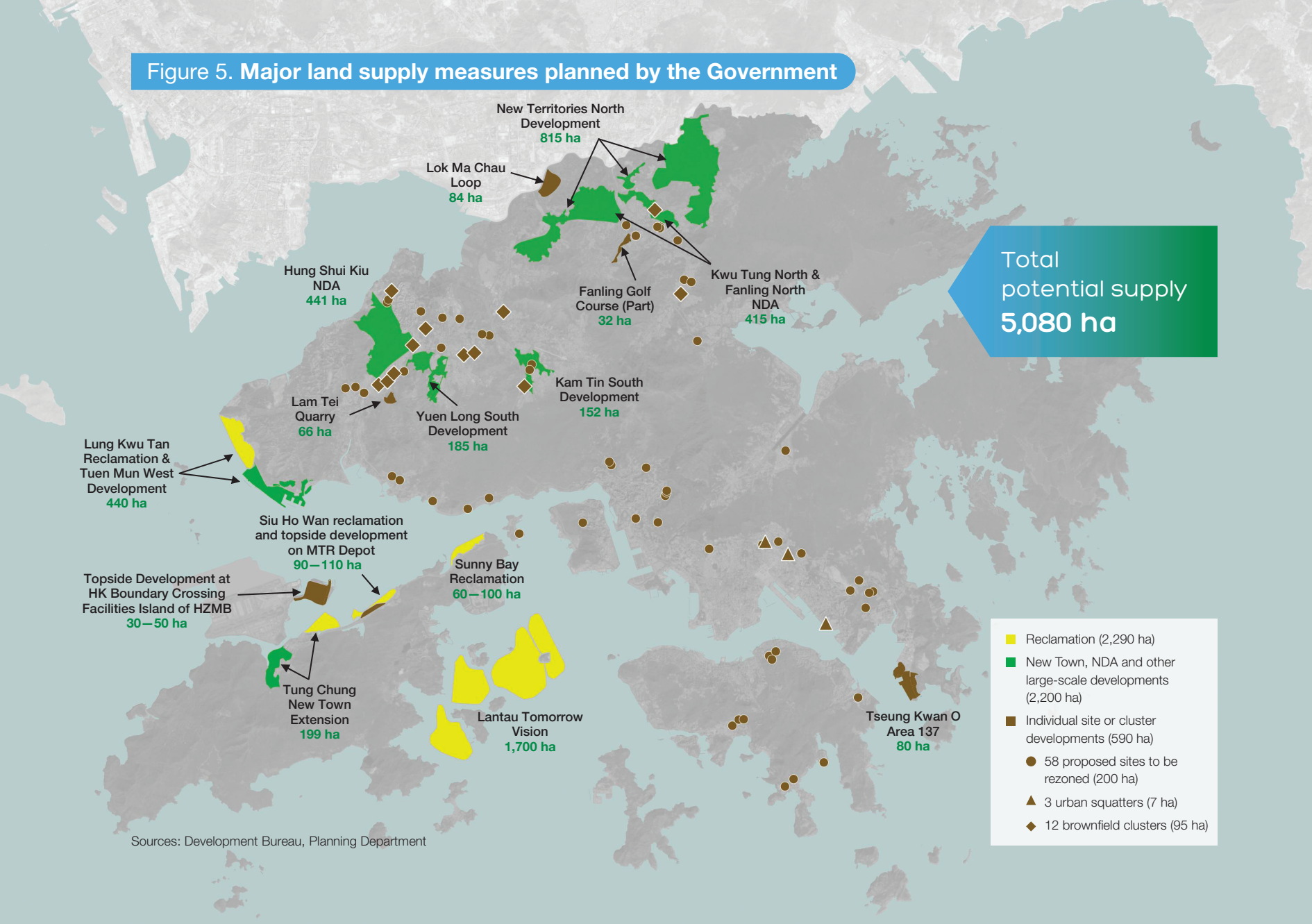
Furthermore, many of these projects are still in conception and pending further studies. If any of these initiatives could not move ahead in time or in full, future land supply would be jeopardised, and a much more severe land supply crisis will confront Hong Kong.

Figure 4. **Land supply planned by the Government can only meet half of our land demand**



Sources: Task Force on Land Supply, Planning Department, and Our Hong Kong Foundation

Figure 5. **Major land supply measures planned by the Government**



Sources: Development Bureau, Planning Department

Strategic planning is a continuous process that cannot afford to be snubbed

Land cannot be created on the spot. Land creation involves complicated procedures, including planning, engineering works, construction of related infrastructures and transport network. It usually takes at least 10 to 20 years to create a "spade-ready" land and a couple more years to fully realise its development and housing potential. Taking the upcoming KTN/FLN and HSK NDAs as an example, their conception can be dated back to the 1990s when the Government promulgated the Territories Development Strategy Review (*Territorial Development Strategy Review — A Response to Change and Challenges Final Executive Report,* 1998). Likewise, it takes two decades or even more for LTV and New Territories North (NTN) development to be completed after being first introduced in 2016. **As land creation requires a long lead time, to avoid a repeat of the land shortage we face today, we must keep the momentum going and start looking for the next batch of NDAs or new towns now.**[1]

There may be a misconception that after completing the LTV and the NTN, we can get land creation over and done with. As the LTV and the NTN are in full swing, we can at least manage to secure a substantial housing supply for the next two decades and probably get some room to respite. However, today's land supply crisis stemming from the halt of land development in the 2000s is a powerful reminder that land must be created on a sustained basis regardless of short-term economic changes. Should we wait for the demand to be large enough to warrant new town development, it is already too late to do so. To this end, as the construction work for the LTV and the NTN could commence in several years, simultaneously, society should also start looking for the next batch of NDAs to succeed the two projects (Figure 6).

[1] For the purpose of this report, the terms "NDA" and "new town" may be considered interchangeable.

Figure 6. **Strategic planning is a continuous process**

Image source: Planning Department

We need large-scale comprehensive planning to make our city liveable

Simply having more housing units does not necessarily make Hong Kong a more liveable city. A liveable city concerns all manners of factors that affect one's quality of life — economic prosperity, access to education, social stability, cultural activities, recreation opportunities and many more. Therefore, a truly liveable city should also provide sufficient infrastructure and community facilities, including public recreational facilities, convenient railway and road network, health care facilities, so forth and so on. However, given the worsening housing crisis, land development discussion often unintendedly prioritises housing shortage over other land uses.

The single focus on housing shortage has led to discussion and attention on fragmented measures, such as individual site and cluster development, getting out of proportion. The living environment created by such piecemeal efforts is in no way liveable since it lacks surrounding facilities or supporting infrastructures. In the end, while we may have more homes for everyone, the living environment could be anything but desirable.

As we envision a liveable and sustainable city, we should embrace a comprehensive mindset and consider a broader scope of planning issues, including housing, transport, business activities, and many more. **It is crystal clear that the solution to our land supply crisis will no longer be piecemeal development on individual site but carefully planned large-scale land development (Figure 7).**

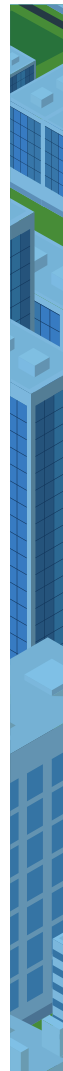
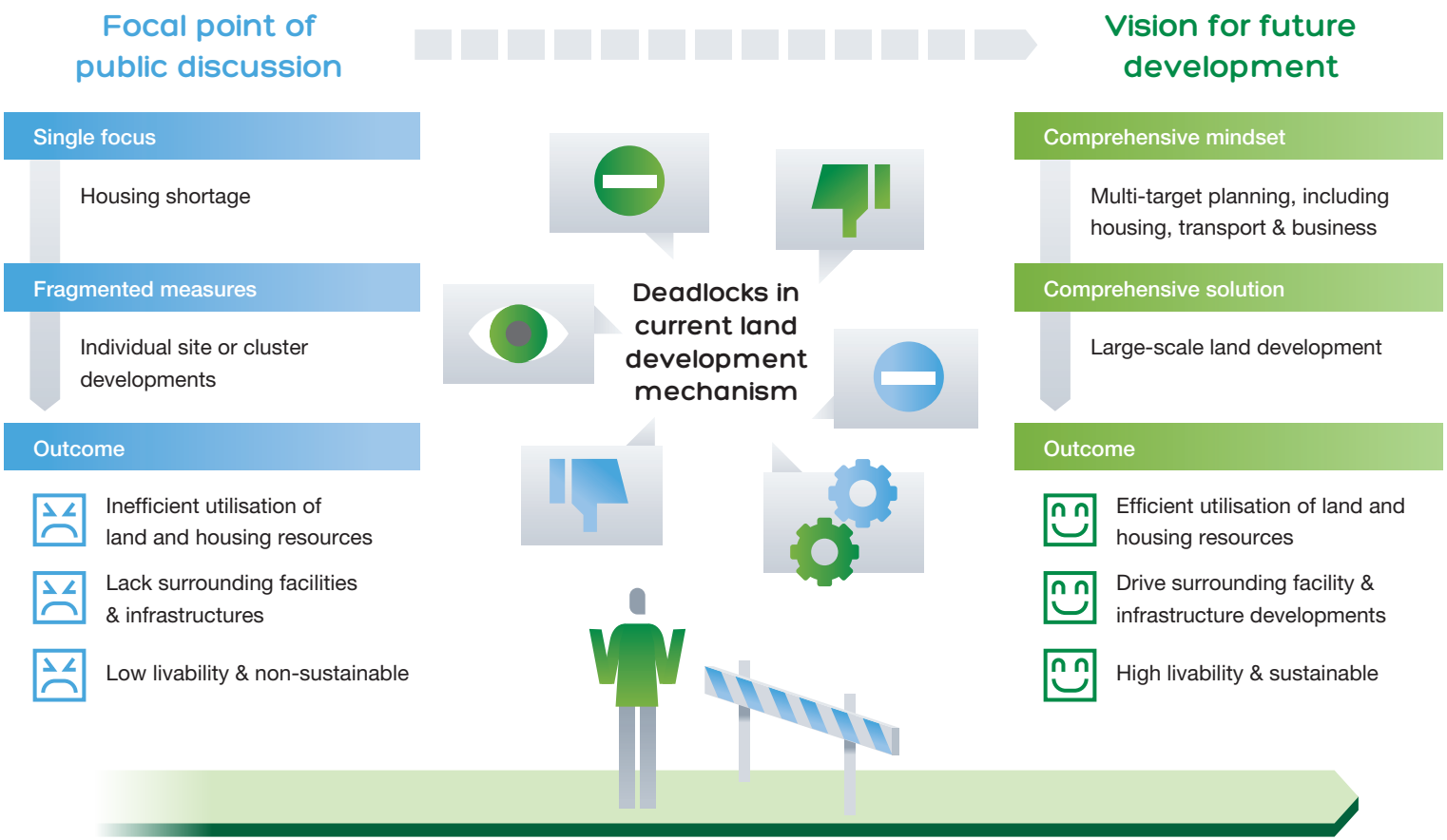


Figure 7. **We need large-scale and comprehensive planning**



Large-scale development is the only way to change the losing game

With comprehensive planning, it follows that future planning should look beyond individual sites. Thus, the crux in changing the losing game of Hong Kong's land shortage is large-scale land development. **One way of doing so is reclamation outside Victoria Harbour.** In particular, LTV is of the essence, since the project alone creates a 1,700-hectare of landmass and accommodates up to 400,000 housing units upon completing the two phases (Civil Engineering and Development Department, 2018). The project completion enables Hong Kong to alleviate its acute land shortage and break away from the sole focus of increasing housing production. It is with LTV that society is in a much better position to explore liveability issues and work out a way to increase per capita living space.

In addition to the Government's planned reclamation, we have previously advocated two reclamation options: the Enhanced East Lantau Metropolis (Our Hong Kong Foundation, 2018b), which is an expanded version of LTV (formerly known as the East Lantau Metropolis), and Cheung Chau South Artificial Island (Our Hong Kong Foundation, 2017). The former expands the Government's reclamation scale in the central waters from 1,700 hectares to 2,200 hectares. The latter creates a 2,200 hectares artificial island that could be used for relocating the Kwai Tsing Container Terminal and other brownfield activities. The two options can provide an additional supply of 2,700 hectares (Figure 8).

Even with additional reclamation, the potential land supply could only add up to 7,780 hectares, and it is still not enough compared to Hong Kong's land demand of 9,080 hectares (Figure 9). Where else can we find more land in Hong Kong?

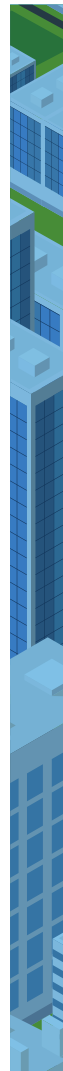


Figure 8. **Additional reclamation options proposed by OHKF previously**

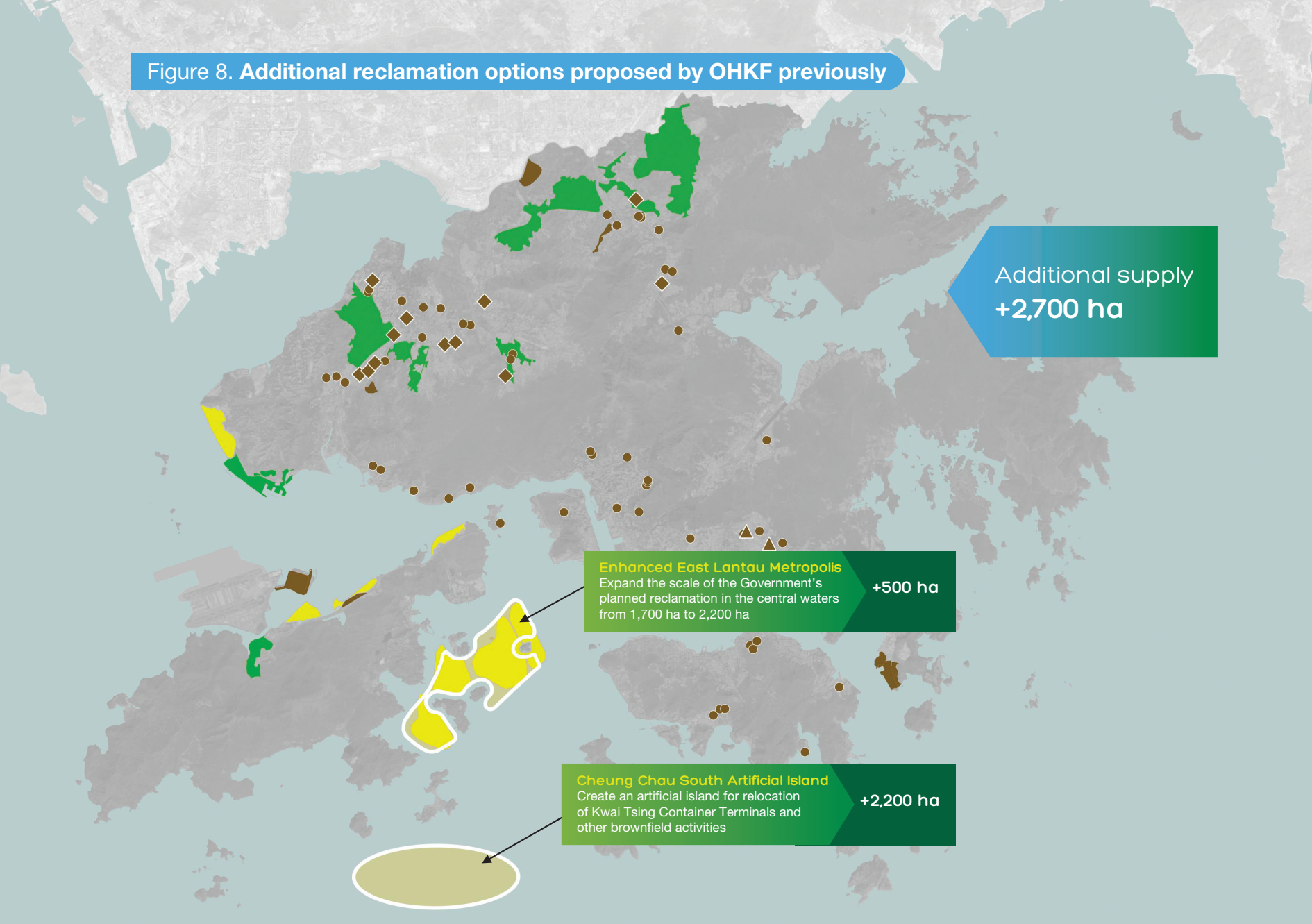
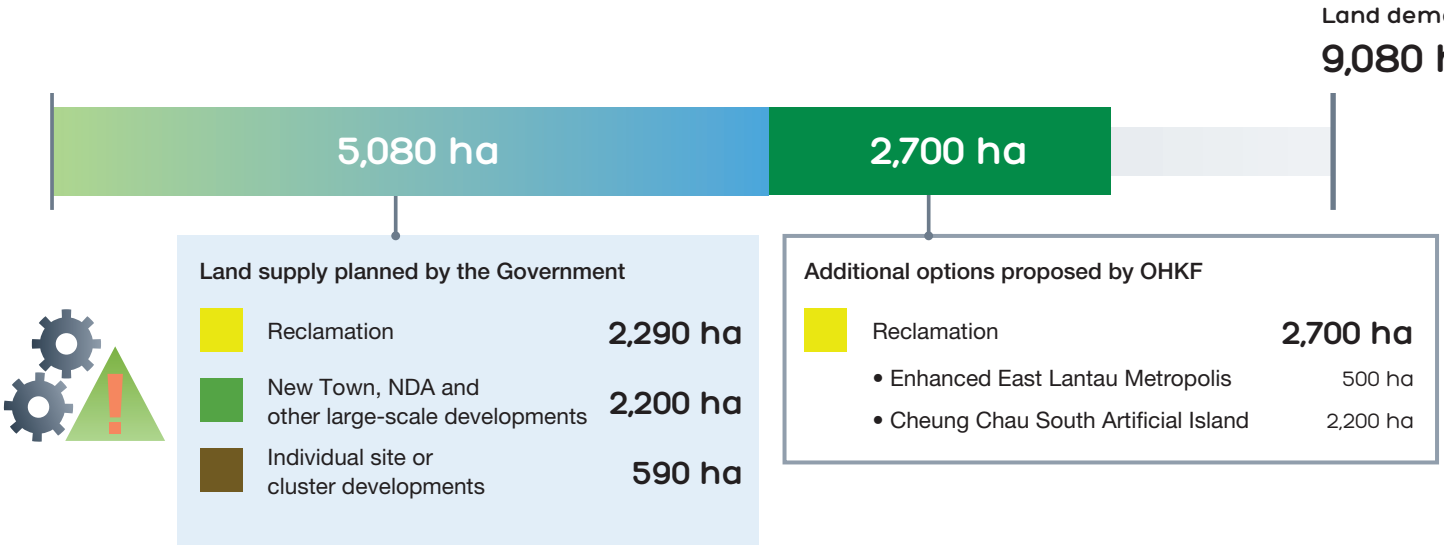


Figure 9. **Additional reclamation is still not enough to make up for the land demand**



Sources: Planning Department, Our Hong Kong Foundation

3

Where are our land options?

There is more than one way to enable large-scale development in Hong Kong. Apart from reclamation outside Victoria Harbour, the other way is to consolidate underutilised land resources for comprehensive urbanisation. This chapter will take a close look at the existing land use pattern of Hong Kong and explore potential areas for large-scale development.

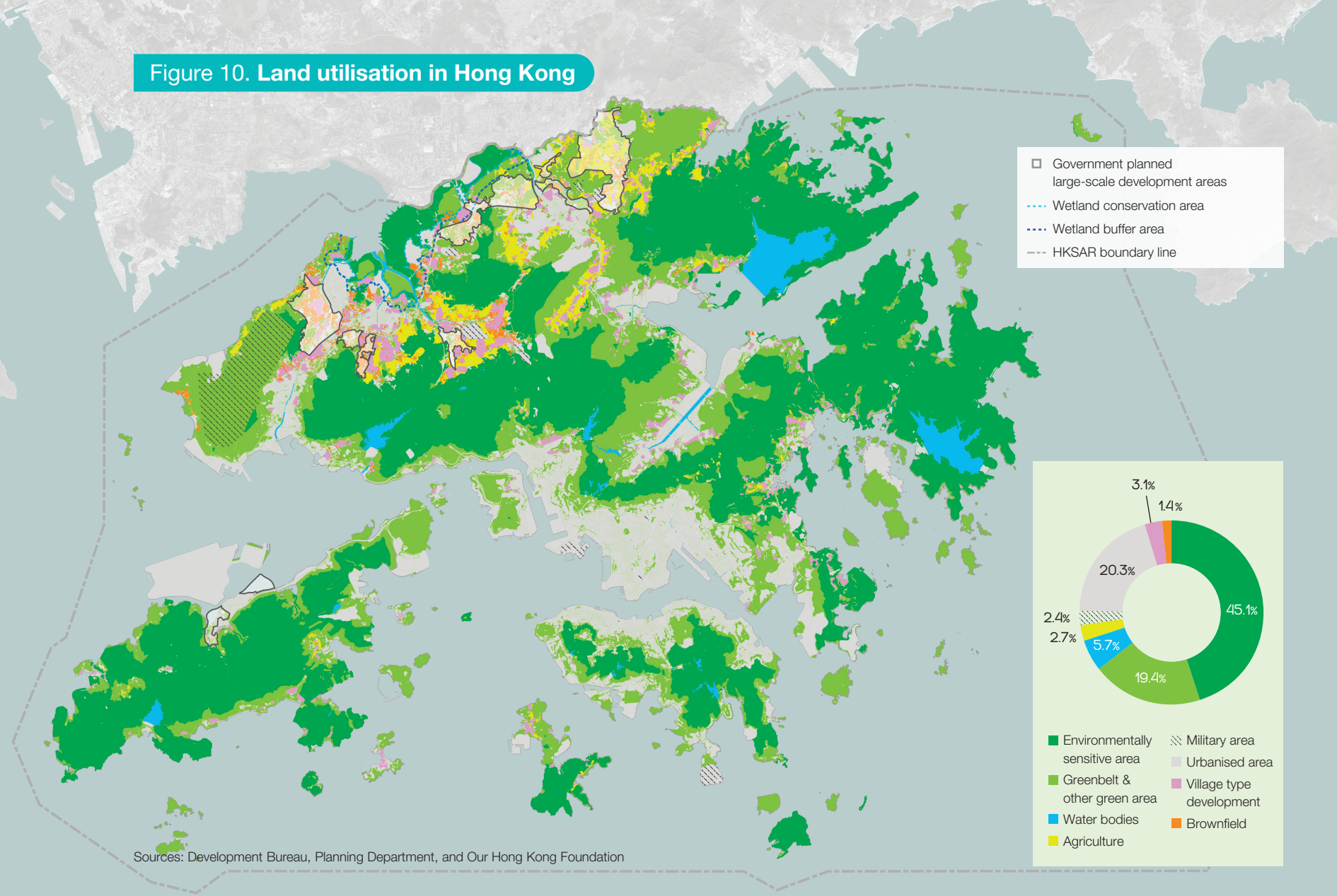
Land utilisation in Hong Kong

Despite being a densely populated metropolis, the urbanised area in fact accounts for a meagre part of Hong Kong. We believe that there is potential to utilise more areas of Hong Kong. Figure 10 shows the broad-brush land utilisation in Hong Kong. The distribution was compiled based on the satellite images obtained from the PlanD and in-house calibration.

Only 20% of Hong Kong's landmass is filled with urbanised areas. They include land parcels occupied by housing, business and offices, industrial land, institutional facilities, infrastructures, etc. These urbanised areas render large-scale revitalisation or renewal difficult to be carried out within a short period of time. On the other hand, approximately 45% of Hong Kong's areas fall within boundaries of country parks and Sites of Scientific Interests. They are regarded as environmentally sensitive, and development of any kind is prohibited on these sites.

The remaining area mainly comprises land designated for green belt and other green area (19.4%), agriculture (2.7%), village-type development (3.1%), and brownfield (1.4%). The majority of these lands are dispersed and intermingled with one another in the New Territories, oftentimes left underutilised. If these lands are consolidated and developed cohesively, they could form a substantial urbanised area in the New Territories to provide capacity for future development.

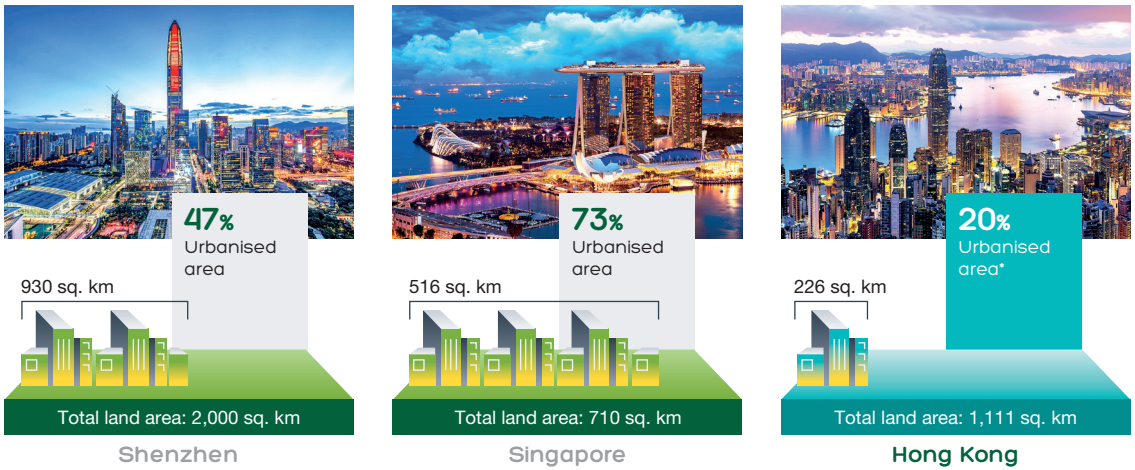
Figure 10. **Land utilisation in Hong Kong**



Sources: Development Bureau, Planning Department, and Our Hong Kong Foundation

Hong Kong only has 20% of its land area built-up

Figure 11. **Hong Kong has a much less urbanised area than that of Shenzhen and Singapore**



Note: * Urbanised area in Hong Kong refers to land of high-density urban development and excludes land of village type development and brownfield
Sources: Task Force on Land Supply, *China Urban Construction Statistical Yearbook 2018*

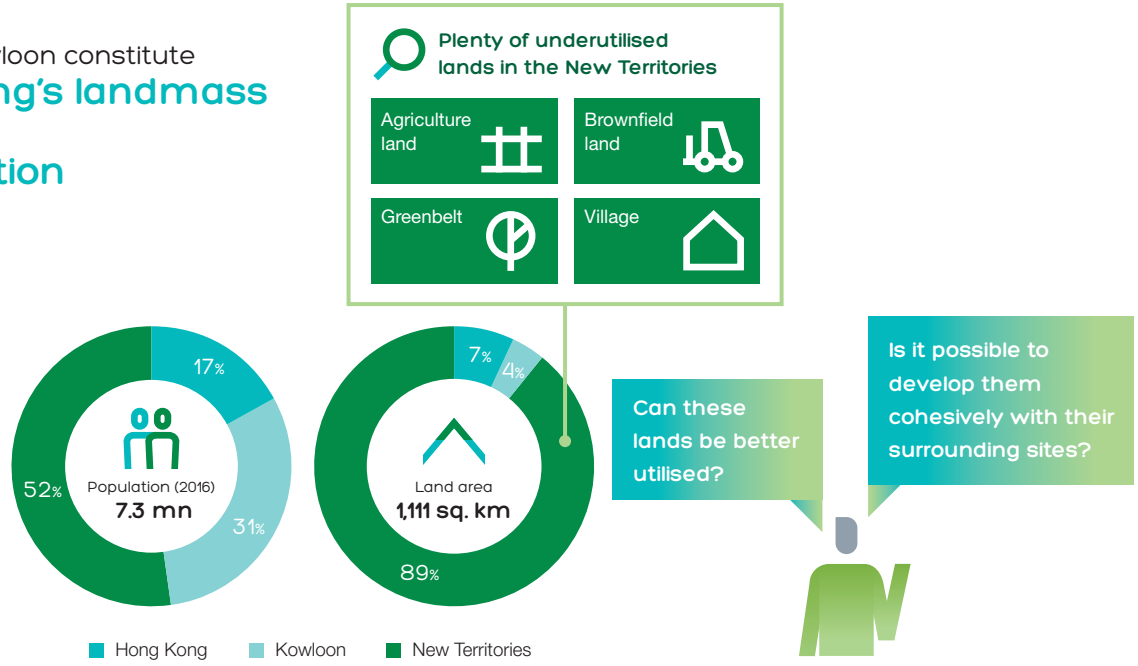
Contrary to popular perception, Hong Kong is not as highly urbanised as other cities. Despite having a smaller land area, Singapore's urbanised area of 516 square kilometres is more than twice the urbanised area in Hong Kong (226 square kilometres) (Figure 11). Shenzhen even has a more massive urbanised area of 930 square kilometres. **Comparing in percentage terms, Hong Kong has only urbanised 20% of its total land area, while Shenzhen and Singapore have already urbanised 47% and 73% of their land, respectively.** In light of the severe land shortage, Hong Kong could urbanise more land areas to increase development capacity.

What calls for attention is that despite Singapore's higher level of urbanisation, Mercer's 21st annual Quality of Living survey ranked Singapore as having the highest quality of living in Asia (25th), way ahead of Hong Kong (71st) (*Vienna Tops Mercer's 21st Quality of Living Ranking*, 2019). This demystifies the presumption that urbanisation will definitely lead to a poor living environment.

There is an opportunity for developing the New Territories

Figure 12. **An opportunity for developing the New Territories**

Hong Kong Island and Kowloon constitute only **11% of Hong Kong's landmass** but house **48% of the population**



Source: Planning Department

At present, urbanisation is mainly concentrated on Hong Kong Island and Kowloon. Despite accommodating almost half of Hong Kong's population, Hong Kong Island and Kowloon merely account for 11% of Hong Kong's landmass (Figure 12). Consequently, the metro area is very crowded, and the traffic within is also highly congested.

Meanwhile, **the New Territories, covering 89% of Hong Kong's area, only houses 52% of the city's population.** Beyond the well-developed new towns, there is plenty of agriculture land, brownfield sites, greenbelt and land zoned for village-type development scattering and intermingling in different parts of the New Territories. It is not unusual to see incompatible land uses in a neighbouring area. From a planning perspective, there is obviously room to better utilise these lands and develop them cohesively with the surrounding areas.

City planning needs to rethink the possibility of the New Territories

Hong Kong has unknowingly used to approach city planning with a **"Central perspective"** — we tend to foster trade and business activities, cultivate cultural offerings, and strengthen infrastructures in the core metro area of Hong Kong Island and Kowloon. With such perspective in mind, the New Territories is merely an outskirt of the city. Oftentimes, the New Territories are seen as a 'solution space' for urban problems. New towns and obnoxious facilities slot in the New Territories primarily because there is no space in the urban area to accommodate them.

Against the backdrop of prolonged housing shortage, it is understandable that public discussion often unintendedly prioritises housing over other matters in land development. However, such a single focus on housing has led to undesirable consequences, creating a bunch of bedroom communities. Residents moaned about the lack of employment opportunities and recreational activities near their homes. **In Hong Kong, there are 2.2 million people who need to work in another district, of which nearly half are residents of new towns, far more than other parts of Hong Kong** (Census and Statistics Department, 2017). If we continue to hold onto this mindset and develop housing in the New Territories without fostering sufficient economic activities, the home-job-school imbalance will only worsen.

Yet, **the New Territories will reflect a different picture if it is rethought and repositioned under a regional planning perspective.** When the planning vision is no longer confined to Hong Kong's boundary, we shall see the New Territories as a strategic location rather than a hinterland for core metro areas. With proximity to Greater Bay Area and continuously improved transport link to the urban area and the airport, there is profound development potential awaiting the New Territories.

Indeed, this is also an opportune time for Hong Kong to rethink its industrial structure. Coinciding with the "Central perspective" in city planning, Hong Kong's economy is highly dominated by financial services and other professional services often seen in the CBDs. There have been calls for diversifying our economies; however, such attempts have failed as land shortage and the resultant high rent choke off businesses and innovation. In view of this, the New Territories can accommodate sectors and institutions which cannot find suitable space in urban areas. Most importantly, it can be the cradle for nascent industries, allowing Hong Kong to nurture new economic engines and our citizens to pursue more diverse job options.

Instead of relentlessly pursuing high-density development, the urbanisation of the New Territories should be sustainable, guided by the concept of liveability. It should not be treated as a commuter town nor a "solution space" for urban problems. Instead, to create liveable new towns, we should be sensitive to people's well-being and explore ways to enhance their satisfaction in being the residents of that area while paying attention to the local context and unique characteristics of the New Territories (UN-Habitat, 2003). One direction would be developing the New Territories towards a self-sustaining region, where residents can work, live, play, and learn in proximity (Figure 13).

Figure 13. **Transforming the New Territories with sustainable urbanisation**

Expanding into the New Territories without fostering a centre of economic activities will **reinforce the home-job-school imbalance**

Bedroom community

Developing the New Territories comprehensively with strategic vision to allow residents to work, **live, play and learn in the same district**

Sustainable urbanisation

New Territories remains unique for its natural charm

Adopting a “New Territories-oriented” approach requires one to be observant of the existing conditions in the New Territories and the uniqueness of this region. Few would disagree that the beauty of the New Territories lies in its abundant natural and cultural resources, which offers a drastically distinct environment compared to the highly developed areas in Hong Kong Island and Kowloon (Figure 14). By harnessing these resources, we can wield our creativity and vision to create new towns that are different from the overcrowded metro area.

Figure 14. **New Territories’ natural charm beyond the bustle of the metro area**

Image source: e X p o s e / Shutterstock.com (ancestral hall)

Enchanting natural features at the doorstep

The New Territories is blessed with a plethora of wetland, country parks and ecological habitats that link us back to nature. Most of the splendid natural features are located within a one-hour journey. There are Tai Mo Shan Country Park and the natural surroundings of Lam Tsuen in the south (Agriculture, Fisheries and Conservation Department, n.d.-b). Wetlands of international importance are found in Deep Bay in the north-west New Territories. Robin's Nest country park in the north is home to more than 600 species of plants and animals, with over 170 types of butterflies spotted in the area ("Robin's Nest Wins Country Park Designation", 2019). They play an important role in providing functioning ecosystems and promoting biodiversity.

Historical landmarks and cultural heritage sites

From its origins as a village, many remnants of the past can be found in the New Territories. Over 80 indigenous/non-indigenous villages can be found in the NTN alone (Development Bureau et al., 2016). Fish villages, ancestral halls, declared monuments, and heritage trails are the performance stages that reveal traces of traditional festivals, ceremonies, and cultural activities. These make the New Territories an excellent destination for a weekend getaway to get out of the concrete jungle. Moreover, arts and cultures also enable us to express creativity and search for solace in our mind. Indeed, to every society, arts and cultures are crucial for its citizens to build their identities and sense of belonging.

Exploration of a variety of cuisines

Thousands of restaurants in the New Territories provide different food styles as a reward after the journey of natural and cultural experiences. Hongkongers constantly get the lowdown on the best eats in the New Territories — local cart noodles, Insta-worthy street snack, fresh-out-of-the-oven egg tarts, Cantonese desserts, you name it. Indeed, one can also easily enjoy the diverse range of culinary experiences, be it Asian, European, or creative fusion.

New Territories development can ride on the rapid development just a river away

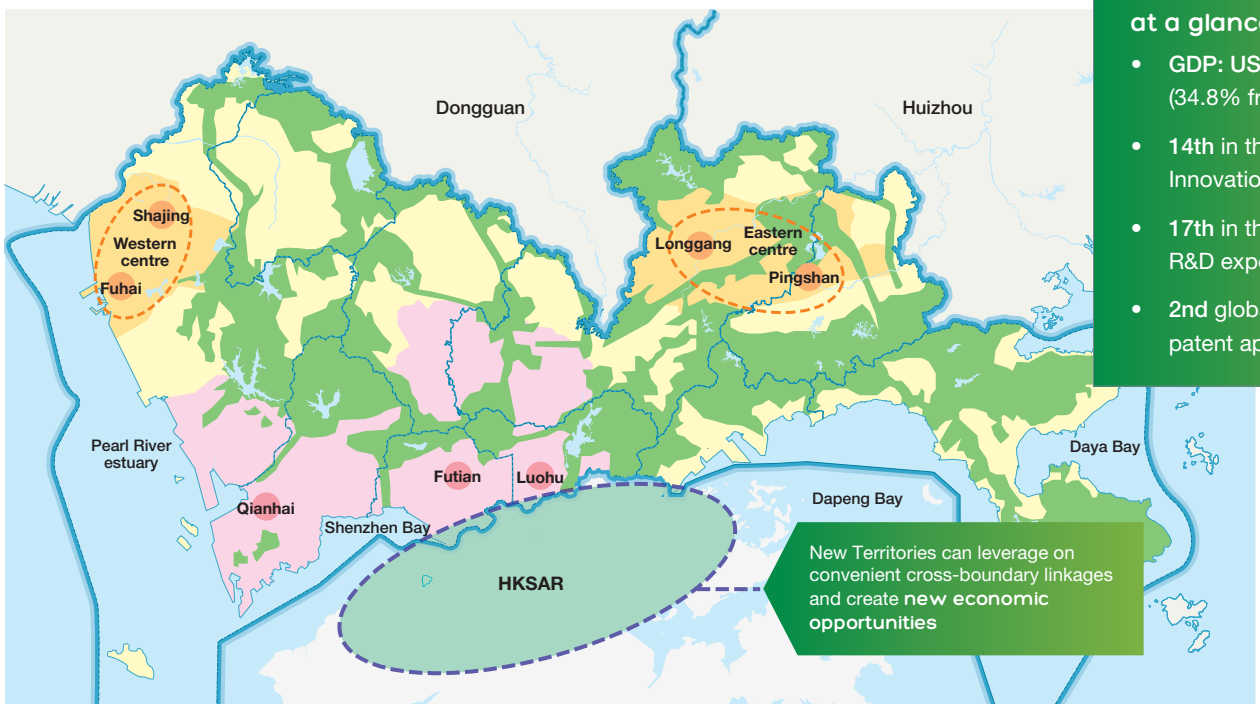
In Hong Kong's spatial planning, it is equally important to consider how the development at the periphery will affect Hong Kong. Shenzhen, our neighbouring city, is one of the fastest-growing cities in mainland China. Over the years, Shenzhen has transformed from a manufacturing base into a thriving technology and innovation hub, eclipsing Hong Kong. In 2018, Shenzhen surpassed Hong Kong to become China's wealthiest city in terms of GDP ranking (Duhalde et al., 2020). Over 34% of the city's income came from high-tech industries. According to global real estate consultant JLL, Shenzhen ranked 14th and 17th in the Global Top 20 for innovation and R&D expenditure, while Hong Kong failed to make it due to poor performance in spending on research, development, and patent generation of technology (*Hong Kong Fails to Ranks among the Top 20 Most Innovative Cities Globally*, 2019).

Taking a closer look at Shenzhen, its economic centres, including Luohu, Futian, and Qianhai, abut Hong Kong's border (Figure 15). Adjoining Shenzhen's CBDs and southern development belt,

the New Territories can leverage the convenient cross-boundary linkages and create new economic opportunities. This would facilitate the development of large-scale industry and employment clusters in the New Territories, fostering the development of new business sectors in Hong Kong and making the New Territories a new economic centre after CBDs in Hong Kong Island and Kowloon. Moreover, the New Territories will be Hong Kong's double gateway between China and the rest of the world. With a smoother connection to everywhere in the world, talents, business, capital and idea will be magnetised towards and stay in this gateway; profound opportunities will unfold for not just the New Territories but also Hong Kong as a whole. **Indeed, staying open and connected to the global economy has been indispensable to Hong Kong's success as a global trading hub.**

Figure 15. **Riding on the rapid development just a river away**

Shenzhen City Master Plan 2020-2035 (draft)



Shenzhen's innovation at a glance

- **GDP: USD 391.4 billion** (34.8% from hi-tech industries)
- **14th** in the Global Top 20 for Innovation
- **17th** in the Global Top 20 for R&D expenditure
- **2nd** globally for number of patent application

Note: The graph is a reproduction of the original graph featured in the *Shenzhen City Master Plan 2020-2035 (draft)*, and may include inaccuracies in the reproduction process.
Sources: Shenzhen Municipal People's Government, Shenzhen Bureau of Statistics, JLL, and various newspapers

Visions and design framework

Considering the existing conditions on planned NDAs, our development blueprint for the New Territories aims to create a liveable environment for households of all age groups and income groups to pursue their ideal lifestyles. The proposal will create abundant space for established and nascent industries, nurturing an innovative workforce locally and bringing impetus to Hong Kong's economy. By striking an appropriate balance between development and conservation, the blueprint will offer distinctive surroundings that integrate city, suburban, countryside and nature in the New Territories (Figure 16).

(1) Multifaceted lifestyle

Offer sufficient and diverse housing options that are affordable by households of all age groups, income groups and compositions to achieve their preferred lifestyles.

Planning concepts:

- Provide a variety of flexible housing types and flats of different sizes to cater for the distinctive needs of various households, including nuclear households, extended families, singles, and elderlies
- Consider elements of intergenerational community and ageing-in-place in the provision of universal design facilities to build more cohesive neighbourhoods and strengthen family ties
- Enable the possibility to pursue alternative lifestyles such as community farming
- Inspire and promote a creative and culturally rich civic life to enhance the distinctive cultural status of the New Territories

(2) Diverse careers

Create an inclusive and resourceful environment where people from all backgrounds, abilities and ages can enjoy convenient access to all established and emerging career paths.

Planning concepts:

- Leverage on the geographically favourable location on major freight and passenger routes to strengthen modern logistics industries
- Offer sufficient space for planned technology parks and employment nodes to grow beyond district levels and attract companies / academic institutions
- Provide development space for nascent industries, including technology sectors and creative production, at an affordable cost

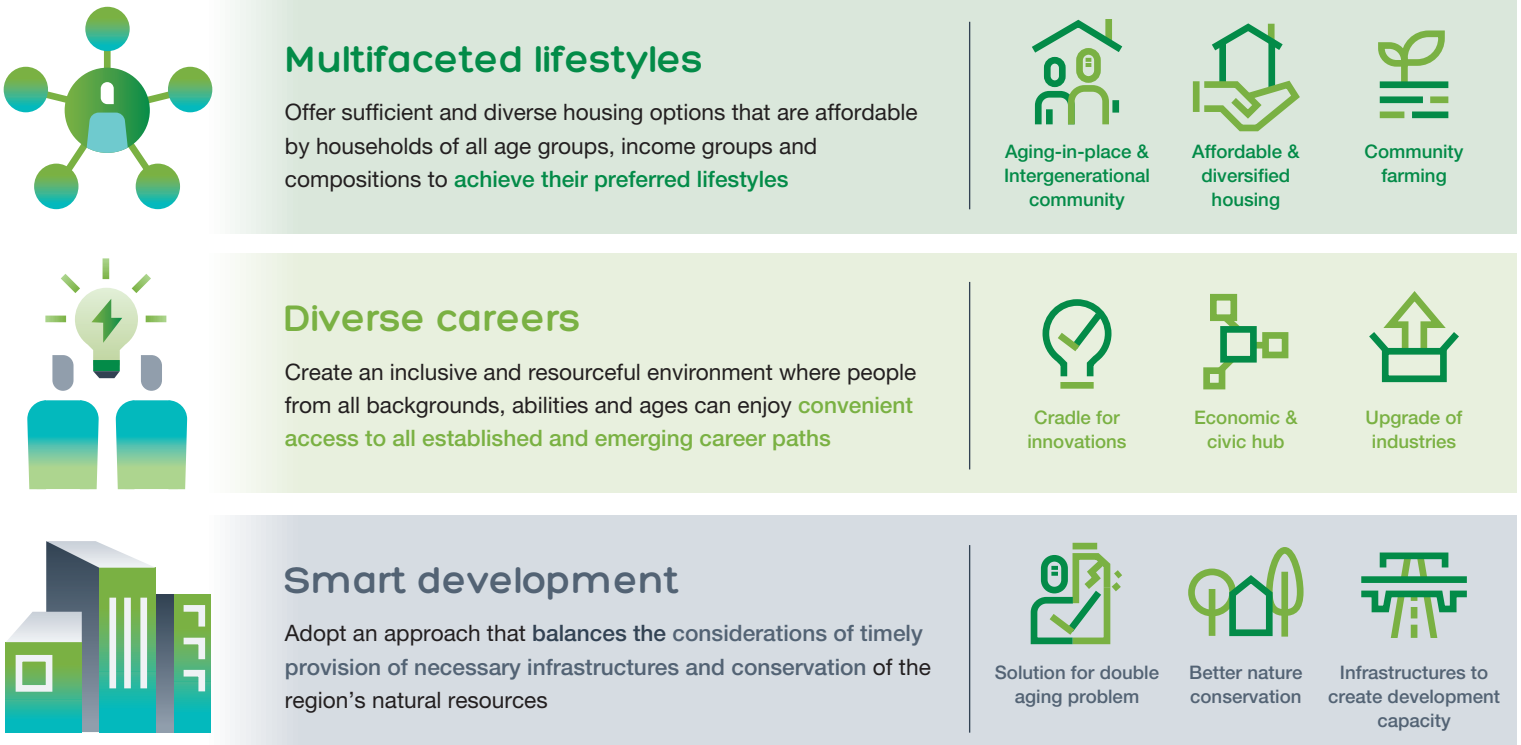
(3) Smart development

Adopt a sustainable approach that balances the considerations of timely provision of necessary infrastructures and conservation of the region's natural resources.

Planning concepts:

- Offer space for urban redevelopment and enable Hong Kong to adapt to the changing needs arising from double ageing in the dilapidated urban area
- Provide transport and other strategic infrastructures to create development capacity
- Adopt an active strategy and put forward policies to balance the need for nature conservation and development
- Rectify incompatible chaotic brownfield development in the New Territories

Figure 16. **Our planning vision is to create positive changes for Hong Kong**



Key principles in developing the New Territories

Comprehensive land use planning is essential to building a liveable town, so are policy support and implementation work. When it comes to developing the New Territories, we are mindful of the shortcomings in the current development approaches. To avoid another failure like the bedroom communities, we adhere to three principles guiding the preparation of our land use proposal and policy recommendations (Figure 17).

(1) Sustainable

In the previous development projects, sustainability and liveability concepts are yet to be realised extensively. Urban designs and development parameters for the upcoming NDAs should consider the following sustainability elements to create urbanised areas that are well equipped for future development.

- Design age-friendly neighbourhood to encourage ageing-in-place
- Expand living space per capita
- Pursue pandemic-resilient and climate-resilient urban designs
- Adopt policies to conserve wetland and manage urban growth
- Provide space for emerging industries to achieve balanced development of the city

(2) Scalable

Ongoing land supply measures, with a single focus on housing, rely on fragmented individual sites and projects. These have impeded our abilities to plan comprehensively and build well-function NDAs. Instead, development should be scalable and make effective use of the land resources.

- Further extend developable areas from existing new towns, communities, and urban networks
- Consolidate fragmented land resources including brownfields and mismanaged conservation area of private owners

(3) Strategic

The lack of economic centre in the New Territories has resulted in serious job-housing imbalance on a territorial-wide scale. There is a genuine need to decentralise the CBD and foster more economic activities in the New Territories. Hence, the New Territories must be planned strategically with consideration on how to complement Hong Kong's territorial development.

- Complement territorial development with strategic transport infrastructure
- Develop multiple economic nodes and dencentralise the CBD by redistributing work opportunities outside the metro area
- Enhance resident diversity in communities

Figure 17. **Three key principles in developing the New Territories**

What has gone wrong?

Sustainability and liveability concepts are yet to be realised extensively

Sustainable

- Design age-friendly neighbourhood to encourage **aging-in-place**
- Expand **living space per capita**
- Pursue **pandemic-resilient** and **climate-resilient** urban designs
- Actively **conserve wetland**
- Provide space for **emerging industries**

What has gone wrong?

Ongoing land supply measures rely on fragmented individual sites and projects

Scalable

- **Further extend** developable areas from existing new towns, communities and urban networks
- Consolidate fragmented land resources including **brownfields** and **mismanaged conservation area of private owners**

What has gone wrong?

Lack of economic centre in New Territories results in serious job-housing imbalance

Strategic

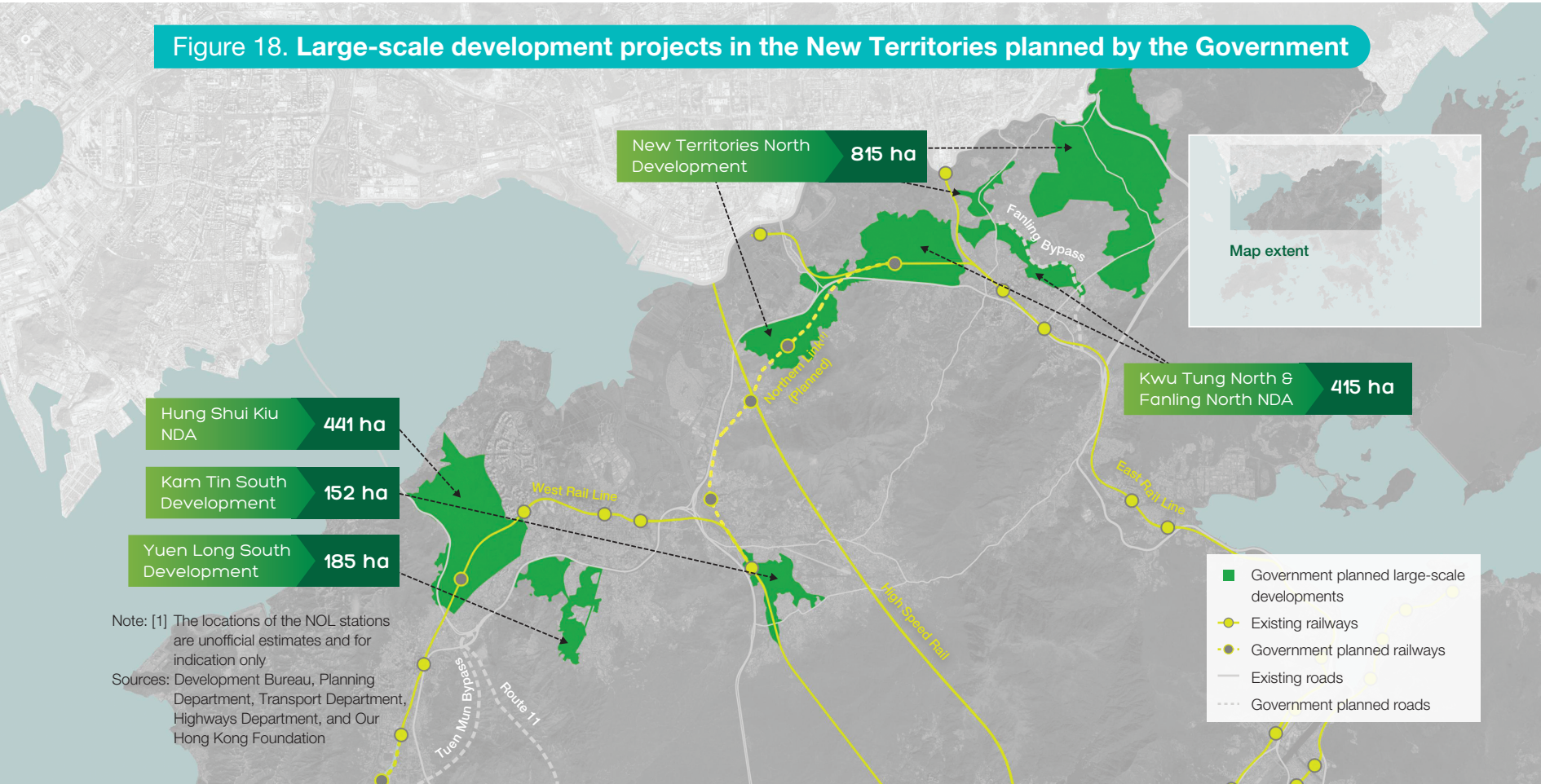
- Complement territorial development with **strategic transport infrastructure**
- **Develop multiple economic nodes** and decentralise the CBD
- Enhance **resident diversity** in the communities

How are we going to do it differently?

Large-scale development projects in the New Territories planned by the Government

With the growing public concern on the housing demand, the Government has been reviewing areas in the New Territories for development potentials. Figure 18 indicates the large-scale development projects implemented or planned by the Government in the New Territories, including HSK NDA, KTN/FLN NDA, Kam Tin South Development, Yuen Long South Development, and NTN Development.

Figure 18. **Large-scale development projects in the New Territories planned by the Government**



Note: [1] The locations of the NOL stations are unofficial estimates and for indication only

Sources: Development Bureau, Planning Department, Transport Department, Highways Department, and Our Hong Kong Foundation

Possibility for more developments

Leveraging the Government's plan, we believe there are potentials for more large scale development in the New Territories by consolidating lands that are currently being underutilised. In this regard, we have identified lands for further study and potential development. In determining the study boundary, there are three selection criteria based on prima facie evidence (Figure 19):

(1) Land use consideration

The study boundary covers lands that are currently underutilised, including fallow farmland and brownfield sites. Active farmland that is scattered and fragmentary in size is also considered for potential consolidation and comprehensive development, yielding a much better planning effect. Green belt areas of lower ecological values and other lands that are not put to good use are also taken into account. Some conservation area and villages, despite not considered as developable in our proposal, are included in the study boundary to examine how surrounding developable areas can integrate with them harmoniously.

(2) Topography

Sizeable sites with flat terrain are selected for further study due to much fewer construction difficulties. Sites with existing development on top may be chosen if there is only low-density development at the moment.

(3) Strategic implication

In deciding the study boundary, we also considered the selected sites' potential synergy with developed areas and planned NDAs. For instance, sites can integrate with nearby NDAs to effectively share infrastructure and achieve economies of scale to boost job opportunities. Sites along strategic transport infrastructures are also prioritised as a higher level of development can be accommodated in these sites.

Readers should note that the abovementioned criteria have yet to consider the specific circumstances of each site. If the development plan is to be taken forward, further feasibility studies and technical assessments have to be conducted to provide more comprehensive information. Additional factors such as environmental and ecological impacts, impact on stakeholders, and infrastructure capacity, should be carefully considered.

ADDITIONAL FACTORS TO BE CONSIDERED

Environmental and ecological impact	• Can effective environmental mitigation measures be adopted to minimise impacts caused by construction and development of potential development areas? • Will there be beneficial impacts for ecology after the land occupied with brownfield activities is restored?
Impact on stakeholders	• Is land resumption and clearance required? How to rehouse and compensate occupants? • How to strike a balance between landowners' property right and public interest?
Infrastructure/utility capacity	• Is additional infrastructure (e.g. sewerage, drainage, water supplies, electricity, etc.) required to support new development? • Does the transport infrastructure have sufficient capacity for additional demand from new development?

Figure 19. **Study boundary selection criteria & considerations**

3 Selection criteria
in determining the study boundary based on prima facie evidence

Land use considerations
- Active / fallow farmland
- Brownfield
- Other underutilised land

Topography
- Sizeable
- Low-density
- Flat

Strategic implication
- Potential synergy with developed areas / strategic new development areas
- Along strategic transport infrastructures

3 Additional factors to be considered
if the plan is to be taken forward

Environmental & ecological impact
- Minimised impact of potential development areas
- Benefits of restoring sites occupied with brownfield activities
- Mitigation measures

Impact on stakeholders
- Landowner
- Operator
- Tenant

Infrastructure / utility capacity
- Transport
- Sewerage / drainage
- Water supplies
- Electricity
- Internet network coverage

4

Developing a liveable New Territories

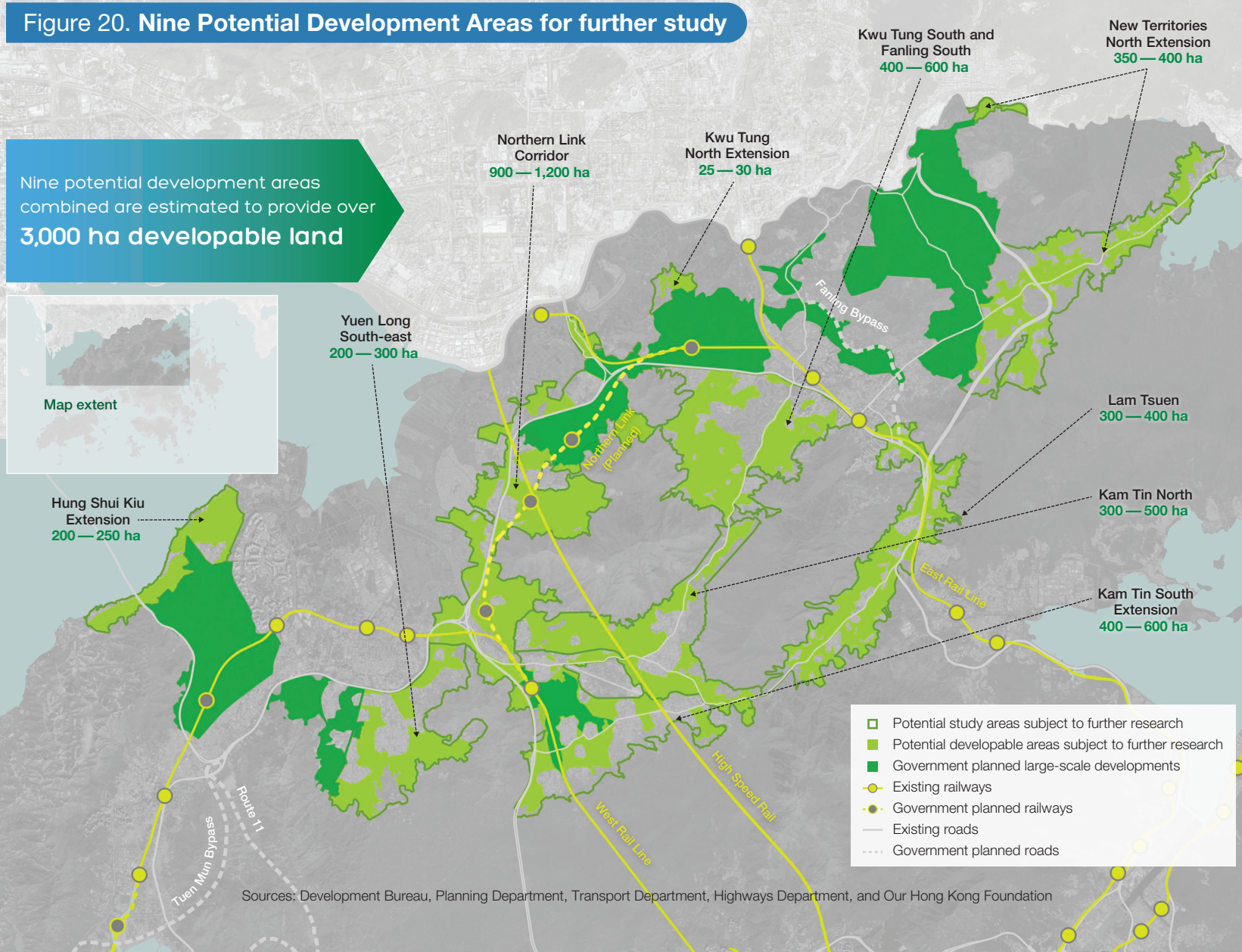
Nine potential development areas subject to further study were identified

To design a forward-looking strategic plan for Hong Kong, we must go beyond the current land supply measures that rely on fragmented sites and individual projects. A single focus on housing has created bedroom communities with inadequate provision of community facilities. New towns have often been developed in silos without achieving synergy with nearby new towns and fostering new economic centres in the New Territories. It is only with a comprehensive planning vision that Hong Kong can create truly liveable and desirable new towns.

We hereby present a total of nine Potential Development Areas (PDAs) for further study (Figure 20). The PDAs include HSK Extension, Yuen Long South-east, Northern Link (NOL) Corridor, Kwu Tung North Extension, Kwu Tung South & Fanling South, NTN Extension, Lam Tsuen, Kam Tin North, and Kam Tin South Extension. All of them are extended from existing new towns and planned NDAs. These PDAs consolidate fragmented land resources in the New Territories, forming a massive development belt comparable to Hong Kong's core urban area (i.e. Northern part of Hong Kong Island, Kowloon and Tsuen Wan new town). A preliminary assessment indicates that these PDAs can bring over 3,000 hectares of developable areas.

On a practical level, PDAs adjacent to NDAs or other developments that are currently under various stages of planning and construction process could be developed first, essentially serving as an extension to these developments. These include the HSK Extension, Yuen Long South-east, NOL Corridor, Kwu Tung North Extension and Kam Tim South Extension.

Figure 20. **Nine Potential Development Areas for further study**



Sources: Development Bureau, Planning Department, Transport Department, Highways Department, and Our Hong Kong Foundation

A comprehensive planning solution for brownfield redevelopment is needed

In the light of the continued shortage of land for housing, the Government has been actively considering redevelopment of brownfield. As explained in our previous report, *Strategic Land Development for Jobs: From Brownfield to Modern Logistics* (Our Hong Kong Foundation, 2020c), brownfield serves as important economic ancillary land for a variety of industrial activities, such as trading and logistics, construction, recycling, and many other sectors which have been vital to Hong Kong's economy. In redeveloping brownfield for housing, the first issue is to find a suitable location for resettling the current occupants.

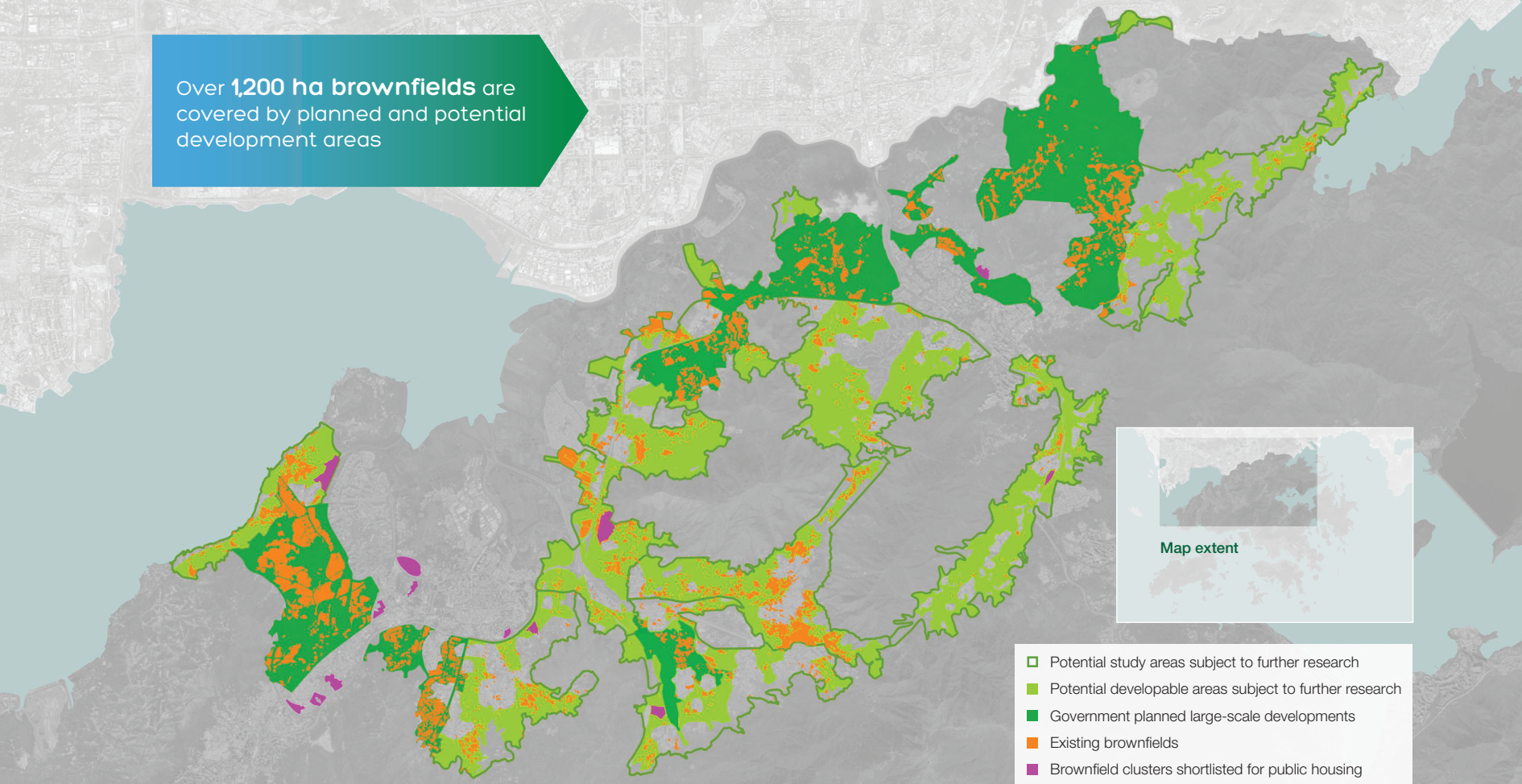
Furthermore, these scattered and fragmented brownfields often lack infrastructure, transport network to town centres, and community facilities. If an individual brownfield site is reapportioned for a limited number of housing units and a small population, it cannot justify the significant up-front capital investment in providing new infrastructure. Hence, brownfields generally have low development potential or incur a prolonged development cycle if they are not developed cohesively with large-scale NDA projects.

As a case-in-point, for those brownfields beyond the NDA boundaries, only 47 hectares (2.9% of total brownfield sites) in 12 clusters are selected for potential public housing development by the PlanD. The development cycle is not fast either — the supply will only be realised in 2030 at the earliest, i.e. more than ten years after the feasibility study conducted in 2017.

On the contrary, we offer a comprehensive planning solution for brownfield development (Figure 21). The planned NDAs and PDAs in our proposal cover over 1,200 hectares of brownfields. With thorough planning intended for large-scale development, the proposal gives grounds for constructing new infrastructures and community facilities. It would release the development potential of fragmented brownfield areas and agricultural land effectively, creating a much more liveable environment with sufficient community facilities.

Figure 21. **We offer a comprehensive solution for brownfield redevelopment**

Over **1,200 ha brownfields** are covered by planned and potential development areas

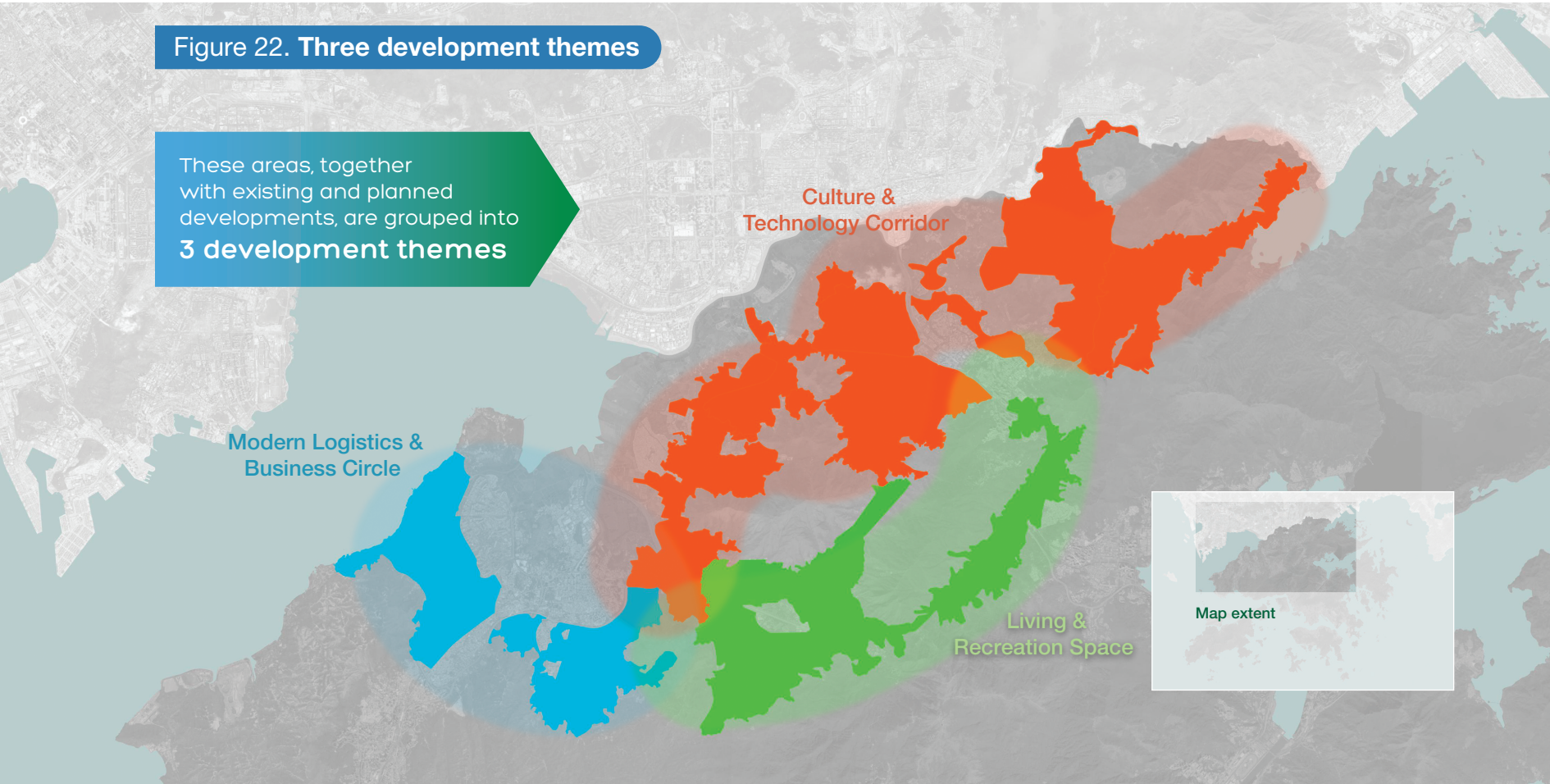


Note: * Unofficial boundary based on estimation and observations on the surrounding environment
Sources: Development Bureau, Planning Department, and Our Hong Kong Foundation

The potential development areas are grouped into three development themes

The planned NDAs and PDAs are grouped into three development themes (Figure 22): Culture & Technology Corridor in the north, Modern Logistics & Business Circle in the north-west, and Living & Recreation Space in the south. Instead of overturning the currently planned development areas, the proposed themes complement their planning intentions and enable the Government's planned projects to achieve much better implementation results.

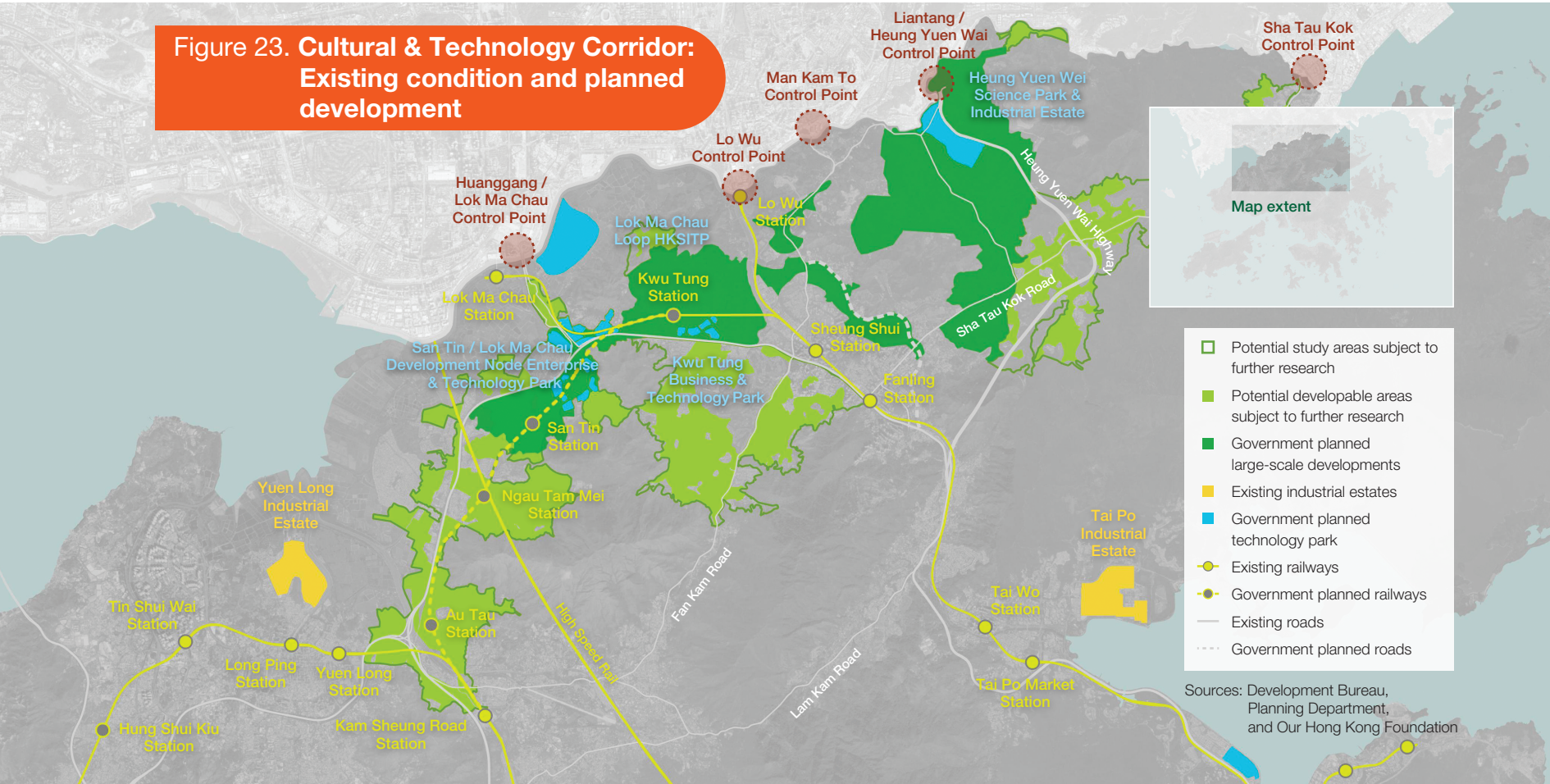
Figure 22. **Three development themes**



(1) Culture & Technology Corridor

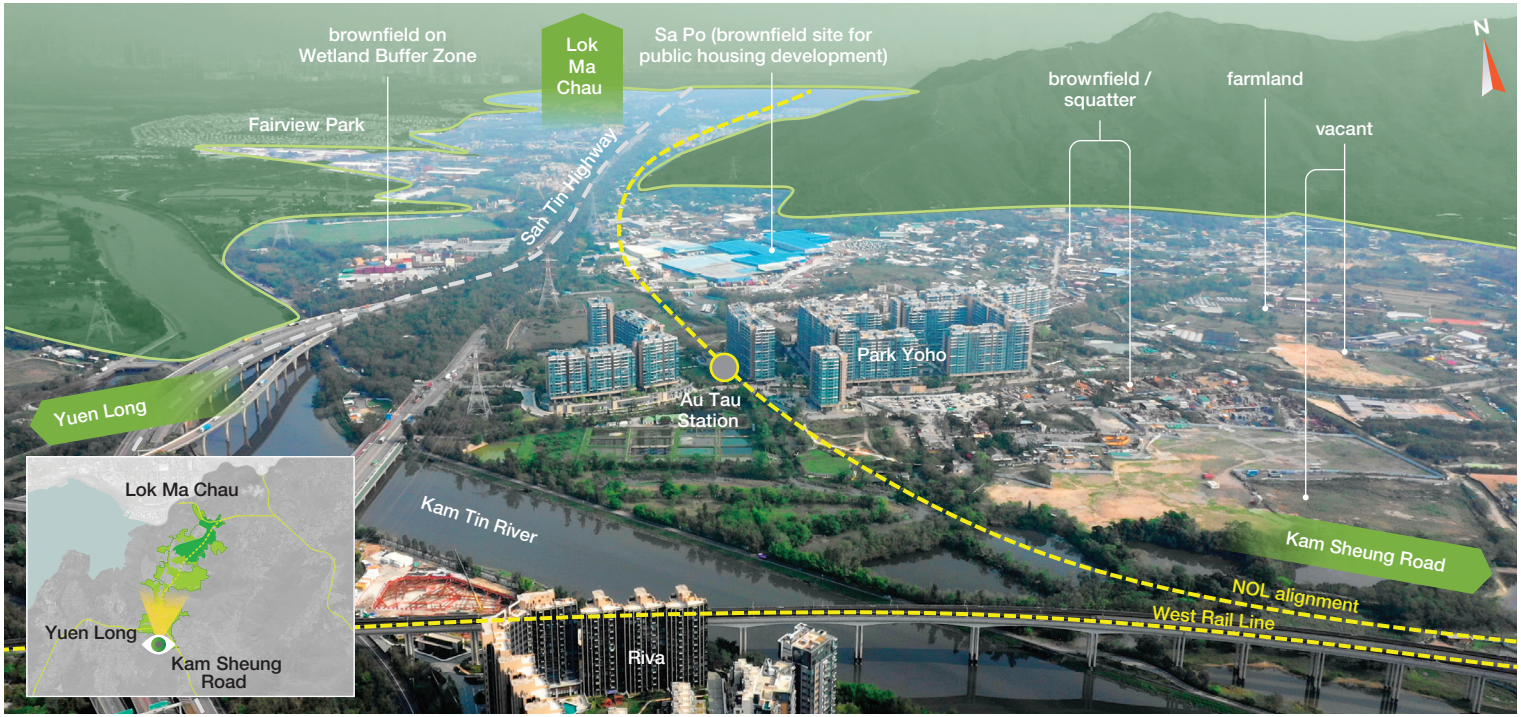
Building on the planned San Tin / Lok Ma Chau Development Node, KTN/FLN NDA, and NTN, the Culture & Technology Corridor extends the developable area further to sites along the NOL, Kwu Tung North extension, Kwu Tung South & Fanling South, and the east of NTN. Abutting the boundary to Shenzhen, the Culture & Technology Corridor enjoys the strategic locational advantage. It will provide expansion for innovation hub and serves as an anchorage of enterprises and academic institutions. The ecosystem for the local arts and cultural sector can be fostered by capitalising on the cultural resources of the New Territories. With an active conservation strategy, the area will be a liveable and vibrant workplace for its residents.

Figure 23. **Cultural & Technology Corridor: Existing condition and planned development**



Sources: Development Bureau, Planning Department, and Our Hong Kong Foundation

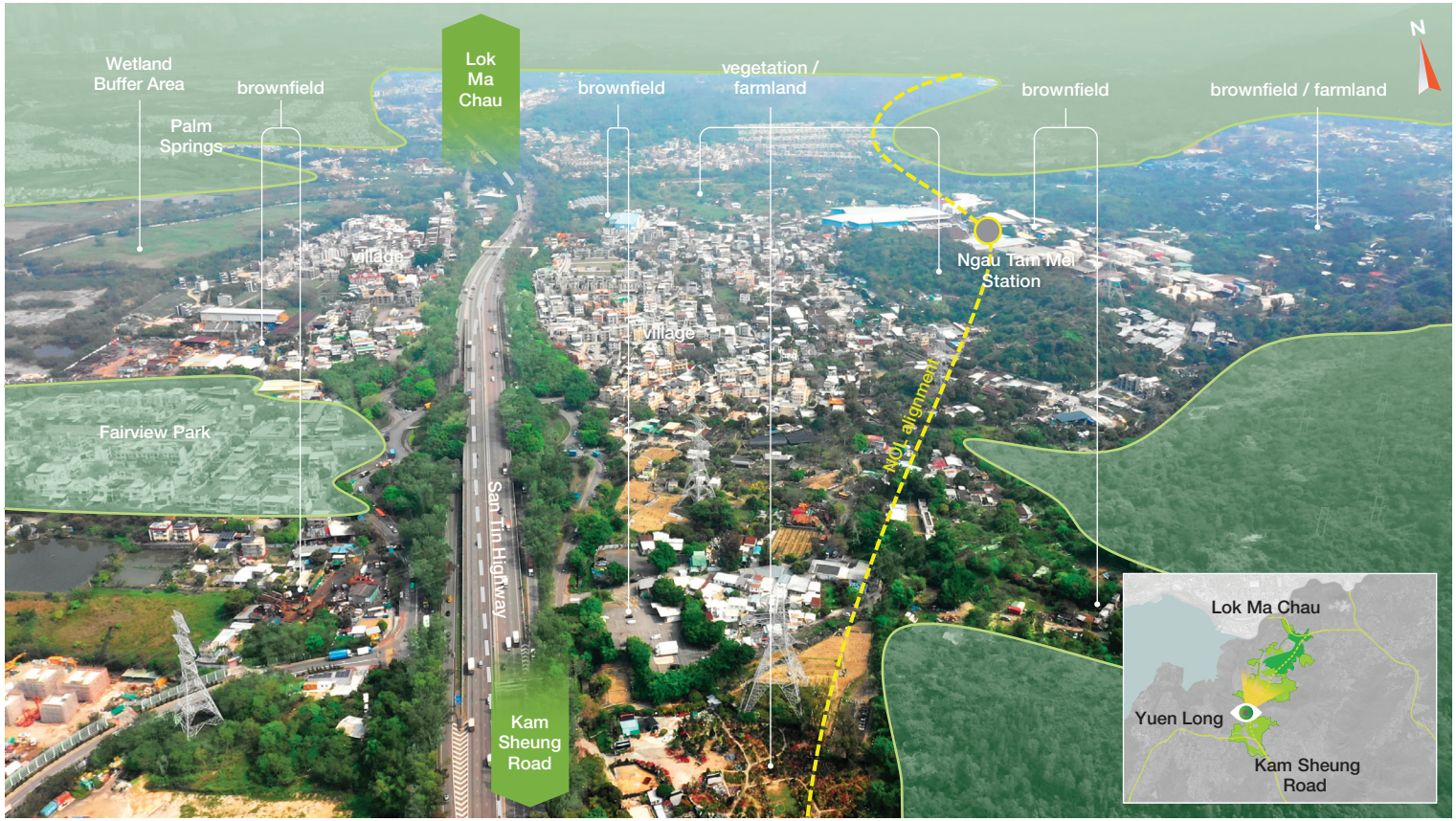
Figure 24. **Site condition of NOL Corridor — Au Tau Station**



Au Tau is characterised by extensive brownfield sites, with farmland, vacant sites, and squatter intermingled in between (Figure 24). A medium-density residential development is near the planned Au Tau station. The planned Au Tau station and the NOL could provide capacity for a higher level of development. In planning for potential development, due consideration has to be given to the adjoining Wetland Buffer Area (WBA). It should be noted that many brownfield activities stretch over the WBA at the moment, it provides an opportunity to rectify these brownfield sites for more compatible development.

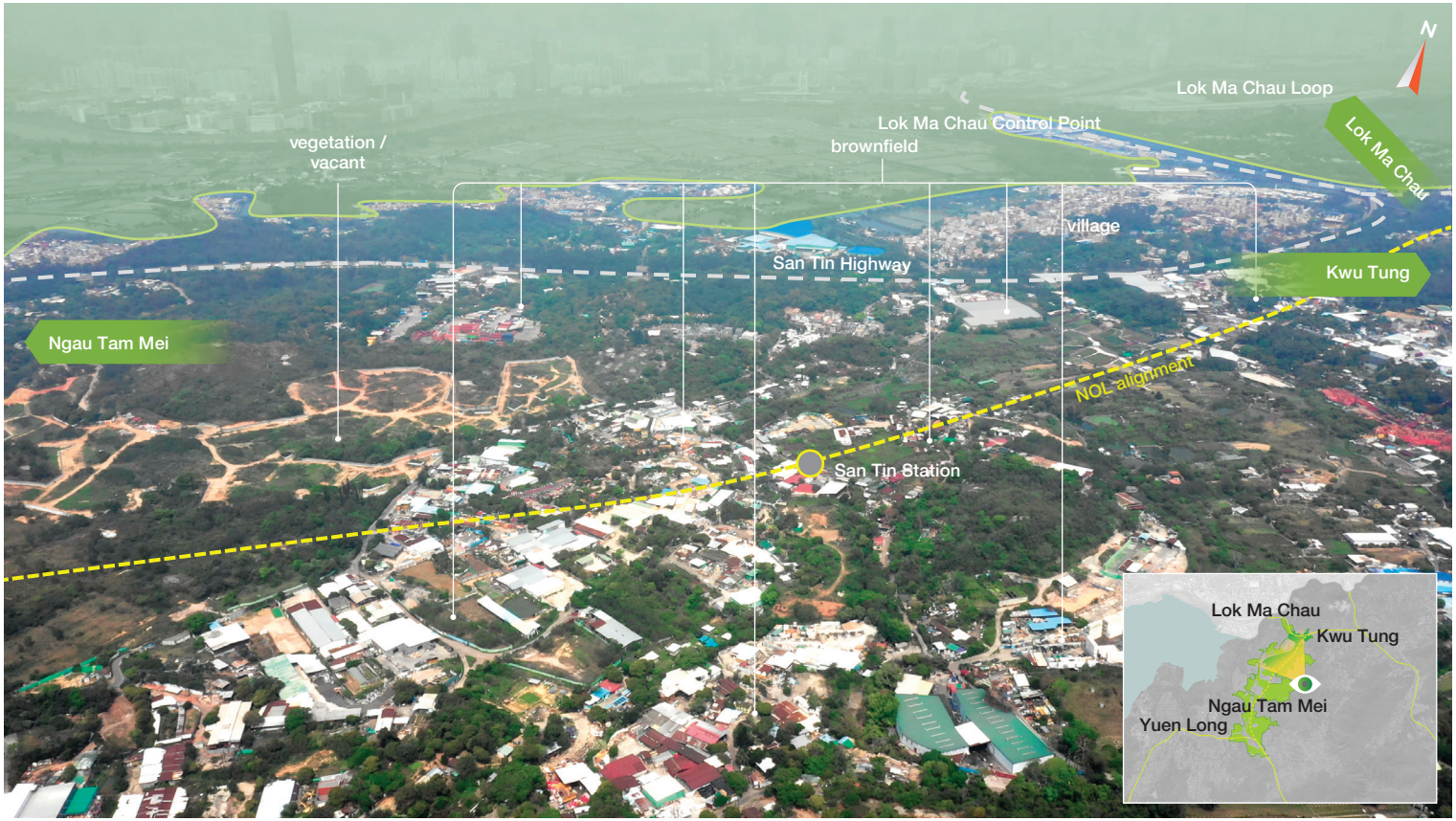
In addition, the Government plans to develop the brownfield cluster in Sha Po and its neighbouring area (30 hectares) for public housing. Yet, if developed individually, it will be subject to many development constraints such as fragmented land ownership, rehousing the large scale of brownfield activities, and inadequate provision of community facilities nearby. Our proposal offers an opportunity for it to be developed comprehensively with adjacent lands.

Figure 25. **Site condition of NOL Corridor — Ngau Tam Mei Station**



At present, brownfield sites spread through the periphery of Ngau Tam Mei station (Figure 25). Extensive vegetation or farmland scatters among the established villages and brownfield operations. Towards the north-west side lies the WBA, which are mainly dried-up fishponds overgrown with weeds. Again, this highlights the need for a proper management approach for the WBA, given its present circumstances. The flat terrain of Ngau Tam Mei also presents an ideal condition for comprehensive NDA development.

Figure 26. **Site condition of NOL Corridor — San Tin Station**



San Tin station is within the study boundary of planned San Tin / Lok Ma Chau Development Node (Figure 26). At present, massive brownfield operations extend over the area, with some part being vacant or covered with vegetation. The PlanD and the CEDD will commence the feasibility study in the second half of 2021 and formulate a Preliminary Outline Development plan.

Figure 27. **Site condition of Kwu Tung North Extension**

The Government plans to reserve land in the Kwu Tung North NDA for "Research & Development" and "Business & Technology Park" development. We propose further expansion of Kwu Tung North and to provide more land on this strategic location for development.

Figure 27 shows the northern part of planned Kwu Tung North NDA. The first stage of site formation and engineering infrastructure of NDA commenced in 2019, while the whole project is expected to be completed in 2031. The Kwu Tung North Extension in the north of the NDA is characterised by vacant sites and vegetation, which can be considered as expansion space for Kwu Tung North NDA after taking full account of the wetland nearby.

Figure 28. **Site condition of Kwu Tung South & Fanling South**

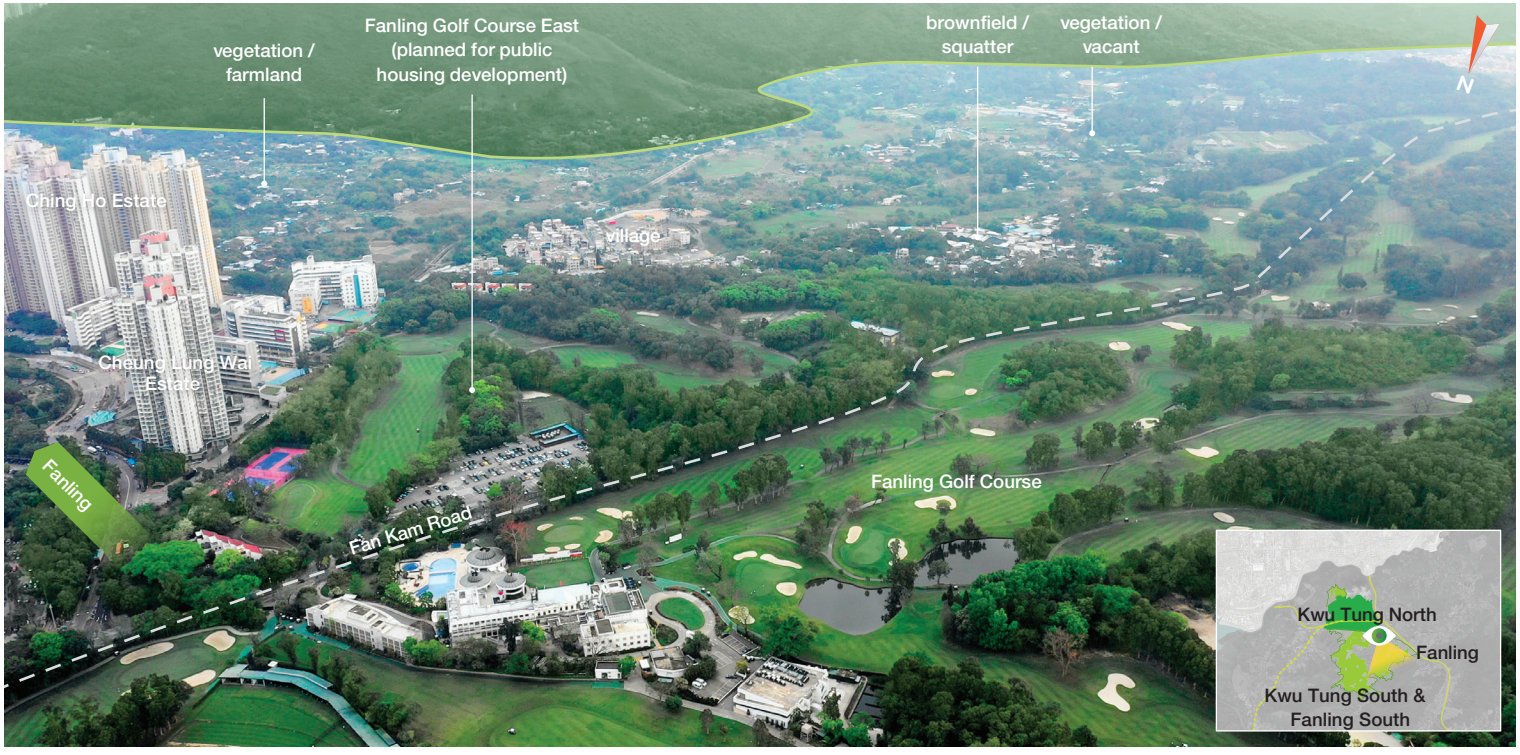


Figure 28 shows the green and open landscape at the Fanling Golf Course in Kwu Tung South & Fanling South. Brownfield, squatters, and vacant sites are seen not far away from the golf course.

In 2023, 32 hectares in the east will be resumed for public housing development. This area is in the periphery of Fanling and Sheung Shui town and some public housing estates have been developed nearby. More residential development can be accommodated in this area if sufficient transport and community facilities are provided.

To the west and south-west of the golf course, the Government plans to establish an Agricultural Park in this massive farmland / vegetation / vacant land. In view of its rural characteristics, the co-existence of traditional and modern farming activities would be studied as the future development direction of the farming industry in Hong Kong.

Figure 29. **Site condition of NTN Extension (North-east of Heung Yuen Wai Highway)**

The Government has earmarked a site near Liantang / Heung Yuen Wai (LT/HYW) in NTN to develop a science park and an industrial estate. It will create more job opportunities to attract more residents. We propose to further expand NTN to the east and the north-east to provide additional land for variety of residential development. Figure 29 is a photo of NTN Extension taken on the north-east side of Heung Yuen Wai Highway. The area is highly accessible to core urban areas and Shenzhen with nearby main roads, including Sha Tau Kok Road and Heung Yuen Wai Highway.

At present, it is characterised by farmland, brownfield activities and vegetation. Development proposals will need to pay due consideration on harmonious integration with the local rural settlement.

Planning Concept

a. Expansion space for planned technology innovation hubs and anchorage of global enterprises

Considering the Hong Kong-Shenzhen Innovation and Technology Park at the Lok Ma Chau Loop (HKSITP) (87 hectares), San Tin / Lok Ma Chau Development Node Enterprise and Technology Park (57 hectares), Kwu Tung Business & Technology Park (12 hectares), and Heung Yuen Wai Science Park & Industrial Estate (56 hectares) in the making, this area will be the engine for Hong Kong's development in Innovation & Technology (I&T) sector and related research. These developments combined will offer 212 hectares of land in Hong Kong to nurture an I&T ecosystem, nine times as much land area as Hong Kong Science Park. However, it is still dwarfed by the tremendous space for I&T in Shenzhen — the Shenzhen Innovation and Technology Zone at the north side of Shenzhen River alone spans 300 hectares. To boost the development of the planned technology parks, **the Culture & Technology Corridor will offer expansion space within reach for the I&T sector to grow and a co-creation mixed-use neighbourhood to cater for residents' everyday needs.**

Enjoying the locational advantage of abutting Shenzhen's border, the Culture & Technology Corridor well placed to be a double gateway between China and the world. **Enterprises and renowned institutions from any part of the world could station in the abundant expansion space provided by the Culture & Technology Corridor and set up laboratories, offices, or regional headquarters.** The presence of companies from various countries and cultural backgrounds could also spark off the exchange of ideas and cultivate a solid international I&T network. This would create new businesses and new job opportunities in Hong Kong as well.

Technology

Even though Hong Kong enjoys a relative competitive edge in some areas of basic scientific research, there is no denying that gaps in knowledge transfer remain unsolved. Knowledge transfer furthers innovation by transforming knowledge generated in university laboratories into products and services that could yield economic and social benefits. To keep the momentum forging the local innovation ecosystem ahead, OHKF put forward seven recommendations in *Building the Technology Bridge for Scientific Breakthroughs: Developing an Innovation Hub of the Future*. By driving knowledge transfer, the policy recommendations enable Hong Kong to build a solid foundation as an international innovation powerhouse (Our Hong Kong Foundation, 2020d).

b. Creative innovations infrastructures to leverage on the diverse resources of the New Territories

Being home to many indigenous villages in Hong Kong, the Cultural & Technology Corridor are loaded with plenteous historical and cultural heritages, such as Chung Ying Street, Lung Yeuk Tau, and Tsung Pak Long. The Government is currently planning to build the New Territories East Cultural Centre, a multi-auditoria art building near the Fanling station (*ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE*, 2018). More performance venues can be provided in the PDAs to complement and synergise with the up-and-coming facilities in the New Territories to attract and nurture creative talents, especially small to medium-sized local art groups.

Coupled with heritage conservation, this would allow for meaningful collaborations to take place that could contribute to fostering a self-contained, dynamic and culturally vibrant community showcasing Hong Kong's local charm and history. These arts and cultures will be the cornerstone for strengthening our identities and sense of belonging and enhancing Hong Kong's soft power. Moreover, the values inherited within and passed on will create a link among Hong Kong people of different generations.

Culture

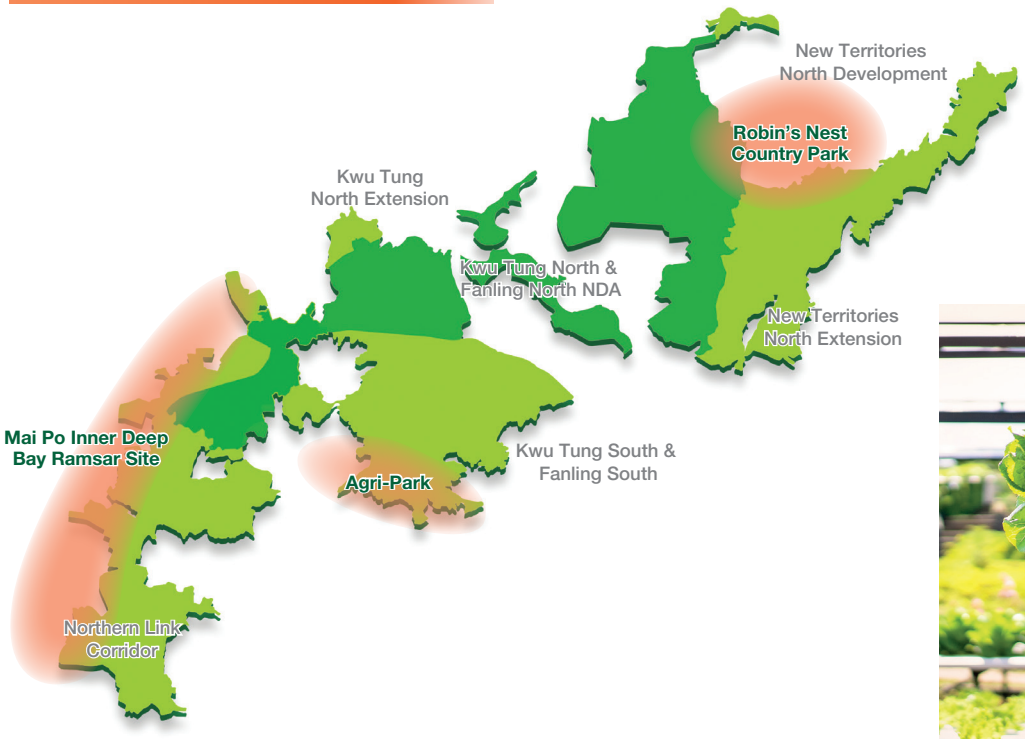
Infrastructures such as incubation space, technology studio and media laboratory can be established in the Cultural & Technology Corridor to support the research and development of creative innovations. The provision of infrastructural support will enable and encourage cross-sector collaborations among the cultural and creative sectors and other sectors such as technology enterprises in the PDAs, thereby giving birth to new ideas and disruptive innovations. Moreover, these infrastructures can act as testbeds for creative experimentations that contribute to creative placemaking and cultivating a more open-minded community in arts appreciation.

Promoting the development of the creative sectors goes beyond the mere provision of space — policy blueprint, funding, collaboration platform and much more policy support are needed. With arts tech becoming a noticeable global trend in the cultural ecosystems worldwide, OHKF's Arts Innovation Research Report, *Innovating Creative Cultures — Arts Tech*, has put forward a comprehensive set of recommendations for Hong Kong to capture the immense opportunities for the arts and creative sectors (Our Hong Kong Foundation, 2020b).

c. Active conservation to create a diverse and liveable living environment

At the proximity of the NOL Corridor lies the wetlands in the Mai Po Inner Deep Bay Ramsar Site. These wetlands are critical ecological habitats for a diverse range of species, but many have been degraded as local fishery faded out and eventually lost their ecological values. **In developing the PDAs, wetland degradation is remediated by curbing brownfield sprawl and incentivising active conservation management.** Land utilisation in areas within or near the wetland boundary can be rationalised based on the carrying capacity of the environment with appropriate policy support.

Nature



Considering the extensive good quality arable land in Kwu Tung South and Fanling South, a designated area can be established in the southern part of this PDA for agricultural rehabilitation and local farming park for the public. **This would facilitate the development of modern agriculture and provide space for a lifestyle farming community;** especially more citizens have sought escape in nature after the outbreak of the pandemic.

Overseas example: Many cities recognise that innovation is not possible without a vibrant cultural and creative environment

Technology and innovation will dominate future economic development, and cities that attract talents and companies in these fields will have the upper hand. Many cities are racking brains to create appealing neighbourhood and cultivate a culturally rich civic life, alluring more businesses and institutions. Indeed, many innovative cities in the world also happen to be the best places for culture lovers.

Silicon Roundabout, London, United Kingdom

Emerging after the global financial crisis in 2007, Silicon Roundabout was a small knot of 16 startups in East London. In 2011, the UK government stepped in and facilitated the cluster's growth by providing funding and policy support (Quetteville, 2018). It has now become a growing startups cluster with over 6,000 companies. Notable participants include tech giants such as Amazon, Google and Facebook. Many attributed one critical success factor to be East London's vibrant cultural life — independent art galleries, cafes, and clubs that persuaded the businesses (Volpicelli, 2020).

Brainport, Eindhoven, Netherlands

Repeatedly crowned as the "smartest square kilometre in Europe", the High Tech Campus Eindhoven in the Brainport region is a knowledge base for various fields of technology, such as High Tech Systems, Med Tech, and Photonics (Romme, 2017). Brainport Eindhoven, a cooperative initiative of local governments, industry, and educational institutions formed in 2005, is responsible for devising policies, attracting international companies, and supporting startups to boost the development of the local knowledge economy (Morisson & Doussineau, 2019). Within reach of HTCE lies the Strijp-S, a creative centre redeveloped from a former industrial park. The Strijp-S provides major event and art space for hosting large-scale events, including Dutch Design Week.

Minato Mirai 21, Yokohama, Japan

Minato Mirai 21 (MM21) is Yokohama's business hub revitalised from a shipbuilding yard. In the 1980s, the municipal Government established the Bureau of Planning and Coordination to resolve coordination issues and spearhead the development plan (Tokyo Development Learning Center, 2017). Currently, MM21 has attracted over 1,700 companies to set up their offices or R&D centres, with key tenants including Nissan, Samsung, and Apple. As of 2013, over 90,000 people worked at MM21 (Policy Division, Policy Bureau, Yokohama City Government, 2018). In addition, the waterfront area in MM21 is also a major cultural and tourism centre. Music halls, Noh theatre, and museums and many other cultural attractions have drawn millions of visitors annually from all over the world.

Implications on Hong Kong's future new towns

Referring to the successful overseas experience, HKSAR Government could form a dedicated organisation with representatives from the Government, business, and institutes to formulate and promulgate development plans. Furthermore, the Government should consider offering tax subsidies and allowances to attract enterprises to relocate to Hong Kong. **Apart from creating high value-added jobs locally, these enterprises will also usher in new technology, know-how, capital, and business network that any nascent development area needs.** By the same token, immigration is key to enabling innovation. The Government should be more proactive in facilitating brain gain — enticing immigration of talents and the return of Hong Kong students studying abroad.

Urban design makes a difference too. Many cities assign considerable area as open space, cultural landmarks, and art installation, also earnestly hosting large-scale events. These efforts cultivate a creative environment, which kindles innovation and appeals to different companies and talents.

Case study: Lok Ma Chau Loop and surrounding area

In recent years, the Government has been bolstering the HKSITP to be the new impetus into the local economy. Society will look to the HKSITP as a credible indicator of Hong Kong's capability in driving I&T development and implementation of new cross-border collaboration models such as "one zone, two parks". Therefore, in this section, we will take a closer look at the development potentials near Lok Ma Chau Loop.

Zooming into Lok Ma Chau, the redevelopment of Huanggang Port in Shenzhen also brings new development opportunities and synergise with the HKSITP. In 2020, the Chief Executive announced in the Policy Address that Hong Kong would explore with the Shenzhen Municipal Government on the co-location arrangements of the new Huanggang Port in Shenzhen (*The Chief Executive's 2020 Policy Address*, 2020). After the co-location arrangement is implemented, over 20 hectares of land in Hong Kong's Lok Ma Chau Control Point can be released for other purposes.

The Control Point is accessible from all sides, making it a convenient and attractive location for further development. At present (Figure 30), the Control Point is sandwiched between wetland in the Deep Bay Area and brownfield operation nearby. While the redevelopment offers an opportunity to rationalise the land use, the plan should also reflect a harmonious integration with the ecologically sensitive wetland. To fully exploit the development potential, the HKSITP and the San Tin / Lok Ma Chau Development Node need to be considered when redeveloping the Control Point.

Figure 30. **Site condition of NOL Corridor — San Tin / Lok Ma Chau Loop**

The Government also requested the MTR Corporation to study the feasibility of extending the NOL to HKSITP and Huanggang Port. This is likely to facilitate cross border collaboration and boost the development of HKSITP, whose remote location and poor transport network would dent its attractiveness as the world's knowledge hub and I&T centre. The Shenzhen Innovation and Technology Zone on the other side of the river, for example, is also well connected with metro lines and intercity trains.

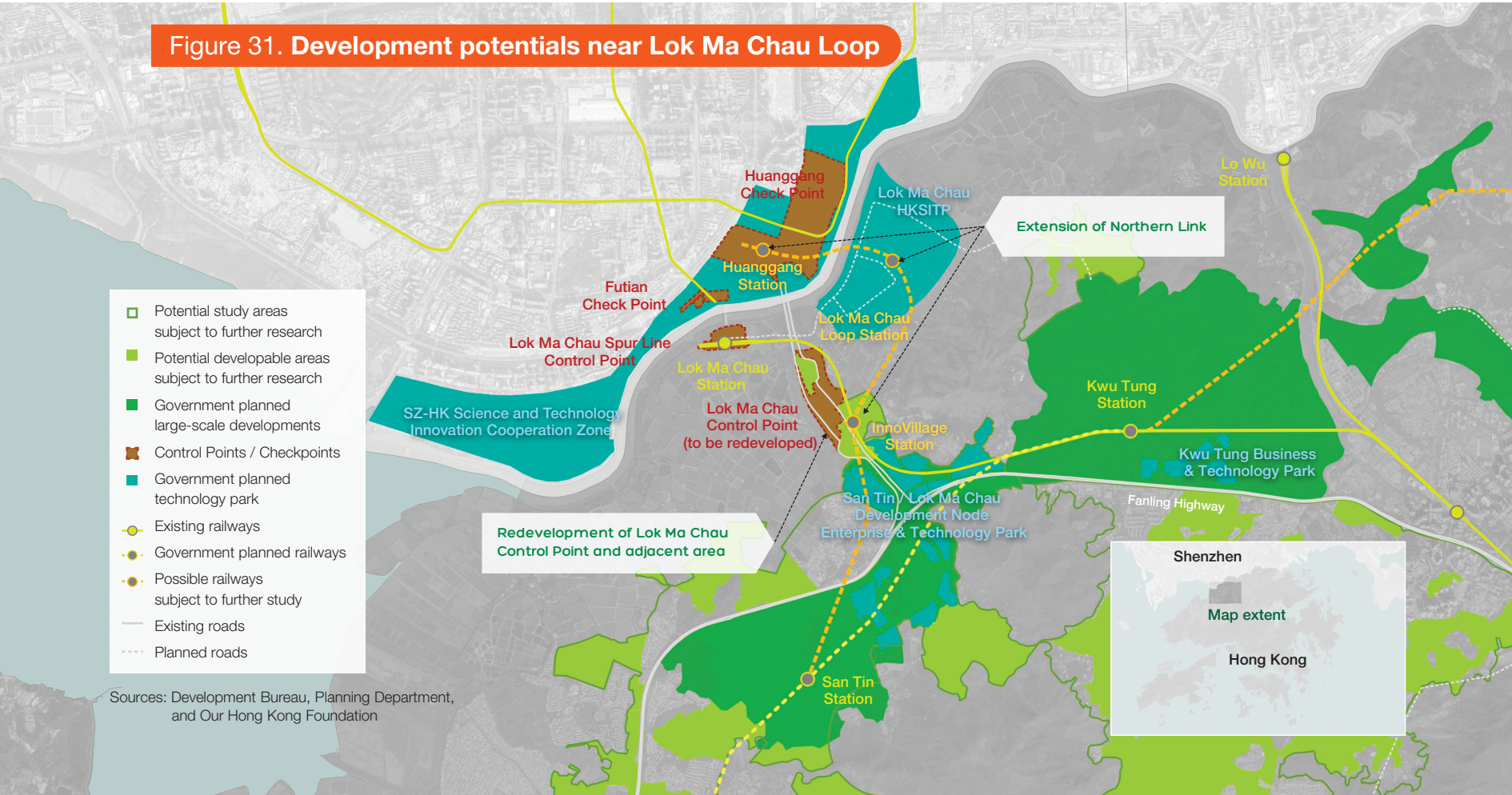
That being said, since the detailed design and construction of superstructures in the HKSITP has been underway, the Government should speed up the construction of the NOL extension. The later the NOL extension project commences, the higher the engineering difficulties and the cost will be.

On a related note, since over 20 hectares of the Control Point can be released for other uses following the co-location arrangement, we propose developing the Lok Ma Chau Control Point into a

so-called InnoVillage to complement the HKSITP (Figure 31). Since the HKSITP is primarily dedicated to R&D purpose, there is only minimal area for commercial and supporting facilities. In this regard, the Lok Ma Chau Control Point and its adjacent area can be redeveloped into a co-creation and mixed-use neighbourhood to serve the needs of the talents and visitors at the HKSITP.

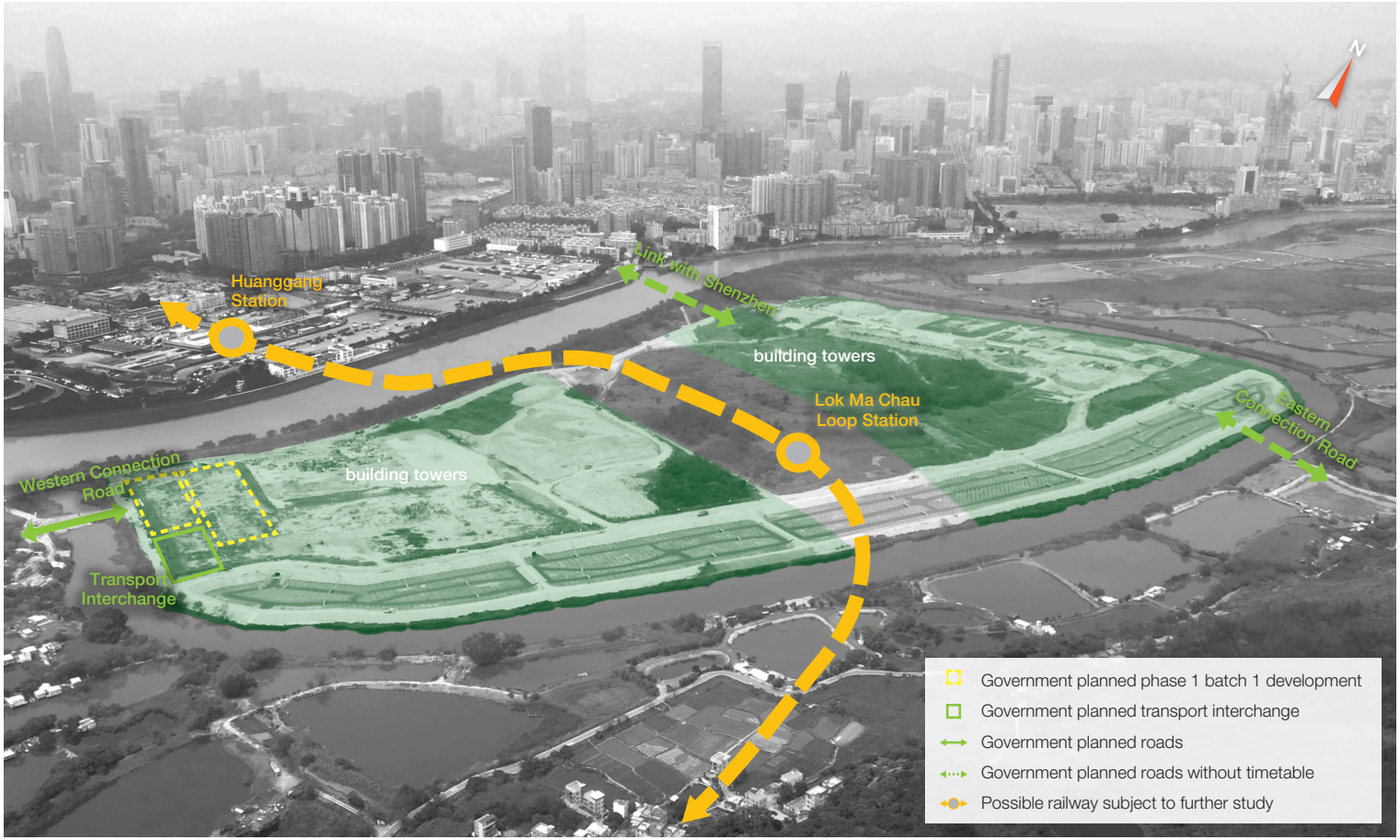
Affordable and quality accommodation, business and innovation campuses, retail spaces, GIC facilities and open areas can be provided at InnoVillage to enrich the appeal of the HKSITP. In relation to this, we suggest adding an intermediate station at the Lok Ma Chau Control Point along the NOL.

Figure 31. **Development potentials near Lok Ma Chau Loop**



Sources: Development Bureau, Planning Department, and Our Hong Kong Foundation

Figure 32. **Lok Ma Chau Loop concept plan**

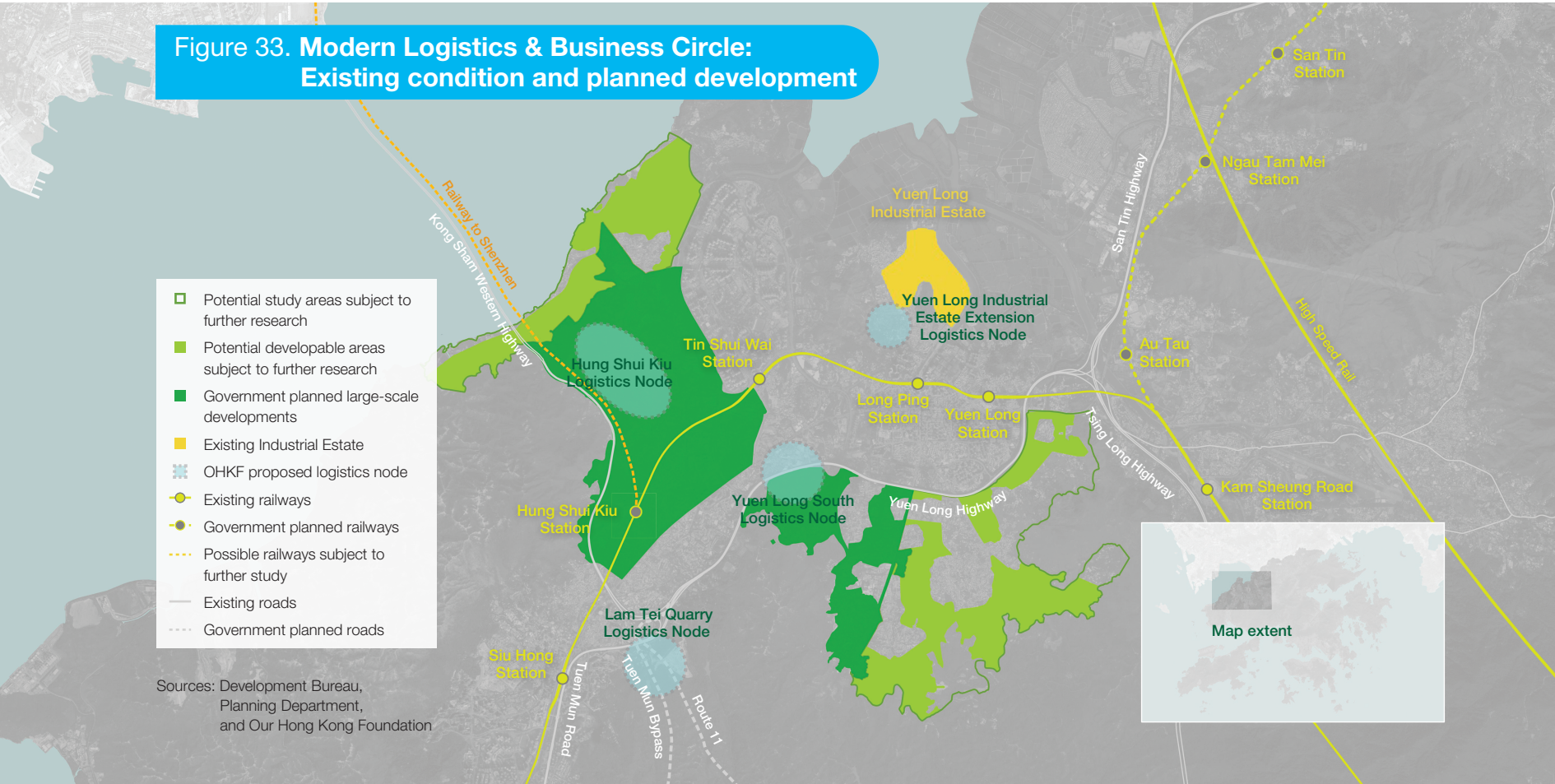


Note: This concept plan is for indicating the approximate development scope only and is subject to detailed design.
Source: Legislative Council

(2) Modern Logistics & Business Circle

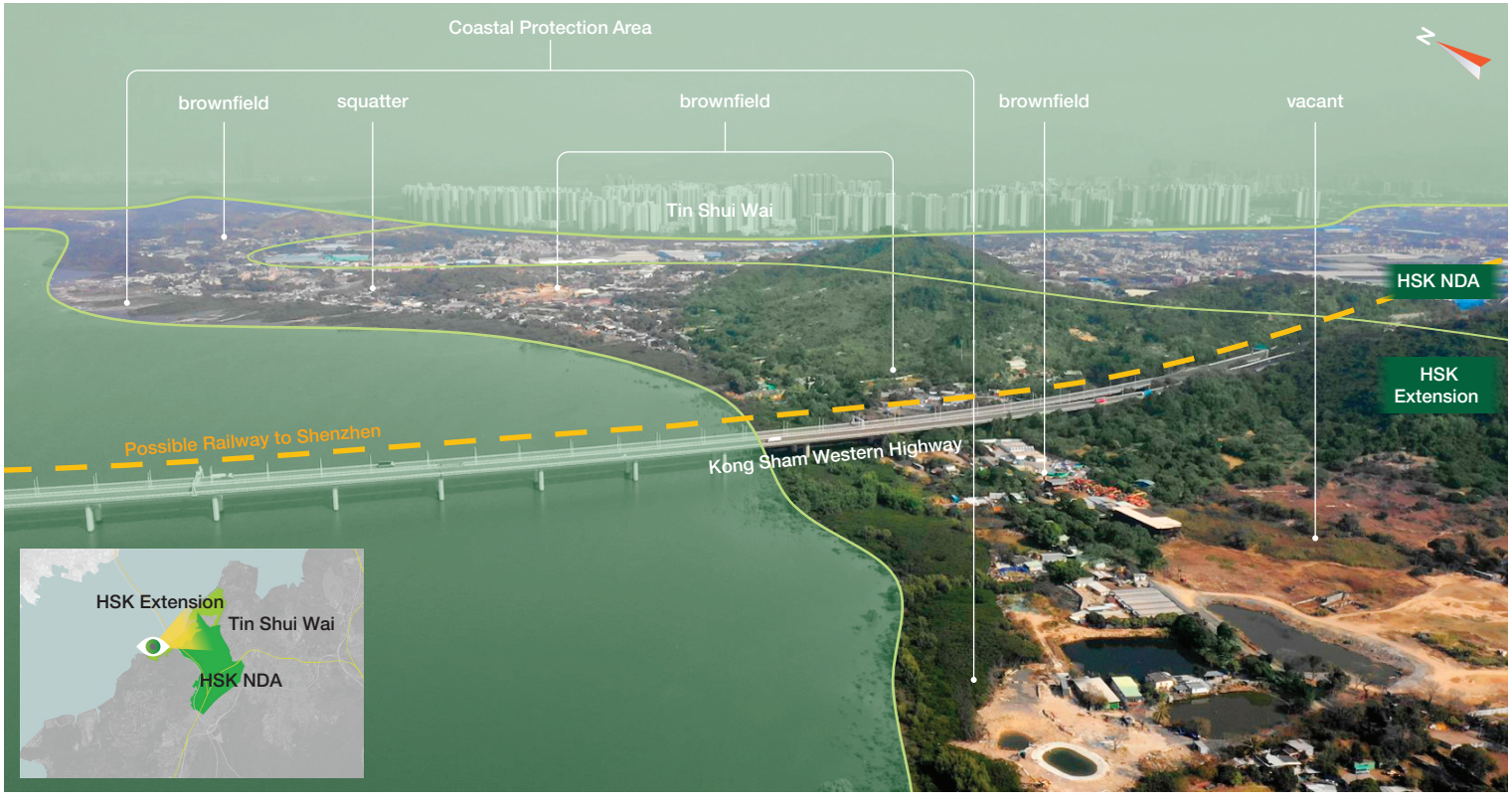
The Modern Logistics & Business Circle encompasses the Government's planned HSK NDA and Yuen Long South Development, together with our proposed PDAs in HSK extension and Yuen Long South-east. This area is designed to further the development of HSK, which is planned as a regional economic & civic hub for the North-west New Territories. The development of this area focuses on the provision of a quality living environment that appeals to talents and enterprises.

Figure 33. **Modern Logistics & Business Circle: Existing condition and planned development**



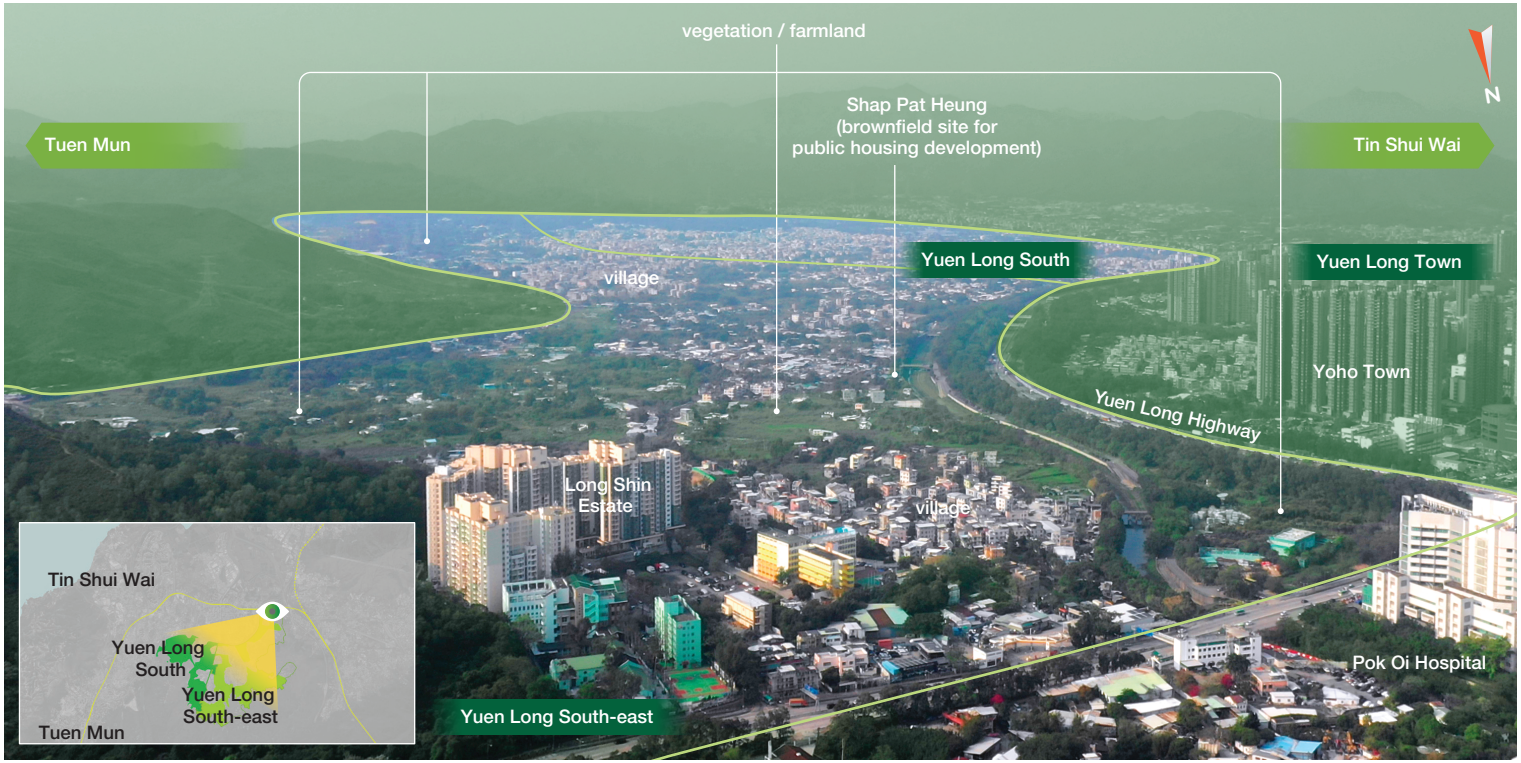
Sources: Development Bureau, Planning Department, and Our Hong Kong Foundation

Figure 34. **Site condition of Hung Shui Kiu Extension**



HSK Extension is at the gateway to Shenzhen Bay Port connected by Shenzhen Bay Bridge. It is wrapped by the Coastal Protection Area (CPA), intended to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment (*Master Schedule of Notes — Coastal Protection Area*, n.d.). However, Figure 34 shows that the CPA is currently encroached by disturbances, including brownfield and squatters. HSK Extension also includes two planned public housing sites at Sha Kong Wai (west of Tin Shui Wai). Comprehensive planning and development of the area will straighten out the present dissonant situation and help restore the environment. The open area and decent surroundings of the CPA could also enhance the appeal of HSK Extension.

Figure 35. **Site condition of Yuen Long South-east**



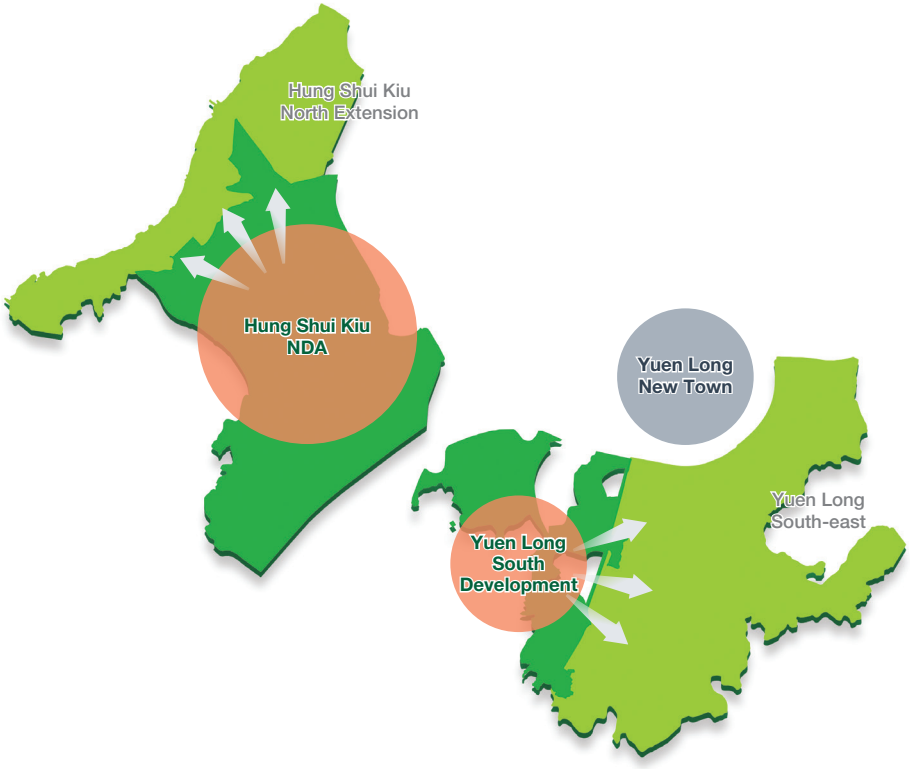
The site in Yuen Long South-east is characterised by vegetation/farmland and brownfield scattered over flat terrain (Figure 35). The 2-hectare brownfield cluster in Shap Pat Heung will be resumed for public housing development. By consolidating with vegetation/farmland nearby, the area can be further developed as an expansion space of Yuen Long South Development.

Planning concept

a. Extension of the future commercial centre at HSK NDA

Strategically located close to Shenzhen and well connected to the Hong Kong International Airport and the Greater Pearl River Delta, the HSK NDA is the up-and-coming development node in the North-west New Territories. Upon full development, the NDA will create approximately 150,000 new employment opportunities. In particular, the planned Logistics, Enterprise and Technology quarter strives to be the economic node for the North-west New Territories. In our previous report, *Strategic Land Development for Jobs: From Brownfield to Modern Logistics,* we have recommended four potential sites in the area to be developed as logistics nodes to strengthen Hong Kong's key pillar industry and competitive edge. These sites are at the HSK NDA, Yuen Long South Development, Yuen Long Industrial Estate Extension, and Lam Tei Quarry area. The nodes can be developed cohesively to enable HSK NDA to thrive as a gateway to the Greater Bay Area.

Coupled with the rapid development of the modern service industry in Qianhai Shenzhen, **our proposed HSK Extension can further boost the development of Hung Shui Kiu as a regional economic centre.** A new cross-city railway to connect Hung Shui Kui to Shenzhen can be considered to enrich cross-border business activities in the New Territories.



b. Expansion space for residential communities

The proposed PDAs in Yuen Long South-east and HSK North Extension are also designed to provide expansion space for the planned HSK NDA and Yuen Long South Development. A variety of residential communities would be designed with respect to the particular site context to allow an appropriate mix of residents for balanced development. Adequate public housing should be offered by the Government to allow all Hong Kong citizens to have an option of becoming homeowners at an affordable cost. **To achieve that, our housing policy should be adjusted from the present predominantly rental model to a buy-or-rent model.** Reference can be made to the 10 housing policy recommendations outlined in our *Vision of Universal Affordable Housing in Hong Kong* (Our Hong Kong Foundation, 2019).

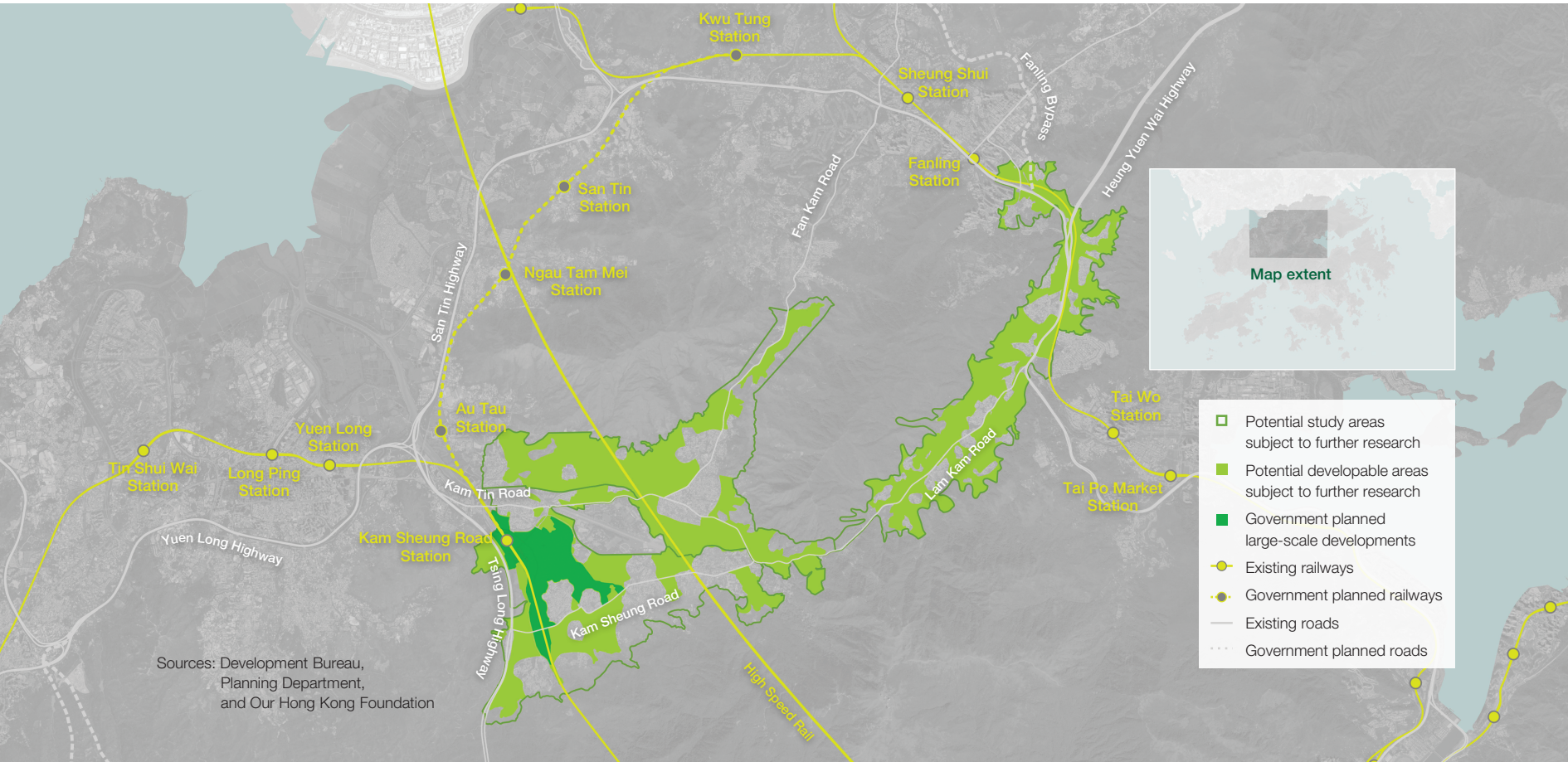
c. Liveable and appealing environment with aesthetic attractiveness

The PDAs would be developed starting from the unique Yuen Long New Town to surrounding establishments. The well-developed Yuen Long New Town is a mature community to provide a variety of services and facilities to support NDAs and PDAs. Scattered brownfield operations would be agglomerated to designated multi-storey buildings for more compatible development. Such would allow diverse housing types to be provided towards Yuen Long South-east to foster different household combination. Urban design is also vital to uplifting the aesthetic attractiveness and creating a desirable living environment. In this regard, Yuen Long Nullah and drainage channels in the area would be revitalised to integrate the natural and man-made environment.

(3) Living & Recreation Space

The Living & Recreation Space stretches across the planned public housing development at Kam Tin South and our proposed three PDAs, namely Kam Tin North, Kam Tin South extension, and Lam Tsuen (Figure 36). These PDAs provide expansion space for neighbouring planned residential and suburban communities, foster a living environment close to nature, and promote nature and heritage tourism.

Figure 36. **Living & Recreation Space: Existing condition and planned development**



Adjoining the Fanling Highway, this site near Nam Wa Po on Lam Tsuen is highly accessible to the NTN and Kowloon from either direction. As noted in Figure 37, the area is marked with extensive village settlement and vegetation/vacant areas. Development direction should consider the possible integration with the local rural settlement. On a side note, the brownfield cluster at Tai Hang will be combined with the neighbouring area to offer a site of 3 hectares for public housing development.

Figure 37. **Site conditions of Lam Tsuen (near Nam Wa Po)**

Figure 38. **Site condition of Kam Tin North**

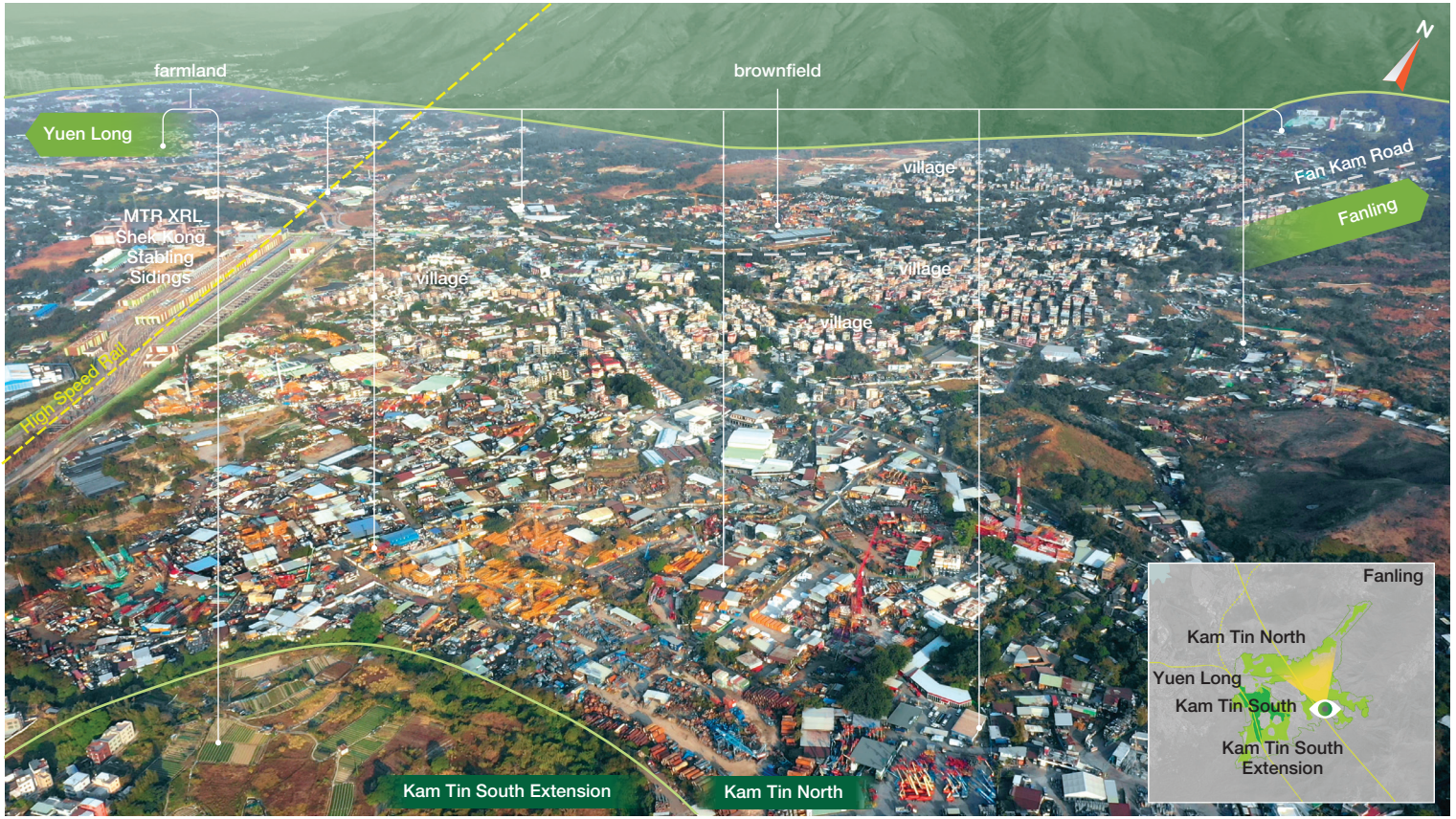
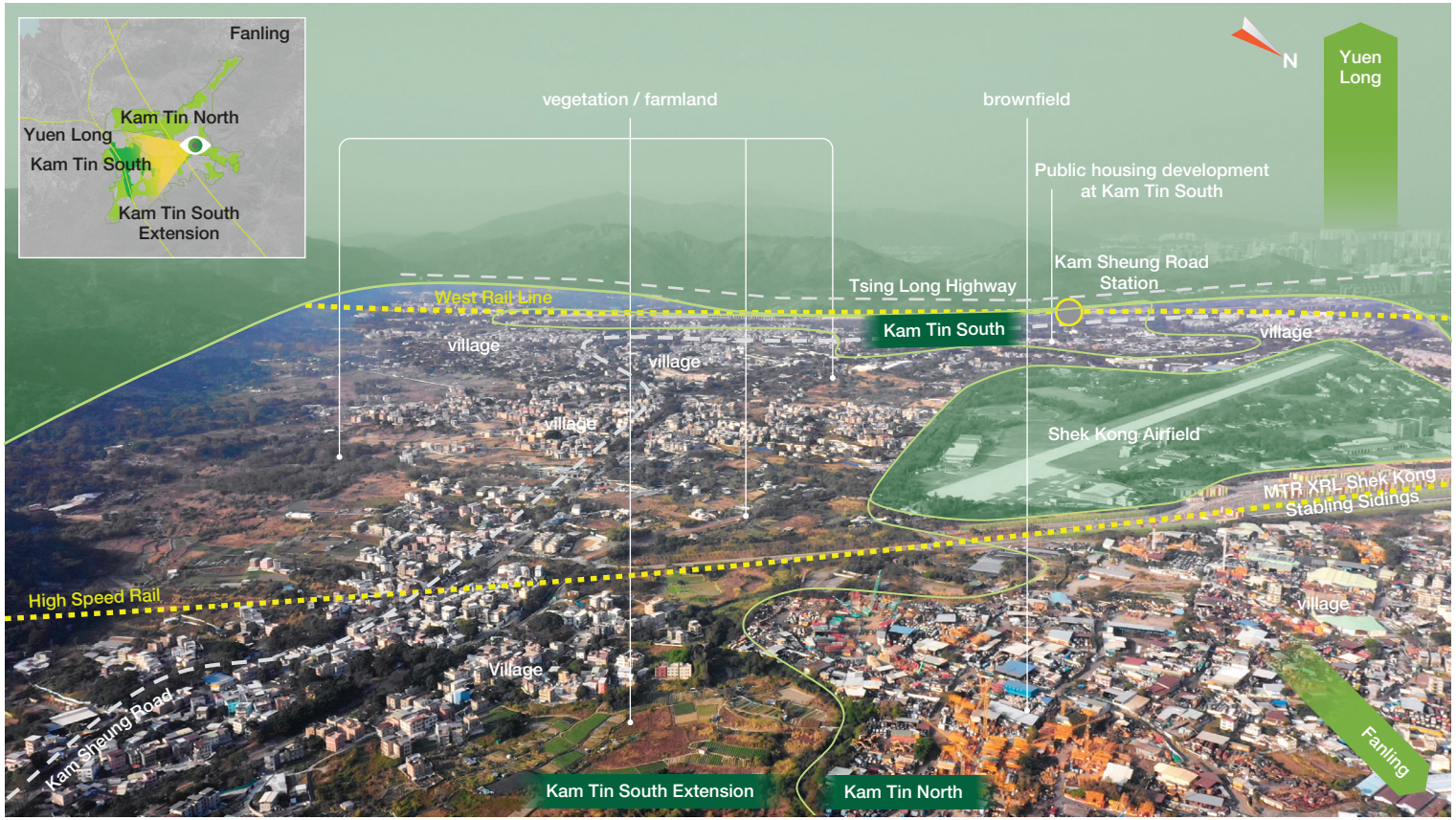


Figure 38 manifests the present conditions of Kam Tin North, where brownfield operations and village settlement intermingle. The incompatible situation clearly illustrates the need for holistic planning and development to rationalise land use. Future development plan will need to address the lack of local roads and the remoteness of mass transportation. Additional transport infrastructure such as new main roads should be considered to enhance the accessibility of the entire Kam Tin.

Figure 39. **Site condition of Kam Tin South Extension**



Kam Tin South Extension is the area encircled with a green line on the left, extended from Kam Tin South which is an area planned for public housing development. Kam Tin South Extension is currently characterised by village settlement and substantial vegetation/ farmland. The site can be developed cohesively with Kam Tin South and offer an expansion space. Similar to the condition of Kam Tin North, the local road network needs to be improved to accommodate future population growth.

Planning concept

a. Expansion space for suburban town

Kam Tin South Extension serves as expansion space for the housing development in Kam Tin South. The area is in the low-density setting of the rural township near Kam Sheung Road station. With regards to land utilisation, more considerations can be given to intergenerational and ageing-in-place communities. **With a clear industrial blueprint and suitable policy support, modernised agriculture can be promoted in the area to revive and boost the local agricultural sector.**

b. Living environment with easy access to nature

The Living & Recreation Space creates a liveable environment surrounded by the scenic natural landscape, including Lam Tsuen Country Park, Tai Mo Shan Country Park, and Tai To Yan. These natural resources can also put in harness to promote local eco-oriented recreation activities and tourism.

c. Heritage tourism

Plentiful historical and cultural heritage sites, such as walled villages inhabited by indigenous clans (Kai Hing Wai and Lam Tsuen), opulent stately homes built in the past, century-old temples and traditional markets, can be spotted in the suburban area. These sites can be promoted for heritage tourism through conservation efforts, allow the general public to appreciate the precious historical resources.

Land supply planned by the Government plus additional options proposed by OHKF could meet future land demand

In summary, the PDAs in the New Territories can yield over 3,000 hectares of developable land for Hong Kong. Along with our previous recommendations of large-scale reclamation, **our proposals can contribute over 5,700 hectares of land supply to Hong Kong over the long term (Figure 40).** Combined with the 5,080 hectares of land planned by the Government, the proposal could meet Hong Kong's land demand of 9,080 hectares (Figure 41). It also equips Hong Kong with some buffer to cope with unforeseeable circumstances in the future.

Land is a precious resource, and we are conversant that a land use plan, once determined, cannot be easily altered in the short term. For that reason, the development blueprint factors in how these PDAs and the planned NDAs could synergise with Hong Kong's territorial development and take it to the next level. It also makes provision for the potential infrastructural support and ways to rationalise the incompatible land use in the New Territories. Needless to say, there are challenges and problems to be resolved in order to realise the new vision for the New Territories. In the following chapter, we will delve into these issues and seek ways to tide over them.

Figure 40. **Additional options of land development proposed by OHKF**

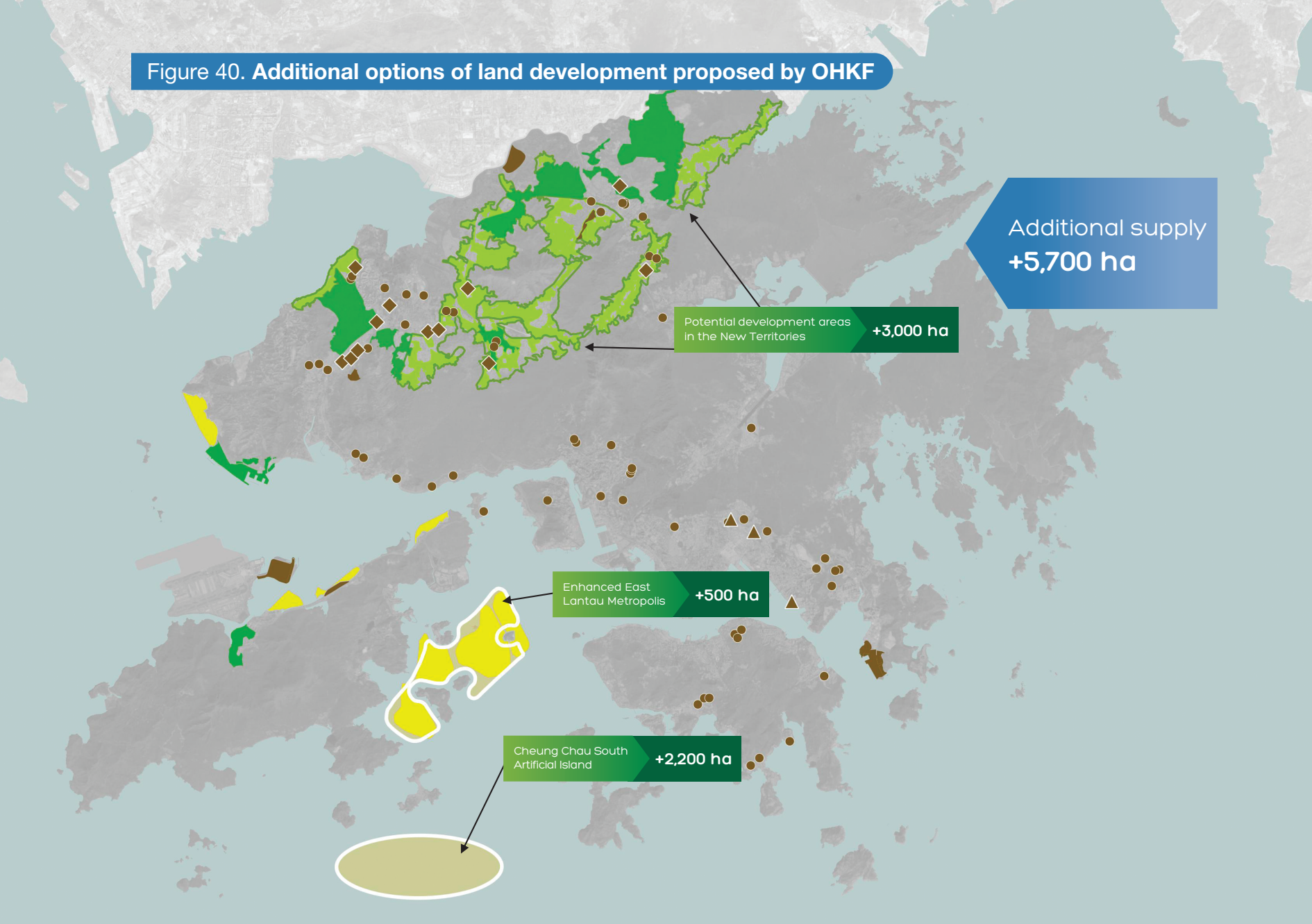
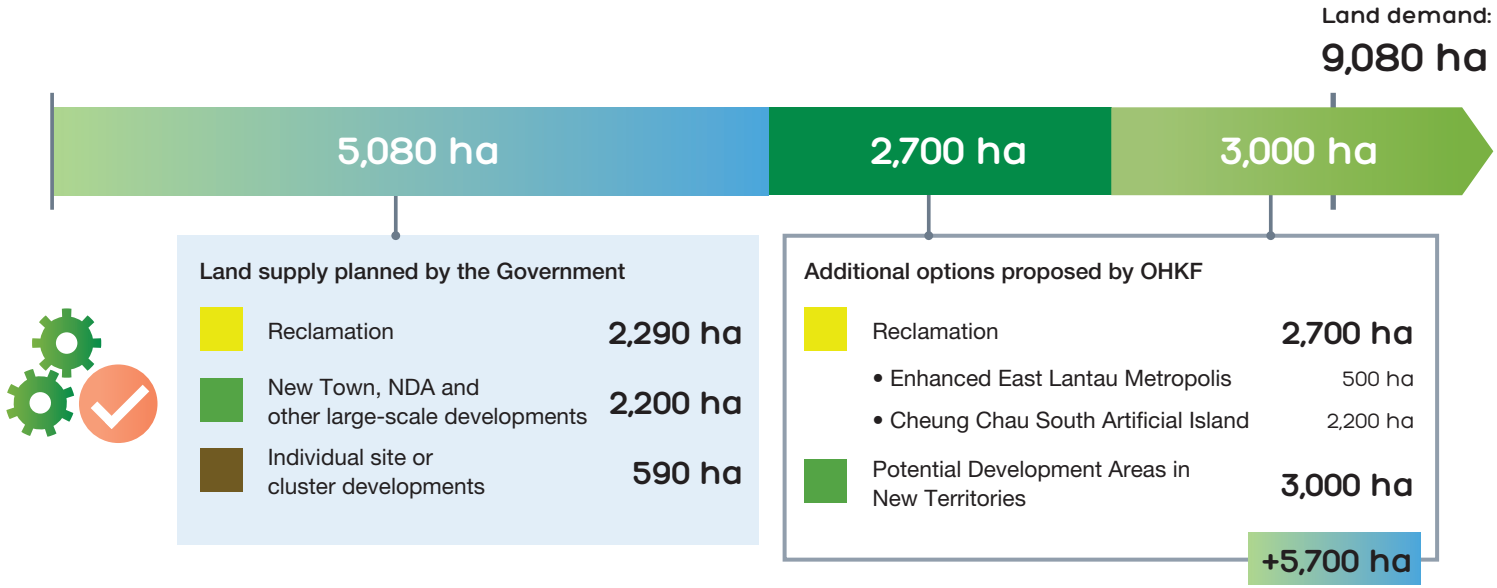


Figure 41. **Land supply planned by the Government plus additional options proposed by OHKF could meet future land demand**



Sources: Planning Department, Our Hong Kong Foundation

5 How to expedite land development?

It takes decades to develop an NDA

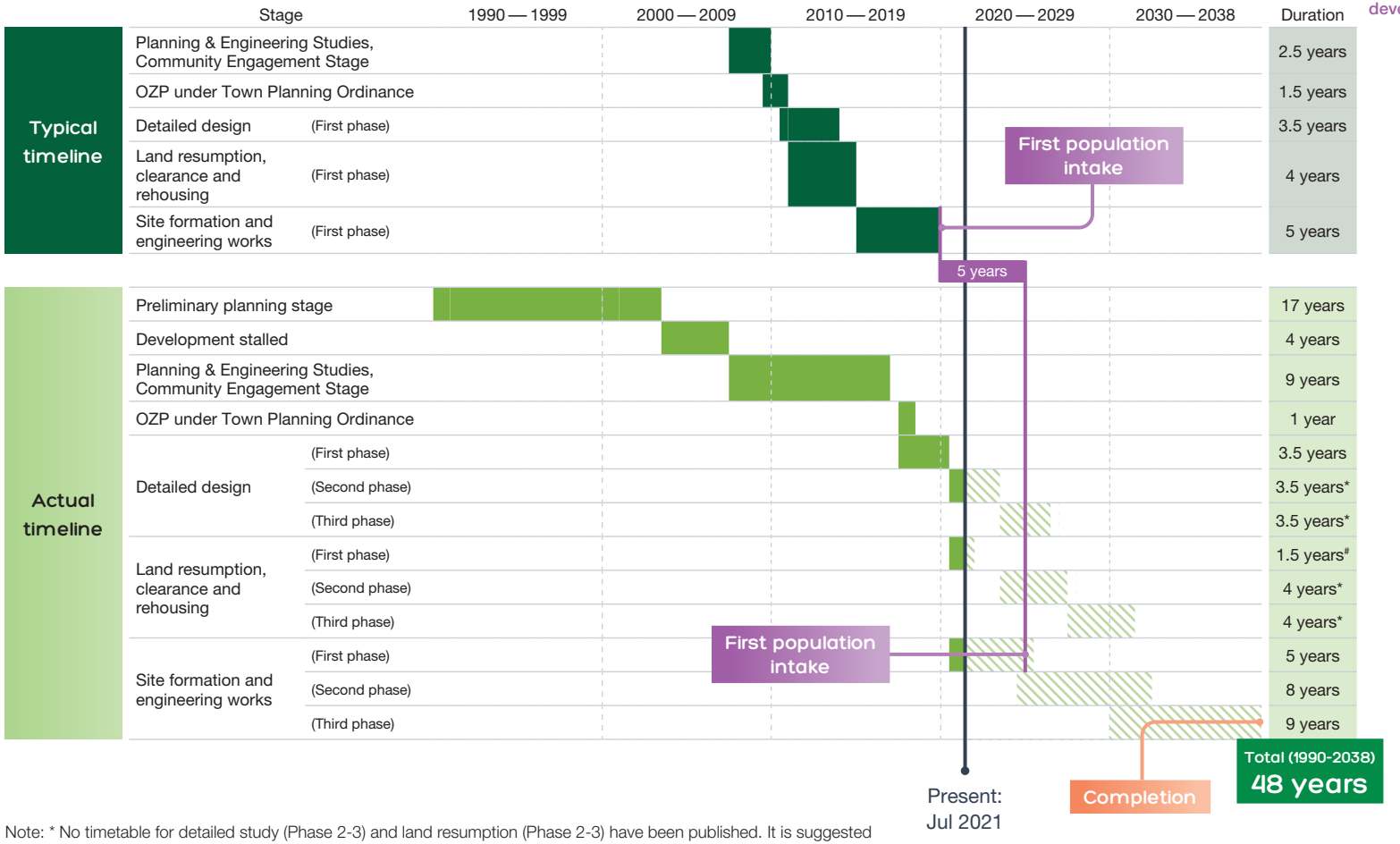
An NDA was not built in a day. The general procedures for housing development on "non-spade ready" sites involve planning & engineering study, public engagement, statutory planning procedures, detailed design & study, land resumption, site formation works, and building & infrastructure works. It generally takes around 11 to 14 years to go through these procedures and create a spade-ready site. Large-scale projects such as NDAs could take even longer due to complexity, let alone the possibility of being shelved due to changes in short-term circumstances.

For example, fledging NDAs of KTN/FLN and HSK were planned back in the 1990s when the Territorial Development Strategy Review identified growth areas in the New Territories. However, the projects were shelved in 2003 as the Government expected slower population growth and housing demand after the SARS. It was until 2007 the Hong Kong 2030 Study revisited the NDAs and recommended proceeding with the developments. **The two NDA projects then kicked off and were expected to be completed after 2030, i.e. four decades after their conception.** In light of the acute land supply crisis confronting Hong Kong, is there any way that we can we speed up the long-winded development timeline?

Case study: Hung Shui Kiu NDA development

Figure 42 compares the outline implementation programme for a typical NDA, provided by the Government to the Legislative Council in April 2011, and the actual development timeline for HSK NDA. According to the typical timeline, the first population intake should have taken place in 2019 (i.e. the 14th year after the proposal of new town development). However, we can only witness the first batch of residents moving into HSK NDA in 2024, i.e. five years later than the expected date, to say nothing of a relatively small scale of 1,400 units noted in the first phase.

Figure 42. **Development timeline of Hung Shui Kiu NDA**



Note: * No timetable for detailed study (Phase 2-3) and land resumption (Phase 2-3) have been published. It is suggested by the Planning Department that detailed study generally requires 38 months while land resumption and clearance generally requires 48 months for each phase.

This is only the duration for land resumption. The time needed for clearance is not reflected.

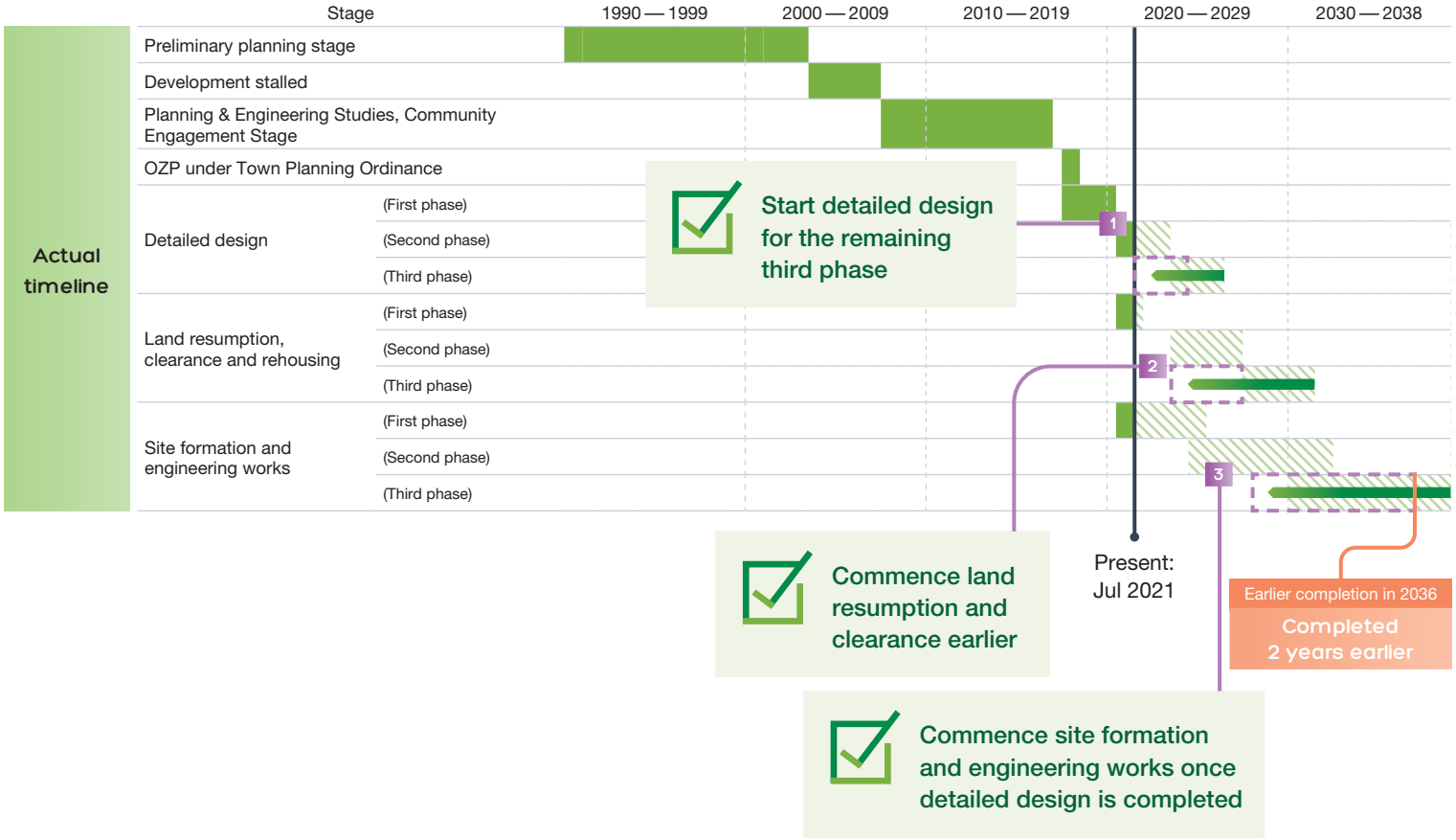
Source: Legislative Council

While it is a common practice that an NDA development is divided into smaller development packages geographically for phased implementation, detailed design for all phases can be conducted concurrently. Hence, we recommend that the Government start the detailed design for the remaining third phase sooner. As such, the subsequent site formation and engineering works could commence earlier.

To begin the site formation works earlier, the Government also has to resume private land and clear the Government land first. Since the completion of the Dedicated Rehousing Estates (DRE) and purpose-built multi-storey buildings in the first phase are required to rehouse the affected domestic households and the brownfield operators respectively (立法會財務委員會轄下的工務小組委員會第十五次會議紀要, 2020), there is no room to start the land resumption and clearance work for the second phases ahead of schedule. Nonetheless, with the DREs gradually completed from 2024 onwards, we recommend that the Government commence land resumption and clearance for the third phases sooner or even concurrently with the second phase (Figure 43).

As the site formation and engineering works for the last phase kickoff ahead of the original plan, the whole development of HSK NDA can be completed in 2036 at the earliest, i.e. two years earlier than the planned date.

Figure 43. **Development timeline for Hung Shui Kiu NDA**

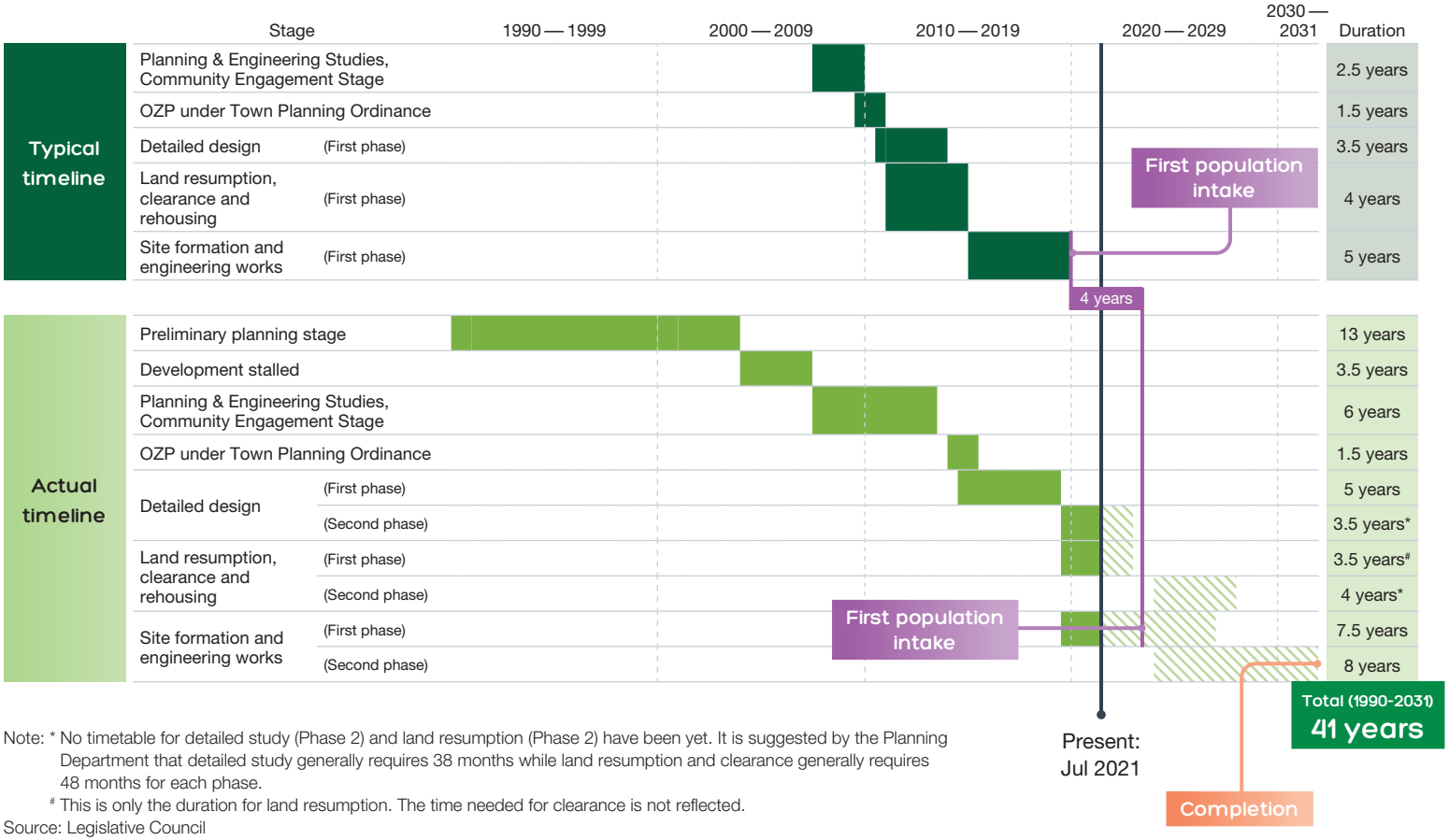


Source: Legislative Council

Case study: Kwu Tung North / Fanling North NDA development

Similarly, the development for KTN/FLN NDA is also prolonged, and thus, the first population intake was delayed by four years compared to the typical timeline (Figure 44).

Figure 44. **Development timeline of Kwu Tung North / Fanling North NDA**



Note: * No timetable for detailed study (Phase 2) and land resumption (Phase 2) have been yet. It is suggested by the Planning Department that detailed study generally requires 38 months while land resumption and clearance generally requires 48 months for each phase.

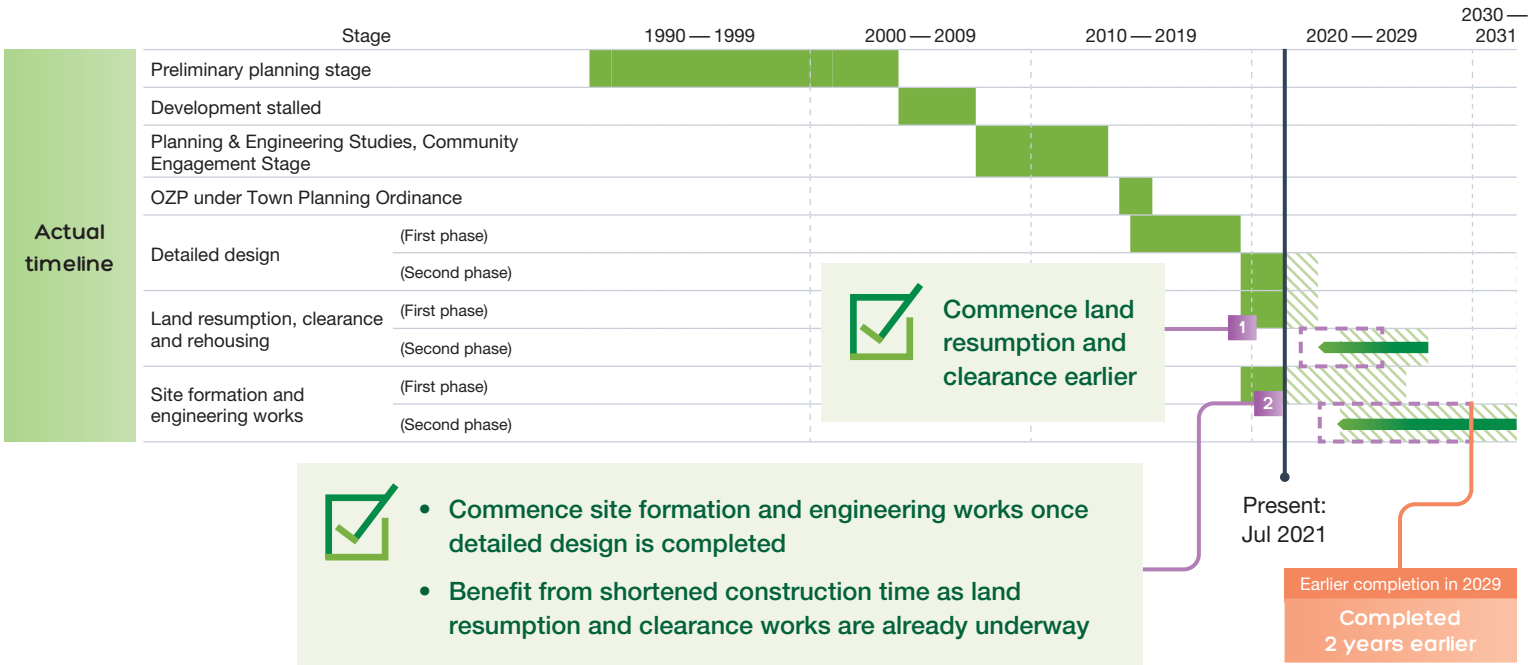
This is only the duration for land resumption. The time needed for clearance is not reflected.

Source: Legislative Council

Even though the development of KTN/FLN NDA has proceeded to the later stages, we believe that there are ways to expedite the development (Figure 45). The Government should commence the land resumption and clearance for the remaining phase earlier in 2022. While the DRE at Pak Wo Road, Fanling for the remaining impacted residents will only be completed in 2023 (Development Bureau, 2019a), the Government can kickoff the resumption and clearance works for the households opt not to be rehoused and the impacted business undertakings. By doing so, site formation and engineering works can begin at those resumed and cleared sites sooner following the detailed design which is expected to be completed in 2022. As such, it also reduces the lead time among different phases and hopefully shortens the duration of engineering works, thereby allowing the whole NDA to be completed in 2029, i.e. two years earlier than the original plan.

From these two NDAs, we can see that development projects are often tied up in the stages prior to detailed design. Particularly, both NDAs spent over six years going through the planning & engineering studies and community engagement stage. As the Government is kicking off NTN development soon, it should consider ways to shorten the time required for these preparatory works. For instance, public engagement can be simplified from the current three stages. The Government should explore ways to expedite the Environmental Impact Assessment. Moreover, reducing or setting a maximum limit on physical representation in the statutory planning procedure can streamline the Town Planning Board (TPB) discussions. In addition, the Government can establish a transparent mechanism to entrust the private sector with the construction of infrastructures during private residential development. Therefore, the subsequent construction can commence sooner.

Figure 45. **Development timeline of Kwu Tung North / Fanling North NDA**



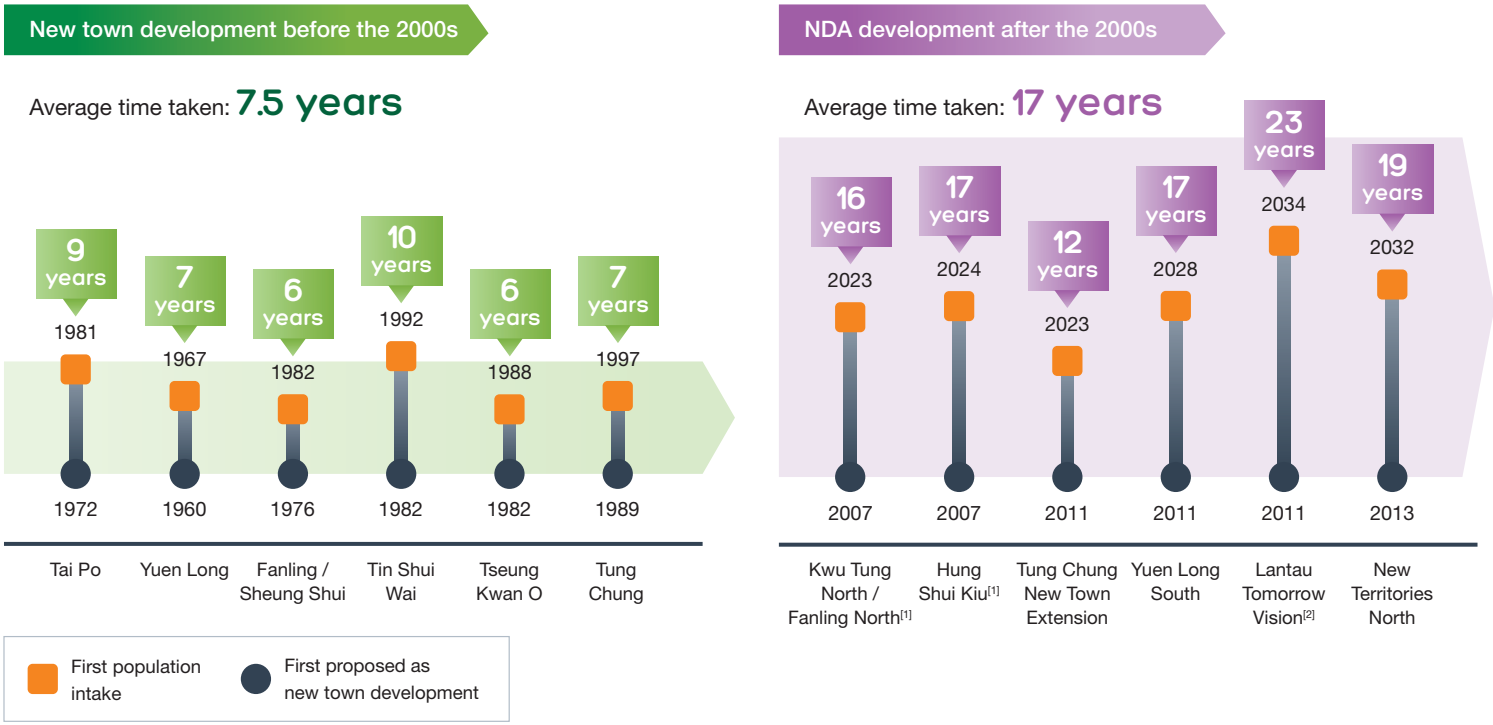
Source: Legislative Council

New town development is much slower than before

Land development has not always been that time-consuming. Comparing the time taken from the first mention of development project to the first population intake for New Town development before the 2000s and NDA development after the 2000s, it is evident that land development has run out of steam in recent years (Figure 46).

For the first three generations of new towns, most of them took fewer than ten years to house the first batch of population. In particular, the first group of residents could move into Fanling / Sheung Shui and Tseung Kwan O new towns just six years after they were first proposed for new town development. The past development could be seen as a miraculous achievement in today's standard, let alone those new town projects also countered similar difficulties such as residents' opposition to land resumption. Meanwhile, the ongoing NDA projects such as HSK and Yuen Long South were proposed more than a decade ago, but all of them have yet to be ready for population intake. In fact, it is going to take 17 years on average for these NDA development plans to accommodate the first batch of residents. We will naturally ask: what has gone wrong in our land development mechanism?

Figure 46. **Comparison in the development time between new towns and NDAs**



Note: [1] KTN/FLN NDA and HSK NDA were first identified in the 1990s but was shelved in 2003. The development projects were later re-proposed in 2007.
[2] Formerly known as East Lantau Metropolis
Sources: 何佩然.《城傳立新：香港城市規劃發展史（1841—2015）》, Planning Department

Our land development system makes it hard to increase supply

Land development is much more than building houses on a piece of vacant land. Instead, due consideration has to be given to the infrastructural capacity, site conditions, nearby land use, compensation and rehousing of existing occupants, and many other matters. The long lead time required to untangle these issues have prolonged the NDA projects. In particular, there are three major hindrances in the large-scale development of the New Territories (Figure 47):

Provision of Infrastructure

First of all, the under-provision of infrastructures has constrained the development potential. To resolve the current congestion and enable further development in the New Territories, new transport corridors are required. Nonetheless, the present demand-led approach requires an even larger resident population to justify the investment, resulting in delayed transport infrastructure development. The same issue is also seen in other strategic infrastructures such as sewerage and drainage.

Stakeholders' interests

In addition, development in the New Territories is often blocked by stakeholders, broadly classified into existing occupants and landowners. Previous NDA projects and construction of transport infrastructure often met with strong opposition from occupants such as squatter households, brownfield operators and farmers, who find compensation and resettling arrangements unsatisfactory. On the other hand, landowners lack the channel to initiate private development in the New Territories.

Policies and administration

Last but not least, failing policies and administrative red tapes have constrained comprehensive development in the New Territories. Rigid development controls have prevented society from responding to the changing environmental and economic needs. Red tapes in the land development cycle also dampen efforts in land creation.

Against the backdrop of the dire housing shortage, it is noticeable that the Government has been giving priority to churning out housing supply through individual NDA and site development. If we focus narrowly on each NDA project and housing site, they can hardly justify any attention to review these deadlocks or attempt to undergo a major overhaul. **Unfortunately, it is precisely with such a mindset that the land development mechanism remains inefficient and rigid, impeding the Government's own endeavor in ongoing land development projects.**

Now that we have presented a broader vision for the New Territories and how it would revolutionise Hong Kong's territorial development. We can connect the dots among these NDAs and PDAs, which amalgamate into one massive region to enhance Hong Kong's development capacity and ultimately enable the city to prosper in the future. **The strategic vision gives grounds for the efforts to untangle the predicaments in land development and warrant the need for substantial capital investment in infrastructure.**

Next, we would explore the challenges posed in these three aspects respectively and put forward policy recommendations to smooth the way for land development. Not only will these improvements unlock more new towns in the future, but they would speed up the ongoing NDA projects. Rather than unprecedented sweeping changes, a number of these measures were previously adopted by the Government to develop the nine new towns rapidly.

Figure 47. **Our land development system makes it hard to increase supply**

Provision of Infrastructure

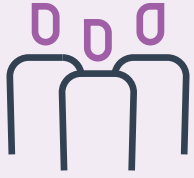
Transport network

New transport corridor is required to resolve congestion and facilitate additional development in the New Territories

Other strategic infrastructures

Under-provision of infrastructures such as sewerage and drainage system limit development in the New Territories

Stakeholders' interests



Existing occupants

Strong resistance from squatter households, brownfield operators and farmers for land development

Landowners

Development of New Territories by market force is in effect prevented as landowners lack channel to participate

Policies and administration

Development control

Current development control is not flexible enough in respond to the changing environmental and economic needs

Administrative support

Lack of a clear accountability system and administrative red tapes prolong land development cycle

Prerequisite of more large-scale development in New Territories

(1) Provision of Infrastructure

a. Enhance transport network for higher connectivity of the New Territories

Major roads and railways are running at close to full capacity

While more housing development is taking place in the New Territories, since economic activities concentrate in core urban areas in Kowloon and Hong Kong Island, residents in the New Territories have to commute to work. However, major roads and railways are running at close to full capacity. People grieve about the long queues for trains and buses and the traffic congestion during weekday rush hour.

From 2010 to 2019, the average car journey speed in the New Territories has dropped by 4% from 39.9 km/h to 38.3 km/h. In Kowloon, the decrease in car journey speed is even more noticeable. The average car journey speed has fallen by 13% from 23.7 km/h to 20.6 km/h (Transport Department, 2020). On the whole, the average speed in Hong Kong Island and Kowloon is getting close to a horse-drawn carriage (15 km/h).

Massive passengers demand has strained the capacity of the railway lines as well, even though there are trains every two to three minutes during peak hour. Based on four persons per square metre, the Volume / Capacity ratio for Tsuen Wan Line, Tseung Kwan O Line, Kwun Tong Line, Island Line, West Rail Line, and Tsuen Wan Line exceeded 100% during rush hour. There is also minimal buffer left for Tung Chung Line and East Rail Line.

With various NDA developments in full swing, more population will reside in the New Territories and create an even more immense travel demand. This points to the need for a new strategic transport network. If transport infrastructure cannot be provided timely, congestion will be worsened, and citizens will find the travel experience more frustrating.

Figure 48. **Average car journey speed**

Average car journey speed (km/h)

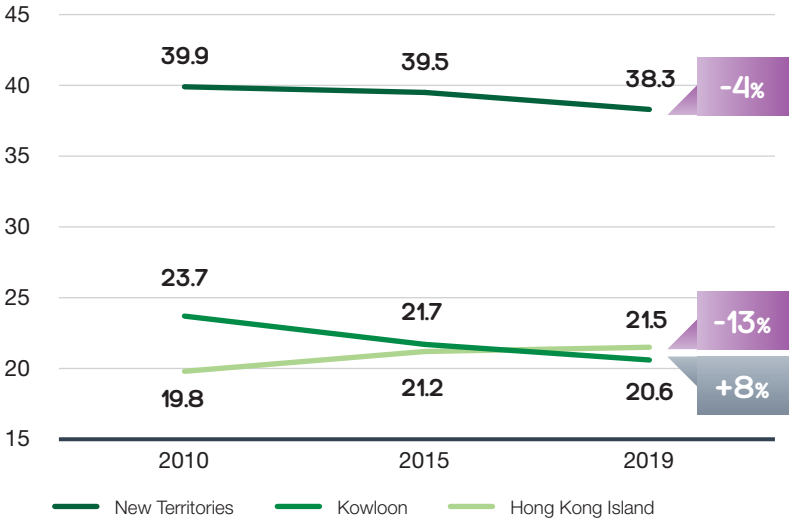


Figure 49. **Railway Line Operating Performance**

Railway Line Operating Performance (2018)[1]

(Based on 4 & 6 persons per square metre)

Railway Line	4 persons	6 persons
Disneyland Resort Line		
Ma On Shan Line		
East Rail Line		
Tung Chung Line		
Tseung Kwan O Line		
Kwun Tong Line		
Island Line		
West Rail Line		
Tsuen Wan Line		

Volume / Capacity (V/C) Ratio

4 Persons	≤ 50%	50% — 100%	> 100%
6 Persons	≤ 50%	50% — 70%	> 70%

Note: [1] The full year figures for 2018 are used, as patronage in the second half of 2019 were affected by public order events and patronage in 2020 was disrupted by the pandemic.
Sources: Transport Department, Legislative Council

We have not done any territorial transport strategy study for the past 20 years

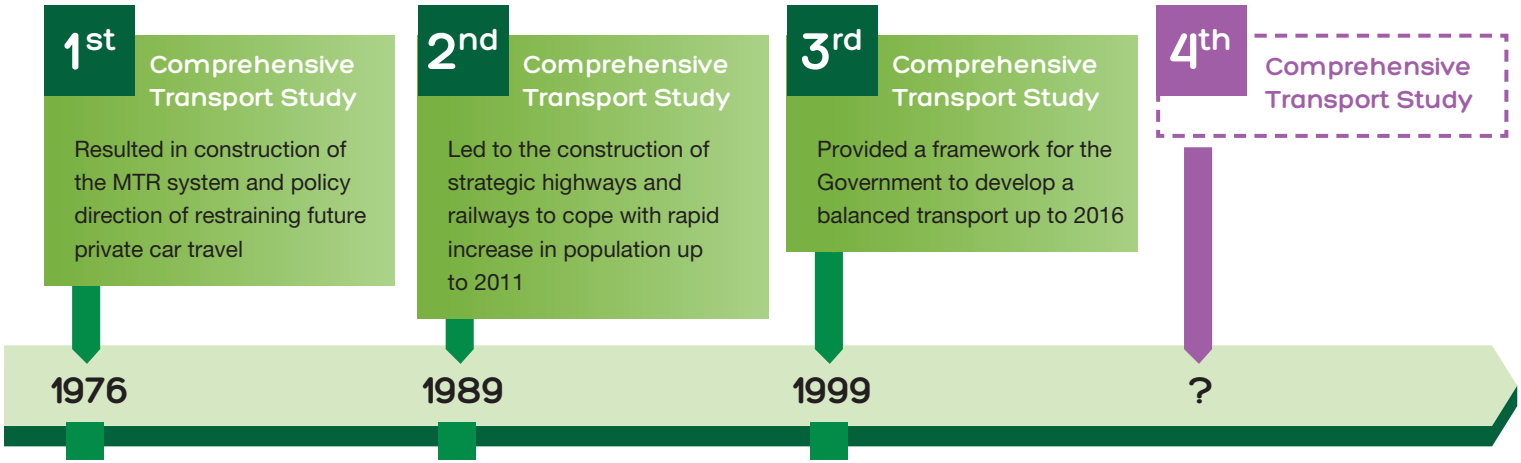
In the last century, Hong Kong's rapid population and economic growth have placed tremendous demand on transport infrastructure. The Government thus commissioned multiple rounds of Comprehensive Transport Study (CTS) to develop a timely transport strategy to cater to development (Transport Department, 1999). These CTS have typically devised transport policies and infrastructure programmes for implementation.

The first CTS study completed in 1976 led to the construction of the MTR system and the policy direction of restraining future private car travel (Figure 50). Later in 1989, the second CTS study was conducted with the planning horizon for a forecasted population of 6.3 million in 2001. It led to the construction of multiple strategic highways and railways, including Hung Hom Bypass, Central-Wan Chai Bypass, Route 9, Airport Railway / Tung Chun Line, Tseung Kwan O extension and West Rail (Phase I). The latest CTS study was completed in 1999, in which the planning horizon was extended to 2011 for a forecasted population of 6.6 million. Some of the recommendations put forward in this study include Route 10, Tuen Mun-Chek Lap Kok Link, Central Kowloon route, North Island Line, ad a 4th Rail Habour Crossing. Furthermore, this study also recommended establishing a review system of CTS to assure that the need, timing, scope, and priorities of the highway projects are updated considering the latest development.

Over the past few decades, the CTS studies have enabled Hong Kong to improve and expand transport infrastructure in time to cope with continuous changes in development. However, the Government has not conducted any CTS studies for more than 20 years, despite the actual population exceeding the original forecast. Without a new transport corridor, it is almost impossible to further increase capacity on existing roads and railways. It was until last year the Government applied for funding at the LegCo for "Strategic Study on Railways beyond 2030" and "Strategic Study on Major Roads beyond 2030". The studies on major roads and railways are expected to be completed in the second half of 2022 and 2023, respectively (*ITEM FOR FINANCE COMMITTEE*, 2020).

Not to mention, with more cross-border interactions, technological advancement, and changes in socio-economic conditions, Hong Kong's development pattern and the resultant demand for transport services would have varied drastically since the last CTS, necessitating the fourth CTS. Relevant assumptions used in the study, such as ownership and use of private vehicles, goods vehicle usage, and cross-boundary traffic, should be reviewed and updated to ensure that the overall transport strategy keeps up with the latest development.

Figure 50. **We have not done any territorial transport strategy study for the past 20 years**



Source: Transport Department

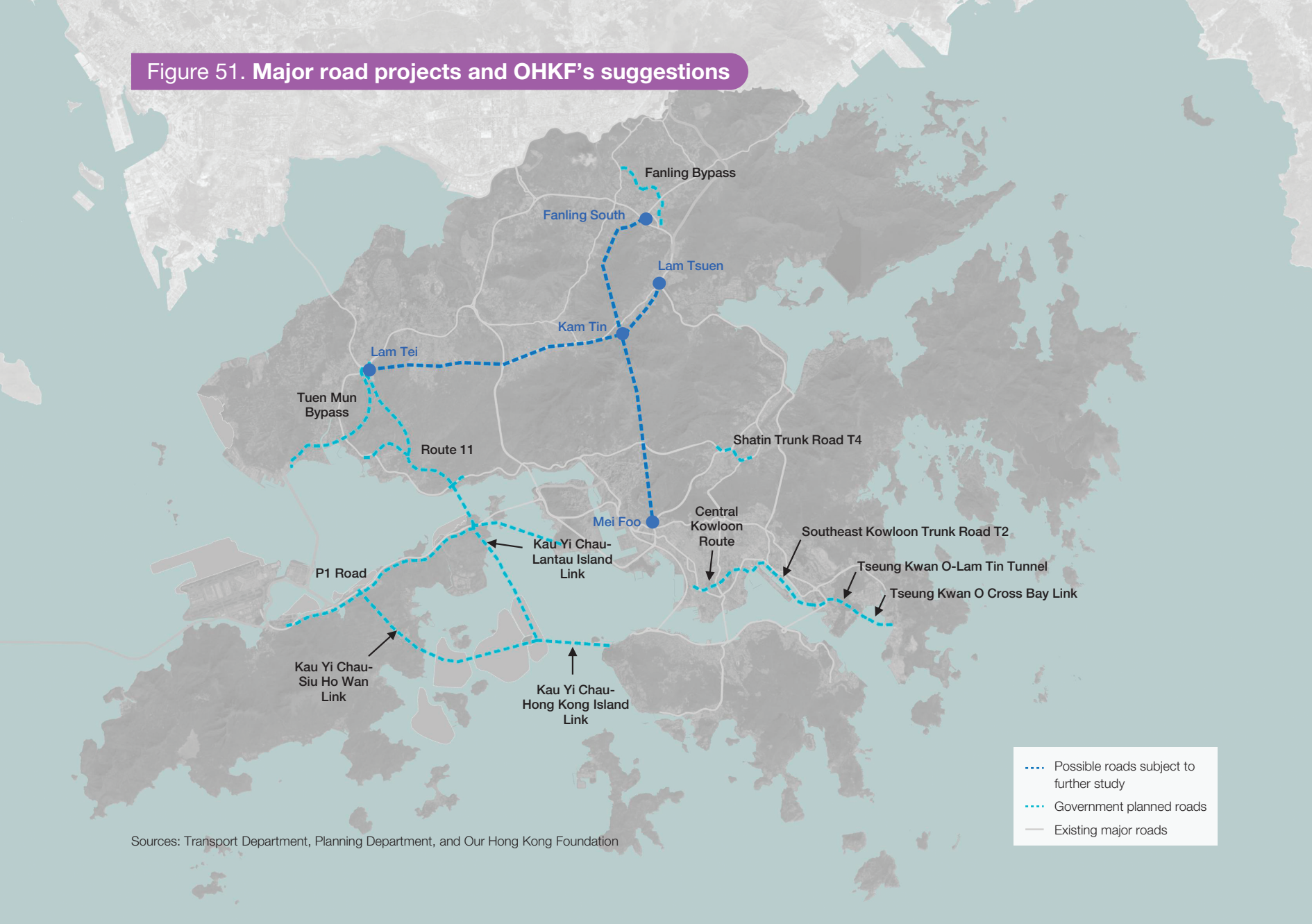
Major road projects and more possible road connections

Figure 51 indicates the Government's planned and committed road projects in light blue. In particular, Tuen Mun Bypass and Route 11 will be vital to unlocking the development potential of the New Territories. However, the news reported that the two main roads would not be completed until 2036 at the earliest ("11號幹線申3.19億 新增支線駁通青衣", 2021).

The LTV is an important prerequisite for enhancing the connectivity of the North-west New Territories. According to the planned transport network, the new roads provide additional routes to bridge the North-west New Territories with Hong Kong Island, the Kau Yi Chau Artificial Islands and the south-east of Lantau, alleviating the severe traffic congestion. Without the new strategic transport network, development in the New Territories will be onerous and daunting.

Given the large-scale development projects in the pipeline, the Government mentioned in the *Hong Kong 2030+* study the possibility of a new North-South Transport Corridor. However, there has yet to be any preliminary idea, be it major roads or railways, from the official. In the light of rising transport demand, we identified two major roads (marked in deep blue colour) very much worthy of examination. The first road stretches from Fanling South to Mei Foo. It is a new strategic road connecting the New Territories to the metro area. The second road links Lam Tsuen to Kam Tin and to Lam Tei, running through the east and the west of the New Territories. These two main roads could enhance the connectivity of the New Territories significantly.

Figure 51. **Major road projects and OHKF's suggestions**



Sources: Transport Department, Planning Department, and Our Hong Kong Foundation

Major railway projects and possible additional railways

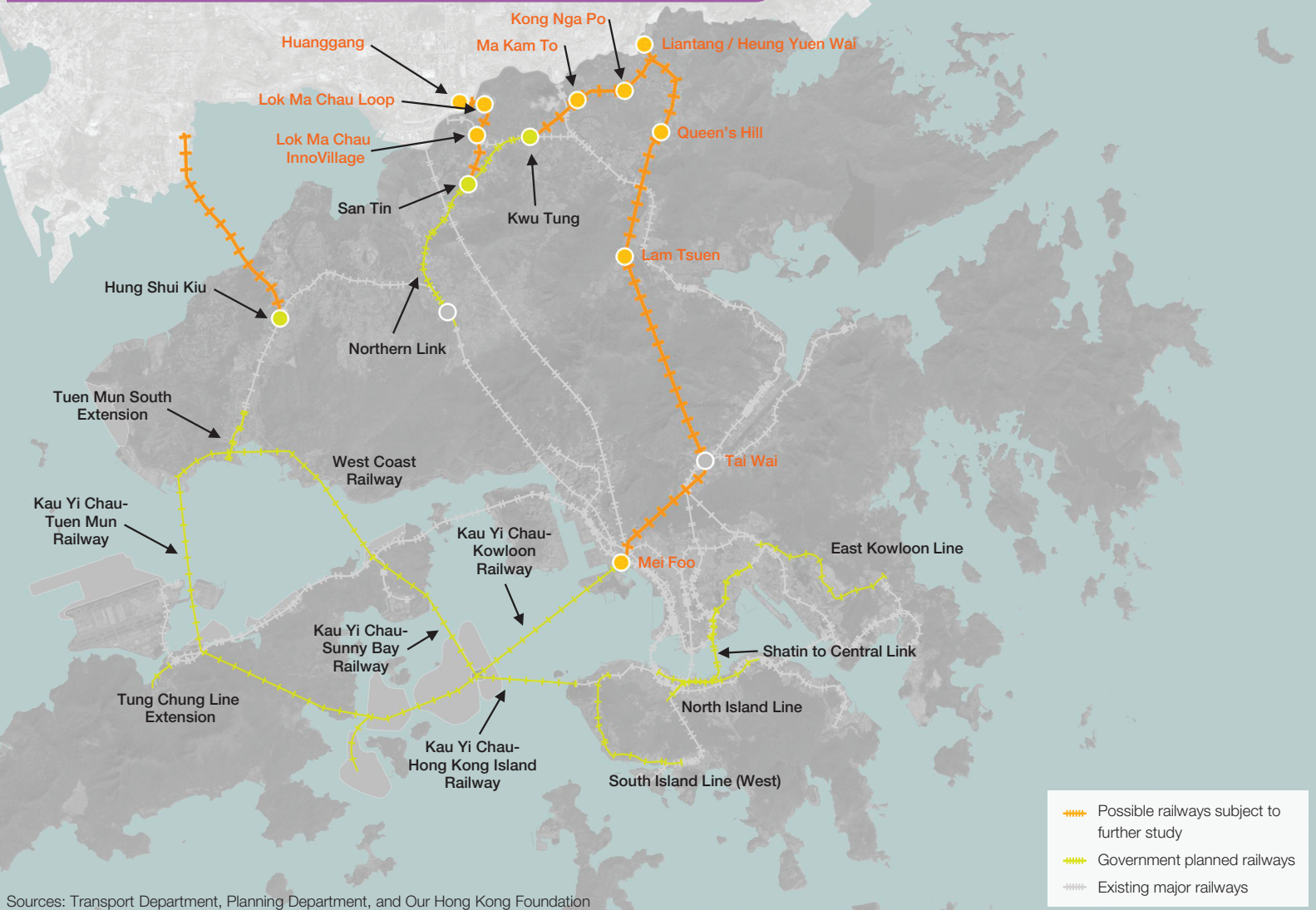
Similarly, Figure 52 shows the Government's planned and committed railway projects in yellow colour. In addition to the railways under construction and study, studies are warranted on four possible railways in orange colour. Three of them are cross-boundary railway connecting to Shenzhen.

The first railway runs through HSK Station in Hong Kong and Shenzhen Bay, boosting the regional connectivity of HSK NDA. The second railway is the NOL spur line that runs through the former Lok Ma Chau Boundary Control Point (we coin it Lok Ma Chau InnoVillage), HKSITP at Lok Ma Chau Loop, and Huanggang Port in Shenzhen. The third railway extends the NOL to Liantang / Heung Yuen Wai Boundary Control Point with two intermediate stations at Man Kam To and Kong Nga Po.

With the urbanisation of the New Territories, more people will move into and work in the NDAs and PDAs, boosting the demand for better transport connection on both the district level and territorial level. Just to take the Government's planned new towns in NTN alone, over 200,000 residents will move into Queen's Hill, Hung Lung Hang, Ta Kwu Ling, and Ping Che, which are yet to be connected to any railway. Given that East Rail line and West Rail line have already been saturated, it is unlikely that extensions to these rail lines can cater to the growing demand. Hence, a third New Territories-Urban Rail Link is required to support the ongoing development in the New Territories. We hereby put forward a railway alignment running through Liantang / Heung Yuen Wai, Queen's Hill, Lam Tsuen, Tai Wai, and Mei Foo for further examination.

Akin to the importance of new road network under the LTV, the proposed rail links of the LTV are indispensable to unleashing the development potential of the Northwest New Territories. The West Coast Railway, the Kau Yi Chau-Sunny Bay Railway, the Kau Yi Chau-Kowloon Railway, and the Kau Yi Chau-Hong Kong Island Railway can facilitate mass movement between the existing CBD and the emerging economic centres in the New Territories. Devoid of LTV and this strategic rail network, it is extremely challenging to pack in even more businesses and residents in the New Territories.

Figure 52. **Major railway projects and OHKF's suggestions**



Sources: Transport Department, Planning Department, and Our Hong Kong Foundation

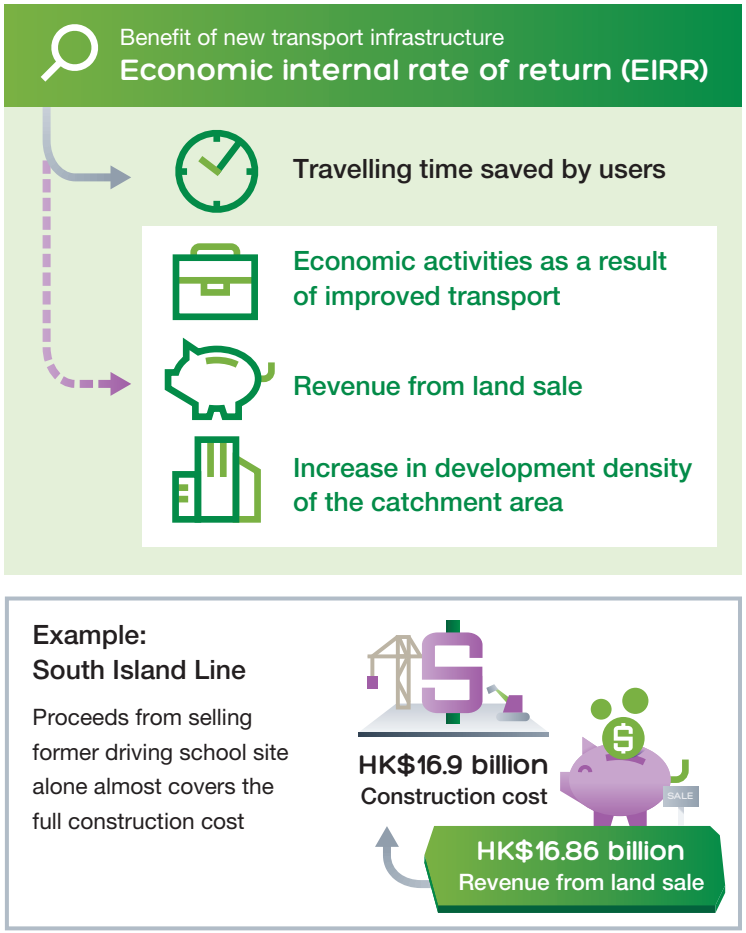
Current IRR calculation is missing a wider range of economic benefits

In assessing the benefits of new transport infrastructure, the Economic Internal Rate of Return (EIRR) is used for justifying the capital investment. However, EIRR is calculated primarily based on the travelling time saved by commuters. Other positive externalities, such as increased economic activities, revenue from land sale, and higher development density of the catchment area, are not considered. As a result, the EIRR of new transport infrastructure has long been underestimated.

As a case in point, the EIRR of the South Island Line was estimated at 5.8% in 2011 (SOUTH ISLAND LINE (EAST) FUNDING ARRANGEMENT, 2011). Since the construction cost of the South Island Line overran to HKD 16.9 billion (MTR CORPORATION LIMITED, 2016), there was concern that the South Island Line would fail to break even. In fact, the revenue of HKD 16.86 billion from selling a former driving school site alone already covered most part of it ("鴨脷洲利南道地皮以168.6億高價成交成本港最貴地王", 2017).The increase in land value is indeed a reflection of economic benefits that are expected to be generated by the new infrastructure.

It is no doubt that the safety scandals and cost overrun in recent railway projects have dampened public confidence in infrastructure project. Thus, proposals of new infrastructure are often criticised as "white elephants". Having said that, we cannot just write off the irreplaceable role of transport infrastructure in making a city function. On one hand, the Government should pay more effort in controlling the cost and the quality of project. On the other hand, we suggest that the Government include a wider range of benefits in calculating the EIRR. This would allow the public to realise the upside potential of these infrastructures better.

Figure 53. **IRR calculation should consider wider range of economic benefits**



Sources: Various newspapers

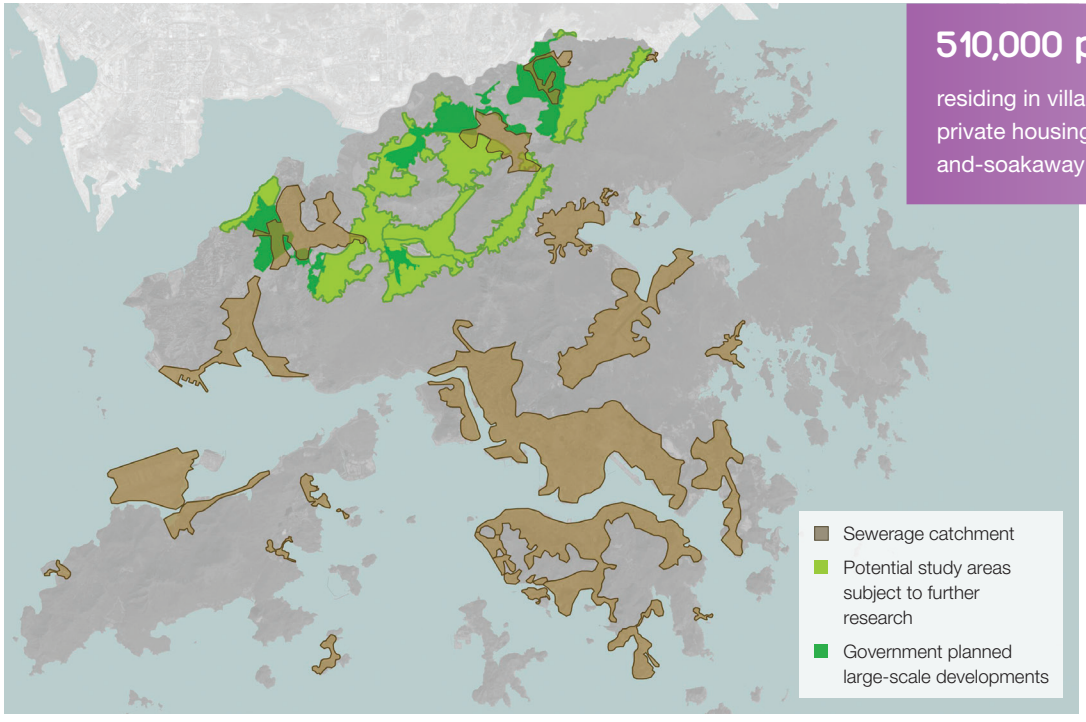
b. Ensure timely provision, expansion and upgrading of supporting infrastructures

Sewage treatment capacity is another bottleneck

Demand-led approach is frequently seen in the planning of other strategic infrastructures. One example is the provision of sewerage facilities. In Figure 54 replicated from the Environmental Protection Department's presentation materials, sewerage catchment mainly covers highly populated and urbanised areas. Suburban settlement such as low-density development in Kam Tin or along the NOL falls outside the boundary, since the small resident population did not warrant the need to enhance sewerage.

It is estimated that 510,000 people residing in village houses, squatters and other private housing relied on septic-tank-and-soakaway (STS) system to treat their sewage (Audit Commission, 2016). Not only does it constrain further development, but improper maintenance of the STS system also results in hygienic problems and environmental pollution. We call on the Government to establish a long-term plan on providing sewerage infrastructure in consideration with future large-scale development in the New Territories.

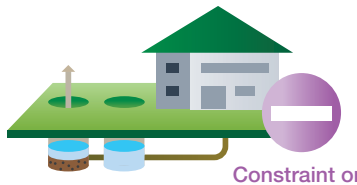
Figure 54. **Sewerage network in Hong Kong**



In areas not provided with public sewerage facilities…

510,000 people

residing in village houses, squatters and other private housing development relied on septic-tank-and-soakaway (STS) systems to treat their sewage



Constraint on further development

Establish a long-term plan on providing sewerage infrastructure in consideration with future large-scale development

Note: The graph is a reproduction of the original graph in "科學為民講座 香港排污基建的規劃與實施", and may include inaccuracies in the process.
Sources: Audit Commission, Environmental Protection Department

(2) Stakeholders' interests

a. Review the settlement and compensation mechanism for occupants and tenants

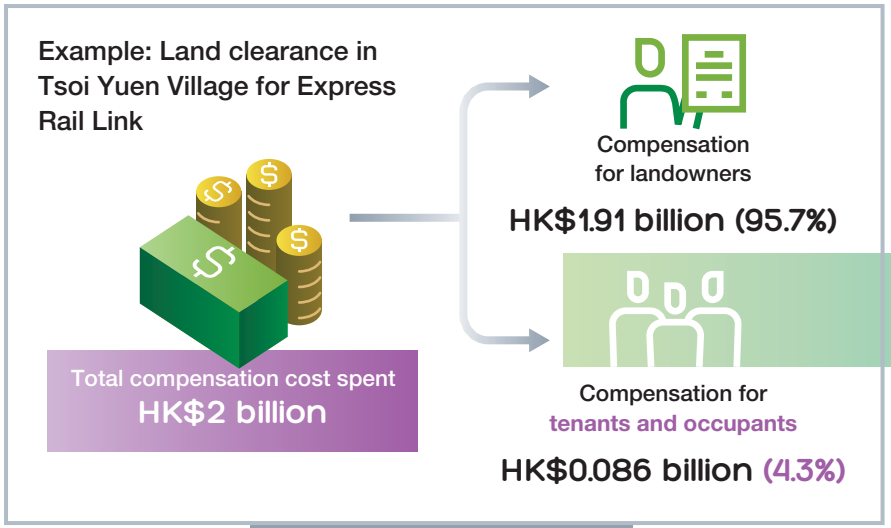
In development projects, resettlement and compensation for tenants and occupants are often the key obstacles for land resumption. Sometimes, the occupants' resentment against relocation may even stir up disturbances in society, as seen in Tsoi Yuen Village and KTN/FLN NDA. One possible explanation is the inadequate monetary compensation for tenants and occupants. They are not entitled to statutory compensation and may receive Ex-Gratia Compensation (EGA) if they meet certain

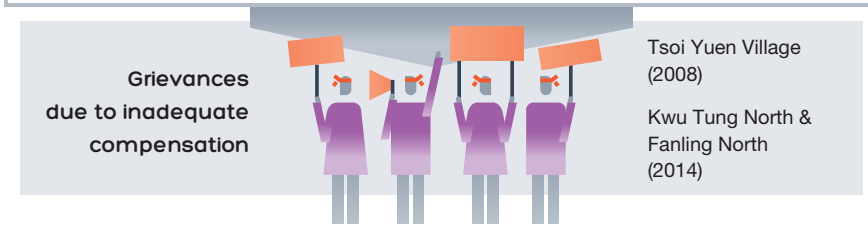
criteria. In the case of Tsoi Yuen Village, out of the total compensation cost of HKD 2 billion, less than 5% went to tenants and occupants (Figure 55) ("高鐵收地竟賠20億天價", 2009). For sure, there are other probable causes, such as the loss of current lifestyle for squatter residents.

Tenants and occupants can be broadly classified into three groups: brownfield operators, squatter residents, and farmers. To minimise their resistance towards development plans, specific and targeted resettlement and compensation arrangement have to be provided for them.

Figure 55. **Resettlement and compensation for tenants and occupants are often the key obstacles for land resumption**

Tenants and occupants are not entitled to statutory compensation





Sources: Various newspapers

Brownfield operators

The Government's *Study on Existing Profile and Operations of Brownfield Sites in the New Territories* in 2019 identified a total of 1,579 hectares of brownfield sites. Currently, over half (803 hectares) of the brownfield sites are already covered in the planned NDAs and other development projects initiated by the Government or the private sector. It is estimated that these brownfield operators employ approximately 25,700 people. With large-scale development unfolding in the New Territories, over 1,200 hectares of brownfield will fall within the NDAs and PDAs. This calls for a comprehensive review and strategy in rehousing the brownfield operators.

Rather than being idle lands, brownfield functions as important economic ancillary land for the trading and logistics industry and other sectors. Nonetheless, under the present policies, searching for relocation sites is "essentially a market behaviour" and is deemed operators' responsibilities (HKSAR Government, 2021a). There is no one-for-one reprovisioning arrangement if brownfield sites are cleared for the Government's development plan. Taking HSK NDA as an example, only 60 hectares of land is planned for modern logistics in HSK NDA after reapportioning 246 hectares of brownfield.

As recommended in our previous report, *Strategic Land Development for Jobs: From Brownfields to Modern Logistics*, the Government should develop logistics nodes to provide suitable working space for our pillar industry, thereby facilitate the reapportioning of brownfield for the NDA and other development projects. Four logistics nodes can be established at strategic locations in the New Territories, namely the Hong Kong Boundary Crossing Facilities Island, Lung Kwu Tan and

Figure 56. **A targeted approach for brownfield operators**

Brownfield operators

Affected scope:

- At least **803 ha** of brownfield[1]
- About **25,700** employed persons[2]

Present policies

- Search for relocation site is deemed as operators' responsibilities
- Only 60 ha of land is planned for modern logistics in HSK after reapportioning 246 ha of brownfield
- Multi-storey buildings for rehousing some operators are expected to be completed from 2027 onwards

OHKF's recommendations

- Develop logistics nodes by setting up a dedicated statutory body in charge of certain strategic industries

Notes: [1] Refers to brownfield sites within Hung Shui Kiu (HSK) NDA, Kwu Tung North / Fanling North (KTN/ FLN) NDA, Yuen Long South (YLS) development and other government and private development projects

[2] Number of employed persons impacted is calculated by *employment at active brownfield site x (area of affected brownfield / total area of active brownfield sites)*

Sources: Planning Department, Legislative Council

Tuen Mun West, Northwest New Territories and New Territories North. To secure Hong Kong's competitive edge in the logistics sector, the Government should set up a dedicated statutory body to devise a holistic policy framework and promote strategic industries like the logistics industry.

Squatter residents

According to the freezing survey conducted by the Lands Department (LandsD), at least 3,734 households and 8,674 residents will be impacted by the HSK NDA, KTN/FLN NDA, and Yuen Long South Development (Lands Department, n.d.-a). Under the current policies, each qualified household may receive a cash compensation up to HKD 1.2 million and an option to rent or buy a Housing Society unit. However, compared to the squatter residents' original lifestyle, in which they could enjoy more spacious living space for a lifetime, the rehousing arrangement would make them worse off.

In this regard, our proposal of having diverse housing types in the PDAs in the previous chapters could provide a comparable resettlement option for these affected squatter households. Moreover, we suggest that the Government consider enhancing the compensation package to speed up relocation, given a much higher opportunity cost of having lands underutilised. For instance, the squatter households can be offered to freely rent, buy or rent-to-buy newly completed public housing units at a affordable price. The Government should also conduct the freezing survey at an earlier stage to speed up relocation arrangement.

Figure 57. **A targeted approach for squatter residents**

Squatter residents

Affected scope:

- At least **3,734** households[1]
- At least **8,674** residents

Present policies

- Each qualified household may receive a cash compensation up to HK$1.2 million and an option to rent/buy a Housing Society unit
- Compared to squatter residents' original lifestyle, the outcome is still worse off for them

OHKF's recommendations

- Enhance the compensation package to speed up relocation
- Conduct freezing survey at an earlier stage

Note: [1] Refers to squatter households within HSK NDA, KTN/FLN NDA, and YLS development
Source: Legislative Council

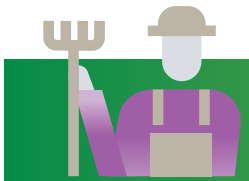
Farmers

Currently, there are at least 103 hectares of farmland impacted by the Government's planned development in the New Territories. To reprovision the affected farms, the Government has implemented the Agricultural Land Rehabilitation Scheme to match owners of arable land with prospective tenants (*Issues Relating to Reprovisioning of Farms Affected by Development Plans and Rehabilitation of Fallow Farmland*, 2018). Yet, applicants typically have to wait for five years before they were matched with landowners successfully. The Government also plans to build the Agricultural Park (Agri-park) in Kwu Tung South to accommodate the affected farmers (*Issues Relating to the Proposed Establishment of the Agricultural Park*, 2019).

Agri-Park's establishment demonstrates the Government's intention to boost commercial crop production. Nonetheless, the project was backfired for neglecting the existing farmers on the site. Many people also cast doubt on its operational feasibility since the Agri-park only offers farmers some basic lodging units, which are temporary resting place instead of permanent residence. In relation to this, the Government may wish to allow flexibility in Agri-Park's operation, for instance, making suitable arrangements for farmers to live close to the farmland and providing more support on equipment and sales channels.

Despite these short-term measures, the Agri-park can only be conducive to Hong Kong's agriculture if the Government establishes clear visions and devise a comprehensive policy framework for the industry as a whole. The New Agricultural Policy has not been updated since it was first published back in

Figure 58. **A targeted approach for farmers**



Farmers

Affected scope:

- At least 103 ha of farmland[1]

Present policies

- Applicants for Agricultural Land Rehabilitation Scheme needs to wait for about 5 years
- The development of Agri-park is too slow and too little, with the first phase being only 11 ha and expected to be completed in 2021

OHKF's recommendations

- Update the Agricultural policy to establish clear visions and comprehensive framework for the industry
- Leverage on the Agri-park to promote research and education of agricultural technology to build a complete industry chain in Hong Kong
- Expedite the consultancy study on Agriculture Priority Area to provide arable land

Note: [1] Refers to farmland within HSK NDA, KTN/FLN NDA, and YLS development
Source: Legislative Council

2014. It has been criticised that there has been no concrete proposal following the introduction of the Policy. Some sectors such as poultry and livestock keeping are also neglected in the Policy.

To promote sustainable farming, Hong Kong cannot rely on fragmented conventional agriculture and broken supply chains anymore. There have been calls for the Government to leverage on the Agri-park to promote research and education of agricultural technology ("「農業園」能否成為香港農業救命草？", 2021). Doing so could nurture local talents in the field and assist farmers in upgrading their production, cultivating a comprehensive ecosystem for local agriculture in the long run. Moreover, the Government may consider establishing an authority with industry's representatives to manage the agricultural production in Hong Kong. It can provide support on issues such as technology, marketing, and financing. Reference can be made to Japan Agricultural Cooperatives (ZEN-NOH, n.d.).

Just as important, the Government has to keep abreast of the industry's needs. For instance, a modern farm typically requires configurations such as greenhouses, storage rooms, electricity and irrigation facilities. However, these agricultural structures cannot be built without going through the prolonged approval process of the LandsD ("農業政策不應受房地產影響", 2019). Also, relocation of farms and poultry houses incur substantial costs, and poultry farmers have to go through the administrative procedures again to obtain licenses. However, farmers can only receive compensation from the Government after the LegCo approves the funding (Legislative Council, 2021). There is a call for the Government to ensure a seamless relocation arrangement and bridge the funding gap borne by the industry.

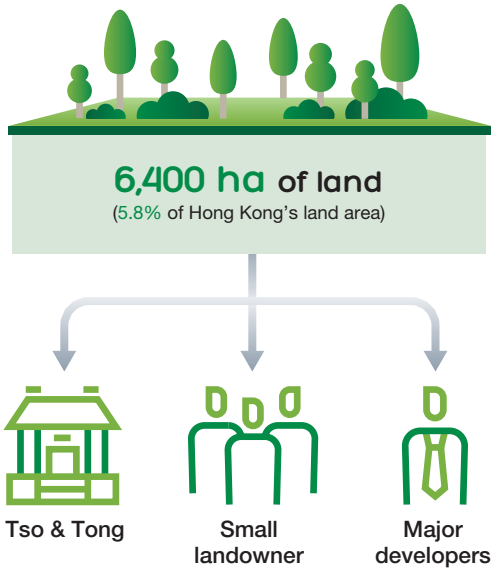
b. Build a toolbox of various land assembly approaches to tap into landowners' resources

Substantial private lands are being missed out currently (Figure 59). There are around 6,400 hectares of agricultural lands and brownfield sites owned by private landowners, equivalent to 5.8% of Hong Kong's land area. While some of them are in the hands of major developers, most are owned by Tso & Tong and individual landowners ("2400公頃祖堂地開拓容60萬人口", 2020). Those private lands are characterised by fragmented ownership and inappropriate subdivision, and small landowners also lack sufficient resources to develop on their own.

As a result, development in the New Territories relies heavily on Government-led effort like NDA development. In this case, the conventional new town approach is often adopted to resume all private lands and then tender out some part for private development. There are few public-private partnership channels, namely Land Sharing Pilot Scheme or limited in-situ land exchange. All in all, most private lands are locked and left idle until the Government steps in and introduces a development plan.

Referring to overseas experiences and past cases in Hong Kong, there are more land assembly methods for the Government's consideration, such as revising EGA, land readjustment, and land bond. By having a wide range of land assembly approaches at disposal, the Government not only resumes land much faster in its development plans, but will also provide a proper mechanism and incentives to facilitate private development on lands without official plans. The Government should actively explore more land assembly approaches and more flexible land disposal mechanisms to expedite land development.
In subsequent sessions, we will explore some examples that have been proposed in society.

Figure 59. **Tapping into the underutilised private land**



- Land is characterized by **fragmented ownership and inappropriate subdivision**
- Individual landowners **have insufficient resources to develop** on their own

Substantial private lands are being missed out...

Now
Heavy reliance on NDA development

- Conventional New Town approach
- Few public-private partnership channels, e.g.:
  - Land Sharing Pilot Scheme
  - Limited in-situ land exchange

Land is locked and left idle until the Government introduces development plan

Future
A toolbox of land assembly approaches

- Revised ex-gartia compensation
- Land readjustment
- Land Bond

Study the feasibility of applying various land assembly methods for future development project

Sources: Development Bureau, Planning Department, Lands Department, and the Real Estate Developers Association of Hong Kong

EGA can be revised to minimise resistance

The Government has been using an ex-gratia zonal compensation for land resumption in the New Territories as an alternative to statutory claims for landowners. Lands are categorised into four compensation zones according to the proximity to NDAs and planned urban development (Figure 60). Generally, sites within the NDAs are classified as zone A and owners receive the highest ex-gratia zonal compensation, which is 120% of the base rate. The further away a site is from the NDA, the less compensation its owner receives (Lands Department, n.d.-b).

When public housing is developed on both NDA and non-NDA sites, some people have questioned whether the compensation difference is well-grounded. In resuming land for KTN/FLN NDA, owners were entitled to an EGA for zone A, which was HKD 1,349 per square metre in September 2019 ("樓市速報：《收地條例》箭在弦上發展商勢加快規畫", 2019). However, when it came to resuming land for public housing development at Wang Chau, owners could only receive EGA for zone B, which was HKD 695 per square metre in May 2017, just half of the compensation received by owners impacted in NDA (*Public Works Subcommittee of the Finance Committee of the Legislative Council — Minutes of the 17th Meeting*, 2019). Therefore, it is little surprise that the development at Wang Chau met with strong opposition from the residents.

To minimise owners' resistance in land resumption, it has been recommended that the zonal compensation system should be reviewed. For instance, the Hong Kong Real Property Federation previously suggested that compensation for all agricultural land in the New Territories should standardised to zone A ("房地產會倡政府劃一價收農地 以甲級農地價再上調", 2019).

Figure 60. **Revise ex-gratia compensation to minimise resistance**

Ex-gratia zonal compensation system

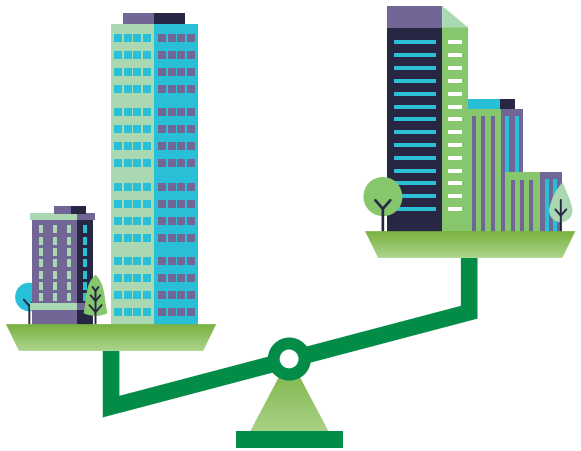
A	NDA and those areas that are affected by essential projects with territory-wide significance
B	Areas which may be brought under urban development in the near future
C	Areas in which no urban development is planned and which are unlikely to be affected by later extension to layout areas
D	Areas not included in other zones

$1,349/sq ft

KTN/FLN NDA
(Sep 2019)

$695/sq ft

Public housing development
at Wang Chau
(May 2017)



? **Is the difference for NDA and non-NDA justified if public housing is developed on both sites?**

Possible solutions and benefits

Minimise resistance in land resumption from owners by reviewing the zonal compensation

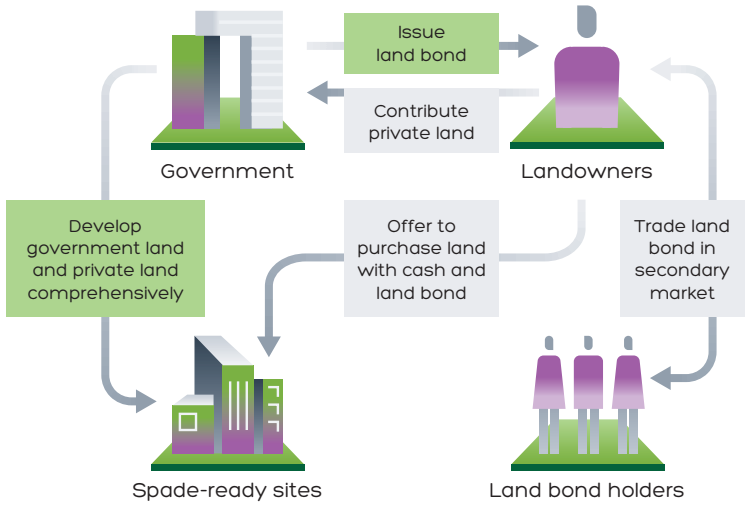
Note: Government posted notices of land resumption for public housing development at Wang Chau in May 2017 and notices of land resumption for the phase development of KTN/FLN NDA in September 2019. The base rates for agricultural land as of April 2017 and April 2019 are used in calculation.
Sources: Lands Department, Legislative Council

Land Bond provides incentives to surrender land to the Government

In 2018, the Ronald Coase Centre for Property Rights Research at HKU put forward the proposal of Land Bonds to facilitate development by market forces. The Government could provide Land Bonds as an alternative to cash compensation for the landowners, and then develop Government land and private land comprehensively into spade-ready sites (Figure 61). After the development is completed, owners can offer to purchase the spade-ready sites with cash and Land Bonds. Alternatively, landowners can hand over private lands without being asked in exchange for Land Bonds. There is also a secondary market for Land Bonds holders to trade.

As Hong Kong had adopted a similar land title exchange mechanism, commonly known as Letters A/B, before, the Government should be familiar with the operation of Lands Bonds. Back then, landowners were entitled to Letters A/B as alternate compensation, which enabled them to exchange for building lands at specified ratios (*NEW TERRITORIES LAND EXCHANGE ENTITLEMENTS (REDEMPTION) BILL*, 1996). While the Government had to publish a detailed layout plan before land resumption under Letters A/B, Lands Bonds work differently as landowners surrender their idle sites voluntarily for the Government to consider potential development or other uses such as land reserve.

Figure 61. **Mechanism of Land Bond**



Local example: Letter A/B

- Issued between 1960 and 1983 to landowners in the New Territories whose land was required for development
- Entitled holders to exchange for building land at specified ratios

Possible solutions and benefits

Introduce Land Bond **to encourage voluntary surrender of idle land** to the Government for development or other uses such as land reserve

Sources: Legislative Council, HKU Ronald Coase Centre for Property Rights Research

Land Readjustment creates value for both the landowners and the society at large

In recent years, the importance of private-led land development has been downplayed by the Government. In the past, the private sector could follow the model of surrender and regrant (i.e. land exchange) — the applicant surrenders private lands under its ownership and is regranted in-situ or non-in-situ land for private housing development. However, the Real Estate Developers Association of Hong Kong (2020) noted the modest number of land exchanges and lease modifications since 2002, which had led to the drop in the private housing supply. Land Sharing Pilot Scheme (LSPS), which is the only available public-private partnership (PPP) model at the moment, has yet to see any projects materialising. In this regard, many industry practitioners have expressed frustration and grievances to the relevant administrative procedures. Instead of shutting the private sector out of housing production, the Government should explore ways to streamline its administrative procedures and get the private sector to lend a hand in building more homes faster. Reference can be made to the ten policy recommendations issued in *Cutting Red Tape to Catch Up with Shortfalls in Land and Housing Supply* (Our Hong Kong Foundation, 2020a).

Land exchange and LSPS are primarily one-to-one PPP approaches. To assemble more fragmented land parcels and develop larger areas, the Government should also consider a multi-party PPP model such as Land Readjustment. Commonly implemented in Japan, Korea, Spain, and other countries, Land Readjustment is a mechanism in which all stakeholders could fairly share the benefit from reorganising and developing the land via land swapping. Illustrated in Figure 62, under Land Readjustment, private landowners contribute their land parcels to the government for comprehensive planning and development. The government may change the boundary, area and even the location of the original site to achieve the planned layout. In this way, the government obtains land for constructing public housing, community facilities and roads. In return, the landowners receive back their share — usually a smaller land parcel but with higher values and added facilities.

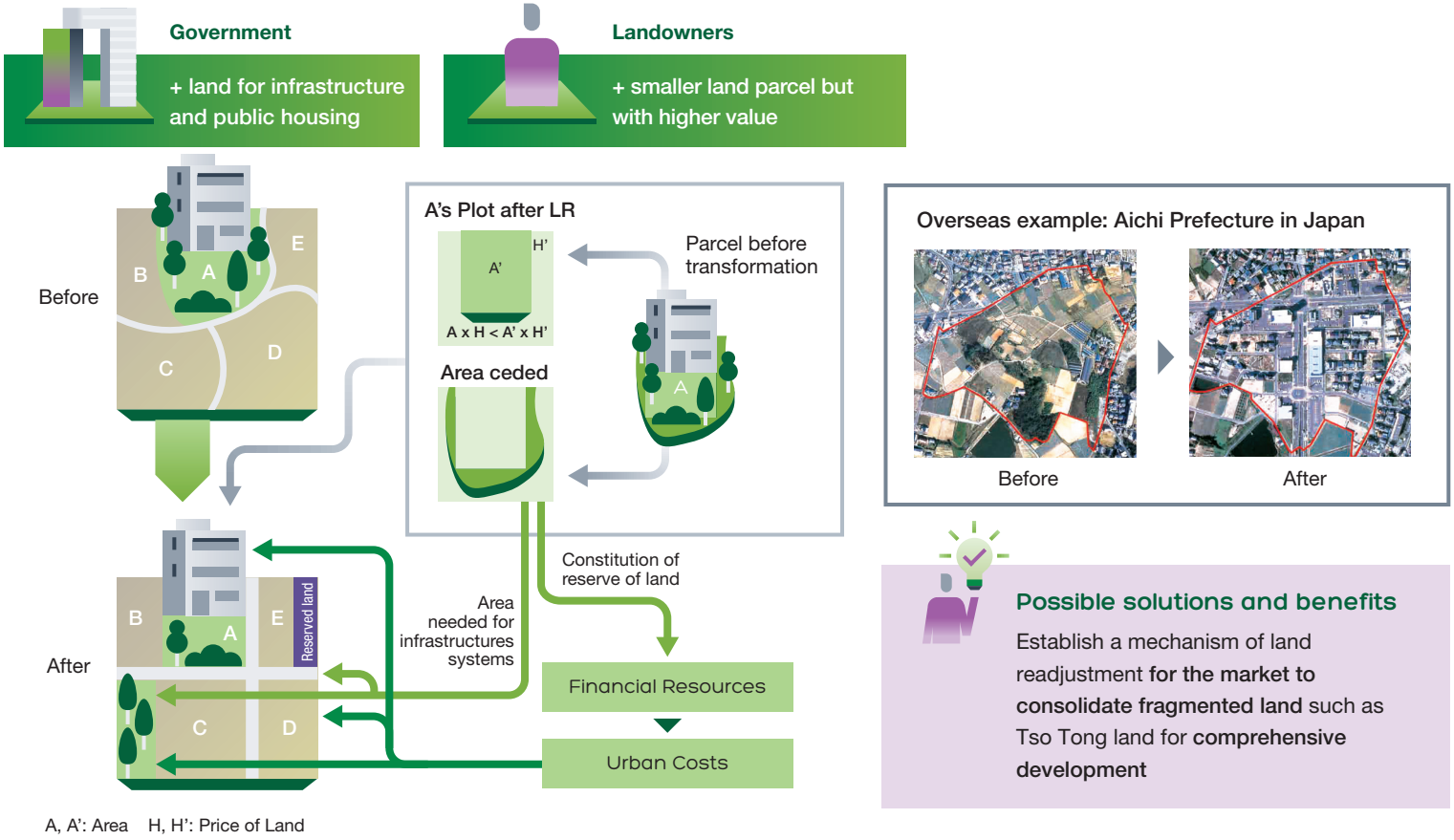
In Japan, the origin of Land Readjustment could date back to 1899. As of 2018, Land Readjustment has redeveloped and created urban areas of around 3,700 square kilometres, representing one-third of the country's total urban area (Souza et al., 2018). It has facilitated new town development and urban renewal, at the same time, preventing unplanned and disorganised growth in the suburb.

The successful implementation overseas makes a strong case for the HKSAR Government to tap into market power to develop sound urban areas efficiently, instead of building new towns all on its own and risking slow progress. This idea was endorsed by the Ronald Coase Centre for Property Rights Research at HKU. Land Readjustment provides an alternate partnership among multiple parties, on top of the current one-to-one public-private partnership model. Hence, it offers a solution to consolidate fragmented land parcels such as Tso Tong land for comprehensive development.

Land Readjustment by the private sector can follow the usual surrender and regrant. However, given more parties involved and project scales getting larger, there would be a need to better coordinate and facilitate collective actions. The Japanese Government has set up implementation agencies at national and prefectural levels, namely the Urban Renaissance Agency and the Corporations for Housing and Urban Development, to take forward the Land Readjustment projects. Similarly, the HKSAR Government can establish a new agency or empower existing agency such as the Urban Renewal Authority to take on Land Readjustment projects.

Figure 62. **Objective of Land Readjustment**

All stakeholders could fairly share the benefit from reorganising and developing the land via a transparent mechanism of land swapping



Sources: International Cooperation Agency of Japan, HKU Ronald Coase Centre for Property Rights Research
Images reproduced from: International Cooperation Agency of Japan, and Urban Renaissance Agency

A mechanism to help develop lands owned by Tso Tong is needed

Tso Tong lands, accounting for 2,400 ha in Hong Kong (2.2% of Hong Kong's land area), are currently locked up due to ambiguous legal requirements. Tso Tong lands refer to lands collectively owned in the name of a clan, family or tong (Figure 63). However, Section 15 of the New Territories Ordinance stated that every transaction of Tso Tong land "shall be as effectual for all purposes as if it had been executed or signed by all the members of said clan, family or tong". In reality, these Tso Tong have numerous members, with some residing overseas. Hence, Tso Tong lands are often restricted from more flexible development approaches.

There have been discussions on overcoming the legal barriers of trading Tso Tong lands. One possible way is to incorporate Tso Tong as a company and grant it the status of a legal entity. Another way would be for the Government to clarify the relevant sections of the New Territories Ordinance concerning the sales of Tso Tong lands. Furthermore, some have suggested establishing a dispute-resolving mechanism similar to the compulsory sale for redevelopment. ("祖堂地參考強拍降出售門檻", 2020).

Figure 63. **Overview of Tso Tong lands**

Tso Tong lands

Lands that are collectively owned in the name of a clan, family or tong, are currently locked up due to ambiguous legal requirements

Area of Tso Tong lands: 2,400 ha

(2.2% of Hong Kong's total land area)

Section 15 of the New Territories Ordinance (Cap. 97)

…Every instrument relating to land held by a clan, family or t'ong, which is executed or signed by the registered manager thereof in the presence of the Secretary for Home Affairs and is attested by him, shall be as effectual for all purposes as if **it had been executed or signed by all the members of the said clan, family or t'ong**….

Possible ways to overcome the legal barriers of Tso Tong lands

- **Incorporate Tso Tong to give it the status of a legal entity**
- **Clarify the relevant sections of the New Territories Ordinance about the requirements on sale of Tso Tong lands**
- **Establish a dispute-resolving mechanism similar to the compulsory sale for redevelopment**

VOTE

Possible solutions and benefits

Explore appropriate solutions **to overcome the key legal barriers** in developing Tso Tong lands

Sources: Heung Yee Kuk, Planning Department

(3) Policies and Administration

a. Promulgate policies to balance the needs for conservation and development

While new transport infrastructure would help release the development potential in north-west and north New Territories, special attention needs to be paid to conservation as there are many wetlands and fishponds nearby. However, the present policy regarding wetland fall short in both conservation and development.

Take wetland as an example (Figure 64), the TPB stipulated boundaries of the Wetland Conservation Area (WCA) and the WBA to control development on privately-owned wetlands. The areas stretch over 3,000 hectares, or 2.7% of Hong Kong's land area (Town Planning Board, 2014). Even though the TPB can regulate development on private lands, there is no mechanism to ensure the owner will manage the land decently and preserve its ecological value. As most wetlands in Hong Kong are created from fishponds, proper mowing and regular water quality control are required to prevent fishponds from drying up. Nonetheless, following the decline of the local fishery sector, many fishponds are abandoned. Today, we see fishponds overgrown with invasive weed and even cases of unauthorised pond filling.

As the public has higher expectation on conservation, the Government needs to revise its conservation policy framework while striving to balance development and conservation needs. We suggest that the Government take reference from effective measures implemented overseas, for instance, the Conservation Trust system, which has been proved successful in the UK.

Being recognised as legal entities, Conservation Trusts can buy land and implement long-termed conservation work. These Trusts have various income sources, such as membership fee, donations, endowments, and commercial activities, to meet the expenses on conservation. The Wildfowl and Wetlands Trust and the UK National Trust are two of the largest conservation bodies in the UK, managing vast conservation areas and historical sites (*Home | National Trust, n.d.; Wildfowl & Wetlands Trust,* n.d.).

On the territorial level, as previously mentioned in Chapter 3, 45% of land Hong Kong (50,000 hectares) is designated as country parks and other environmentally sensitive areas. Another 15% of the land (17,000 hectares) is designated as Green Belt zones. In other words, 60% of land in Hong Kong (more than 66,000 hectares) has been locked up for environmental reasons. We reckon the importance of country parks and green areas to ecological conservation and the city's recreational needs. Nonetheless, there has been a lack of regular review of their ecological value, especially when the boundaries of the country parks were established 40 years ago.

Further to our previous report, *Maximizing Land Use to Boost Development Optimizing Housing Resources to Benefit All* (Our Hong Kong Foundation, 2015), we call for a comprehensive review of these some 66,000 hectares of green areas. The Government should set up a platform to promulgate a set of scientific standards and criteria for reviewing their ecological value, service and use. The goal is to maintain 50,000 hectares for country parks and special areas of high ecological importance, i.e. no net loss, and release the remaining for future development.

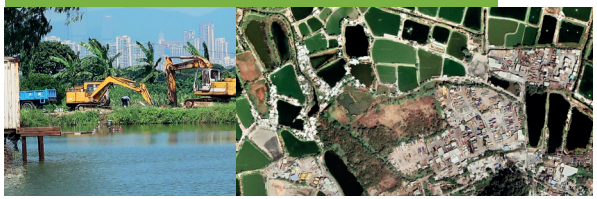
Figure 64. **Present policies regarding wetland fall short in both conservation and development**

Existing status of Wetland Conservation Area (WCA)

Abandoned fish pond overgrown with exotic and invasive weed

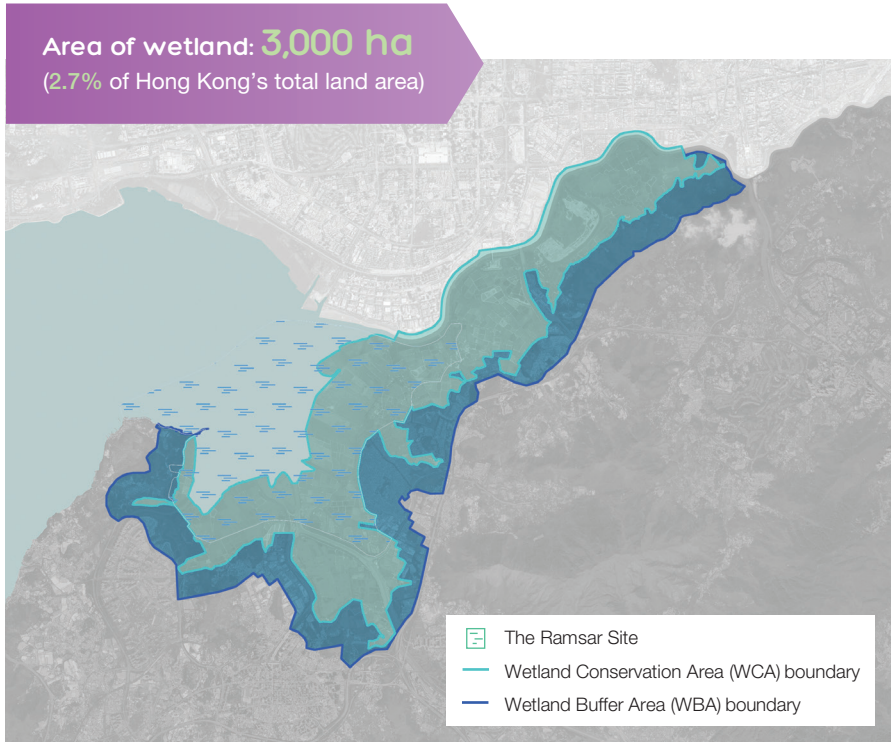
Vegetation growing in abandoned fish ponds

Existing status of Wetland Buffer Area (WBA)



Unauthorised pond filling

Incompatible brownfield sites



Sources: Planning Department, Our Hong Kong Foundation
Image sources: GovHK, Planning Department, and Google Earth

b. Enable more flexibility in land use zoning framework

Cutting edge technologies will open the door to new industries and reshape business models, trip patterns, demand for office space and distribution, shopping preference and many more aspects of our economy. In the last year, Covid-19 has accelerated some of these changes, such as work from home, online learning, and e-commerce. As we adjust our work practices to the 'new normal', is our land use zoning also agile in responding to the evolving economic needs?

The present zoning system for economic land is rigid to meet changing market needs or encourage integrated development. Commercial zone primarily permits the use of office, hotel, shop and services. On the other hand, arts studio, office for media production and research centre can only be located in Industrial zone that generally lacks eating place or place of recreation. The blurring of the dichotomy between business and industrial uses pushes society to consider the possibility of more mixed-use development in Hong Kong.

Other cities have been encouraging mixed-use development to optimise land use. For instance, as introduced in our previous report, *Maximizing Land Use to Boost Development Optimizing Housing Resources to Benefit All*, Singapore uses zonings of "Business Park — White" and "Business — White" to encourage a combination of clean industries and commercial/residential/hotel developments.

Under Hong Kong's current zoning system, the designation of land as Other Specified Uses (OU) would be appropriate to facilitate more mixed-use development. We suggest that in planning future NDAs, the Government zones more land as OU to promote amalgamation of compatible land uses. For instance, offices can be integrated with research centres and recreational space in the same area. In this case, we could develop a vibrant district with commercial, educational, recreational, cultural, and diverse uses, which could help build a high-status image to attract international companies. The Government can still specify the Notes for the OU zones to maintain planning control. Furthermore, we recommend that the Government review various zonings regularly and add more permissible uses timely to keep with the economy's changes.

What is more, the present restriction on domestic plot ratios (PR) in new towns should be relaxed. The Hong Kong Planning Standards and Guidelines introduces lower densities for new towns considering the lack of infrastructural capacity, also with an aim to offer a better living environment. The maximum permitted PR in New towns are usually 3.6 to 5, while that of main urban areas can reach 7.5 or even higher. Now, as we are gradually urbanising the New Territories, the maximum PR for new towns should be lifted to be in line with that of the main urban areas. The Government should provide necessary enhancements to the current infrastructure to overcome any associated planning and capacity constraints.

Figure 65. **More flexibility in land use is needed to meet the evolving economic needs**

Cutting edge technologies will open up new industries and business models, **creating unprecedented situations** that are not reflected in the current land use zoning

?

?

?

Commercial

Office, hotel, shop and services

Industrial

Research, Design and Development Centre, manufacturing plant, warehouse, quality control

Other Specified Uses

A variety of non-polluting industrial, office and other commercial uses

What are the implications on planning the NDAs?

- Zone land as “Other Specified Uses” and add more permissible uses timely to keep up with economic changes
- Relax the plot ratio restriction in the New Territories to allow more flexibility

Source: Town Planning Board

c. Establish a dedicated department to spearhead the development of NDA

The incredible achievement of creating multiple new towns before the 2000s is there for all to see, and credit should be given to the efficient organisational structure in the Government. Back then, departments and bureaux were organised to drive urban growth. This development-oriented structure enabled the Government to spearhead several new town projects simultaneously. Later on in the 2000s, given the subsiding need for creating new towns, the organisational structure was then skewed towards maintaining well-developed urban areas (Figure 66).

We do not attempt to single out any organisational structure and regard it as a panacea for the land supply crisis. However, as the socio-economic environment evolves, new challenges come to light and require different solutions. Upon our citizens' earnest expectation for a way out of the dire land shortage, the Government needs to adapt accordingly.

To expedite the development of NDAs, the Government should set up a dedicated department to spearhead the NDA projects. This department will be tasked to undertake the overall coordination and monitoring role, enhancing the accountability and oversight of the development projects. Moreover, a dedicated department could raise efficiency by promulgating targeted public engagement strategies and coordinating responses to aspirations from stakeholders. Instead of founding an entirely new department from the ground up, we referenced the then Territory Development Department (TDD).

Figure 66. **Establish a dedicated department to spearhead the development of NDA**

New Town development before 2000s

Organisational structure in the Government is more development-oriented to spearhead multiple New Town projects

NDA development after 2000s

Organisational structure is skewed towards maintenance of well-developed urban areas instead of growth-focused

Set up a dedicated department to spearhead the development of NDAs

Accountability

Tasked to undertake the overall coordination and monitoring role in the development project

Efficiency

Promulgate a public engagement strategy and coordinate response to aspirations from stakeholders

Case study: Territory Development Department (TDD)

In 1973, the New Territories Development Department (NTDD) was established to implement the new town development programmes and ensure timely land formation and provision of infrastructure. It was a matrix type multi-discipline organisation with regional development offices in the new towns, each under the leadership of a project manager (Territory Development Department, 1995). In 1986, the NTDD merged with the then Urban Area Development Department to form the TDD to also take on new major developments on Hong Kong Island and Kowloon.

With the aid of teams of professionals and consulting engineers, project offices assumed the overall responsibilities and led the development projects (Figure 67). For every new town, the project office was in charge of preparing development plans, obtaining approval on all relevant statutory procedures, conducting feasibility studies, overseeing land acquisition and clearance, monitoring the engineering works, exercising financial control, and other duties.

On the other hand, responsibilities are often split and shared among multiple departments in the present day's large-scale development. For instance, the preparation of development plans is mainly assigned to the PlanD; the LandsD is primarily responsible for land administration matter; the CEDD is entrusted to manage engineering works. Not only is there an absence of a clear accountability mechanism, but complex organisations can hinder communication. Thus, the development cycle is prolonged.

Figure 67. **Case study: Territory Development Department (TDD)**

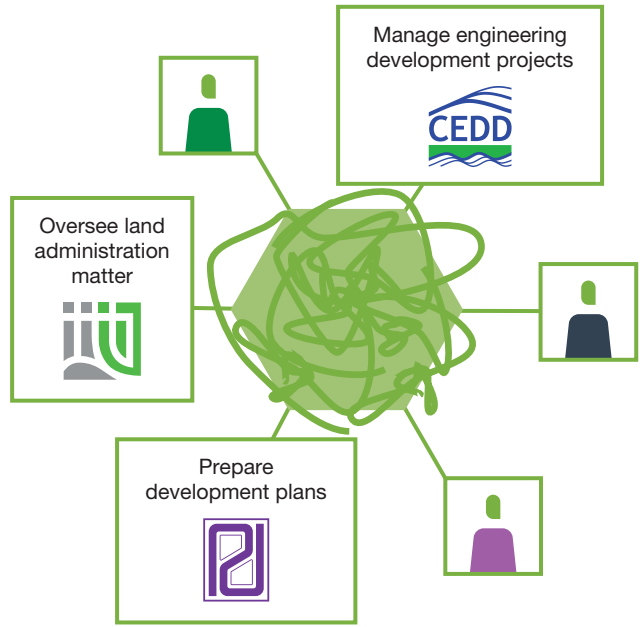
A multi-disciplinary project management office on developing new towns

Territory Development Department (1973 — 2004)[1]

Dedicated project office for each new town

- Prepare development plans
- Conduct feasibility studies
- Oversee land acquisition and clearance
- Obtain approval on all statutory procedures
- Manage all engineering development projects
- Exercise financial control

Large-scale development is split and shared among various departments



...and many other departments

Note: [1] The former New Territories Development Department merged with the Urban Area Development Department to form the Territory Development Department
Sources: Government Records Service, Legislative Council

d. Enhance high-level steer on strategic planning and execution

In 1997/98, the Steering Committee on Land Supply for Housing (HOUSCOM) was formed to oversee flat production targets of 85,000 private and public units (*Achieving Flat Production Targets*, 1998). The HOUSCOM established an accountability mechanism to set out clear mandates for the Housing Department (HD), the LandsD and the TDD and to coordinate their efforts. For housing projects within New towns, Strategic Growth Areas (SGAs) and major development areas, the TDD remained responsible until the concerned sites were passed to either the HD for building public housing or the LandsD for land sales for private housing construction. From then onwards, the HD and the LandsD were accountable for these projects until flat completion (Figure 68) (Task Force on Land Supply, 2018).

Furthermore, project directors are responsible to the then Secretary for Housing and the Financial Secretary. They must endeavour to adhere to the prescribed production timetable and escalate issues or insurmountable difficulties to the HOUSCOM for resolution. The HOUSCOM also came up with a specific framework for solving problems regarding housing projects. It was with a clear mandate and well-defined delivery targets from the high-level steer that 68,200 flats were completed during the five years from 1999 to 2003.

Such a system with precise timetables and clear accountability seems to be absent in today's Government. After the HOUSCOM was reformed to the Steering Committee on Land Supply in 2013, land creation and housing supply have yet to take off. The fact that the housing supply continues to lag behind the targets stipulated in the LTHS speaks for itself. To expedite land and housing supply, a comprehensive overhaul of the Government's organisational structure and administrative procedures is much needed. All policies and regulatory regimes involved in land and housing development, such as town planning, Environmental Impact Assessments and other procedures, should be scrutinised to uncover pain points and break down the bureaucratic hurdles. The Government should then establish outcome-based key performance indicators and work out a roadmap accordingly, specifying the housing supply targets and their expected delivery time. In fact, this is nothing new — the then TDD issued ten-year development programmes for each new town annually, which contained detailed completion timetables for all housing and facility projects in the decade. Only when the Government embraces an outcome-based management approach can it raise its coordination efficiency and implementation effectiveness to tackle the land supply crisis.

On top of that, the Government should enhance its high-level steer on strategic planning and execution. Apart from monitoring land and housing supply targets, the aforementioned committee should be more active in guiding Hong Kong's strategic planning and translating the strategic visions into short-to-medium term plans actionable by bureaux.

Figure 68. **Set land and housing supply targets with clear mandates for departments**

Steering Committee on Land Supply for Housing (HOUSCOM)

1. Clear accountability

Projects within New Towns, SGAs and major development areas

Housing type	Public housing	Private housing
Site delivery	TDD	TDD
Flat completion	HD	LandsD

2. Inter-departmental goals

- Project directors are responsible to the Secretary of Housing and the Financial Secretary
- They must adhere to the prescribed production timetable, and escalate issues to the HOUSCOM for decision making

68,200

Average annual completion of public and private housing (1999-2003)

In 2013, reformed to

Steering Committee on Land Supply

Provides high level steer overseeing and coordinating the assessment of land demand and supply and the strategic planning for different land uses

Accountability system?

Inter-departmental goals?

Set land and housing supply targets, with clearly defined responsibility for their delivery

Source: Legislative Council

e. Build land reserve to avoid a repeat of land shortage

To avoid a repeat of land shortage, apart from meeting the future land demand, it is equally critical to build a land reserve (Figure 69). Land reserve generally refers to spade-ready land without immediate pre-determined use owned by the Government. Its function is to cater to unforeseeable needs and provide buffer capacity in planning land requirements. Pre-emptive land banking has been a tradition in Western European countries and is also practiced in Asia (Lawson & Ruonavarra, 2019). The Task Force on Land Supply also advocated the need of building a land reserve in Hong Kong to "save for rainy days" (Task Force on Land Supply, 2018).

Meanwhile, in Hong Kong, the current legislation and administrative procedures render it impossible to resume or form a piece of land before any detailed planning is in place. Land resumption and reclamation are the two major approaches in creating a land reserve. However, invoking the Lands Resumption Ordinance requires an established "public purpose", which can only be established with approved plans for NDAs or other public development projects. In the case of reclamation, the Government's internal administrative arrangement warrants the preparation of a new or amended Outline Zoning Plan prior to any reclamation work (Planning, Environment and Lands Bureau & Works Bureau, 1997).

Without readily available land on hand, Hong Kong is caught in a difficult situation as the demand for various types of land mounts up. In OHKF's past research report, *Rethinking Public Housing Policy; Building Sustainable Land Reserve* (Our Hong Kong Foundation, 2016), we have been calling on the Government to build its land reserves to meet various economic, social and livelihood needs in the long term. The Government could explore appropriate land banking mechanisms with reference to successful implementation in other places.

In this regard, the Government may establish a public land banking authority that focuses on land acquisition through the market mechanism. On the other hand, the Government should also revise its administrative arrangements to allow reclamation without strict pre-determined use. Furthermore, as mentioned in the earlier section and our previous report, the Government can also introduce the concept of "White Zone" i.e., zoning without specific designation on uses, to facilitate development for land banking purpose. It is only by setting up a land reserve that Hong Kong keeps itself out of the land supply crisis for good.

Figure 69. **Building land reserve to avoid a repeat of land shortage**

Concept of land reserve

- Spade-ready land owned by the Government without immediate pre-determined use
- Cater for unforeseeable needs and provide flexibility and buffer capacity in the planning of land requirements

Pre-emptive land banking has been **tradition in West European countries** and now is also **practiced in many Asian countries**

Task Force on Land Supply advocated the need of **building land reserve to save for rainy days**

Meanwhile in Hong Kong, Outline Zoning Plan (OZP) is often required before any land development project is underway

Outline zoning plan

Land resumption

Invoking the Lands Resumption Ordinance requires an established "public purpose"

Reclamation

Government's administrative arrangements require the preparation of a new or amended OZP prior to reclamation work

Explore appropriate land banking mechanism with reference to successful implementation in other places

- Establish a public land banking authority focusing on acquiring land through a market mechanism
- Revise administrative arrangements to allow reclamation without strict pre-determined use
- Introduce "White Zone" for land banking purpose

Sources: Land policies for affordable and inclusive housing (Lawson, J.M. and Ruonavaara, H.), Report of the Task Force on Land Supply, Works Bureau Technical Circular No. 13/97, Foreshore and Sea-bed (Reclamations) Ordinance, and Lands Resumption Ordinance

6 A liveable Hong Kong for all

As the Government is relentlessly boosting the housing supply, it cannot put the cart before the horse — neglecting liveability elements, the conditions leading to a decent life for everyone in the city.

Individuals need more than a tiny flat to flourish — we seek diverse housing types when we enter different life stages; we long for an affordable space to work and do business; we wish for open space and quality community services within reach. Therefore, we should set our eyes on comprehensive planning and large-scale development to build liveable communities where people desire to live, work and play. The LTV and the large-scale development in the New Territories, the only options that create extensive landmass, will be the requisites to achieve this aim.

Our society has learnt a painful lesson from today's land supply crisis. Facing a living environment characterised by cramped flat size, meagre space for new businesses, and under-provision of infrastructure and community facilities, does anyone still aspire to live and work in an intolerable environment like Hong Kong? It comes with no surprise that the acute housing shortage bred discontent and despair among our younger generation, giving rise to agonising social conflicts in recent years. We can no longer afford to see further degradation in our citizens' quality of life. The time has come now for us to create truly liveable places and bring hope to Hong Kong.

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