



OUR HONG KONG
FOUNDATION
團結香港基金



公共政策研究院
PUBLIC POLICY INSTITUTE

Discussion on Brownfield Development Strategy

August 28, 2020

Research • Advocate • Engage
研究 • 倡議 • 推動





OUR HONG KONG
FOUNDATION
團結香港基金



公共政策研究院
PUBLIC POLICY INSTITUTE

Part 1

An overview on the 8 brownfield clusters identified by the Planning Department



The Government intends to resume some brownfields for public housing development

Brownfields refer to some former agricultural lands which are now occupied by industrial, warehousing, logistics and car parking operations. They have a relatively low land utilization efficiency and may cause environmental and traffic problems, despite providing support to the development of the construction, logistics, port backup, recycling and many other related industries. Besides those brownfields which were already included in the New Development Areas (NDAs), some relatively sizeable brownfield clusters are now being considered for public housing development.

The Planning Department (PlanD) commissioned their consultant to kickstart the <Study on Existing Profile and Operations of Brownfield Sites in the New Territories>

Apr 2017

PlanD published the report of <Study on Existing Profile and Operations of Brownfield Sites in the New Territories>

Nov 2019

PlanD published the results of <Shortlisted Brownfield Clusters for Public Housing Development (First-Phase)>

Mar 2020

Shortlisted brownfield
In the first phase
36 ha



Adjoining
land parcels
27 ha



**8 brownfield clusters
63 ha**

estimated to provide
>20,000 units
(based on plot ratio 3.6)

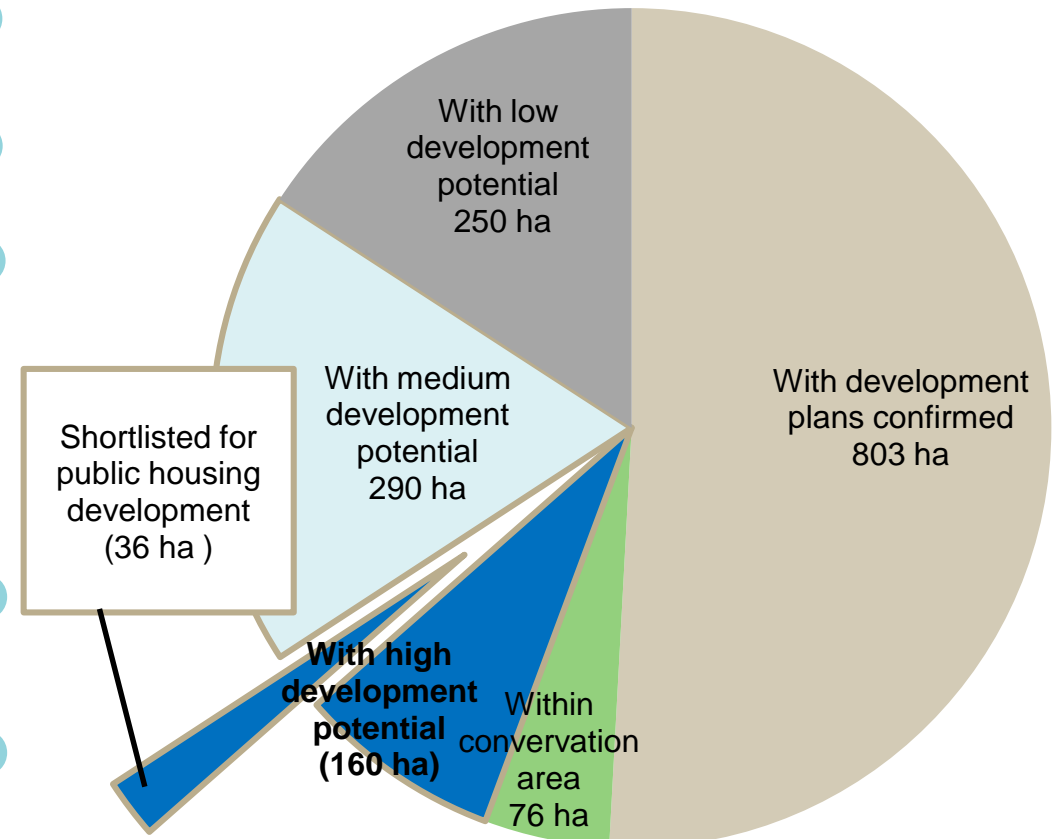
The Civil Engineering and Development Department (CEDD) started the Project Feasibility Study for the <Shortlisted Brownfield Clusters for Public Housing Development (First-Phase)>

Q2 2020

PlanD expects to complete the study of <Shortlisted Brownfield Clusters for Public Housing Development (Second-Phase)> (290 ha)
CEDD expects to complete the First Phase Project Feasibility Study

Q4 2020

New Territories Brownfield Total Area: 1,579 ha



Locations of the 8 brownfield clusters

Selection criteria on the 8 brownfield clusters:



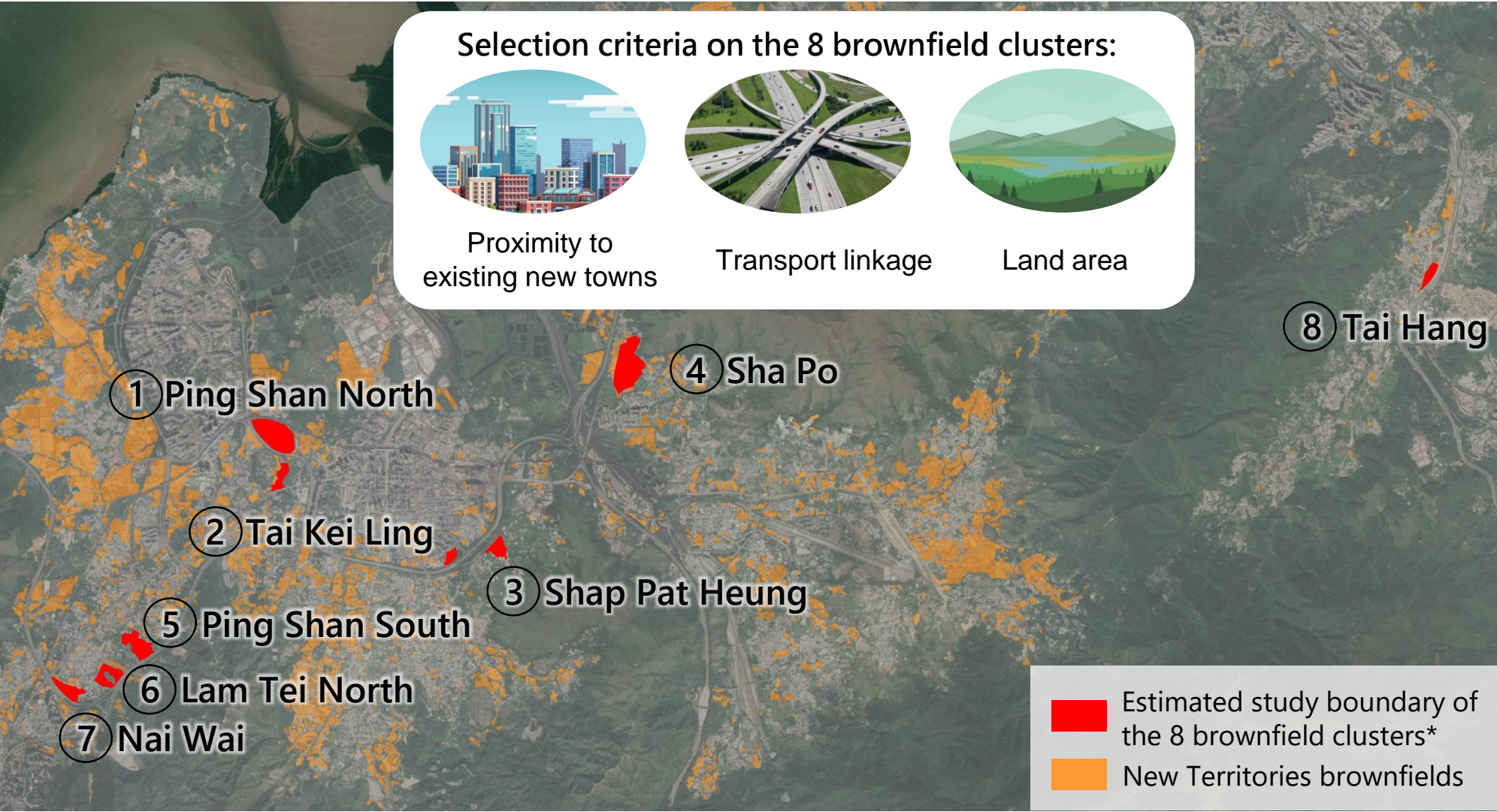
Proximity to existing new towns





Transport linkage



Land area



 Estimated study boundary of the 8 brownfield clusters*
 New Territories brownfields

According to Gov papers submitted to the LegCo-

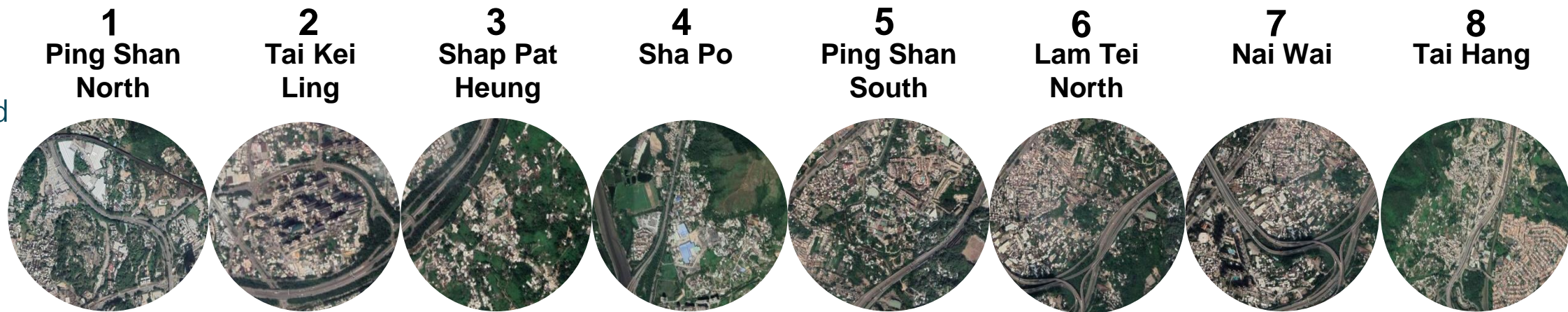
The 8 brownfield clusters may produce **>20,000 public housing units**

Govt. expects to **transform them into "spade-ready" sites in about 6 years** (versus >8 years now in general)

Govt. aims at **compressing the time needed for production of certain housing units to within ten years approximately** from the commencement of EFS

Cross comparison of the 8 brownfield clusters

😊 Easy/Good
 😐 Average
 😞 Hard/Bad



	1 Ping Shan North	2 Tai Kei Ling	3 Shap Pat Heung	4 Sha Po	5 Ping Shan South	6 Lam Tei North	7 Nai Wai	8 Tai Hang
Study area (ha)	18	2	4	17	8	7	5	3
Estimated public housing units#	6,600	600	1,300	6,000	3,300	2,000	1,300	600
Transport	😊	😐	😞	😞	😐	😐	😐	😞
Community facilities	😊	😐	😞	😞	😐	😐	😐	😞
Environmental compatibility	😊	😊	😞	😐	😐	😐	😐	😞
Technical Feasibility	😊	😐	😐	😞	😐	😐	😐	😞
Resettlement	😞	😐	😐	😞	😐	😐	😐	😐

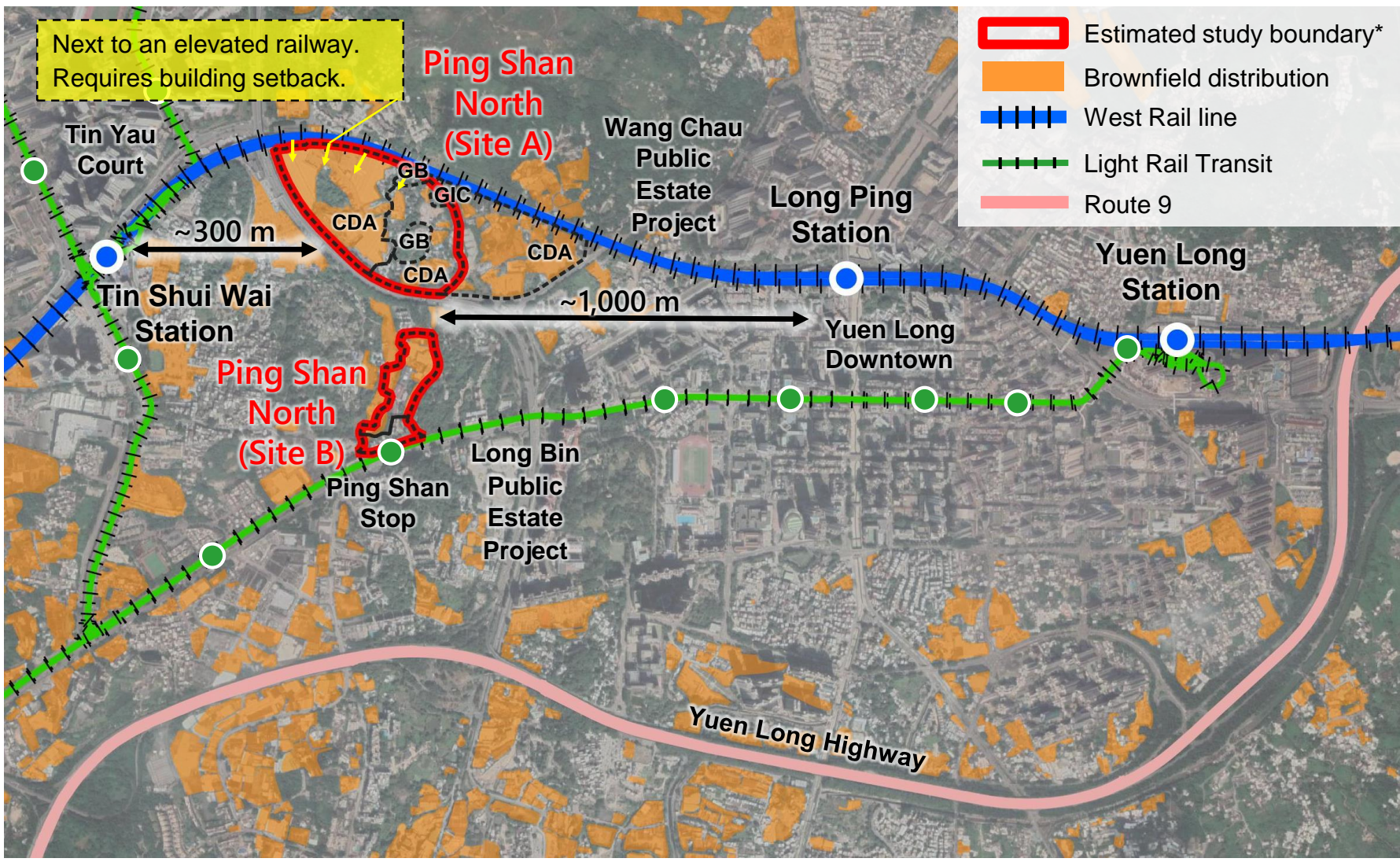
*Based on the locations published by PlanD, OHKF estimated the study boundary of the shortlisted brownfield clusters
 #Followed PlanD's recommendation to adopt a 3.6 plot ratio as the calculation basis

Results only applicable to comparison within the 8 brownfield clusters

Source: Development Bureau, PlanD, CEDD, Google Map, OHKF

© 2020 Our Hong Kong Foundation Limited. All Right Reserved.

Ping Shan North Cluster: Advantages and Limitations



Study area	~18 ha
Brownfield area involved	~ 9 ha
Estimated public housing units	~ 6,600 units [#]

- Advantages**
- Large site area allowing production of plentiful housing units and comprehensive planning
 - Mature transport ancillary facilities (WRL, LRT)
 - Next to developed communities (YL, TSW)
 - Next to public housing estate projects

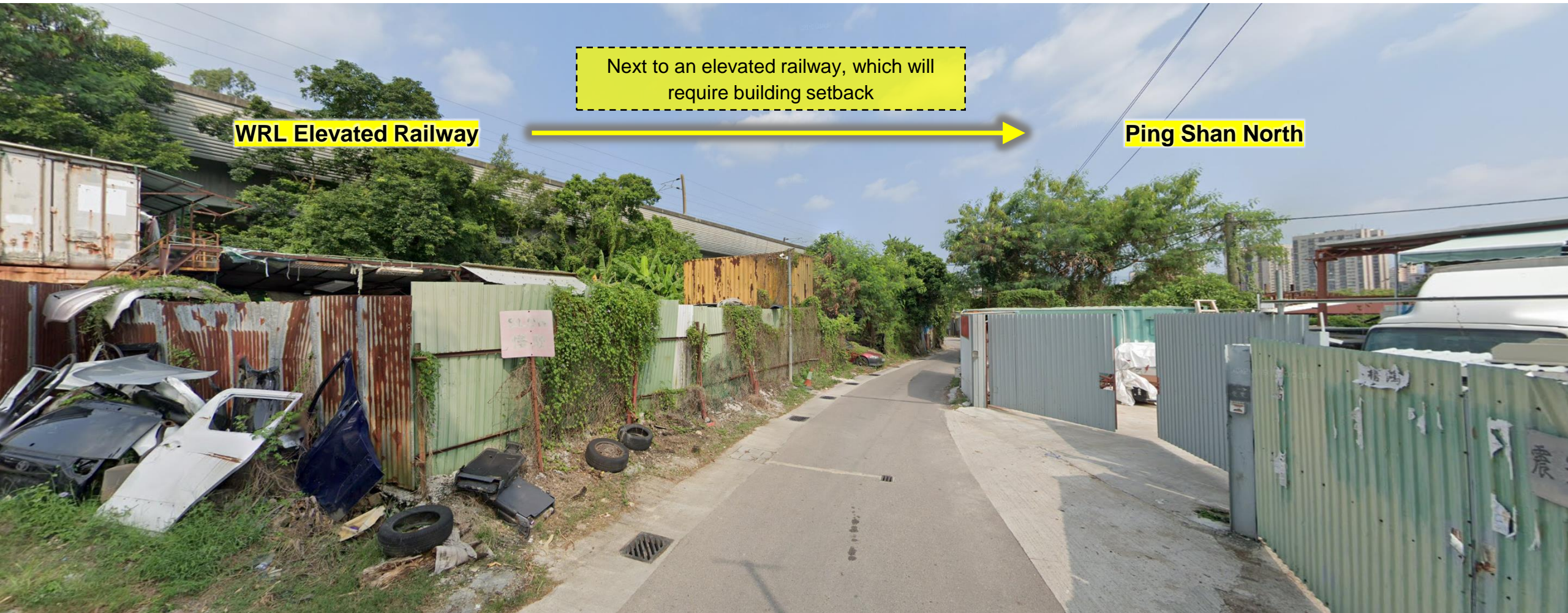
- Limitations**
- Next to an elevated railway, which will require building setback and reduce the developable area. Mitigation measures such as noise barrier also required
 - Sizable brownfield operations intermingled with residential dwellings, making resettlement a challenge

- Recommendations**
- To assess transport and community ancillary facilities from a regional perspective and incorporate nearby housing projects for more comprehensive planning

Source: Development Bureau, PlanD, CEDD, Google Map, OHKF
 © 2020 Our Hong Kong Foundation Limited. All Right Reserved.

*Based on the locations published by PlanD, OHKF estimated the study boundary of the shortlisted brownfield clusters
[#]Followed PlanD's recommendation to adopt a 3.6 plot ratio as the calculation basis

Ping Shan North Cluster: Advantages and Limitations

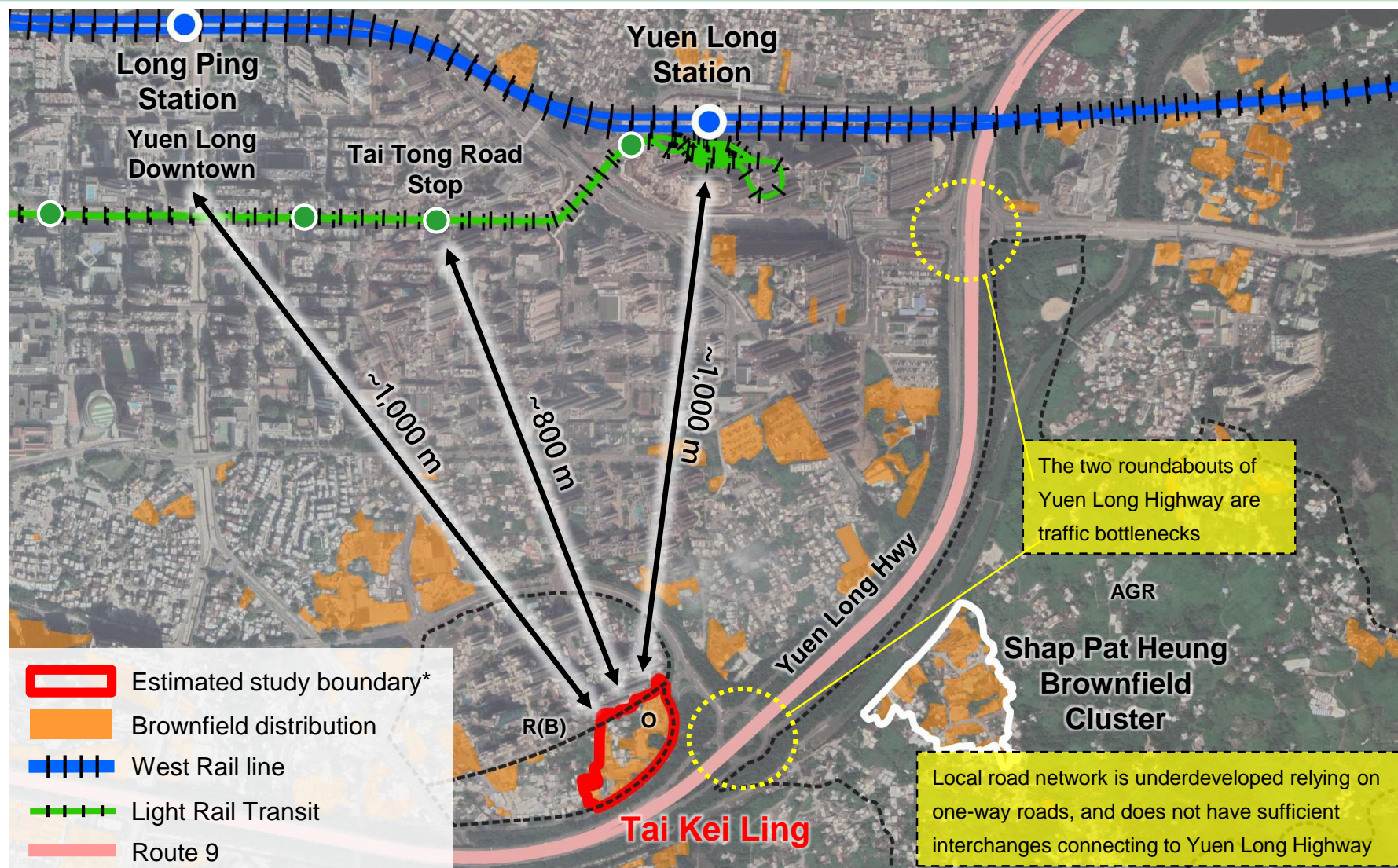


Next to an elevated railway, which will require building setback

WRL Elevated Railway

Ping Shan North

Tai Kei Ling Cluster: Advantages and Limitations



Study area	~ 2 ha
Brownfield area involved	~ 1 ha
Estimated public housing units	~ 600 units [#]

Advantages

- Involves a smaller percentage of Tso Tong Lands, which may make the resumption process less challenging

Limitations

- The two roundabouts of Yuen Long Highway are traffic bottlenecks
- Small site area, low estimate of housing units
- Mix of brownfield operations and squatters, which could make resettlement more difficult
- Local road network is underdeveloped relying on one-way roads, and does not have sufficient interchanges connecting to Yuen Long Highway
- Distant from major mass transport
- Distant from developed communities and does not have sufficient ancillary facilities

Recommendations

- To develop with the agricultural lands around Shap Pat Heung to improve local transport, community facilities and land efficiency

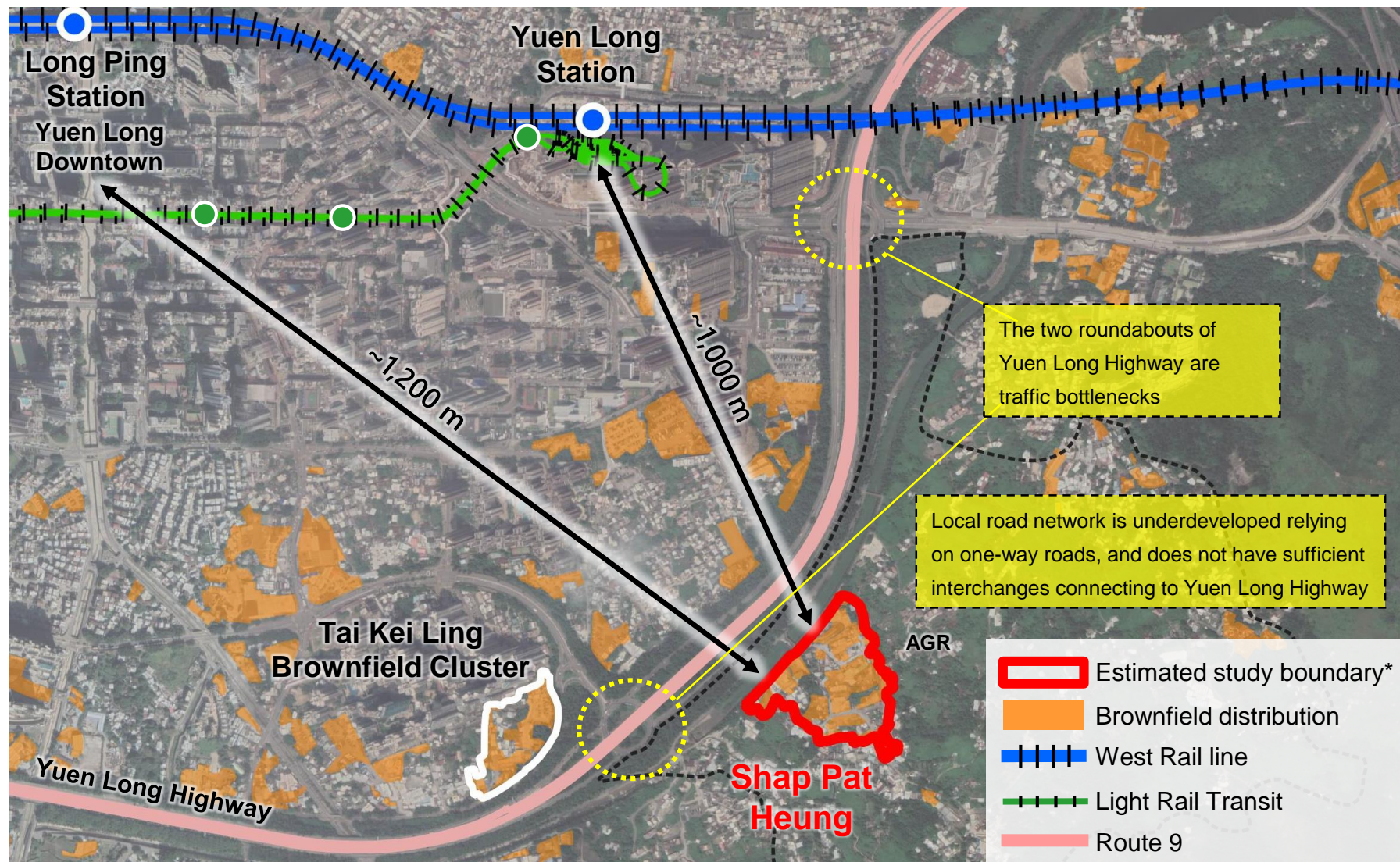
Tai Kei Ling Cluster: Advantages and Limitations



Mix of brownfield operations and squatters

Local road network is underdeveloped relying on one-way roads, and does not have sufficient interchanges connecting to Yuen Long Highway

Shap Pat Heung Cluster: Advantages and Limitations



Study area	~ 4 ha
Brownfield area involved	~ 2 ha
Estimated public housing units	~ 1,300 units [#]

- Advantages**
- Concentrated brownfield cluster distribution

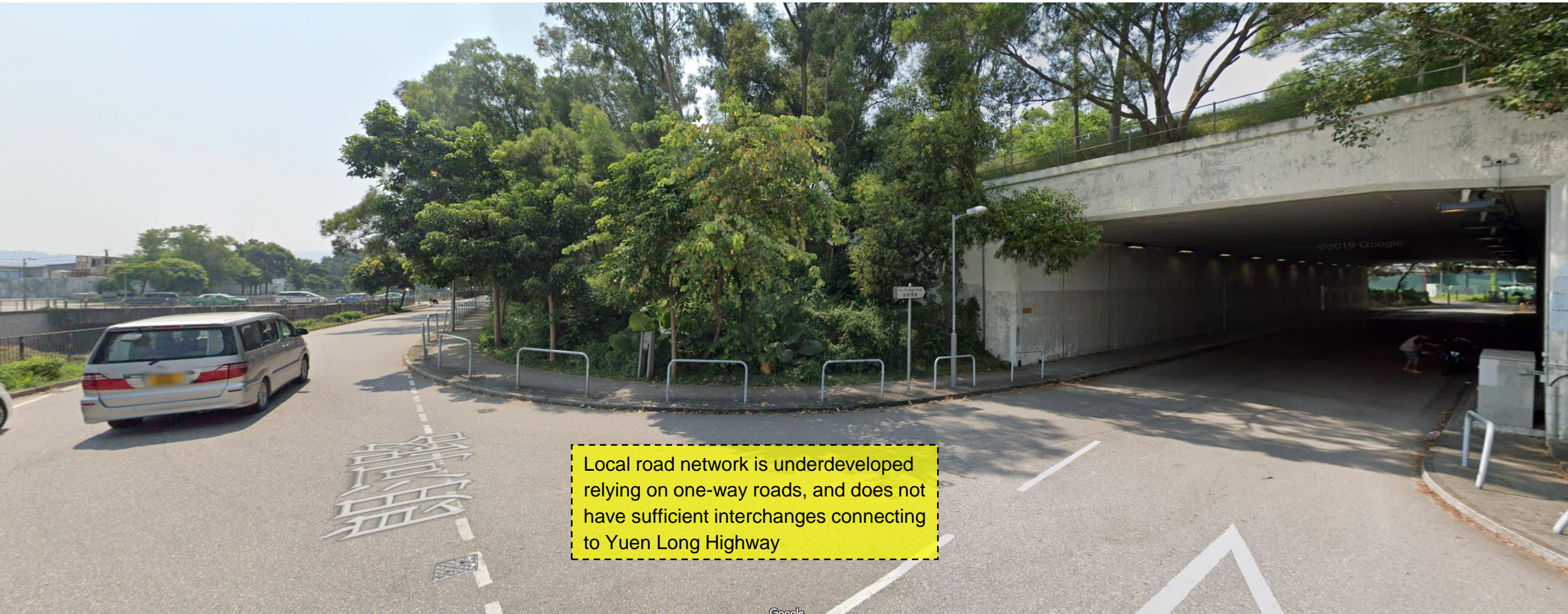
- Limitations**
- The two roundabouts of Yuen Long Highway are traffic bottlenecks
 - Small site area, low estimate of housing units
 - Mix of brownfield operations and squatters, which could make resettlement more difficult
 - Distant from major mass transport
 - Distant from developed communities and does not have sufficient ancillary facilities

- Recommendations**
- To develop with the agricultural lands around Shap Pat Heung to improve local transport, community facilities and land efficiency

Source: Development Bureau, PlanD, CEDD, Google Map, OHKF
 © 2020 Our Hong Kong Foundation Limited. All Right Reserved.

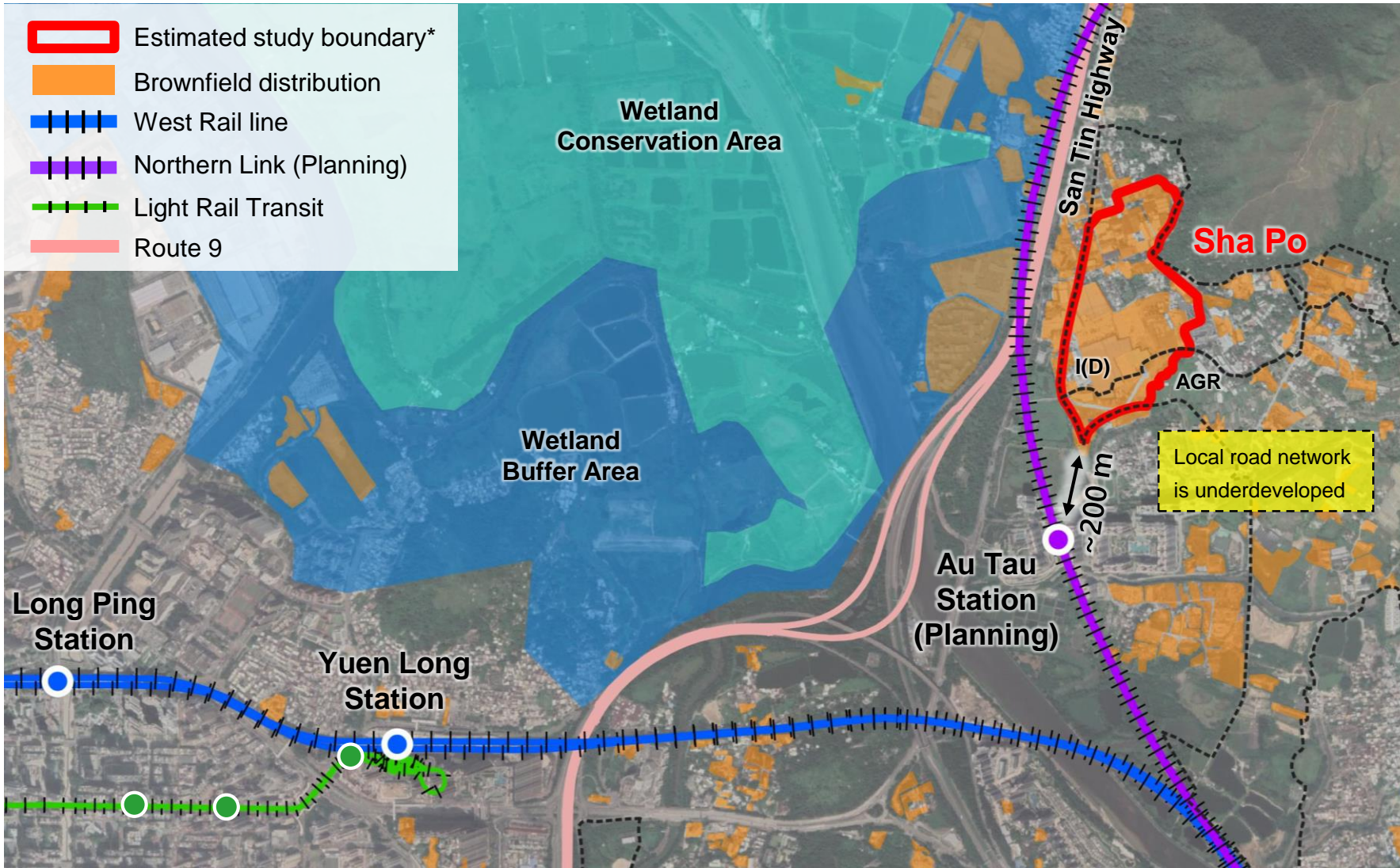
*Based on the locations published by PlanD, OHKF estimated the study boundary of the shortlisted brownfield clusters
[#]Followed PlanD's recommendation to adopt a 3.6 plot ratio as the calculation basis

Shap Pat Heung Cluster: Advantages and Limitations



Sha Po Cluster: Advantages and Limitations

- Estimated study boundary*
- Brownfield distribution
- West Rail line
- Northern Link (Planning)
- Light Rail Transit
- Route 9



Study area	~ 17 ha
Brownfield area involved	~ 13 ha
Estimated public housing units	~ 6,000 units [#]

- ### Advantages
- Sizable site area, higher estimate of housing units, and allows more comprehensive planning
 - Next to the planned NOL Au Tau Station
 - Next to San Tin Highway

- ### Limitations
- Involves large-scale brownfield operations (international logistics companies etc.), which may require strategic resettlement
 - Project status of the NOL Au Tau Station remains unclear
 - Distant from developed communities and does not have sufficient ancillary facilities
 - Local road network is underdeveloped

- ### Recommendations
- To accelerate the NOL project to release the full potential of the surrounding lands
 - To adopt the brownfield consolidation strategy recommended by the OHKF, and to resettle brownfield operations into logistics nodes

Source: Development Bureau, PlanD, CEDD, Google Map, OHKF
 © 2020 Our Hong Kong Foundation Limited. All Right Reserved.

*Based on the locations published by PlanD, OHKF estimated the study boundary of the shortlisted brownfield clusters
[#]Followed PlanD's recommendation to adopt a 3.6 plot ratio as the calculation basis

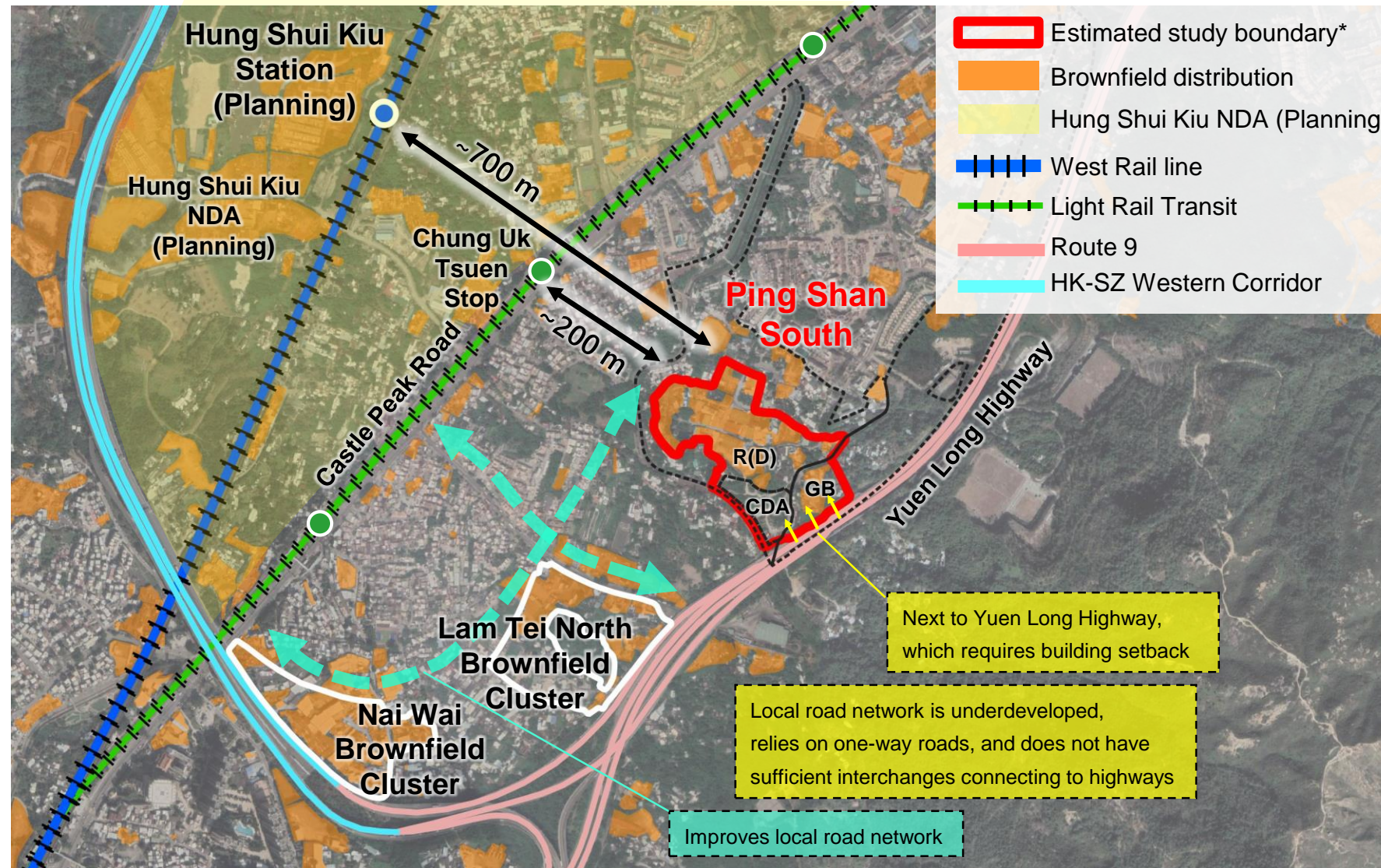
Sha Po Cluster: Advantages and Limitations

Extremely fragmented ownerships

Large-scale brownfield operations



Ping Shan South Cluster: Advantages and Limitations



Study area	~ 8 ha
Brownfield area involved	~ 3 ha
Estimated public housing units	~ 3,300 units [#]

Advantages

- Transport ancillary facilities are quite sufficient
- Close to the planned Hung Shui Kiu NDA

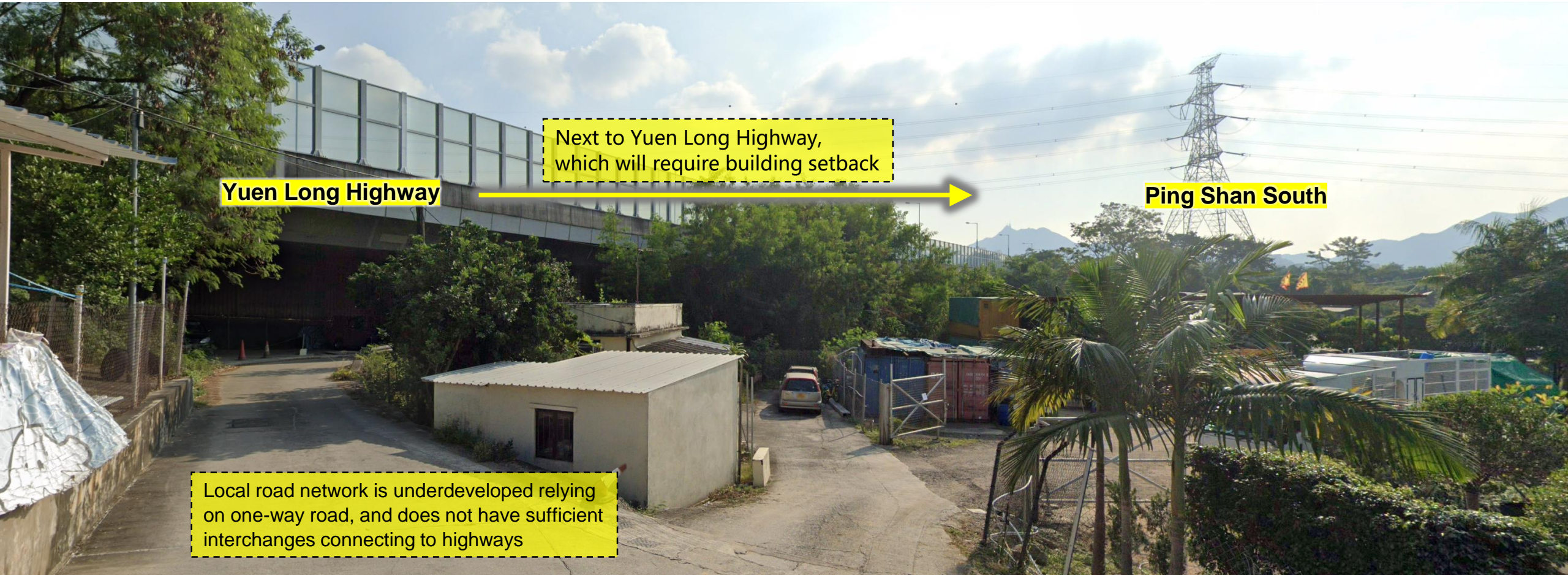
Limitations

- Next to Yuen Long highway, which will require building setback, reduce developable area, and require mitigation measures such as noise barrier
- Local road network is underdeveloped relying on one-way road, and does not have sufficient interchanges connecting to Castle Peak Road and Yuen Long highway

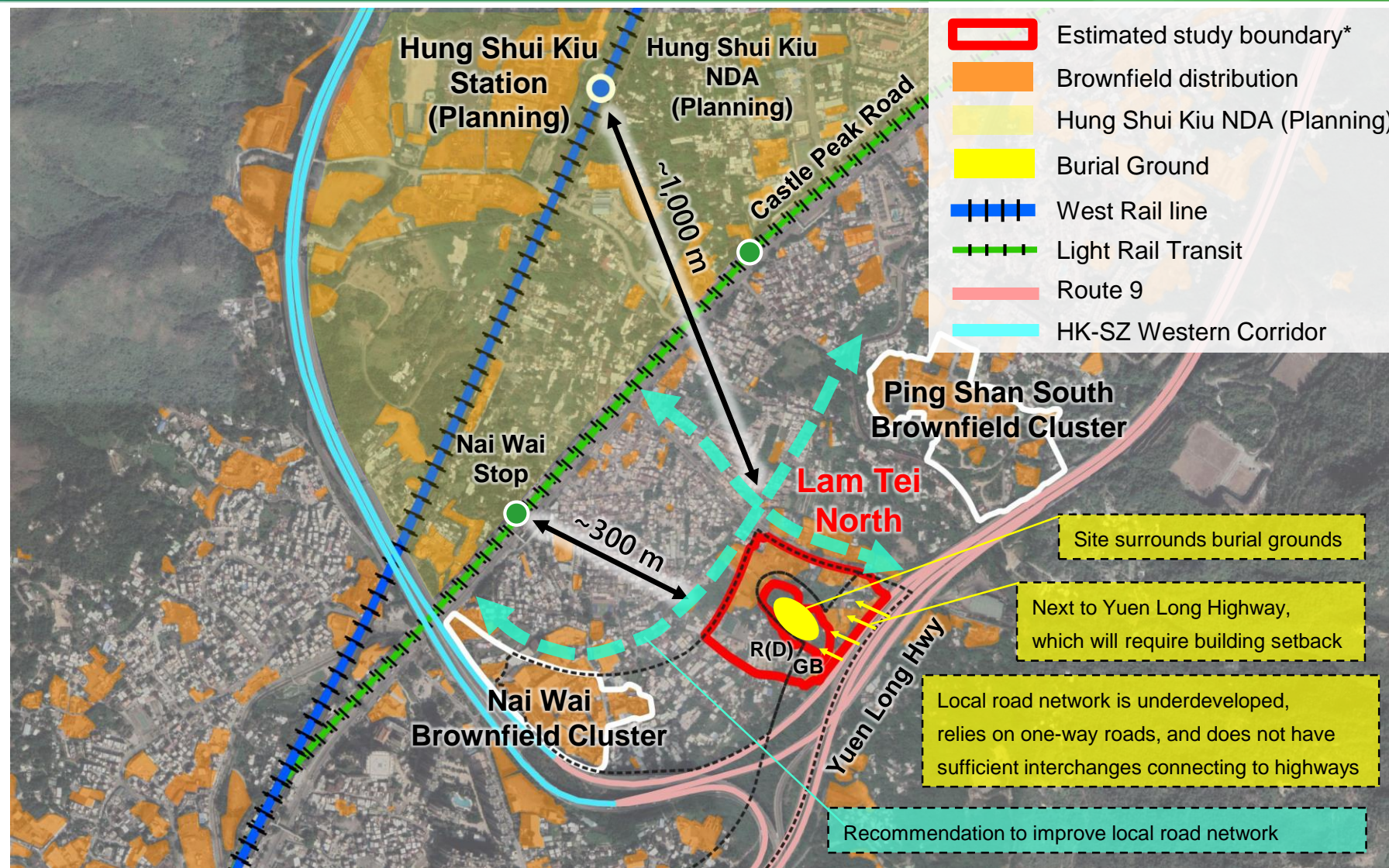
Recommendations

- To assess transport and community ancillary facilities from a regional perspective and incorporate nearby brownfield clusters for better comprehensive development planning
- To improve local road network

Ping Shan South Cluster: Advantages and Limitations



Lam Tei North Cluster: Advantages and Limitations



Study area	~ 7 ha
Brownfield area involved	~ 2 ha
Estimated public housing units	~ 2,000 units [#]

Advantages

- Transport ancillary facilities are quite sufficient
- Close to the planned Hung Shui Kiu NDA

Limitations

- Site surrounds burial grounds, which could impact developable area and building layout
- Next to Yuen Long Highway, which will require building setback, reduce developable area, and require mitigation measures such as noise barrier
- Local road network is underdeveloped relying on one-way road, and does not have sufficient interchanges connecting to Castle Peak Road and Yuen Long Highway

Recommendations

- To assess transport and community ancillary facilities from a regional perspective and incorporate nearby brownfield clusters for better comprehensive development planning
- To improve local road network

Lam Tei North Cluster: Advantages and Limitations

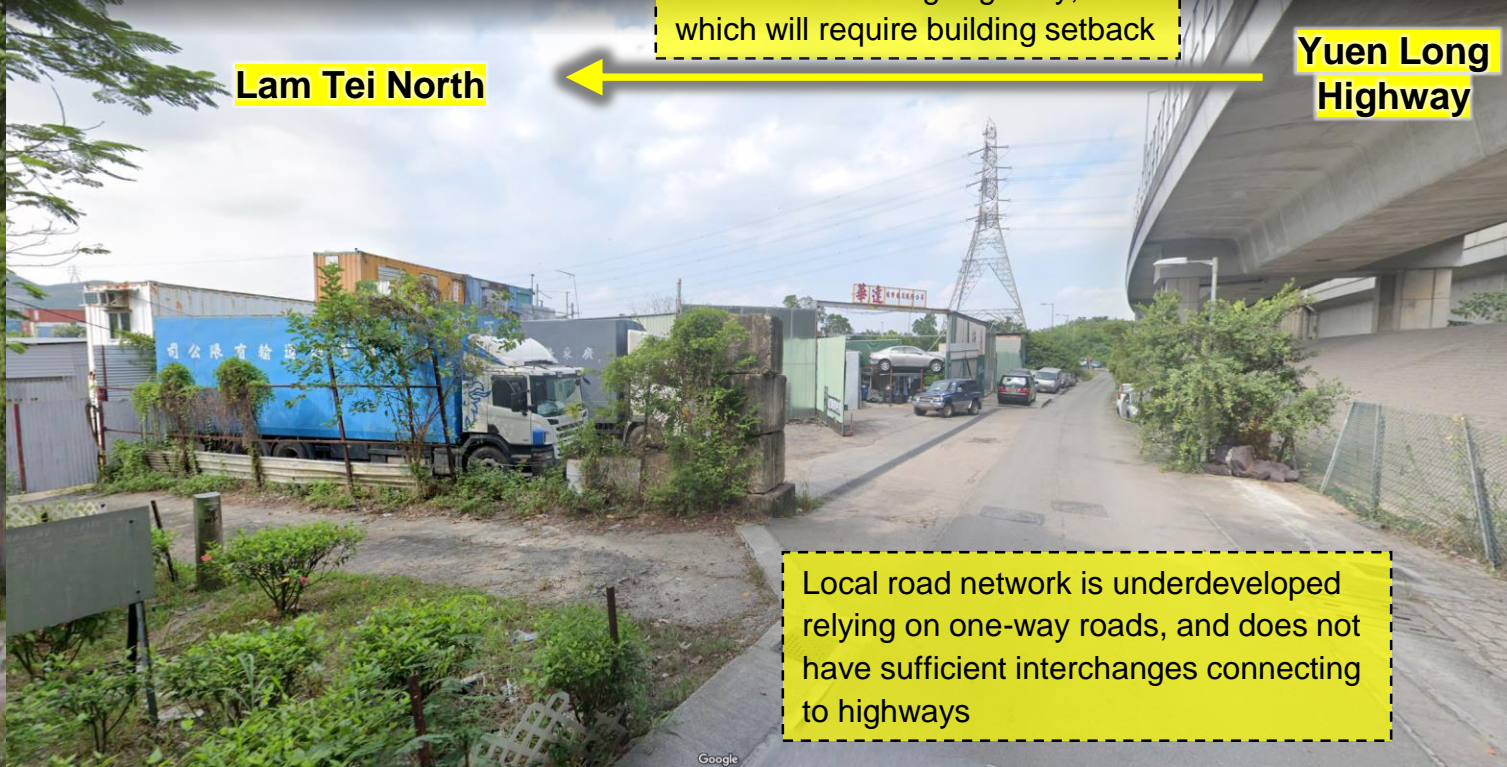
Site includes burial grounds



Lam Tei North

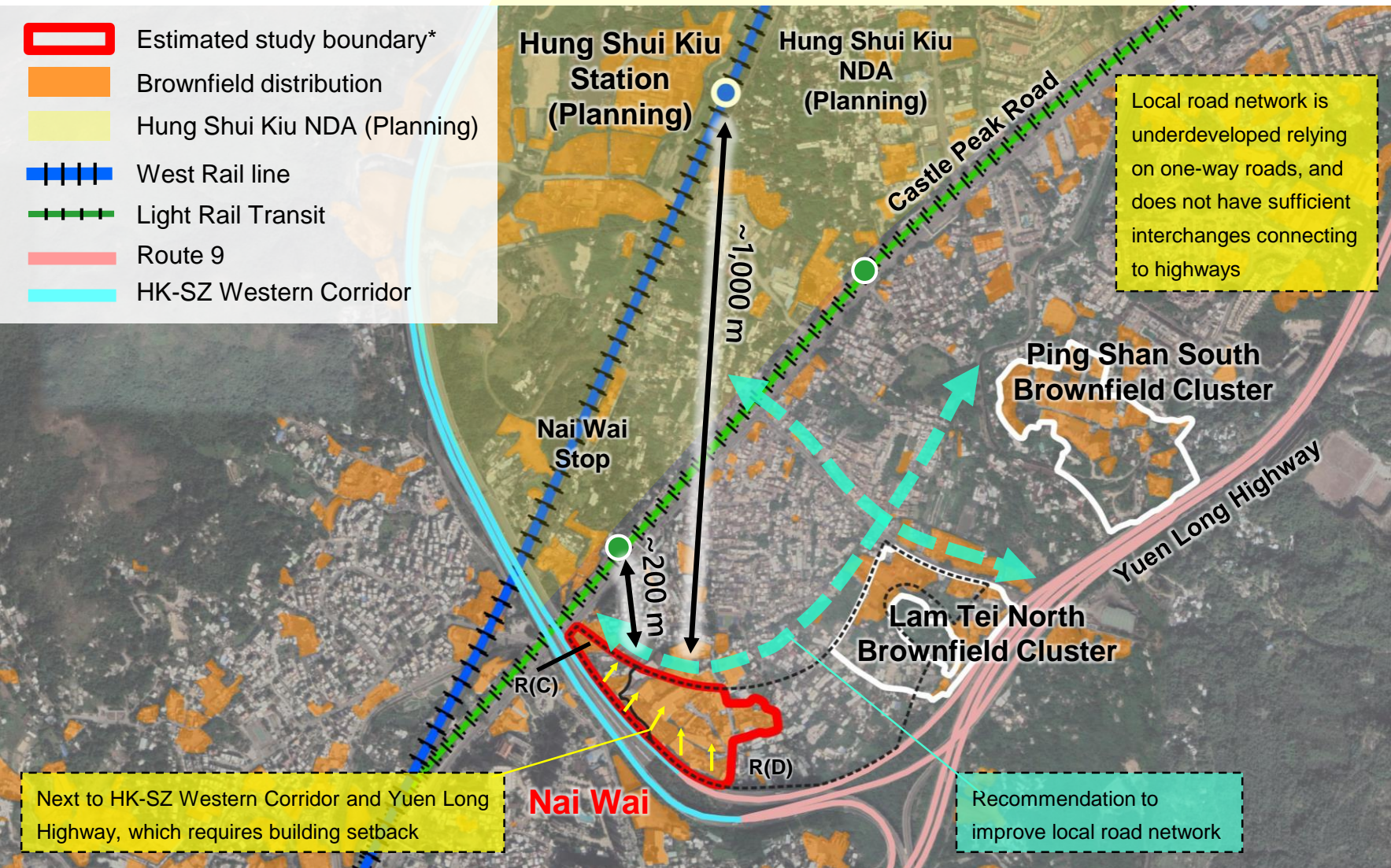
Next to Yuen Long Highway, which will require building setback

Yuen Long Highway



Local road network is underdeveloped relying on one-way roads, and does not have sufficient interchanges connecting to highways

Nai Wai Cluster: Advantages and Limitations



Study area	~ 5 ha
Brownfield area involved	~ 3 ha
Estimated public housing units	~ 1,300 units [#]

- ### Advantages
- Transport ancillary facilities are quite sufficient
 - Close to the planned Hung Shui Kiu NDA

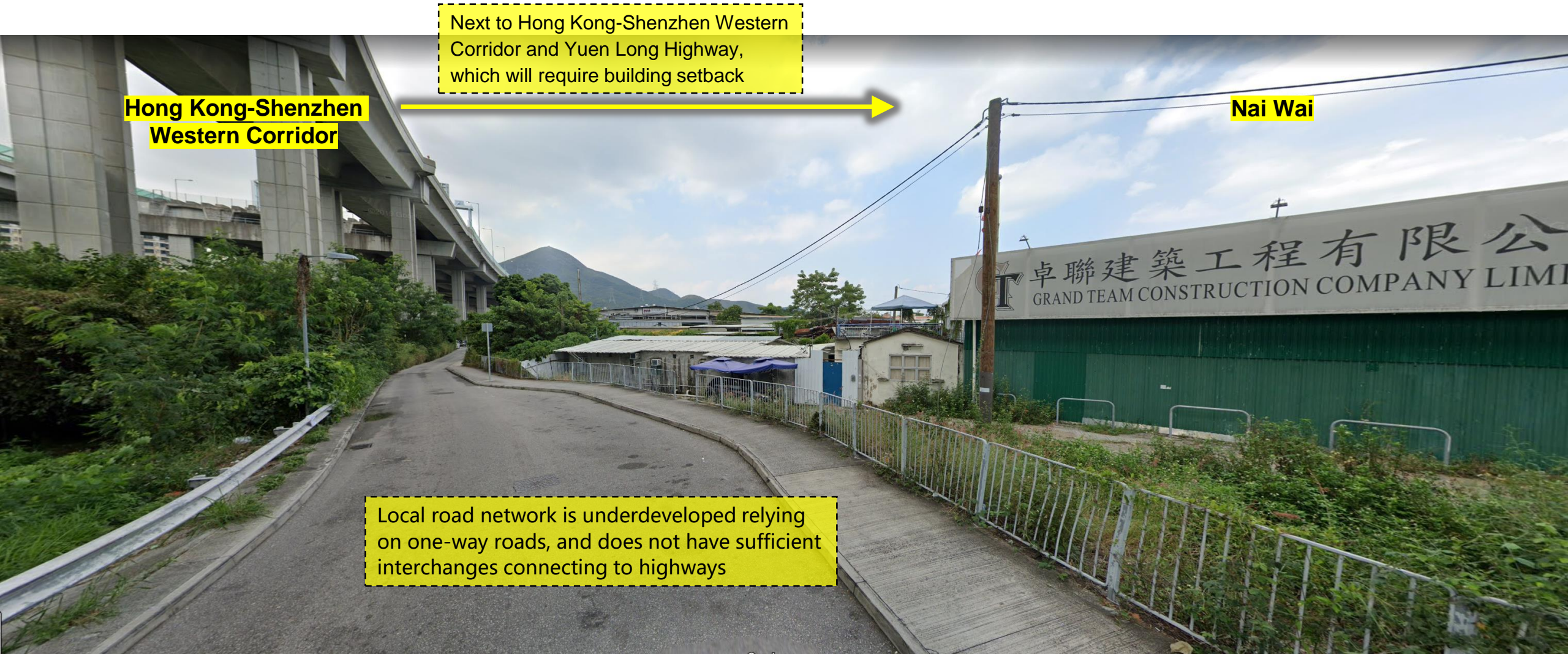
- ### Limitations
- Next to HK-SZ Western Corridor and Yuen Long Highway, which will require building setback, reduce developable area, and require mitigation measures such as noise barrier
 - Local road network is underdeveloped relying on one-way road, and does not have sufficient interchanges connecting to Castle Peak Road, HK-SZ Western Corridor and Yuen Long Highway

- ### Recommendations
- To assess transport and community ancillary facilities from a regional perspective and incorporate nearby brownfield clusters for better comprehensive development planning
 - To improve local road network

Source: Development Bureau, PlanD, CEDD, Google Map, OHKF
 © 2020 Our Hong Kong Foundation Limited. All Right Reserved.

*Based on the locations published by PlanD, OHKF estimated the study boundary of the shortlisted brownfield clusters
[#]Followed PlanD's recommendation to adopt a 3.6 plot ratio as the calculation basis

Nai Wai Cluster: Advantages and Limitations



Tai Hang Cluster: Advantages and Limitations



- Estimated study boundary*
- Brownfield distribution
- West Rail line
- Route 9

Study area	~ 3 ha
Brownfield area involved	~ 1 ha
Estimated public housing units	~ 600 units [#]

Advantages

- Next to Fanling Highway

Limitations

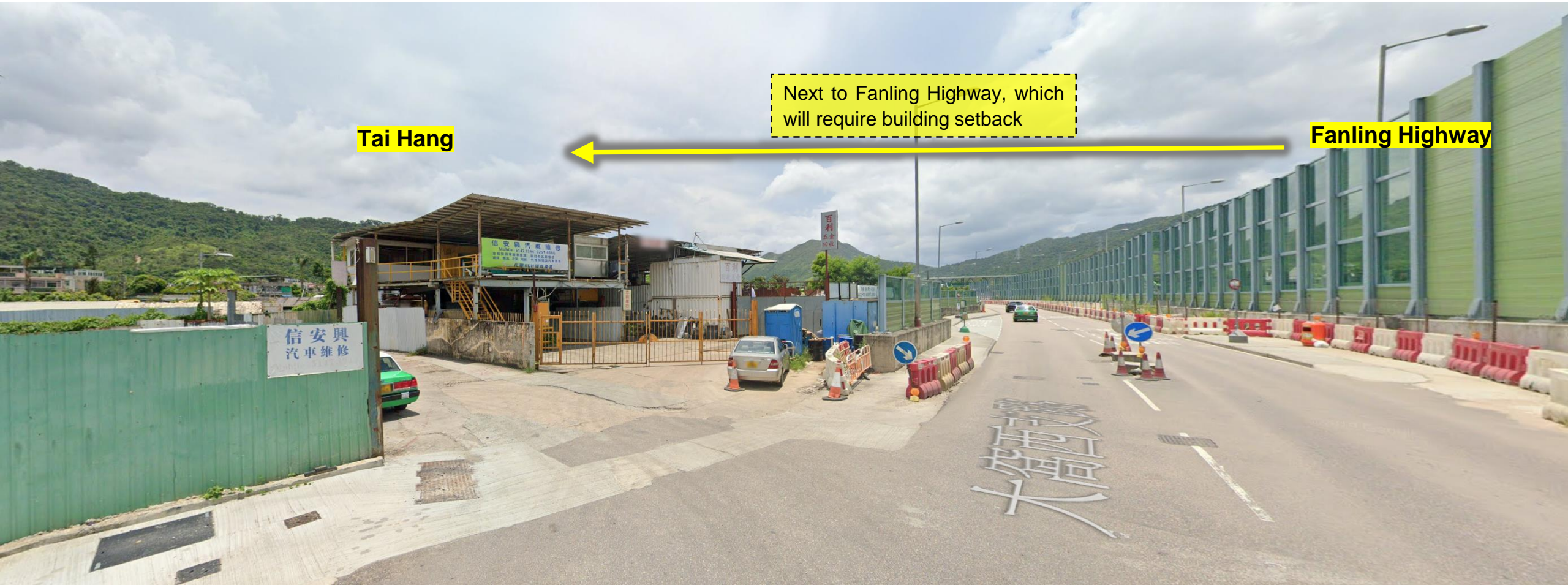
- Distant from major mass transport
- Distant from developed communities (Tai Po, Fanling) and does not have sufficient ancillary facilities
- Next to Fanling Highway, which will require building setback, reduce developable area, and require mitigation measures such as noise barrier
- Local road network is underdeveloped and does not have sufficient interchanges connecting to Fanling Highway
- Surrounded by agricultural lands, which includes operating farms, and causes lower environmental conformity

Recommendations

- To improve local road network
- To provide transport feeder services
- To provide community ancillary facilities

*Based on the locations published by PlanD, OHKF estimated the study boundary of the shortlisted brownfield clusters
[#]Followed PlanD's recommendation to adopt a 3.6 plot ratio as the calculation basis

Tai Hang Cluster: Advantages and Limitations



Tai Hang

Next to Fanling Highway, which will require building setback

Fanling Highway



OUR HONG KONG
FOUNDATION
團結香港基金



公共政策研究院
PUBLIC POLICY INSTITUTE

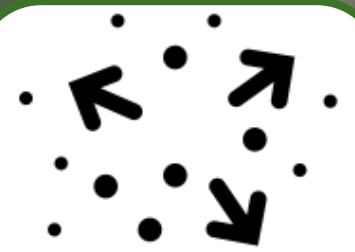
Part 2:

OHKF recommendations on developing brownfields in the New Territories



How to achieve sustainability in brownfield development?

Current development strategy for the 8 brownfield clusters :



Small site area and scattered distribution



Lacking development synergy with neighbouring regions



Time-consuming & inefficient

① Ping Shan North

② Tai Kei Ling

⑤ Ping Shan South

⑥ Lam Tei North

⑦ Nai Wai

④ Sha Po

③ Shap Pat Heung

⑧ Tai Hang

What is a better way to develop brownfields?

?

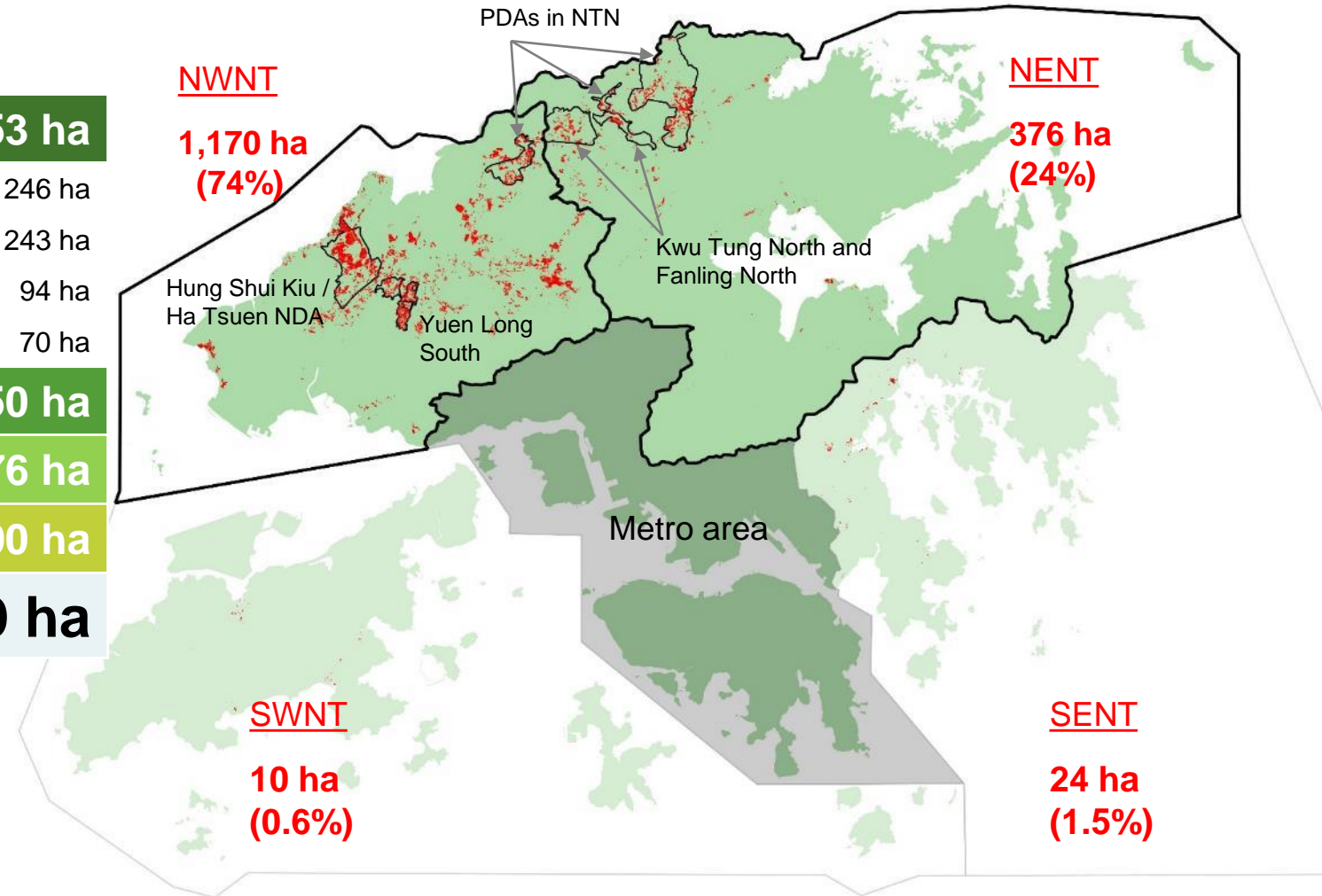


Strategic Land Development for Jobs: From Brownfields to Modern Logistics



Lack of industry land forced logistics operators to spread onto brownfields in the New Territories

Within New Development Areas (NDAs)	653 ha
Hung Shui Kiu / Ha Tsuen	246 ha
New Territories North	243 ha
Yuen Long South	94 ha
Kwu Tung North and Fanling North	70 ha
Within other development projects	150 ha
Within conservation-related zones	76 ha
Remaining brownfield sites	700 ha
Total	1,579 ha

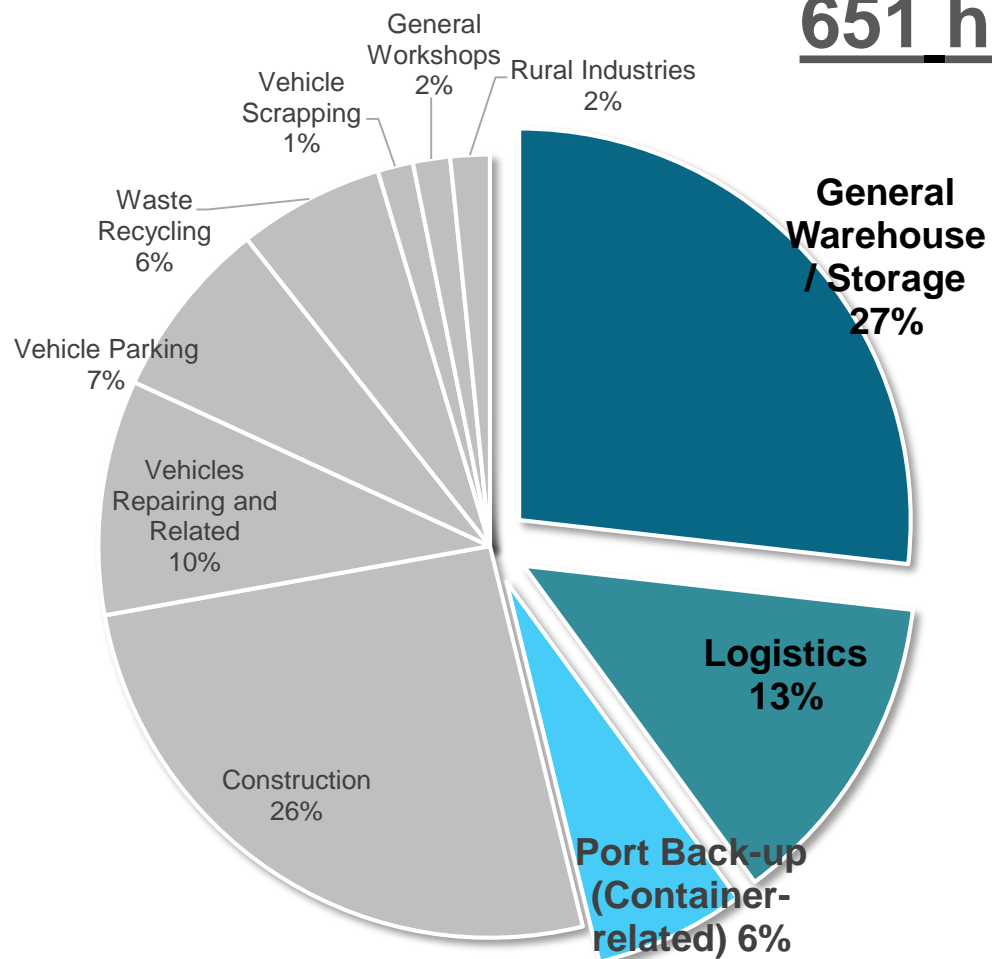


Source: Planning Department

Logistics-related industries occupy over 46% of active brownfield site area

Logistics-related Industries Active Brownfield Site Area

651 ha (46%)



Brownfield operators provide considerable job opportunities to local logistics industry

Employment of logistics-related industries in Hong Kong



15% are working in brownfields

Estimated employment of logistic-related industries on brownfield sites:



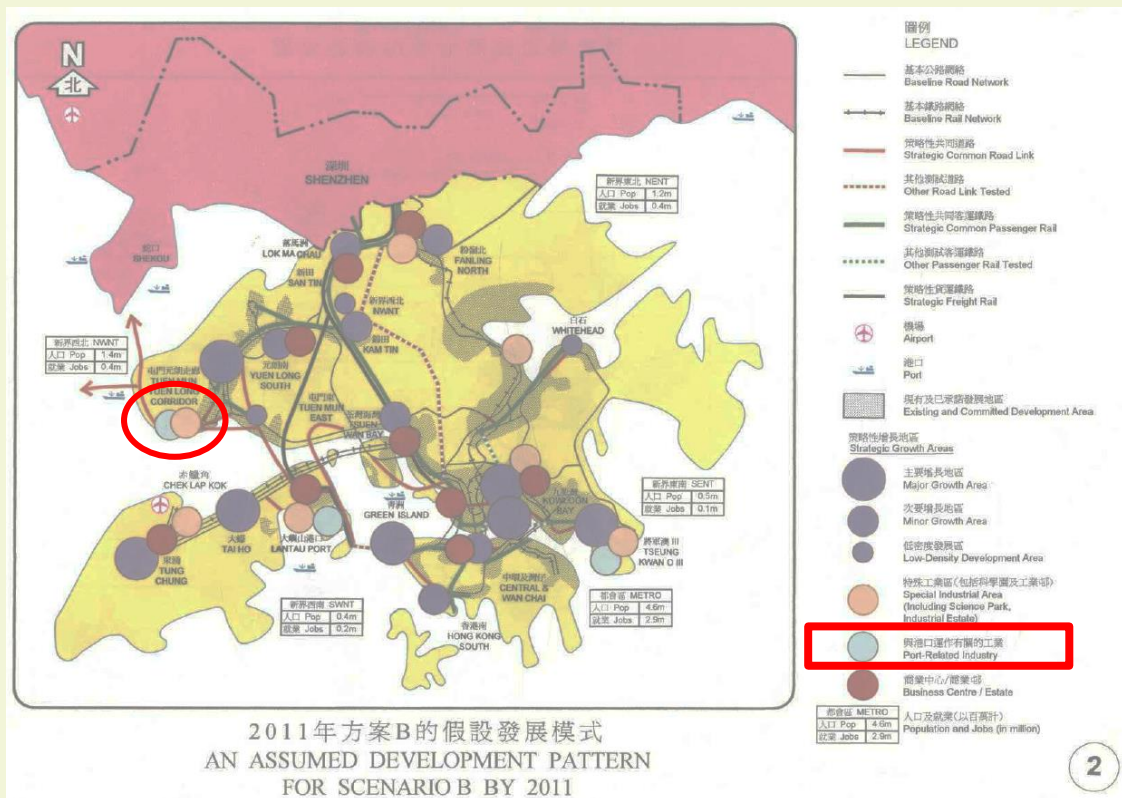
26,270

Employed > **180,000** people
(approx. **5%** of Hong Kong employed population)

Note: Employment of logistics-related industries on brownfield sites includes employment in general warehouse / storage, logistics, and port back-up (container-related)
Sources: Census and Statistics Department and Planning Development

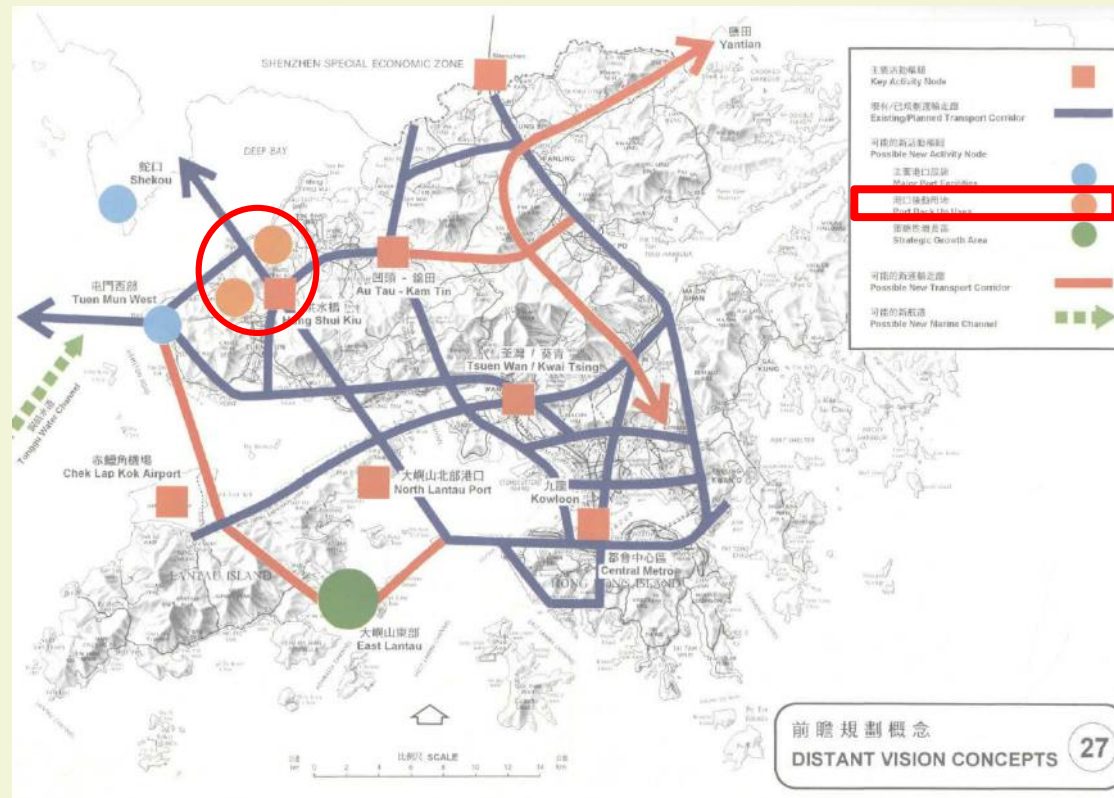
Planned development of north-west New Territories for port back-up industry in 1990s has not been realized

An assumed development pattern for Scenario B by 2011 (1999)



More land for port-related industry was expected in 2011 according to development plan in the *Territorial Development Strategy Review*

Distant Vision Concepts (1999)



Distant vision concepts considered developing more land for container handling and rationalising brownfield in north-west NT

Source: *Territorial Development Strategy Review* (1999)

Brownfield emerges as result of inadequate land-use planning for industrial growth

Lack of holistic economic and land use planning



Organic development of brownfield is being fostered

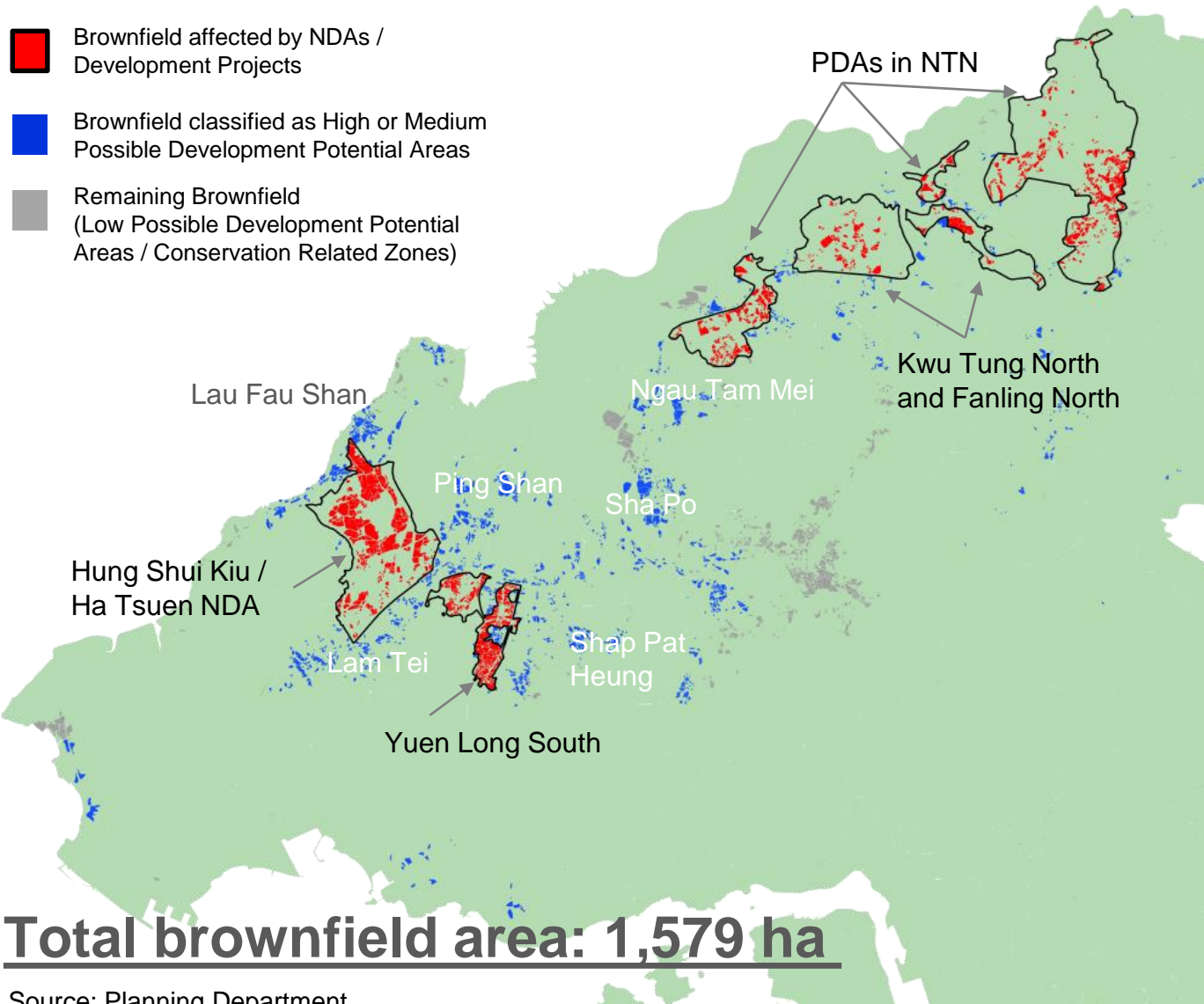


Suboptimal operation on brownfield leads to negative externality



The way forward: Commitment to ensure adequate and timely provision of land and facilities for strategic industries

Operating space on brownfield will gradually be phased out...



Total brownfield area: 1,579 ha

Source: Planning Department
© 2020 Our Hong Kong Foundation Limited. All Right Reserved.

About **50%** brownfield sites will be affected by New Development Areas and other Development Projects

Affected by New Development Areas / Development Projects **803 ha**

Hung Shui Kiu / Ha Tsuen	246 ha
New Territories North	243 ha
Yuen Long South	94 ha
Kwu Tung North and Fanling North	70 ha
Other development projects ^[1]	150 ha

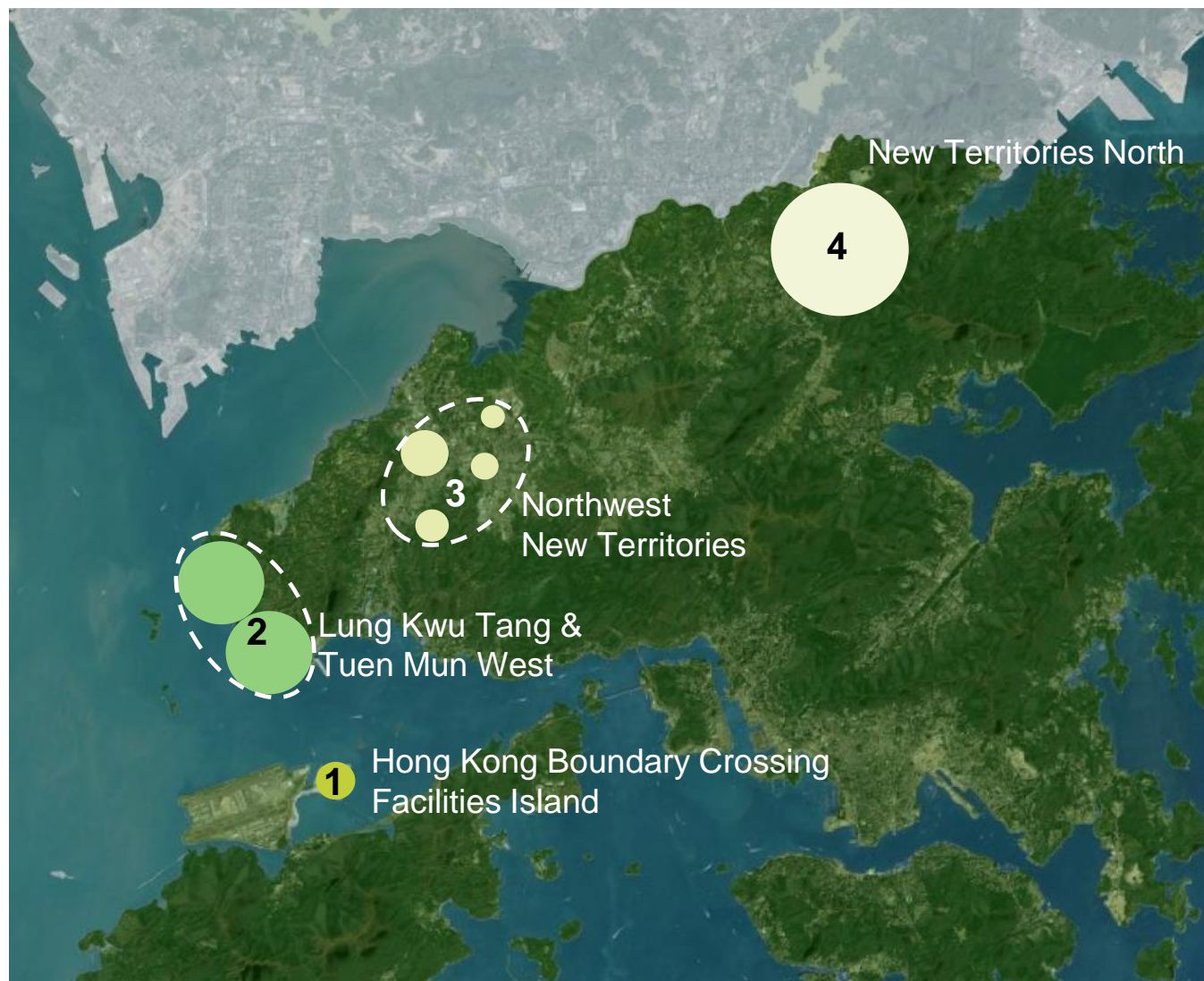
About **28%** brownfield sites are classified as high or medium^[2] possible Development Potential Areas (DPA)

Possible Development Potential Areas (DPA) to be studied **450 ha**

High DPA—Ping Shan, Lam Tei, Sha Po Tsuen, Shap Pat Heung, etc.	160 ha
Medium DPA—Ngau Tam Mei, Lau Fau Shan, Lung Kwu Tan South, etc.	290 ha

Notes:
 [1] As the details of the 150 ha development projects have not been announced, the exact locations of these projects are not shown on the map.
 [2] The Planning Department will study about 700 ha brownfield sites, which are to be classified as high, medium and low Development Potential Areas, of which 250 ha brownfield sites are classified as low Development Potential Areas.

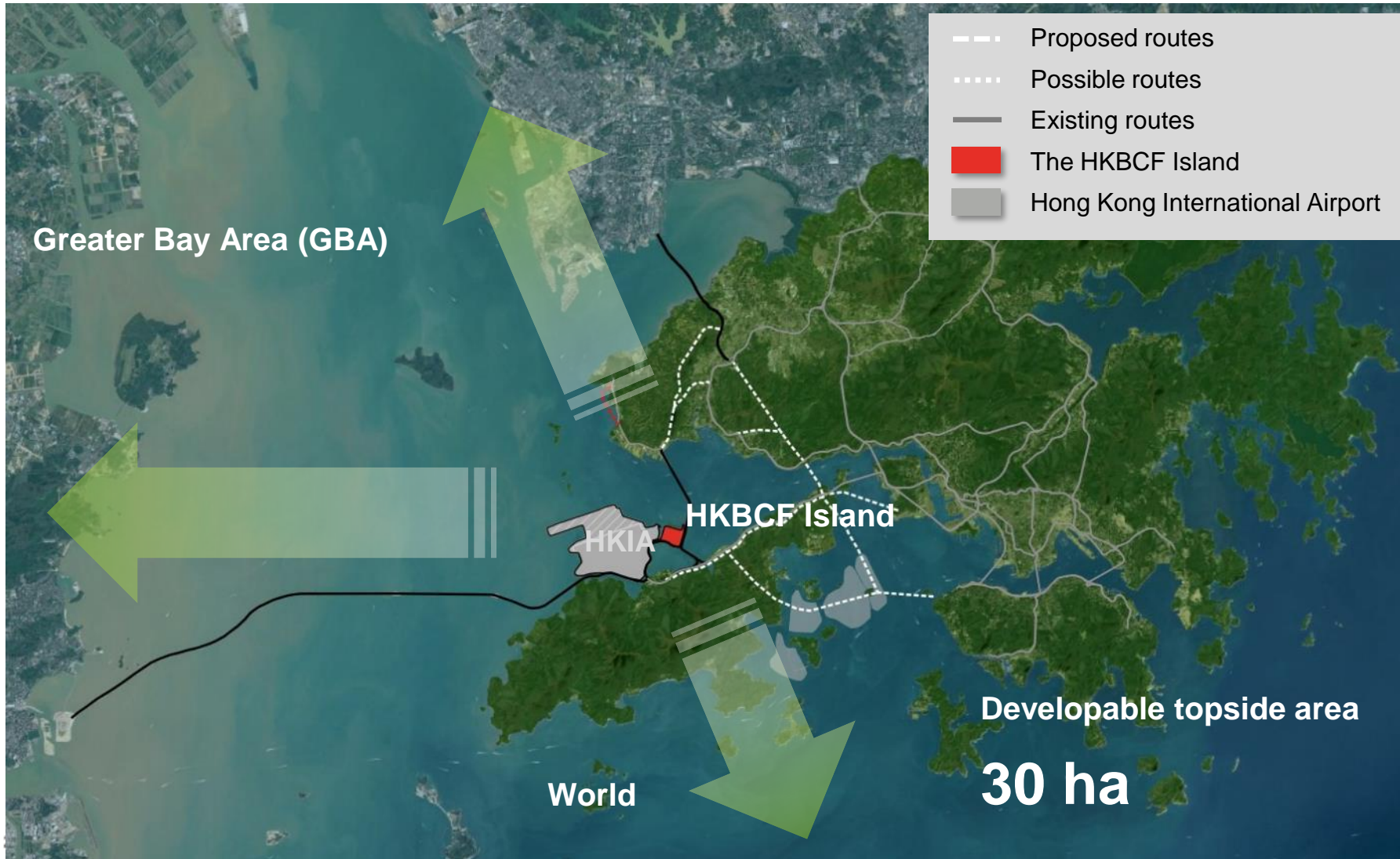
Potential sites for development of dedicated logistics nodes



Logistics Nodes	Roles and Functions	Size (ha)	Estimated job capacity
1. Hong Kong Boundary Crossing Facilities Island	Airport Logistics Consolidation Centre	30	5,000 – 10,000
2. Lung Kwu Tang & Tuen Mun West	Airport Logistics Support Hinterland	450 – 590	50,000 – 70,000
3. Northwest New Territories	GBA Logistics Gateway (Western)	150 – 160	15,000 – 25,000
4. North New Territories	GBA Logistics Gateway (Eastern)	110 – 150	10,000 – 20,000
	Total	740 – 930	80,000 – 125,000

1. Topside development at the Hong Kong Boundary Crossing Facilities (HKBCF) Island

The Planning of Topside Logistics Development at Hong Kong Boundary Crossing Facilities (HKBCF) Island should speed up



2015 Planning, Engineering and Architectural Study for Topside Development at HKBCF Island of the Hong Kong-Zhuhai-Macao Bridge (HZMB), Hong Kong section

Suspended

2018 Government invited Airport Authority Hong Kong to submit development proposal

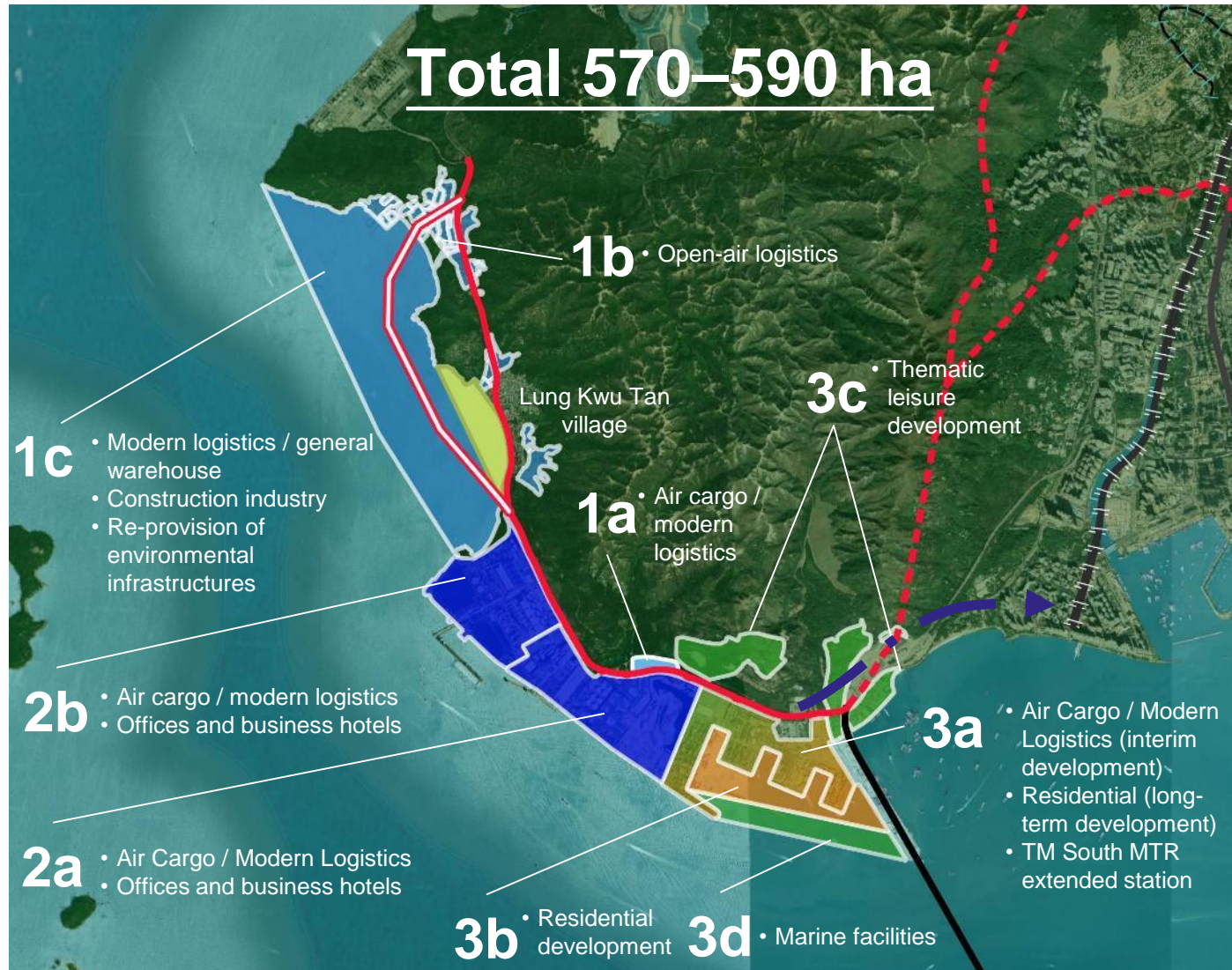
No further progress

2020 **???**

Double Gateway
Airport Logistics
Consolidation Centre

2. Lung Kwu Tan & Tuen Mun West

Integrated Residential & Logistics Development



Phase 1



Air Cargo/ Modern Logistics



Construction Industry



Environmental Infrastructures

- 3a. Transform Current River Trade Terminal for interim development
- 1a. Tuen Mun Area 49
- 1b. Current Lung Kwu Tan Brownfield Sites
- 1c. Lung Kwu Tan Reclamation

Phase 2



Air Cargo/ Modern Logistics



Offices



Hotel

- 2a. Relocation of Current Fill Bank, Recycle Plant, Steel / Cement Plant
- 2b. Relocation of Current Power Station

Phase 3



Residential



Leisure

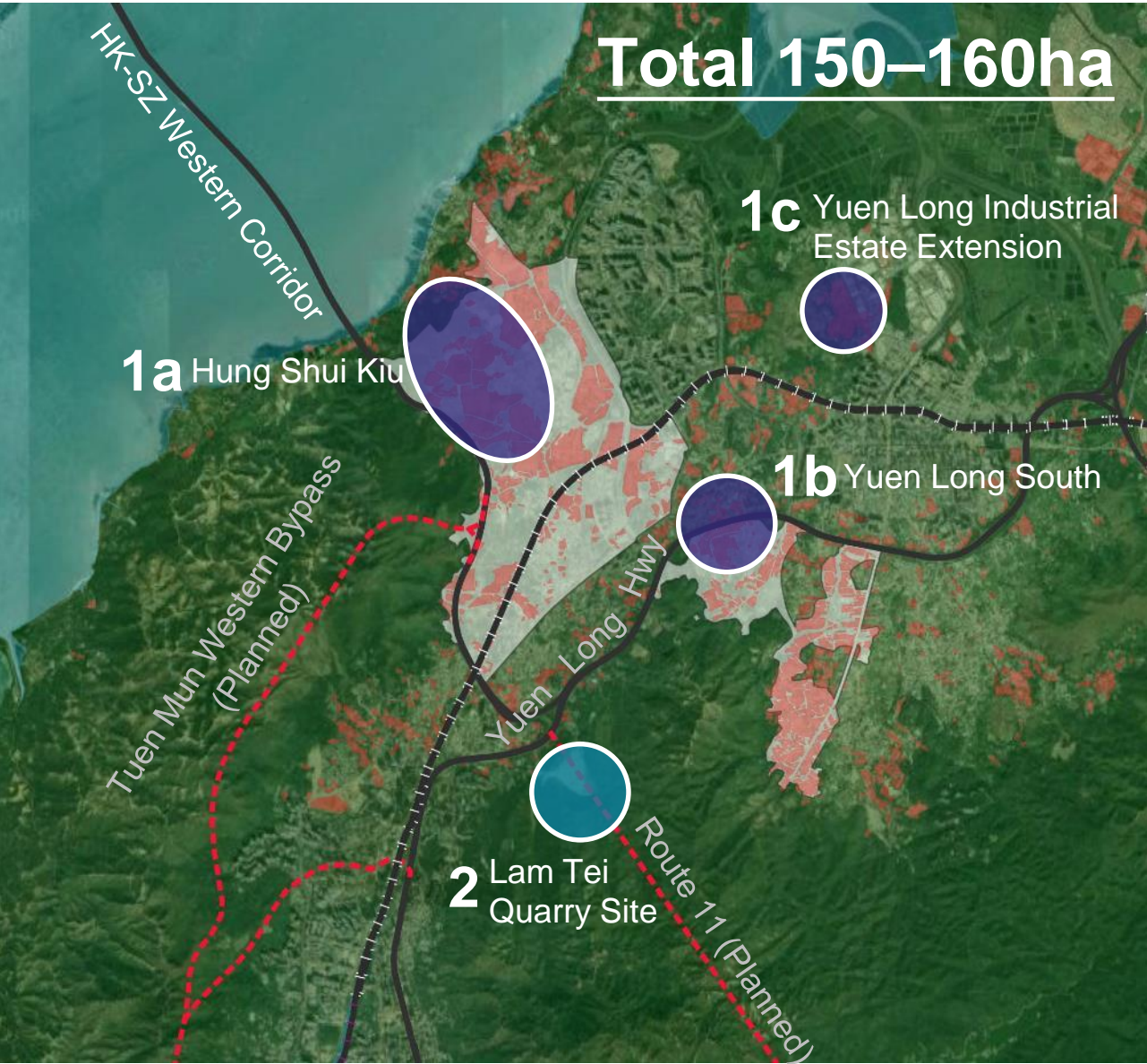


Marine

- 3a. Replace River Trade Terminal for long-term development
- 3b. River Trade Terminal Reclamation
- 3c. Tuen Mun Area 40 & 46
- 3d. River Trade Terminal Further Reclamation

- Tuen Mun – Chek Lap Kok Link
- Tuen Mun South Extension
- Proposed Tuen Mun South MTR Further Extension
- Planned Tuen Mun Western Bypass
- Proposed Road expansion for existing Lung Mun Road
- Proposed New Road to divert heavy vehicles away from Lung Kwu Tan village
- Buffer area between Lung Kwu Tan village and Logistics Node

3. Northwest New Territories Modern Logistics Circle



Development Planned by the Government

- 1a. Hung Shui Kiu NDA
- 1b. Yuen Long South development
- 1c. Yuen Long industrial estate extension

Proposed Development

- 2. Lam Tei Quarry Site



Modern Logistics



Enterprise & Technology



Open-air Logistics



Wholesale Trade & Outlet

— Planned Route

— Existing Road

— Existing Rail

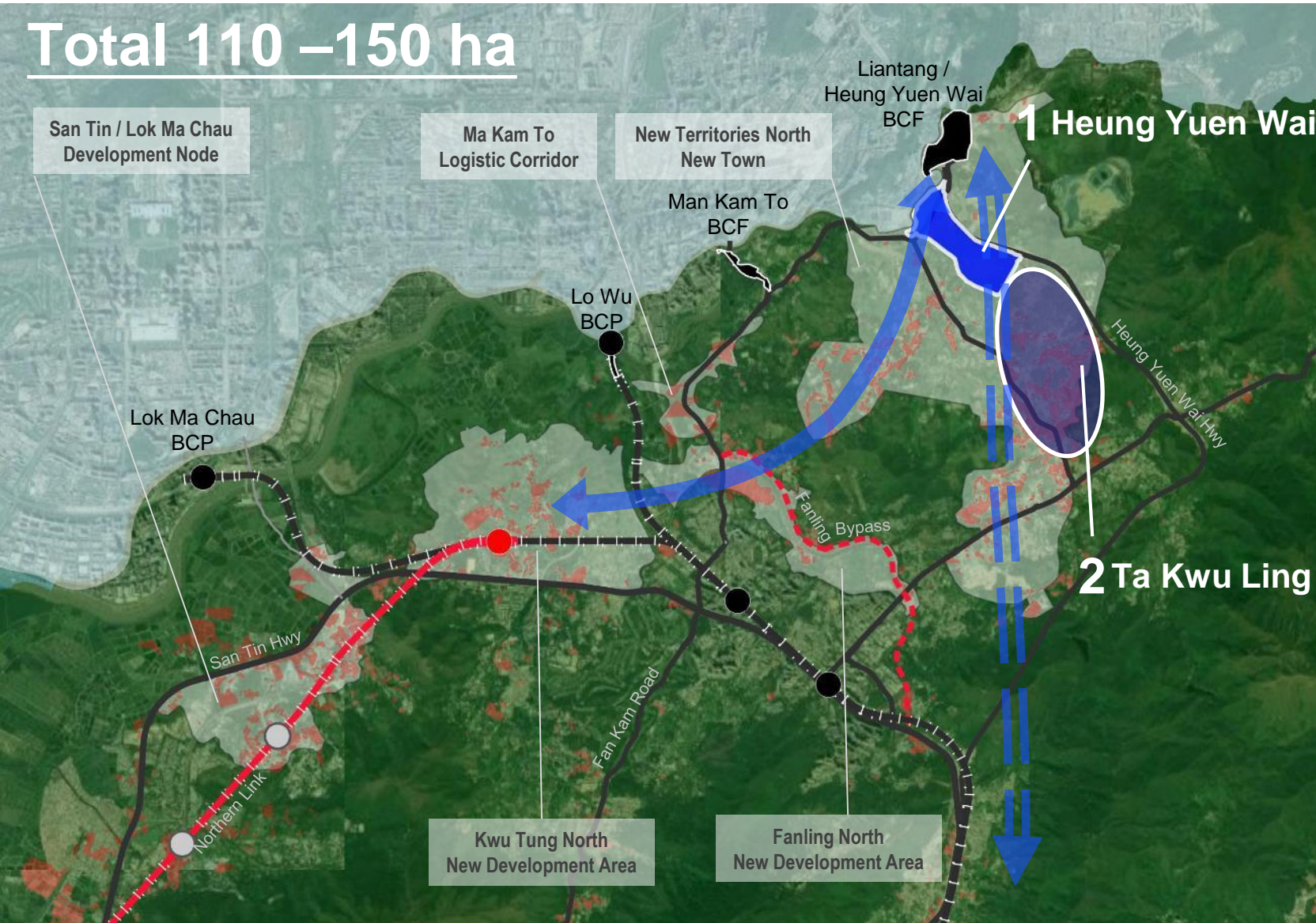
● Planned sites

● Proposed site

■ Brownfield

4. New Territories North

Total 110 –150 ha



Planned Development

1. Heung Yuen Wai



Science Park Industrial Estate

Proposed Development











2. Ta Kwu Ling



E-commerce Modern Logistics



Enterprise & Technology

-  Proposed Extension of Northern Link
-  Proposed North-South Corridor and Rail
-  Proposed Rail Station
-  Planned Route
-  Planned Rail
-  Planned Station
-  Existing Road
-  Existing Rail
-  Existing Rail Station
-  Brownfield

Take cues from overseas cases for logistics nodes operations



Two-Envelope Tender System

Evaluate only the applicants' business proposals in the first round, before evaluating their quotations in the second round



Direct Allocation

Qualified enterprises receive lands directly allocated from government bodies



Ready-To-Use Facilities

Provide ready-to-use facilities for rental to operators of smaller scale



Co-Management with Private Institution

Chambers of commerce and industry associations share professional knowledge with public institutions through participating in management



The logistics nodes will be managed by a statutory body



Brief Summary

Time-consuming & inefficient

Good use of land

Current Model

Brownfield Cluster Development Strategy

- Sites are small & scattered
- Each site take up an area of 2-8 ha



- Solely targeting on public housing land supply
- Low
Sites are small and part of site may be used for improving the local road network

OHKF Recommendation

Logistics Nodes Development Strategy

- Sites are sizable & located in transport-strategic locations
- Each site take up an area of >30 ha



- Comprehensive planning
Aim at providing logistics nodes to integrate brownfield operations and thus release spaces for housing and other developments
- High
Sites are sizable, thus road improvement works will not take up a large portion of the land

Area & location

Planning goal

Land efficiency

Five recommendations to improve Hong Kong's logistics competitiveness



A structural reform in global consumption pattern emerged during the COVID-19 pandemic

【HKTVmall】香港電視7月GMV錄6.2億元 按月升43.9%



【零售寒冬】L'Oréal裁員逾百人 架構重組轉網購

股樓投資 13:28 2020/07/22 讚好 41

關注文章 儲存文章

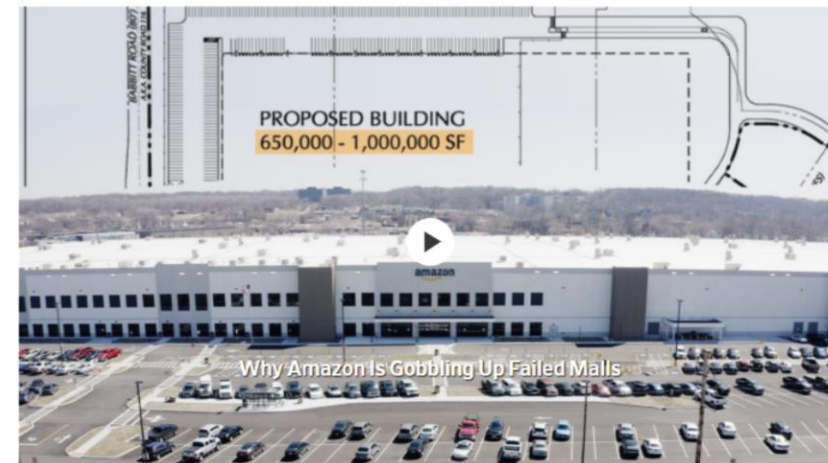
分享: f e m



WSJ NEWS EXCLUSIVE | REAL ESTATE

Amazon and Mall Operator Look at Turning Sears, J.C. Penney Stores Into Fulfillment Centers

Hookup between Simon Property Group, Amazon would show how retail and logistics are converging more rapidly



As the decline of bricks-and-mortar retail rolls on, commercial real-estate developers are left with huge abandoned properties. Who will fill that underutilized space? A series of acquisitions by associates of Amazon in Northeastern Ohio provides some clues. (Originally published May 6, 2019)

Our logistics industry is poised to embrace new opportunities with our world-leading edge

A world-leading aviation logistics industry

Second
among all Asian airports in International Connectivity

First
member airport recognized by IATA CEIV Fresh



120 airlines
connect to over
220 destinations

IATA certifications & community partners



International Cooperation



Opportunities in the logistics age



Cargo-carrying robots

- Could increase storage space by 180%
- Could shorten the payback period shortened by 50% to 1.5 years
- Its operation requires a ceiling height of 3.5-4 meters

Vaccines & pharmaceuticals logistics

- Requires through-and-through cold-chain logistics technology
- Only a few airports in the world can accommodate



A new value chain

- Logistics real estate as an emerging industry
- Upfront investment from the logistics operators could be reduced



OUR HONG KONG
FOUNDATION
團結香港基金



公共政策研究院
PUBLIC POLICY INSTITUTE

Thank You
