



16th International Geography Olympiad

Hong Kong, China

30 July – 5 August 2019

FIELDWORK EXERCISE

Test

Student Number

1	6				
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Student Name (country)

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Student No.

1	6				
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Fieldwork Test: Question paper

Sustainable Development of Sai Kung Town

Time allowed: 120 minutes [Total score: 40]

This question paper and its appendix contain a total of **16 pages**.

Using the information provided in the Appendix and maps 1a and draft map, together with the data you collected at the fieldwork sites, answer **ALL** 6 questions.

1. Calculate the total daily capacities of public land transports (bus and light bus) using the following assumed values (you must show your work). (6 marks)

Assumptions:

- Passenger capacity – Bus: 150; Light bus: 16
- Number of trips per bus route per day – Weekday: 50; Weekend & holidays: 65
- Number of trips per Light bus route per day – Weekday: 60; Weekend: 90

Answer in person per day:

Public transport	Weekday	Weekend & Holidays
Bus		
Light bus		
Total		

2. On Figure C1, draw the original coastline of 1967 depicted in Figure C3 in the Appendix.
(6 marks)

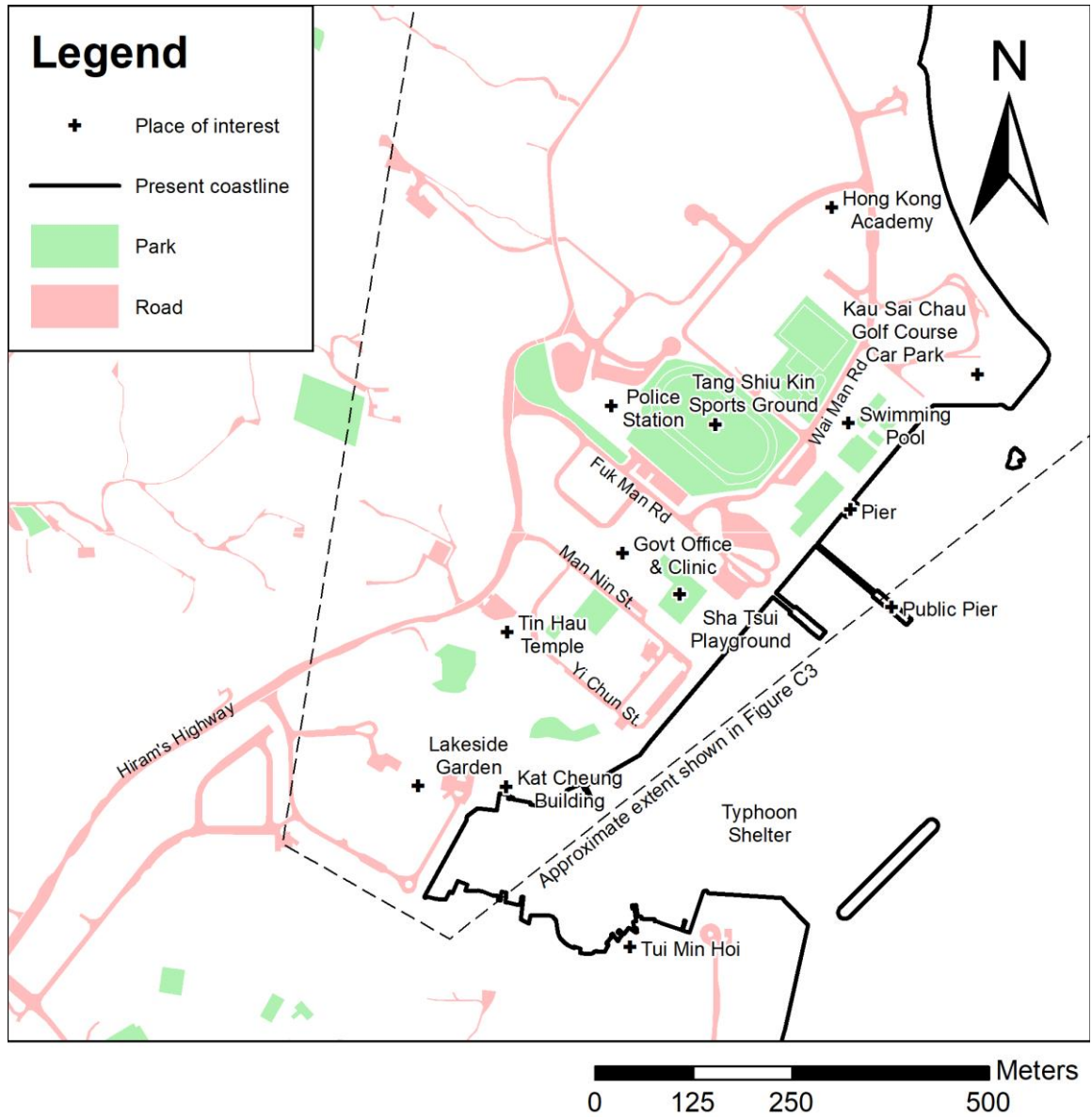


Figure C1: Current Coastline of Sai Kung Town.

4. Identify two main functions of Sai Kung Town nowadays. For each function, give two pieces of evidences to support your answer. (6 marks)

Function	Evidences
	<p>1.</p> <p>2.</p>
	<p>1.</p> <p>2.</p>

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Do **NOT** write any answer on this page.

5. Identify two urban problems you observed in Sai Kung Town. Elaborate your answers. (4 marks)

Urban problem 1:

Urban problem 2:

6. The government plans to further develop Sai Kung Town to build upon its existing functions. The new development can take place on converted or new land of up to 1 hectare (10,000 m²).
- On Figure C2 below, mark the area(s) that you suggest to be developed. Annotate the map to give a rationale for your choice. (4 marks)
 - Write a development plan for Sai Kung Town. Through making references to Figure C2, explain on the next page how your proposed plan will build on the existing functions of the town, and at the same time alleviate issues identified in question 5. Take account of the (i) benefits for local residents and visitors, as well as (ii) environmental considerations. (8 marks)

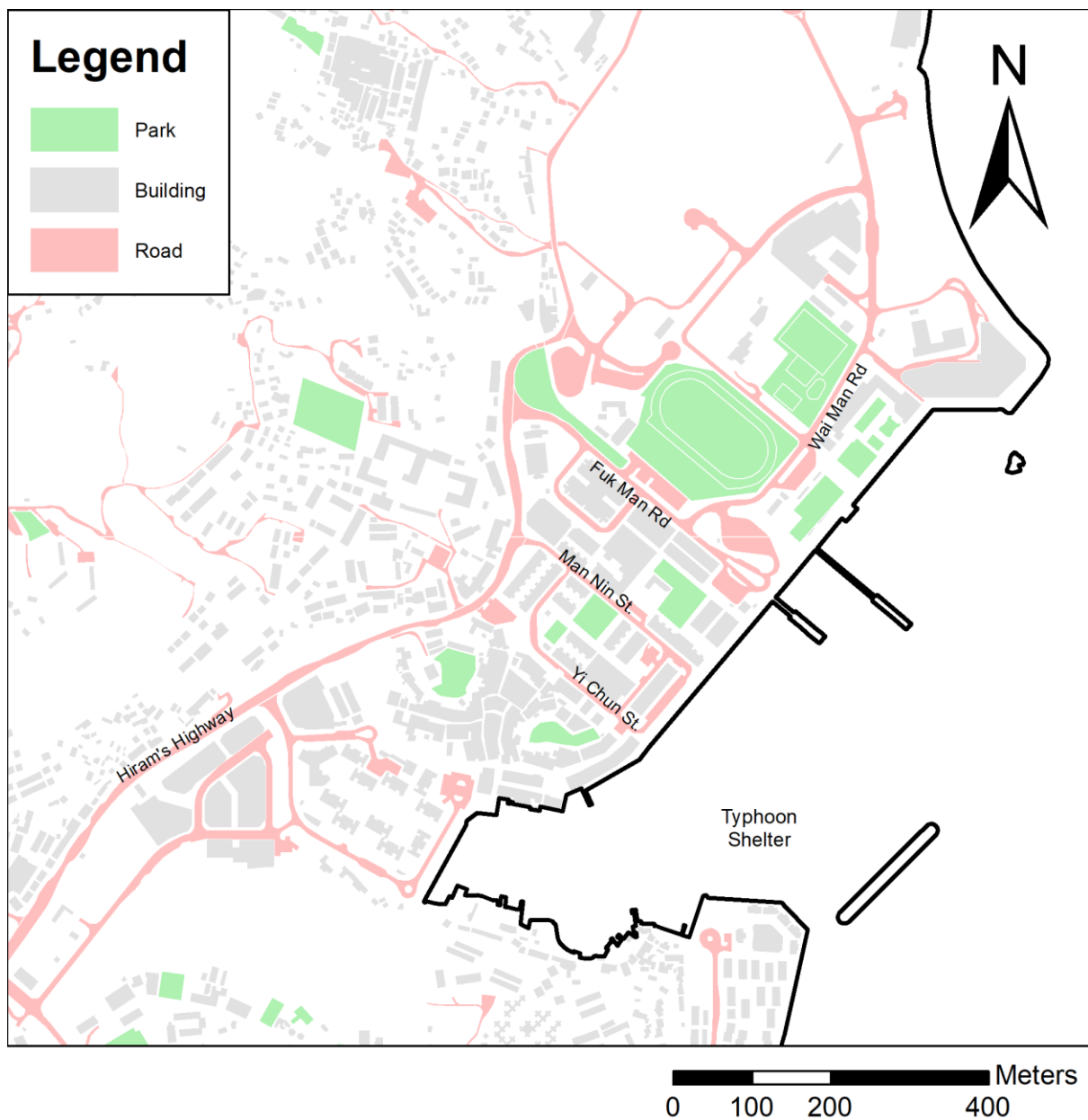


Figure C2: Development Plan of Sai Kung Town

Appendix

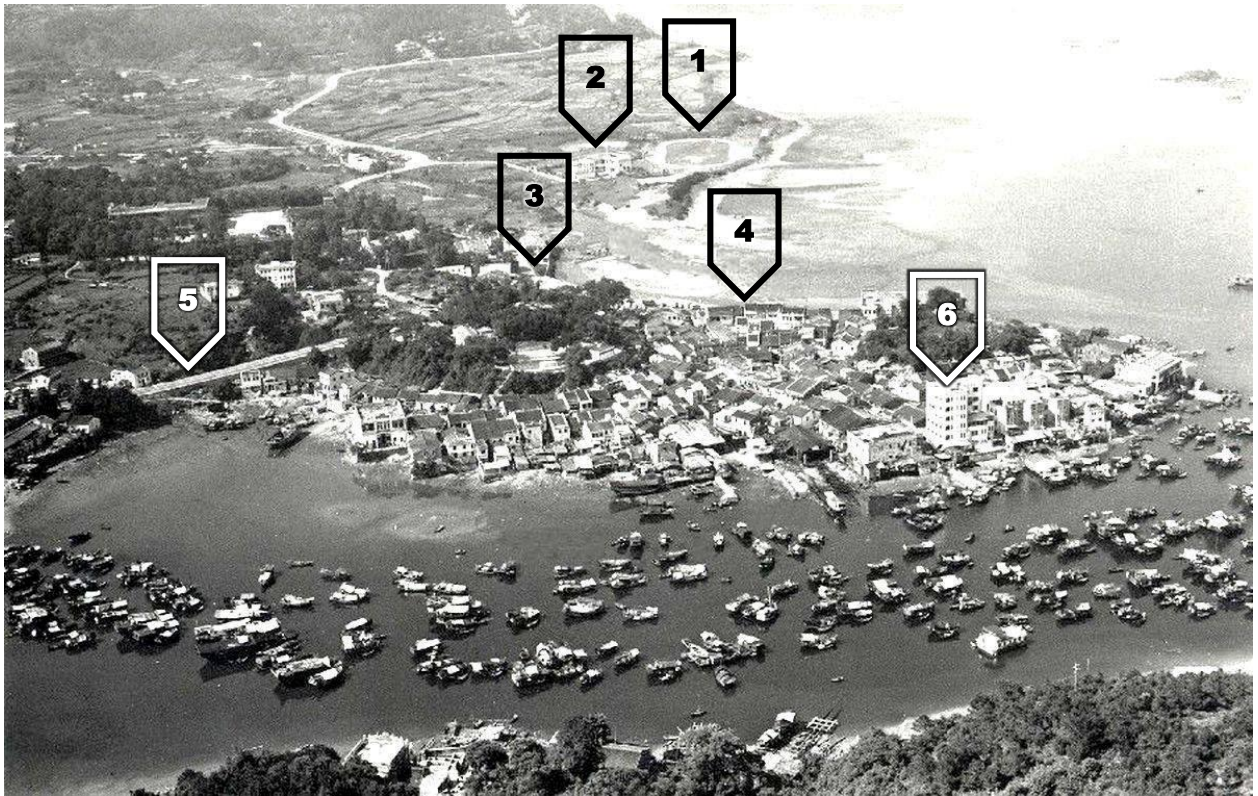


Figure C3: Sai Kung Town, 1967. 1: Sports ground; 2: Police station, 3: Tin Hau Temple 4. Yi Chun Street nowadays; 5: Hiram's Highway nowadays; 6: Kat Cheung Building.



Figure C4: Sai Kung Town, 1983. 1: Hiram's Highway; 2: Kat Cheung Building; 3: Tin Hau Temple; 4: Yi Chun Street; 5: Man Nin Street; 6: Light bus terminal nowadays. New residential buildings on the right foreground were built in 1975 to cater for resettlement due to the construction of High Island Reservoir.



Figure C5: Aerial View of Sai Kung Town in 2019. The geographical extent is the same as Figures C1 and C2. Source: © Lands Department, HKSAR.

Student No. 1 6

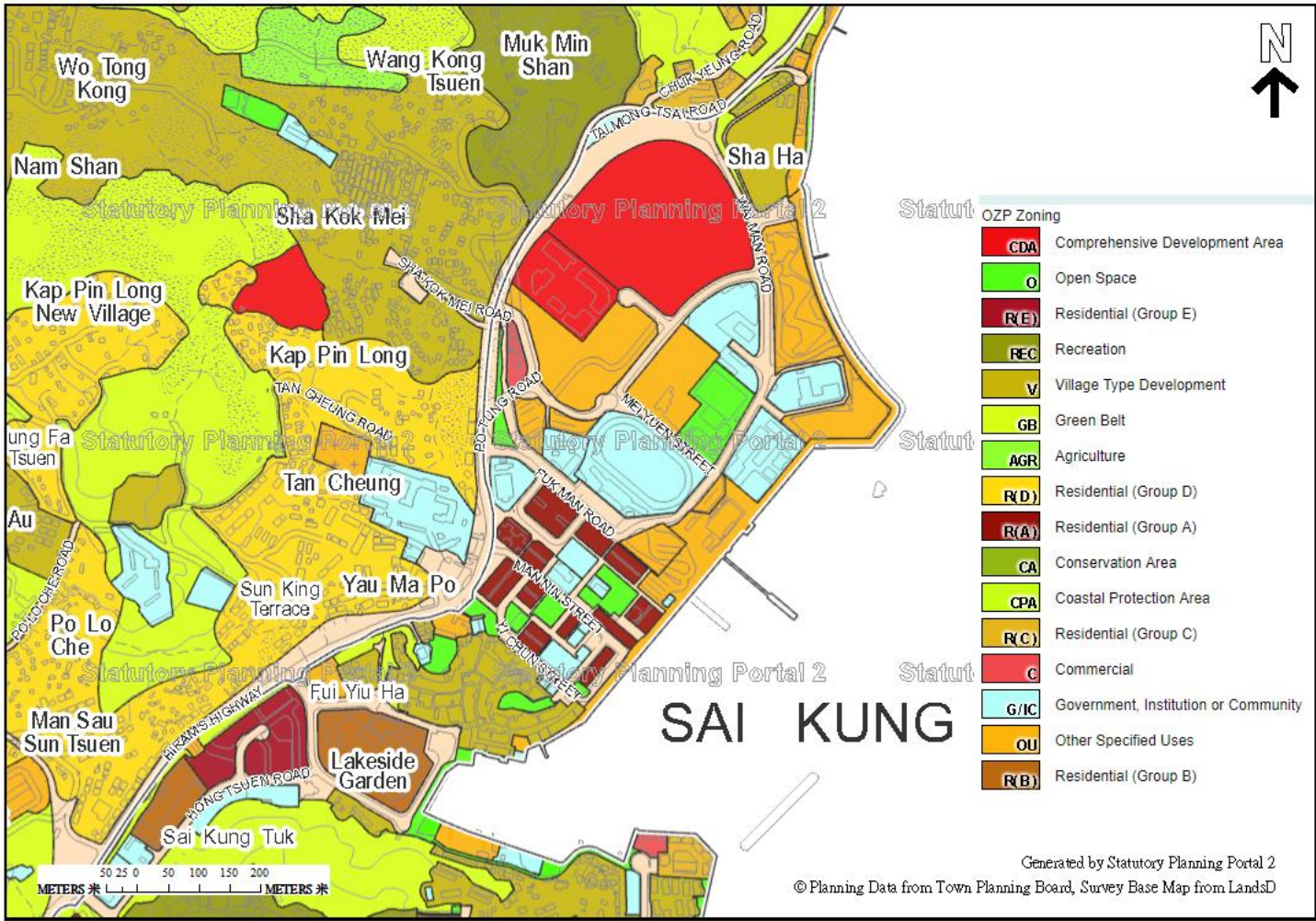
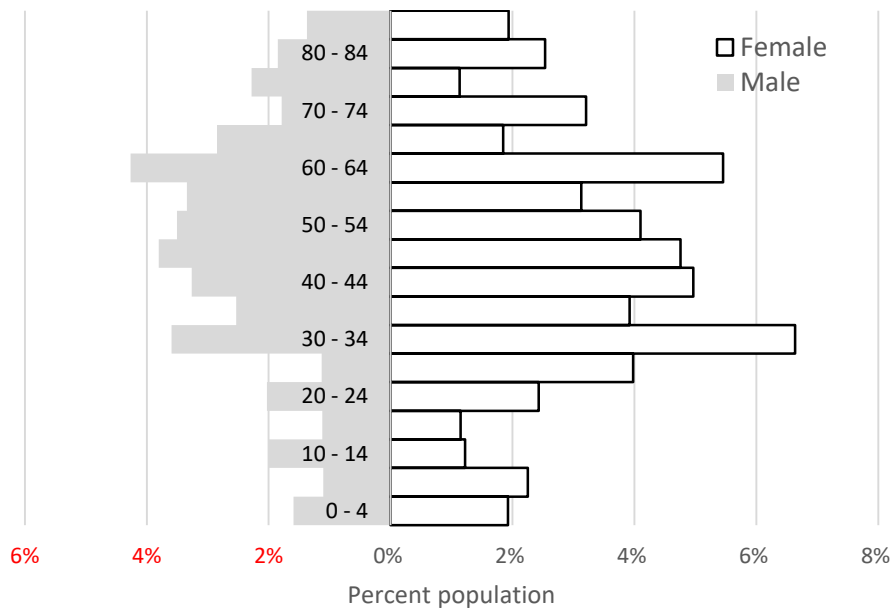


Figure C6: Landuse Zoning Plan of Sai Kung Town. Source: Statutory Planning Portal 2 (<http://ozp.tpb.gov.hk>). Comprehensive Development Area is a zoning that allows mixed uses, usually residential and commercial.

Plate C7: Statistics of Sai Kung Town:

- 2016 Population: 6707; Median age of residents: 47.



- Labour force (participation rate): 3669 (60.8%).
- Median floor area of accommodation: 42 m².
- 2018 – 2019: 18 millions of visitors to Hong Kong. And 0.9% of all visitors had visited Sai Kung Waterfront / Town according to a survey carried out in 2011.



Fieldwork Exercise

You will have **15 minutes** to read the instruction of this exercise and the question paper before you begin the tasks. You should use this time to write your student number and your name in the spaces provided on the question paper and maps.

General Instructions:

- This is an **individual exercise**. Do **NOT** work together in a group.
- During the full day exercise, **no mobile phones and other electronic devices** such as cameras and tablets are permitted. You will be disqualified if found.
- Do not ask other students for assistance! You can only seek help from the volunteers. They are wearing *green* iGeo badges and will be stationed around the designated fieldwork area and at the three fieldwork stations.
- It is **your responsibility to manage your time and plan your route**.
- Act quickly but do not rush, be especially careful when crossing roads, parking areas and so forth.
- Each student is permitted a pocket-size English dictionary to use during the fieldwork tasks. It shall contain no written notes or supplement sheets of paper. Volunteers will inspect your dictionary before the tasks commence.
- In the unlikely event that you lose your way, head to the coast by walking in the opposite direction of the mountains.
- In case of an emergency, go to fieldwork stations (ST1, ST2 or ST3) and call Kolo at (852)9836 7165 or Lincoln at (852)9608 8119. If necessary, call 999 in an extreme emergency.

Field Site Introduction:

You are now in **Sai Kung Town**, a town located in the eastern New Territories of Hong Kong. Traditionally, it was a fishing village. In the 1970s, when the High Island Reservoir¹ was constructed by the damming of a strait, residents who originally lived in the area on the sea and in flooded villages were resettled in Sai Kung Town. Nowadays, the town is the home of a population numbered around 6,700 (2016). The percentage of residents who own a private vehicle in Sai Kung Town and the rural South-eastern New Territories were the highest among all districts in Hong Kong (at 42.3% in 2011).

The Fieldwork Tasks:

- This fieldwork exercise is divided into two tasks taking place at different sites.
- You will be assigned to **either Task 1 or Task 2 in the morning**. After lunch you will switch and work on the other task. After completion of both tasks, all participants will return to the Education University.
- The question paper of the assigned task will be distributed to you before each of the tasks. You should check and inform the leader in the beginning of the task in case there is a page missing.
- Make sure you have written your student number and your name in the spaces provided on the question paper and maps.
- You will need to complete all the data collection within the time allocated, and return the completed question paper package to a location given to you in the question paper at the end of each task.

The Fieldwork Test:

- The fieldwork tasks will be followed by a 2-hour written test in the evening.
- In the test, (i) Map 1a; (ii) the Draft Map; (iii) Question papers of task 1 and (iv) task 2 will be distributed back to you. You will need to make reference to the data collected at the sites. Recommendation: Make good use of the notes page of the question papers of the fieldwork tasks.

¹ Currently the largest water supply reservoir in Hong Kong, with a storage capacity of 280 million m³.



30 JUL - 5 AUG 2019

16TH INTERNATIONAL GEOGRAPHY OLYMPIAD

DISCOVERING A VIBRANT CITY FOR OUR SMART FUTURE

**Fieldwork
Exercise
Briefing**

Hong Kong

A vibrant city for our smart future

Basic needs

衣

Clothing → Shopping / retail

食

Food

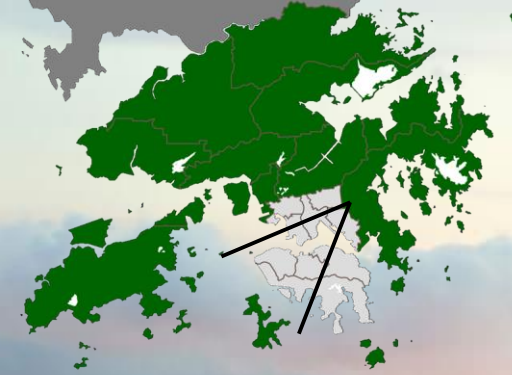
住

Housing

行

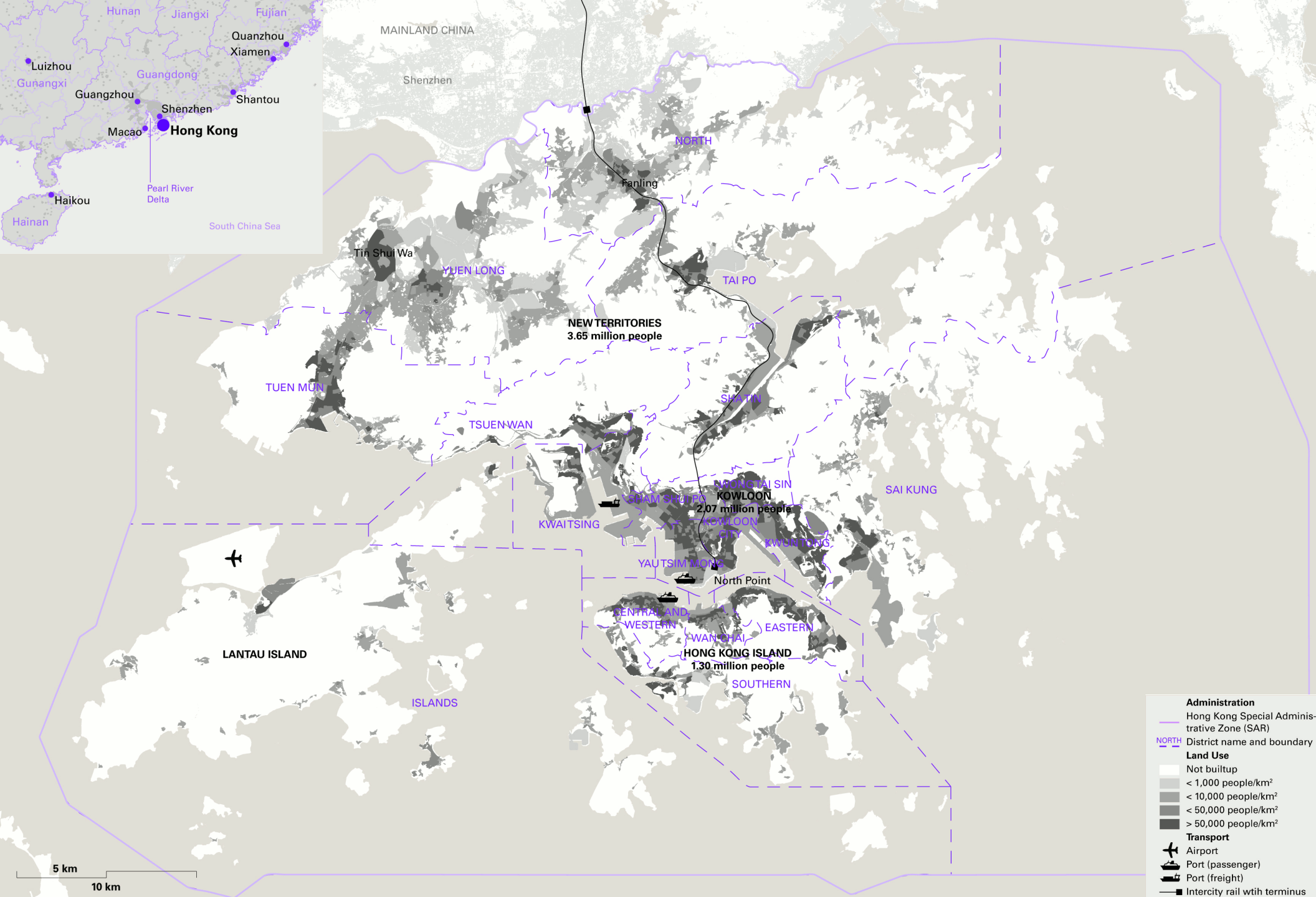
Transportation → Communication





Population – 7.4M
HKI: 17.5%
KLN: 30.3%
NT: 52.2%
Density – 6690 / km²



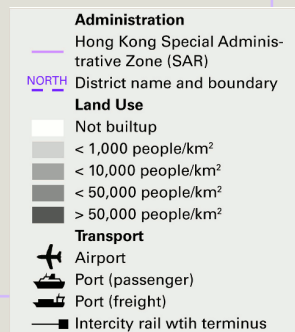


Hong Kong's Residential Area Density

Source: LSE Cities

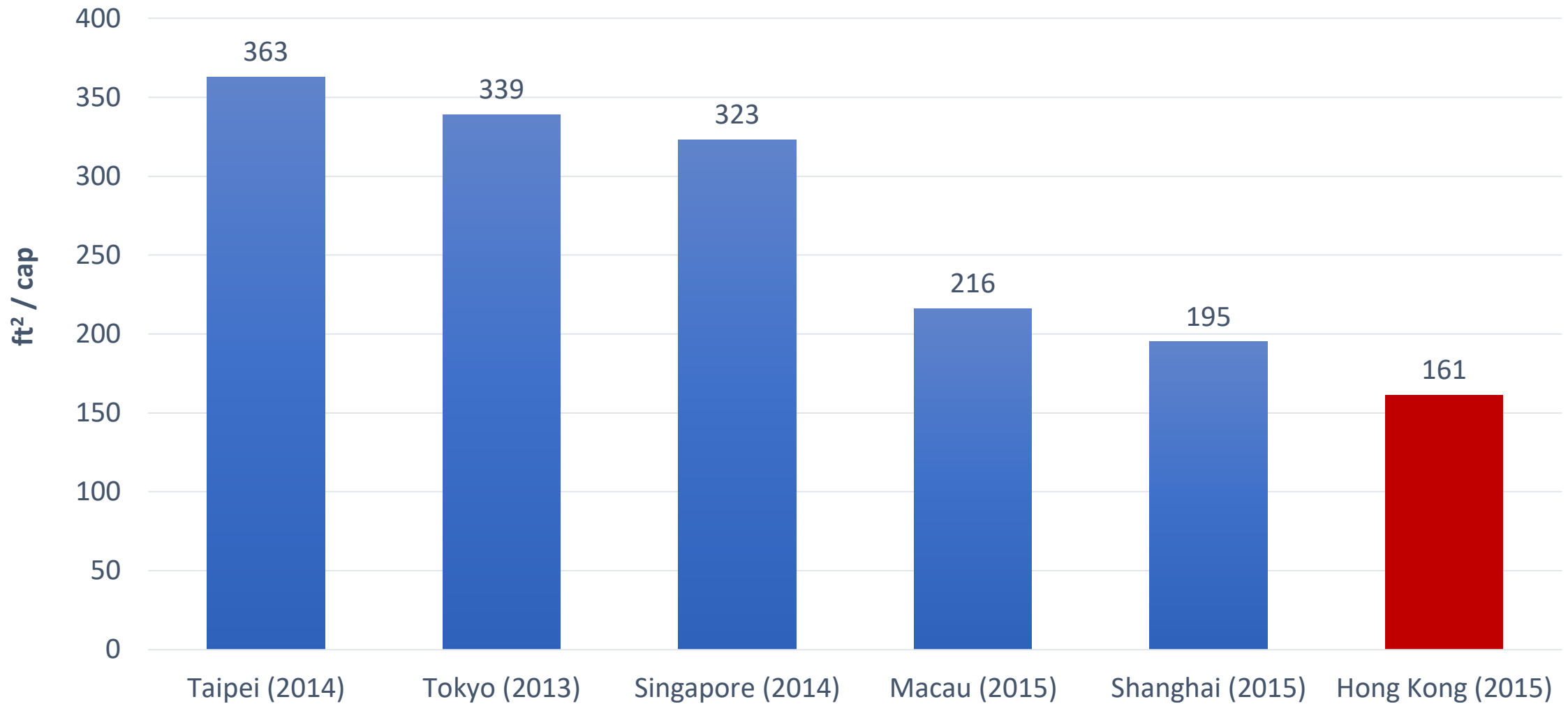
HONG KONG

22°28'01"N 114°11'38"E



Per capita living space in selected Asian cities

(LegCo Research Office 2016)



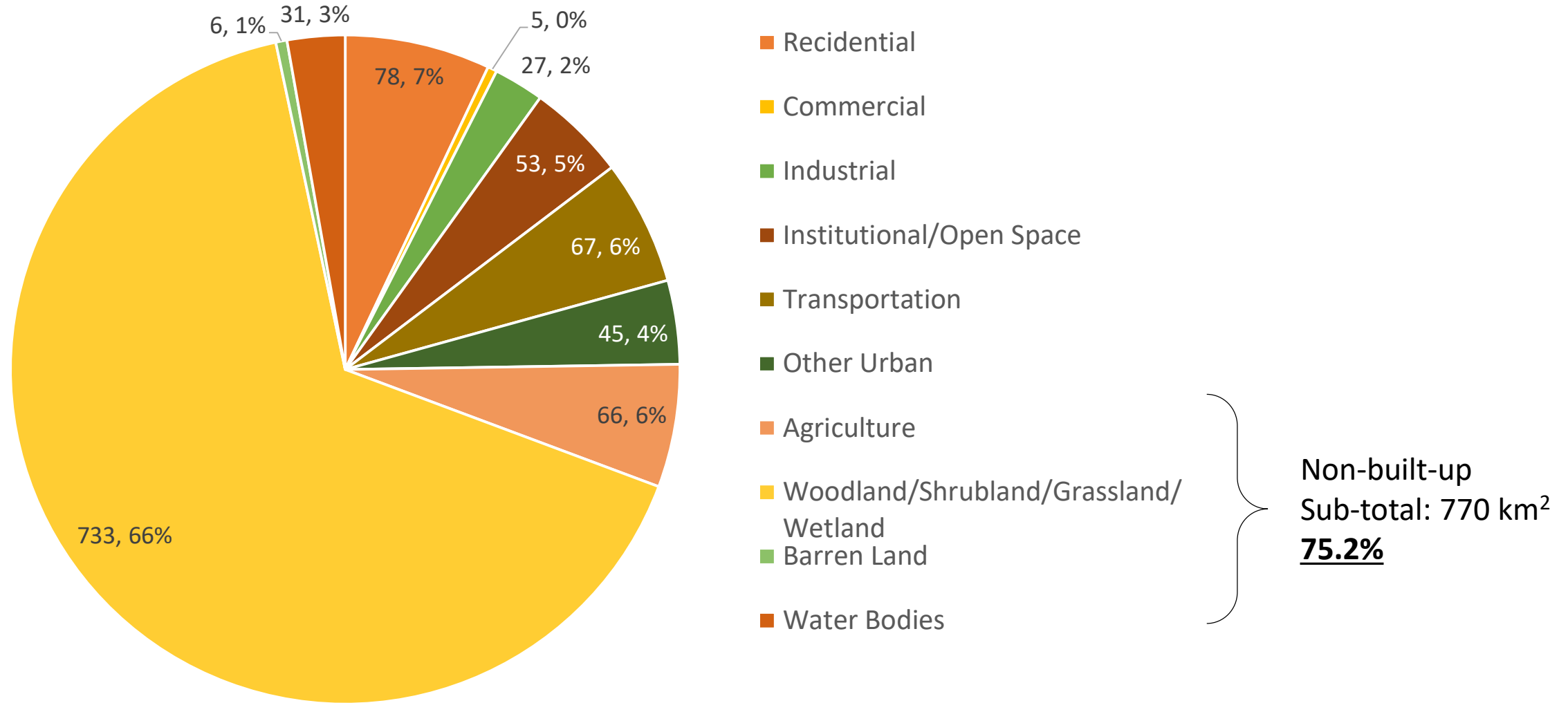
HONG KONG

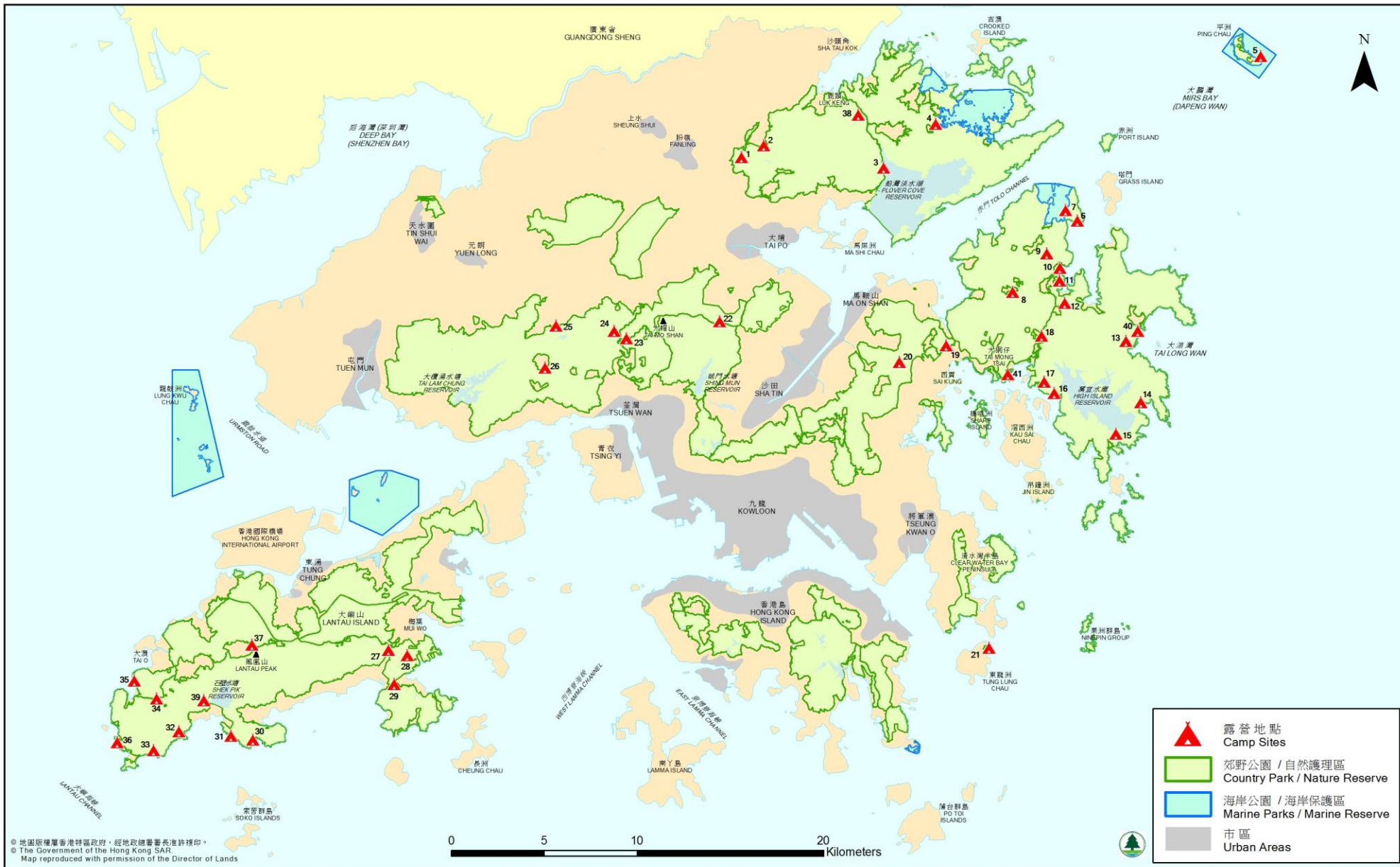
22°28'01"N 114°11'38"E

Land Utilization in Hong Kong 2018

[km²]

(Planning Dept. 2019)





Country Parks (AFCD 2017)

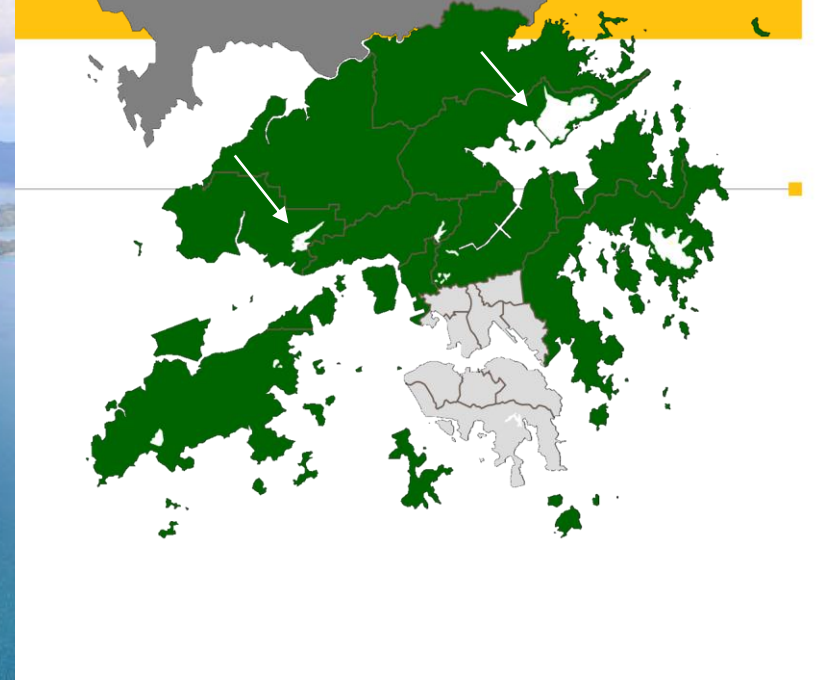
Total Area 434 km²
39.1%

- | | | | | | | | | | | | | | |
|-------------------------|-------------------------|------------------------|----------------------|-----------------------|-----------------------|--------------------------|-----------------------------|-----------------------|----------------------|--------------------------|-------------------------|----------------------|---|
| 1 流水壩
Lau Shui Heung | 4 三桠涌
Sam A Chung | 7 灣仔西
Wan Chai West | 10 大灘
Tai Tan | 13 西灣
Sai Wan | 16 元五墳
Yuen Ng Fan | 19 水浪窩
Shui Long Wo | 22 鉛礦坳
Lead Mine Pass | 25 河背
Ho Pui | 28 白富田
Pak Fu Tin | 31 石樓洲
Shek Lam Chau | 34 萬丈布
Man Cheung Po | 37 昂平
Ngong Ping | 40 鹹田灣
Ham Tin Wan |
| 2 鶴藪
Hok Tau | 5 東平洲
Tung Ping Chau | 8 鐘上
Cheung Sheung | 11 黃石
Wong Shek | 14 浪茄灣
Lang Ke Wan | 17 曬苦灣
Po Kwu Wan | 20 昂平
Ngong Ping | 23 扶輪公園
Rotary Club Park | 26 田夫仔
Tin Fu Tsai | 29 十壟
Shap Long | 32 大流灣
Tai Long Wan | 35 牙鷹角
Nga Ying Kok | 38 降下坳
Kong Ha Au | 41 大網仔一號營地
Tai Mong Tsai Campsite No.1 |
| 3 涌背
Chung Pui | 6 灣仔南
Wan Chai South | 9 猴塘溪
Hau Tong Kai | 12 北潭凹
Pak Tam Au | 15 白腊
Pak Lap | 18 怡庭
Yee Ting | 21 東龍洲
Tung Lung Chau | 24 荃錦
Twisk | 27 南山
Nam Shan | 30 籬箕灣
Lo Kei Wan | 33 狗嶺涌
Kau Ling Chung | 36 煎魚灣
Tsin Yue Wan | 39 石壁
Shek Pik | |

Water Gathering Grounds



Plover Cove Reservoir



Tai Lam Chung Reservoir

Great Outdoors



Beaches

E.g. Tai Long Sai Wan Beach



Global Geopark



Hikes

E.g. Dragon's Back & Kowloon Peak



Cycling

*E.g. Nam Sang Wai,
Shatin to Tai Mei Tuk or Wu Kai Sha*



Mai Po Nature Reserve



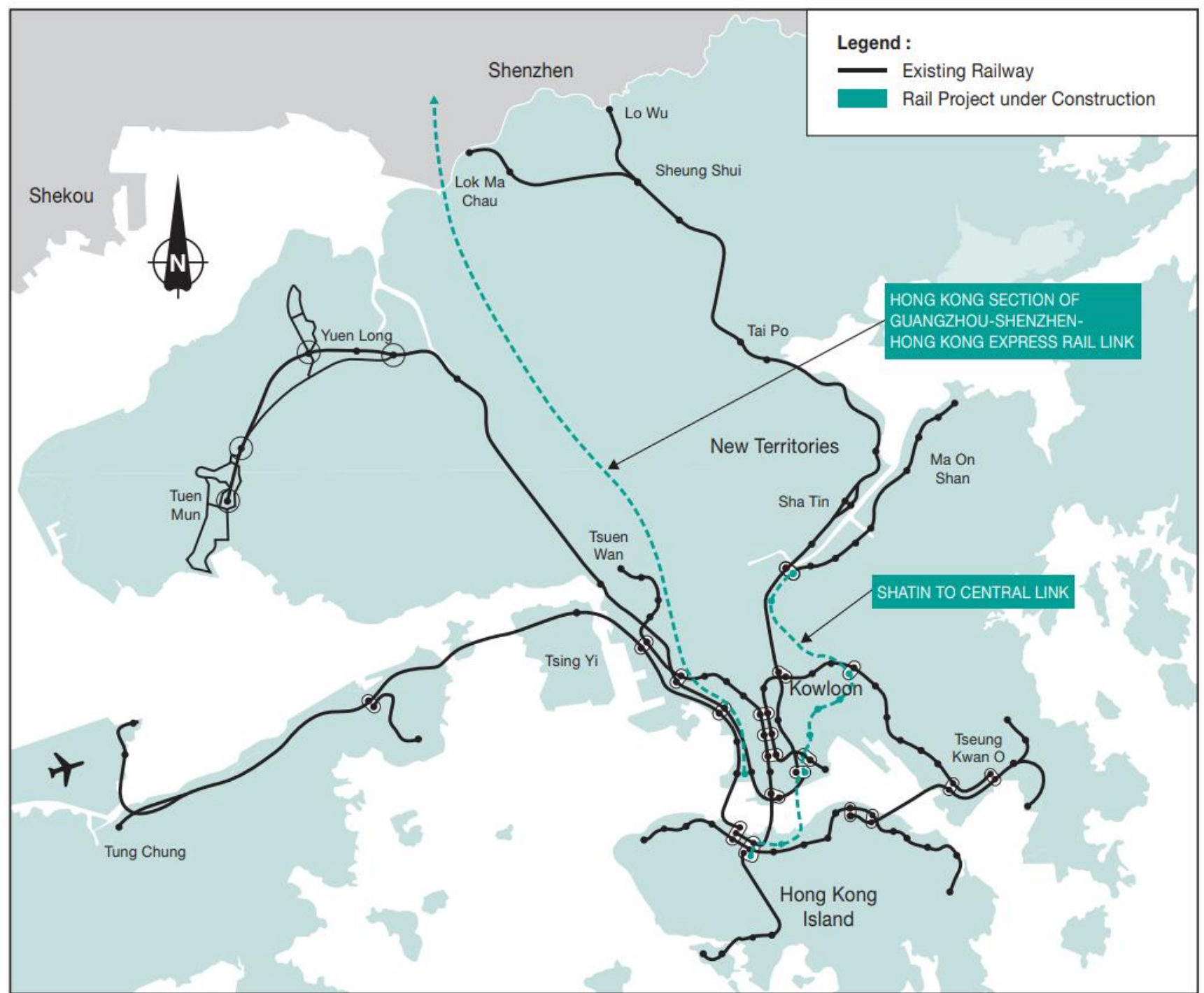
Hong Kong Wetland Park

Rail System



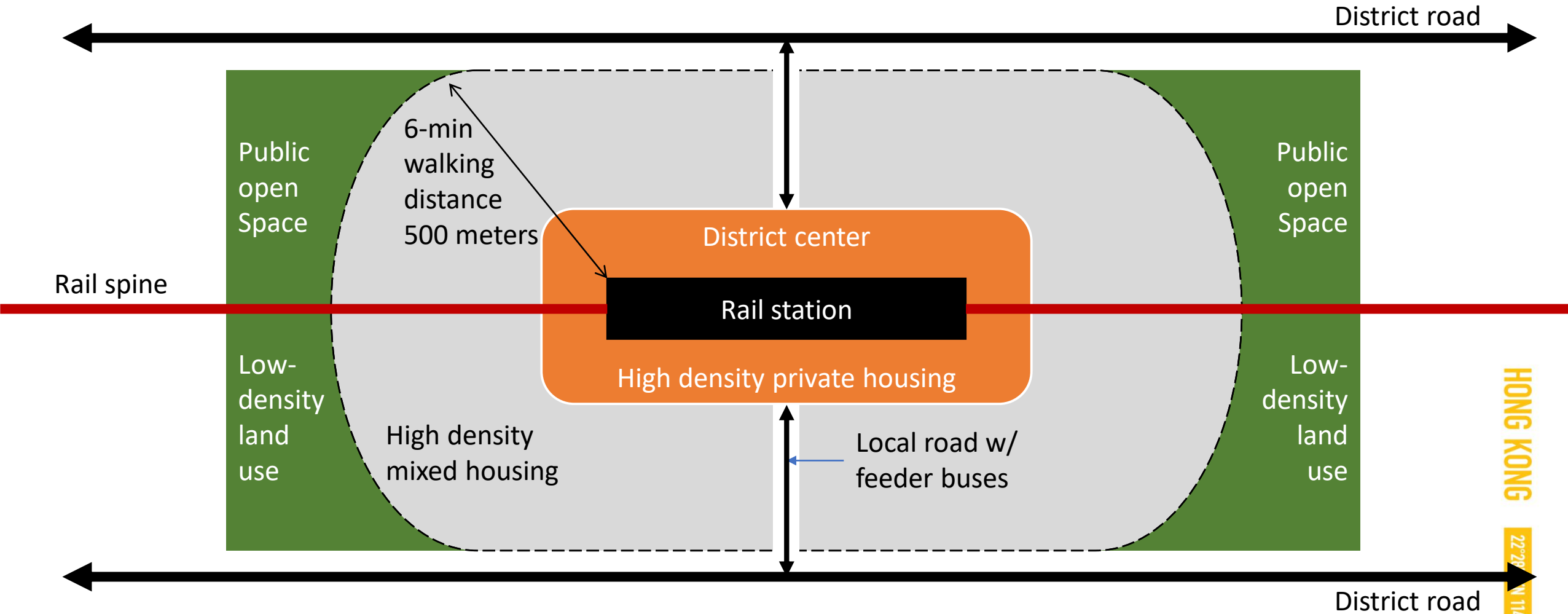
$$\text{Time headway} = \frac{1}{\text{frequency}}$$

Transit-oriented development



Development Model

(Source: Sylvie Nguyen/HKU)



衣

Clothing & shopping

Special Markets in HK

HK is a shopping paradise and well-known for an incredible range of street markets that specialize in electronics to goldfish to merchandise

Store clustering



Ladies' Market

Rows of stalls with all sorts of cheap merchandise, souvenirs, clothing and electronics



Mongkok Flower Market

Both cut flowers and growing plants can be found in the shops



Temple Street Night Market

The market is well-known for its fortune tellers, fengshui experts, herbalists and Cantonese opera performance



Sham Shui Po Golden Computer Center

The best place for low-cost computer, computer peripherals and games



Tung Choi Street Goldfish Market

Fish are displayed in either immense aquariums or little plastic bags hung at the entrance of stores

食

Food

International Cuisine in HK

International cuisines can be found all over the city.



Halal food



Vietnamese food



Japanese food



Thai food



Spanish food



Korean food

Cha Chan Teng (Tea restaurant)

Hong Kong-style cafe

Well-known for eclectic and affordable menus, which include dishes from Hong Kong cuisine and Hong Kong-style Western cuisine



Yuanyoung

A mixture of coffee and tea originated in HK



French toast

Toasted bread with a peanut-butter filling in the middle and syrup slathered on top



Pineapple bun

Bun with a slab of butter inside



Milk Tea

Hong Kong-style milky tea



Egg tarts

Custard tart

Hong Kong Street Food



Eggette



Stinky tofu



Cheung fun



Curry fish balls



Fried chestnuts



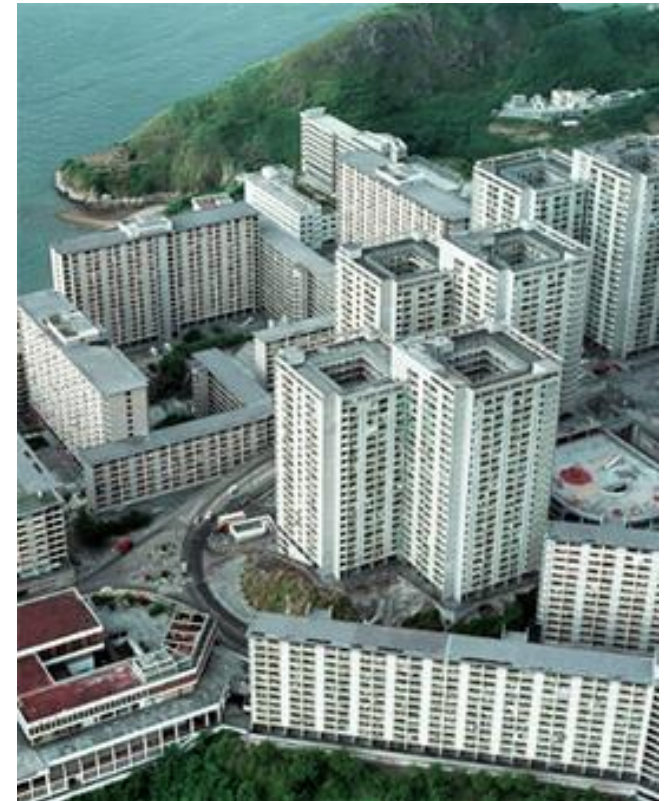
Bowl pudding

住

Housing



Slab Block (1960s)
Choi Hung Estate
16-storey
Living room + bath room + kitchen



Twin Tower (1970s)
Wah Fu Estate
20-storey



Trident (1980s) – Y
Fu Shin Estate
35-storey
Multi-room

Harmony Block (1990s) –
Yau Lai Estate
40-storey





Older private housing
1960s / 1970s
Utilitarian architecture
Rectangular plan
<20-storey



“Western-style” housing
1970s – 1980s
20-storey
Composite-rectangular plan



Modern housing
2000s – 2010s
40-storey
Varied façade
Glass and steel elements
Composite-rectangular plan

New Territories “indigenous” villages Small House Policy



Village housing (New Territories)
All time periods
3-storey
Rectangular plan of 700 ft²
Composite-rectangular plan
Usually chaotic placement

行

Transportation

Modes (means) of transport

Mass Transit Railway
Heavy rail
Right-of-way



Light Rail
NW New Territories



Tram
Heritage street car
HK island



Bus / Light bus



Taxi

Urban Area



New Territories

Lantau

Ferry and “Kai-to”



HONG KONG

22°28'01"N 114°11'38"E

Field Work Exercise (FWE)

Weather is Wet and HOT!



Heat exhaustion
 Dizzy
 Excessive sweating
 Muscle cramps
 Nausea

- HKO Forecast:
 - 26 – 29°C
 - 80 – 95% RH
 - Cloudy with showers and squally thunderstorms
 - 80% Chance of rain
- Depends on your acclimatization!

Relative Humidity %	Air temperature °C										
	21	24	27	29	32	35	38	41	43	46	49
0	18	21	23	26	28	31	33	35	37	39	42
10	18	21	24	27	29	32	35	38	41	44	47
20	19	22	25	28	31	34	37	41	44	49	54
30	19	23	26	29	32	36	40	45	51	57	64
40	20	23	26	30	34	38	43	51	58	66	
50	21	24	27	31	36	42	49	57	66		
60	21	24	28	32	38	46	56	65			
70	21	25	29	34	41	51	62				
80	22	26	30	36	45	58					
90	22	26	31	39	50						
100	22	27	33	42							

Serious risk to health - heatstroke imminent
 Prolonged exposure and activity could lead to heatstroke
 Prolonged exposure and activity may lead to fatigue

Field Work Exercise

- 1 August, full day
 - 2 field work tasks at field site during day time
 - 1 field work assessment at night
- Individual exercise
 - No communication between participants & team leaders
- No mobile phones and electronic devices can be used
 - **Disqualify** if found
- Seek help from volunteers (Green badge)
- Your own responsibility to time and plan!

Field work tasks

- 15 minutes - read question paper
 - Write names & student number
- Task 1 – 120 minutes
- Task 2 – 75 minutes
- Assessment 120 minutes

What you should bring to the field site

- >1L water
- Hat
- Umbrella / raincoat
- Clipboard to write on
- Writing stationaries
- Sunscreen (if needed)
- Your own medication (if needed)
- Pocket-size English dictionary (if needed) – this will be checked
 - No written and inserted notes

Transport Arrangements

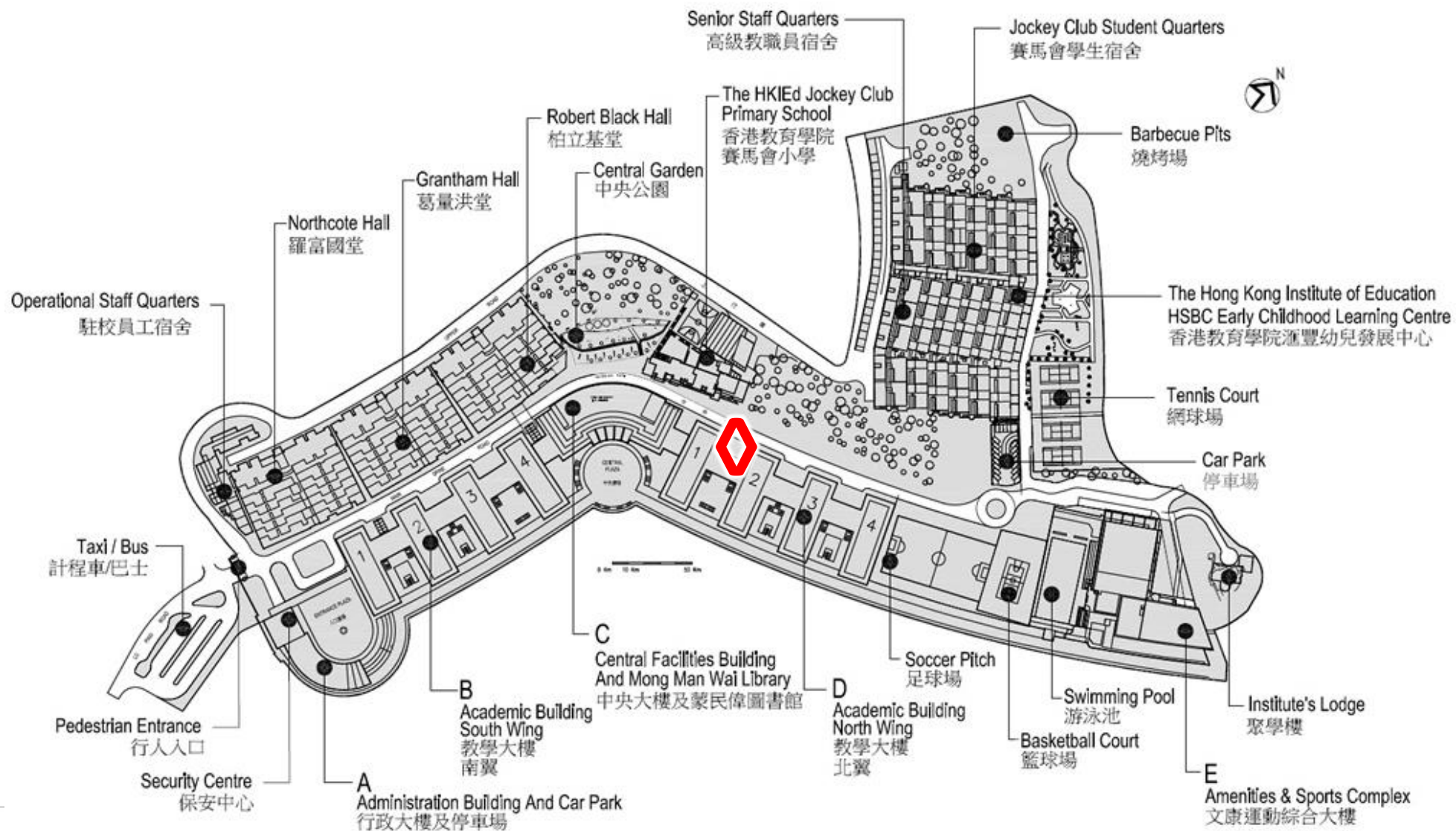
Bus	Teams
1	Argentina, Australia, Belarus, Belgium, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, China-Beijing, China-Macau , Croatia, Task Force Members, Observers
2	Canada, China-Hong Kong, China-Taipei, Cyprus, Czech Republic, Denmark, Estonia, Finland, Hungary, Indonesia, Japan
3	Kazakhstan, Latvia, Lithuania, Mongolia, Montenegro, The Netherlands, New Zealand, Nigeria, Philippines, Poland, Romania
4	Russia, Serbia, Singapore, Slovakia, Slovenia, Switzerland, Tajikistan, Thailand, Turkey, United Kingdom, United States, LoC Members

FWE Schedule: 1 August (Thur)

Activity	Time Bus 1 & 2	Time Bus 3 & 4
Breakfast	07:30	07:30
Departure form EDUHK	09:00	09:00
Arrive at starting point	10:00	10:00
AM task begins	10:15	10:15
AM task ends	12:15 (bus)	11:30 (foot)
Lunch	12:45	11:45
Travel to starting point	13:45 (foot)	12:45 (bus)
Arrive at starting point	14:00	13:15
PM task begins	14:15	13:30
PM task ends	15:30	15:30
Back to EDUHK	16:30	16:30
Field work assessment	19:30	19:30

Bus leave sharp
at G/F of Block
D1/D2

The Education University of Hong Kong - Tai Po Campus





16th International Geography Olympiad

Hong Kong, China

30 July – 5 August 2019

FIELDWORK EXERCISE

Task 1

Student Number

1	6				
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Student Name (country)

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Fieldwork Task 1: Question paper

Land Use Mapping

Time allowed: 120 minutes. Complete question 1.1. [Total Score: 40]

This question paper and its appendix contain a total of **8 pages**.

You are now at fieldwork station ST1 or PtA (see Map 1a). At the end of this session, submit your (i) question paper, (ii) Map 1a; (iii) Draft Map and (iv) Map 2 at station **ST1 or ST2** (PtA is not a station; see Map 1a, Figure A4 and A5). Make sure you have written your name and student number in the spaces provided on the question paper and maps. Late submissions will not be accepted.

Q

1.1 For all transects (purple line) as shown in Map 1a, identify the following features:

- Building types and building height (in number of storey)
- Ground floor retail services and restaurants types

Summarise your observations on Map 2.

Helpful hints:

You will draft your data collection on the draft map sheet provided. Later you will organise and annotate your observations on Map 2. **Map 2 is the only page that will be graded.** A score will be awarded for:

- The accuracy of data collected;
- The design of a classification scheme; and
- Clarity of presentation.

Attention should be paid to the target customers of specific shops/ restaurants as well as to whether clusters exist. If so, where and why do they occur? This information is important to the test that follows.

- END OF PAPER -

1

Student No.

1	6				
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Write your notes here: (notes will not be graded)

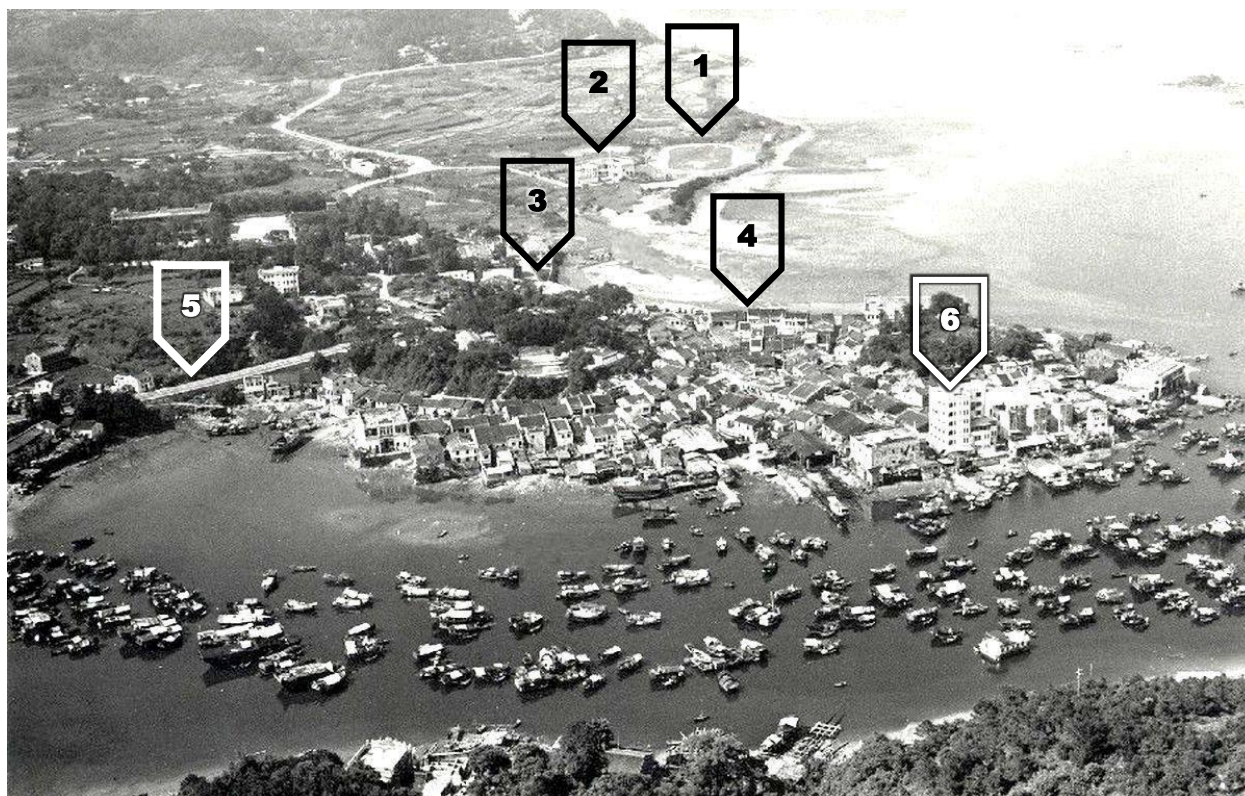
Appendix

Figure A1: Sai Kung Town, 1967. 1: Sports ground; 2: Police station, 3: Tin Hau Temple; 4: Yi Chun Street nowadays; 5: Hiram's Highway nowadays; 6: Kat Cheung Building.



Figure A2: Sai Kung Town, 1983. 1: Hiram's Highway; 2: Kat Cheung Building; 3: Tin Hau Temple; 4: Yi Chun Street; 5: Man Nin Street; 6: Light bus terminal nowadays. New residential buildings on the right foreground were built in 1975 to cater for resettlement due to the construction of High Island Reservoir.

Figure A3: Photos of Housing Units of Hong Kong Over Time:



(a) Traditional village house units of the post-war period



(b) Refurbished pre-war Chinese-style flat.



(c) Typical village house unit built after 1972.
Floor area 700 feet², 3-storey.



(d) Building of the 1970s having an utilitarian architecture¹. Usually less than 20-storey.

¹ Building design to maximize utility, or in other words, the efficiency of the use of space, light and construction materials.



(e) Village house built in 2010s. Having a modern architecture. Floor area 700 feet², 3-storey.



(f) Modern building² of the 2000s. 20-storey upwards but subject to local land use plan.

² Façade (outward appearance) of a modern building in Hong Kong usually display the building's technical and functional components, such as having large bay windows and balconies. The façade of a modern building therefore looks more varied compared to those built in the 1970s.



Figure A4: Fieldwork Station ST1. 1: Typhoon shelter; 2: Kat Cheung Building; 3: ST1.

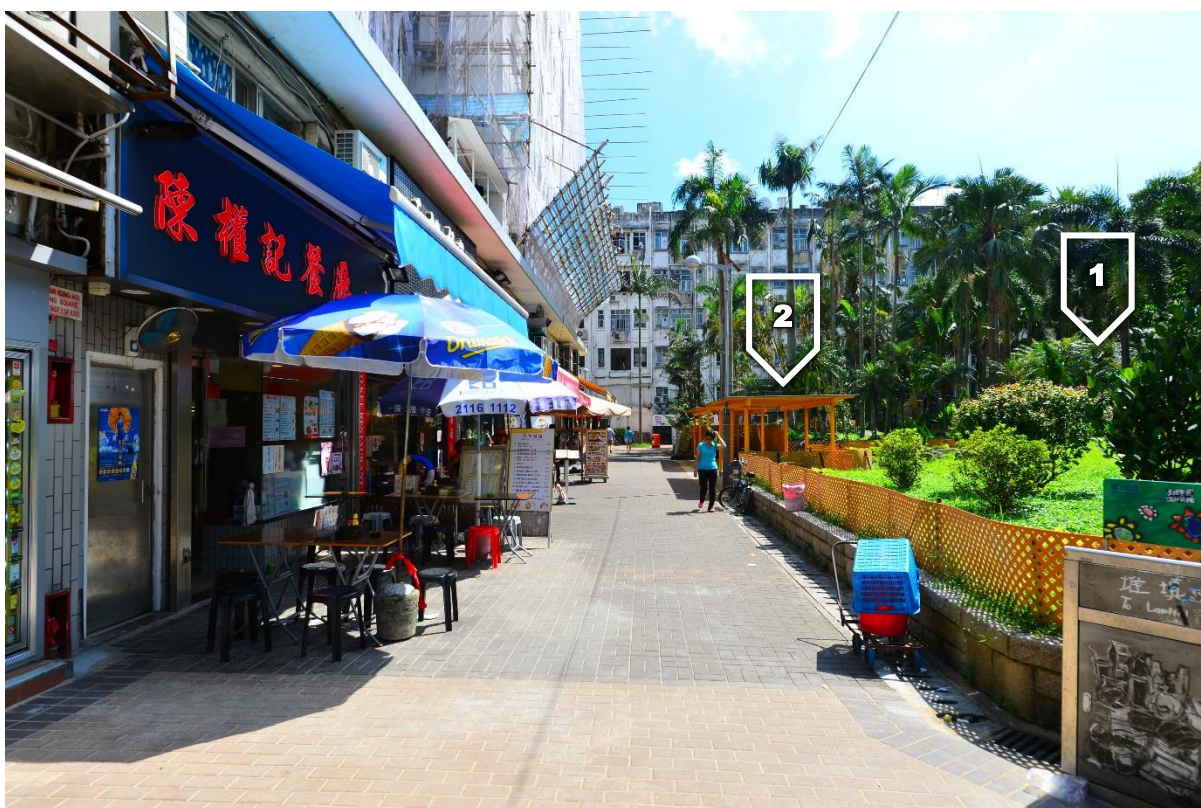


Figure A5: Fieldwork Station ST2. 1: Sha Tsui Playground; 2: ST2 under the orange pavilion.



16th International Geography Olympiad

Hong Kong, China

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FIELDWORK EXERCISE

Task 2

Student Number

1	6				
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Student Name (country)

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Fieldwork Task 2: Question paperTransportation and the promenade

Time allowed: 75 minutes. Complete questions 2.1 to 2.5. [Total score: 30]

This question paper and its appendix contain a total of **8 pages**.

You are now at point PtB (see Map 1b). At the end of this session, submit your question paper at station **ST3** (see Map 1b, Figure B4, at a pavilion overlooking the public pier). Make sure you have written your name and student number in the spaces provided on the question paper. Late submissions will not be accepted.

At fieldwork sites F1 to F3, and along the promenade (Green line; Map 1b), collect data and answer the following questions:

Q

2.1 Identify the uses and functions of the promenade. What kinds of activities occur here? (6 marks)

Human uses:



Figure B2: Transport End Terminals That Link to Sai Kung Town.

Q

2.4 Map and label the different types of coastal protection on Figure B3. (4 marks)

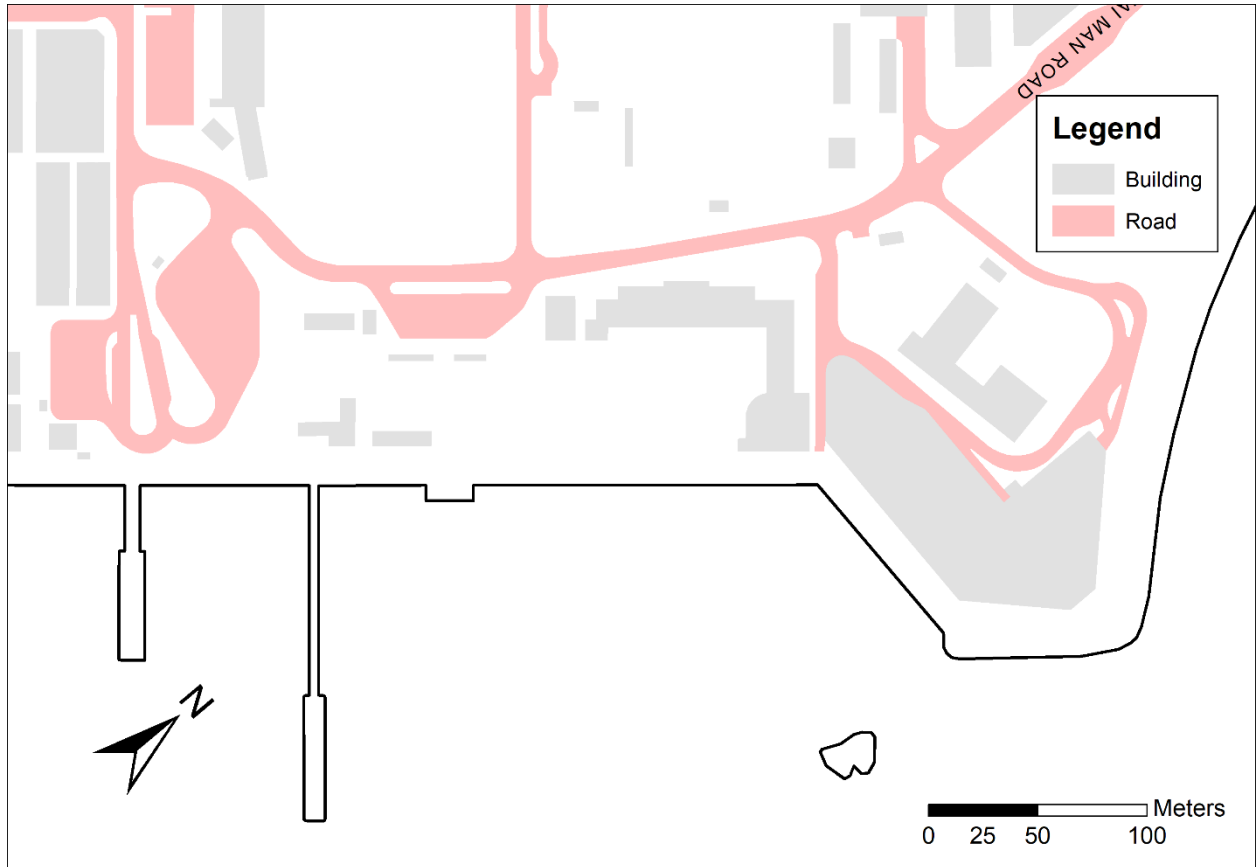


Figure B3: Coastal Protection of Sai Kung Town.

Q

2.5 Suggest the reasons for the different types of coastal protection adopted in different locations along the promenade. Considerations should be given to both engineering and human use. (4 marks)

Type of coastal protection		
Engineering considerations	Reasons:	Reasons:
Human use considerations	Reasons:	Reasons:



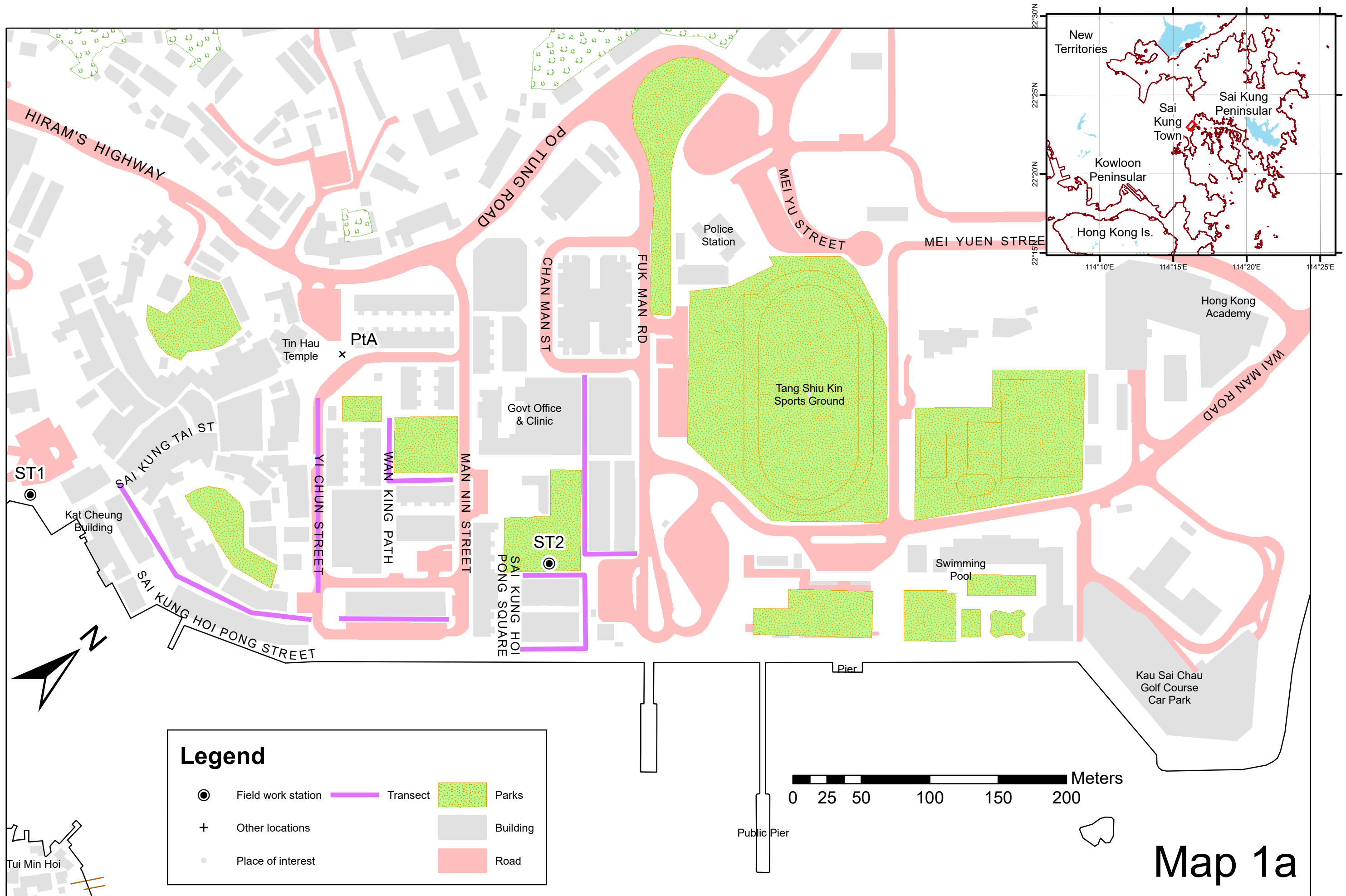
Student No.

1	6				
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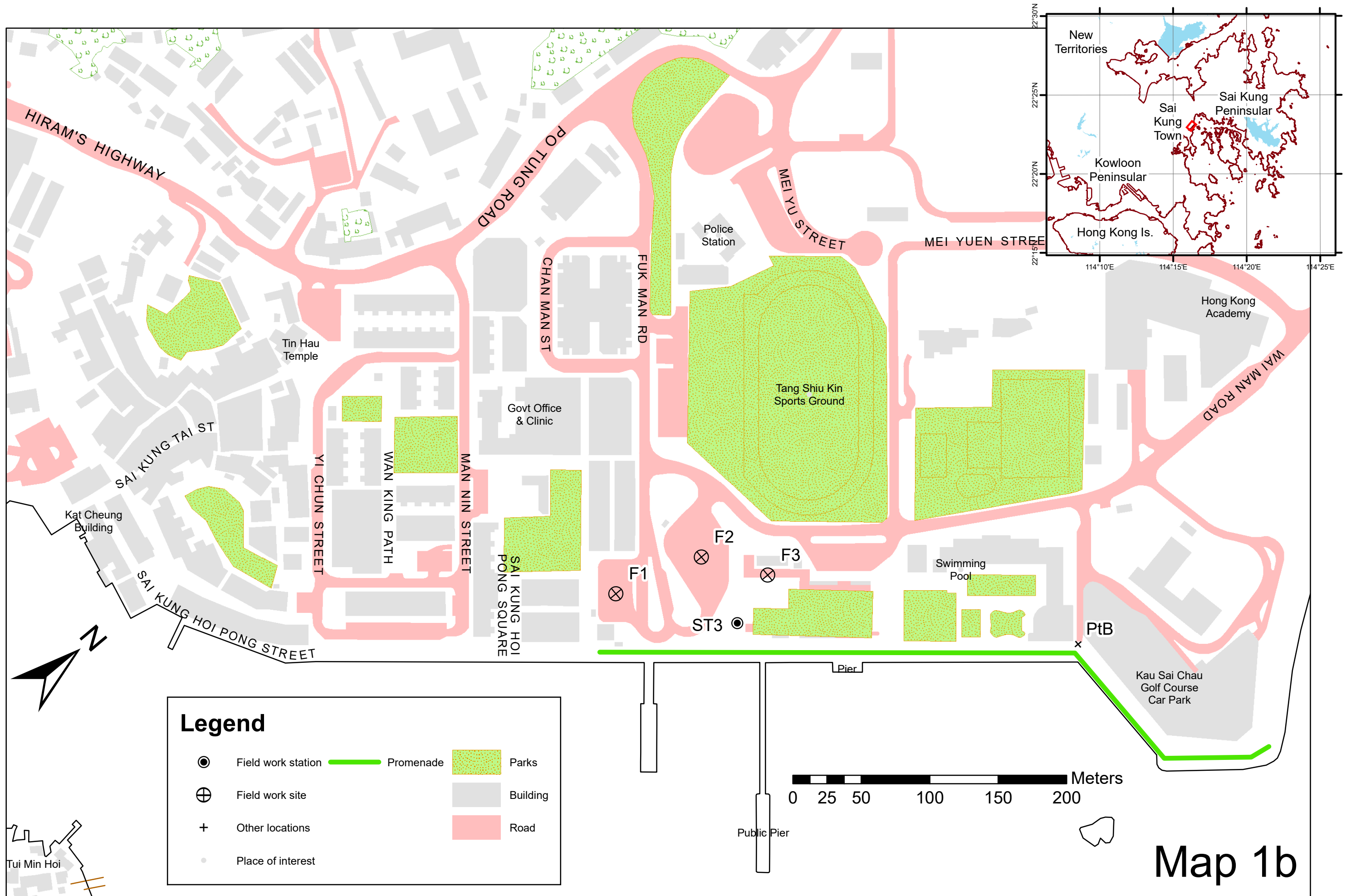
Write your notes here: (notes will not be graded)

Appendix

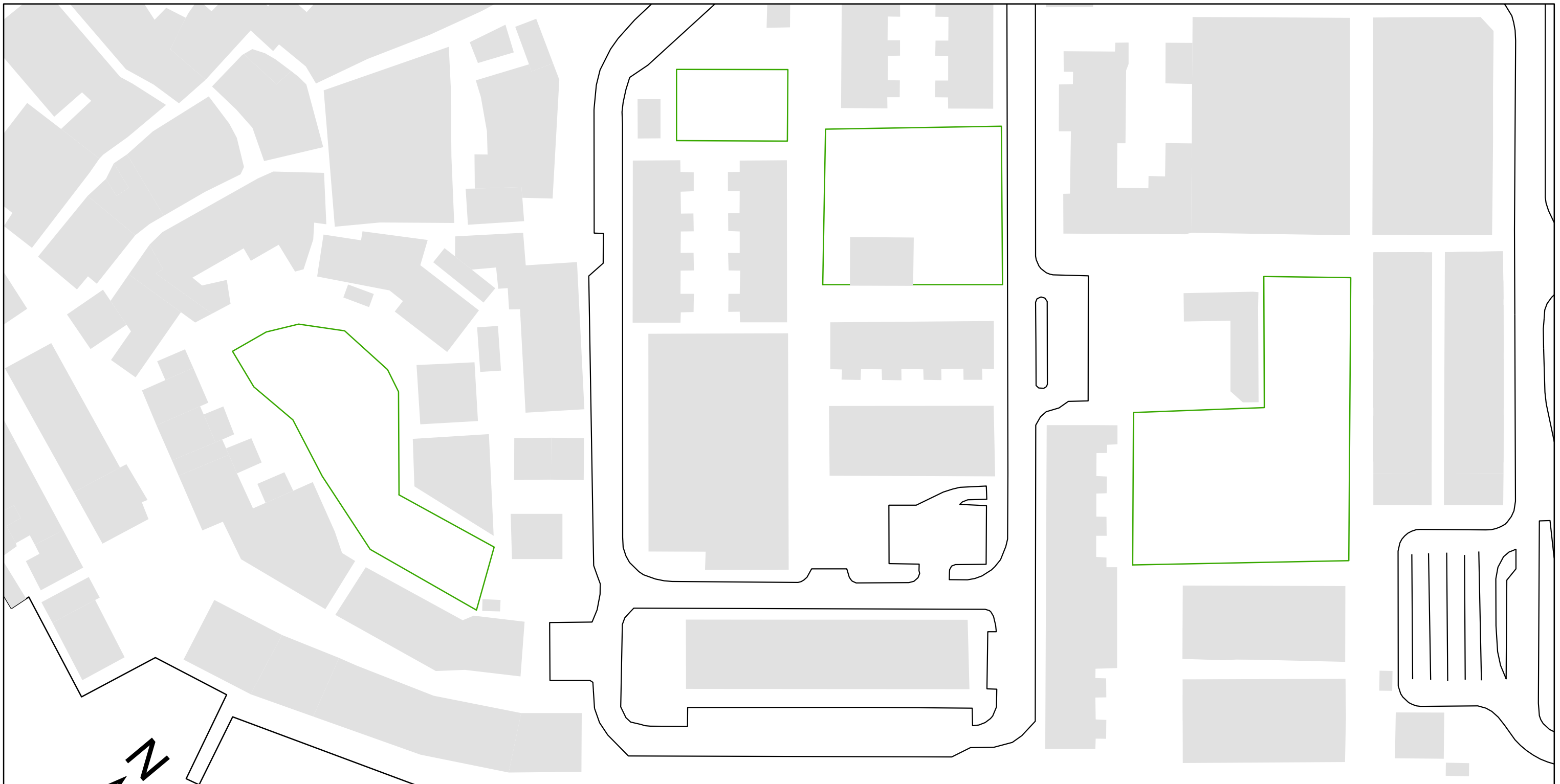
Figure B4: Fieldwork Station ST3. 1: Sai Kung Public Pier; 2: Promenade; 3: ST3 under the cyan metal pavilion with glass ceiling. Walk up stairs to get to it.



Student number: 16




Student number: 16



Legend

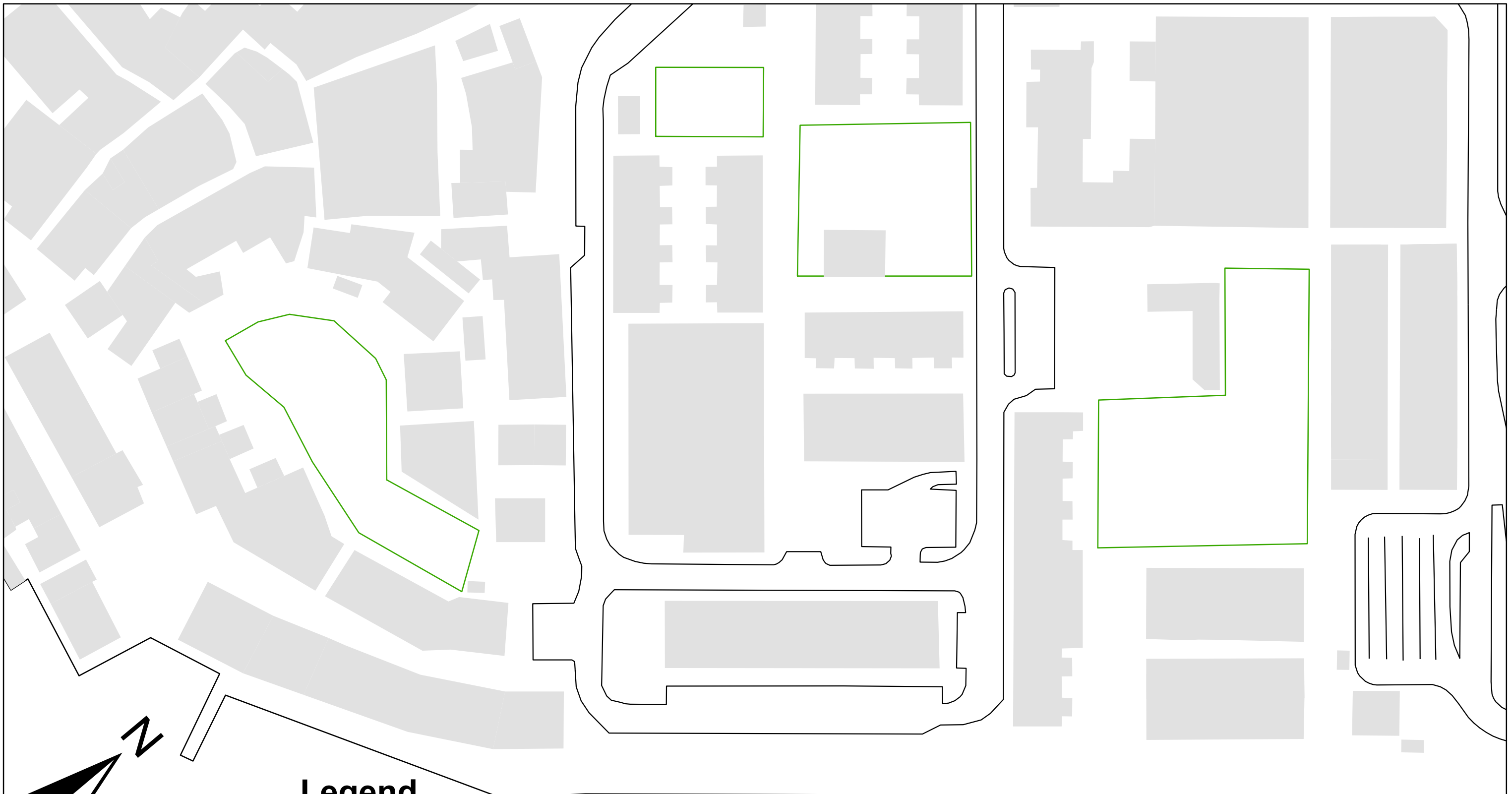
 Building

 Meters
0 10 20 40

Map 2


This map is for marking

Student number: 16



Legend

 Building

 Meters
0 10 20 40

Draft Map

This map will not be marked

Student number: 16