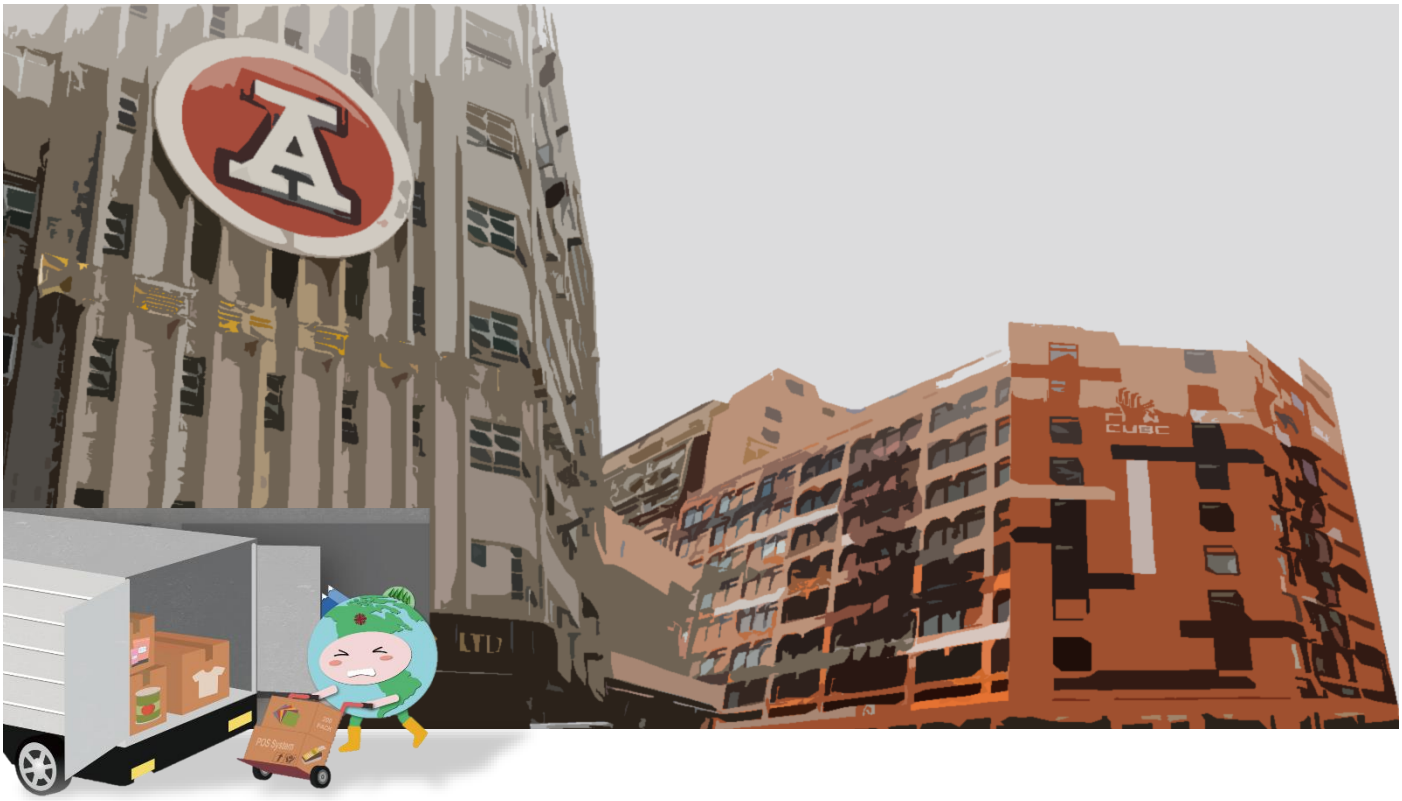
明 愛 陳 震 夏 郊 野 學 園
Caritas Chan Chun Ha Field Studies Centre

Transformation of San Po Kong Industrial Area



Student Name: _____ **Group No.:**_____

Course Date: _____

OBJECTIVES

Knowledge:
- To understand the type and use of buildings in the current San Po Kong Industrial Area
- To combine secondary data and analyse the factors favourable to industrial development in San Po Kong in the past and the reasons for the changes

Skills:
- To collect primary data using methods such as observation, scoring and counting
- To conduct spatial data analysis using a geographic information system
- To present the data using appropriate diagrams

Value:
- ➢ To cherish the industrial development advantages that are mutually beneficial to Mainland China and Hong Kong

Relevance to the DSE Geography Curriculum

Compulsory Module 3:

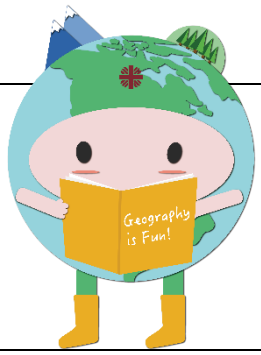
Changing Industrial Location – How and why does it change over space and time?

➢ Prior knowledge

1) In which districts of Hong Kong did industrial areas develop throughout the years? (List some examples)

Before the 1960s	1960 to mid-1970s	Mid-1970s to 1990s

2) Hong Kong's manufacturing industry began to decline starting from the 1970s/ 1980s/ 1990s/ 2000s. After that, how did the factories in these industrial areas undergo transformation?



STAGE 1 PLANNING & PREPARATION

➢ Enquiry question

Explore the situations and reasons for changes in the San Po Kong Industrial Area.

- Referring to the various possibilities in the 'Prior Knowledge 2', which situations do you speculate buildings in the current San Po Kong Industrial Area are more similar to? Or do they still maintain the appearance and use of the old-style industrial buildings?

➢ Where to collect data?

1. Study area: San Po Kong

2. Which period was the San Po Kong Industrial Area developed in? What were the characteristics of the manufacturing industry in San Po Kong at that time?
   - ❑ Before 1960s ❑ 1960s to mid-1970s ❑ Late 1970s
   - Mainly heavy industry / light industry , for examples _____
     _____
   - The factories were mainly government-built / private owned

3. Is San Po Kong an ideal field site for this topic? Why?

What factors would you consider when choosing the field site?

➢ When to collect data?

Date: _____ ❒ Weekday (Mon to Fri) ❒ Sat & Public holiday

Time: _____ to _____

1. Any weather warnings & signals issued by the Hong Kong Observatory today?
   - ❑ Tropical cyclone warning signals ❑ Rainstorm warnings
   - ❑ Very hot weather warning ❑ Cold weather warning
   - ❑ Other: _____

2. Is today ideal for fieldwork of this topic? Why?

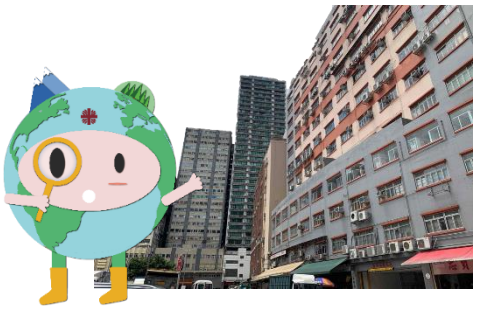
What factors would you consider when choosing the fieldwork date?

➢ What data to collect and how to collect the data?

Items	Primary data collection methods (*A-I) (*may choose more than one*)	How should the sampling method be selected?
1 Identify the type and use of the buildings		
▪ Based on the appearance of the buildings, assess the extent of transformation from old-style industrial buildings to new-style industrial buildings or to commercial buildings		If your class does not have enough manpower to observe all the buildings within the study area, what principle would you use to select the buildings to observe?
▪ Classify the land use based on the appearance of the buildings		
2 Identify buildings that have undergone redevelopment or revitalization in recent years		
3 Compare the traffic flow of different types of vehicles		What principle would you use to select the locations for counting the traffic flow?
4 Other field evidence related to changes in economic activities (if any)		
▪ Building directory		If you encounter these field evidences while passing by the location, then take photos when it is safe and feasible, what sampling method is applied here?
▪ Recruitment and rental advertisements		
▪ Trucks loading and unloading of cargoes		

* Primary data collection methods *(details on P.14)*

A) Observation	B) Measurement	C) Counting	D) Category	E) Distribution (mapping)
F) Scoring	G) Field sketching	H) Questionnaire	I) In-depth interview	



STAGE 2 DATA COLLECTION

➢ Task 1: Identify the type and use of the buildings

Method 1: Scoring based on the building's appearance

Within the study area, score **each** building's exterior features according to the following scoring criteria. Record the data in Table 1 and calculate the average score for each building based on the number of observable items.

Scoring criteria for the building's exterior features (refer to the pictures in Appendix 1 on P.16-17)

	Score		
Features	**0-1**	**2-3**	**4-5**
1) Windows and air-conditionings	No air-conditioning space in the window/ inconsistent window and air-conditioning settings	Fixed air-conditioning space/ air-conditioning space has shields installed/ consistent window and air-conditioning settings across the units	Mainly glass curtain walls/ air-conditioning not exposed externally
2) External walls	Obvious peeling on external walls/ exposed and disorganized pipes and vents	Good condition of external walls/ signs of recent renovation	Stylish design/ greenery incorporated
3) Parking lot	Dilapidated/ accommodates large trucks/ with some loading and unloading tools	Basic and functional/ accommodates both vans and private cars	With decorative lighting/ mainly for private car parking
4) Main entrance	Dim and dilapidated/ small/ rather secluded	Basic lighting/ plain but neat	Bright and spacious/ stylish
5) G/F shop types	Mainly garages/ hardware stores/ canteens/ logistics/ warehouse/ recyclers	Mainly daily goods and services (e.g. banks, snack shops, vegetable and fruit stores)	Chain stores/ high-end shops

*Features that cannot be observed are marked as "NA" (not applicable) (e.g. the building is under renovation, there are no ground floor shops and no parking lot), and the "NA" items are not counted in the average score.

The extent of transformation

Score	0-1	>1-2	>2-3	>3-4	>4-5
Colour					
The extent of transformation	Lowest	Low	Medium	High	Highest
Main building types	Mainly old-style industrial buildings built in early years, which mostly retain their original appearance.		Mainly new-style industrial buildings that have been renovated or office buildings that emerged early in the area.		Mainly are high-end commercial buildings that have been revitalized or redeveloped in recent years.

Method 2: Classifying land use based on the building's appearance

Classify the land use within the study area and fill in the corresponding land use code in Table 1.

Land use type^	Code	Colour
Industrial	I	
Commercial	COM	
Residential	RES	
Government/Community/Institution	GCI	
Recreational	REC	
Vacant#	V	
Work in progress#	WIP	
Transportation	T	

^ Buildings are NOT classified as mixed land use in this study. You should classify the land use by observing the whole building.

Try to understand the future land use of that location based on field evidence. Record it in Table 1, e.g. WIP(COM) or WIP(RES).

Table 1: Type and use of the buildings *(Please refer to the field map on P.18 for the building numbers)*

	Method 1*							Method 2
Building number	Windows and air-conditionings	External walls	Parking lot	Main entrance	G/F shop types	Number of observable items	Average score	Land use

*Features that cannot be observed are marked as "NA" (not applicable) (e.g. the building is under renovation, there are no ground floor shops and no parking lot), and the "NA" items are not counted in the average score.

➢ Task 2: Identify buildings that have undergone redevelopment or revitalization in recent years

Compare this with the 2002 map of San Po Kong and observe which building names have changed. Based on the building's appearance, infer whether they have been revitalized or redeveloped.

➢ Task 3: Compare the traffic flow of different types of vehicles

Within the assigned area, select **TWO** suitable locations and mark them on the map. Record the number of different types of vehicles passing through within **5 minutes**. Record the data in Table 2 to find out the major economic activities within the area from the types and numbers of vehicles.

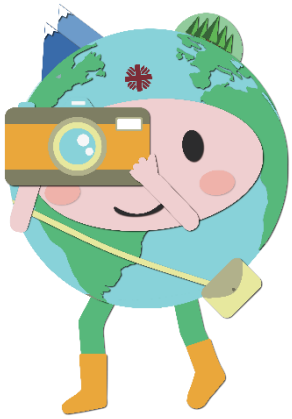
Table 2: Vehicle flow

	Location 1	Location 2	
Street name *(Please mark the locations on the map on P.18)*			
Direction of traffic:			
Time:			
Types of vehicles	**Location 1**	**Location 2**	**Average frequency**
Van / truck/ container truck/ other cargo vehicle			
Private car			
Bus/ mini bus			
Taxi			
Motor bike			
Coach			
Others (please specify): _____			

Task 4: Photograph the field evidence (ensure safety when taking photos)

During the fieldwork, take some photos related to the study topic as evidence for data analysis. Here are some suggestions:

Subject of photograph		Consider the followings
1) Building directory	Select an industrial building and photograph the directory. Ensure the company names are clearly visible.	▪ What types of manufacturing industries do you see? ▪ Are most of the economic activities manufacturing or non-manufacturing?
2) Recruitment/ rental advertisements	At the advertisement board of the industrial building, photograph some recruitment and rental advertisements.	▪ What manufacturing-related occupations do you see? ▪ Are there any non-manufacturing economic activities within the industrial buildings? ▪ What are the approximate rental rates for the industrial buildings? Are there any features or selling points of the industrial buildings mentioned?
3) Trucks loading and unloading cargoes	Photograph trucks loading and unloading cargoes by the roadside or outside the industrial buildings.	▪ Do you frequently observe this situation during the fieldwork? ▪ What type of products advertisements do you see on the vehicles or cargoes? Are there any recognizable brands?



STAGE 3 DATA PROCESSING & PRESENTATION

Based on the primary data collected, what types of diagram should we use to present the data if we are trying to understand the following item?

		Types of diagram
1.	Display the percentage of buildings with different extent of transformation within the study area	
2.	Display the distribution of buildings with different extent of transformation within the study area	
3.	Display the distribution of land use within the study area	
4.	Compare the quantities of different types of vehicles within the study area	
5.	Display the changes in land use from 1970s to the present	

After completing the data processing for the above items, please select one item and describe your data processing steps.

STAGE 4 INTERPRETATION & CONCLUSION

1. Based on the field data, describe the type and use of buildings in the current San Po Kong Industrial Area.

	Hints: ♦ Is the finding similar to your expectations? ♦ What type of building accounts for the highest proportion? To what extent has the study area undergone transformation? ♦ What are the main use of buildings that have been revitalized or redeveloped in recent years?

2. Combining secondary data, analyse the above transformation from perspective of the locational characteristics of San Po Kong.

	Hints: ♦ Do the advantages that drove the development of the industrial area still exist? ♦ From the 1960s to the present, in which period did the land use undergo more significant change? ♦ What are the important changes that have taken place in San Po Kong Industrial Area and the surrounding areas? ♦ What policies have facilitated the transformation of the industrial area?

3. Do manufacturing industry still exist within the study area? Give examples and analyse the reasons.

	Hints: ♦ Referring to the field evidence collected, e.g. building directory, recruitment advertisements and rental advertisements. ♦ What are the characteristics of these manufacturing industries? ♦ Is it because of production costs?

4. What impacts have the transformation of San Po Kong Industrial Area brought to the area? Explain with field evidence. (Hints: Consider the perspectives of different stakeholders)

Positive impacts	Negative impacts

STAGE 5 Evaluation

Reflect on the fieldwork planning. Discuss factors that may cause data bias. What can be done to improve the **reliability** and **validity** in data of this fieldwork?

Factors affecting the data reliability and validity		Suggestion for improvement
Fieldwork date/ time ◆ Fieldwork date and time representative? ◆ Any impact by today's weather condition?		
Field site/ study area ◆ Field sites match with research topic? ◆ Field study area adequate?		
Location of data collection (Sampling) ◆ Sampling method in choosing field site appropriate? ◆ Location of measurement representative? ◆ Sample size sufficient?		
Data collection items/ methods ◆ Data collection items adequate to answer the enquiry questions? ◆ Are the data obtained from the data collection method(s) objective and without bias? ◆ Any inadequacy about the equipment/ instruments? ◆ Surveyor using the equipment/ instruments correctly?		

Further study:

Choose another industrial area developed in the same period (e.g. Kwai Chung or Wong Chuk Hang) and compare its transformation with that of San Po Kong. Formulate a fieldwork plan by referring to the data collection methods used in this field study.

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Homework:

After the fieldwork, please organize this fieldwork experience in field trip diary on p.12-13, and use it as a reference for revision of field-based question.

My Field Trip Diary

Transformation of San Po Kong Industrial Area

- Related modules: C3 Changing Industrial Location – How and why does it change over space and time?
- Key point of fieldwork/topic: _____

▪ Date:_____ (Weekday/ Public holiday) ▪ Time:_____ ▪ Field site: _____	▪ Weather condition:
Is the above planning appropriate for the fieldwork?	

- Primary data:

Data collection method	Data collected	Equipment/ Material (if any)	Merits☺/Demerits☹ of the data collection method (give examples)	Suggestion for improvement (give explanations)

- Secondary data:

Data collected	Use	Data obtained from
Apart from the above, what other secondary data could be used for further investigation?		

- Sampling method (if any):

Sampling method	Applied during data collection of	Merits☺/ Demerits☹

- Data processing and presentation:

Type of graph/ chart	Content and function of graph/chart	Merits☺/ Demerits☹

- For deeper learning or further study, I suggest modify the following aspects.

		Suggestion (give examples)
❑	Key point of fieldwork/ topic	
❑	Data to be collected and method of data collection	
❑	Date and time of fieldwork	
❑	Field site	

Primary data collection methods

Data collection methods	Explanations		Examples
A) Observation	● Using sensory observation to explore the details of research subject (people, things or environment) in a purposive and planned way. Data are recorded using text, photos, sketch, map, etc. (Refer to other data collection methods listed below)		● Identification of the surrounding environment of a field site
B) Measurement	● To estimate or measure the physical quantity of the research subject. It usually requires the use of equipment or tools. Data are usually shown in certain standard, weights or measures.		● Measurement of the width of street and the building height
C) Counting	● To record the number of occurrence of a single item.		● Statistics of pedestrian flow at the pier
D) Category	● To classify based on the nature, characteristics and uses: ♦ to group the same or similar things; ♦ to separate different things.		● Types of goods sold in supermarket ● Customers (serving local residents and tourists) of different shops
E) Distribution (mapping)	● To group similar things according to the research topic (similar to "**D. Category"**); ● Only suitable for spatial representation (different from category); ● Useful in showing the mode of occurrence of research subject in a complex environment.		● Distribution of shops selling big fish balls in Cheung Chau
F) Scoring	● To quantify abstract or subjective concepts; ● To merge various data for easy comparison; ● Scoring items should include different aspects.		● Risk index of natural hazards of Cheung Chau ● Air Quality Health Index (AQHI)
G) Field sketching	● To make simplified drawing of the field site to show what the data collectors observed. Annotations related to the research subject are added to provide key feature or additional information.		● Draw the characteristics and formation of weathering landforms
H) Questionnaire	● Forms: face-to-face, telephone, written, etc.; ● Using questionnaire to understand the opinion of research subject; ● Larger sample size than "**I. in-depth interview"**; ● Mainly closed questions (with options available).	● To collect information by questioning; ● To obtain information which is difficult to be obtained through observations; ● To understand the rationales and opinions of interviewees.	● The main reasons for tourists to visit Cheung Chau ● The level of satisfaction among residents regarding a revitalization project
I) In-depth Interview	● To obtain information through face-to-face/ telephone interview; ● Smaller sample size than "**H.Questionnaire"**; ● Mainly open questions and forthcoming questions will change upon the answer of respondents.		● Opinions of District Council members on the future development of that district

Sampling Methods

Probabilistic sampling methods

- *Need to know the size of population;*
- *Few differences among individuals;*
- *Individual has equal chance of being selected;*
- *Representativeness of data depends on sampling percentage.*

Non-probabilistic sampling methods

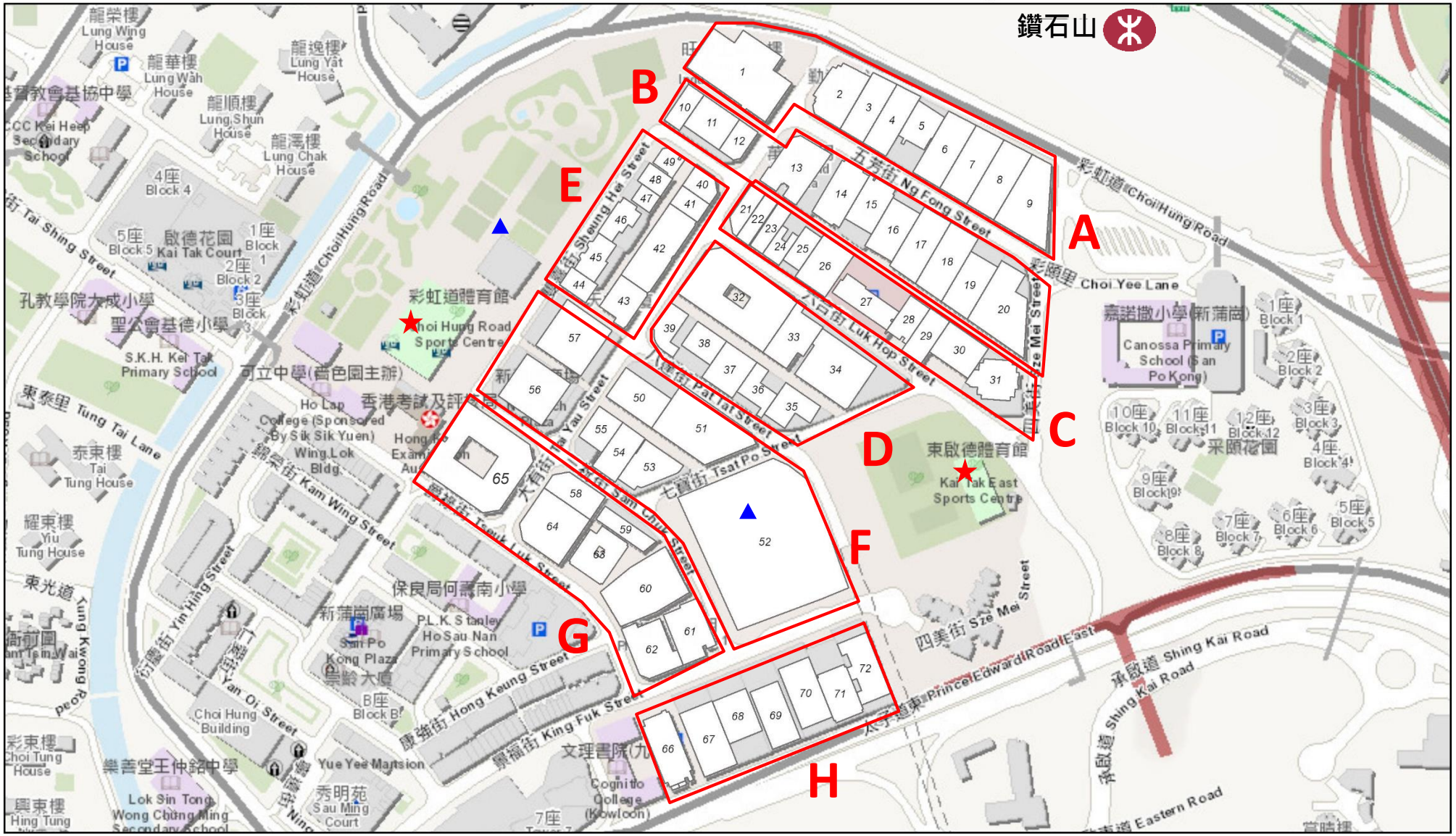
- *Size of population might not be relevant to the research objective;*
- *Chance of individual being selected is unknown;*
- *Representativeness of the results depends on the judgment of researcher in sample selection (Such as the correlation between samples and research targets).*

Sampling methods	Simple random sampling (簡單隨機抽樣)	Systematic sampling (系統抽樣)	Stratified sampling (分層抽樣)	Quota sampling (配額抽樣/ 定額抽樣)	Convenience sampling (便利抽樣/ 方便抽樣)	Purposive sampling (立意抽樣)
Explanations	To select sample from the **whole population randomly**. (using computer program, bamboo slip or random number table)	Each member of the whole population is sequentially numbered, then selected according to a **fixed, periodic interval**.	The whole population are classified according to the variable and divided into separate stratum. Then samples are selected randomly by proportion from each stratum.	The whole population are classified according to the variable and divided into separate stratum. Then desired number (quota) of samples are selected from each stratum.	Research subjects are selected due to convenience of recruitment.	Samples are selected according to research objectives and special requirements.
Examples	To choose a certain number of students to conduct questionnaires/ surveys according to the class number.	To measure the noise level of a street in a regular interval.	To group buildings according to their ages (e.g. above or below 50), and select a certain number of buildings in each group randomly.	To select a certain number of male and female customers, then record the amount spent in a shop.	To interview a certain number of relatives who work in mainland China To interview a certain number of passersby on the street	To conduct an in-depth interview with a district councilor about the social problems of that district.
Remarks	Suitable for small population and few variations among samples (for relevant research objectives).	Suitable for large population (hidden cyclic ordering which may affect the representativeness of data).	Effectively show the relationship / effect between variables.	Effectively show the relationship / effect of variables, but the characteristics and size of samples are judged subjectively.	Should not generalize the data to larger population	Suitable for qualitative research (data is easily influenced by the subjective judgment of researcher)

Appendix 1: Reference for scoring the building's appearance

	0-1	2-3	4-5
Windows and air-conditioning	Without air-conditioning space in the window/ inconsistent window and air-conditioning settings	With fixed air-conditioning space/ air-conditioning space has shields installed/ consistent window and air-conditioning settings across different units	Mainly glass curtain walls/ air-conditioning not exposed externally
	 	 	 
External walls	Obvious peeling on external walls/ exposed and disorganized pipes and vents	Good condition of external walls/ signs of recent renovation	Stylish design/ greenery incorporated
	 	 	 

	0-1	2-3	4-5
Parking lot	Dilapidated/ accommodates large trucks/ with some loading and unloading tools	Basic and functional/ accommodates both vans and private cars	With decorative lighting/ mainly for private car parking
			
Main entrance	Dim and dilapidated/ small/ rather secluded	Basic lighting/ plain but neat	Bright and spacious/ stylish
	 	 	 
G/F shop types	Mainly garages/ hardware stores/ canteens/ logistics/ warehouse/ recyclers	Mainly general daily life shops (e.g. banks, snack shops, vegetable and fruit stores)	Has chain stores/ high-end shops
	 	 	 



Field Study Map — San Po Kong Industrial Area