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Caritas Chan Chun Ha Field Studies Centre

Changing Industrial Location of Tai Lin Pai, Kwai Chung

Name: _____ **Group: _____**

Name of School : _____ **Date: _____**

Objectives:

Knowledge: (1) To understand the current situation of manufacturing and non-manufacturing industries in the study area

(2) To analyze the changes of manufacturing industry and the factors affecting industrial location of Tai Lin Pai, Kwai Chung

Skills: (1) To use various fieldwork strategies to collect primary data e.g. land use mapping, categorizing and counting, observation and recording

(2) To use appropriate statistical graphs to process quantitative data

Value: (1) To cherish the advantages of industrial development between China and Hong Kong

Relevance to the DSE Geography Curriculum

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

Enquiry Question

1. _____ land use accounts for most in the Tai Lin Pai industrial area, Kwai Chung.
2. There are more _____ land use proximity to the railway station (Kwai Hing MTR station) in the Tai Lin Pai industrial area, Kwai Chung.
3. There are more _manufacturing / non- manufacturing_ industries in the buildings proximity to the railway station (Kwai Hing MTR station) in the Tai Lin Pai industrial area, Kwai Chung

Prior knowledge before the fieldwork

Factor of production

Compare the Hi-Tech Industry and the Garment Industry in Hong Kong

Factors	Hi-Techs	Garment
Labour requirement	More / Less	More / Less
Land requirement	Large area / Small Area	Large area / Small Area
Capital requirement	(Relatively) Higher / Lower	(Relatively) Higher / Lower
Skill required	(Relatively) Higher / Lower	(Relatively) Higher / Lower
Locations in Hong Kong (examples)		

Temporal Development of the Industries

Put the types of manufacturing industries of Hong Kong in the appropriate time in the table below

1) Garment, 2) Textile, 3) Data Centre and Storage, 4) Watch and clock, 5) Multimedia production, 6) Electric Car Production

1980s to 1990s	From 2010 onward

STAGE 1: PLANNING AND PREPARATION

A Where to go for the fieldwork

Where are the industrial area(s) in Hong Kong?	These location(s) you suggested is suitable for conducting fieldwork? What are the criteria for a good field site?

Compare the data below between 1) Tai Lin Pai, Kwai Chung and 2) Tseung Kwan O INNOPARK (or previously known as Tseung Kwan O Industrial Estate)

	Tai Lin Pai, Kwai Chung	**Tseung Kwan O INNOPARK**
Year of establishment (About)	**1968**	**1995**
Distance from CDB (Central)	14 KM	19KM
Size of the industrial area (approx. km^2)	0.5	0.75
Distance from nearest MTR station	200M from Kwai Hing Station 1 KM from Kwai Fong Station	1.5KM from LOHAS Station 4 KM from Tseung Kwan O Station
Number of bus routes passed by	79	8
Number of minibus routes passed by	36	3
Number of buildings (approx.)	80	40

Before the fieldwork, you may refer to the video to understand the study area	
https://www.youtube.com/watch?v=ebPYFKjhu-Y	

After watching the video. What are the advantages and disadvantages of conducting industrial fieldwork in Tai Lin Pai, Kwai Chung?

Advantages	**Disadvantages**
1	1
2	2
3	3

Sampling of the transect

There are more than 80 buildings in Tai Lin Pai Industrial Area. The transect of this study will not cover all of them. Suggest appropriate sampling method with the condition suggested below

Fieldwork	Sampling Method
Select the buildings near the MTR Station	Convenience / Systematic / Purposive / Simple Random
Select a building in a three buildings interval within the study area	Convenience / Systematic / Purposive / Simple Random
Select the buildings according to a specific criteria	Convenience / Systematic / Purposive / Simple Random

B When to conduct the fieldwork

Before the trip, suggest the differences between weekdays and weekends in the industrial area?

	Weekdays	Weekend / Holiday
Number of vehicle	More / Less	More / Less
Number of pedestrian	More / Less	More / Less
Noise level	Higher / Lower	Higher / Lower
Number of shops opened	More / Less	More / Less

Could you explain the when will be an appropriate time for the industrial fieldwork (ie weekdays, weekends, day-time or night-time), in order to understand the manufacturing industries? Please specify your reason(s).

C What data to be collected?

Method for primary data collection *(You mat refers to p.14 for detail)

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

Research Items	Method(s) [Please fill the letter above]
Land Use of buildings	
Numbers and types of industries within the study area	
Study of Traffic Flow	

STAGE 2: DATA COLLECTION

1. Land use distribution

Walk along the transect XY and classify the land use of all buildings in the study area. Use the colour scheme below to show the land use distribution on the base map (p.18).

Land use*	Code	Colour
Commercial	Com	
Residential	Res	
Industrial	I	
Government/Community/Institution (e.g. hospital, school, library, etc.)	G/C/I	
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.**

 # I*ndicate the future land use in the blanket representing the future land use, i.e. WIP (Com) or WIP (Res)*

2. Classification and counting of manufacturing and non-manufacturing industries

Enter the lobby of selected buildings and take a photo of the directory. Classify the different types of economic activities as shown in the directory on the table listed at the bottom of this page. Calculate the number and percentages of manufacturing and non-manufacturing activities of selected buildings.

3. Traffic flow of the study area

Each of the group will be assigned in a particular location for vehicle counting.
Describe the surrounding land use.
Count the vehicles of the following categories passed through the location (single direction) for 5 minutes.

Time:		
Surrounding Land Use		
Description of surrounding environment		
Direction of Traffic	**Heading North / Heading South**	
	Total Numbers Vehicle	**Remarks**
Private Car		
Trucks/Van/Container Trucks/Goods Vehicles		
Taxi		
Motor Bike		
Bus (Coach, mini bus, public bus)		
Others		
Total		**---**

STAGE 3: DATA PROCESSING, PRESENTATION AND ANALYSIS

Calculate the percentage of each type of land use on the transect XY

- Calculate the **distance percentages** of various land use of transect

  For example: To calculate the distance percentage of commercial land use

  Distance percentage of commercial land use

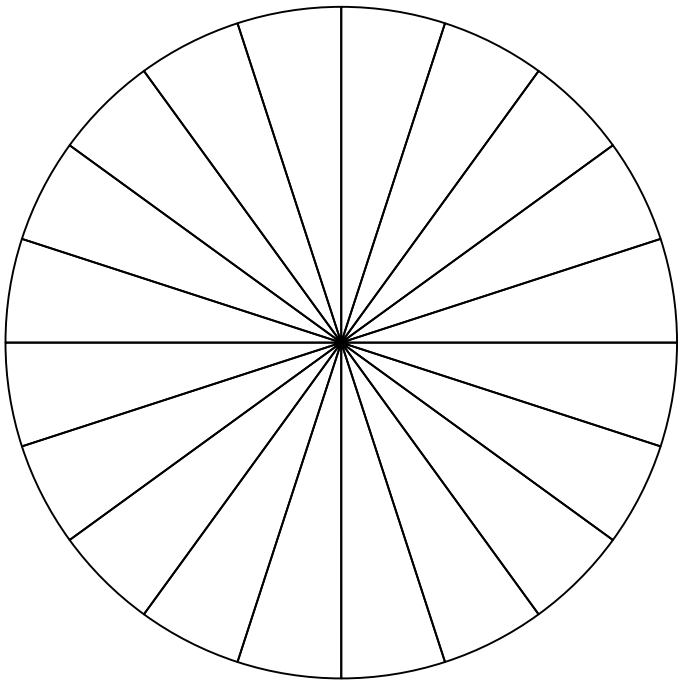
$$= \frac{\text{Length of commercial land use}}{\text{Length of transect}} \times 100\%$$

- **A. Draw the distance percentages in a pie chart**

Distance Percentage of the land use along the transect

Type	Percentage	Colour
Commercial		
Residential		
Industrial		
Government/Community/Institution		
Recreational		
Vacant		
Work in progress		
Transportation		

Pie chart of the distance percentage of land use along the transect



B. Land Use Transect Map (Land Use Distribution)

Draw the trsnsect map according to the data collected

X

Y

Type	Percentage	Colour
Commercial		
Residential		
Industrial		
Government/Community/ Institution		
Recreational		
Vacant		
Work in progress		
Transportation		

In the above land use figure A and B, are the percentages the same? Explain the reason.

_____

1. With reference to the classification scheme below, display the proportion of manufacturing and non-manufacturing activities of the selected buildings

Calculate the percentage of economic activities

- $= \frac{\text{Number of economic activities of particiular industry}}{\text{Total number of economic activities in a building}} \times 100\%$

Name of building: _____

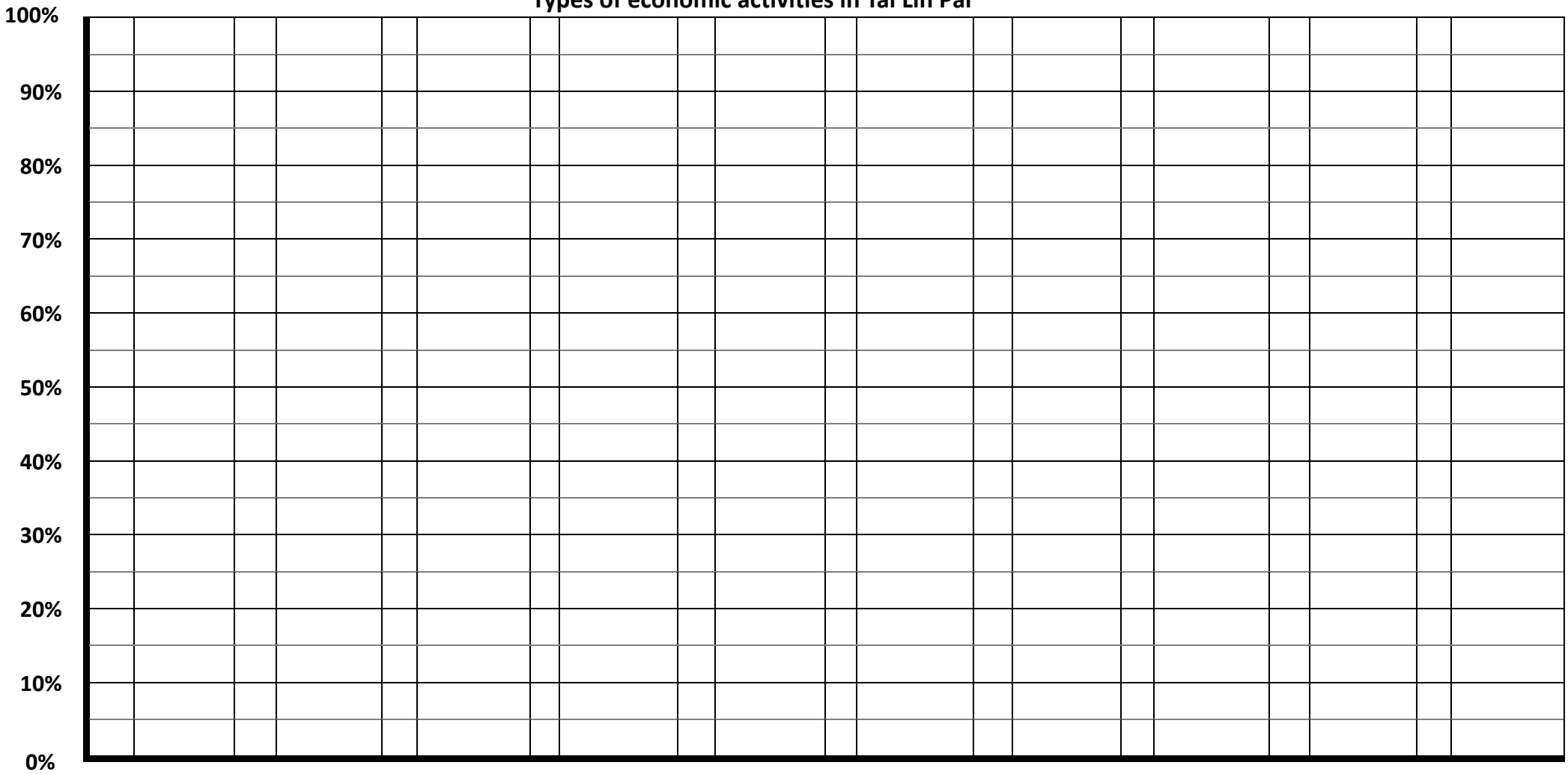
	Types of economic activities	Number of companies engaging similar business	% of total	Colour
Manufacturing	1. Printing and printing-related industries/ Manufacturing of paper and paper products			
	2. Mental (五金,金屬製品) and Machinery			
	3. Food and food processing			
	4. Garment, fashion and textile, fashion accessory			
	5. Other manufacturing			
Non-manufacturing	1. Trading (例：xx 實業、xx 洋行)			
	2. Storage (e.g. mini storage)			
	3. Business Services or other non-manufacturing services			
Unable to identify				
		Total no. of companies: _____	100%	

Group: _____

DATA PROCESSING – Types of economic activities in Tai Lin Pai, Kwai Chung Use the compound bar graph below to display the data from p.9

Manufacturing					Non-manufacturing			Unable to identify
Printing Related ☐	Metal Related ☐	Food and food processing Related ☐	Garment, textile Related ☐	Other manufacturing ☐	Trading ☐	Storage ☐	Business, non-manufacturing and Others ☐	☐

Types of economic activities in Tai Lin Pai



3 Using a bar chart to show the result of the traffic flow statistics

Time	
Location	
Direction of Traffic	**Heading North / Heading South**
Description of the Surrounding Environment	

Private Car **Trucks** **Taxi** **Motor Bike** **Bus** **Others**

STAGE 4: DATA INTERPRETATION (DISCUSSION QUESTIONS)

1. Describe the percentages of industrial, commercial land uses in the study area. Account for the changes of industrial land use.

2. Describe and explain the railway station (Kwai Hing MTR station) and the land use in the study area of Tai Lin Pai.

3. "'Tai Lin Pai is a desirable location for the industrial development."
Justify the above statement with the field data collected.

4. Referring to the compound bar graph (p.10), describe and explain the proportion of manufacturing and non-manufacturing industry.

5. Using the data collected on traffic flow, explain "Tai Lin Pai industrial area is undergoing economic transformation".

6. Referring to P.9 the economic activities of selected buildings as examples, analyze the following phenomena.
    i) What types of manufacturing industries are still located in the study area? Explain the reason.
    ii) What types of non- manufacturing industries are still located in the study area? Explain the reason.
    iii) Explain the selected building is undergoing economic transformation?

7. Referring to the data collected and the map (https://tinyurl.com/tailinpai). Account for the transportation network is favourable for the industrial development in Tai Lin Pai industrial area.

STAGE 5: EVALUATION

1. Counting the vehicle flow is one of the strategy to understand the industrial activities. What are the pros and cons of the vehicle flow counting? And suggest for the methods to increase the accuracy in vehicle flow counting.

Pros	Cons
Suggestions for increase accuracy:	

2. Please use the table below to suggest the factors affecting the data reliability and validity, also the suggestion for improvement.

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 respond the enquiry questions? ◆ Are the data obtained from the data collection method(s) objective and without bias? ◆ Any inadequacy about the equipment/ instruments? ◆ Measurer using the equipment/ instruments correctly?		

Homework:

After the fieldwork, please organize this fieldwork experience in field trip diary on p.16-17, as a reference for the revision of field-based question.

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)

My Field Trip Diary

- Related modules: 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 conditions:
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 (for supplementary information only):

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

- Sampling method (if any):

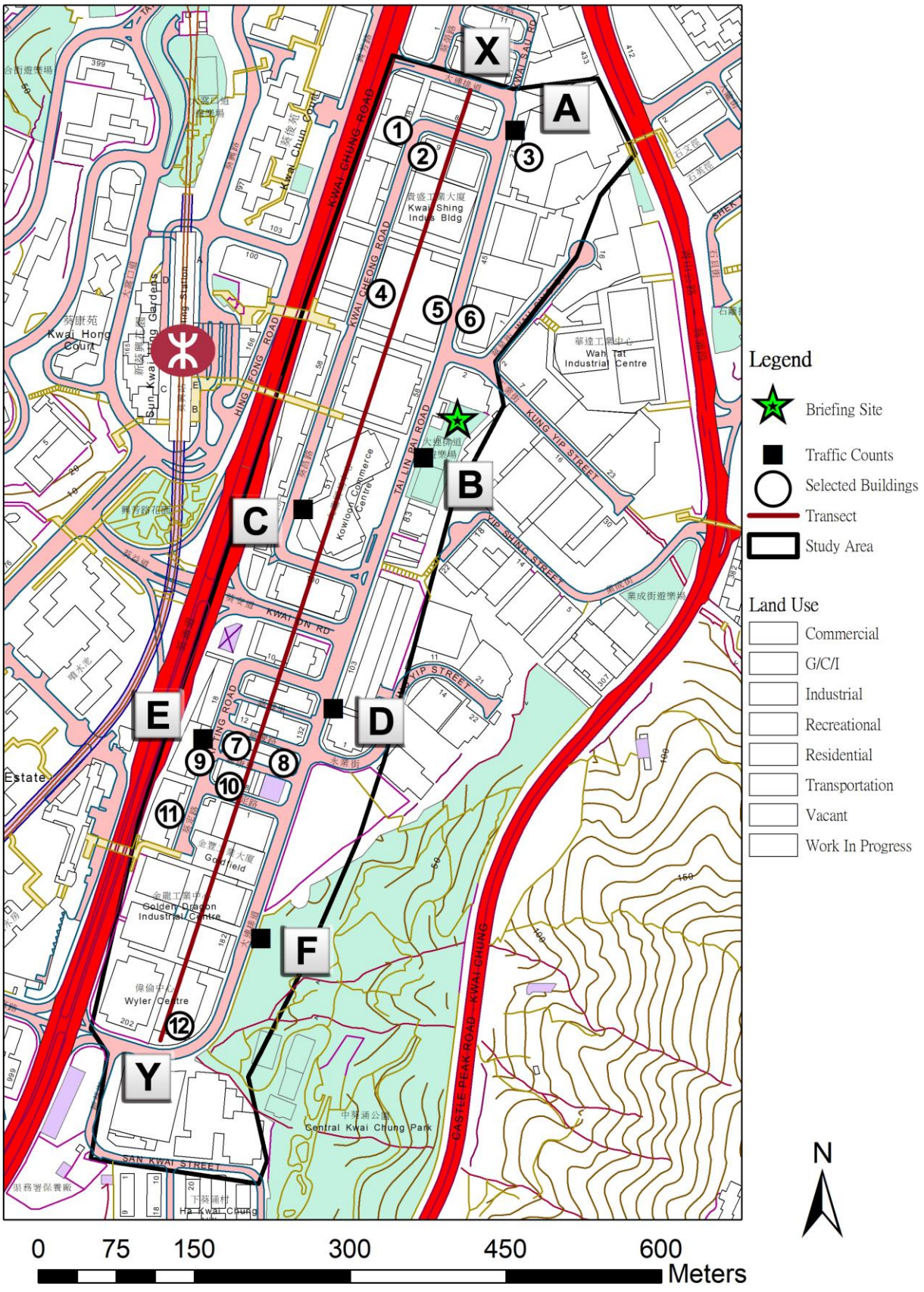
Sampling method	Applied in the following	Merits/ Demerits

- Data processing and presentation:

Type of graph/ chart	Content shown 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	


X
A
B
C
D
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Y
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12
KWAI CHUNG ROAD
KWAI CHEUNG ROAD
HING FONG ROAD
TAI LIN PAI ROAD
KUNG YIP STREET
YIP SHING STREET
KWAI ON RD
WANG YIP STREET
CASTLE PEAK ROAD – KWAI CHUNG
SAN KWAI STREET
Kwai Hong Court
Sun Kwai Hong Gardens
Kwai Shing Industrial Bldg
Wah Tat Industrial Centre
Kowloon Commerce Centre
Golden Dragon Industrial Centre
Wyler Centre
Central Kwai Chung Park
Legend
Briefing Site
Traffic Counts
Selected Buildings
Transect
Study Area
Land Use
Commercial
G/C/I
Industrial
Recreational
Residential
Transportation
Vacant
Work In Progress
N
0
75
150
300
450
600
Meters