



# Traffic and Pedestrian Flow Studies

**Student Name:** \_\_\_\_\_

**Group no.:** \_\_\_\_\_

**Course Date:** \_\_\_\_\_

## OBJECTIVES

- **Knowledge :**
  1. To study the traffic and pedestrian flow.
  2. To analyze the interrelationship between the traffic and pedestrian flow and surrounding environment.
- **Skills :**
  1. To use field observation, measurement and counting skill to collect data.
  2. To understand sampling method to improve the validity and reliability of data collected.
- **Values**
  1. To understand the relationship between the transportation system and social development.



## Relevance to the DSE curriculum

Transport Development, Planning and Management  
Building a Sustainable City – Are environmental conservation and urban development mutually exclusive?

## Planning and Preparation

### 1. Methodology

A **traffic count** is a count of vehicular or pedestrian traffic, which is conducted along a particular road, path, or intersection. A traffic count is commonly undertaken either automatically (with the installation of a temporary or permanent electronic traffic recording device), or manually by observers who visually count and record traffic on a hand-held electronic device or tally sheet

There are different methods can be used in calculating pedestrian flow as listed below:

- **Manual Counting**



• Automatic Counting



Compare the situation when counting the traffic flow in urban Hong Kong and Cheung Chau

	Urban Hong Kong	Cheung Chau
Vehicle Type		
Number of Vehicle	More / Less	More / Less
Dangers when conducting Fieldwork		
Location for counting		

## Pre-trip Discussion

- 1) Name the instrument that is used in the fieldwork. \_\_\_\_\_
- 2) Explain two reasons to explain manual counting is more suitable in this fieldwork.  
\_\_\_\_\_
- 3) When there is a large number of pedestrian or vehicle passed by, how could we do count in a more accurate way?  
\_\_\_\_\_



---

## **Data Collection**

1. Students will be divided into groups.
2. Each group will be assigned with ONE location for the counting work.
3. Count the number of pedestrians and bicycles / tricycles / vehicles passing through the assigned location for 40 minutes, divided into eight five-minute intervals. Put the results in the data record sheet as shown in Table 1.
4. After the counting work, all groups have to walk through all other locations and describe the surrounding environments. Put your descriptions in Table 2.



**Table 1: Record Sheet**

Locations	Time	Number of pedestrians	No of bicycles/tricycles/ vehicles
Name of field site: <hr/>	0-5 mins		
	6-10 mins		
	11-15 mins		
	16-20 mins		
	21-25 mins		
	26-30 mins		
	31-35 mins		
	36-40 mins		
Total			

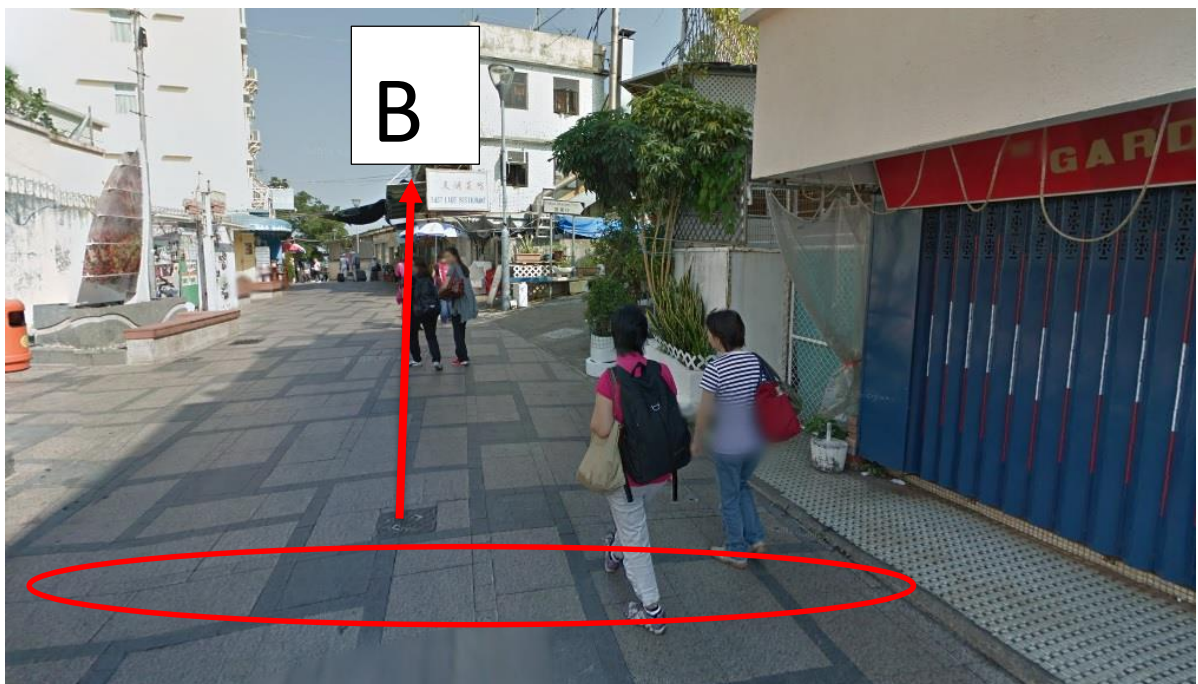
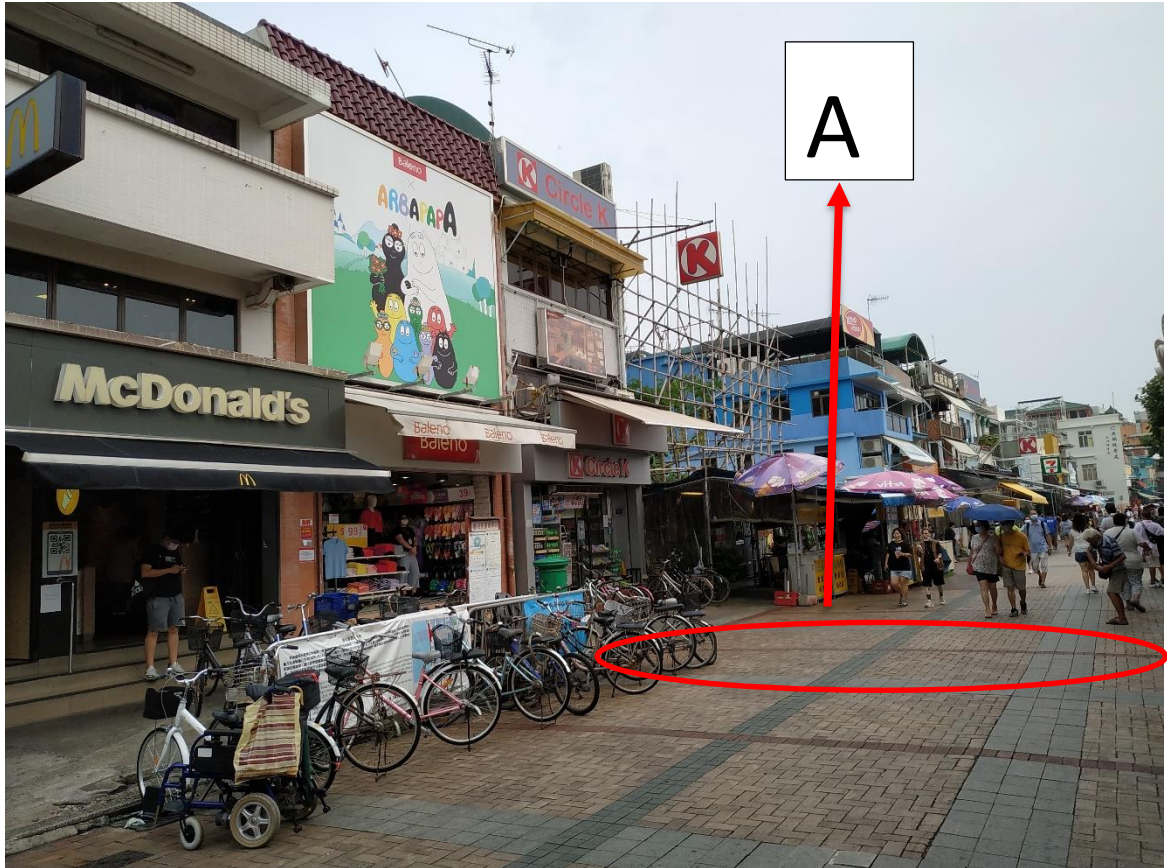


**Table 2: Site Description**

Locations	Description of surrounding environment
(A) Pier	
(B) Beach	
(C) Street	
(D) Sport ground (Next to the seafood restaurant)	
(E) Market	
(F) Wai Yan College	
(G) Fire Station Near Ping Chong Road (Ice Factory)	
(H) Jockey Club	



## Figures of the Field Sites















## **Data Processing**

1. Complete Table 1 and Table 2.
2. Draw a component bar chart to show the temporal changes of pedestrian flow and bicycles / tricycles / vehicles respectively in your study area on P.12.
3. Draw two isoline maps to show the aggregate spatial variations of the pedestrian flow and bicycles / tricycles / vehicles respectively on P.13-14.

## **Discussion and Presentation**

1. According to the field data, describe and account for the spatial distribution of the pedestrians.
2. According to the field data, describe and account for the spatial distribution of the bicycles / tricycles / vehicles.
3. With field evidence, explain whether there are significant relationship between pedestrian flow and the surrounding environment.
4. Which sampling method was in use in this fieldwork? Describe and explain how to redesign the data collection method to raise the validity and reliability of the field study.

## **Extended Session**

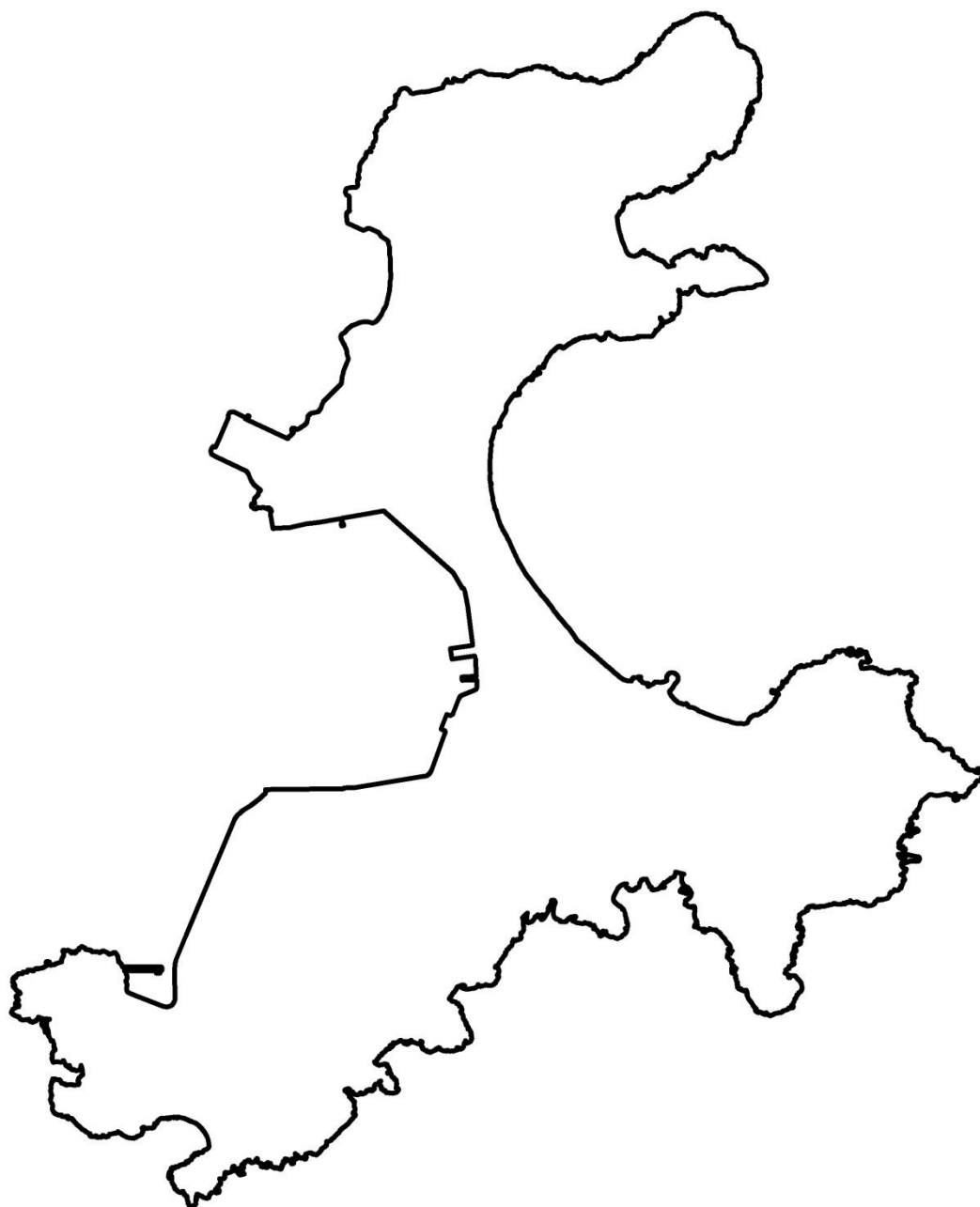
A traffic count is conducted in the vicinity of your school campus. Describe the procedures and the points to note when you conduct this traffic count.





# Isoline Map for Pedestrian Flow in Cheung Chau

(Date : \_\_\_\_\_) Time: \_\_\_\_\_



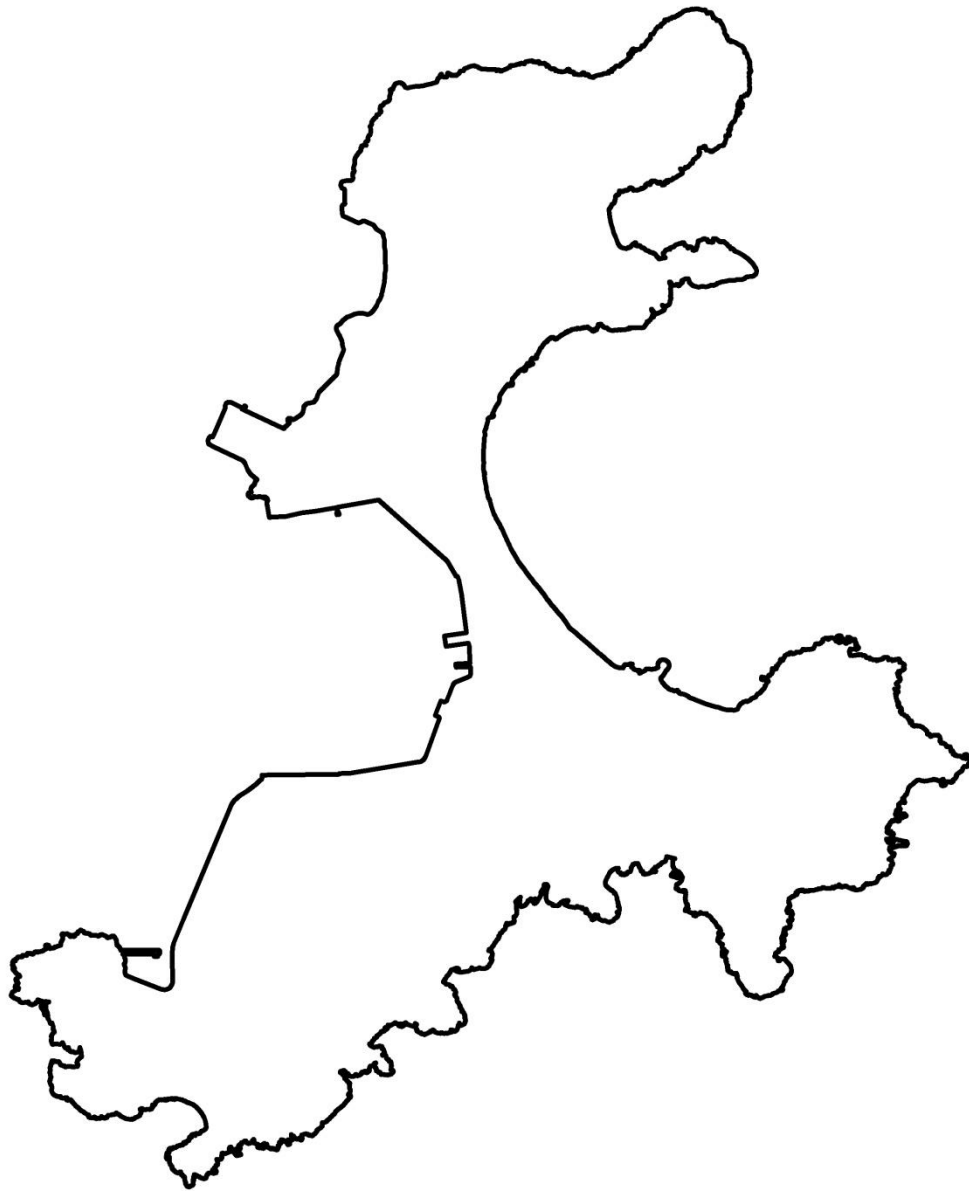
0 187.5 375 750 1,125 1,500 Meters





## Isoline Map for Bicycles / tricycles / vehicles in Cheung Chau

(Date : \_\_\_\_\_) Time: \_\_\_\_\_



0 187.5 375 750 1,125 1,500 Meters





