



Sustainable Urban Development

Enquiry Skills Approach, Version 2.0

A. Planning and Preparation

Objectives

1. To examine the general land use pattern in the study area.
2. To observe the urban decay and urban renewal in the study area.
3. To analyse the sustainable development in the study area.

Scope of the Study

1. Tsuen Wan Town

Field Work Plan

1. Refer to the Map 2.4.
2. Flip the provided transparency, Map 2.3, on Map 2.4. Tsuen Wan town will then be separated into 28 zones.
3. Take a walk according to the route shown on Map 2.4.
4. During the walk, observe and examine the land uses of the labelled 28 zones according to the following classification.
 - a) Commercial
 - b) Industrial
 - c) Low income residential
 - d) Middle income residential
 - e) High income residential
 - f) Institutional
 - g) Construction
 - h) Recreational
 - i) Others
5. For each zone, select one typical building. Observe and evaluate its outlook and surrounding area according to the following items.
 - a) Building materials
 - b) Design
 - c) Height
 - d) Infrastructure
 - e) Recreation facilities
6. Record your marks in Table 2.1.
7. Measure the noise level, air quality, wind direction, wind speed and the number of pedestrians passing by at each checkpoint (A-G).
8. Students are requested to record the noise level for 1 minute at each checkpoint.
9. Measure the air quality, wind direction and wind speed with the air quality meter and anemometer for 1 minute at each checkpoint.
10. Count the number of pedestrians passing by from all directions for 1 minute at each checkpoint.
11. Record the major type of vehicle and count the number of vehicles passing by from all directions for 1 minute at each checkpoint.
12. Record the data in Table 2.4.

Think About

List the safety risks when conducting the urban fieldwork.

B. Data Collection

Data Items

1. Land uses
2. Building appearances and surroundings
3. Noise level
4. Wind direction and wind speed
5. Dust particulates level
6. Pedestrian flow
7. Number of vehicles
8. Major type of vehicles

Data Collection Method

1. Systematic sampling
2. Use of assessment form

Equipment List

Items	Quantity	Checked	Returned
1. Base map (Individual)	x1	<input type="checkbox"/>	<input type="checkbox"/>
2. Clipboard (Individual)	x1	<input type="checkbox"/>	<input type="checkbox"/>
3. Compass (Individual)	x1	<input type="checkbox"/>	<input type="checkbox"/>
4. Colour pencils	x1	<input type="checkbox"/>	<input type="checkbox"/>
5. Counter	x2	<input type="checkbox"/>	<input type="checkbox"/>
6. Sound meter	x1	<input type="checkbox"/>	<input type="checkbox"/>
7. Anemometer	x1	<input type="checkbox"/>	<input type="checkbox"/>
8. Dust particulates meter	x1	<input type="checkbox"/>	<input type="checkbox"/>

Think About

List the possible errors when collecting data.

Suggest ways to reduce the above difference.

Data Recording sheet**Table 2.1 Assessment Form for Land uses and Bulidings in Tsuen Wan**

Area	Land Use	Building Appearances and Surroundings*					Total
		a)	b)	c)	d)	e)	
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
21.							
22.							
23.							
24.							
25.							
26.							
27.							
28.							

*Markings for building appearances and surroundings (3 marks for the best, 1 mark for the worst):

a) Building materials b) Design c) Height d) Infrastructure e) Recreation facilities

Table 2.2 - Other related Data in Tsuen Wan

Check Point	A	B	C	D	E	F	G	Ho Koon
Noise level (dB)								
Dust Particulates ($\mu\text{g}/\text{m}^3$)								
Wind Direction								
Wind Speed (m/s)								
Pedestrian Flow								
Number of vehicles								
Major type of vehicles								

C. Data Processing, Presentation and Analysis

Draw the most appropriate diagrams to present the collected data.

Think About

List the merits and demerits of the chosen diagrams.

D. Interpretation and Conclusion

1. Describe the pull and push factors for developers and citizens developing and living in Tsuen Wan.

2. What is your opinion on environmental quality in Tsuen Wan? Please explain with examples, and suggest the remedial measures.

3. In your opinion, which zone(s) in Tsuen Wan need(s) renewal project the most? Why?

4. To what extent has the urban development of Tsuen Wan applied the concept of sustainable development? Please explain.

E. Evaluation

1. Other than the data collected in this course, suggest other data and information you might need to further investigate the urban environment in Tsuen Wan. Explain your answer.
