



# Sustainable Urban Development

Version 5.0

## Objectives

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

## 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. Sound meter	x1	<input type="checkbox"/>	<input type="checkbox"/>
6. Anemometer	x1	<input type="checkbox"/>	<input type="checkbox"/>
7. Dust particulates meter	x1	<input type="checkbox"/>	<input type="checkbox"/>
8. Counter	x2	<input type="checkbox"/>	<input type="checkbox"/>

## Field Work

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 2.2.

**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)								
Wind direction								
Wind speed (m/s)								
Dust particulates ( $\mu\text{g}/\text{m}^3$ )								
Pedestrian Flow								
Numbers of vehicles								
Major type of vehicles								

### Data Processing

1. Calculate the total marks for the assessment of each land uses zone in Table 2.1.
2. Assign different colours to each land use. Fill the zones with the corresponding colours on Map 2.4.
3. By drawing circles in different radii, show the noise level of each check point in Tsuen Wan on Map 2.4.

### Discussion

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

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2. Describe the push factors discouraging developers and citizens to develop and live in Tsuen Wan.

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3. What is your opinion on environmental quality in Tsuen Wan? Please explain with examples.

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4. Suggest remedial measures in order to solve the above-mentioned environmental problems in Tsuen Wan.

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

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6. What are the possible problems of carrying out renewal project in the above-mentioned zone(s)?

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

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8. In your opinion, how may Tsuen Wan town planning help Hong Kong to be a sustainable city?

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