

**BOARD OF STUDIES**  
NEW SOUTH WALES

**2013**

**HIGHER SCHOOL CERTIFICATE  
EXAMINATION**

# Geography

## General Instructions

- Reading time – 5 minutes
- Working time – 3 hours
- Write using black or blue pen  
Black pen is preferred
- Board-approved calculators may be used
- A Stimulus Booklet is provided with this paper
- Write your Centre Number and Student Number at the top of pages 9, 11, 13 and 15

## Total marks – 100

**Section I** Pages 2–7

### 20 marks

- Attempt Questions 1–20
- Allow about 35 minutes for this section

**Section II** Pages 9–16

### 40 marks

- Attempt Questions 21–24
- Allow about 1 hour and 10 minutes for this section

**Section III** Page 17

### 40 marks

- Attempt TWO questions from Questions 25–27
- Allow about 1 hour and 15 minutes for this section

## Section I

**20 marks**

**Attempt Questions 1–20**

**Allow about 35 minutes for this section**

**Refer to the Stimulus Booklet**

Use the multiple-choice answer sheet for Questions 1–20.

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Refer to Source A on page 1 of the Stimulus Booklet to answer Questions 1–2.

- 1** In 2011, approximately how many visitors to Tasmania came from Japan?

  - (A) 3000
  - (B) 4000
  - (C) 5000
  - (D) 6000
  
- 2** From 2011 to 2012, what was the relative change in visitor numbers from the United Kingdom to Tasmania?

  - (A) 5% increase
  - (B) 25% decrease
  - (C) 33% decrease
  - (D) 75% increase
  
- 3** Which of the following identifies TWO urban dynamics of change?

  - (A) Social structure and urban decay
  - (B) Culture of place and consolidation
  - (C) Spatial exclusion and sustainability
  - (D) Decentralisation and urban renewal

Refer to Source *C* on page 1 of the Stimulus Booklet to answer Questions 4–6.

- 4** What is the approximate barometric pressure for Adelaide?
- (A) Greater than 1032 hPa
  - (B) Greater than 1014 hPa and less than 1020 hPa
  - (C) Greater than 1020 hPa and less than 1026 hPa
  - (D) Greater than 1026 hPa and less than 1032 hPa
- 5** What is the general wind direction contributing to the rainfall in Queensland?
- (A) Easterly
  - (B) Westerly
  - (C) Northerly
  - (D) Southerly
- 6** What mapping technique has been used to represent the amount of precipitation?
- (A) Precis
  - (B) Cadastral
  - (C) Choropleth
  - (D) Frequency distribution

Refer to Source *D* on pages 2 and 3 of the Stimulus Booklet to answer Questions 7–13.

- 7** What is the population density in AR 9939 if each building has three occupants?
- (A) 9 people per km<sup>2</sup>
  - (B) 18 people per km<sup>2</sup>
  - (C) 27 people per km<sup>2</sup>
  - (D) 36 people per km<sup>2</sup>
- 8** What is the approximate area of Big Punchbowl intermittent lake in AR 9743?
- (A) 0.26 km<sup>2</sup>
  - (B) 0.35 km<sup>2</sup>
  - (C) 26 000 ha
  - (D) 350 000 m<sup>2</sup>

- 9** What is the approximate bearing of the building located at GR 959418 from Mount Paul spot height (GR 037429)?
- (A) 75°
  - (B) 83°
  - (C) 255°
  - (D) 263°
- 10** What is the approximate time taken by a cyclist travelling by road from Wet Marsh Bridge (AR 8839) to Whelans Bridge (AR 8644) at an average speed of 15 km per hour?
- (A) 11 minutes
  - (B) 21 minutes
  - (C) 31 minutes
  - (D) 41 minutes
- 11** In what general direction does the Swan River in AR 8942 flow?
- (A) S
  - (B) SW
  - (C) SSW
  - (D) WSW
- 12** What is the aspect of the slope at AR 0532?
- (A) NW
  - (B) SW
  - (C) NNE
  - (D) SSE
- 13** Which of the following features is NOT visible from Mt Parsons spot height at GR 089332?
- (A) Wineglass Bay AR 0730
  - (B) Fleurieu Point GR 040311
  - (C) Coles Bay built-up area AR 0635
  - (D) Mt Dove summit GR 081326

Refer to Sources *D* and *E* on pages 2 and 3 of the Stimulus Booklet to answer Questions 14–15.

**14** What is the feature labelled *A*?

- (A) Lemon Bight AR 1129
- (B) Hazards Beach AR 0529
- (C) Hazards Lagoon AR 0629
- (D) Richardsons Beach AR 0734

**15** In which general direction was the photographer facing when taking the photograph?

- (A) East
- (B) West
- (C) North
- (D) South

Refer to Source *F* on page 3 of the Stimulus Booklet to answer Questions 16–17.

**16** What was the approximate increase in electricity used by industrial users from 2005 to 2010?

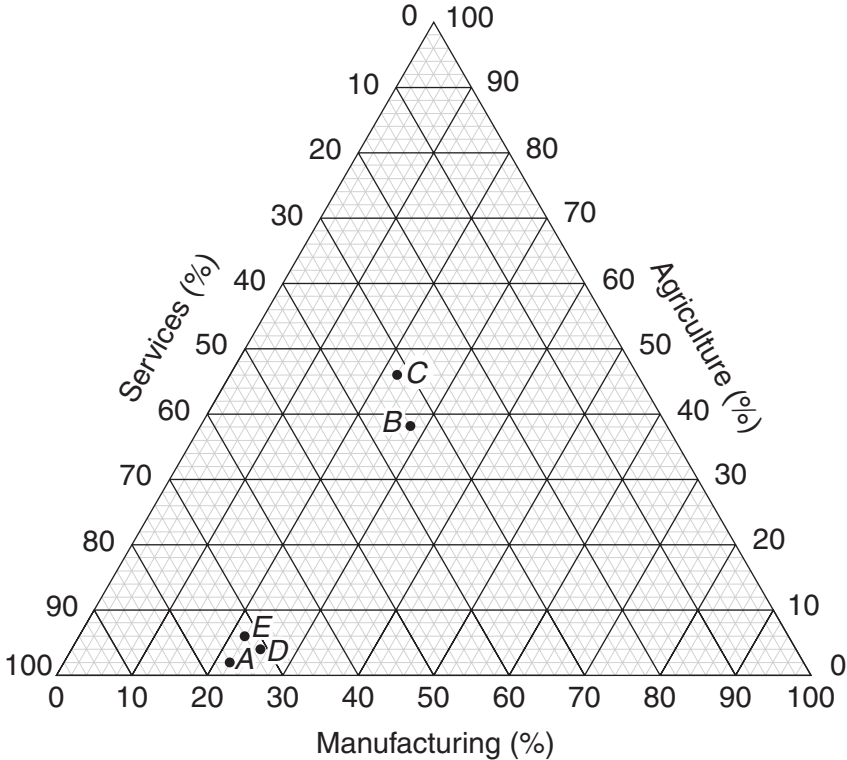
- (A) 700 million kWh
- (B) 1100 million kWh
- (C) 1500 million kWh
- (D) 1900 million kWh

**17** What was the approximate combined electricity used by residential users and industrial users in 2000?

- (A) 1500 million kWh
- (B) 1700 million kWh
- (C) 5800 million kWh
- (D) 6400 million kWh

Refer to the ternary graph to answer Questions 18–19.

**Employment by industry sector for selected countries, 2011**



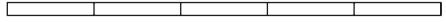
- 18 What percentage of the workforce in country *A* was employed in the service sector?
  - (A) 2%
  - (B) 22%
  - (C) 76%
  - (D) 98%
  
- 19 What is the difference in employment in the manufacturing sector between country *C* and country *B*?
  - (A) 2%
  - (B) 4%
  - (C) 6%
  - (D) 8%

20 Which of the following represents the largest scale?

(A) 1:100 000

(B)  $\frac{1}{50\,000}$

(C) 1 cm represents 25 km

(D)   
0    2.5    5    7.5    10    12.5 km

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Centre Number

Section II

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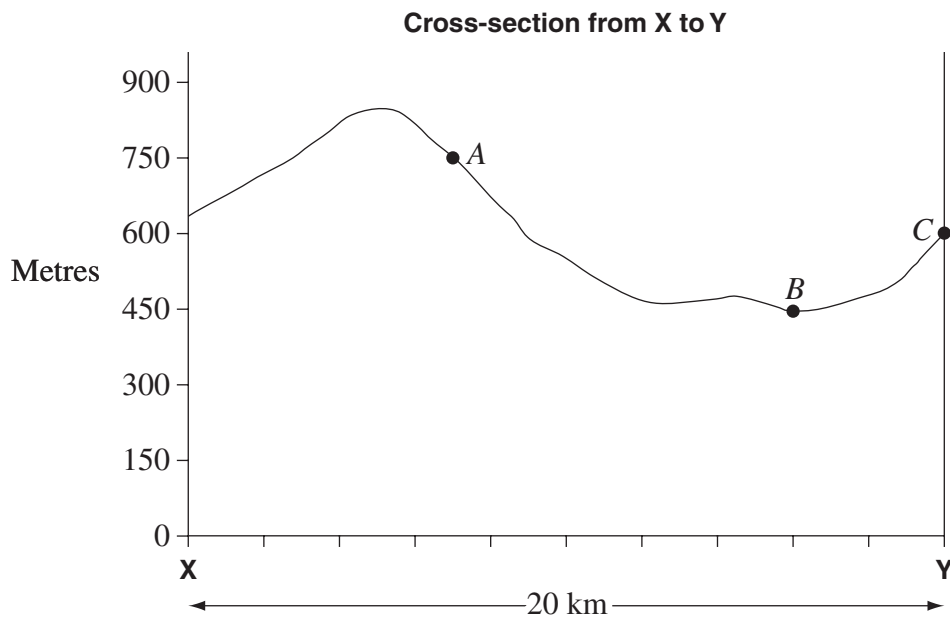
40 marks

Attempt Questions 21–24

Allow about 1 hour and 10 minutes for this section

Use the Stimulus Booklet and your knowledge of geography to answer Questions 21–24 in the spaces provided. These spaces provide guidance for the expected length of response.

Question 21 (5 marks)



- (a) State the local relief between point A and point C. 1

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- (b) Calculate the average gradient between point A and point B. Show working. 2

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- (c) Calculate the vertical exaggeration of the cross-section. Show working. 2

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Centre Number

Section II (continued)

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Question 22 (12 marks)

- (a) Using Source *B* on page 1 of the Stimulus Booklet, explain TWO reasons for the management and protection of ecosystems. **6**

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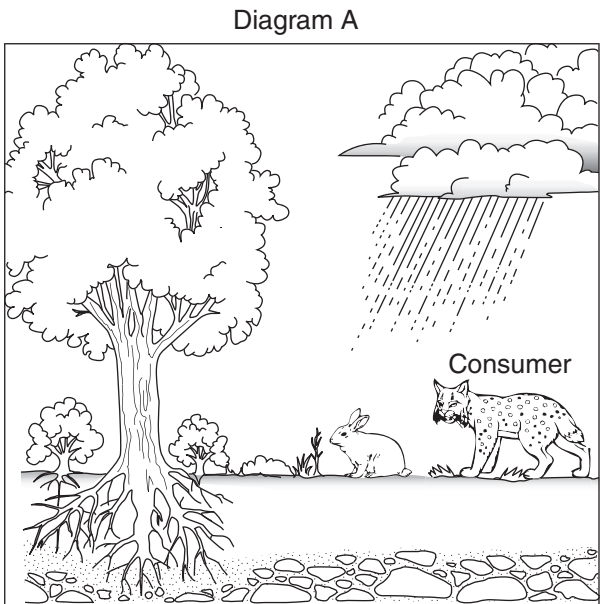
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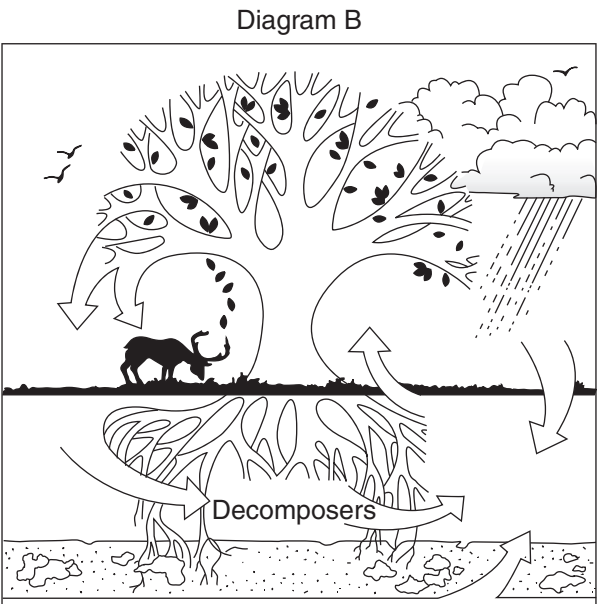
Question 22 continues on page 12

Question 22 (continued)

(b) With specific reference to both diagrams, explain the biophysical interactions responsible for the functioning of ecosystems. 6



Acknowledgement: © Exploring Nature Educational Resource



Source : USDA NRCS & NSTA (2010)

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End of Question 22



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Section II (continued)

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Question 23 (12 marks)

- (a) Explain the changing relationship between regional centres and small towns. **4**

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- (b) With reference to Source G on page 4 of the Stimulus Booklet, account for the rapid growth of megacities in the developing world. **4**

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Question 23 continues on page 14

Question 23 (continued)

- (c) Using Source *H* on page 4 of the Stimulus Booklet, explain ONE challenge associated with the provision of services in megacities in the developing world. **4**

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**End of Question 23**

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Section II (continued)

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Question 24 (11 marks)

Answer this question with reference to an economic activity in a global context that you have studied.

Economic activity .....
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- (a) Outline the spatial patterns of this economic activity. 2

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- (b) Describe ONE impact of this economic activity. 3

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Question 24 continues on page 16

Question 24 (continued)

(c) Explain TWO factors contributing to the future directions of this economic activity.

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**End of Question 24**



# Geography

## Section III

**40 marks**

**Attempt TWO questions from Questions 25–27**

**Allow about 1 hour and 15 minutes for this section**

Answer each question in a SEPARATE writing booklet. Extra writing booklets are available.

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In your answers you will be assessed on how well you:

- demonstrate geographical knowledge and understanding relevant to the question
  - communicate ideas and information using geographical terms and concepts appropriately
  - refer to case studies, illustrative examples and the Stimulus Booklet where appropriate
  - present a sustained, logical and cohesive response
- 

### **Question 25** (20 marks)

Assess the impact of humans on the functioning of TWO ecosystems at risk.

### **Question 26** (20 marks)

Analyse the impact of urban dynamics on the ecological sustainability of a large city in the developed world.

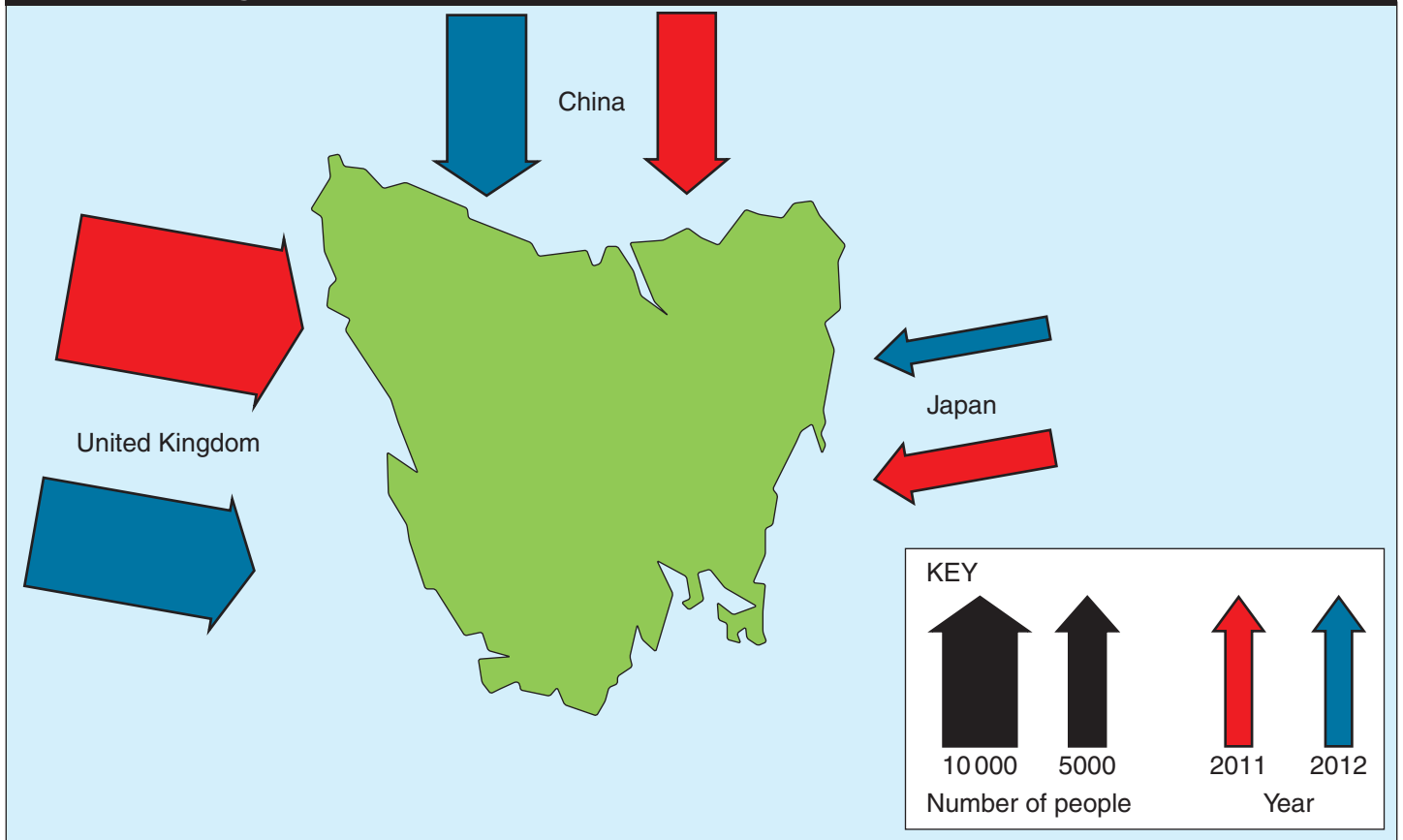
### **Question 27** (20 marks)

Evaluate factors that have influenced the location of an economic enterprise operating at a local scale.

**End of paper**

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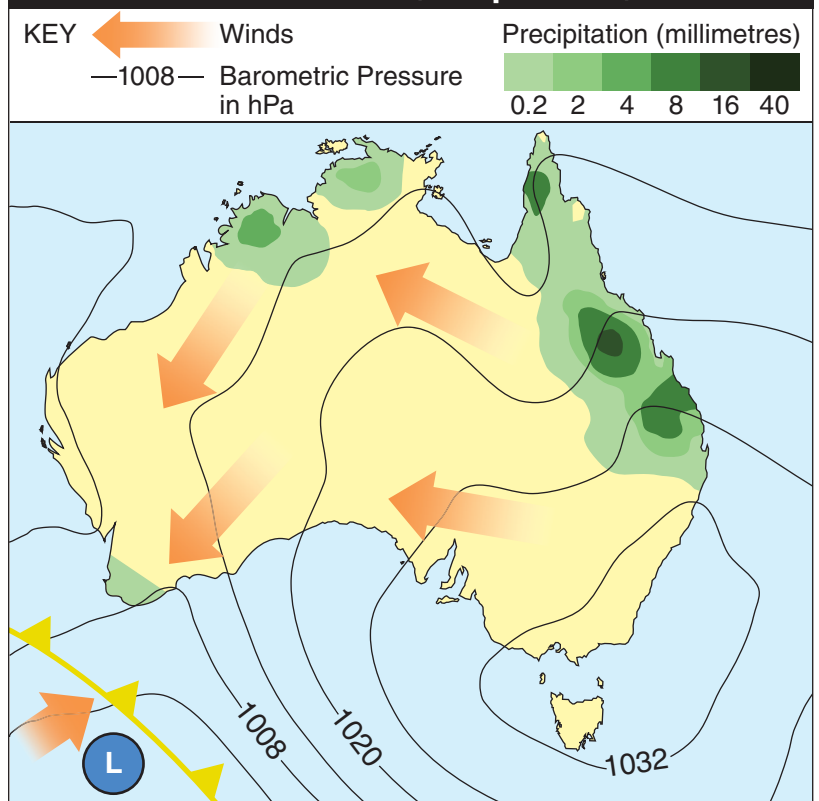
### Source A – Origin of visitors to Tasmania from selected countries (2011–2012)



### Source B – An ecosystem at risk



### Source C – Weather data (15 April 2012)



Source D Extract from Freycinet (Tasmania) topographic map



SCALE 1 : 100 000

1 centimetre represents 1 kilometre  
Contour interval: 20 metres  
Elevation in metres

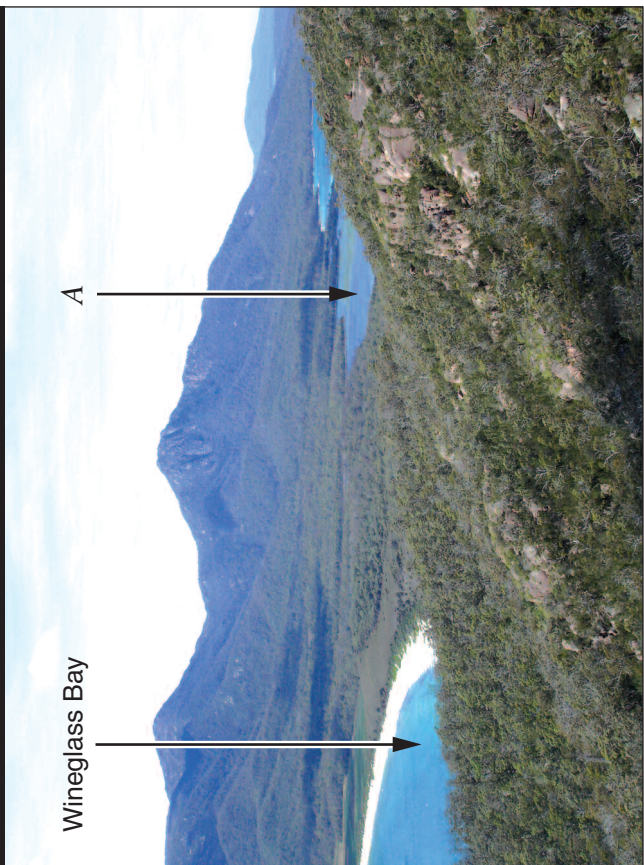
**Legend**

- Built-up area.....
- Roads for continuous public use**
- Highway.....
- Arterial road.....
- Road of restricted use or access**
- Other roads; Bridge.....
- Walking track (position approximate).....

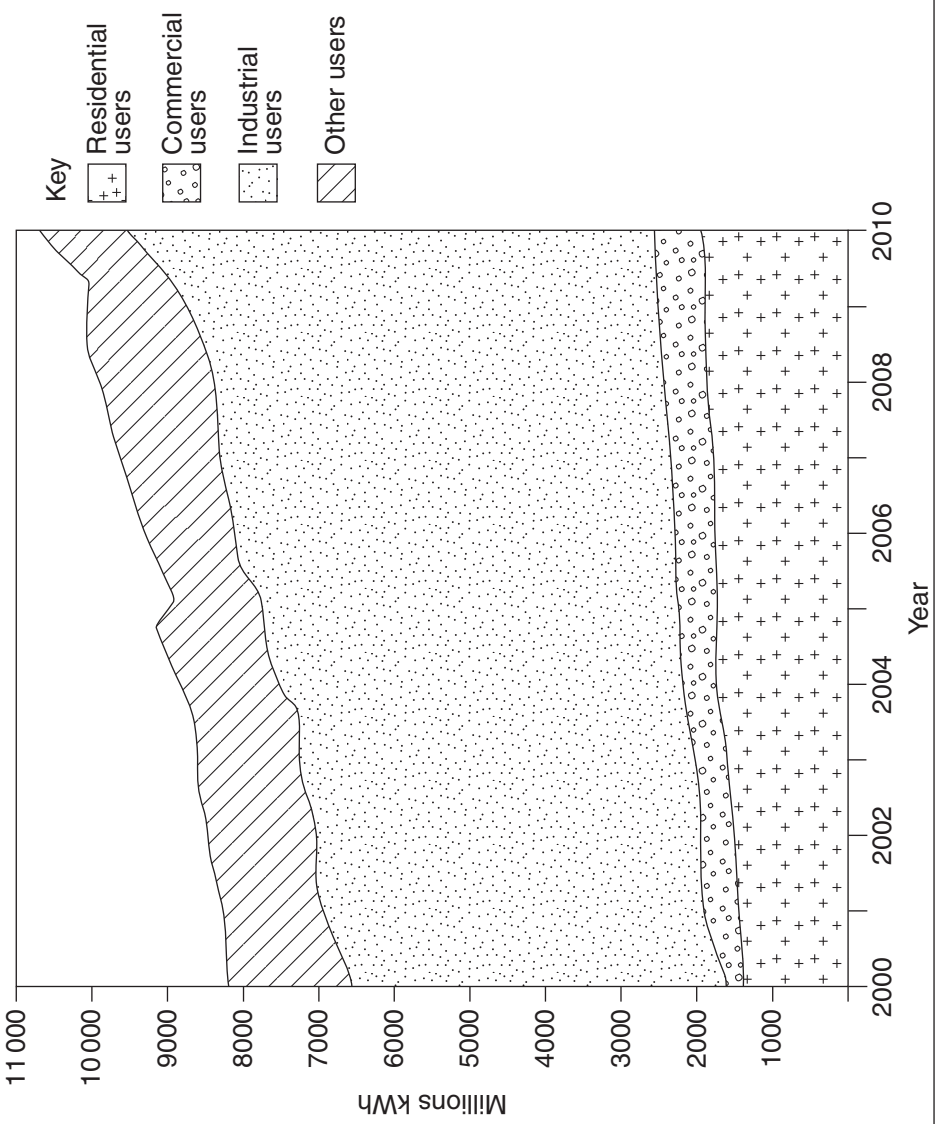
- Forest or scrub, dense.....
- Forest or scrub, medium.....
- Forest, plantation.....
- Orchard.....
- Building/s; Cemetery; Church.....
- Trig station; Spot height.....
- Contour with value;.....
- Depression contour.....

- Lake, perennial; Lake, intermittent;.....
- Watercourse.....
- Swamp; Land subject to inundation.....
- Rock, bare or awash; Tidal flat, Saline flat.....
- Tidal reef; Rock ledge; Sand.....

**Source E – Photograph taken in the Freycinet area**



**Source F – Electricity users (2000–2010)**



Source G – Images in the developing world



Source H – Challenges in a city of the developing world

