



**GEOGRAPHY
HIGHER LEVEL
PAPER 3**

Thursday 3 May 2001 (morning)

2 hours

INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Answer Section A
and
Either: two questions from Section B;
Or: one question from Section B and one question from Section C.

SECTION A - TOPOGRAPHICAL MAPPING

Answer all parts of the question in this section.

1. Refer to the topographic map extract of Bega, a town with a population of 4700 people in south-eastern Australia. It is the largest town for tens of kilometres in any direction.

Bega is located at a latitude of 36°40'S. The town is situated in a valley, 15 kilometres inland from the Tasman Sea to the east, and separated from the sea by a low range of coastal hills.

The valley was formed by the Bega River and its tributary, the Brogo River. The area is used for a range of primary industries including dairying, beef farming and vegetable cultivation, with timber cutting on the surrounding hills.

The climate of the area is humid, with an average annual rainfall of about 800 mm, distributed fairly evenly through the year.

The scale of the map is 1:25000 and the contour interval is 10 metres. The map is the latest available, but is based on 1971 surveys. The aerial photograph of the town was taken in August 1996.

- (a) State the approximate scale of the aerial photograph, and briefly explain how you obtained this figure. [2 marks]
- (b) Using the map and aerial photograph, describe the purpose and size of the factory at grid reference 529380, and suggest reasons for its location. [4 marks]
- (c) Describe the principal changes which have occurred in the area shown in the aerial photograph since the map was printed. [4 marks]
- (d) Quoting evidence from the map and aerial photograph, discuss the features of the physical environment which
- (i) make this a good situation for a town, and
 - (ii) hinder the town's development. [6 marks]
- (e) Compare the information shown on the map with the information shown in the aerial photograph. Which is more useful to the geographer? [4 marks]



Levee or dyke; Quarry or gravel pit
Building; School; Post Office; Police Station; Church
Windpump; Mine
Horizontal control point (with height), Landmark; Other
Bench mark (with height); Spot height approximate
Mud; Sand
Landmark boulder; Rocky pinnacle; Cave
Contours; Approximate contours
Depression contours; Auxiliary contour
Landmark area (landslide; rocky ground)
Cliffs, inland; Coastal
Eroded bank (with relative height)

Medium Timber
Scattered timber; Forest
Orchard or Plantation; Vineyard
Mangrove; Scrub
Marsh or Swamp; Land subject to inundation
Dam or tank; Well or bore; Spring; Lake perennial
River or stream perennial; Intermittent
Dam or weir; Rapids in large river
Stream or watercourse indefinite
Falls; Rapids in small river; Braided river
Lake intermittent; Lake dry
Irrigation canal; Drain

Built-up area with main roads; National route number
Road sealed surface two or more lanes
Road sealed surface one lane; Drawbridge; Causeway
Road loose surface two or more lanes; Bridge; Mile post
Road loose surface one lane; Embankment; Cutting
Track vehicular, unimproved earth; Gate; Cattle Grid
Track, foot or bridle
Railway multiple track; Station; Tunnel
Railway single track; Turntable; Siding or loop
Light railway or tramway
Power transmission line
Telephone line; Underground

Breakwater
Anchorage, Pier or wharf
Wreck exposed; Marine railway
Reef; Rock shelf
Rock bare or awash; Lighthouse; Rocky shoreline
Parish (Cadastral subdivision of the County)
County boundary
Parish boundary
Shire boundary
State Forest; National Forest boundary
State Park and National Park boundary
Closed road; Portion and Number

COCKWHY

51

41

52

53

54

55

56

57

58

40

41

40

39

38

37

36

35

34

33

32

31

30

29

28

27

26

25

24

23

22

21

20

19

18

17

16

15

14

13

12

11

10

9

8

7

6

5

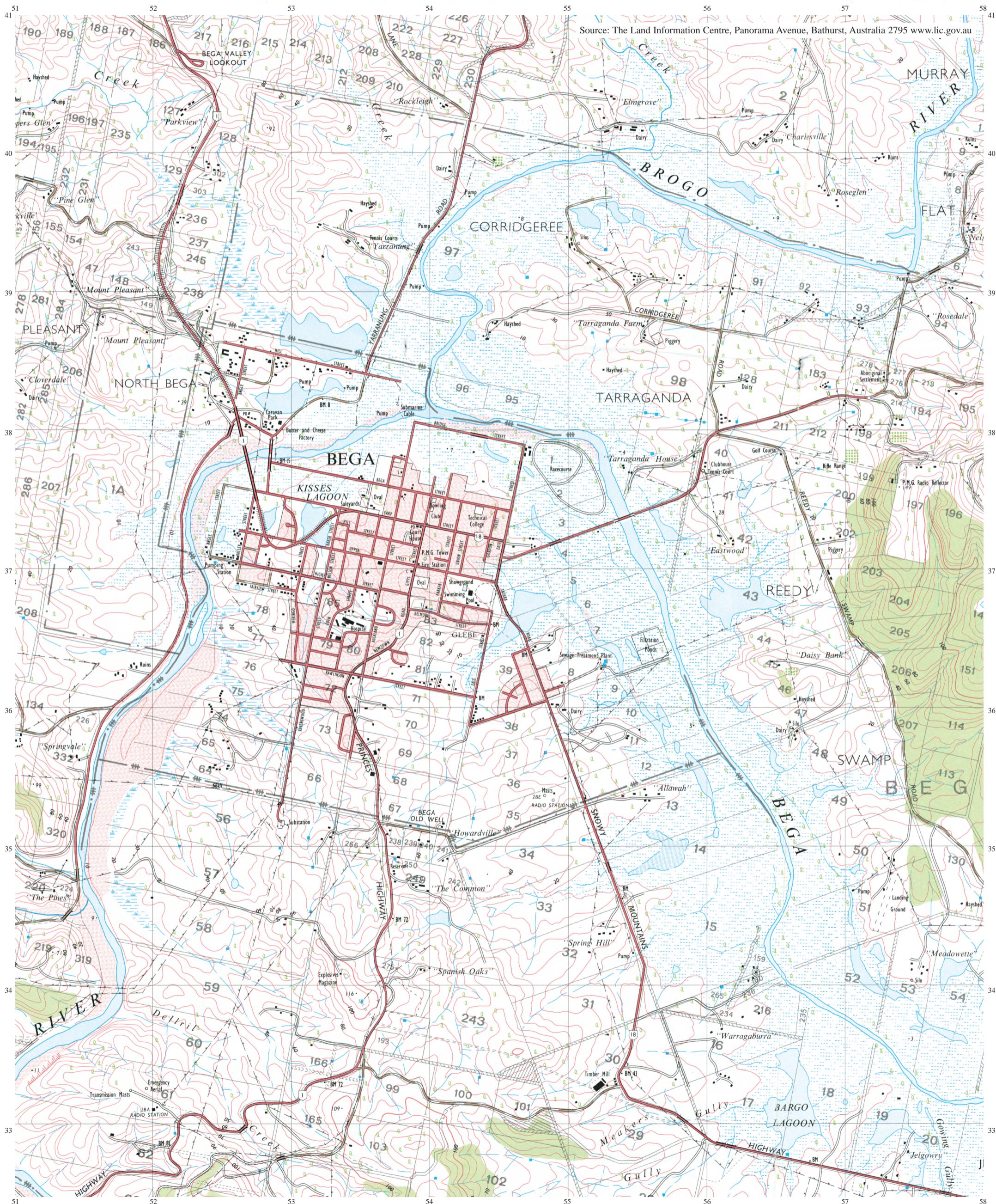
4

3

2

1

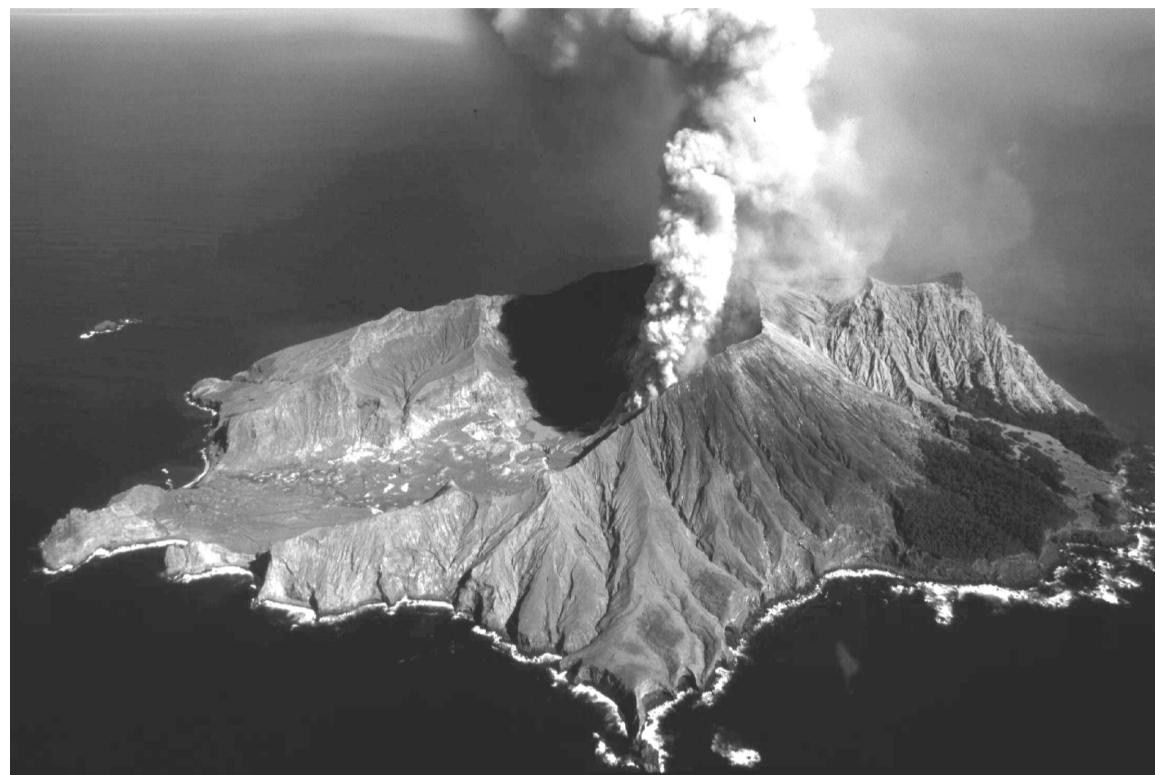
0



Answer either **two** questions from Section B or **one** question from Section B and **one** question from Section C.

SECTION B - THE NATURAL ENVIRONMENT

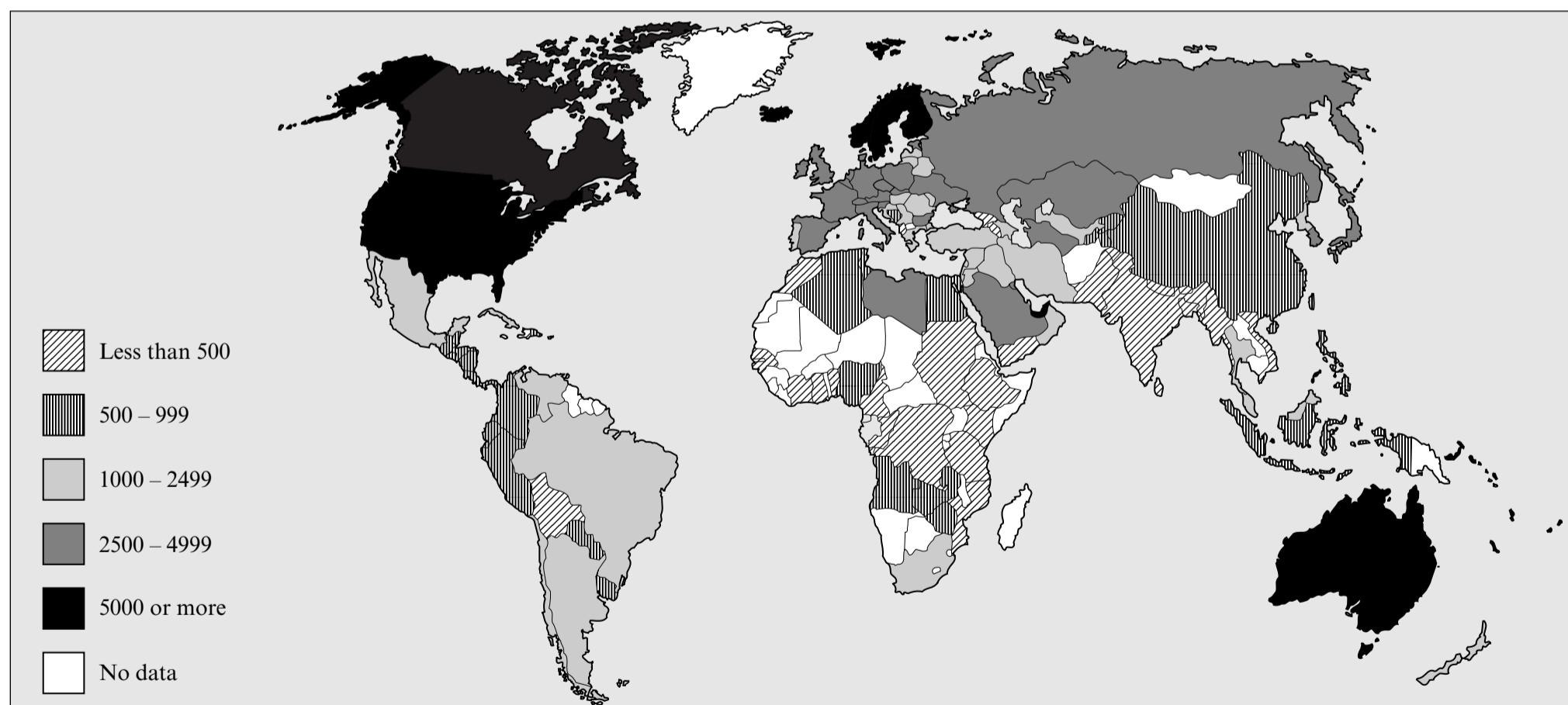
2. Discuss the impact of human activity on urban climates. [20 marks]
3. Identify the landform in the photograph below, and describe the formation of this landform. [20 marks]



4. 'The more people alter the functioning of the water cycle, the more they seem to abuse it'. Discuss this statement with reference to one area you have studied. [20 marks]
5. With reference to at least one specific example, explain how an ecosystem can become destabilised. [20 marks]

SECTION C - RESOURCES

The map below shows the annual consumption of commercial energy per capita, expressed in kilograms of oil equivalent.



Source: World Bank Atlas 1999, p.39

6. Describe and account for the pattern shown in the map. [20 marks]
7. Name two countries shown on the map above which are in different categories in the key, and compare the problems facing management of some important resources in those two countries. [20 marks]