

Map Skills

for Common Entrance Geography
and Key Stage 3

Teacher's Material

John Widdowson

Contents

ANSWERS TO ACTIVITIES

page 2

TEMPLATES FOR ACTIVITIES

page 8

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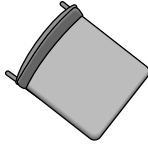
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Section 1

1.1 What's special about maps?

Page 3

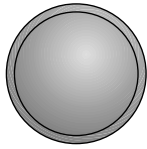
1



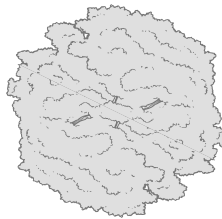
a chair



a table



a post box



a tree

- 2 a) Seaford b) Cuckmere River
c) green d) red
- 3 a) real colours, fields
b) words, symbols, lines (grid lines and contours)
- 4 a) White Horse b) Photo A is an aerial photo
- 5 A map would be more useful. Places are named on the map, so it would be easier to find them.

1.2 Symbols – the key to using a map

Page 4

- 1 a) church with a spire, mixed woodland, camp site/caravan site
b) Your symbols should match those used on the OS map.
c) motorway
- 2 a) urban features – buildings, main road, secondary road, other roads, churches, school, library, railway station, rural features – river, pond, woodland, secondary road, footpath, bridleway, parking, picnic site, viewpoint
b) The urban area on the map has lots of human features like buildings and roads, but the rural area has more natural features like woodland. The rural area has a picnic site and viewpoint.
- 3 Choose your own features.
- 4 Make up your own island.

1.3 A sense of direction

Page 7

- 1 a) N b) SW c) E d) SW e) NE
- 2 a) A to B, NNW B to C, NW C to D, NE
D to E, NNW E to F, ENE F to G, NW
G to H, N H to I, NW I to J, NNE
J to K, W
b) K to J, E J to I, SSW I to H, SE H to G, S
G to F, SE F to E, WSW E to D, SSE
D to C, SW C to B, SE B to A, SSE
- 3 a) south
b) The Cuckmere River flows south towards Cuckmere Haven at the top of the photo.

1.4 Finding places on a map

Page 9

- 1 Seaford Bay 4699
Seven Sisters Country Park 5298
Cuckmere Haven 5197
Beacon Hill 4701
- 2 4602 Denton Hill Farm 5202 Church Farm
5099 Dymock Farm 4901 Rathfinny Farm
- 3 Exceat Bridge 514994 White Horse 511009
Seaford Leisure Centre 493995
Rathfinny Farm 497018
- 4 Seaford Museum 485985
Litlington Church 523019
Norton Top 486034
Alfriston Post Office 520032
- 5 *Cliff did not feel very well. He had a high temperature and his brow was sweating. After a while, his face turned green and he found a black patch on his bottom. It was not very pleasant. Soon it was all over. They wheeled him in a barrow to the cemetery.*

1.5 Distance – the long and short of it

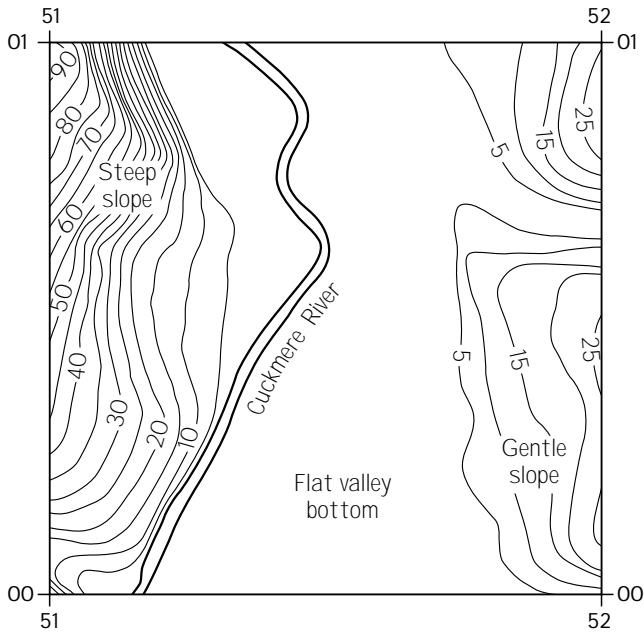
Page 11

- 1 3.4 km
- 2 3.9 km
- 3 a) Rachel lives in Litlington.
b) She gets off the bus at Frog Firl (517019) and walks 0.6 km to get home.

1.6 Relief – the third dimension

Page 12

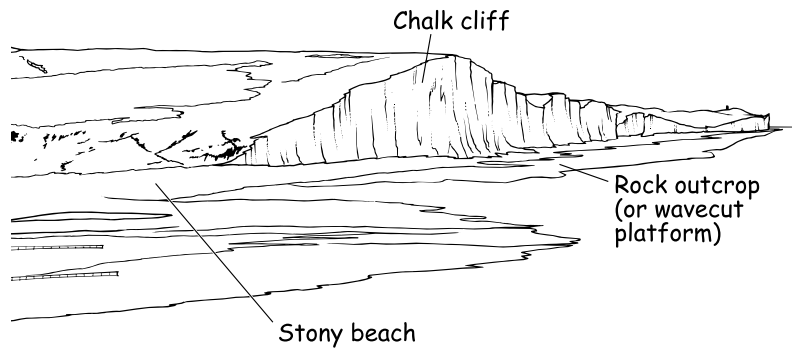
- 1 a) 498019, 73 m 525977, 97 m 467035, 82 m
517006, 9 m
b) 508037, 141 m
- 2 a) downhill b) uphill c) downhill d) flat



1.7 A route with a view

Page 14

- 1 a) Chalk cliff is easy to recognise. b) It is harder on the map because it is just a line.
- 2 Your completed table will be like the one below.
- 3 Your account should include the information in the table.
- 4 a) 512974 b) Facing east

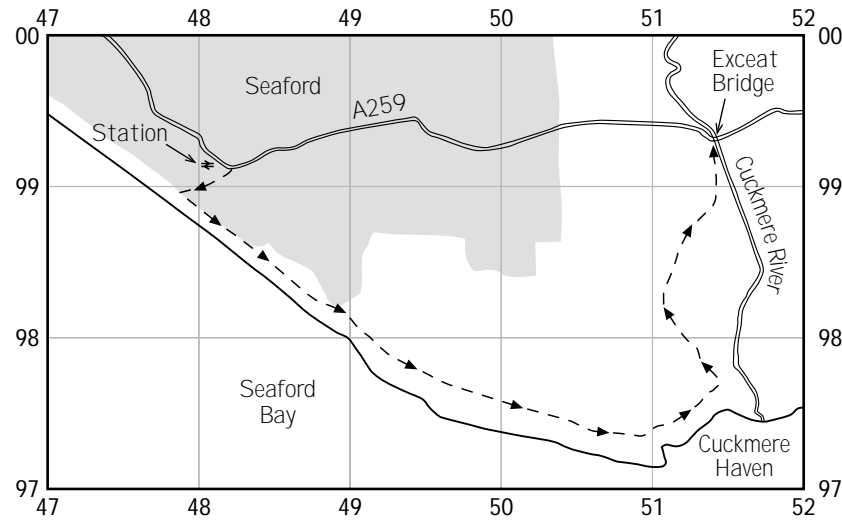


From	Grid reference	To	Grid reference	Distance	Direction	Slope	Interesting features
Seaford Station	481992	Seafont	478989	0.4 km	SW	Flat	Stony beach
Seafont	478989	Groynes	488982	1.2 km	SE	Flat	Museum
Groynes	488982	Seaford Head	494977	0.7 km	SE	Up	Tumulus Cliff Wavecut platform
Seaford Head	494977	Cliff Bottom	510973	1.6 km	ESE	Down	Cliff Stony beach Wavecut platform
Cliff Bottom	510973	Cuckmere Haven	514977	0.6 km	NE	Up/ down	Cliff Wavecut platform
Cuckmere Haven	514977	Exceat Bridge	514994	1.9 km	N	Flat	Cuckmere valley/flood plain National Trust

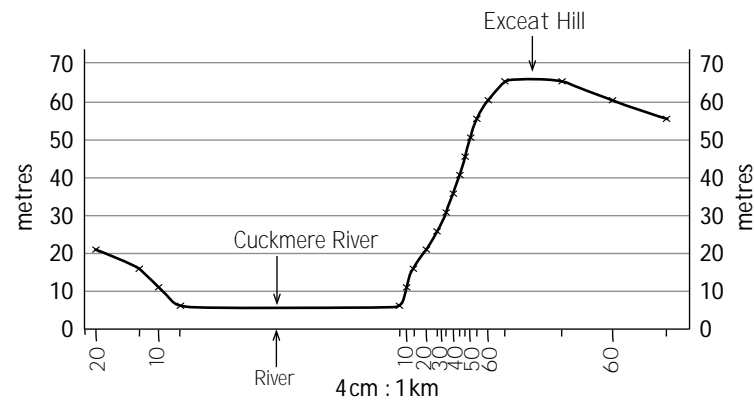
1.8 Sketch maps and cross-sections

Page 17

1



2



1.9 Decision time!

Page 19

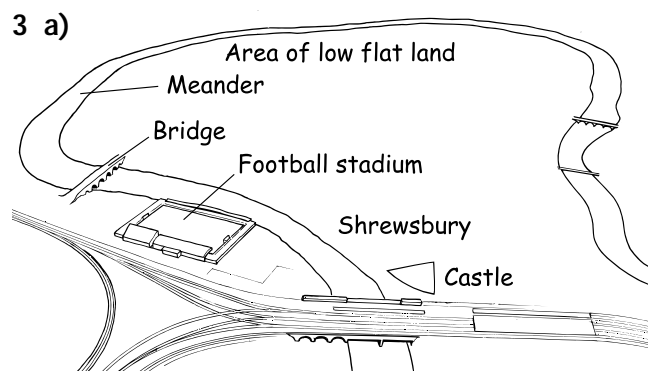
- 1 a) 478992, B 494986, F 480007, C 467002, A 499004, D 494994, E
- c) There is no right answer but each decision should be justified by reasons.

Section 2

2.1 Geomorphological processes

Page 21

- 1 a) Castle. The river provided natural protection.
- b) Nine bridges; 491128, 488127, 484126, 488122, 495122, 496124, 496128, 498130, 506142
- c) People could cross the river easily.
- 2 a) 4912
- b) south-west



4

- b) The football stadium is at risk from flooding.
- c) It was important that the castle did not flood. It is less important if a football pitch floods.

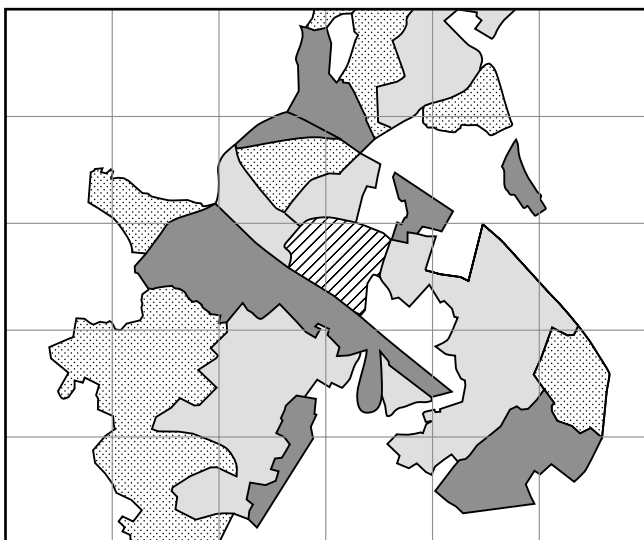
Page 22





- 1 a) 491125, market 484134, agricultural show ground 487130, church with tower 509144, golf driving range 484122, school 491131, playing fields
- b) Agricultural show ground, golf driving range and playing fields are at risk from flooding.
- c) The places at risk from flooding are open spaces, while the places not at risk are buildings.
- d) Yes, it is more important that buildings don't flood than open spaces.

2.2 Settlements

Page 24

- 1 CBD, 0042/0142 Older housing, 0041 Modern housing, 9941 Industry, 9942/0042
- 2 Tourist information/museum, 008427 church, 011427 police station, 010426 library, 010425 station, 013422 civic centre, 014425 leisure centre, 014424
- 3 a) 9942, 0042, 0041, 0040, 0143, 0243, 0340
- b) Most of the industry is found along the main transport routes that radiate from the centre of Ashford.
- c) Yes, industry is found in sectors of the town as it is in the model.



Key  CBD  Industry  Older housing  Modern housing

Page 26

- 1
- 2 a) Approximately 8 km²
- b) Approximately 15 km²

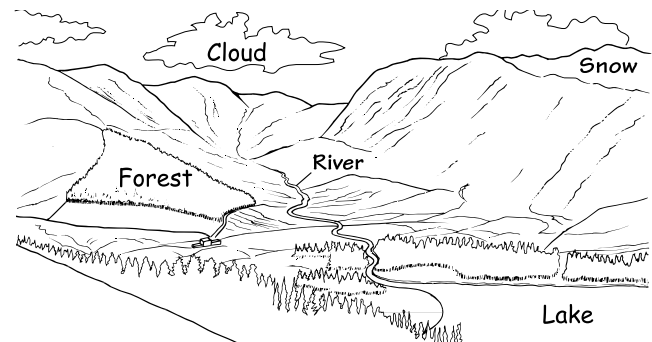
2.3 Weather and climate

Page 29

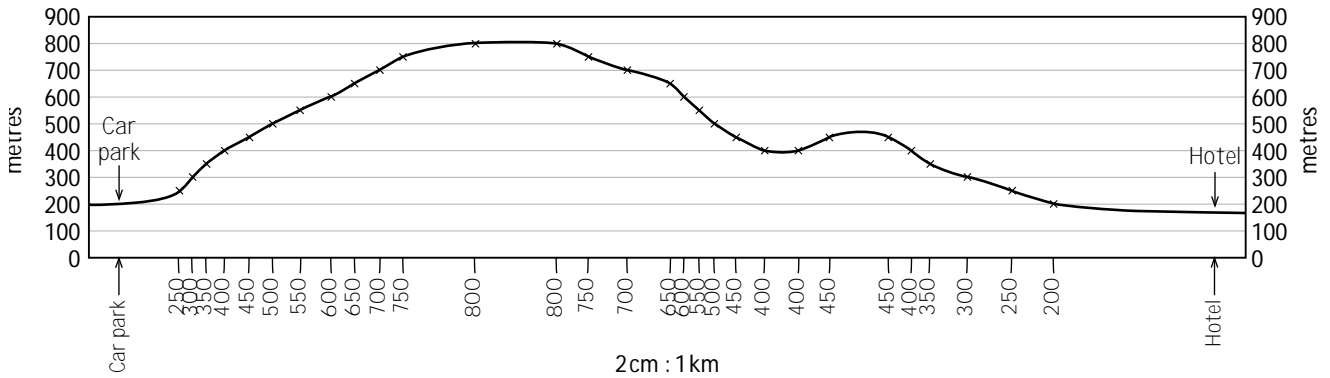
- 1 a) 341151 b) 949 m
- 2

Grid reference	Feature	Connection with the water cycle
347153	Red Tarn	Water is stored here
365146	Grisedale Beck	Water runs off the surface of the land
400131	Low Wood	Water is transpired into the air
312163	Thirlmere	Water is stored here
338151	Brownrigg Well	A spring where water comes out of the ground

- 3 The rock is impermeable. Impermeable rock does not allow water to drain through, so it stays on the surface, forming rivers and lakes.
- 4 a) and b)



- c) A lake – water is stored here and some evaporates
- A cloud – water vapour condenses into droplets
- A forest – water is transpired into the air
- A stream – water runs off the surface



2.4 Economic activities

Page 33

- 1 a) tube works, 672962 tin plate works, 671969 smelter works, 682971 tin plate works, 675980
b) colliery, 696003
- 2 marina, 657925 leisure centre, 657926 museums, 661927 Plantasia, 659934 sports centre, 664957 hotel, 678968 Swansea Vale Railway, 675960 cycle track, 684991 to 660924
- 3 a) The docks are used as a marina.
b) In 1952 industry used railways. In 2003 industrial estates use roads.
c) A motorway north of Swansea. It would help people and goods move to and from Swansea.

Page 34

- 1 See table below
- 2 Probably not, as the area is polluted and marshy and it would cost too much to improve the land.

2.5 Tectonic processes

Page 36

- 1 a) 3323 m
b) About 618 m
c) Because lava moves downhill with gravity.
- 2 a) 12 km
b) 100 hours (just over four days)
c) It is likely to harden into rock
- 3 a) 1634–38, 1702, 1759, 1766, 1787, 1811, 1819, 1838, 1852, 1892, 1928, 1950–51, 1971, 1978–79, 1983, 1984, 1985, 1986–89, 1989–90, 1991–93
b) 1991 to 93, about 1 km
c) It would have destroyed vegetation, roads and buildings. People would have been evacuated.
- 4 Your own opinion.

Advantages in 19th century	Evidence	Disadvantages in 20th century	Evidence
Coal can be mined from the valley	Coal mine at 696003	Coal is getting expensive to mine so mines close down	Only one mine on the map
Factories built on the flat valley floor	Metal works e.g. 672962	Air pollution, waste heaps and contaminated soil	Air pollution in photo. Waste heap at 667965
Railways transport heavy goods	Railways on map	Valley is marshy. There is no space for large factories	Marsh in 6796
River supplies water to factories and an alternative means of transport	River Tawe on map	River is polluted by wastewater from factories	No evidence
Swansea has a large population with a skilled workforce	Swansea covers a large area on map	Docks too small for new larger ships	Dock in 6592 is small and entrance narrow
Docks at the river mouth import raw materials and export products	Docks in 6792		

Page 38

- 1 Around the centre of the volcano is bare rock. Further from the centre there is natural vegetation and, beyond that, farming. Settlements are found where there is farming.
- 2
 - a) The main crater is near the centre of the volcano. You can tell it is a crater because new lava is coming from it.
 - b) Bare rock is formed from old lava flows that came from the crater.
 - c) Natural vegetation grows on bare rock after many years. Close to the volcano it would be destroyed by new lava.
 - d) Settlements are found where there is farming. It is fairly safe to live 12 km from the centre of the volcano.

2.6 Environmental issues

Page 40

- 1 Any examples that come from map B.
- 2 Answer should include all the details listed. Award bonus points for a sustainable holiday.

Page 43

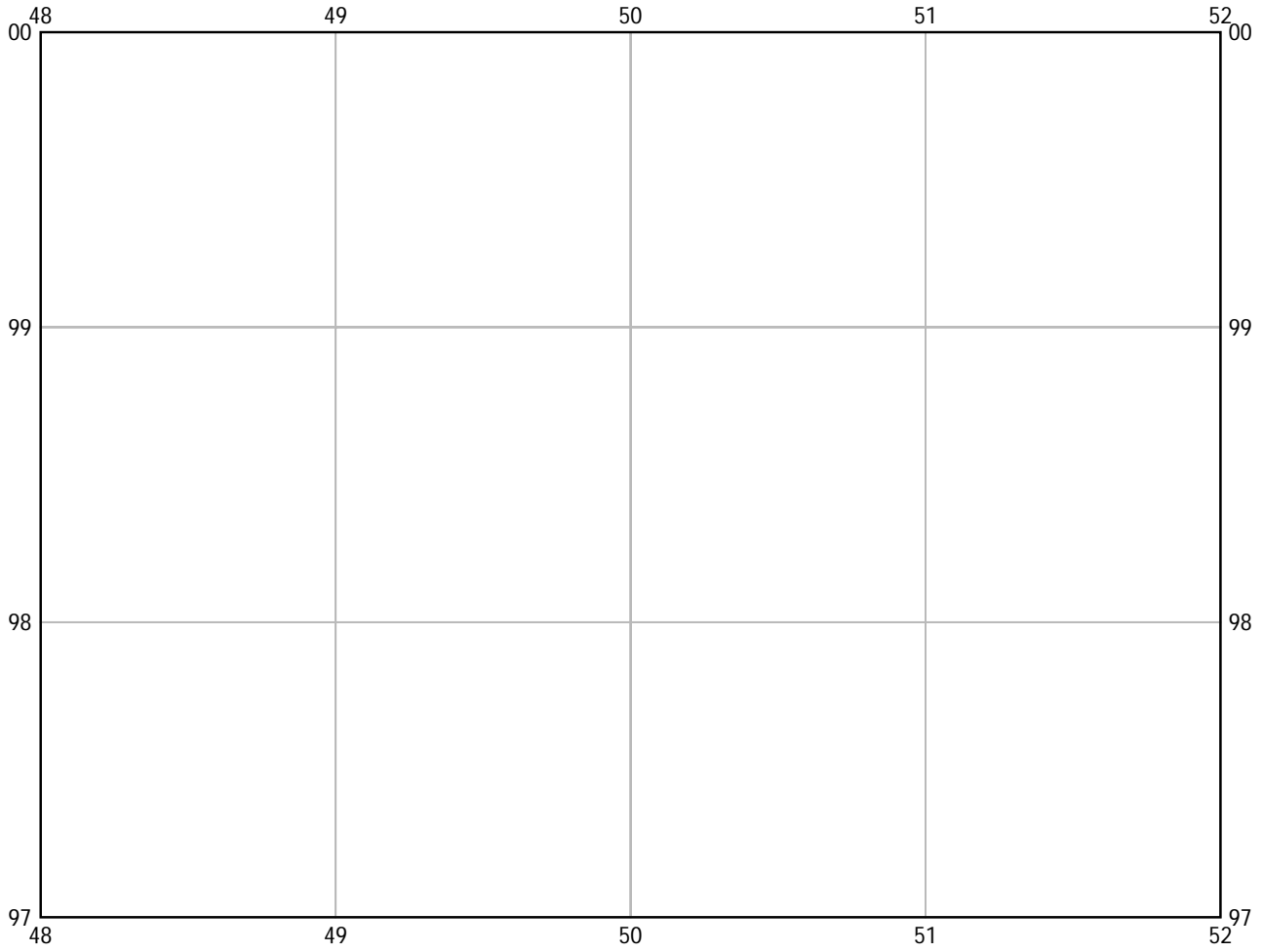
- 1
 - a) This is how you could complete the matrix:
 - b) Any examples from the map

	Farming	Tourism	Local business	Residents	Wildlife	Reservoir	Forestry	Outdoor activities	Quarrying
Farming									
Tourism	X								
Local business	✓	✓							
Residents	✓	X	✓						
Wildlife	✓	X	0	0					
Reservoir	X	✓	0	X	✓				
Forestry	X	✓	✓	✓	✓	X			
Outdoor activities	0	✓	✓	✓	X	✓	0		
Quarrying	X	X	✓	✓	X	0	X	0	

Pages 16–17

Activity 1

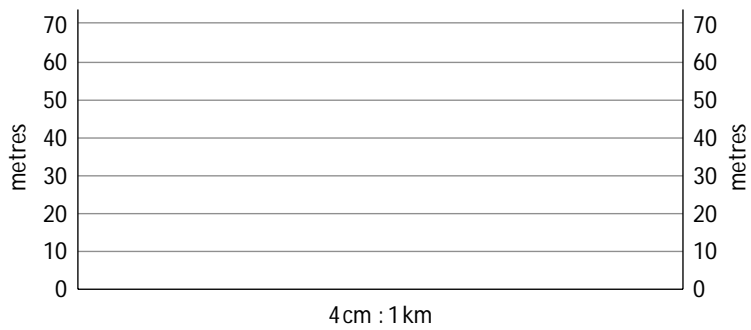
Frame to draw sketch map



Pages 16–17

Activity 2

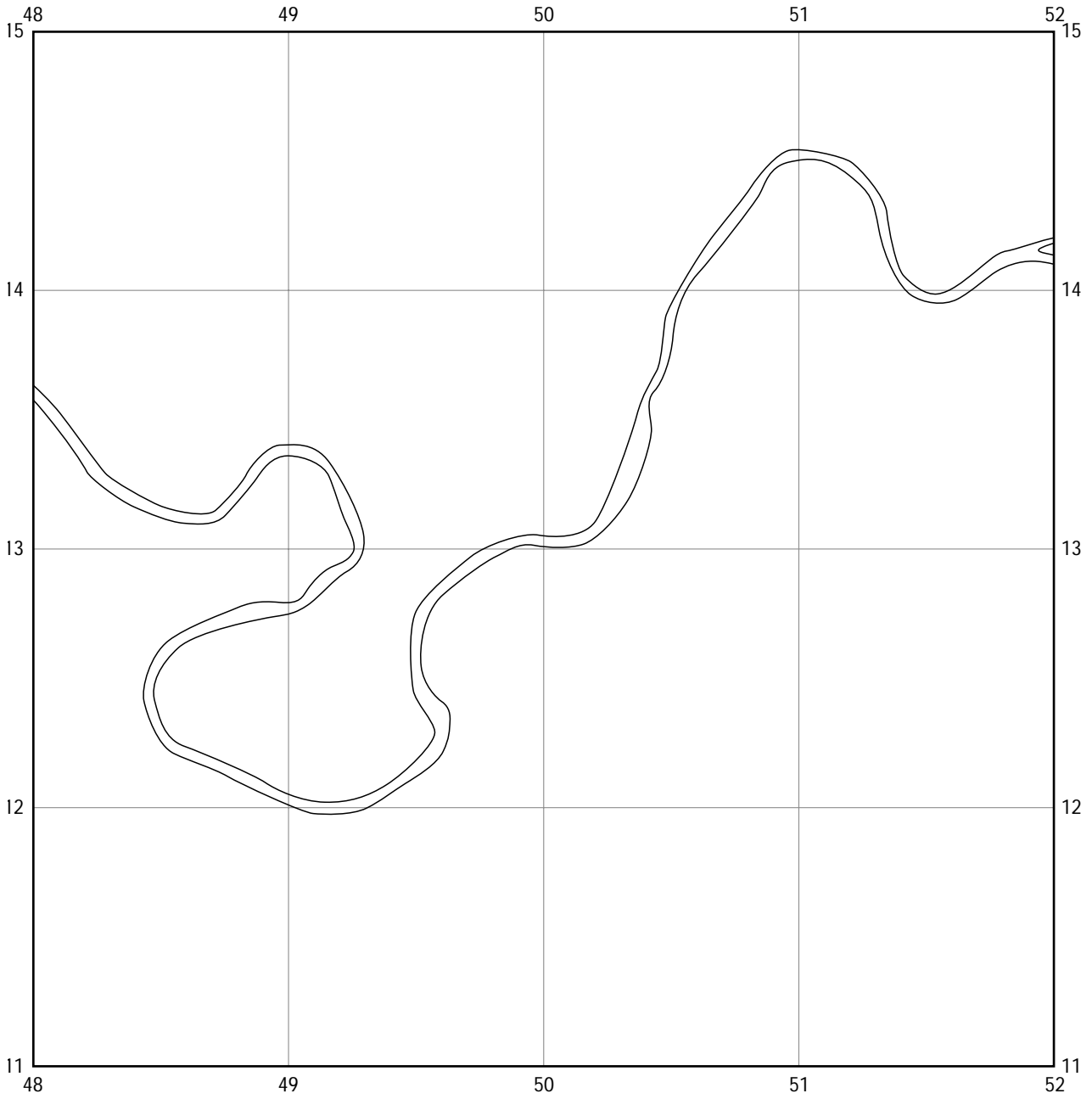
Grid to draw cross-section



Pages 22–23

Assignment

Sketch map of River Severn through Shrewsbury to draw flood defences



Pages 26–27

Activity 1

Outline land use map of Ashford to colour



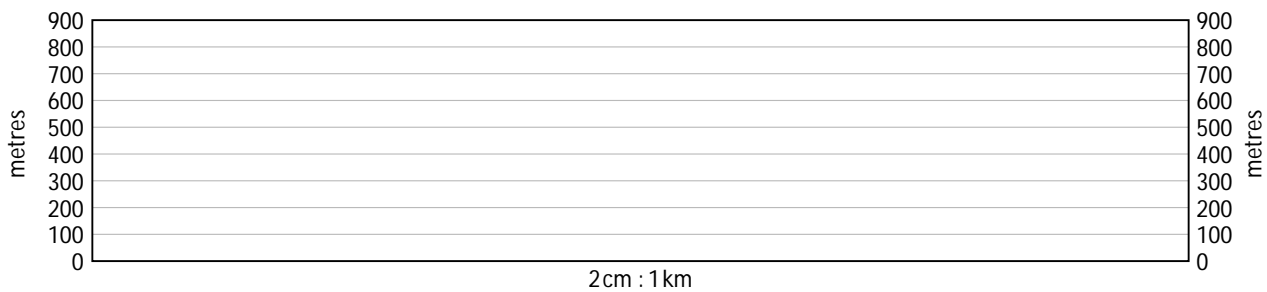
Key

- CBD
- Industry
- Older housing
- Modern housing

Pages 30–31

Activity 1

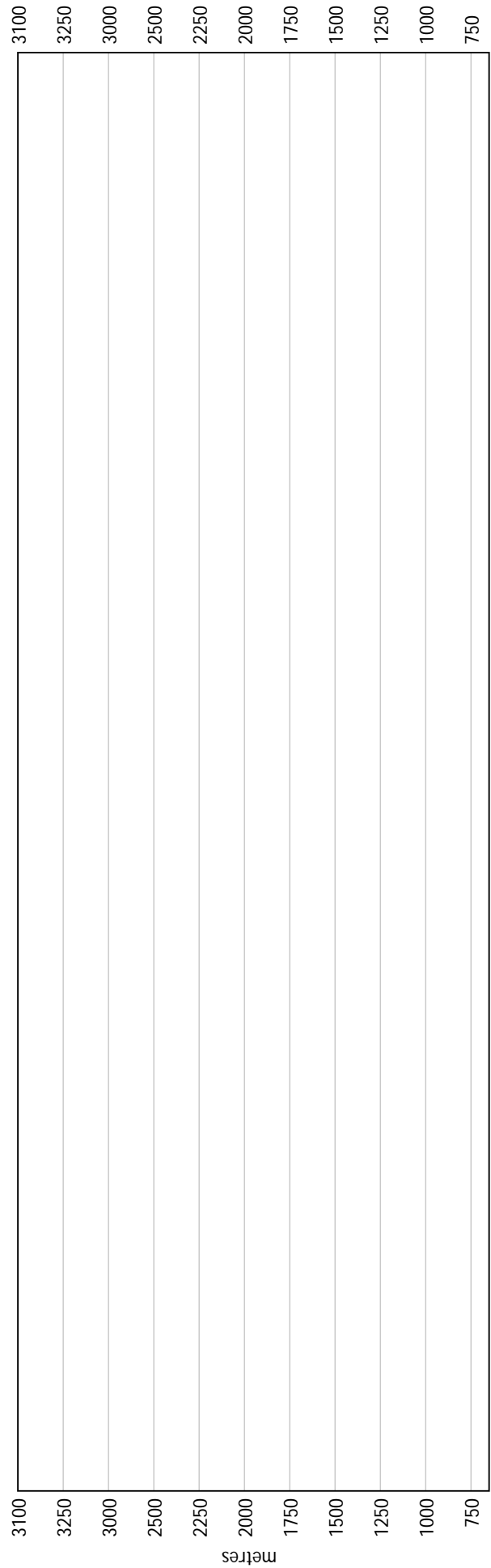
Grid for Helvellyn cross-section



Pages 38–39

Assignment

Grid for Etna cross-section



Pages 42-43

Assignment

Grid and outline map to draw management plan

