

Paper Reference 4GE1/01
Pearson Edexcel
International GCSE (9–1)

Geography

PAPER 1: Physical geography

Friday 17 May 2024 – Afternoon

Time: 1 hour 10 minutes

Resource Booklet

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THE QUESTION PAPER.**

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For some Figures there is a modified colour and modified black and white diagram. You may use whichever version is easier for you to view. Some diagrams are only in modified colour but you are then provided with a description of the diagram.

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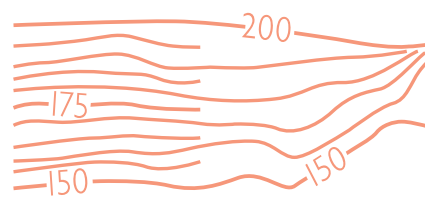
Figure 1a – Key (Colour)

OS map of an upland river landscape

KEY

Contour lines shown at 10 metre intervals

Contours



5 metres 10 metres



Footpath



52

Ground survey height



National Trail



Recreational route



Water



Scree



Boulders



Vertical face/cliff



Outcrop



Bracken, heath or rough grassland

Figure 1a – Diagram (Colour)
OS map of an upland river landscape

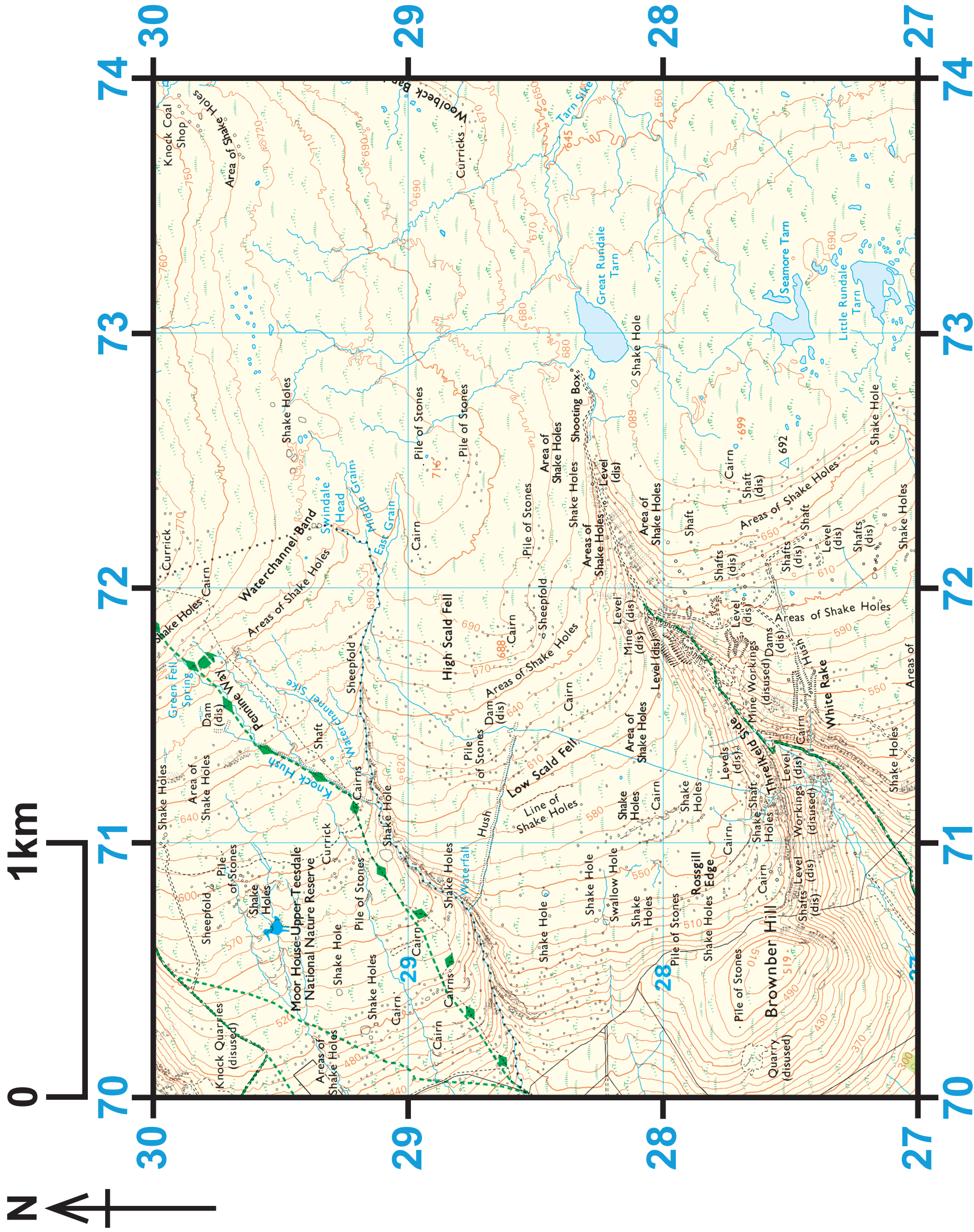


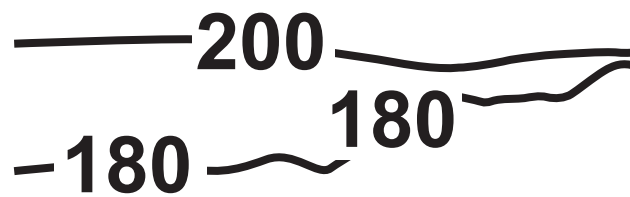
Figure 1a – Key (Black and White)

OS map of an upland river landscape

KEY

Contour lines shown at **20** metre intervals

Contours

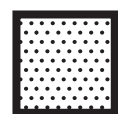


- - - - - Footpath

• 52 Ground survey height

NT National Trail

◆ ◆ ◆ Recreational route

 Water

..... Rivers/streams

 Vertical face/cliff and outcrop

 Scree

 Boulders

 Bracken, heath or rough grassland

Figure 1a – Diagram (Black and White) – Part 1

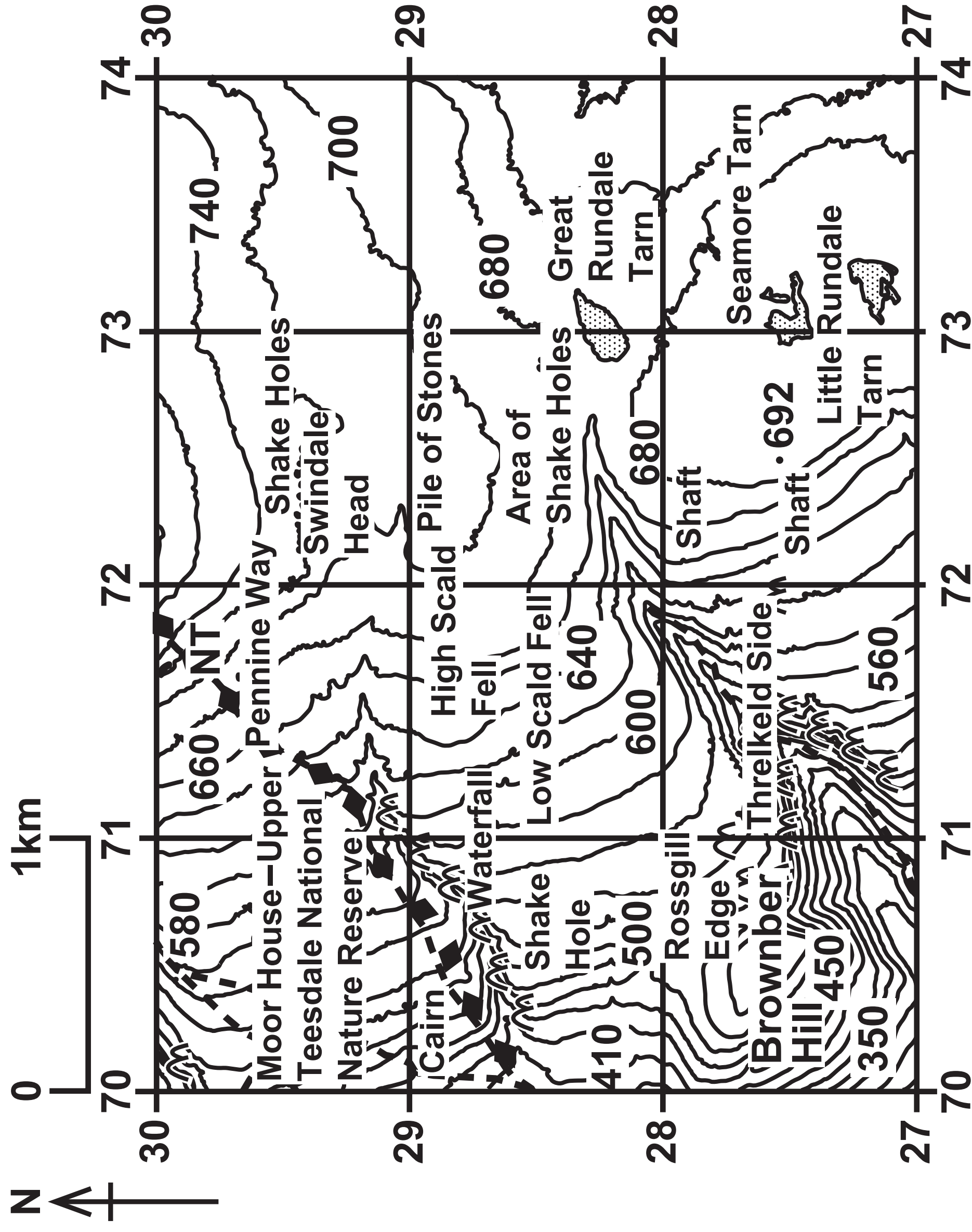


Figure 1a – Diagram (Black and White) – Part 2
OS map of an upland river landscape

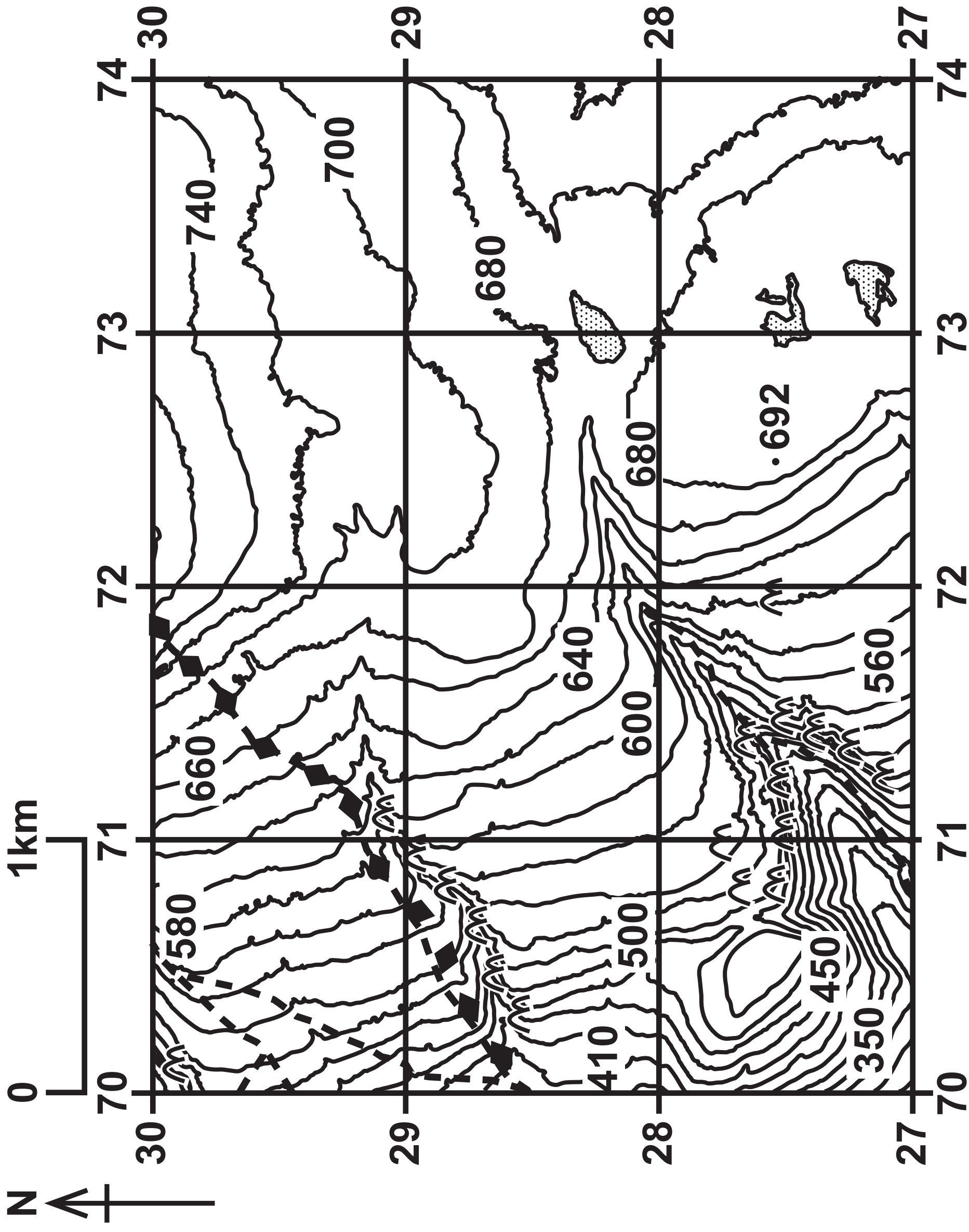


Figure 1a – Diagram (Black and White) – Part 3
OS map of an upland river landscape

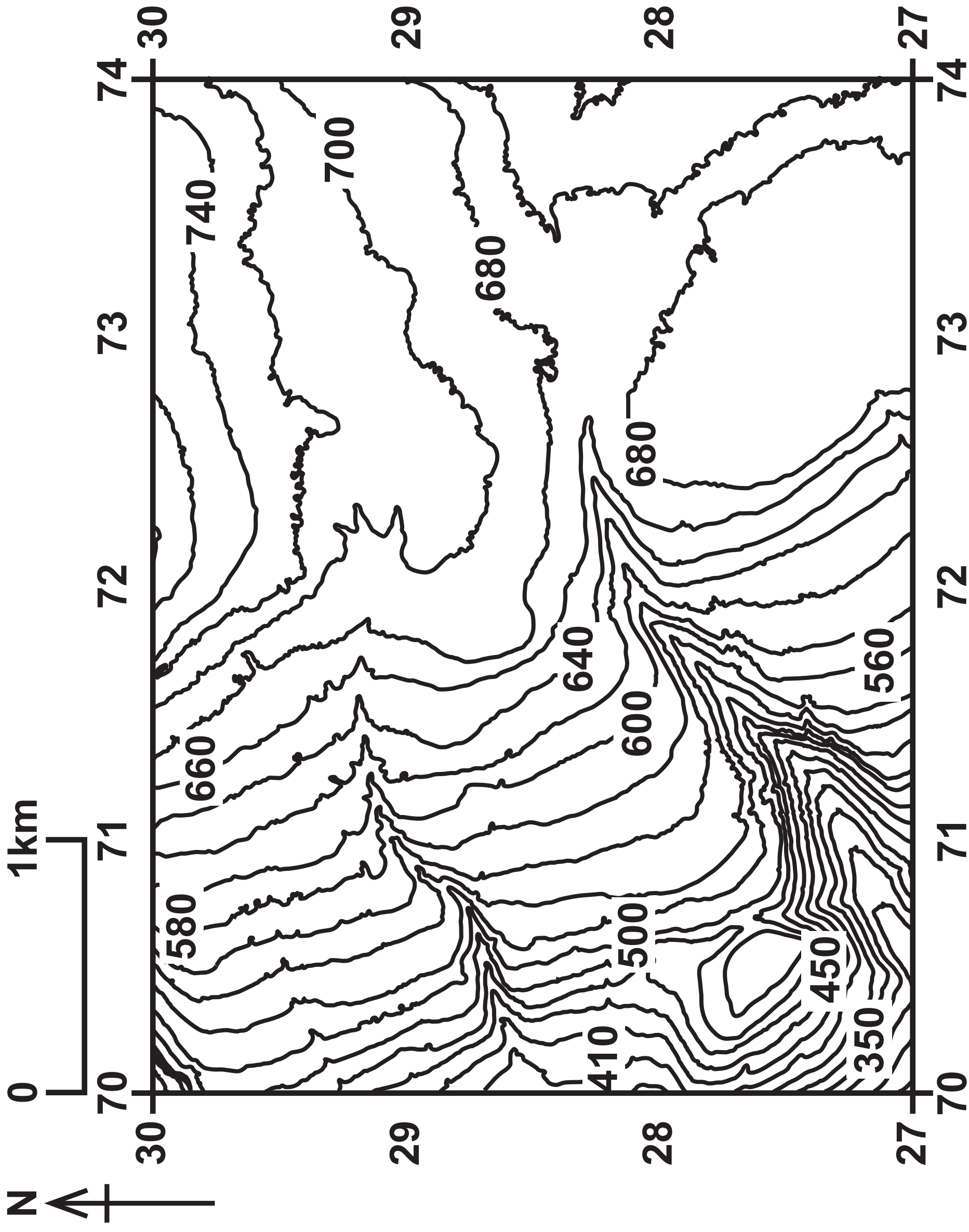


Figure 1a – Diagram (Black and White) – Part 4
OS map of an upland river landscape

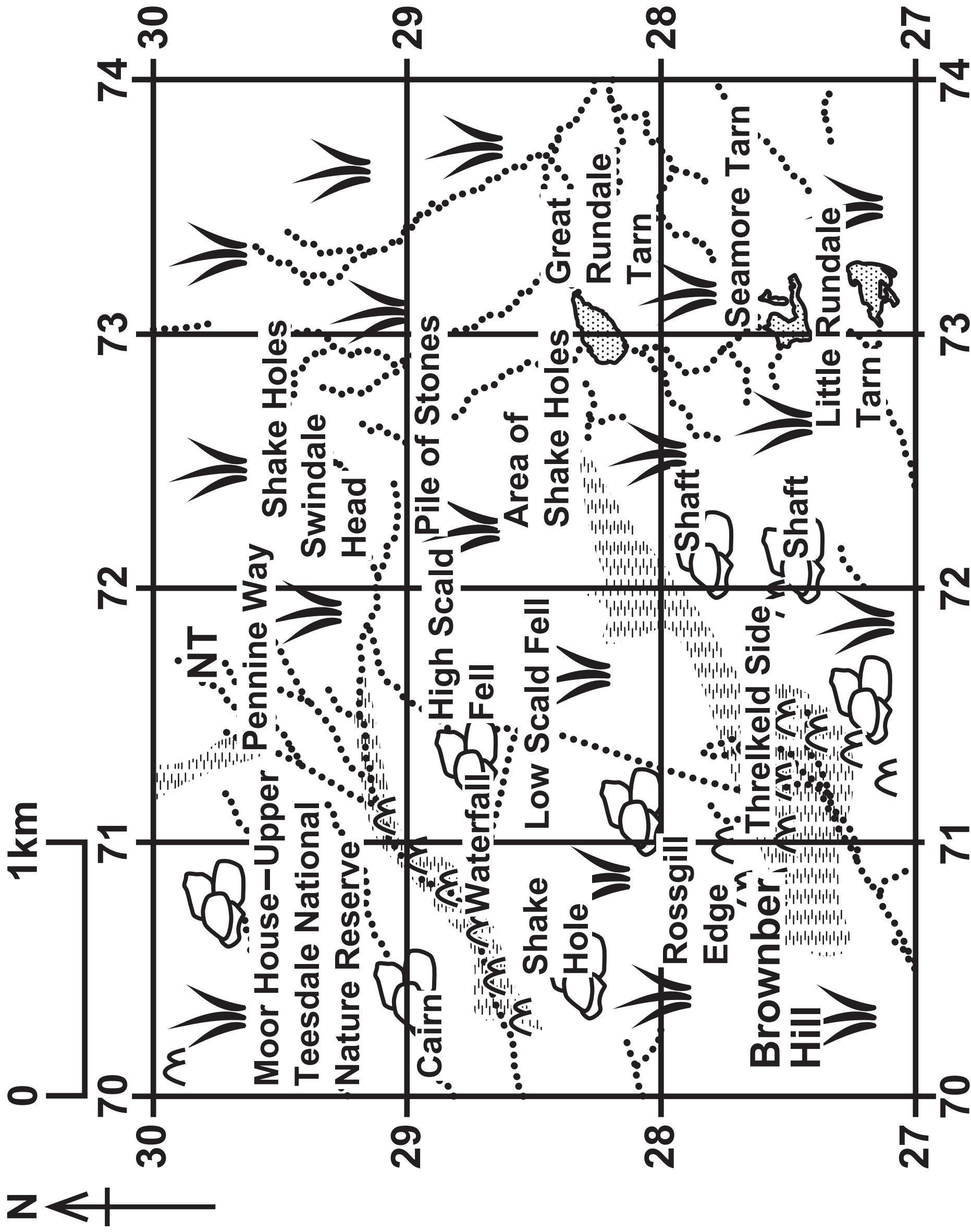


Figure 1b – Key

Storm hydrograph

KEY  Precipitation  Discharge

Figure 1b – Diagram
Storm hydrograph

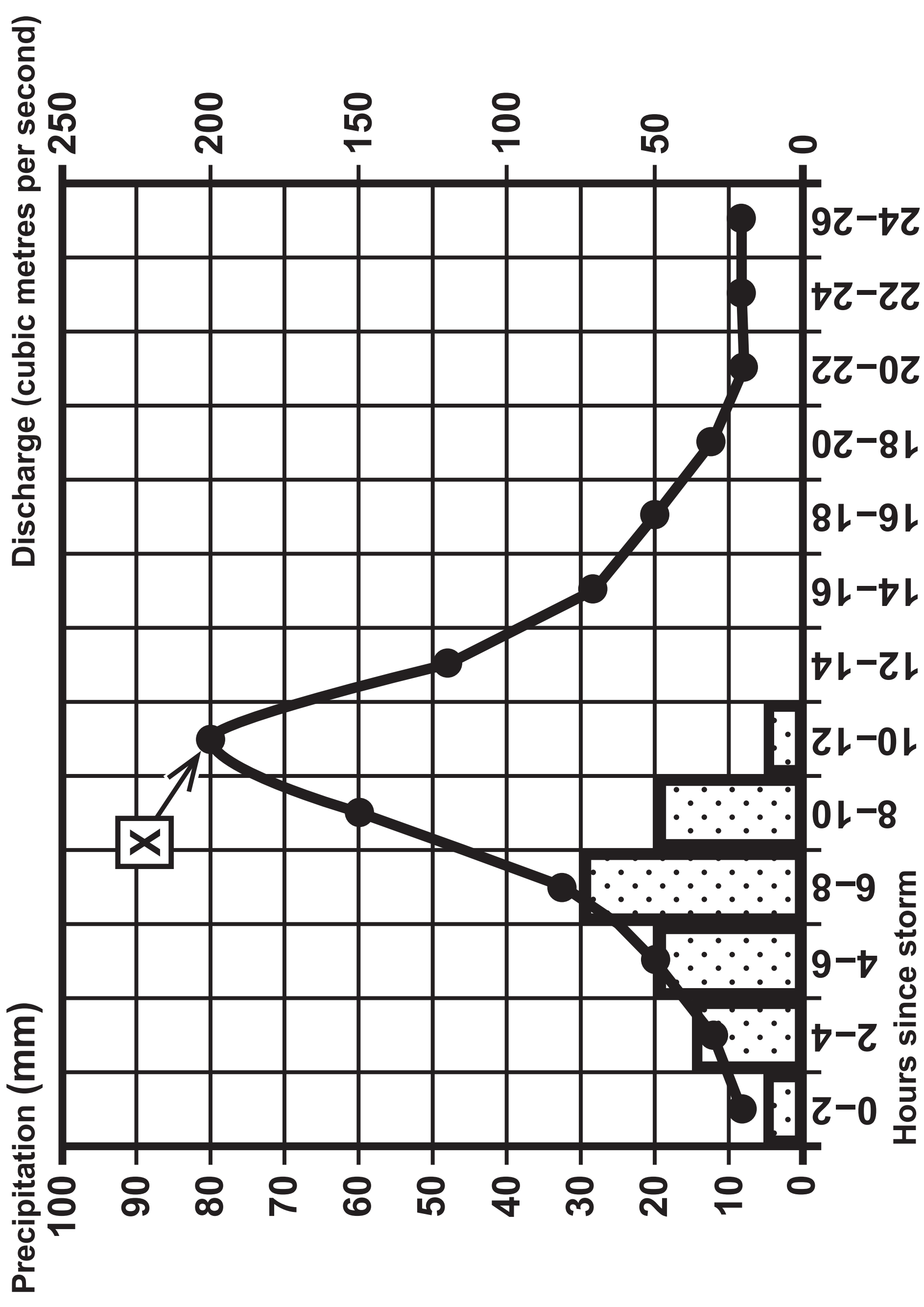


Figure 1c – Information

Areas of water shortage and selected data

Southwestern USA

Population density: **154 people/km²**

Average annual precipitation: **454 mm**

Average hours of sunshine per year: **4,000**

Egypt

Population density: **111 people/km²**

Average annual precipitation: **22 mm**

Average hours of sunshine per year: **4,400**

India

Population density: **464 people/km²**

Average annual precipitation: **1,236 mm**

Average hours of sunshine per year: **3,000**

Figure 1c – Diagram (Colour)
Areas of water shortage and selected data

KEY  Areas of high water shortage

Southwestern USA

Egypt

India

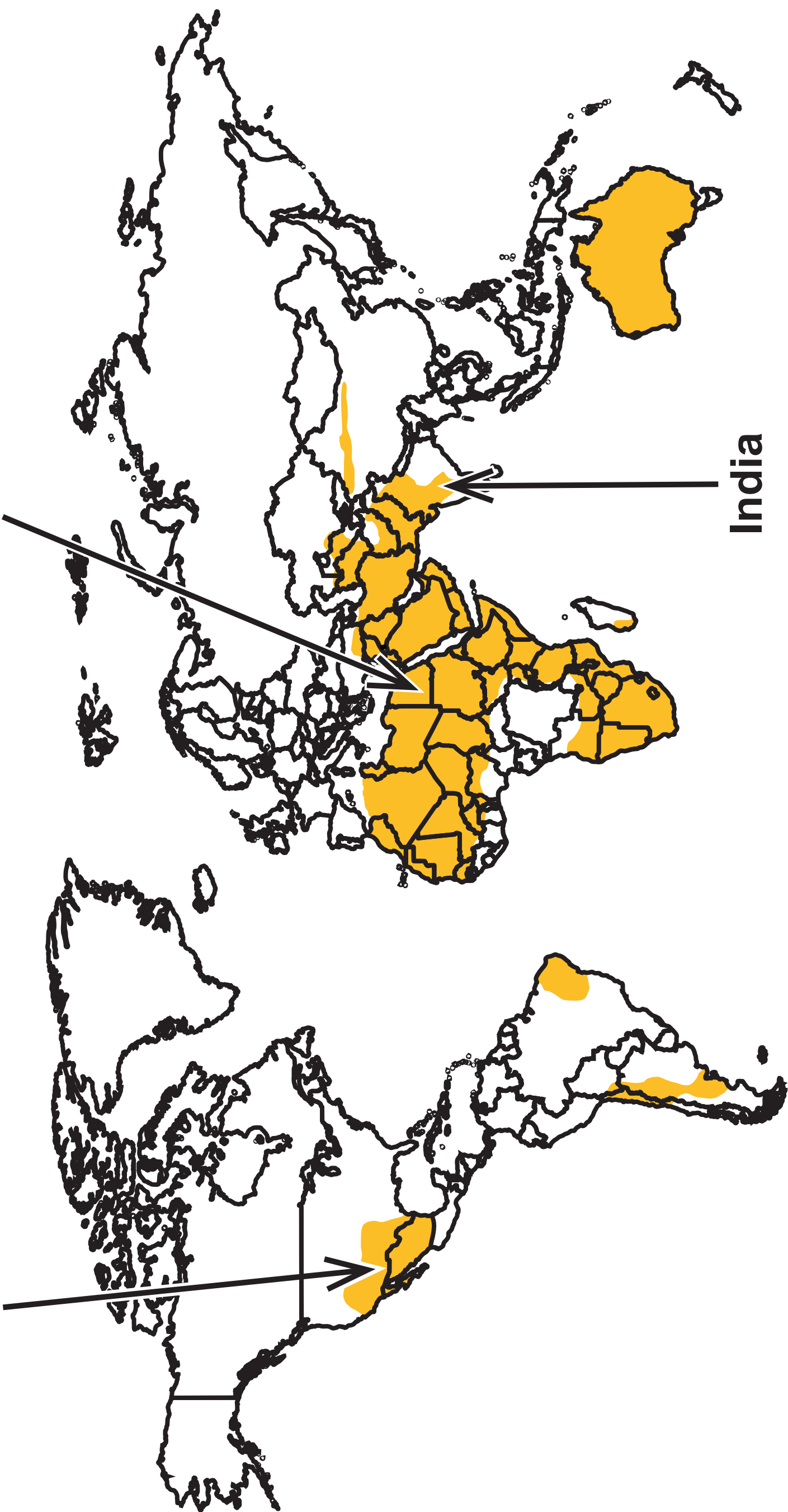


Figure 1c – Diagram (Black and White)
Areas of water shortage and selected data

KEY  Areas of high water shortage

Southwestern USA

Egypt

India

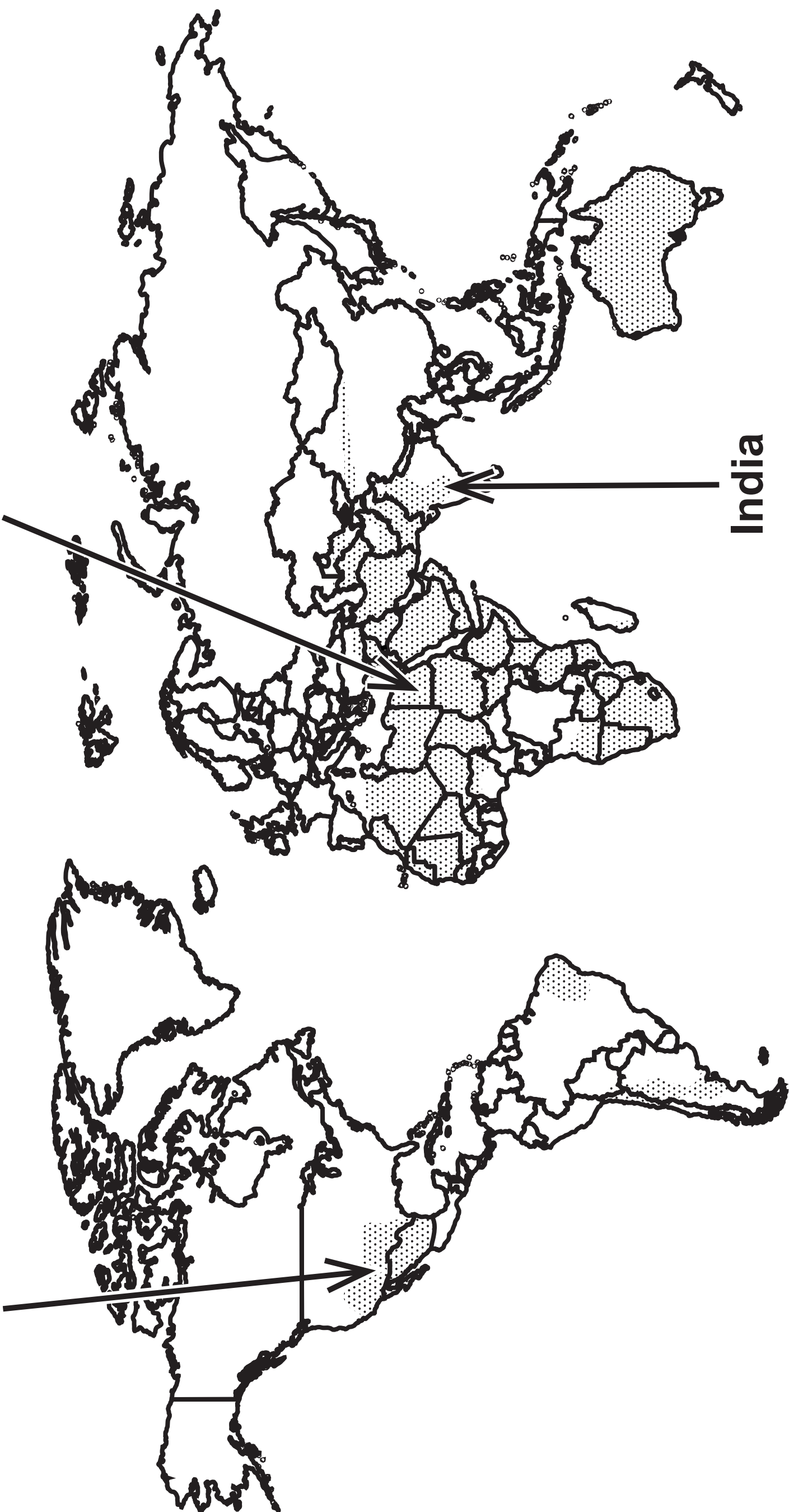





Figure 2a – Key (Colour)


OS map extract showing a coastal landscape


KEY


- 


Camp site or Caravan site
- 

Parking / Park and ride,
all year / seasonal
- 

Recreational route
- 

Water; mud
- Sch School
- + Place of worship
- Current or former place of worship
- 

– with tower
- 

– with spire, minaret or dome
- 

Beacon

Figure 2a – Diagram (Colour)

OS map extract showing a coastal landscape

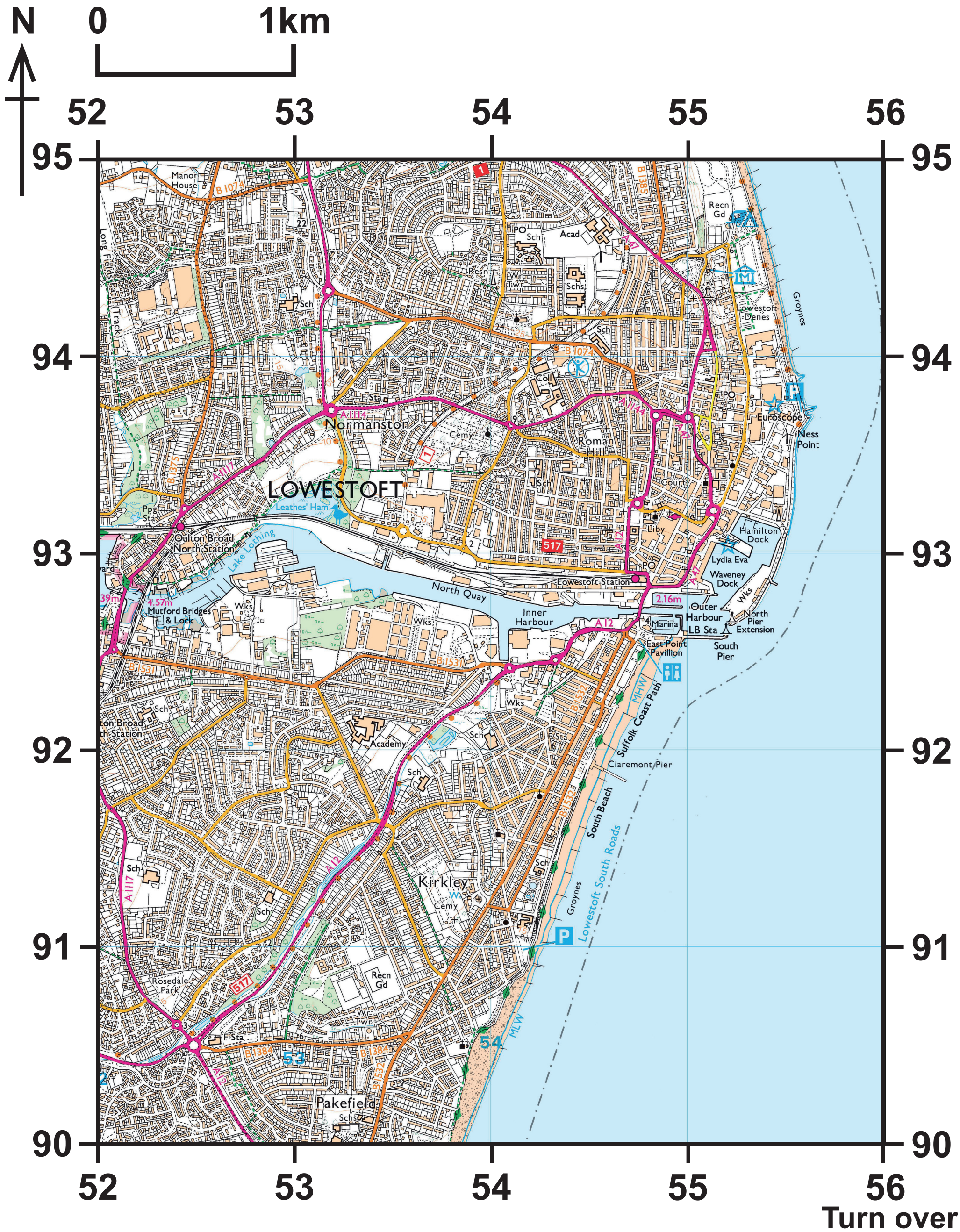


Figure 2a – Key (Black and White)

OS map extract showing a coastal landscape

KEY











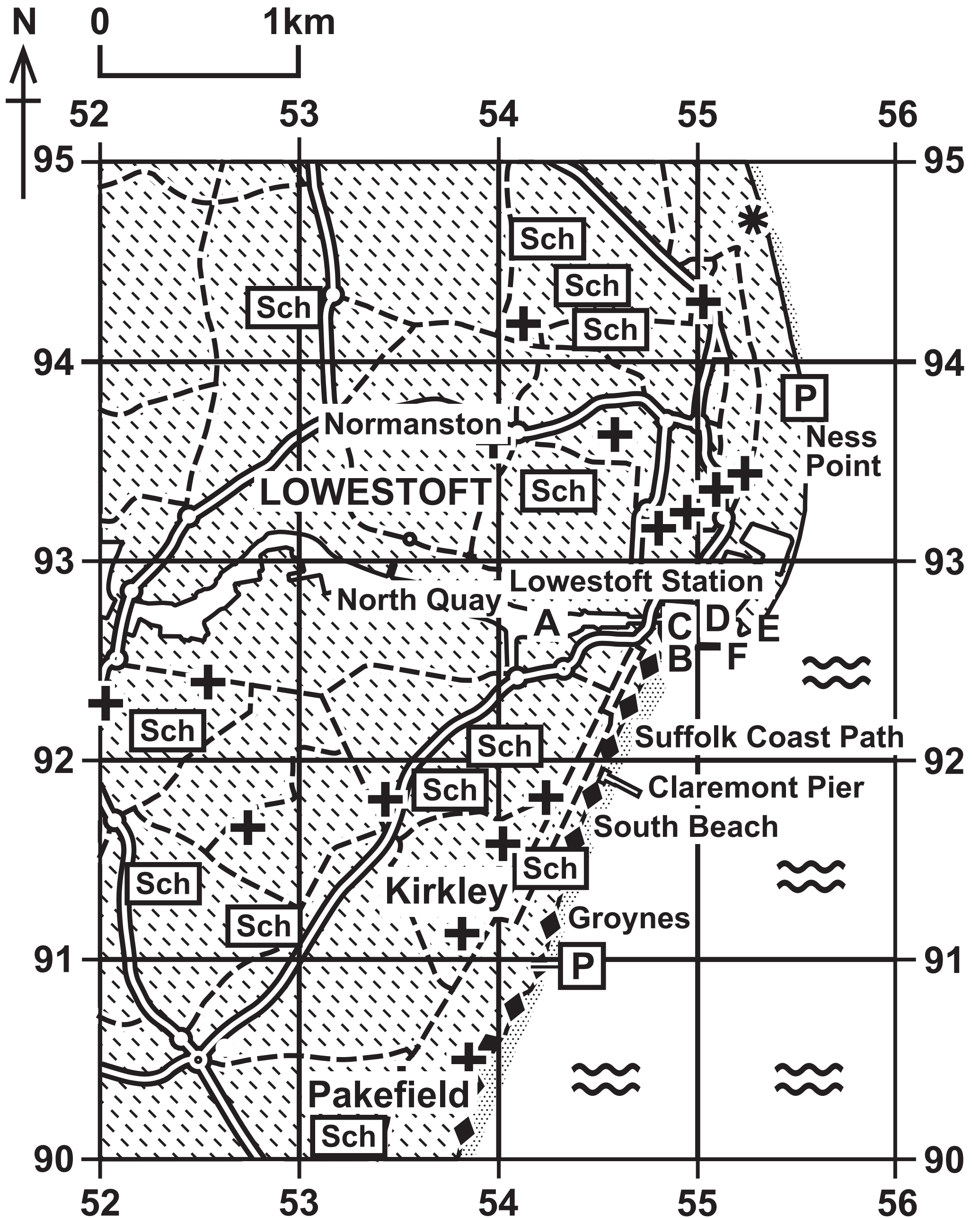
- A Inner Harbour
- B East Point Pavillion
- C Marina
- D Outer Harbour
- E North Pier Extension
- F South Pier
-  Recreational route
-  Main roads
-  Side roads
-  Sand
-  Buildings and houses
-  Water
-  Parking
-  School
-  Camp site or Caravan site
-  Place of worship

Figure 2a – Diagram (Black and White) – Part 1

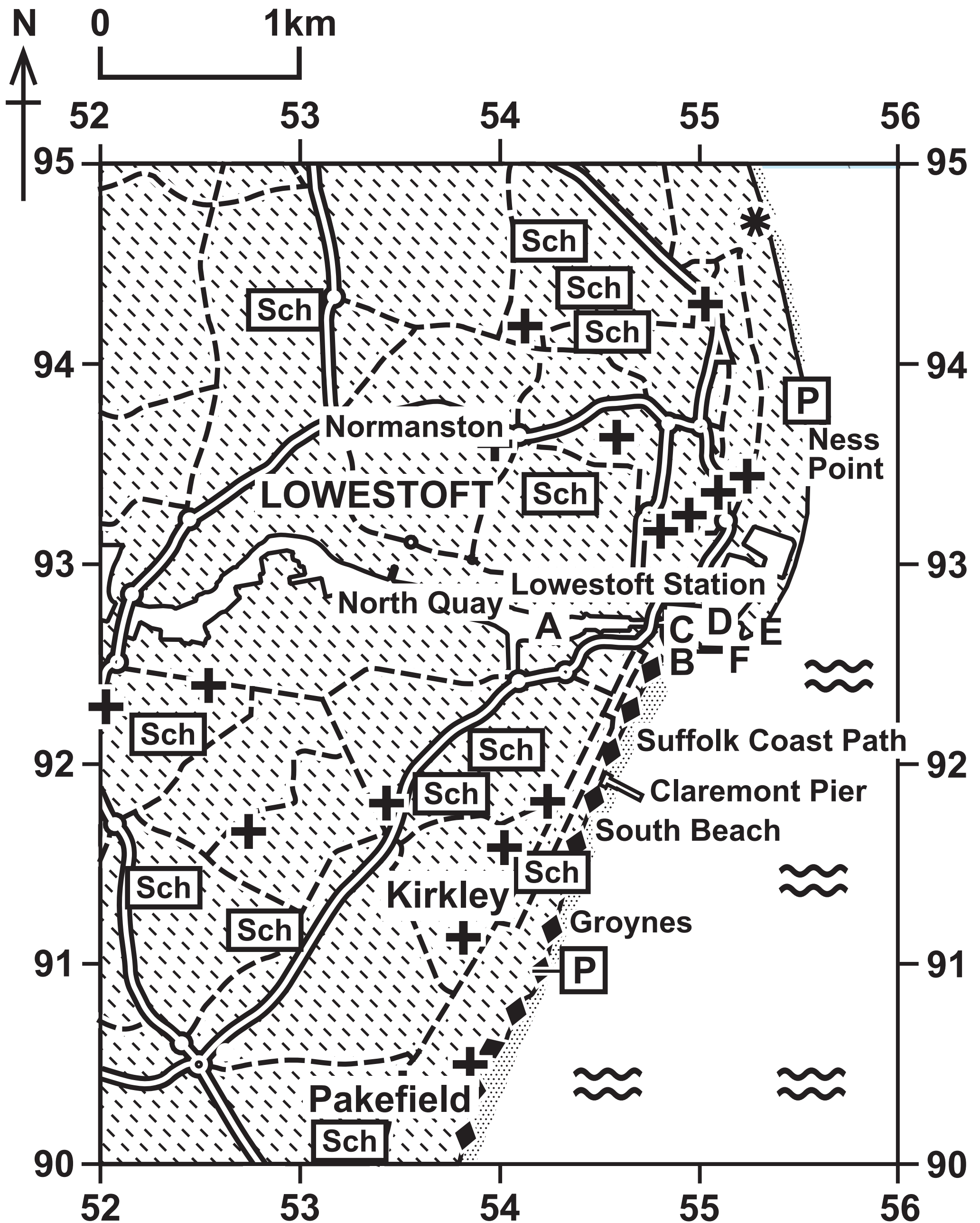
OS map extract showing a coastal landscape



Turn over

Figure 2a – Diagram (Black and White) – Part 2

OS map extract showing a coastal landscape



Coastal landforms

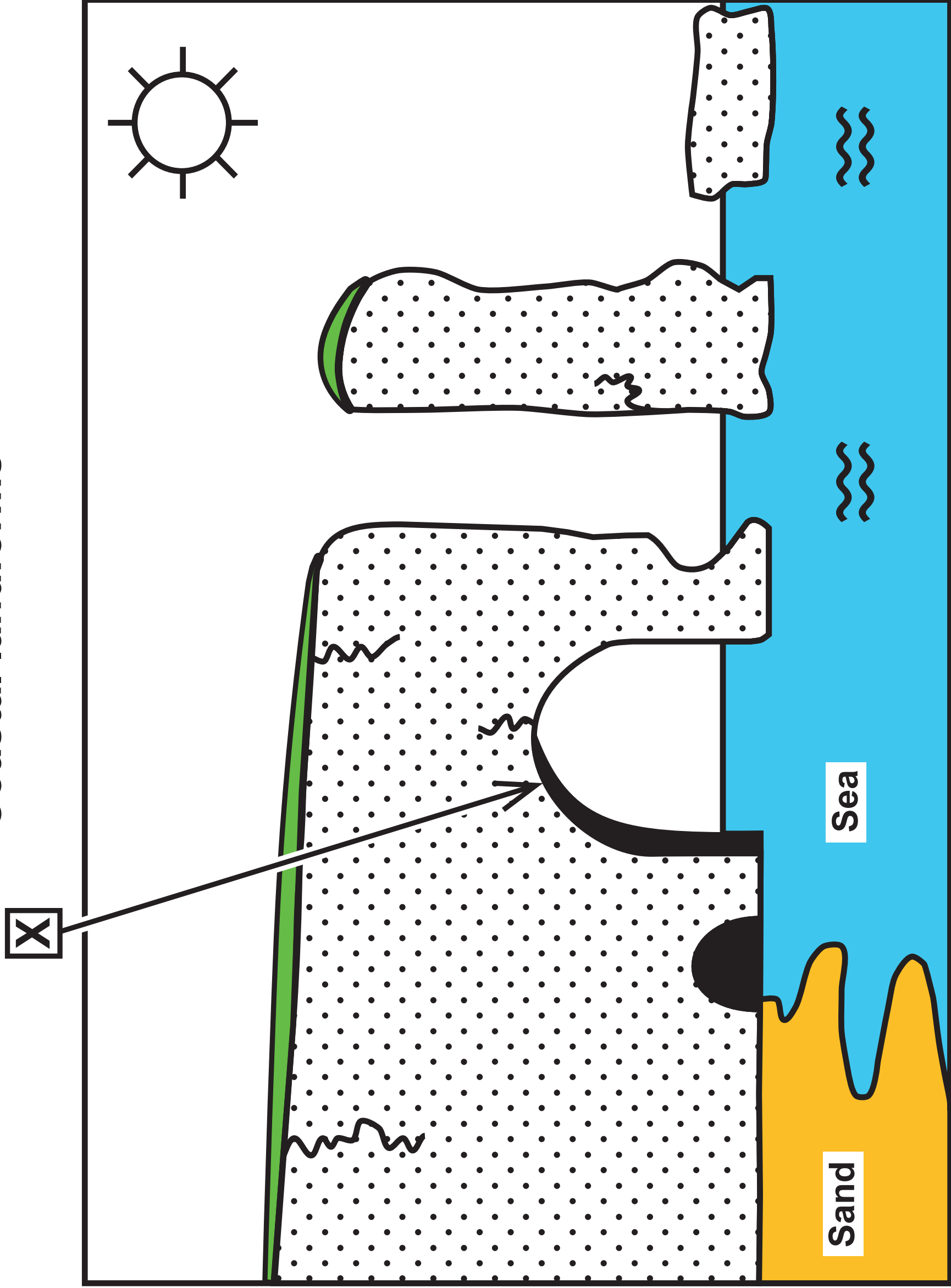


Figure 2b (Black and White)

Coastal landforms

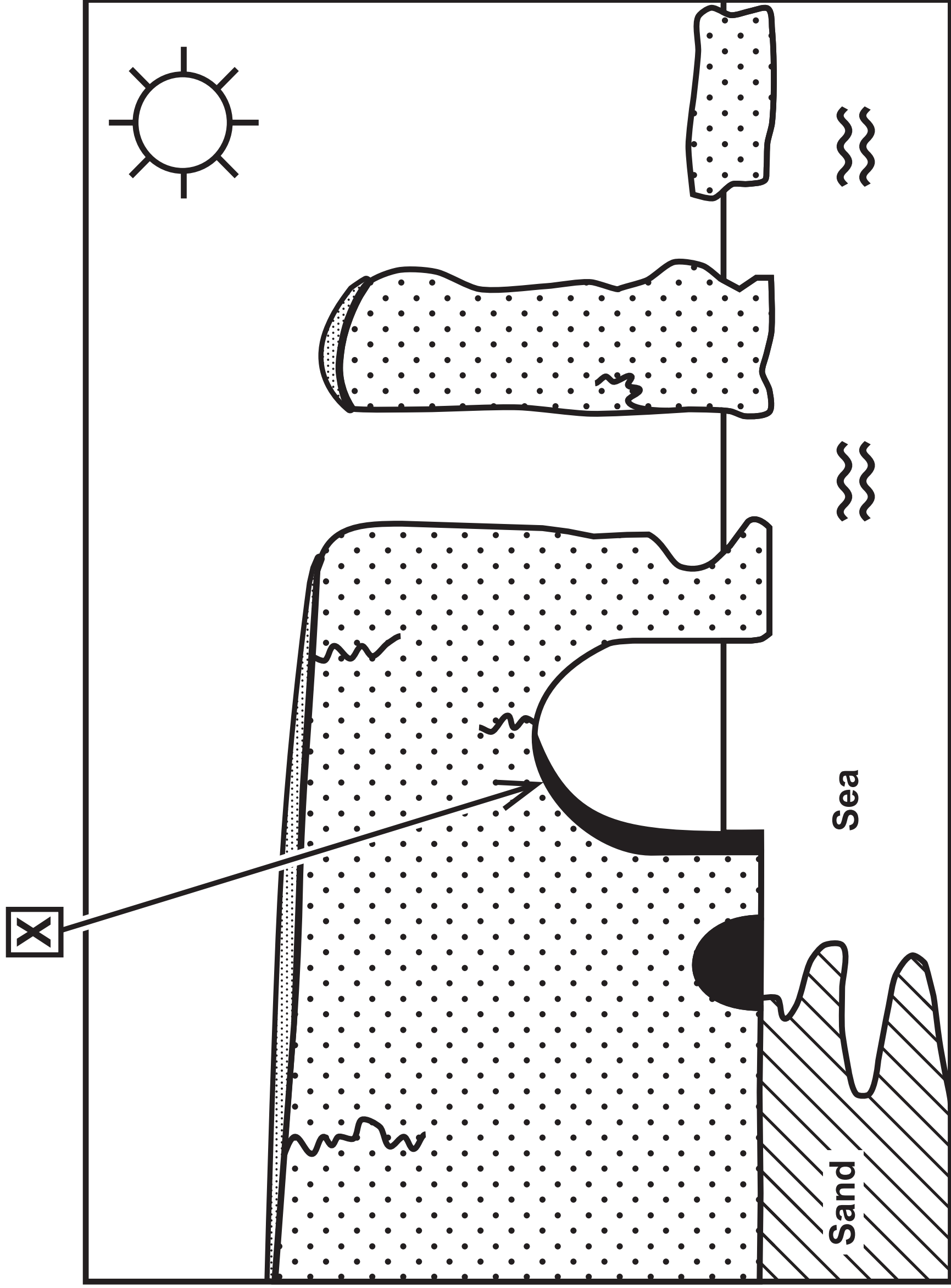


Figure 2c – Information

Countries with a large population living in low-lying coastal areas and selected data

USA

Total number of people living in low-lying coastal areas:
34 million

Percentage of total urban population living in low-lying urban areas: **61·4%**

Recorded storm surges in **21st century: 21**

China

Total number of people living in low-lying coastal areas:
204 million

Percentage of total urban population living in low-lying urban areas: **18·1%**

Recorded storm surges in **21st century: 392**

Philippines

Total number of people living in low-lying coastal areas:
23·8 million

Percentage of total urban population living in low-lying urban areas: **11·9%**

Recorded storm surges in **21st century: 154**

Figure 2c – Diagram (Colour)

Countries with a large population living in low-lying coastal areas and selected data

KEY  Countries with large populations living in low-lying coastal areas

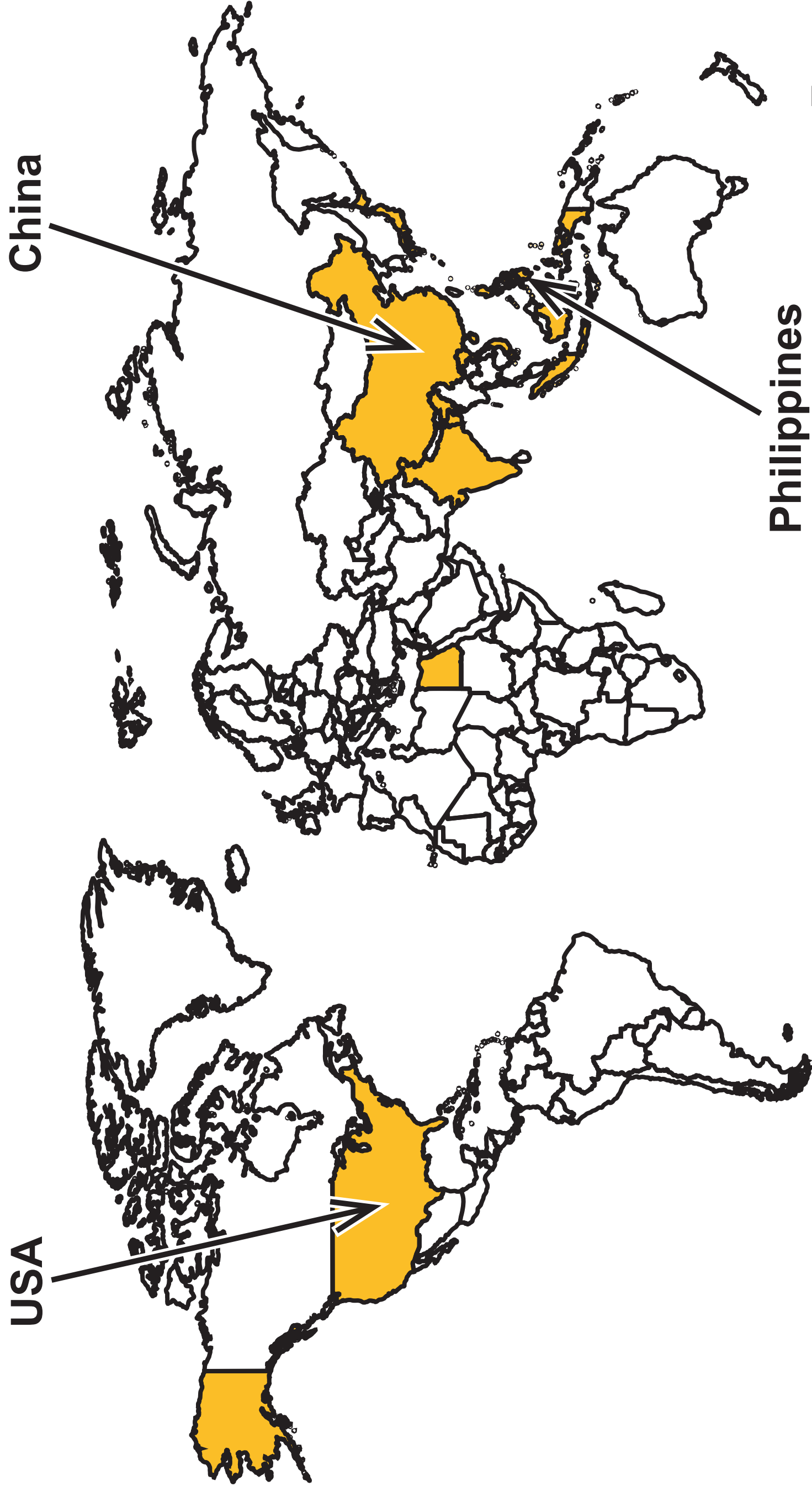


Figure 2c – Diagram (Black and White)

Countries with a large population living in low-lying coastal areas
selected data

KEY  Countries with large populations living in low-lying coastal areas

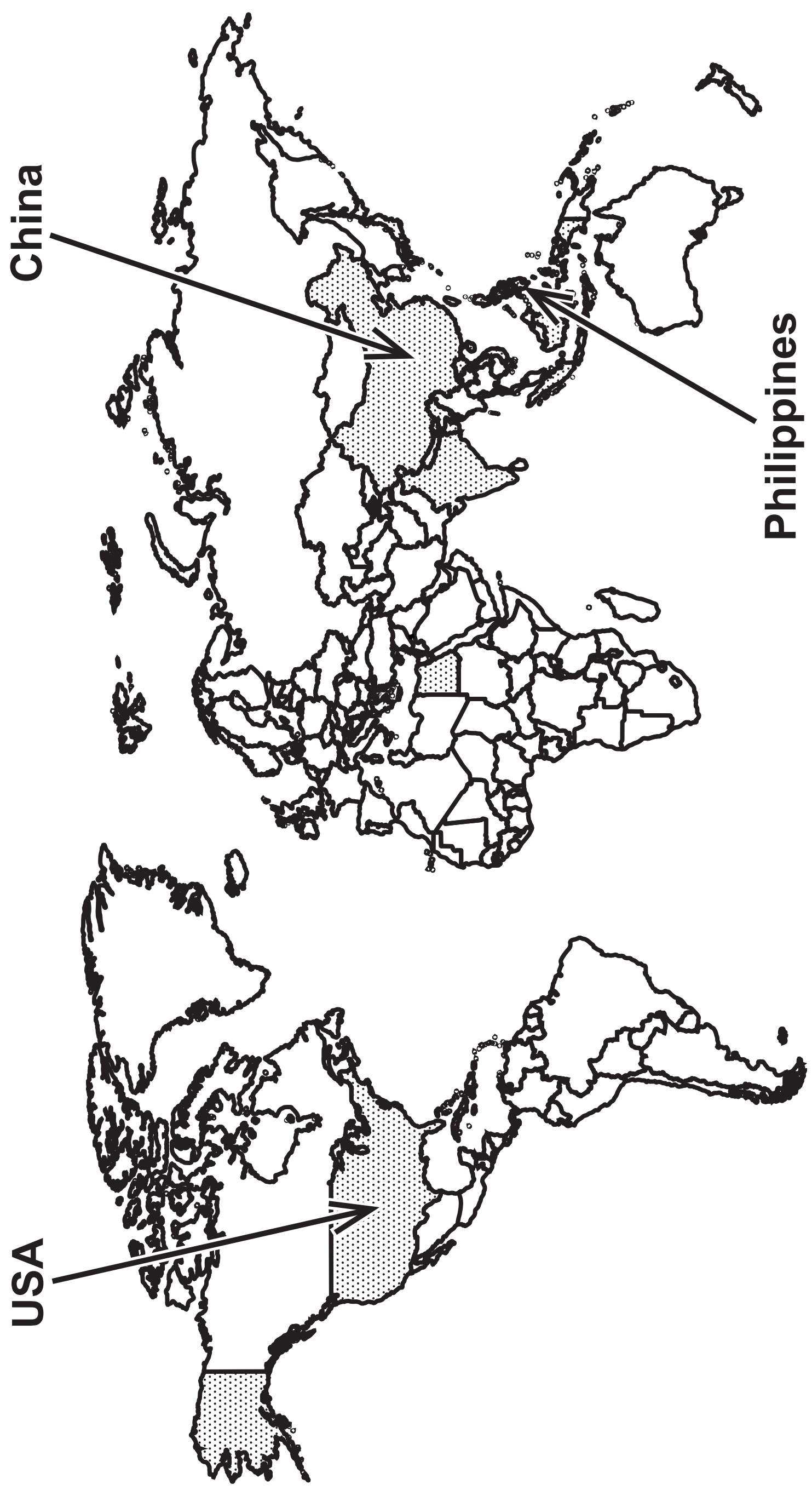


Figure 3a (Colour)

Features of a volcanic eruption

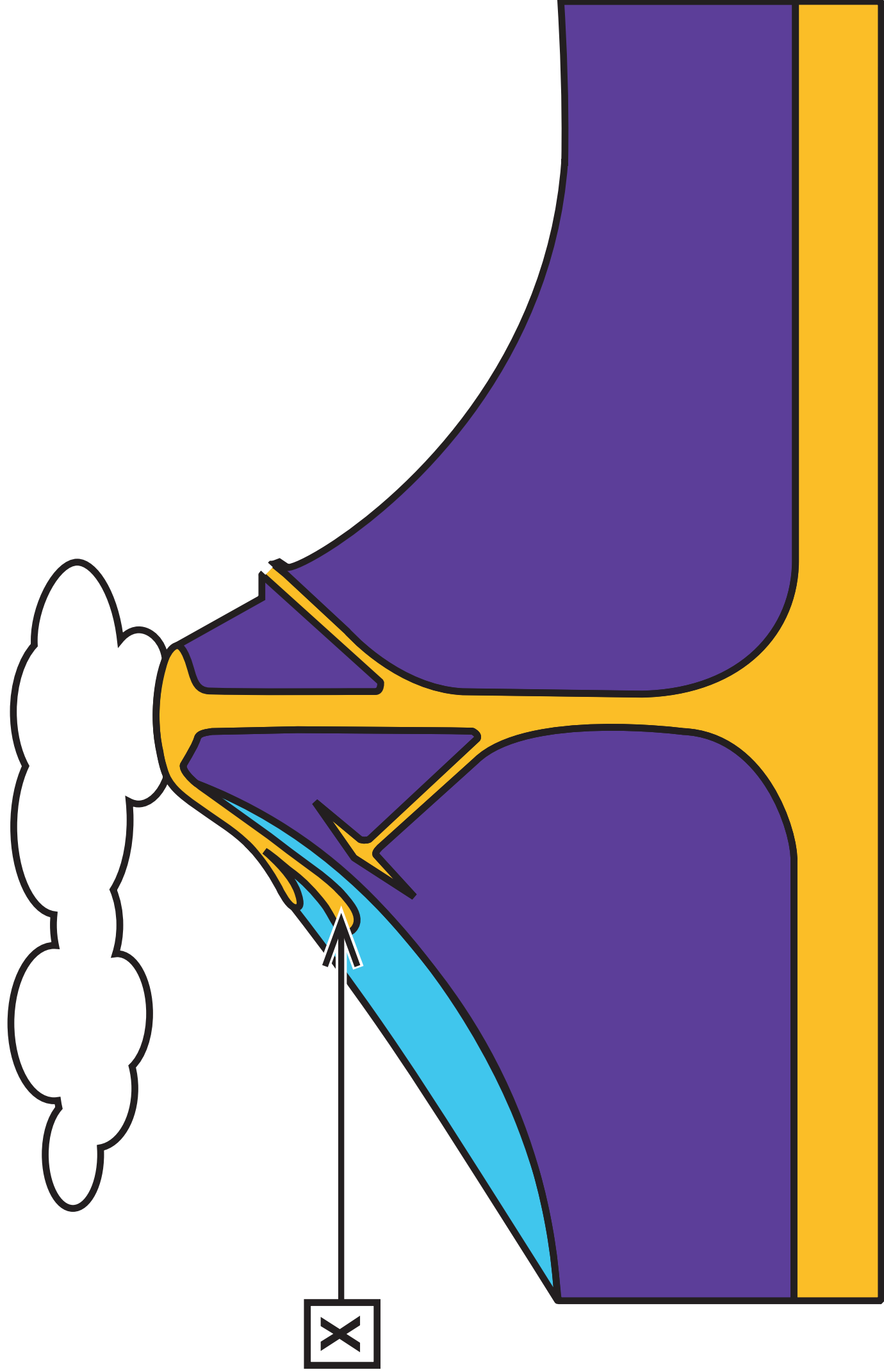


Figure 3a (Black and White)

Features of a volcanic eruption

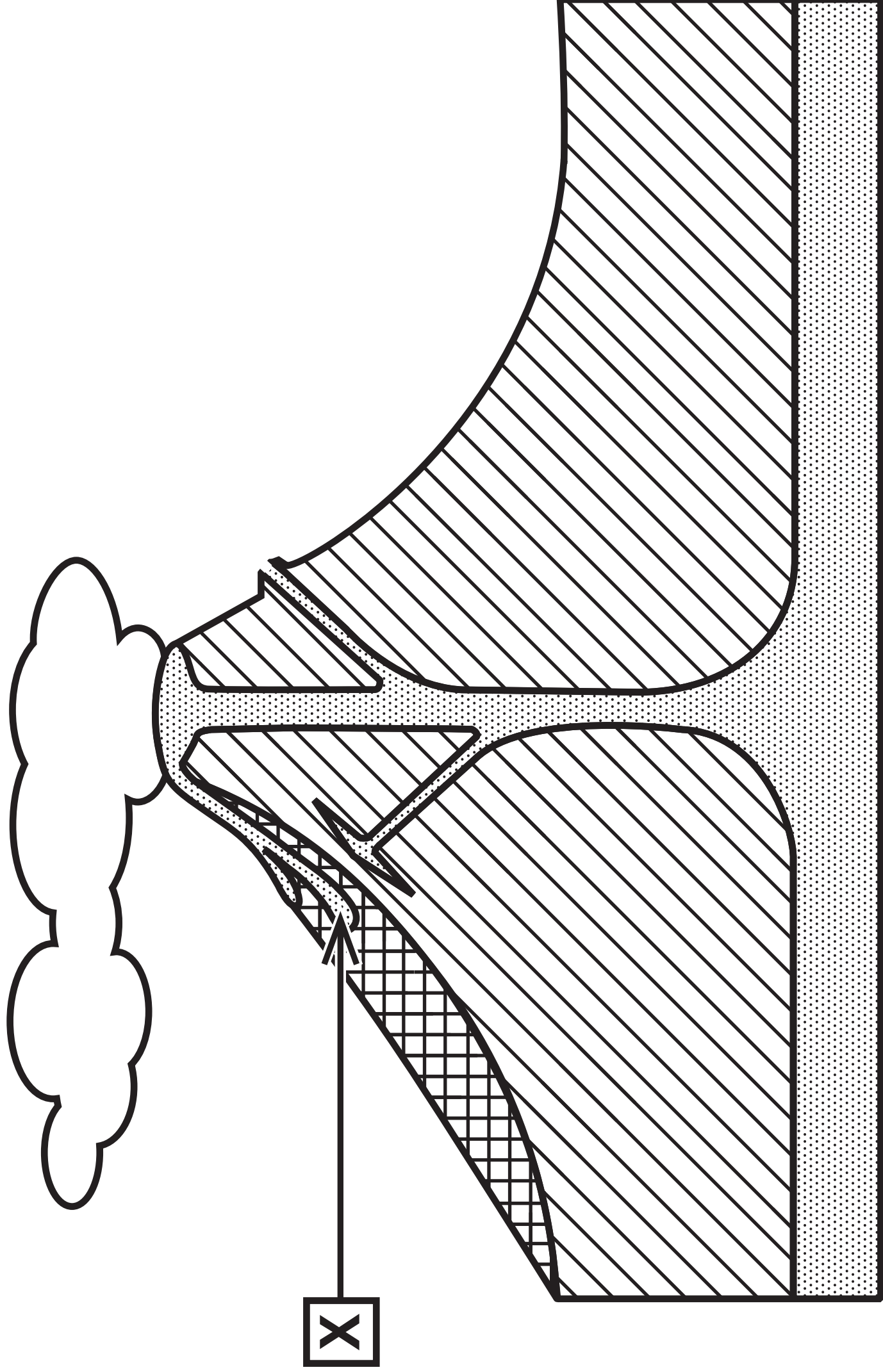


Figure 3b (Colour)

Global distribution of volcanoes

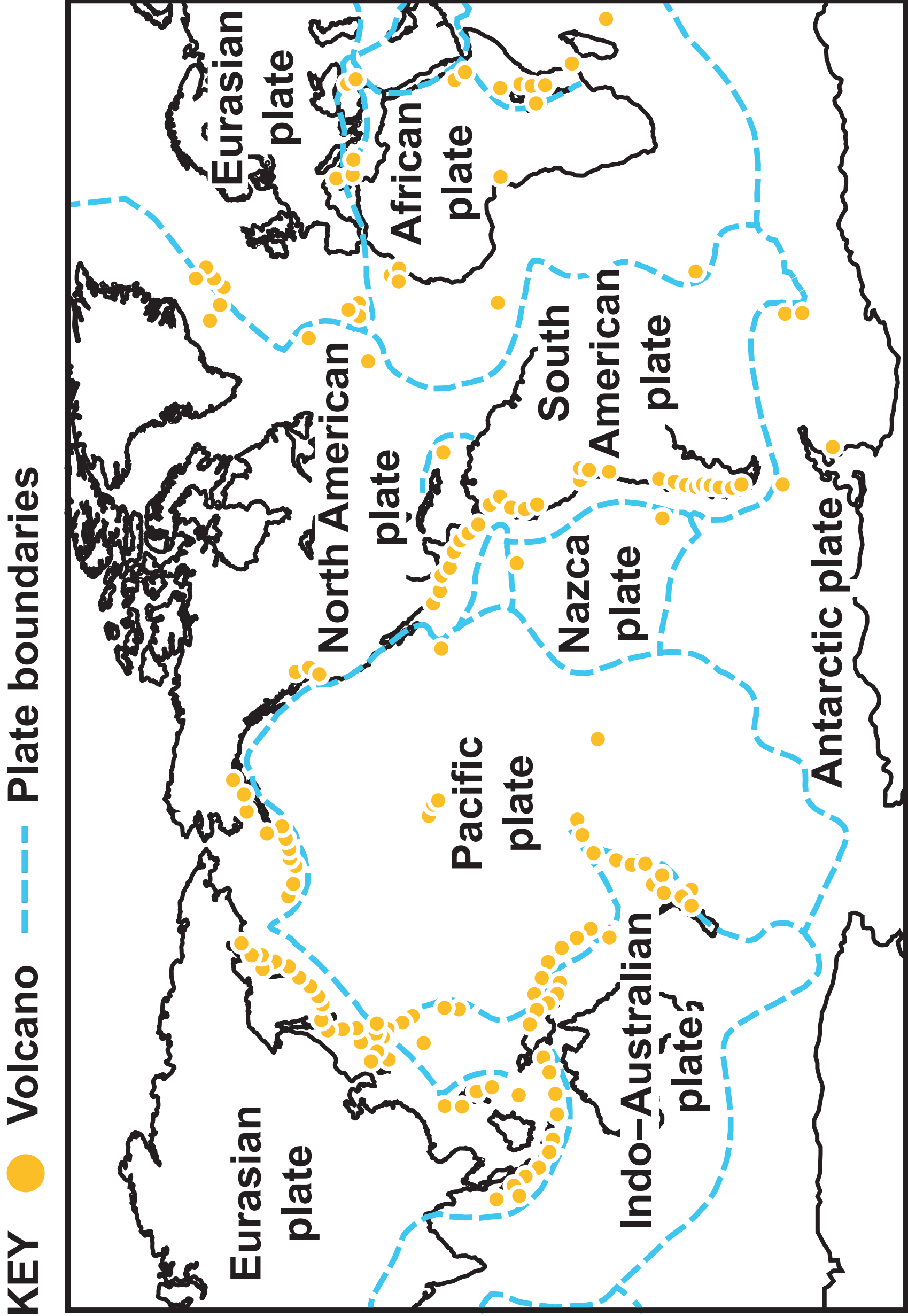


Figure 3b (Black and White)

Global distribution of volcanoes

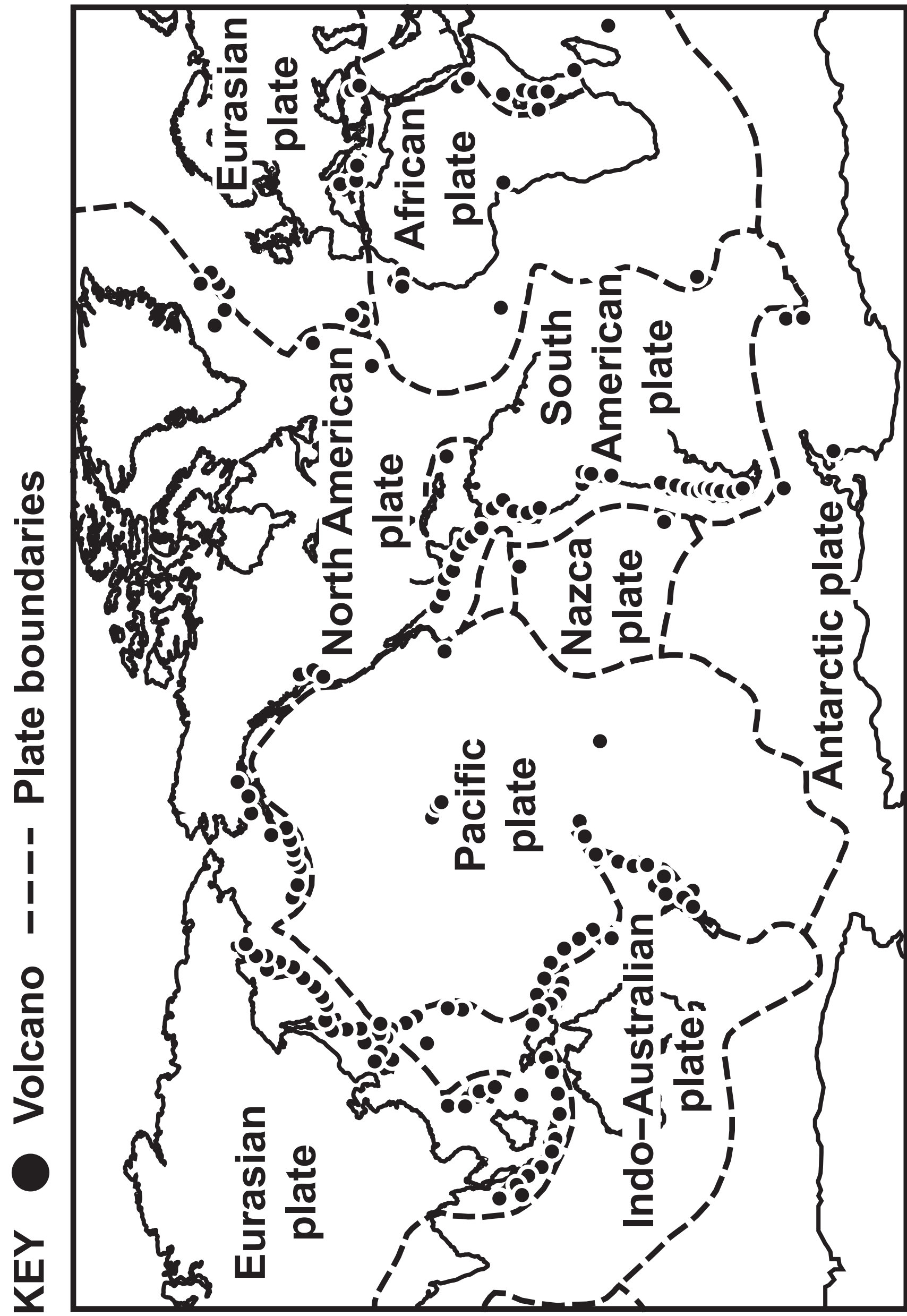


Figure 3c – Information

Selected impacts from Mount Mayon eruption, Philippines, January 2018

Water pollution at base of Mount Mayon

29 rivers around the volcano were silted with volcanic ash making the water unsafe to drink and irritating animal skin.

Farming at base of Mount Mayon

US\$3.3 million of crops were destroyed affecting **9,800** farmers and covering **7,100** hectares.

Vegetation cover after eruption

Lava flowed up to **3 km** from the crater destroying large areas of vegetation in the National Park which has **239** vegetation species.

Figure 3c – Diagram (Colour)

Selected impacts from Mount Mayon eruption, Philippines, January 2018

Area covered by ash after the Mount Mayon eruption,
Philippines, January 2018

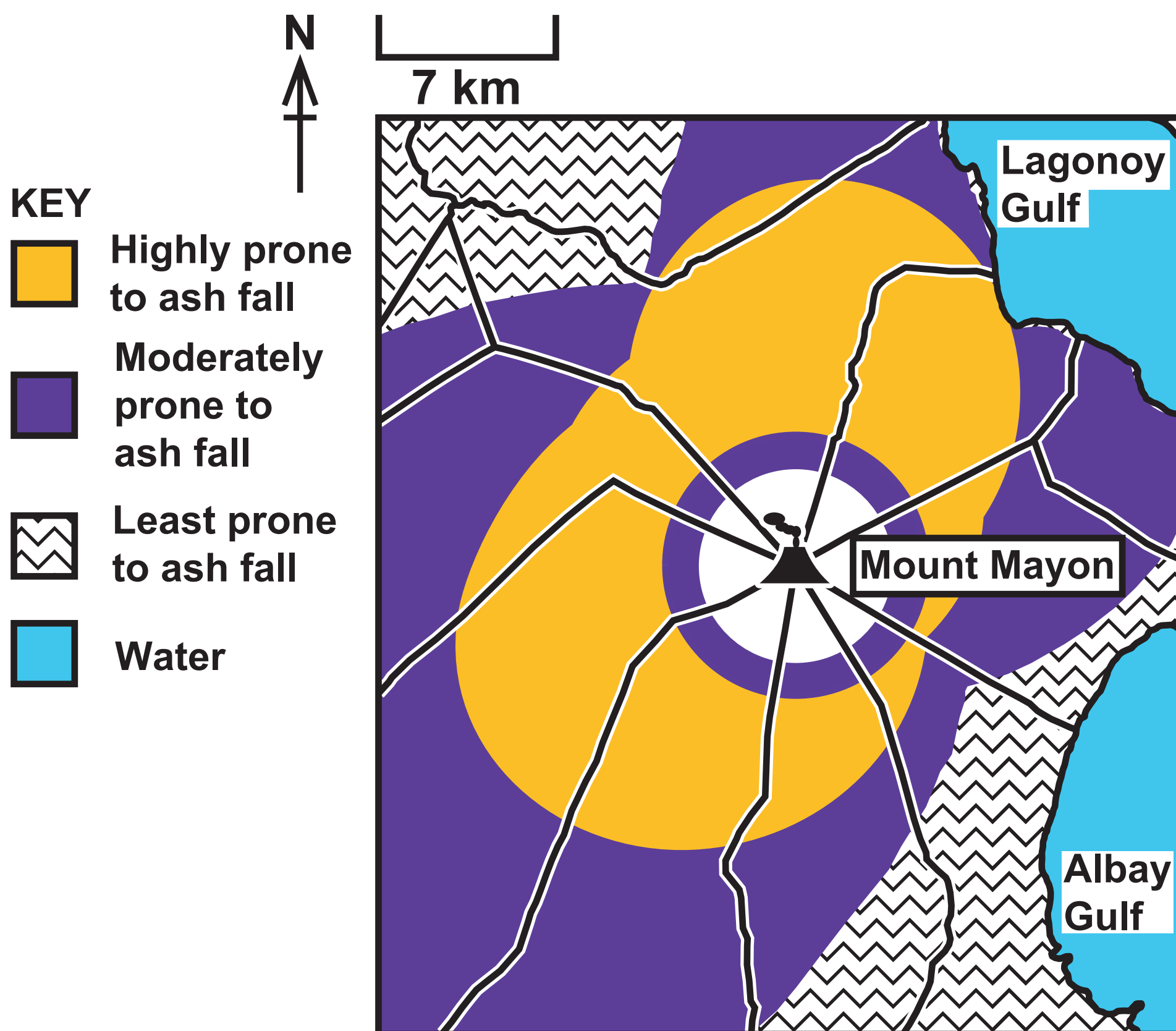


Figure 3c – Diagram (Black and White)

Selected impacts from Mount Mayon eruption, Philippines, January 2018

Area covered by ash after the Mount Mayon eruption,
Philippines, January 2018

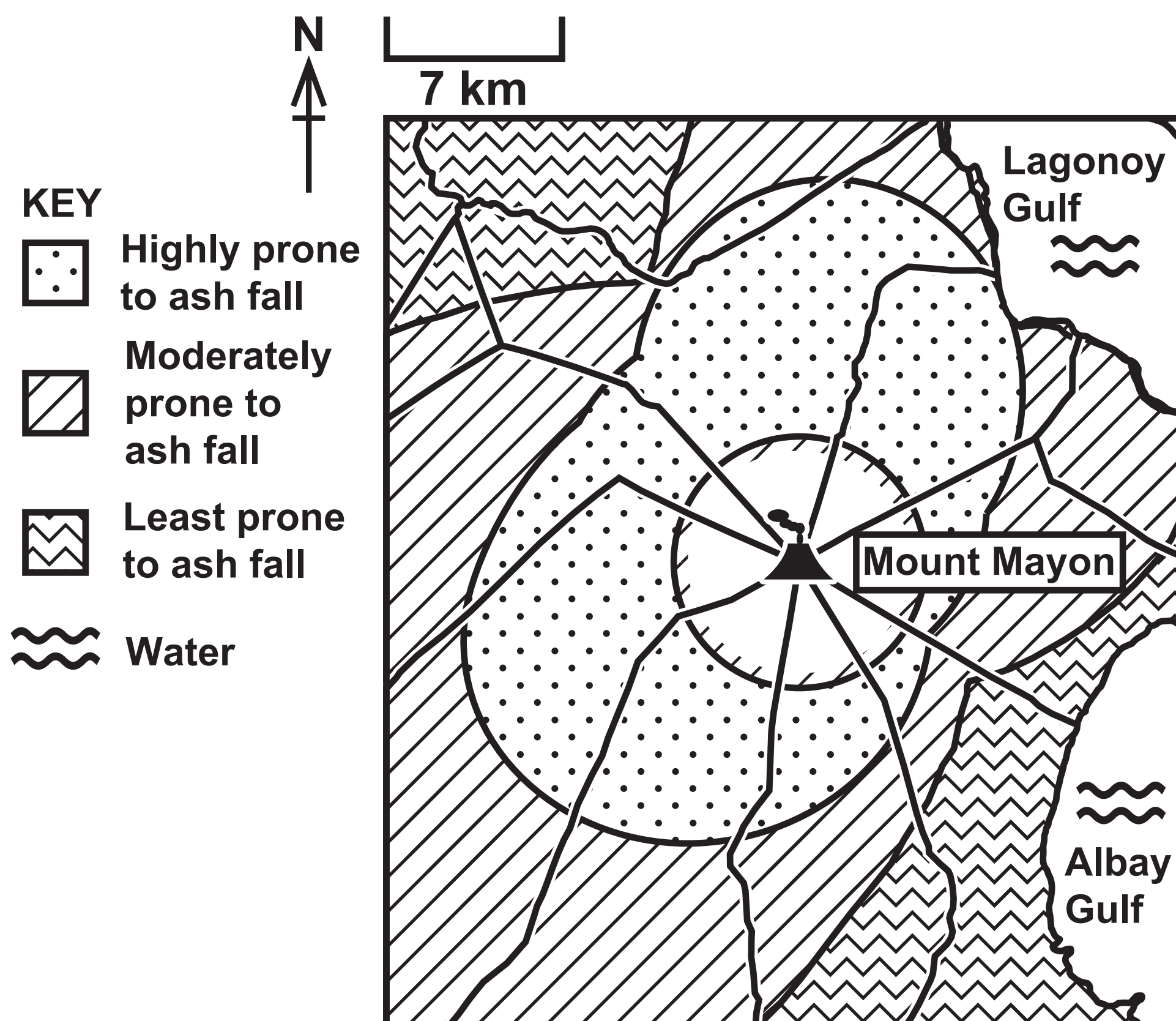


Figure 4a

Average river depth data for each site

Site	Average river channel depth (cm)
1	12
2	5
3	14
4	23
5	41
6	36
7	47
8	51
9	50
10	63

Figure 4b

River width and average velocity data for each site

Site	River width (metres)	Average river velocity (m/s)
1	1	0·2
2	2	0·3
3	4	0·4
4	6	0·6
5	7	0·7
6	9	0·8
7	11	0·8
8	12	1·0
9	14	1·1
10	17	1·2

Figure 5a

Pebble sizes for Site 2

Sample	Pebble length (cm)
1	6
2	11
3	16
4	9
5	15
6	12
7	17
8	4
9	8
10	13

Figure 5b

Average pebble length along 900 metres stretch of coastline

Site	Distance along coast (metres)	Average pebble length (cm)
1	0	14
2	100	11
3	200	10
4	300	9
5	400	8
6	500	6
7	600	5
8	700	5
9	800	3
10	900	2

Figure 6a

Average temperature for each site

Site	Average temperature (°C)
1	12
2	18
3	22
4	24
5	24
6	23
7	19
8	17
9	14
10	13

Figure 6b

Air pressure and precipitation for each site

Site	Air pressure (mb)	Precipitation (mm)
1	994	8
2	995	7
3	998	6
4	999	5
5	1004	4
6	1008	3
7	1010	2
8	1012	2
9	1014	1
10	1018	0

Acknowledgements

Pearson Education Ltd. gratefully acknowledges all the following sources used in the preparation of this paper:

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