



GCSE

3110U10-1

GEOGRAPHY

**UNIT 1: CHANGING PHYSICAL AND HUMAN
LANDSCAPES**

TUESDAY, 21 MAY 2019 – AFTERNOON

1 hour 30 minutes plus your additional time allowance

Surname

Other Names

Centre Number

Candidate Number

0

ADDITIONAL MATERIALS

Resource folder.

In addition to this paper you may use a calculator and a ruler if required.

INSTRUCTIONS TO CANDIDATES

Use black ink, black ball-point pen or your usual method.

Write your name, centre number and candidate number in the spaces on the previous page.

Answer BOTH questions in Section A.

Answer ONE question from Section B.

Write your answers in the spaces provided in this booklet.

**If additional space is required you should use the additional page(s) at the end of this booklet.
The question number(s) should be clearly shown.**

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question.

Your ability to communicate and organise your ideas will be assessed in questions that are worth 6 or 8 marks. The accuracy of your writing will be assessed in your answer to question 2(c)(iii).

SECTION A – CORE THEMES

Answer ALL questions in this section.

THEME 1: LANDSCAPES AND PHYSICAL PROCESSES

1 (a) Study the OS map extract in the Resource Folder. It shows an area of coastline around Pwllheli in North Wales. A key for the OS map appears on the back page of the Resource Folder.

(i) Identify the landform A.

Tick (✓) ONE choice below. [1]

LANDFORM	TICK (✓)
Beach	
Wave-cut platform	
Headland	

1 (a)(ii)

Give the six figure grid reference of the lighthouse at Point B on the map.

Tick (✓) ONE choice below. [1]

GRID REFERENCE	TICK (✓)
348389	
387349	
349388	
389348	

1 (a)(iii)

Complete the following paragraph by **UNDERLINING** the correct answer in each of the brackets. [3]

The sand spit extends towards the
(WEST / NORTH-EAST / NORTH-WEST) from
Crochan Berw in grid square 3834. The distance to the
lighthouse at Point B is **(0.6 / 2.5 / 0.3)** kilometres
from Crochan Berw. The track along the northern edge
of the sand spit is open to
**(ALL TRAFFIC / HORSES ONLY /
PEDESTRIANS ONLY)**.

1 (b) Study the photographs opposite.

(i) Give the drainage basin process shown in PHOTO 1.

Tick (✓) the correct answer from the box below. [1]

PROCESS	TICK (✓)
Infiltration	
Overland Flow	
Interception	
Throughflow	

THEME 2: RURAL-URBAN LINKS

2 (a) Study the map opposite.

- (i) Tick (✓) THREE statements in the box below that are true. [3]**

STATEMENT	TRUE (✓)
Los Angeles is the largest global city.	
The greatest concentration of global cities is in South Asia.	
London has a population of less than 8 million.	
New York has a population of 30 million.	
The majority of global cities have a population of between 8 and 10 million.	
Tokyo is the largest global city.	

2 (a)(ii)

Global cities often grow because of migration.

Describe TWO pull factors which can lead to migration to global cities. [4]

Factor 1

Factor 2

2 (b) Retailing is an important function in towns and cities in the UK. Retailing in UK towns and cities is changing.

Study the data opposite.

(i) Give the type of location in which more retail units have closed than opened. [1]

continued on the following page

Newport, South Wales, has one of the highest percentages of vacant city centre retail units in the UK.

TOTAL NUMBER OF RETAIL UNITS IN NEWPORT CITY CENTRE	NUMBER OF VACANT RETAIL UNITS IN NEWPORT CITY CENTRE
507	138

Source: Local Data Company

2 (b)(ii)

Calculate the percentage of vacant retail units in Newport to one decimal place. Show your working. [2]

Answer _____

2 (b)(iii)

Give TWO reasons why many people prefer to shop in out of town retail parks than in town centre high streets. [4]

Reason 1

Reason 2

2 (c)(i) What is a brownfield site? [2]

2 (c)(ii)

Give TWO reasons why brownfield sites are often preferred to greenfield sites for new developments. [4]

Reason 1

Reason 2

2 (c)(iii) Study the RESOURCE BOX below and opposite.

RESOURCE BOX

In recent years, the dockland area of Bristol has undergone major change.

The development of Bristol Docks has created a commercial environment of café bars, restaurants, shops and other tourist and leisure facilities generating over 3 000 new jobs in a previously run-down part of the city. There are also sports facilities, an industrial museum and a maritime heritage museum.

continued on the following page

SECTION B – OPTIONS

Answer **ONE** question in this section, **EITHER** Question 3 or Question 4

THEME 3: TECTONIC LANDSCAPES AND HAZARDS

3 (a) Study the map opposite.

- (i) Give the name of **ONE** active volcanic island shown on the map. [1]
-

- (ii) Complete the box below to give the latitude and longitude of Puerto Rico. [2]

	LATITUDE	LONGITUDE
PUERTO RICO	18° _____	_____ ° West

3 (a)(iii)

Complete the following paragraph choosing your answers from the box opposite. [4]

The Earth's _____ is made up of segments called plates which move relative to each other. At X, the Caribbean Plate is colliding with the North American Plate. This is called a _____ plate margin where the process of _____ leads to one plate sinking underneath the other and melting. Landforms like _____ are often formed at this type of boundary.

3 (a)(iv)

Explain why ocean trenches are formed where two plates collide. You may use a diagram to help your answer. [4]

3 (b)(iii)

Explain why earthquakes can affect infrastructure in large cities. [2]

If you have answered Question 3 DO NOT answer Question 4.

THEME 4: COASTAL HAZARDS AND THEIR MANAGEMENT

- 4 (a) Study the information box below and the map opposite.

Hurricane Maria was a severe storm that affected parts of the Caribbean in September 2017. Hurricanes can cause severe flooding from storm surges, where the sea level is raised at the centre of the storm and when strong winds drive large waves onto the coast.

- (i) Give the name of ONE island affected by Hurricane Maria when it was at category 4. [1]

- (ii) Complete the box below to give the latitude and longitude of Puerto Rico. [2]

	LATITUDE	LONGITUDE
PUERTO RICO	18° _____	_____ ° West

4 (a)(iii)

Complete the following paragraph choosing your answers from the box opposite. [4]

Severe weather events can pose a risk for people living in coastal environments. Physical factors that increase the risk can include the low-lying _____ of many coastal areas which means they can be easily flooded.

Another physical factor is the _____ and frequency of events. Human factors include the number of people affected as coastal areas are often more

_____ populated and the

_____ of a country

which determines whether it can afford to protect its people.

4 (b)(ii)

**Suggest ONE reason why the planned option is to
'Do Nothing' in the Area A in the north of the map.
[2]**

4 (b)(iii)

The opinions of residents who live at the coast are often different to those of local councils about how the coastline should be managed.

Give ONE reason to explain this. [2]

FLOODING IN CARLISLE, NORTH-WEST ENGLAND, DECEMBER 2015

PHOTO 1



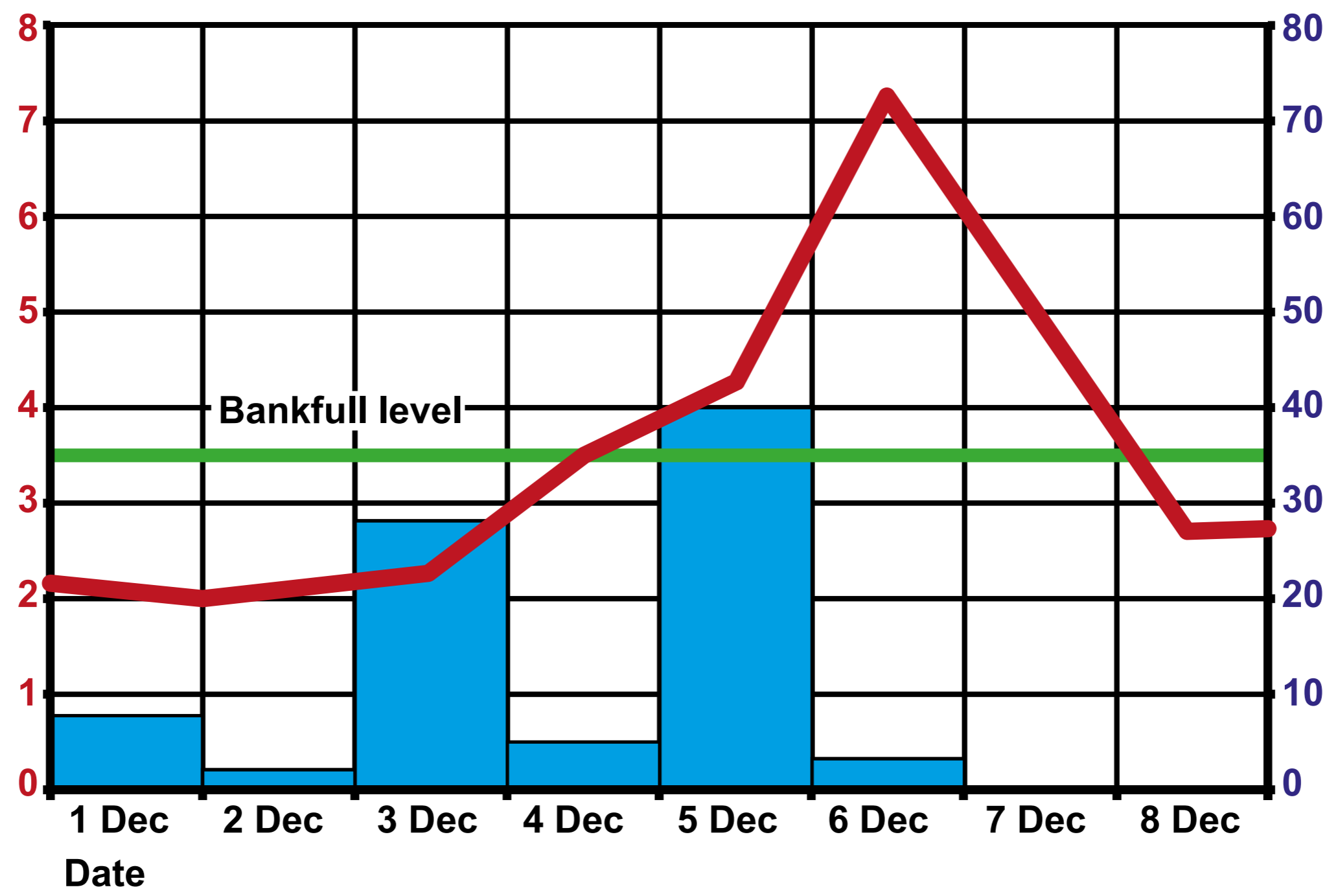
PHOTO 2



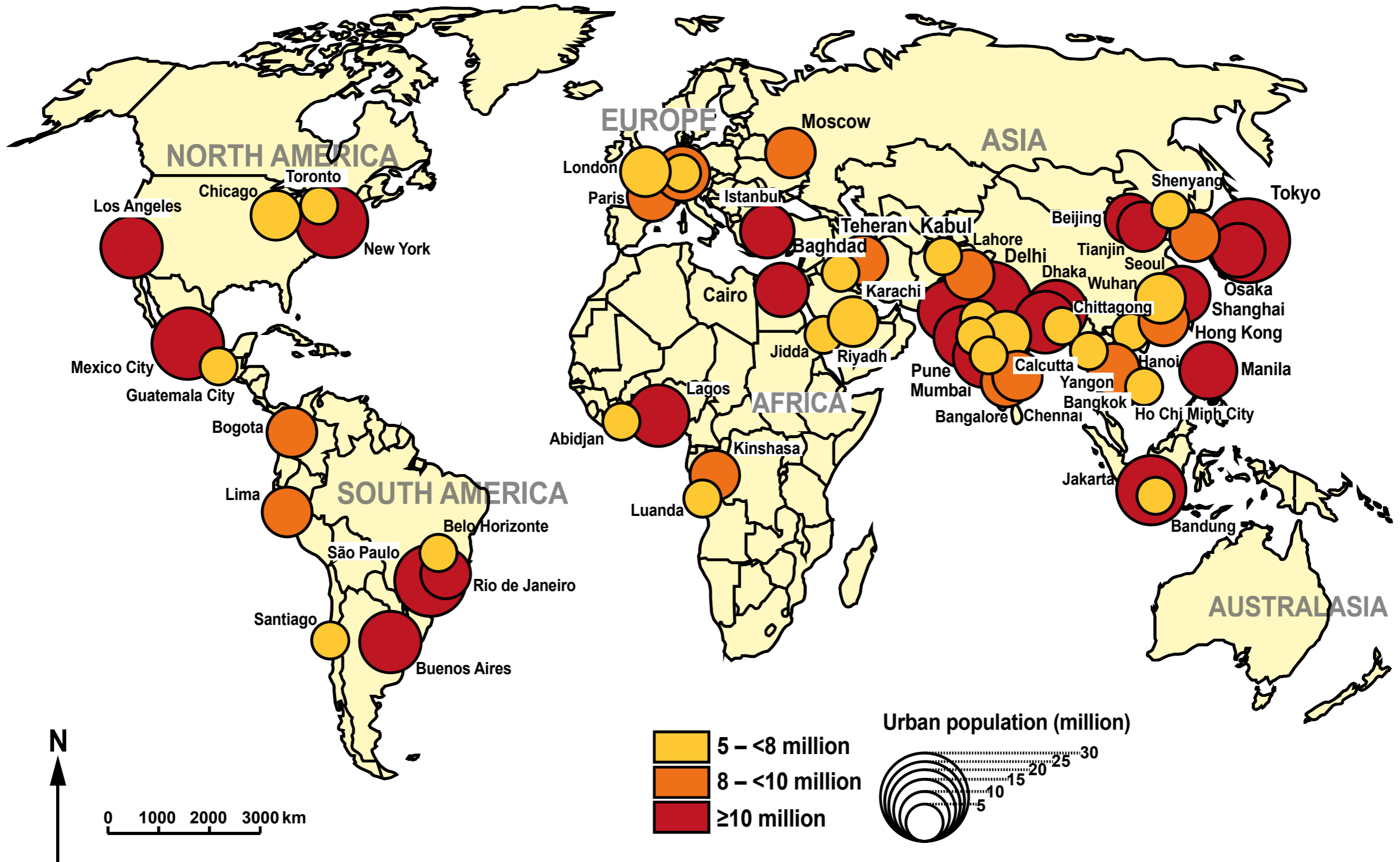
A STORM HYDROGRAPH FOR THE RIVER EDEN AT CARLISLE DURING THE 2015 FLOOD

River Level (m)

Rainfall (mm)



THE WORLD'S LARGEST GLOBAL CITIES



OPENINGS AND CLOSURES OF SHOPS IN UK URBAN AREAS 2015-2016

VACANT SHOPS IN NEWPORT, WALES

TYPE OF LOCATION	DIFFERENCE IN NUMBER OF RETAIL UNITS
Town centre high street shops	-373
Out of town retail park shops	+304
Town centre shopping centre	+22



Source: Local Data Company

RESOURCE BOX

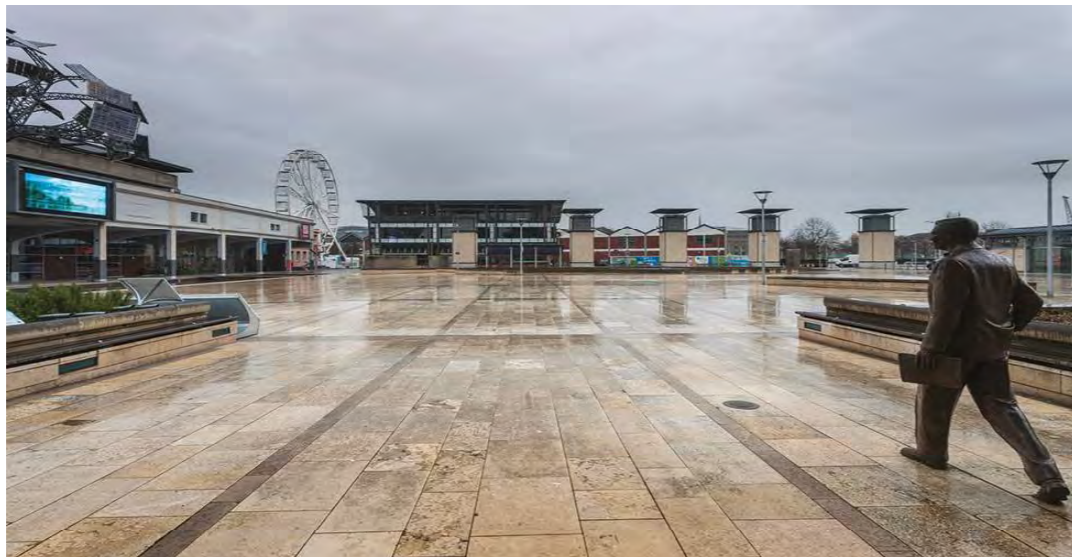
PART OF BRISTOL DOCKS BEFORE REDEVELOPMENT



BRISTOL DOCKS WATERFRONT



MILLENNIUM SQUARE, BRISTOL DOCKS



NEW HOUSING DEVELOPMENT IN BRISTOL DOCKS



EGAN'S WHEEL



GOVERNANCE
Effective and inclusive participation, representation and leadership

TRANSPORT AND CONNECTIVITY
Good transport services and communication linking people to jobs, schools, health and other services

SERVICES
A full range of appropriate, accessible, public, private, community and voluntary services.

ENVIRONMENTAL
Providing places for people to live in an environmentally-friendly way.

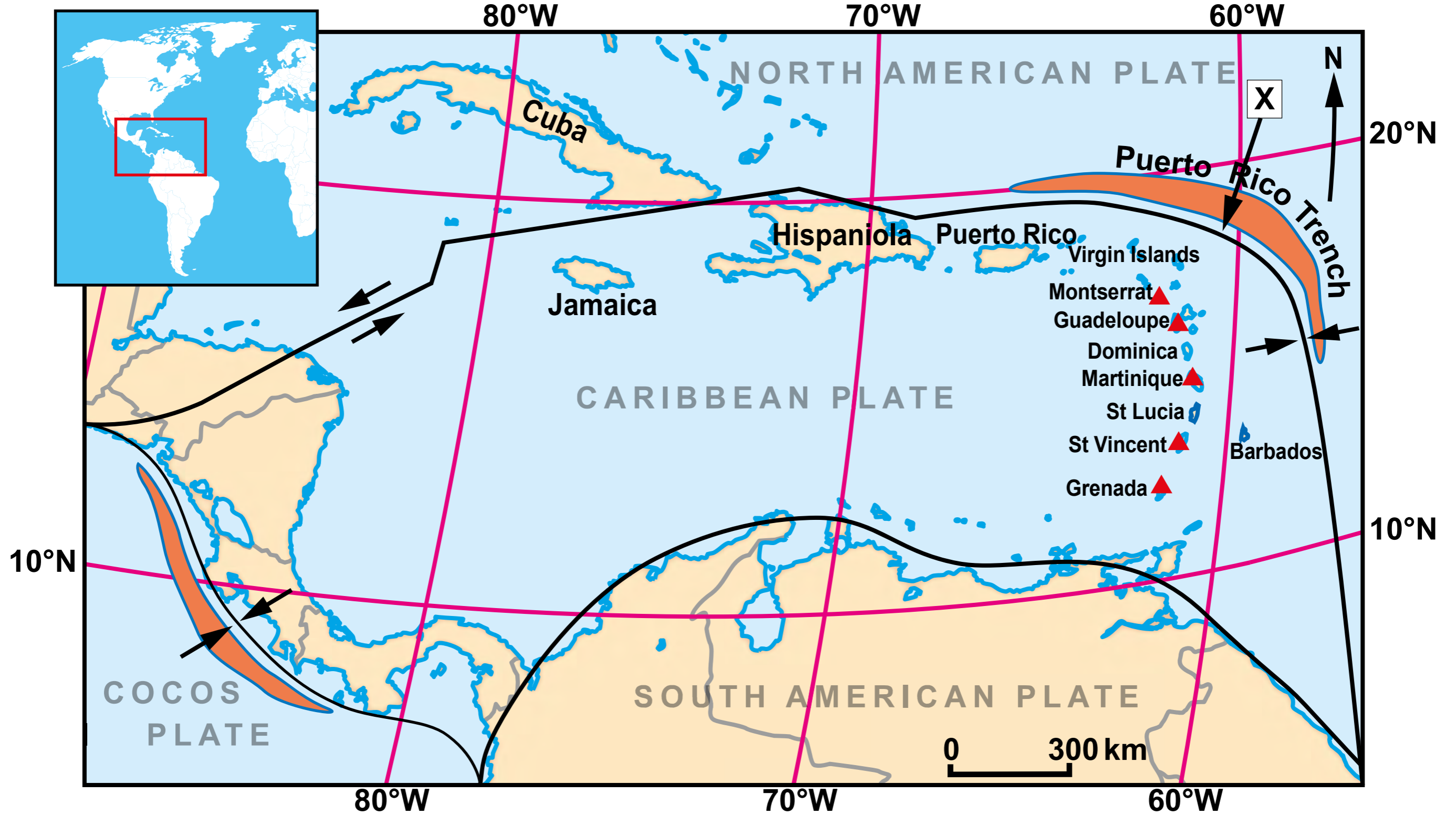
ECONOMY
A flourishing and diverse local economy

HOUSING AND THE BUILT ENVIRONMENT
A quality built and natural environment

SOCIAL AND CULTURAL
Vibrant, harmonious and inclusive communities

SUSTAINABLE COMMUNITIES

PLATE BOUNDARIES IN THE CARIBBEAN REGION



Key:

- ▲ Active volcanoes
- Plate boundary
- Direction of plate movement
- Trench

mantle

rift valleys

core

constructive

subduction

conservative

convection

divergence

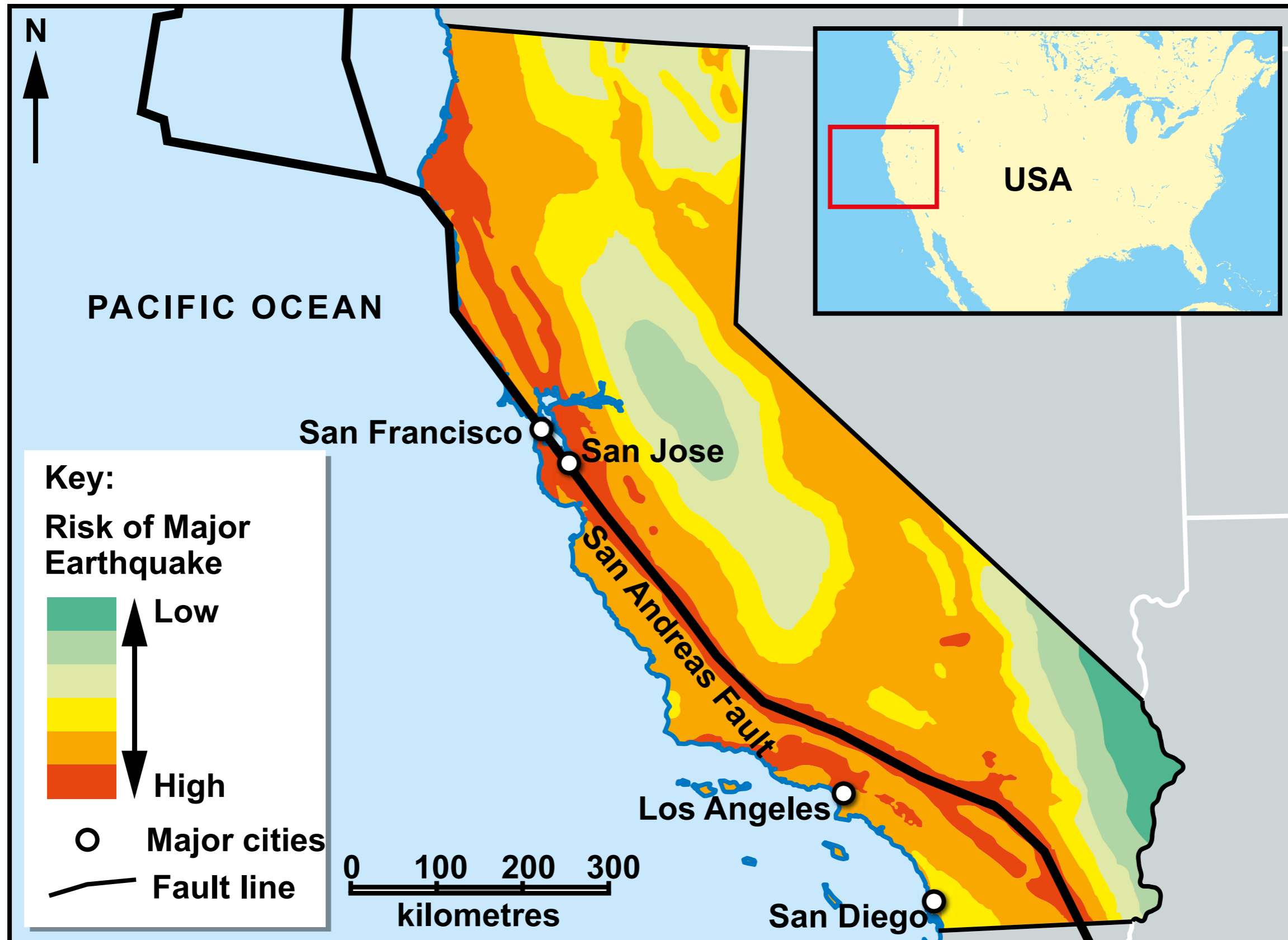
destructive

stratovolcanoes

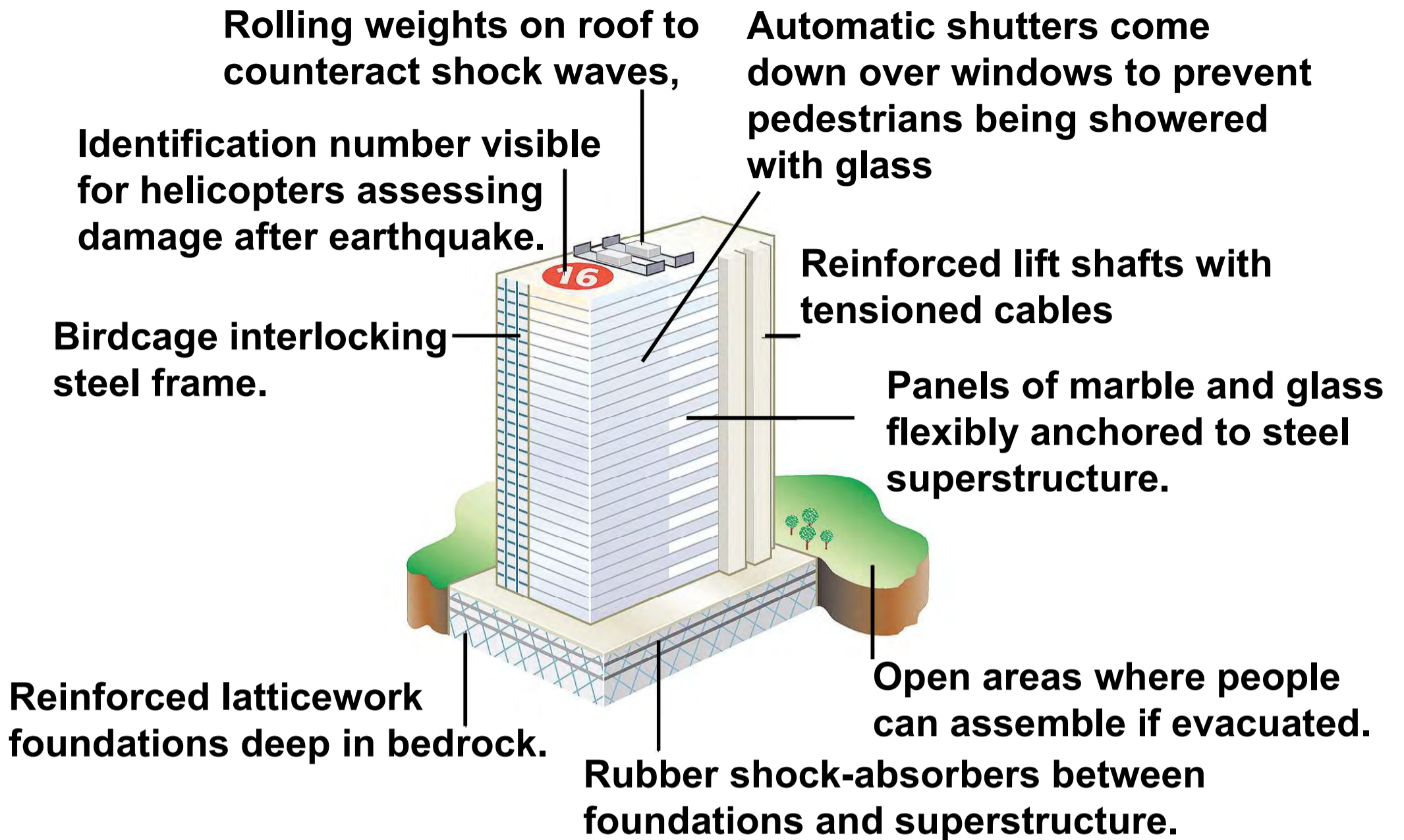
crust

hot spots

EARTHQUAKE HAZARD RISK IN CALIFORNIA, USA



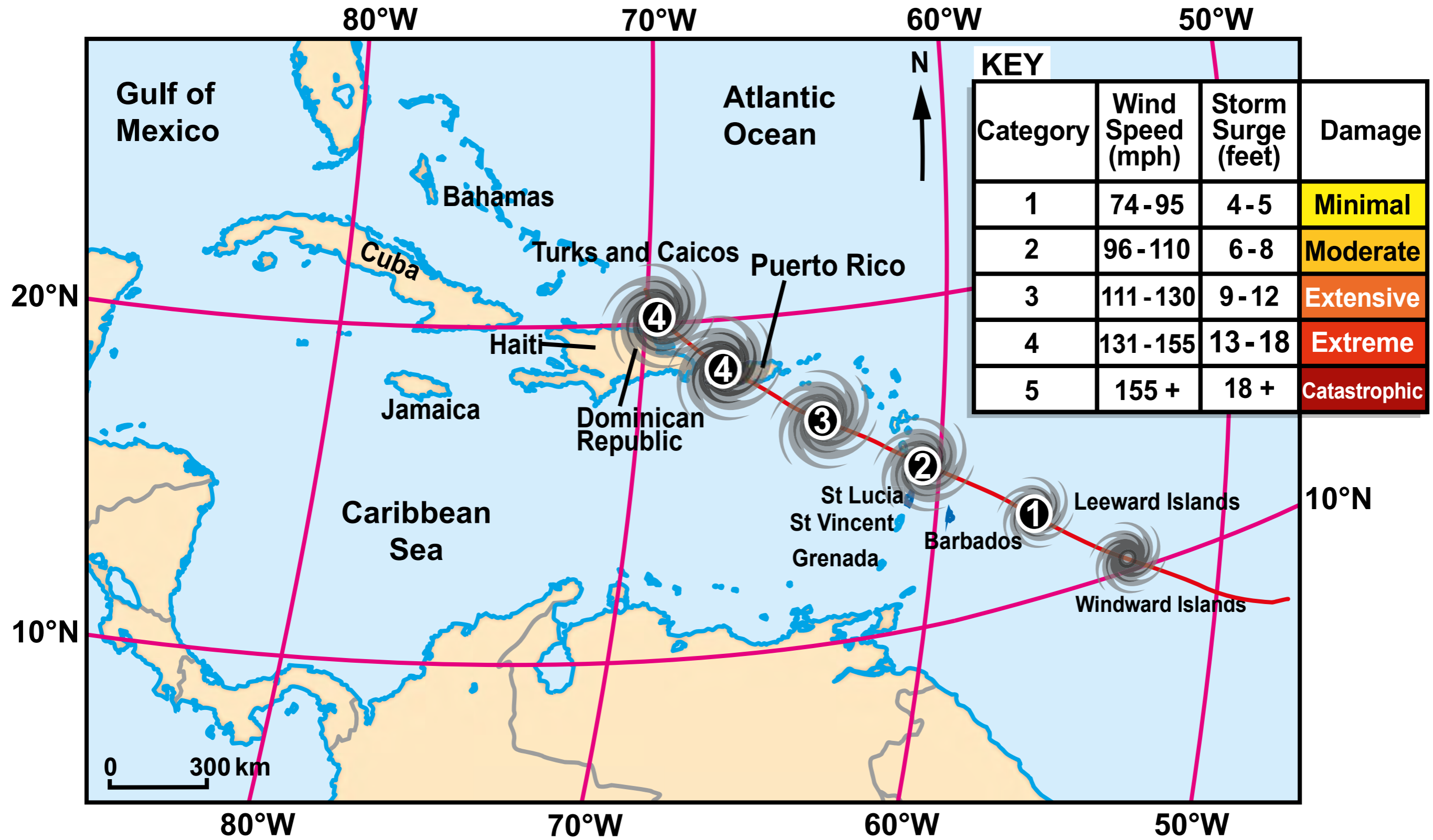
EARTHQUAKE RESISTANT DESIGN



EARTHQUAKE DRILL IN CALIFORNIA



HURRICANE MARIA IN THE CARIBBEAN, SEPTEMBER 2017



sparse

geology

evenly

wealth

soils

education

relief

strength

health

densely

rainfall

direction

STORELINE MANAGEMENT PLAN, NW ENGLAND

Key to Recommended Management Options:

-  Hold the line
-  Managed retreat
-  Do nothing
-  Low lying land
-  Small settlements
-  Populated areas



SOFT ENGINEERING, UK



HARD ENGINEERING, UK





GCSE

3110U10-1A

GEOGRAPHY

Unit 1 – Changing Physical and Human Landscapes

TUESDAY, 21 MAY 2019 – AFTERNOON

RESOURCE FOLDER

This folder is for use with questions in Unit 1.

This folder need not be handed in with your answer booklet.

Explorer series (1:25 000 scale)

EXPLORER MAP SYMBOLS

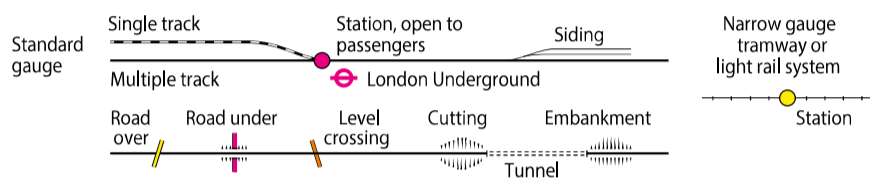


ROADS AND PATHS

Not necessarily rights of way

- Motorway
- Dual carriageway
- Main road
- Secondary road
- Narrow road with passing places
- Road under construction
- Road generally more than 4m wide
- Road generally less than 4m wide
- Other road, drive or track, fenced and unfenced
- Gradient: steeper than 20% (1 in 5); 14% (1 in 7) to 20% (1 in 5)
- Ferry; Ferry P (passenger only)
- Path
- Service area
- Junction number
- Toll road junction
- London River Services

RAILWAYS



PUBLIC RIGHTS OF WAY

Not shown on maps of Scotland

- Footpath
 - Bridleway
 - Byway open to all traffic
 - Road used as a public path
- The representation on this map of any other road, track or path is no evidence of the existence of a right of way.

OTHER PUBLIC ACCESS

- Other routes with public access (not normally shown in urban areas). The exact nature of the rights on these routes and the existence of any restrictions may be checked with the local highway authority. Alignments are based on the best information available.
- Recreational route (alternative route)
- National Trail
- Traffic-free cycle route
- National cycle network route number – traffic free; on road
- Permissive footpath
- Permissive bridleway
- Firing and test ranges in the area. Danger! Observe warning notices.
- Access permitted within managed controls, for example, local byelaws.

BOUNDARIES

- National
- County; England
- Unitary Authority (UA), London Borough (LB), Metropolitan District (Met Dist) or District (Scotland & Wales are solely Unitary Authorities)
- Civil Parish (CP); England or Community (C); Wales
- National Park boundary

ARCHAEOLOGICAL AND HISTORICAL INFORMATION

- Site of antiquity
- Site of battle (with date)
- VILLA Roman
- Non-Roman
- Visible earthwork

HEIGHTS AND NATURAL FEATURES

The contour interval on Explorer maps are shown at 5m and/or 10m vertical interval, to provide the most detailed heighting available.

Survey height:
52 · Ground
284 · Air

Surface heights are to the nearest metre above mean sea level. Where two heights are shown, the first is the height of the natural ground in the location of the triangulation pillar, and the second (in brackets) to a separate point which is the highest natural summit.

VEGETATION

Limits of vegetation are defined by positioning of symbols

- Coniferous trees
- Non-coniferous trees
- Coppice
- Orchard
- Scrub
- Bracken, heath or rough grassland
- Marsh, reeds or saltings

ACCESS LAND (England and Wales)

- Access information point
- Access land
- Access land in wooded area within sand
- Coastal margin

Access land portrayed on this map is intended as a guide to land normally available for access on foot, for example access land created under the Countryside and Rights of Way Act 2000, and land managed by National Trust, Forestry Commission, Woodland Trust and Natural Resources Wales. Some restrictions will apply; some land shown as access land may not have open access rights; always refer to local signage.

The depiction of rights of access does not imply or express any warranty as to its accuracy or completeness. Observe local signs and follow the Countryside Code. Visit: gov.uk/government/publications/the-countryside-code

GENERAL FEATURES

- Gravel pit
- Sand pit
- Other pit or quarry
- Landfill site or slag/spoil heap
- Electricity transmission line
- Solar farm
- Slopes
- Place of worship
- Current or former place of worship; with tower
- Current or former place of worship; with spire, minaret or dome
- Triangulation pillar
- Mast
- Windmill with or without sails
- Wind pump
- Wind turbine
- Building; important building
- Glasshouse
- Youth hostel
- Bunkhouse, camping barn or other hostel
- Bus or coach station
- Lighthouse; disused lighthouse
- Beacon

ABBREVIATIONS

See website for full list

- | | | | | | |
|---------|-------------------|--------|---------------------|---------|--------------------|
| BP | Boundary post | Liby | Library | Pol Sta | Police station |
| BS | Boundary stone | Mkt | Market | Resr | Reservoir |
| CH | Clubhouse | Meml | Memorial | Sch | School |
| F Sta | Fire Station | MP; MS | Milepost; Milestone | TH | Town hall |
| FB | Footbridge | Mon | Monument | NTL | Normal tidal limit |
| Ind Est | Industrial Estate | PO | Post office | W; Spr | Well; spring |

TOURIST AND LEISURE INFORMATION

- Art gallery (notable / important)
- Boat hire
- Boat trips
- Building of historic interest
- Cadw
- Camp site
- Camping and caravan site
- Caravan site
- Castle or fort
- Cathedral or Abbey
- Country park
- Craft centre
- Cycle hire
- Cycle trail
- English Heritage
- Fishing
- Forestry Commission visitor centre
- Garden or arboretum
- Golf course or links
- Heritage centre
- Historic Scotland
- Horse riding
- Information centre
- Information centre, seasonal
- Mountain bike trail
- Museum
- National Trust
- Nature reserve
- Other tourist feature
- Parking
- Park and ride, all year
- Park and ride, seasonal
- Phone; public, emergency, roadside assistance
- Picnic site
- Preserved railway
- Public house(s)
- Public toilets
- Recreation, leisure or sports centre
- Slipway
- Theme or pleasure park
- Viewpoint
- Visitor centre
- Walks or trails
- Water activities
- Water activities (board)
- Water activities (paddle)
- Water activities (powered)
- Water activities (sailing)
- Watersports centre (multi-activity)
- World Heritage site / area