

THE MAP
The 1:625 000 scale map shows the distribution of the different bedrock units as they would appear if the surface cover of superficial sediments, deposited by rivers and wind during the last two million years or so, were removed. The bedrock geology shown is a generalization compiled from the digital geological map at 1:625 000 scale for England, Wales and Scotland. This, in turn, is generated from more detailed geological maps prepared at 1:250 000 scale and based on surface observations and records of rock exposures, marine excavations and boreholes, combined with geophysical information derived from aerial photography, satellite imagery, geophysics and geochronology.

INDEX AND EXPLANATION
Age and bedrock. The approximate age in millions of years is given down the left-hand side, together with the names of the main periods and epochs. The scale is true either in terms of time or thickness but not necessarily a general sequence of superposition.

Sedimentary and metamorphic rocks
The map key has been constructed so that the most complete sequence of sedimentary and metamorphic rocks is shown down the left-hand side of the map. Where appropriate, additional names are placed in subsidiary columns to the right to show particular regional variations. The main categories of rocks on the map have been identified in the key labels using a combination of colour and a map code.

Colour
Where possible, the colours used in the previous edition of the map have been retained. In certain cases, however, the colour scheme has been changed to better represent the geological units. Where necessary, the colour scheme has been changed to better represent the geological units. Where necessary, the colour scheme has been changed to better represent the geological units.

Map code
The code consists, usually, of a letter case letter followed by a number. For example 'G1' is the code for the Palaeozoic period of geological time in the Earth's history. Thus, 'C' is used for Carboniferous and 'J' for Jurassic but where letters would be duplicated, well-established alternatives are used, for example 'K' for Cretaceous and 'E' for Cretaceous. The code rocks found in England and Wales and Metropolitan (M). Other rocks (discovered) occur in Scotland and elsewhere. A two letter map code such as 'CP' indicates a range of ages that cover the time period, in the future Carboniferous to Permian, but where a small part of the geological unit lies in an adjacent period then only the dominant part is given. Where each geological period is further subdivided into sub-periods, the sub-periods of the same age have the same number. In some places the numbering is based on the stratigraphical position, for example, subdivisions of the Silurian rocks, is four fold with 'S1', 'S2' and 'S4' already equivalent to the four epochs (Llandovery, Wenlock, Ludlow and Wrekin). In certain cases, the numbering of 'J' is based on the stratigraphical position. In practice these numbers can vary from one appropriate subdivision of the rocks, and are not intended to give a reference chronology.

Unit names
Each label on the key for Sedimentary and Metamorphic Rocks is linked with the names of the most important stratigraphical units in the field, but the list is not exhaustive. Where space permits, the main lithologies in each unit are described.

Lithological variants
In addition to the rectangular tables, there are a number of lithological variants. These describe important lithologies or types of different lithology to the main unit. They can usually be identified on the map by their distinctive colour, for example most limestones are blue.

Igneous rocks
Igneous and metamorphic rocks have a separate key. For the igneous rocks each lithology is described in a separate key. However, the colour scheme is based on a colour key used for different ages when required. They are labelled with an upper case letter, often an 'M', to indicate their age but no numbers are required. In addition, units that are metamorphically altered are labelled 'M' or 'metamorphic' while units that are not are labelled 'igneous'.

CROSS-SECTIONS
The cross-sections show how the units that appear on the map are interpreted at depth. The vertical scale is in metres on the map but the vertical scale has been increased (x2) for clarity and this exaggerates the thickness of the strata. See the dipmeter to the left of the section to correct the exaggerated dip to actual dip.

INDEX AND EXPLANATION
SEDIMENTARY and METAMORPHIC ROCKS

ERA	PERIOD	EPISODE	REGIONAL VARIATIONS	
CENOZOIC	NEOGENE	N	Red Clay, Norwich Clay and Washford Clay (only east of city of Dover)	
		N	London Clay, St Albans, London and Bracknell beds, Cross Gravels	
		N	Sandstone, silt and clay	
	PALEOGENE	G	Blackdown and Barton gss, Ringsted Formation, silt, silt and clay	
		G	Thames Sp (Thames and London Clay beds), silt, silt and clay	
	MESOZOIC	CRETACEOUS	C	Lambeth Gp (Lambeth and Reading beds), sand and clay, pebbles, shaly
			C	Thames Sand Formation, fine sand
			C	White Chalk (Lagotheca), silt with fine
		JURASSIC	J	Chalk Group
			J	Clay (Lagotheca) and Sandstone (Lagotheca), silt and sandstone
J			Lower Greenward Group and Winton Sand, sandstone	
J			Mudstone Group, mudstone with limestone	
J			Uffington and sandstone	
J			Portland Group, limestone, mudstone and sandstone	
J			Portland Group, limestone, mudstone and sandstone	
PALAEOZOIC	PERMIAN	P	Permian Sandstone, siltstone, sandstone, mudstone	
		P	Red Marl, Anglian Clay and Kennelley Clay, fine	
		P	Carboniferous, limestone, siltstone and mudstone	
	CARBONIFEROUS	C	Kilnseye and Oxford Clay, fine, mudstone, locally shaly	
		C	Great Oolite Group, limestone, siltstone and sandstone	
		C	Wolfe Sandstone Group, sandstone and mudstone	
		C	Wolfe Sandstone Group, sandstone and mudstone	
		C	Wolfe Sandstone Group, sandstone and mudstone	
		C	Wolfe Sandstone Group, sandstone and mudstone	
		C	Wolfe Sandstone Group, sandstone and mudstone	
PALAEOZOIC	DEVONIAN	D	Devonian Sandstone, siltstone and mudstone	
		D	Devonian Sandstone, siltstone and mudstone	
		D	Devonian Sandstone, siltstone and mudstone	
	SILURIAN	S	Silurian Sandstone, siltstone and mudstone	
		S	Silurian Sandstone, siltstone and mudstone	
		S	Silurian Sandstone, siltstone and mudstone	
		S	Silurian Sandstone, siltstone and mudstone	
		S	Silurian Sandstone, siltstone and mudstone	
		S	Silurian Sandstone, siltstone and mudstone	
		S	Silurian Sandstone, siltstone and mudstone	
NEOZOIC	CAMBRIAN	C	Cambrian Sandstone, siltstone and mudstone	
		C	Cambrian Sandstone, siltstone and mudstone	
		C	Cambrian Sandstone, siltstone and mudstone	
	NEOZOIC	N	Neozoic Sandstone, siltstone and mudstone	
		N	Neozoic Sandstone, siltstone and mudstone	
		N	Neozoic Sandstone, siltstone and mudstone	
		N	Neozoic Sandstone, siltstone and mudstone	
		N	Neozoic Sandstone, siltstone and mudstone	
		N	Neozoic Sandstone, siltstone and mudstone	
		N	Neozoic Sandstone, siltstone and mudstone	

IGNEOUS ROCKS

INTRUSIVE (Plutonic and hypabyssal)	EXTRUSIVE (Volcanic)
Palaeozoic: G	Palaeozoic: G
Cretaceous: K	Cretaceous: K
Permian and Carboniferous: CP	Permian and Carboniferous: CP
Devonian: D	Devonian: D
Silurian and Devonian: SD	Silurian and Devonian: SD
Ordovician and Silurian: OS	Ordovician and Silurian: OS
Neoproterozoic: X	Neoproterozoic: X

ABBREVIATIONS
Geological boundary, bedrock
Fault at rockhead
Sense of relative movement on strike-slip fault
Thrust fault, bars on hanging wall side

