

The geologist's view

"The outcrop of British Middle Jurassic carbonate rocks are at their most impressive and noticeable in the Cotswolds, and have provided classic sections for their study since the earliest days of geology. If you are a geologist, it is stunning. But even if you simply love the Cotswolds you will find huge fascination in what the geopark has to offer."

Gloucestershire Geology Trust

Schools resource

Many Gloucestershire schools are now recognising the huge educational resource on their doorstep. Children are enthused by hands-on learning about geology, while teachers can deliver elements of the curriculum for science, geography, citizenship and education for sustainable development.



The Gloucestershire Geology Trust runs a programme of Rock and Fossil Roadshows, either for the general public or at local schools. Field trips can also be arranged to

"You pitched the activities very well for the different ages and abilities of the children and gave them a real insight into the incredible timescale of the earth."

Headteacher

show pupils geology in-situ. A new education pack is available for teachers, with lessons on geological time and dinosaurs.

Get involved

Visit our website www.cotswoldhillsgeopark.org or phone Hannah Evans on 01452 864438 for more information.

Or you can email hellen@glosgeotrust.org.uk to sign up for our Rock & Fossil Roadshows.



Useful contacts

Guided walks

Gloucestershire Wildlife Trust: 01452 383333, info@gloucestershirewildlifetrust.co.uk

Gloucester Ramblers Group: 01452 864451, www.ramblers.co.uk

The National Trust (Wessex): 01985 843600, enquiries@thenationaltrust.org.uk

Tourist information centres

Bourton-on-the-Water: 01451 820211

Cirencester: 01285 654180

Cotswold (Stow-on-the-Wold): 01451 831082

Stroud: 01453 760960

General

Gloucestershire Geology Trust: www.glosgeotrust.org.uk

Cotswolds AONB: www.cotswoldsaonb.com

Natural England: www.naturalengland.org.uk

Huntsmans Quarries: www.huntsmansquarries.co.uk

Royal Agricultural College: www.rac.ac.uk

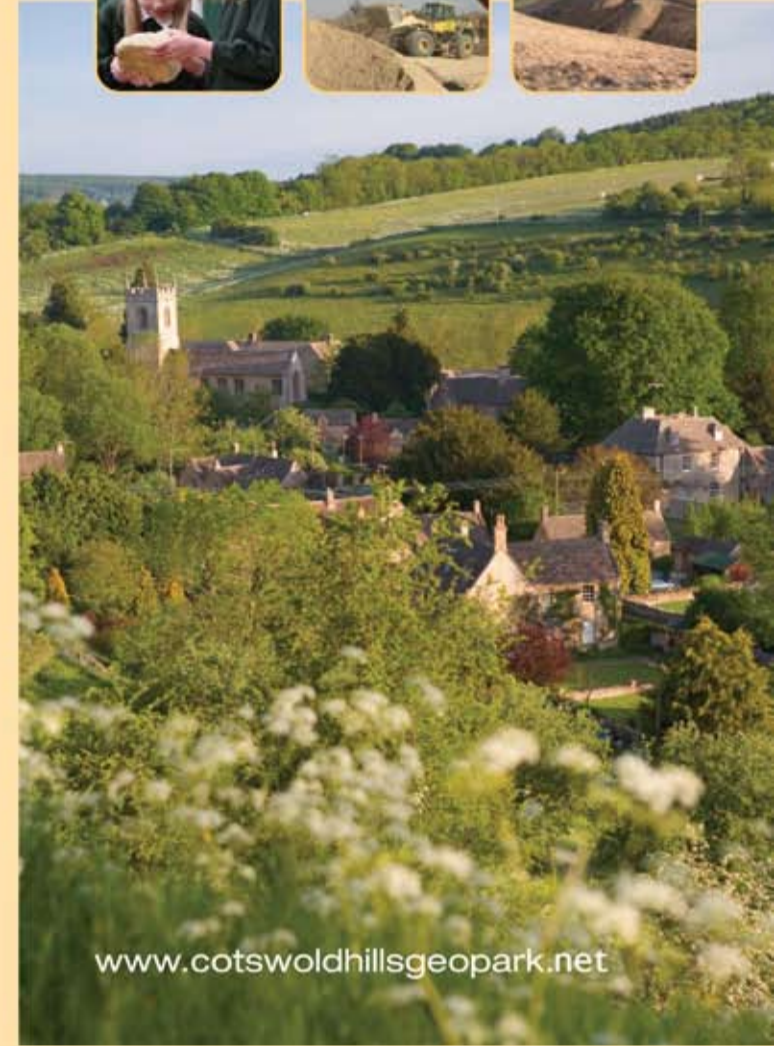
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www.cotswoldhillsgeopark.net



Cotswold Hills Geopark

... an amazing journey through time



www.cotswoldhillsgeopark.net

Explore the living history beneath your feet

Dig deeper

The beauty of the Cotswolds is more than just skin deep. It's the geology beneath the rolling hills and pretty villages that makes this well-loved corner of England the unique place it is today.

The geology of Gloucestershire is some of the most diverse in Britain and tells a fascinating story of the changing landscape of Gloucestershire over 200 million years. Its influence can be seen in the biodiversity, agriculture and even the beers of the Cotswolds (brewed with local water).

Formed during the Jurassic period some 170 million years ago, the distinctive honey-coloured limestone is the trade mark of the Cotswolds.

Geopark

The geology of the Cotswolds is so special that a swathe of land almost 60 miles long has been designated as the proposed "Cotswold Hills Geopark". A geopark is an area of diverse and significant geology which contains accessible sites and actively promotes them to the community and to tourists.

One important aim for the Cotswold Hills Geopark is to win recognition as part of the European Network of Geoparks. Quite apart from the fact that the local geology richly deserves that accolade, it would also bring further funding and the opportunity to become involved in wider initiatives. The proposed geopark brings strong new impetus to a cause that is supported by local authorities and voluntary organisations as well as Cotswolds industries ranging from tourism to quarrying.



Greenhouse to icehouse

British weather today is generally moderate, but the layers of rocks that lie beneath the Cotswold Hills tell of a dramatically changing climate. Some 170 million years ago, huge reptiles and shellfish thrived in a warm, shallow sea that covered the land. It is from the remains of the shellfish that the limestone that we now think of as typical of the Cotswolds was created.

When the seas receded, dinosaurs roamed the earth. The abundance of fossils found across the proposed geopark include footprints and vertebrae belonging to *Megalosaurus*.

When the seasonal snow caps of the last Ice Age melted 12,000 years ago, they cut the valleys we see today.



Image: www.dogystore.com

Back to the future

You can find clues to our heritage across the Cotswolds – in the wildlife, the landscape features and the exposed rock outcrops. Our aim is to make sure that these geological sites are properly preserved for future generations to enjoy.

Understanding geology is key to properly managing natural resources, such as groundwater supplies.

There are few places in the UK where geology plays such a significant role in the character of the built environment. Towns and villages throughout the district derive much of their character from the use of local limestone for building and roofing, while drystone walls are one of the most distinctive features of the Cotswold countryside.

Beneath our feet

The rocks that form the Cotswolds Hills are mainly made up of two different geological stages of the Jurassic period.

MIDDLE JURASSIC

The natural absorbency of **Fuller's Earth** makes it ideal for cat litter and as a grease absorbent

Chipping Norton Limestone is a hard aggregate used to make concrete or in the sub-base for roads

Walling stone comes from **Salperton and Aston limestone**

Stone for buildings in the Cotswolds – and beyond – comes from the **Birdlip Limestone Formation**

LOWER JURASSIC

Many fossils have been found in the **Bridport Sand Formation**

The **Whitby Mudstone Formation** controls the emergence of many springs

The **Marlstone Rock Formation** is locally rich in iron ore

Dyrham Mudstone contains clays and silts used for brick-making.



www.cotswoldhillsgeopark.net

Cotswold Hills Geopark

... an amazing journey through time

1 Cleeve Hill SSSI T

Perhaps the best place in the Cotswolds to see a wide range of exposed rocks, as well as some rare limestone grassland.



2 Leckhampton Hill

Quarrying for limestone has exposed the thickest sequence of Middle Jurassic rocks anywhere in the country. Don't miss the Devil's Chimney, which is believed to be a practical joke dreamt up by bored quarry workers of the 18th century looking for a way to immortalise their work. SSSI T



3 Crickley Hill SSSI T

This country park and Scheduled Monument is the place for fossil-hunting. Echinoids, brachiopods, gastropods and corals have all been found in the Pea Grit.



4 Stony Furlong Railway Cutting SSSI

This site exhibits a suite of rocks from The Birdlip Limestone to Fuller's Earth, which contain a wide variety of fossils.

5 Rodborough Common SSSI

The 250 acres of National Trust land features an 18th century fort. You can clearly see how geology affects biodiversity. The common is on top of a hill and the sloping ground and limestone beneath support taller vegetation, which is popular with insects.

Lydney

Quedgeley
Cainscross
Stonehouse
Stroud
Chalford
Nailsworth

7 Woodchester Park

A National Trust park with an unfinished gothic mansion built of local limestone. Streams running down the valley sides are building small dams and waterfalls from tufa - a calcium carbonate deposit. SSSI

6 Selsley Common SSSI

Excellent features which show how changes in the environment affect the types of rocks deposited. The Roaring Gutter stream cuts through the slope, exposing the Birdlip Limestone Formation.



8 Minchinhampton Common SSSI

Underground mines here provided stone for the interior for the House of Commons and Gloucester Cathedral. They are home to rare horseshoe bats.

9 Huntsmans Quarry SSSI

Active quarries provide an important geological resource, revealing vertical sections not visible in natural outcrops. Huntsmans Quarry produces the stone familiar in buildings across the Cotswolds. It also has a geological Site of Special Scientific Interest, which can be visited by arrangement (tel: 01451 850555).



10 Ebrington Hill

At 261m, this is the highest point in Warwickshire. The low ground between Ebrington Hill and Dovers Hill contains glacial sediments, some of which originated in north Wales.

Other Cotswolds attractions

- Belas Knap
- Chedworth Roman Villa
- Prinknash Abbey
- Cotswold Farm Park
- Snowhill Manor
- Broadway Tower and animal park
- Batsford Arboretum
- Bourton-on-the-Water
- Corinium Museum
- Museum in the Park

Key

- Geopark area
- County boundary
- Roads
- SSSI Site of Special Scientific Interest
- T Trail leaflet available from Gloucestershire Geology Trust