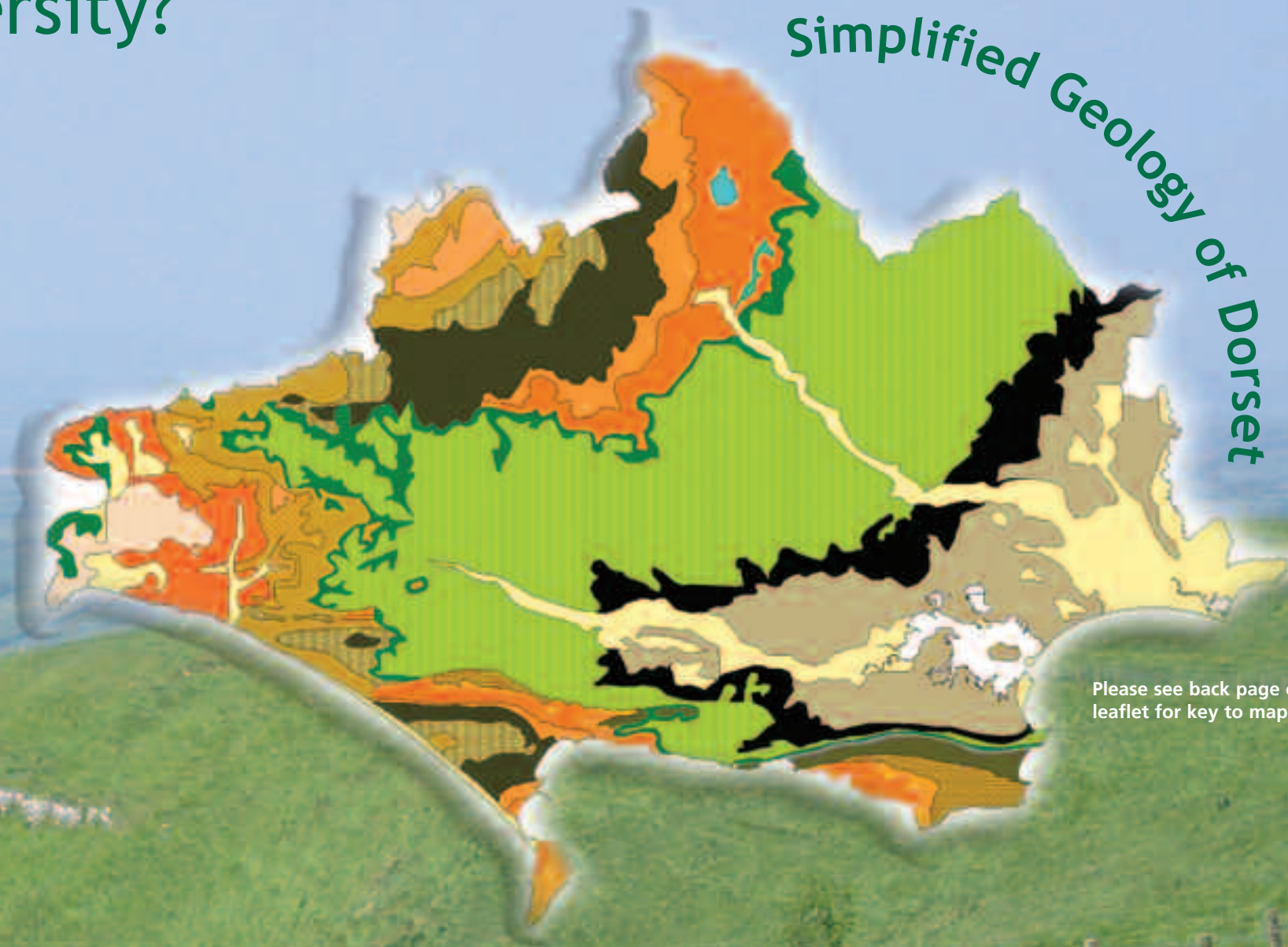


A scenic view of a coastal cliff with a large, circular fossil of a nautilus shell in the foreground. The text "discover biodiversity in your area" is written across the image.

Dorset is shaped by the millions of years of geological time and process. It is a rich natural tapestry of layers, folds and features which can be seen in the landscape.

Simplified Geology of Dorset



Please see back page of leaflet for key to map.



How can you support DIGS?

Dorset Important Geological Sites Group help protect geodiversity sites in Dorset. DIGS needs you!

You can help in many ways; even if you have little or no geological know how your membership will help conserve sites.

You could get involved in site clearance projects or education programmes.



To Join...

DIGS membership


Dorset's Important Geological Sites Group was founded in 1993, DIGS is affiliated to UKRIGS and Dorset Wildlife Trust. A group of amateur and professional people who care about conserving our geological heritage in Dorset. If you would like to join please send your details to:

The DIGS Liaison Officer
Dorset Wildlife Trust, Brooklands Farm,
Forston, Dorchester, Dorset, DT2 7AA

I would like to join DIGS

Name: _____

Address:

Postcode

Tel:

Email:

I enclose a cheque for £5.00 for one years membership and understand I will receive a copy of the *Beneath Your Feet* self guided walks leaflet. (While stocks last)

What on Earth is Geodiversity?

Key for Simplified Geology map

The figure displays three columns of color-coded boxes representing geological rock types:

- Jurassic Rocks:**
 - Purbeck Beds (light brown)
 - Portland Beds (orange-brown)
 - Kimmeridge Clay (dark brown)
 - Corallian (orange)
 - Oxford Clay (dark brown)
 - Combehead Forest Marls (dark brown)
 - Fulham's Earth (light brown)
 - Inferior Collië (dark brown)
 - Upper Lias (orange-brown)
 - Middle Lias (orange)
 - Lower Lias (light brown)
- Cretaceous Rocks:**
 - Upper, Middle and Lower Chalk (light green)
 - Upper Greensand (light green)
 - Gault (light blue)
 - Lower Greensand (teal)
 - Wealden (dark brown)
 - Purbeck Beds (light brown)
- Paleogene and Neogene Rocks:**
 - Alluvium, Plateau Gravels, Valley Gravels & Head (light yellow)
 - Brackisham Beds, Bagshot Beds (light brown)
 - London Clay, Reading Beds (black)

Visitor Centres and Museums with Geology

Charmouth Heritage Coast Centre	01297 560772
Chesil Beach Centre	01305 760579
Kimmeridge Marine Centre	01929 481044
Lulworth Heritage Centre	01929 400587
Portland Bill Visitor Centre	01305 861233
Studland Beach Information Centre	01929 450259
Swanage, Durlston Country Park	01929 424443
Swanage Heritage Centre	01929 421427
Dorset County Museum, Dorchester	01305 262735
Gillingham Museum, Chantry Fields, Gillingham	
Sidmouth Museum, Sidmouth, Devon	01395 516139
Fairlynych Museum, Budleigh Salterton, Devon	01305 445275
Sherborne Castle	www.sherbornecastle.com

Other Useful Contacts

Earth Science Advisor 01305 228575
Dorset LGAP website www.dorsetlgap.org.uk
The Jurassic Coast website www.jurassiccoast.com
English Nature website www.english-nature.org.uk
DIGS website www.dorsettrigs.org.uk



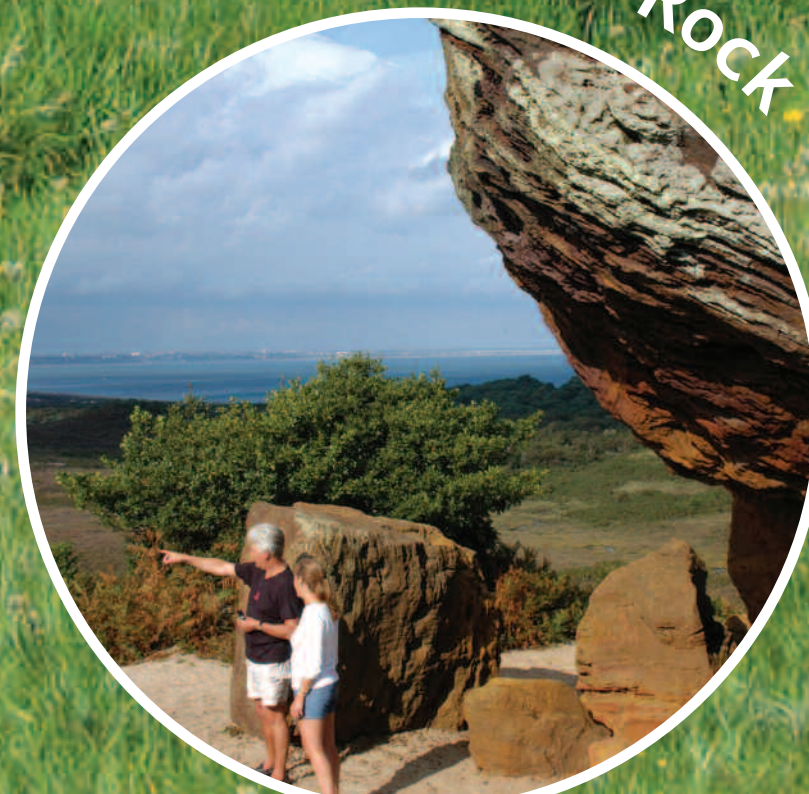
Local Geodiversity Action Plan

In Dorset we have a Local Geodiversity Action Plan or LGAP, the aim of which is to:

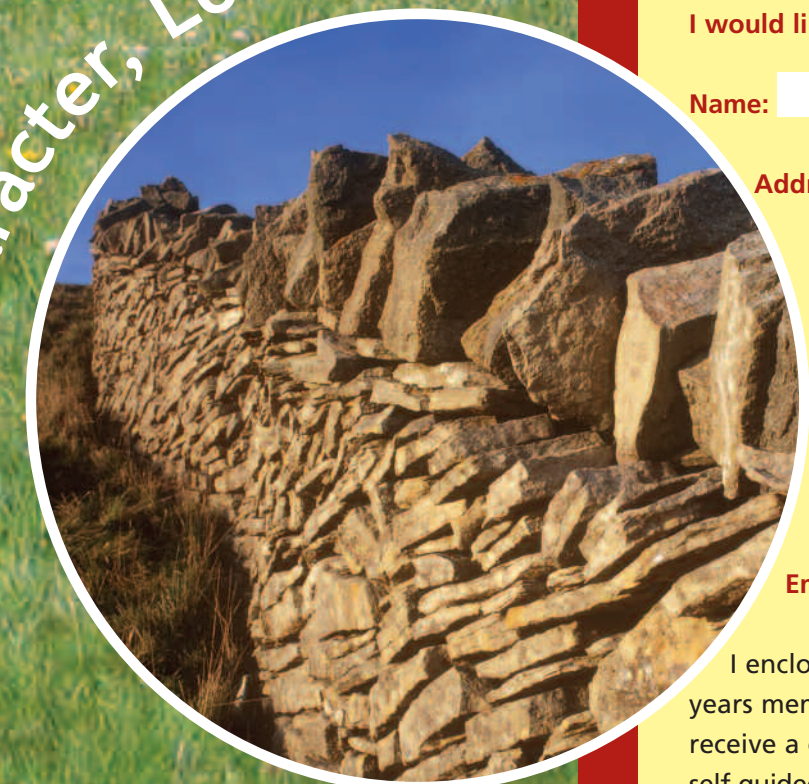
Draw together existing information and ongoing projects concerned with the geology, geomorphology, soils and landscapes of Dorset and the East Devon Coastal Corridor, and to initiate further actions that will lead to:

- The conservation and enhancement of the geological resource.
- Providing guidance to the planning authorities on sustainable policies for geodiversity.
- Increasing appreciation and understanding of the geological heritage of the area.

Full details are available from
www.dorsetlgap.org.uk



Agglestone Rock



Local Character, Local Stone

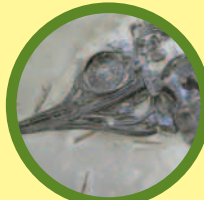
Eggardon Hill RIGS site: Horizontal natural outcrops of Upper Greensand 95 million years old



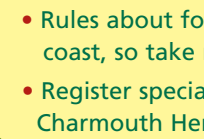
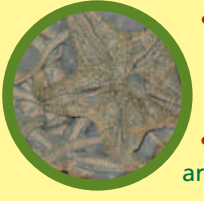
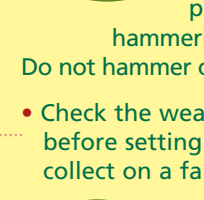
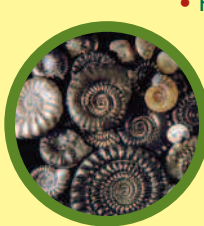
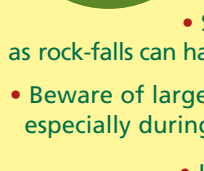
Your Pocket Guide

Carefully tear out the yellow box for your pocket guide to safe and responsible fossil collecting on the West Dorset Coast.

Fossil Collecting



- Fossil hunting is a great outdoor hobby, so your choice of clothing should reflect this
- The best place to find fossils is amongst pebbles and boulders on the beach



- Stay away from the cliffs, as rock-falls can happen at any time
- Beware of large waves, especially during rough weather
- Hammers and chisels are not essential – plenty of fossils can be found without them
- If you do choose to use a hammer, always wear eye protection and keep hammering to a minimum. Do not hammer or dig in the cliffs
- Check the weather and tides before setting out. It is best to collect on a falling tide
- Keep away from the cliff edge
- Mudflows are dangerous - stay well away
- Always tell someone where you are going and how long you will be
- Rules about fossil collecting vary along the coast, so take note and respect local signs
- Register special or rare fossil finds at the Charmouth Heritage Coast Centre

The Jurassic Coast World Heritage Site



The Jurassic Coast includes the Dorset and East Devon coasts and provides a window into the past. From Exmouth to Studland you can view rocks from the Mesozoic Era (Triassic, Jurassic and Cretaceous 250-65 million years ago) this represents 185 million years in 95 miles. It is diverse, providing access to rocks formed in hot arid deserts to tropical seas. The cliffs are a natural feature controlled by erosion.

The main threat to the coastal outcrops is from intervention by man in the form of coastal sea defences and development.



What on Earth is Geodiversity?

Geodiversity is the range of rocks, fossils, minerals, soils, landforms and natural processes that make up the Earth's landscape and structure.

Much of our coast is designated for its geodiversity. The Jurassic Coast World Heritage Site was inscribed for its Earth Science interest.



Lulworth Cove, Jurassic Coast World Heritage Site:
Purbeck strata crumpled by Alpine folding 35 million years ago

More about Geodiversity



Geodiversity links people, culture, landscape and biodiversity. It underpins all our activities from farming to engineering, gardening to waste management, recreation to industry.

All aspects of our daily lives are touched by geology even if we are often unaware of it. The range and diversity of earth science features are just as important a part of our heritage as wildlife and culture. In an area rich in landscape value, geodiversity is key to integrated management and conservation.

Local Character Local Stone



There is a rich history of quarrying in Dorset. There are many disused quarries which once supplied stone to build houses and roads. It makes sense to use local resources to build your home, so why ship building materials over long distances? Each village or town in Dorset can tell a story about the local geology through the buildings. This theme of local character, local stone is addressed by Area of Outstanding Natural Beauty management plans.

Dorset County



The county of Dorset is rich in geodiversity, 200 million years of earth history are reflected in the many soil types, rocks and fossils. Our earliest habitations were built on hill tops, hills which are only there because of the underlying geological structure and erosion over vast periods of time. Chalk dominates the central swathe of the county, a high rolling landscape providing farmers with arable land and the army with training grounds. The chalk overlies older (200 -140 million years ago) Jurassic rocks which come to the surface in the west, north and along the coast. The various rocks provide many soil types often within close proximity of one another. The different rocks have different textures and resistance to erosion which leads to many landscape features.

Geodiversity underpins Biodiversity



In the east of the county younger rocks, clays, sands and gravels from the Paleogene and Neogene Periods (65 million years to the present day) create heath land rich in plant species and provide aggregate for extraction. On Portland thin soils low in nitrogen create a fragile ecosystem. Along our shores, shifting sands, shingle beaches and landslides create ever changing environments, while beneath the sea rocky ledges provide shelter for myriad marine species. Rocks and geological processes quite literally are the building blocks of biodiversity.

Old Quarries



Old quarries are havens for wildlife; many are designated as Sites of Special Scientific Interest (SSSI), for wildlife and geology. In addition there are some 60 quarries and pits which are designated as Regionally Important Geological Sites (RIGS). A group of volunteers watch over these sites and you can join them by filling out the form attached to this leaflet. RIGS are protected for their educational value as examples of each of the different layers of rock in Dorset. Local government has agreed that they require protection and a check is made on all planning applications which might affect SSSI and RIGS sites.

Triassic Period
250 million years ago
(East Devon section of the Jurassic coast)

Jurassic Period
200 million years ago

Cretaceous Period
140 million years ago

Paleogene Period
65-23 million years ago

Neogene Period
23 million years - present day