

Location & Access: GR SY 022795, on the S W Coast Path. Car parking and toilets near the Lifeboat station at SY 014800. Trains to Exmouth train station (25 minutes walk away). Stagecoach Bus service 95 from Exmouth Station to the Lifeboat Station hourly in summer. Accessible parking near Orcombe Point. A flat route to the GeoNeedle, can be reached by a zigzag sloping path from the beach and road.

Key Geography: Gateway to the Jurassic Coast, with dramatic red cliffs, sandy beaches and extensive views on a clear day.

Description: The GeoNeedle marks the start of the 96-mile long Jurassic Coast. From here to Dorset, 180 million years of geological history can be seen in the cliffs of Triassic, Jurassic and Cretaceous rocks. The GeoNeedle itself is made from the various rock types found on the Jurassic Coast. It was designed by public artist and sculptor Michael Fairfax to mark the opening of this World Heritage Site and unveiled by HRH Prince Charles in 2002.

The rocks forming the cliffs are best seen at Rodney Point, where the coast road (Queen's Drive) ends. They are mudstones and sandstones deposited at the beginning of the Triassic about 250 million years ago when Britain was located close to the latitude of the present day Sahara. The climate was semi-arid with wetter periods characterised by streams and lakes. Meandering rivers deposited the cross-bedded cemented sandstones which can be seen at sea level where weathering and erosion of weaker beds has produced a stepped cliff profile. Higher up the cliff, are red mudstones, silts and clays which were deposited in large lakes; they are much softer and easily broken up by weathering, wind and rain. There are several faults visible in the sandstone which are exploited by wave action.

On a clear day, views from the GeoNeedle are spectacular, east along the Jurassic Coast towards Lyme Regis and Portland, and west across the Exe Estuary to Dawlish, Torbay, and Berry Head. Owned by the National Trust, this area is rich in wildflowers including orchids, but please do not pick them as they provide food for many other species. Look out for butterflies and moths and birds such as buzzards, kestrels, cormorants and kittiwakes. Information panels giving details about rock formations, prehistoric environments and coastal features can be found at the start of the walk and by the beach. A series of small metal plaques mounted along the path provide many interesting facts about the area, wildlife and scenery.

The GeoNeedle can be reached easily from the beach and the coast road, and it is possible to walk further along the coast path to Sandy Bay/Littleham or Budleigh Salterton where you can return to Exmouth by bus but check the timetable first especially in winter. A set of steep steps lead down the beach at Rodney Point which can be accessed at low tide, *(continued overleaf)*



Curiosity Questions:

- # Why are the rocks in this area Red?
- # What was the environment like 250 million years ago when these rocks formed?
- # How many different types of birds and butterflies did you see? Can you name them?

Further information:

<https://jurassiccoast.org/visit/attractions/exmouth/>
<https://www.southwestcoastpath.org.uk/walksdb/562/>

Reviewer: John Davidson

Author / Consultant

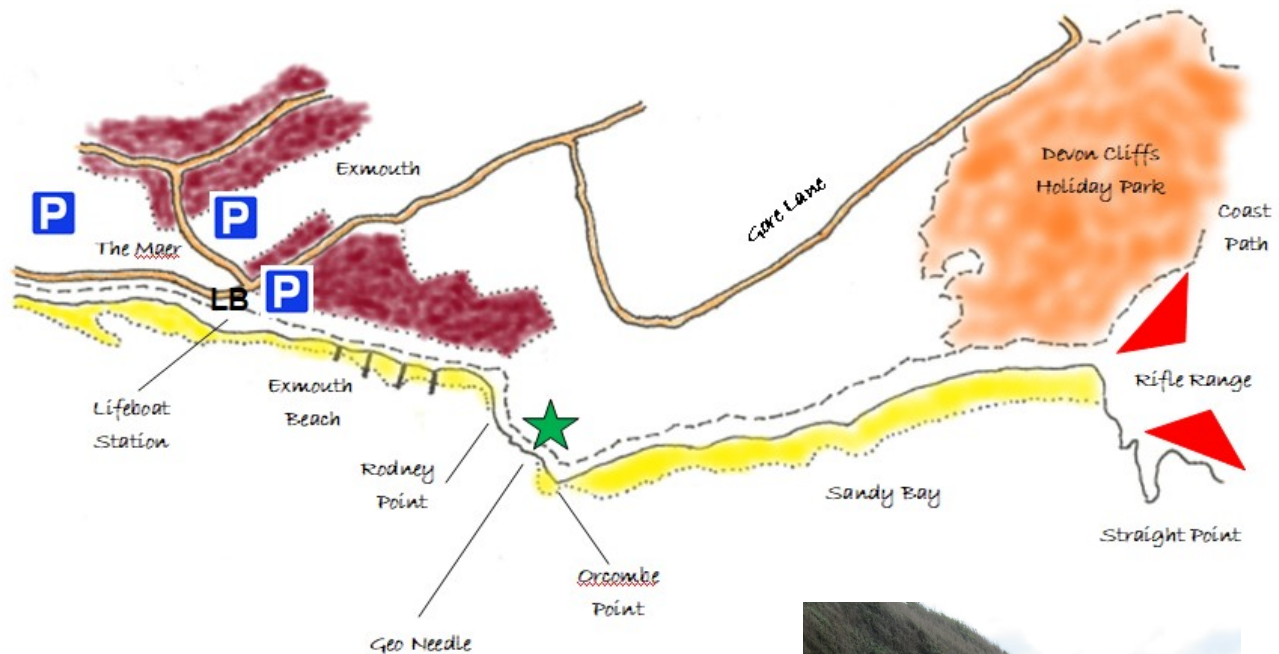
John Davidson is former Head of Geography, Director of Alumni and member of the Senior Leadership team at Exeter School, Devon.

but they may be slippery when wet. Refreshments are available at most times of year near the car parks.

Safety: The cliffs near the GeoNeedle are very steep and unstable, and the cliff edge must be avoided. The beach at Orcombe Point is covered by the sea at high tide – be careful not to get cut off! The rocks are dangerous when wet.



Orcombe Point



Answers to Curiosity Questions:

Why are the rocks in this area red? *(The red colour comes from iron oxide in the rocks)*

What was the environment like 250 million years ago when these rocks formed? *(These rocks formed in a hot, dry desert at the centre of a huge continent with sand dunes and occasional flash floods)*

How many different types of birds and butterflies did you see? Can you name them? *(Butterflies seen in summer include marbled white, small tortoiseshell, meadow brown, gatekeeper and peacock. Frequently seen bird species include kestrels, skylarks, cormorants and swallows)*