## USEFUL RESOURCES:

**Maps:** Ordnance Survey 1:25,000 Outdoor Leisure 15, Purbeck and South Dorset. British Geological Survey Map Sheet 343 Swanage.

**Books:** Geology of the Dorset. John Cope. Geologists' Association Guide No 22.

Coast and Country Geological Walks in and around Dorset. DGAG

**Websites:**

dorsetgeologistsassociation.org

jurassiccoast.org

southampton.ac.uk/~imw

View looking south from Old Harry towards Studland showing typical vertical Chalk cliffs and stacks.

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# WORLD HERITAGE COAST LOCATIONS:

# OLD HARRY ROCKS

# THE DEVELOPMENT OF COASTAL LANDFORMS.

The Old Harry Rocks viewed from just south of Handfast Point.

# WHAT'S SPECIAL ABOUT THE COAST AT THE OLD HARRY ROCKS?

The coastline between Studland and Swanage has an outstanding section of Chalk cliffs with characteristic scenery and marks the eastern end of the World Heritage Coast. The vertical cliffs show a number of landforms which have evolved over a period of time. It is also helpful to take a boat trip from Poole to Swanage and back to get a different view.

## HOW TO GET THERE:

**1.** Location: The eastern end of Ballard Down at GR SZ 055826. Boat trips are available in the tourist season between Poole Quay and Swanage and provide a good view of the coastal section from the sea.

**2.** Access over land is gained via the coastal footpath from Studland village with parking at the National Trust car park (GR SZ038825). Alternatively, park in New Swanage at GR SZ 031803 and walk through the chalet park to the coast path and follow it along the coast N.E. to Old Harry. The walk from Studland is easier, shorter and less steep.

**3.** Facilities. There is a pub / hotel by the car park in Studland as well as shops in the village and there are extensive facilities in Swanage although not necessarily in New Swanage.

## HEALTH & SAFETY:

The cliffs are vertical and liable to rock falls. There are places where there is clear evidence that people walk out to precarious positions to get a better view. **This is not to be recommended**. You should not put yourselves or others in danger. Because of the steep nature of the cliffs you should also be careful in windy weather

## THE GEOLOGY:

The cliffs in this section of coastline are made of Upper Cretaceous Chalk, 70-90 million years old. The rocks get progressively older as you move north with the older Lower Cretaceous in Swanage Bay to the south and the younger Tertiary strata to the north in Studland Bay. There is interest in both these locations and they can easily be accessed from the parking locations mentioned earlier in this leaflet.

Generally speaking the strata are horizontal but around the Ballard Fault the strata become vertical. The picture above shows the curved fault dipping to the right with the vertical strata.

The coastal cliffs develop because of undercutting by the erosive effect of waves. Lines of weakness seen (such as faults and fractures) are picked out by the sea and caves develop. Where the coastline has a promontory the sea erodes a cave through to form an arch.

Over a period of time the arch gets bigger and eventually the roof collapses to form a pillar of rock or stack. These in turn are eroded away leaving stumps, one of which can be seen in the picture over leaf.