

## DORSET LOCAL GEOLOGICAL SITES SURVEY

Site number                    G SZ09/11

Site name                     Whitecliff, Parkstone Bay

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### Summary description

#### **Tertiary, Eocene: Bracklesham Group, Poole Formation, Parkstone Clay.**

The old cliff on the north side of Parkstone Bay shows the junction of the Parkstone Clay with the underlying sand. At the top of the cliff the highest sand is a thin bed within the clay, very fine grained, with some lignite. The white clay is silty with rootlets and a lateritic base. Below the clay is a fine grained thinly bedded orange-buff sand, with a fine grained but massive buff sand at the base of the cliff. (Made ground obscures the base of the original cliff.) The clay is of historical interest, being one of those used at the South-Western potteries nearby, which closed in the 1960's.

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#### **Tertiary, Eocene: Bracklesham Group, Poole Formation, Parkstone Clay.**

This old sea-cliff has now partly disappeared under the landfill of the recreation ground. The white clay is named the Parkstone Clay, the highest clay in the Poole Formation, previously known as the Pipe Clay Series. The other clays are Broadstone, Oakdale and Creekmoor, named from the areas of Poole where the clay reaches the surface.

The clays and sands of the Poole Formation were deposited as sediments in a river estuary about 35 to 40 million years ago. The river started in the area which is now Devon and Cornwall, eroding the land and carrying debris eastward. Larger debris and pebbles were deposited first, then as the river slowed in a wide valley the sand was deposited with the lighter silt and clay particles being carried the furthest until the river reached the sea. There were variations in sea level over this great length of time so that the clays were deposited when the sea level was high, forming lagoons, and the sands were deposited when the sea level was low leaving an open river valley. This has resulted in repetitions of sand and clay sequences that have been given the local names. The climate at that time was subtropical with ferns, magnolia, pine trees, many insects and small mammals living in the river valley.

The several different clays from the Poole Formation were used for bricks, drainage pipes, domestic pottery, terracotta and the small smoking pipes which gave the name Pipe Clay Series to this group. During the 19<sup>th</sup> and 20<sup>th</sup> centuries there were over 50 'potteries' in the Borough of Poole manufacturing the different products from the different beds of clay, according to their clay, organic or mineral suitability. The white clay of the Parkstone Clay was particularly suitable for terracotta. The panels and the eagle on the Park gates are made of terracotta. The moulds were still kept in the South Western Potteries (500 metres east of Whitecliff recreation ground) until it closed in the 1960's, but were then buried under the housing development. During the working life of the pottery the workers dug a deep pit that could also reach the lower Broadstone Clay, which was suitable for drainage pipes.