

# CORK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	White Bay		
Other names used for site			
<b>IGH THEME</b>	IGH8 Lower Carboniferous		
<b>TOWNLAND(S)</b>	Carlisle Fort, Glanagow, Trabolgan		
<b>NEAREST TOWN/VILLAGE</b>	Whitegate		
<b>SIX INCH MAP NUMBER</b>	100		
<b>ITM CO-ORDINATES</b>	582690E 561840N (end of path from car park)		
<b>1:50,000 O.S. SHEET NUMBER</b>	81	<b>GSI BEDROCK 1:100,000 SHEET NO.</b>	25
<b>GIS CODE</b>	CK087		

## Outline Site Description

Extensive exposure in rocky cliffs along a public beach.

## Geological System/Age and Primary Rock Type

Sandstone and mudstone of the Cuskinny Member and Pig's Cove Member of the Lower Carboniferous (Mississippian) Kinsale Formation.

## Main Geological or Geomorphological Interest

This site on the eastern side of the entrance to Cork Harbour hosts a section through the core of an east-west-striking syncline. Two units are exposed at the site, the Cuskinny Member and the overlying Pig's Cove Member. Both are part of the Kinsale Formation, which forms the base of the Carboniferous succession in the region and overlies the uppermost Devonian rocks, represented by the Old Head Sandstone Formation. These two formations comprise the lower part of the Cork Group, which consists exclusively of marine clastic rocks deposited in the South Munster Basin in latest Devonian to early Carboniferous times.

The Kinsale Formation comprises mudstone and subordinate sandstone deposited on a relatively shallow water shelf. The Cuskinny Member consists of sandstone units, mudstone and heterolithic sandstone-mudstone units. The Pig's Cove Member generally lacks sandstones and comprises parallel-laminated mudstone and siltstone with lenses of fine sand (linsen). The linsen textures are also heterolithic features and such features reflect alternations in sediment supply, characteristic of deposition in a wave-influenced shallow coastal marine environment, including tidal flats.

The site extends for over 400 m along the beach. On the southern side of the syncline, parasitic folds are well exposed and are accompanied by a near vertical axial plane cleavage.

## Site Importance – County Geological Site

This site comprises a short section through two members of the Lower Carboniferous Kinsale Formation, exposed in the core of a syncline. The heterolithic sandstone-mudstone composition of the members, well exposed at this site, reflects their deposition in a shallow marine coastal environment.

## Management/promotion issues

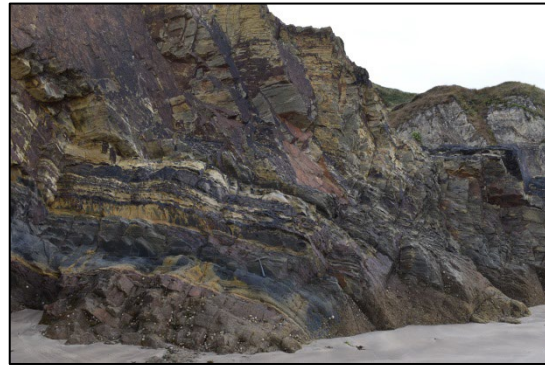
The site is on a public beach, popular with swimmers and walkers. It is reached via a path from a car park. The path leads to the northern side of the site. A second partly overgrown path runs south from this main path, past a ruined house on the cliff overlooking the beach, and leads to the southern side of the site. This path is quite overgrown at its lower end and the site would benefit from clearance of vegetation. The site merits promotion, possibly as part of a coastal geological heritage trail.



Northern end of White Bay strand, view eastwards of northern limb of Grab-All Bay syncline, with mudstone of the Pig's Cove Formation (right) overlying sandstone and shale of the Cuskinny Formation (left).



Close-up of mudstone of Pig's Cove Member displaying fine sand lenses (linsen).



Mudstone and siltstone of the Pig's Cove Member in centre of syncline.



Northern end of White Bay strand, interbedded sandstone and shale of the Cuskinny Member.



