CORK - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Old Head of Kinsale**
Other names used for site	
IGH THEME	**IGH8 Lower Carboniferous, IGH10 Devonian, IGH9 Upper Carboniferous, IGH3 Carboniferous to Pliocene Palaeontology**
TOWNLAND(S)	**Lispatrick Lower, Lispatrick Upper, Ballymackean, Downmacpatrick or Oldhead**
NEAREST TOWN/VILLAGE	**Ballinspittle**
SIX INCH MAP NUMBER	**137**
ITM CO-ORDINATES	**562420E 540980N (Signal Tower)**
1:50,000 O.S. SHEET NUMBER	**87** **GSI BEDROCK 1:100,000 SHEET NO.** **25**
GIS CODE	**CK069**

Outline Site Description
Landmark headland with an exposed coastline comprising cliffs and coves.

Geological System/Age and Primary Rock Type
Bedrock comprises Upper Devonian Old Red Sandstone that passes into younger Lower Carboniferous (Mississippian) beds, and then into Namurian rocks. The type sections for most formations within the South Munster Basin occur on the Old Head of Kinsale.

Main Geological or Geomorphological Interest
More than 2,000 m of the uppermost Devonian and basal Carboniferous rocks are exposed in coastal sections at the Old Head of Kinsale. The southern-most, narrow tip of Old Head comprises fine-grained sandstones and minor mudstones of the Devonian Old Head Sandstone Formation. The contact between the Old Head Formation and overlying Kinsale Formation represents the base of the Tournaisian (also referred to in literature as the Courceyan) stage of the Lower Carboniferous (359 million years ago) and this approximates to the Devonian-Carboniferous boundary. The boundary is best seen in Holeopen Bay West. The oldest Carboniferous unit is the Kinsale Formation (Castle Slate Member, Narrow Cove Member, Pig's Cove Member). The succeeding unit is the Courtmacsherry Formation. This formation consists of calcareous mudstone and non-calcareous mudstone. The pyritic cherty mudstones and minor dolomites at the southern end of White Strand correspond to the Lispatrick Formation. The uppermost Carboniferous rocks at Old Head are the White Strand Formation sandstones with interbedded with mudstones. These beds exhibit superb examples of folding at the southern end of White Strand. These formations are collectively referred to in some literature as the Cork Group.

Site Importance – County Geological Site; recommended for Geological NHA
The Old Head of Kinsale is the stratotype for the base of the Tournaisian Stage of the Lower Carboniferous (Mississippian). The lowest stage of the Lower Carboniferous used to be referred to as the Courceyan Stage, though this term is no longer used. The stage was named after the local Cork barony of the de Courcey family. This site is of international significance.

Management/promotion issues
Much of the coastal exposures south of White Strand are inaccessible and are limited in places to observation from a vantage point on along the coastal cliffs. The strata exposed at the south end of White Strand, and in some of the nearby coves to the south of the strand, which can be accessed along the coastal path, are suitable for visitors during calm weather conditions and low tide. The geological heritage and stratigraphical characteristics present on the Old Head of Kinsale are of immense significance and are suitable for promotion when considering geotourism and education.

Holeopen Bay West. Old Head Sandstone Formation (lighter, right)-Kinsale Formation (darker, left) contact marks the Devonian-Carboniferous boundary.

Folding in White Strand Formation at south end of White Strand.

View northwest of Kinsale Formation from Holeopen Bay West towards Ringalurisky Point.

Folding in Lispatrick Formation shale and sandstone beds south of Whitestrand Point. Sea caves at this section.

Courtmacsherry Formation beds in cove on north side of Lispatrick Point.

Hennessy et al., 2023. Geological Survey Ireland.