

## DONEGAL - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>St John's Peninsula</b>
Other names used for site	St John's Point
<b>IGH THEME(S)</b>	<b>IGH13 Coastal Geomorphology, IGH7 Quaternary, IGH1 Karst, IGH8 Lower Carboniferous</b>
<b>TOWNLAND(S)</b>	<b>Ballybodonnell, Ballycroy, Ballyederlan, Ballymagowan, Ballysaggart, Beaugreen Glebe, Cavan, Dunkineely, Killaghtee, Killultan, Menamny, Point, Rahan Near, Rahan Far</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Dunkineely</b>
<b>SIX INCH MAP NUMBER</b>	<b>97, 97A, 98</b>
<b>ITM CO-ORDINATES</b>	<b>574523E 872895N</b>
<b>1:50,000 O.S. SHEET NUMBER: 10</b>	<b>GSI BEDROCK 1:100,000 SHEET NOs. 3, 4</b>
<b>GIS Code DL043</b>	

### **Outline Site Description**

St. John's Peninsula is a 10km-long narrow peninsula running southwest from Dunkineely into Donegal Bay.

### **Geological System/Age and Primary Rock Type**

The sequence is Lower Carboniferous in age and begins with the Banagher Sandstone Formation, in the northeast corner of McSwyne's Bay. This is overlain by the Ballyshannon Formation (alternating calcarenites and richly fossiliferous calcareous shales) which underlies much of St. John's Peninsula. The overlying Muckros Sandstone Formation (calcareous sheet sandstones and oolites) forms St. John's Point at the end of the peninsula. The soft sediment overlying the bedrock of the peninsula is predominantly comprised of glacial till, in the form of drumlins, which were deposited at the base of the ice sheet flowing offshore from Donegal during the last Ice Age.

### **Main Geological or Geomorphological Interest**

St John's Peninsula has an impressive coastal landscape displaying cliffs, structural ledges, caves and periglacial scree. The northern coast is partly an escarpment cliff. There are low cliffs cut into the alternating limestone and shale beds near the Point lighthouse. The broad shore platforms, are formed by wave erosion and weathering along the bedding planes of the gently dipping sandy limestones.

On the west coast near to the lighthouse, sandy limestone gives way southwards to purer limestone, in which rectilinear cracks are developed, to form limestone pavement with incipient 'clint and gryke' pattern.

In the northeast corner of McSwyne's Bay, a 1m-thick bed of dark limestone interrupts the arenaceous sequence and contains colonies of *Syringopora*, crinoids, brachiopods (*Spirifer*), ostracods and foraminifers.

Most of the surface of the peninsula is covered by glacial till, deposited in the form of drumlins.

### **Site Importance – County Geological Site; may be recommended as Geological NHA**

The spectacular coastal features of the site are easily accessible by car and minibus. The peninsula offers an excellent teaching site. The limestone pavement is of county level interest. An SAC and proposed NHA (00111) cover the southernmost 4 km of the peninsula and include some of the surrounding marine waters.

### **Management/promotion issues**

Wave-cut platforms developed on limestone are frequently slippery, and this can be particularly dangerous in places where they dip towards the sea. This hazard occurs at certain locations around St. John's Point and great care is needed in these areas. Killultan beach, on the eastern side of the short isthmus linking the northern part of the peninsula with the headland of the Point, attracts summer holidaymakers and seaward outcrops attract anglers in all seasons. The Point also offers some of the best sea diving in Europe.



The exposed west coast of St John's Point.



Looking north from the west coast of St Johns Peninsula, with the drumlins in the distance.



Fault plane separating limestone-shale beds (left) from limestone pavement (right).



