

## MAYO - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Inishkea Islands</b>
Other names used for site	Goose Islands, Inis Gé, Inis Geidhe
<b>IGH THEME</b>	<b>IGH5 Precambrian</b>
<b>TOWNLAND(S)</b>	<b>Inishkea North, Inishkea South</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Belmullet</b>
<b>SIX INCH MAP NUMBER</b>	<b>6a</b>
<b>ITM CO-ORDINATES</b>	<b>455980E 822000N (very south of Inishkea North)</b>
<b>1:50,000 O.S. SHEET NOS. 23, 23a</b>	<b>GS1 BEDROCK 1:100,000 SHEET NO. 6</b>

**GIS Code MO061**

### **Outline Site Description**

The Inishkea Islands comprise two main islands, Inishkea North and Inishkea South, and thirteen small islands. The islands are located ~4km west of the Mullet peninsula.

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

Deposition of the original sedimentary rocks has been dated at between c. 950-650 million years ago. The Inishkea Division (Erris Complex) is formed of meta-sedimentary (sedimentary rocks that have been metamorphosed) psammitic and semi-pelitic schists.

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

The metamorphic rocks of the Inishkea Division (c. 950-650 Ma) are younger than, and structurally overlie, the rocks of the Annagh Gneiss Complex (Annagh Division). Schists are the dominant lithology of the Inishkea Division but amphibolites and granitic intrusions are also present. Prior to metamorphism and deformation, the original Inishkea sediments were probably deposited along the margin of a continental shelf. Metamorphic deformation of the original sediments produced flaggy to fissile micaceous psammitic and semi-pelitic schists. Radiometric studies and stratigraphic contact interpretation suggests that the Inishkea Division is part of the Lower Dalradian sequence. The contact between the Annagh and Inishkea Divisions is marked by overlapping ductile faults (imbricated fault zone) indicating past tectonic forces. Age dating of Sm-Nd (Samarium-neodymium) isotopes suggests that the original Inishkea Division sediments (later altered and deformed) were derived from Palaeoproterozoic rocks (> 1.6 billion years). Detrital zircon data from the Inishkea Division yield variable dates of c. 1640 Ma, c. 1500 Ma, and c. 900 Ma. The detrital sources are interpreted to be from the Laurentian continent/margin, and are understood to have been deposited no earlier than c. 1005 Ma.

### **Site Importance – County Geological Site**

North and South islands have ca. 8 km of good coastal exposures of schists. The Islands are also designated as a Special Area of Conservation (SAC 000507) and a Special Protection Area (SPA). They are the main wintering ground of barnacle geese in Ireland and there are a number of important national monuments and recorded monuments on the Islands.

### **Management/promotion issues**

Owing to the remote location of these uninhabited islands, and relative difficulty in access, the site is not deemed to be under threat of human pressure. Any promotion or interpretation would be best confined to the Mullet peninsula, Achill Island, and coastal locations where the Inishkea Islands can be viewed.

