

## MAYO - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Carrownisky</b>
Other names used for site	Gob Imligh; Portnalugna Rocks; Turloughbeg Strand
<b>IGH THEME</b>	<b>IGH13 Coastal Geomorphology</b>
<b>TOWNLAND(S)</b>	<b>Cross, Roonagh, Carrownisky, Dooghmakeon, Emlagh</b>
<b>NEAREST TOWN</b>	<b>Louisburgh</b>
<b>SIX INCH MAP NUMBER</b>	<b>95b, 95d</b>
<b>ITM CO-ORDINATES</b>	<b>475047E 777868N</b>
<b>1:50,000 O.S. SHEET NO. 37</b>	<b>GSi BEDROCK 1:100,000 SHEET NOS. 10, 11</b>
<b>GIS Code MO024</b>	

### Outline Site Description

A low-lying coastal section comprising beach, sand dunes, low drift/sand cliffs, rocky shoreline and headlands, lagoons, and machair.

### Geological System/Age and Primary Rock Type

Bedrock outcrops at the rocky headlands comprise Ordovician mudstones and sandstones (Derrylea Formation), and Silurian pelites and psammities (Bouris Formation). Between the rocky shore outcrops and headlands are extensive coastal deposits of Holocene age (within the last c.12,000 years). Silurian calcareous psammities (Lough Nacorra Formation) at White Strand are obscured by coastal deposits.

### Main Geological or Geomorphological Interest

The site at Carrownisky comprises two main strands (Sruhir Strand and White Strand). This is a very high-energy, open-coastline beach, sand-dune and machair system, fronted by a sand and gravel beach which has moved progressively onshore since the end of the last Ice Age. Beach deposits have formed low barriers (<10m high), which in turn front lagoons, and partially-peat filled *Phragmites* reed swamps. The beach barrier is asymmetrical, with a steep seaward slope, and a gently sloping ramp leading back into the lagoon and areas of calcareous sand machair. This open-coast dune and machair environment is supratidal (above high tide). Sediments in the mobile sand-dunes are more easily swept up than beach sands, being less frequently wetted (except by rainfall). Cycles of sediment accumulation and erosion occur at the site; however the build-up of sand is predominantly by aeolian processes. Occasional over-washing of sediment during storms also occurs. Rocky headlands occur at the southern and northern end of the site. Between the two strands lies a low sand-draped hill at Gortnagarryan Strand, with a low drift/dune cliff at the shoreline. Apart from the headlands and shoreline outcrops, bedrock is obscured by glaciogenic material, which itself is overlain by sand and peat deposits. Carrownisky River drains into Lough Roonagh, behind Sruhir Strand, with the outflow to the beach meandering through the dunes and machair. Lough Cahasy, at the north end of Sruhir, drains south into Roonagh Lough. Lough Baun and Poolmore Lough drain west across the north end of White Strand.

### Site Importance – County Geological Site

This County Geological Site is significant in providing an understanding of the sedimentation processes along the west coast since the last ice age. The site is located within the Lough Cahasy, Lough Baun and Roonagh Lough SAC (001529). The biodiversity significance is well recognised, and the inherent role played by the geology should be recognised.

### Management/promotion issues

The beach is publicly accessible from three beach car park areas, and via a local road at the north end. Aside from warnings about tides along foreshore settings (this is a popular surfing spot), this site is one which could be promoted in publications, websites etc., outlining the geological and natural heritage, and conservation sensitivities of the dune-machair environment.



Looking north over White Strand from sand dunes at Gortnagarryan. Shoreline outcrops of Silurian rocks visible on left.



The gentle ramp from cobble beach barrier down to machair, behind Sruhír Strand, looking south.



Smoothened bedrock (Bouris Fm) with N-S trending striations (parallel to hammer) at N end of Carrownisky Beach. Strata strike E-W (direction of photo, looking west).



Sand, gravel and cobble beach deposits at Carrownisky, looking north towards Gortnagarryan. Corraun hills in distance.



Machair pastures and Roonagh Lough viewed from Cross Strand parking area, looking east. Croagh Patrick in distance.



Looking south from the drift/sand hill at Gortnagarryan over Sruhír Strand. Mweelrea visible in distance.



