

NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Kinnagoe Bay
Other names used for site	Armada Bay (La Trinidad Valencera), Glennagiveny Bay
IGH THEME	IGH13 Coastal Geomorphology
TOWNLAND(S)	Mossy Glen, Glennagiveny
NEAREST TOWN/VILLAGE	Gleneely
SIX INCH MAP NUMBER	13, 22
ITM CO-ORDINATES	662800E 946130N (White Strand)
1:50,000 O.S. SHEET NUMBER 3	GSI BEDROCK 1:100,000 SHEET NO. 1
GIS Code ND006	

Outline Site Description

Kinnagoe Bay comprises a scenic and sheltered strand at the foot of a steep plunging cliff and bluff lined coast at the head of a wide bay. The cliffs and bluffs are thickly vegetated with scrub and trees, with vegetated dunes areas at the back of the beach.

Geological System/Age and Primary Rock Type

The beach and back beach dune system have developed in the last 12,000 years since the end of the last Ice Age, and is Holocene in age. Coastal bedrock exposures of Dalradian Supergroup grit and phyllite (similar to slate) crop out in the intertidal zone at discontinuous sections along the beach, with many outcrops polished smooth by wind-blown sand.

Main Geological or Geomorphological Interest

This site hosts a fine example of a beach and dune system shaped on calcareous marine sand that has been swept in from the sea floor to the foot of a precipitous cliff line at the head of a broad embayment (Kinnagoe Bay and Glennagiveny Bay). The beach (White Strand) is backed by cliffs that rise to 100m-120m OD. The sandy beach at Glennagiveny Bay (663800E 945700N) is backed by a raised beach at the foot of 80-90m high cliffs and bluffs.

The beach also exhibits fine examples of sand-blasted rock, as seen on the blue-grey phyllite outcrops on the beach (663010E 945900N). At the western end of Kinnagoe Bay, in the vicinity of the car park, coarse graded grits and phyllitic slates are extensively reddened. This colouration feature is uncommon in the Dalradian rocks of Inishowen and Donegal.

In 1980, a diving expedition to the wreck of the *La Trinidad Valencera* retrieved a beach pebble (red/orange calcareous mudstone) of the foreshore below the coastguard station, containing a small (31mm) ammonite of the Lower Liassic genus *Echioceras*. The pebble is understood to be glacial debris, and not local. Early OSI 25" sheets record a disused lime kiln near the gully at the west end of the beach cliffs.

Site Importance – County Geological Site; recommended for Geological NHA

Owing to the scenic beauty created by the dramatic coastal cliffs and golden strand and dunes, the site is recommended for designation as a geological NHA. The site is located within the North Inishowen Coast SAC and proposed NHA (002012). Kinnagoe Bay is famous as the site of the wreck of Spanish Armada ship *La Trinidad Valencera* which sank in the bay on September 16th 1588.

Management/promotion issues

The beach at Kinnagoe Bay is a popular recreational site. Camping is a regular activity along the beach-dune transition zone. Trampling on the mature vegetated and younger dune areas should be discouraged, as too should littering and fire lighting. A public information sign at the car park would help to inform visitors of the sensitive nature of the dunes and also of Kinnagoe Bay's coastal landform development and its maritime history.



Kinnagoe Bay and White Strand viewed from winding approach road to beach, looking southeast to Balbane Head.



View of White Strand looking northwest from backshore dune-beach transition.



View of northwest end of White Strand from intertidal rock outcrops. Vegetated dune bluff to rear of tents.

