

## DUBLIN CITY - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>North Bull Island</b>
Other names used for site	Bull Island, <i>Oileán an Tairbh</i>
<b>IGH THEME</b>	<b>IGH13 Coastal geomorphology</b>
<b>TOWNLAND(S)</b>	<b>Raheny, Clontarf</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Dublin</b>
<b>SIX INCH MAP NUMBER</b>	<b>15, 19</b>
<b>ITM CO-ORDINATES</b>	<b>722772E 736610N (centre of island)</b>
<b>1:50,000 O.S. SHEET NUMBER</b>	<b>50 GSI BEDROCK 1:100,000 SHEET NO. 16</b>

### Outline Site Description

North Bull Island, about 5 km long and 800 m wide, is located in Dublin Bay, lying roughly parallel to the shore off Clontarf (including Dollymount), Raheny, Kilbarrack, and facing Sutton.

### Geological System/Age and Primary Rock Type

The island, as well as the beach known as Dollymount Strand running its entire length, is a very recent, and inadvertent, result of human intervention in the bay in the last 200 years.

### Main Geological or Geomorphological Interest

In times past, Dublin Bay had a long-running problem with silting, notably at the mouth of the River Liffey. After years of primitive dredging, a more effective attempt to maintain a clear channel was begun in 1715, when the first piles were driven of the Great South Wall, completed in 1830. It was during this period that the building of a North Bull Wall was also proposed, and when it was seen that the South Wall did not solve the silting problem, the authorities responsible for Dublin Port commissioned studies on the matter. In 1801 the survey highlighted the potential creation of the North Bull sandbank.

The Bull Wall was completed in 1825. Over the succeeding years, the natural tidal effects created by the walls deepened the entry to the Liffey from 1.8 m to 4.8 m. Much of the silt now scoured from the river course was deposited on the North Bull, and a true island began to emerge, with people venturing out onto the growing beach. The island is primarily a sand structure. The southeast facing side is a flat beach, backed by marram-grass-anchored dunes, scrub and marsh. On the northern side of the Bull, between the island and the mainland, is a large linear saltmarsh complex backed by mudflats all of which are covered at high tide. Several of the city's small rivers and streams enter the bay here, and the city's second largest river by volume, the River Tolka, has its estuary facing the city end of the island, into which the Wad River, and a combination of several smaller watercourses, also flow.

### Site Importance - County Geological Site

The sand flats and the associated beach, dune, lagoon and slack features, make North Bull Island a textbook locality for the recognition of coastal deposition features. The island is already a proposed SAC (SAC 000206, North Dublin Bay), SPA and NHA for biodiversity reasons and the geodiversity of an active sedimentation system should be highlighted in any promotion of this. It is also one of only two reserves in Ireland under the UNESCO Man and Biosphere Programme.

### Management/promotion issues

The location of the features of interest makes them easily accessible, and North Bull Island Bay is a popular recreational area given the number of fine beaches and walks around its perimeter. Information boards are worthy additions to the site, and explain the features' associated habitats, flora and fauna. The coastal geological processes involved in the formation of the feature has been, and should continue to be, highlighted within future literature produced on the island.



Some of the marshes and tidal mudflats on the western side of North Bull Island.



Dunes in the central portion of North Bull Island.



Dollymount Strand, looking north.



