

Lesson Plan: Human interaction with surface processes

Class: Junior Cycle

Subject: Geography

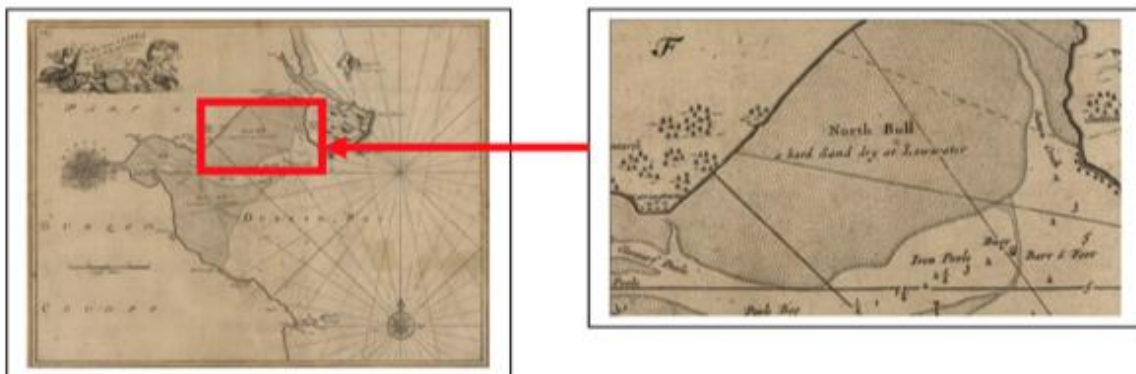
Element: Geographical Skills

Strand 2: Exploring how we interact with the physical world

Learning Outcome: 2.7 investigate examples of how people interact with and manage surface processes

Bull Island, Co. Dublin did not exist before the interaction of human activity through the building of Dublin Port harbour wall, to protect the valuable port from the erosive power of the sea. We will show, using the internet, how maps can be used to demonstrate how man alters his environment and also show how this knowledge may be put to good use for the benefit of both man and his environment.

Bull Island county Dublin did not exist prior to early 19th century. The formation of the North Bull Island followed the construction of the harbour breakwaters at the entrance to the Port of Dublin in the early years of the 19th century. This act altered the natural pattern of sedimentation that occurred in this part of the bay.



- Reference map of Dublin Bay from the **1640s'** and a zoomed in view of North Bull from the same map, prior to the construction of the harbour breakwaters at the entrance to the Port of Dublin in the early years of the 19th century.

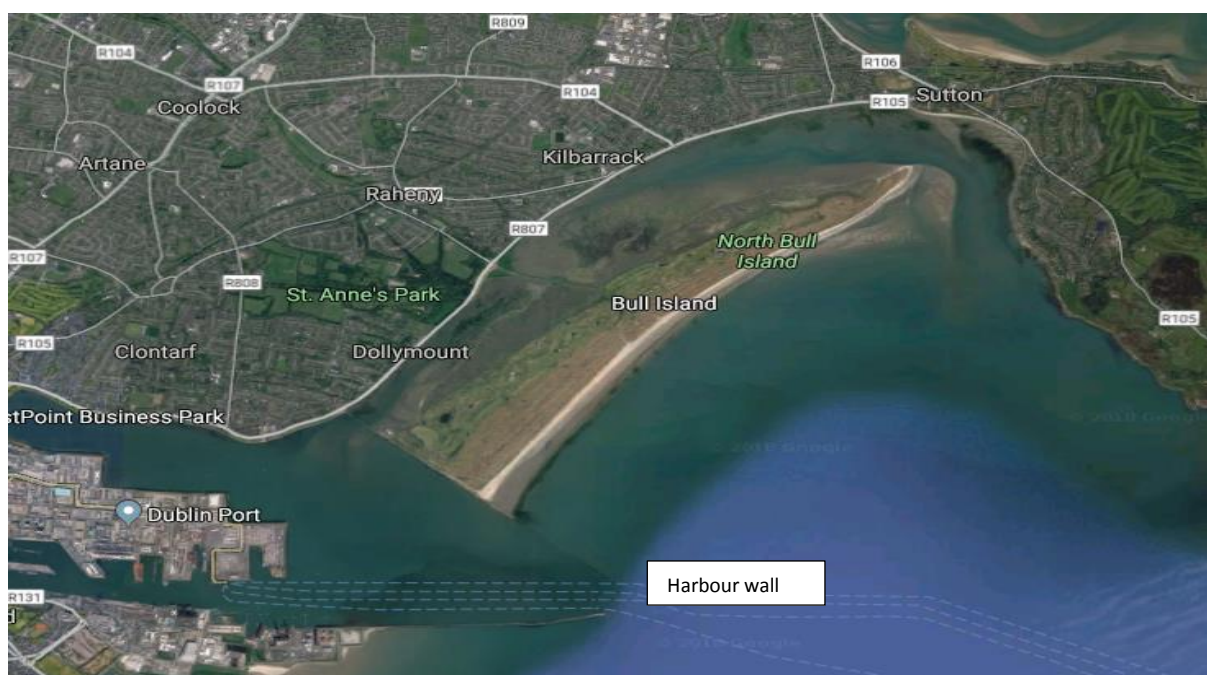
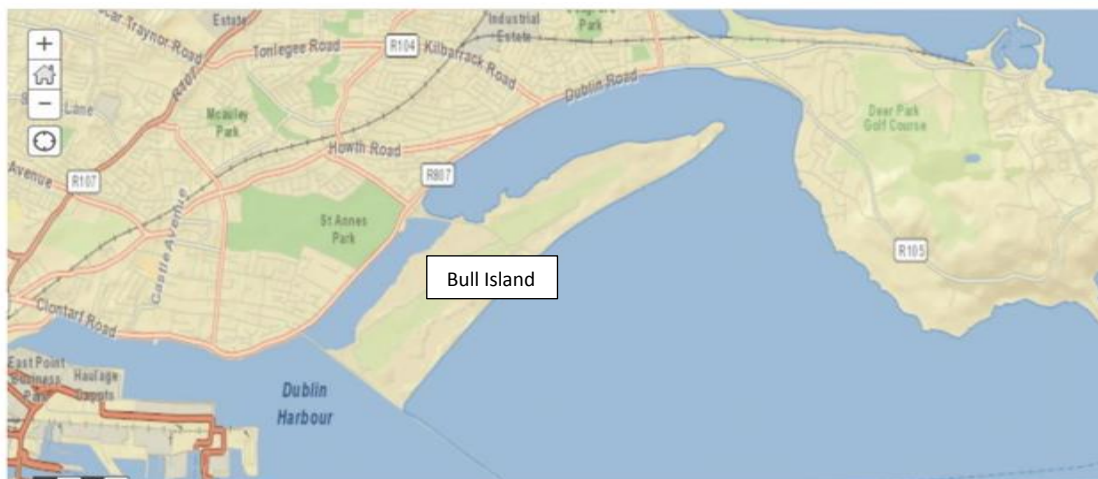


- Reference map of Dublin Bay from the 1838 and a zoomed in view of North Bull from the same map, showing the very early days of the Bull Island sand spit formation, after the construction of the harbour breakwaters at the entrance to the Port of Dublin.

A sand spit is a features of coastal deposition. It is created when longshore drift, the zig-zag movement of material down the beach, reaches a sheltered place. Here longshore drift loses energy and deposits material on the seabed. Overtime this builds up over sea level to form a sandspit which is a long narrow ridge of sand or shingle. It is connected to the mainland at one end and extends across a bay at the other. Wind and wave action can cause the sand spit, as which Bull Island to become curved at the end.

Today Bull Island stretches from the North Wall of the Dublin port breakwater to Sutton. The extent of this growth can only be fully appreciated when we compare maps from the 1640's to those available today.

- Reference map from ESRI ARCGIS server



- Satellite image of the area from google maps:

<https://www.google.com/maps/@53.3749664,-6.1499191,11833m/data=!3m1!1e3>

Which of the following geographical skills have you examined? Answer the question by ticking the appropriate box.

	Yes	No	Don't know
Reading and interpretation skills such as:			
1. Did you examine maps of different scales?			
2. Did you read and try to understand different types of pictures, diagrams, maps etc.?			
3. Did you read and try to understand different tables of information or data sets?			
Applied skills such as:			
4. Did you try to ask geographical questions of the information such as Who? What? Why? How? When? Where?			
5. Did you investigate the geographical data from different sources to build an answer?			
6. Did you use different types of geographical data such as paper maps, digital maps, satellite imagery?			
7. Did you analyse the geographic information to try to find patterns, relationships or connections between the different types of information?			
8. Did you manage and present the information or data in a clear and concise way?			

Why is Q5 important in your opinion?

What section or sections of your textbook or course did this connect with, in your opinion?

Maps and text created by INFOMAR and Scoilnet:



INFOMAR

Integrated Mapping for the Sustainable Development of Ireland's Marine Resource

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