AGL13110

SUMMARY REPORT ON THE

BATHYMETRIC AND GEOPHYSICAL DATA INTEGRATION

FOR THE

GREATER DUBLIN DRAINAGE SCHEME

FOR

TECHWORKS MARINE

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PROJECT REFERENCE	AGL13110 GREATER DUBLIN DRAINAGE SCHEME		
AUTHOR	**CHECKED**	**REPORT STATUS**	**DATE**
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1. SUMMARY

- APEX Geoservices Limited was requested by Techworks Marine to carry out a project to integrate the results of a previously acquired geophysical investigation with supplied bathymetric data.
- This exercise was conducted over two sites as part of the offshore investigations for the Greater Dublin Drainage Scheme.
- The objectives of the integration process were to output seabed and bedrock elevations and overburden thickness data on a unified grid system referenced to Lowest Astronomical Tide (LAT).
- The bathymetric data was supplied by the client in the ETRS Geodetic coordinate system on a 2m x 0.03m grid.
- The overburden thickness data was derived from the previous geophysical investigation which consisted of CHIRP and Sparker single channel seismic data profiles. These profiles were primarily acquired with a west to east orientation with minimum line spacing of c. 95m and a variable trace spacing of c. 2m.
- The two datasets were interpolated to a 2 x 5m grid using a krigging algorithm in the Golden Software SURFER 9 package.
- A 2 x 5m grid was chosen to harmonise the detailed bathymetric grid and the more widely spaced seismic profiles.
- The unified grid was created using the northern, southern and eastern limits of the bathymetric data and the western limit of the seismic data. This was done in order to avoid extrapolation of the overburden thickness and bedrock elevation information into areas where no seismic data was acquired close to the shoreline.
- The finalised data is provided as one Excel spreadsheet for each of the two survey areas and is displayed in Drawings 13110_01_Bath & 13110_04_Bath.
- **NB. ALL DATA POINTS IN THE OUTPUT EXCEL FILES NOT ON THE DATA ACQUISITION PROFILES ARE INTERPOLATED BY THE SOFTWARE**.

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FIGURE 1: Area 1, Portmarnock, Seismic Survey Location

Scale 1:10000

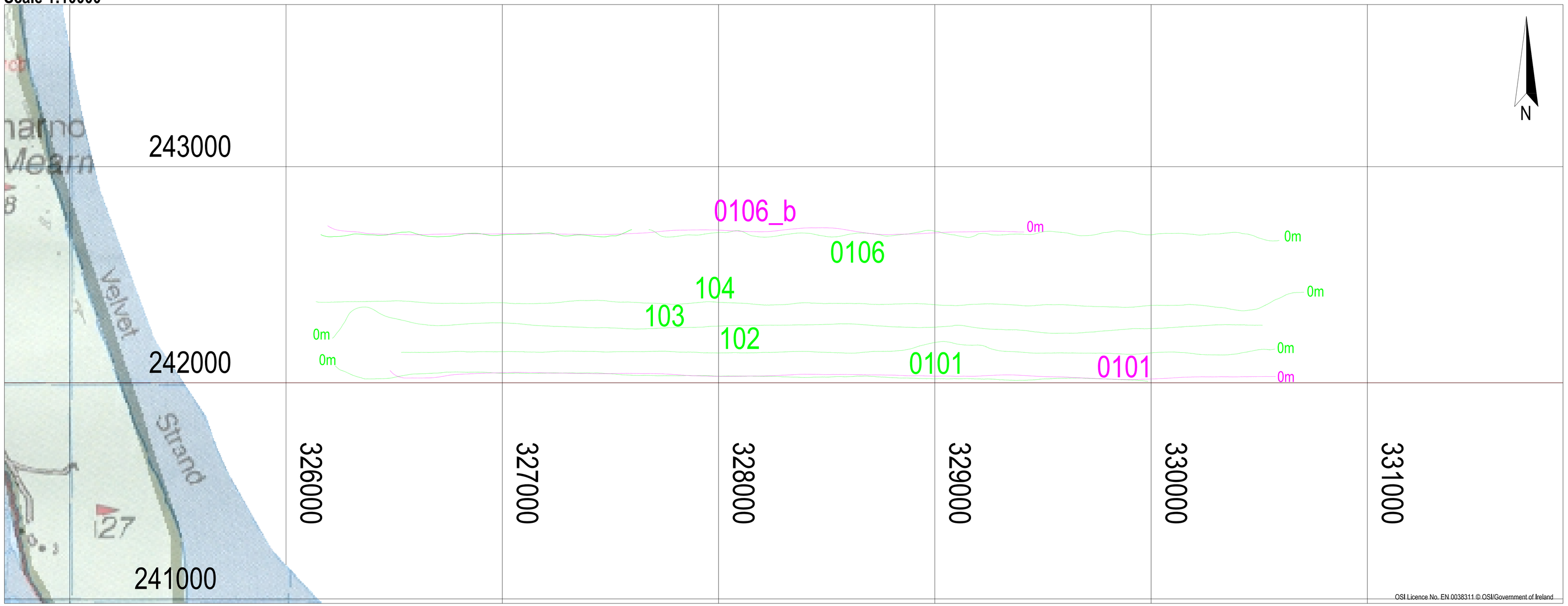
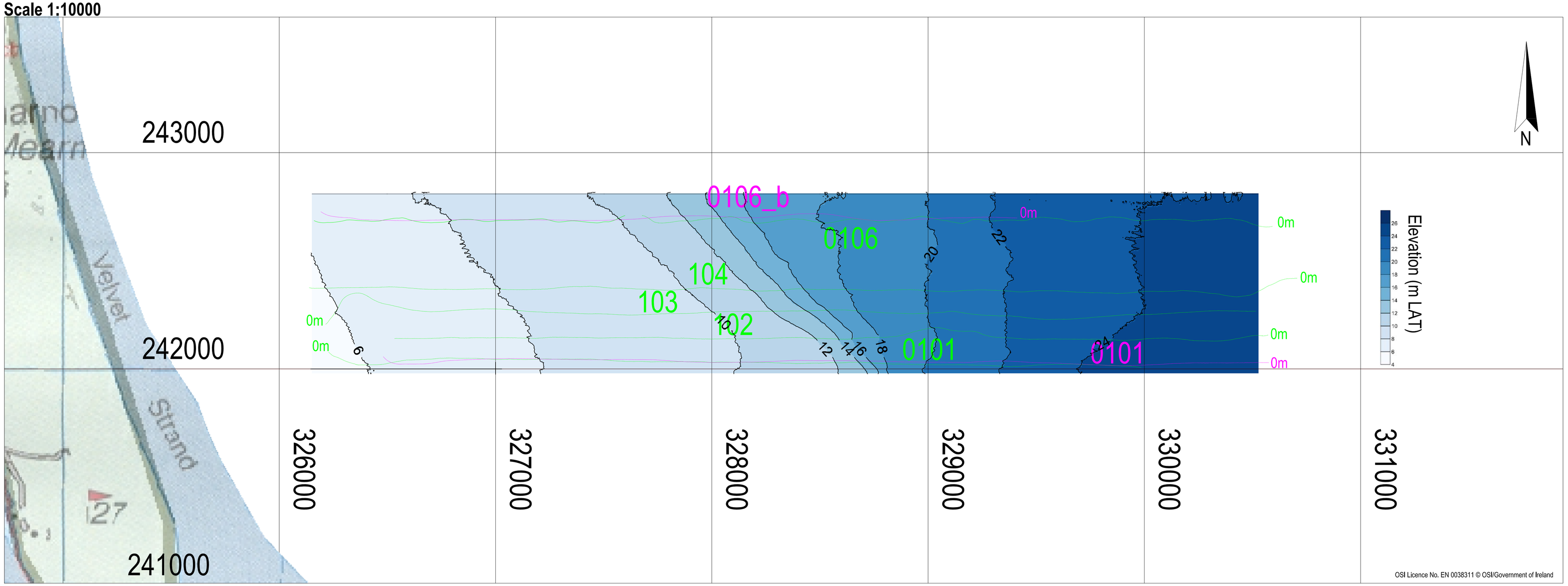


FIGURE 2: Area 1, Portmarnock, Seabed Elevation (m LAT) from Bathymetric Data

Scale 1:10000



INDEX MAP:

LEGEND:

101 Sparker Profile

101 Chirp Profile

NOTES:

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DRAWING NUMBER:
13110_01_BATH.DWG

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FIGURE 1: Area 1, Portmarnock, Bedrock Elevation (m LAT) from Bathymetric & Seismic Data

Scale 1:10000

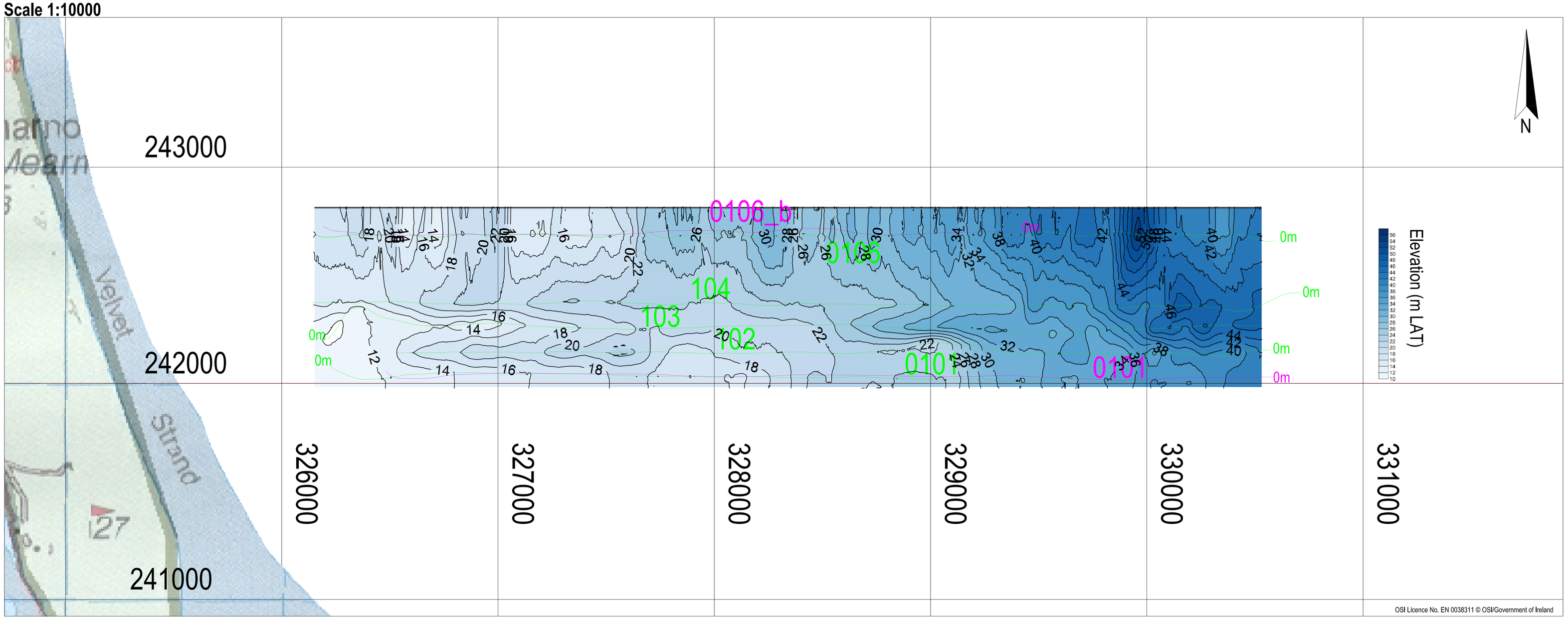
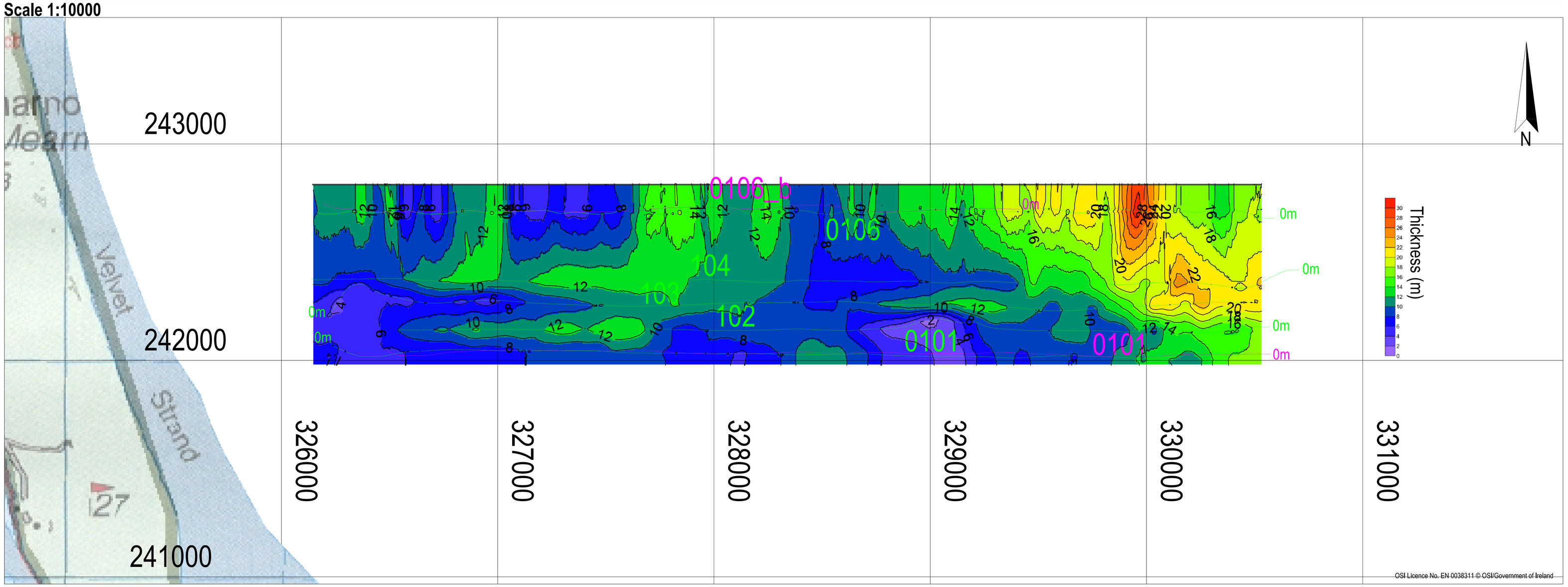


FIGURE 2: Area 1, Portmarnock,Sediment / Overburden Thickness Map (m) from Seismic Data

Scale 1:10000



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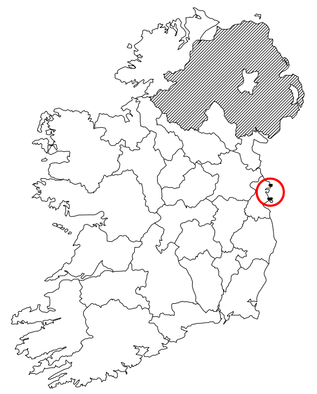

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FIGURE 1: Area 2, Skerries, Seismic Survey Location

Scale 1:10000

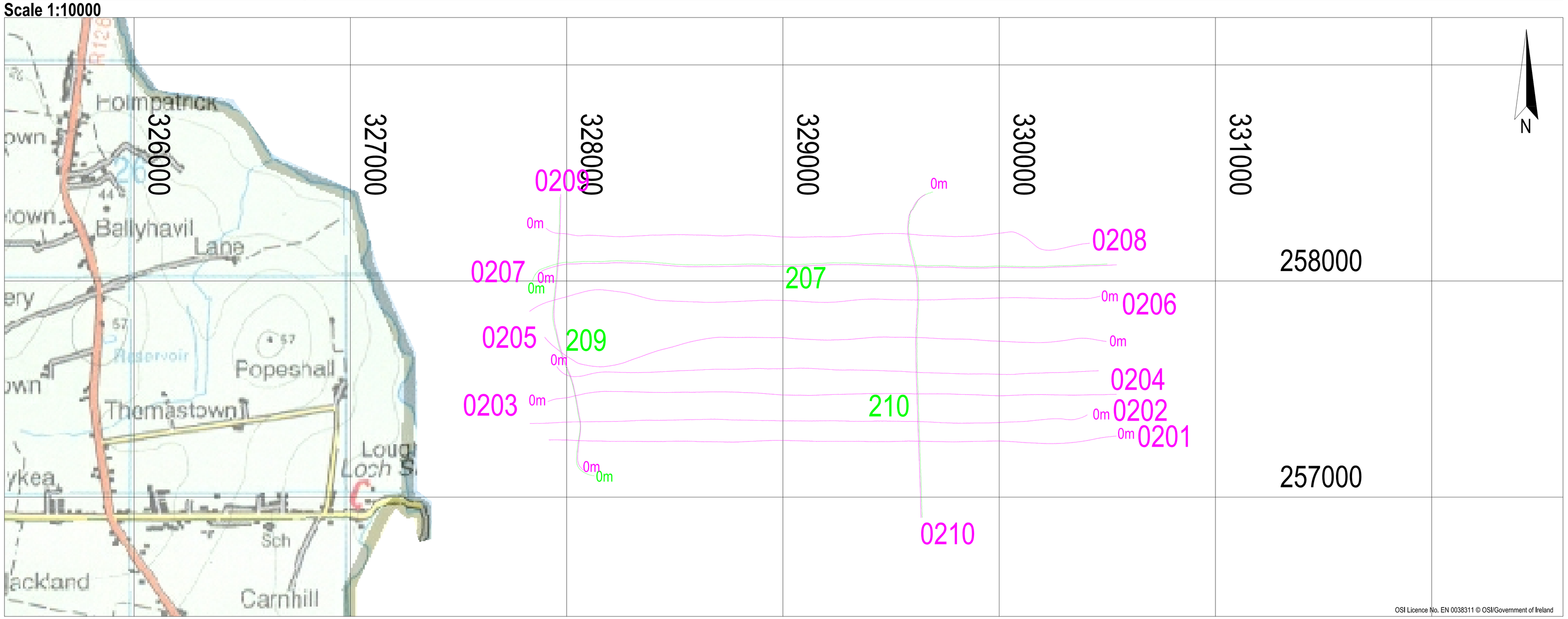
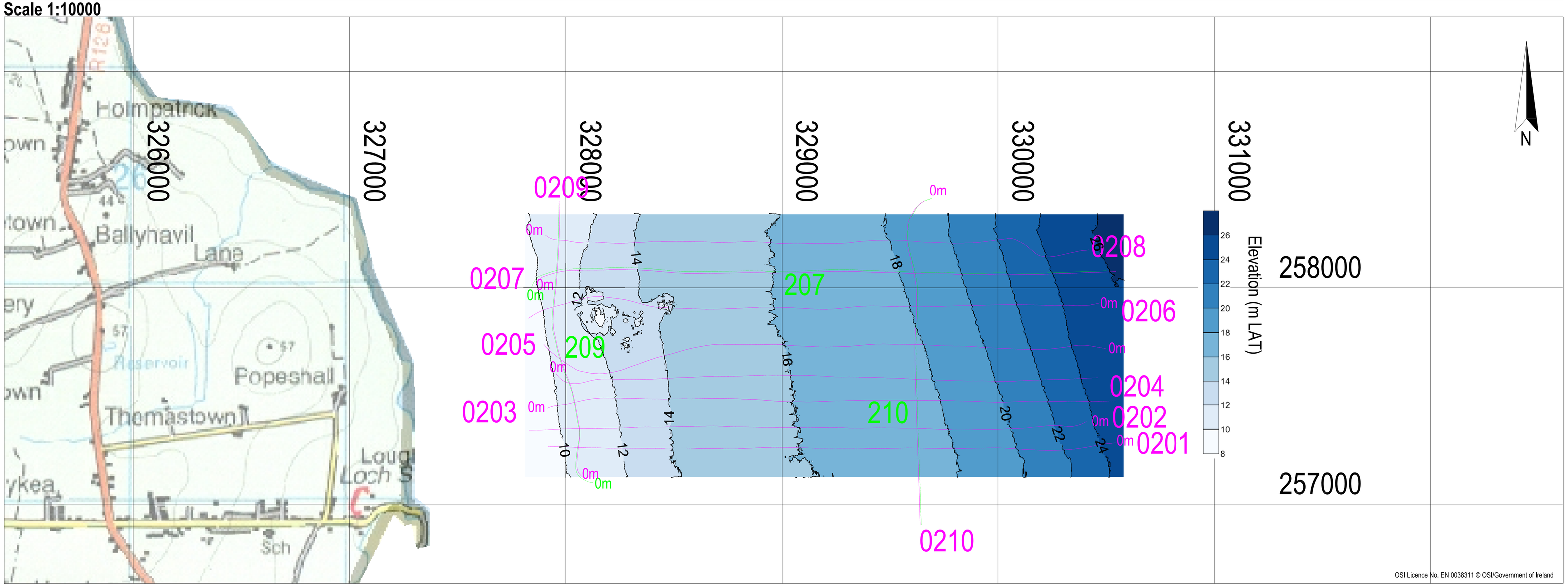


FIGURE 2: Area 2, Skerries, Seabed Elevation (m LAT) from Bathymetric Data

Scale 1:10000



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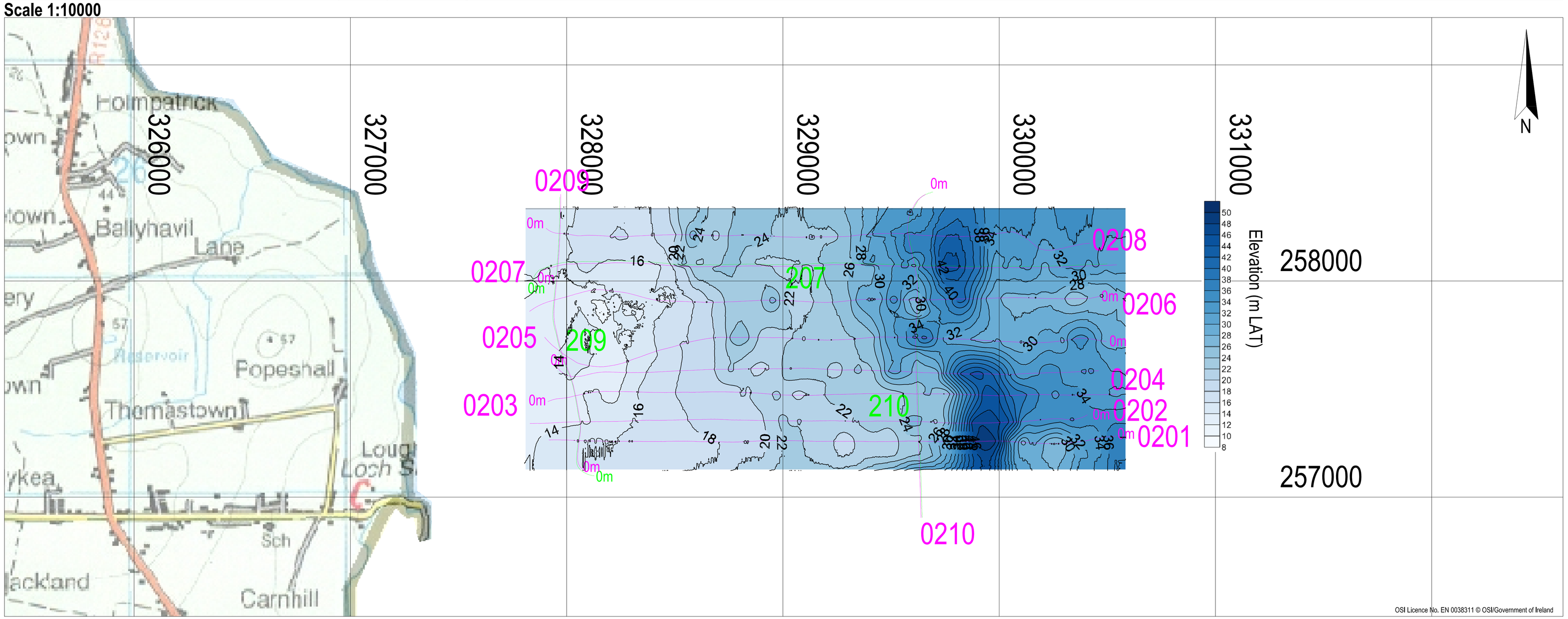

FIGURE 2: Area 2, Skerries,Sediment / Overburden Thickness Map (m) from Seismic Data

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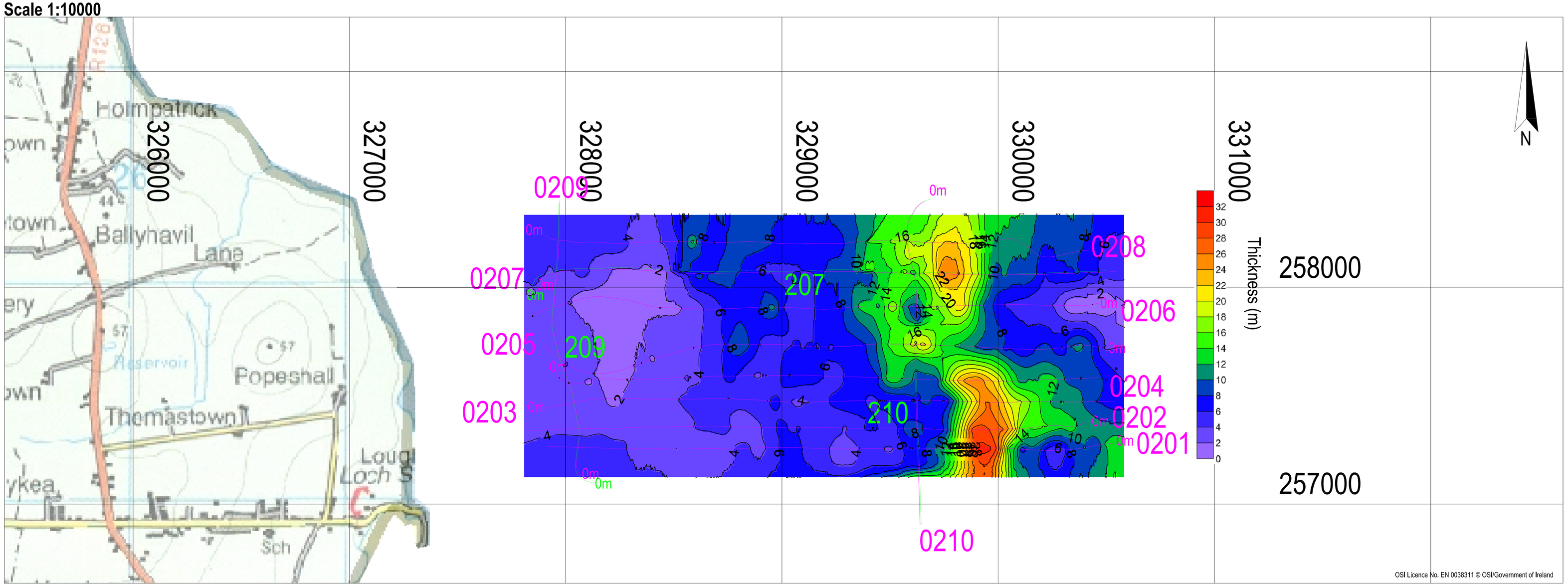

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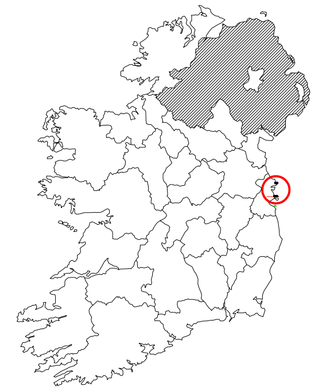

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