

Seed Mussel Survey report for Howth – 11 to 13/09/2018

Vessel: MV T.Burke (BIM), Skipper John Murphy, Survey Officer Nicolas Chopin

Equipment: 1 meter dredge, 0.1 m² Day grab, 400 kHz side scan sonar.

Area surveyed: In the channel between Ireland's Eye and Howth. From Drumleck Point to the Baily Lighthouse.

Survey summary:

Following industry report of small spat on the south side of Howth, a survey has been carried out to estimate the quantum of these seed mussel beds. The survey was extended to the north side of Howth, in the channel with Ireland's Eye. The side scan sonar was deployed at the two locations and a number of features were investigated. Seed mussels were found at the two locations in various quantities.

Table 1: Area coordinates (in Degrees, decimal minutes WGS84):

Howth South:

Latitude	Longitude
53° 21.489' N	6° 4.021' W
53° 21.336' N	6° 4.587' W
53° 21.340' N	6° 4.829' W
53° 21.463' N	6° 4.943' W
53° 21.510' N	6° 4.455' W

Howth North:

Latitude	Longitude
53° 23.490' N	6° 3.390' W
53° 23.737' N	6° 3.888' W
53° 23.741' N	6° 3.608' W
53° 23.615' N	6° 3.380' W

NOTE: The areas displayed on the attached map have been established following the side scan sonar data verified by ground truthing (opaque area on the map). These coordinates represent a simplified polygon of the area of the settlements identified (the light green line on the map).

Howth South:

Small seed mussel was found in an area covering approximately 12 hectares west of the Baily Lighthouse. At the time of the survey, the average size of the seed mussel was 12.8 mm and the main population represented in the samples was comprised between 12 and 16 mm (71% of the mussel measured). Five grabs were taken to assess the density in the area; the average density across the settlement is approximately 20 tonnes/hectares which brings an estimated tonnage of 240 tonnes. There are a few small starfish at the location and the shell of the seed mussel is still quite thin. The seabed is mainly muddy sand with few patches of small gravel.

Howth North:

Much larger seed mussels were found in the north side. The area represents 8 hectares approximately but moorings and buoys in the area limited the survey. At the time of the survey the average size of the seed was 28.48 mm with the main population represented in the sample comprised between 28 and 32 mm (54% of the measured mussels). The seed is of good quality and very little waste was picked up in the dredge (17% from samples). There were a few small starfish on the location, but their predatory impact was not visible at the time of the survey. The grab was deployed eight times in the area and the average density was found to be 65 tonnes/hectares, up to 97 tonnes/hectares for Grab 5 (see GH5 on the map). The estimated tonnage for the area at the time of the survey was some 520 tonnes. The seabed is mainly coarse sand on mud.



Fig. 1: Seed mussel found on the north side of Howth

Recommendation:

Those beds potentially represent an extra 800 tonnes for the 2018 mussel seed fishery. The area on the north side is good for transplanting immediately, ideally, although it could be fished, now the south side bed would benefit from a few more weeks of growth to allow the small seed mussel to increase in size and achieve some greater shell-hardening.

Nicolas Chopin

BIM Inshore Survey Officer

Seafood Technical Services Business Unit

Notes for maps:

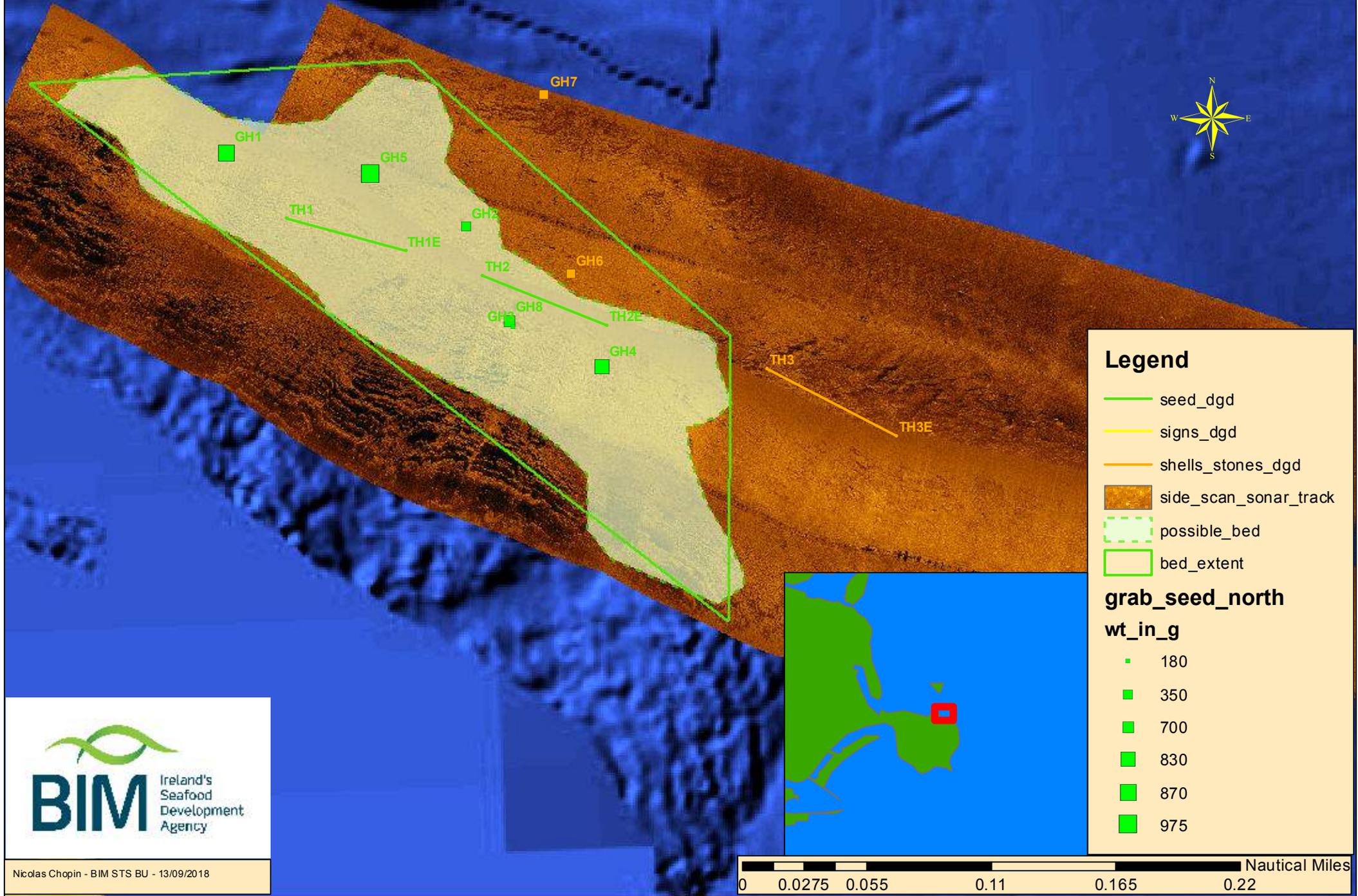
TH stands for Tow Howth

GH stands for Grab Howth

In the legend dgd stands for dredge

In the legend gb stands for grab

Seed Mussel Survey Map of North Howth - 11 and 12 /09/2018



Legend

- seed_dgd
- signs_dgd
- shells_stones_dgd
- side_scan_sonar_track
- possible_bed
- bed_extent

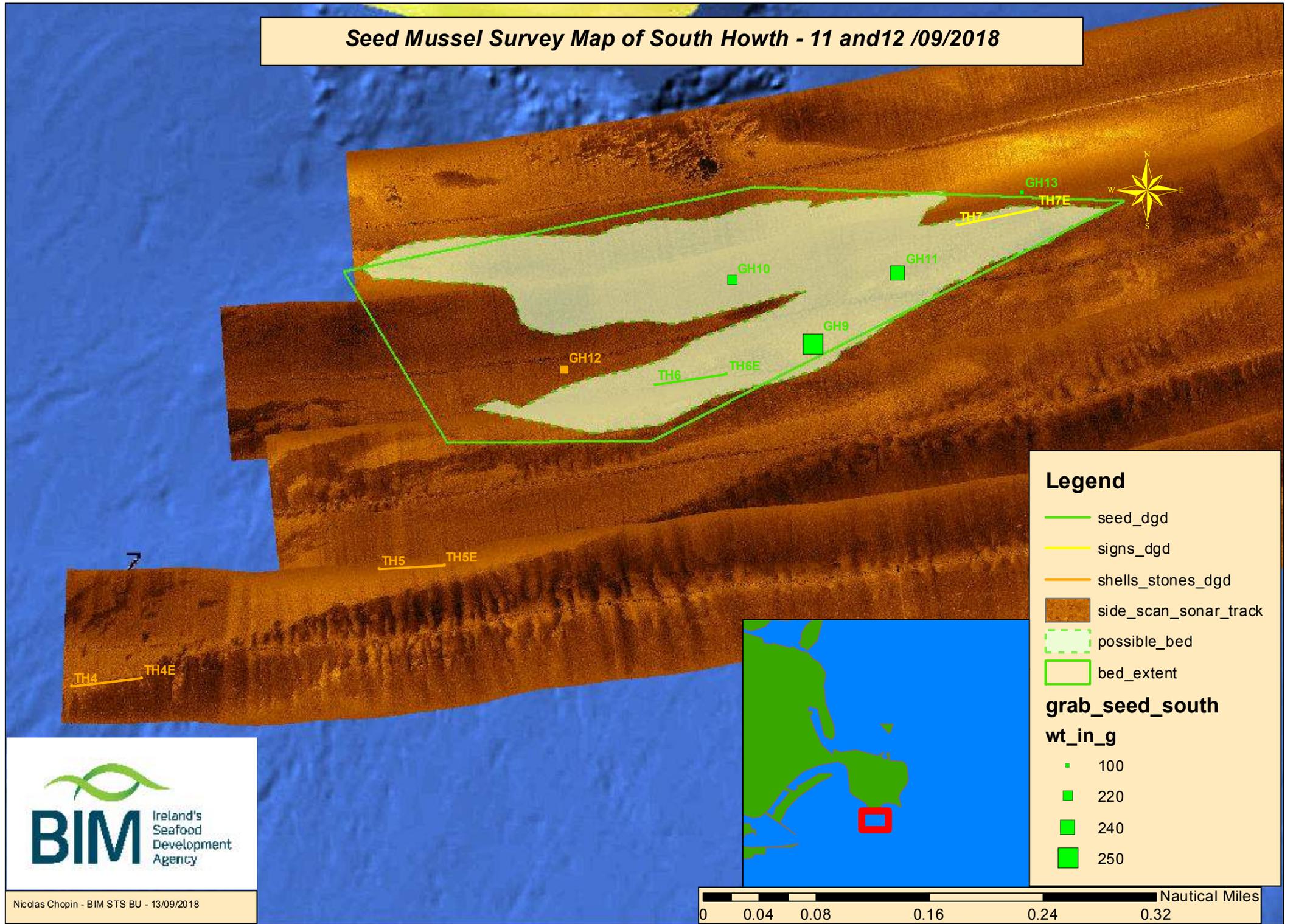
grab_seed_north

wt_in_g

- 180
- 350
- 700
- 830
- 870
- 975



Seed Mussel Survey Map of South Howth - 11 and 12 /09/2018



Legend

- seed_dgd
 - signs_dgd
 - shells_stones_dgd
 - side_scan_sonar_track
 - possible_bed
 - bed_extent
- grab_seed_south**
- wt_in_g**
- 100
 - 220
 - 240
 - 250

