

Seed Mussel Survey Report Updates for the Southeast Coast (Cahore Point/ Rusk Channel/ South Wicklow Head) – September 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.

This report combines two separate surveys carried out between the 27/08/2018 to the 7/09/2018 covering two areas previously surveyed.

1/ South Wicklow Head (see map attached)

The preliminary survey carried out at the end of July was limited due to weather conditions and static fishing gear in the area, but some seed was observed. The zone was surveyed again at the end of August and again static fishing gear limited the side scan sonar coverage as well as the number and length of tows that we could make, nevertheless, few grabs were taken in the area.

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

Latitude	Longitude
52° 54.658' N	6° 1.369' W
52° 54.590' N	6° 1.036' W
52° 54.256' N	6° 1.263' W
52° 54.306' N	6° 1.489' 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).

Unfortunately, it was impossible to estimate the real borders of the settlement due to the fishing gear but using the various tows and the grabs, it was estimated that the seed mussel spread over 22 hectares approximately.

The density was equally difficult to estimate due to the nature of the seabed in the location (stones and gravel which jammed the grab). From the data collected in the area, we estimated that the average density is around 19 tonnes/hectares, which give an estimated tonnage for the area of 500 tonnes.

The seed mussel looked in good condition with an average size of 22 mm or little over 1000 pieces/kg, 70% of the population (in the samples) is comprised between 22 and 26 mm. There are few mussels left from 2017 as well but in very small quantities.

At the time of the survey, low amount of starfish were observed in the area. There is possibility of high amount of waste (mainly small stones) in the dredges.

Scattered amount of same size seed were found along the shore, north of the area.

2/ Rusk Channel (see attached map)

Two areas were marked back in early July. Those two locations were surveyed again at the start of September. The area close to the shore (see previous report) has not shown cover improvement and the seed remain scattered over the same zone.

The area located at the south end of the Rusk channel showed good development.

Table 2: Area coordinates (in Degrees, decimal minutes WGS84):

Latitude	Longitude
52° 28.674' N	6° 12.478' W
52° 28.485' N	6° 12.157' W
52° 28.424' N	6° 11.548' W
52° 28.148' N	6° 11.720' W
52° 28.359' N	6° 12.083' W
52° 28.326' N	6° 12.722' 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).

The seed is spread on a West/East axe south of the navigation buoys. The area was mapped using the side scan sonar referenced with tows and grabs carried out at the location. The possible settlement extent has been estimated at approximately 37 hectares.

Density varies a lot through the settlement, from 2kg/m² to nearly 13 kg/m², but the average has been set for 5.6kg/m² following the grabs data. It was estimated the area could yield over 2200 tonnes of seed.

The average size nearly doubles between the two surveys: from 14 mm at the start of July to over 27 mm at the start of September. The bulk of the population is now comprised between 28 and 34 mm (53% of 300 measurements). The seed condition is good but some waste is to be expected mainly on the western part.

Few starfish were observed in the area but with visible mortality for the seed. Like along the shore, scattered patches of seed can be found around the main settlement, but no quantities could be established.

Recommendation:

The total estimated tonnage over the two areas is 2,700 tonnes (possibly more including the various patches). In addition there are reports from a bed at Howth, with industry members and BIM's conservatively estimating 600 tonnes in the area.

Combined this represents 3300 tonnes in the IE Irish Sea region.

Following industry consultation BIM would advise opening the fishery on the next suitable tides (September 17th).

Nicolas Chopin

BIM Inshore Survey Officer

Aquaculture Technical Section

Note for the map:

TW stands for Tow Wicklow

TC stands for Tow Cahore

GW stands for Grab Wicklow

GC stands for Grab Cahore

In the legend dgd stands for dredge

In the legend gb stands for grab

Seed Mussel survey Map for the South Rusk Channel - 4/09/2018 to 7/09/2018

Legend

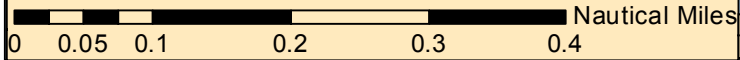
seed_grab

Wt_in_g

- 100
- 200
- 220
- 375
- 400
- 480
- 570
- 930
- 1280

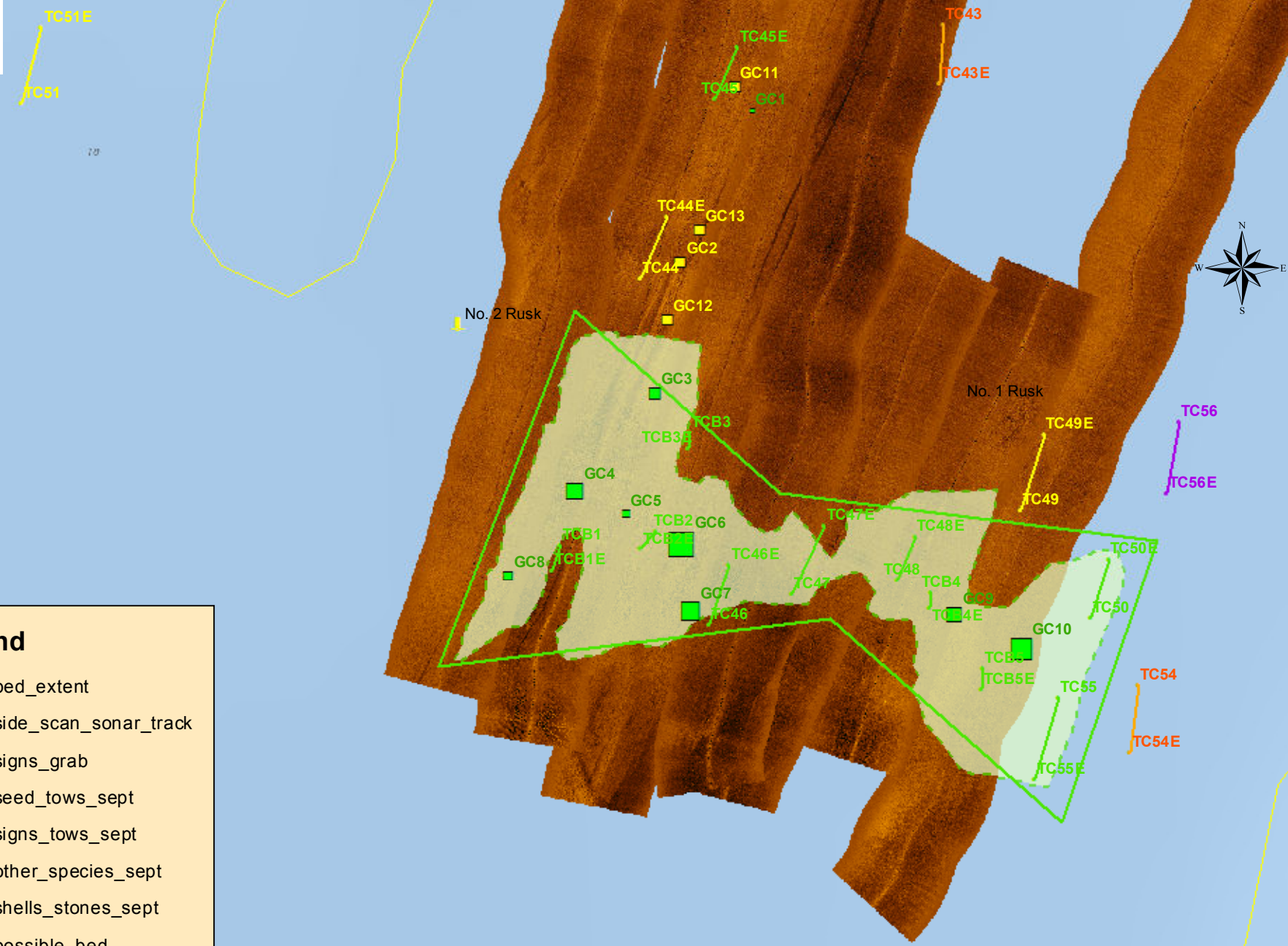
Legend

- ▭ bed_extent
- side_scan_sonar_track
- signs_grab
- seed_tows_sept
- signs_tows_sept
- other_species_sept
- shells_stones_sept
- - - possible_bed

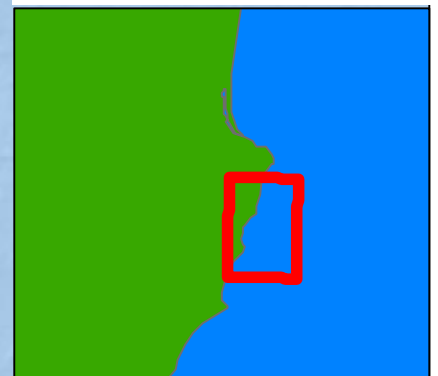


Nicolas Chopin - 7/09/18 - BIM STS BU

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Seed Mussel Survey Map for South Wicklow Head - 27/08/2018 to 30/08/2018



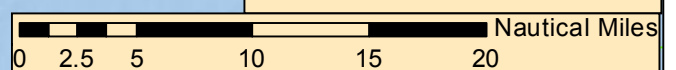
Legend

grab_seed

wt_in_g

- 30
- 80
- 130
- 180
- 530

- seed_dgd
- signs_dgd
- other_species_dgd
- shells_stones_dgd
- bed_extent
- side_scan_sonar_track
- 05_meters
- 10_meters



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