

Seed Mussel Survey Report for South Cahore Head and the Rusk Channel – 31/07/2019 to 01/08/2019

Vessel: MV T.Burke II (BIM), Skipper John Murphy, Survey Officers Nicolas Chopin, Adam Andrews.

Equipment: 1 meter dredge and 400 kHz side-scan sonar and 0.1 m² day grab

Area surveyed: South of Cahore Head and in the Rusk Channel

Survey summary:

This survey found dense settlements of mixed sized seed (most are between 20-36 mm in length) in two main patches, the first, south of Cahore Head, and second in the Rusk Channel. Quantitative surveys were carried out on 31/07/2019 and 1/08/2019 reporting an estimated 2500 tonnes of seed in the Cahore area. Starfish were not found within the beds.

- **South of Cahore Head:** This area was last productive from 2013-2015 but for the last three years has not been a source of seed mussel. This year, seed has formed a dense settlement in a ~1km north-south stretch covering 34 hectares. A total of 7 tows confirmed mussel aggregations identified using side-scan sonar and did not contain any starfish. In addition, two smaller patches of scattered were found to the south of the main patch.

A total of 17 grabs were taken inside the main bed, mean = 33.8 tonne hectares. The total coverage of the bed is estimated at 34 hectares. The biomass of the main bed therefore is estimated at 1150 tonnes. The two smaller patches to the south of the main bed are estimated to provide another 100 tonnes. We averaged 40% waste across our 17 grabs. 50% of individuals were between 26-34 mm in length.

- **In the Rusk Channel:** This area last produced a bed in 2012 and is south of the Rusk Channel where seed is more commonly found. This year seed has formed along the inside of the Blackwater Bank in two patches slightly separated by a ~150 meter strip. For the purpose of the tonnage estimate we considered this as one area.

A total of 18 grabs were taken inside the main bed, mean = 40.6 tonne hectares. The total coverage of the bed is estimated at 31 hectares. The total biomass therefore is estimated at 1250 tonnes. We averaged 43% waste across our 18 grabs. 35% of individuals were between 24-28 mm in length, 32% of individuals were between 10-14 mm in length.

Bottom type: Mainly sand and fine gravel

Recommendations:

This resource is ready to be fished.

BIM Inshore Survey Team
Seafood Technical Services and Business Unit

Notes for the map:

TC stands for Tow Cahore

Tables 1-3: Area coordinates (in Degrees, decimal minutes WGS84) from North to South:

- The main settlement south of Cahore Head is in a North/South orientation covering approximately 34 hectares.

Latitude	Longitude
52 30.727342	-6 13.722020
52 30.811217	-6 13.387314
52 29.932394	-6 13.951719
52 29.888445	-6 13.603888

- The two smaller scattered patches south of the main bed are:

Latitude	Longitude
52 28.976760	-6 15.713405
52 28.888646	-6 15.375810
52 28.746566	-6 15.978098
52 28.591498	-6 15.725742

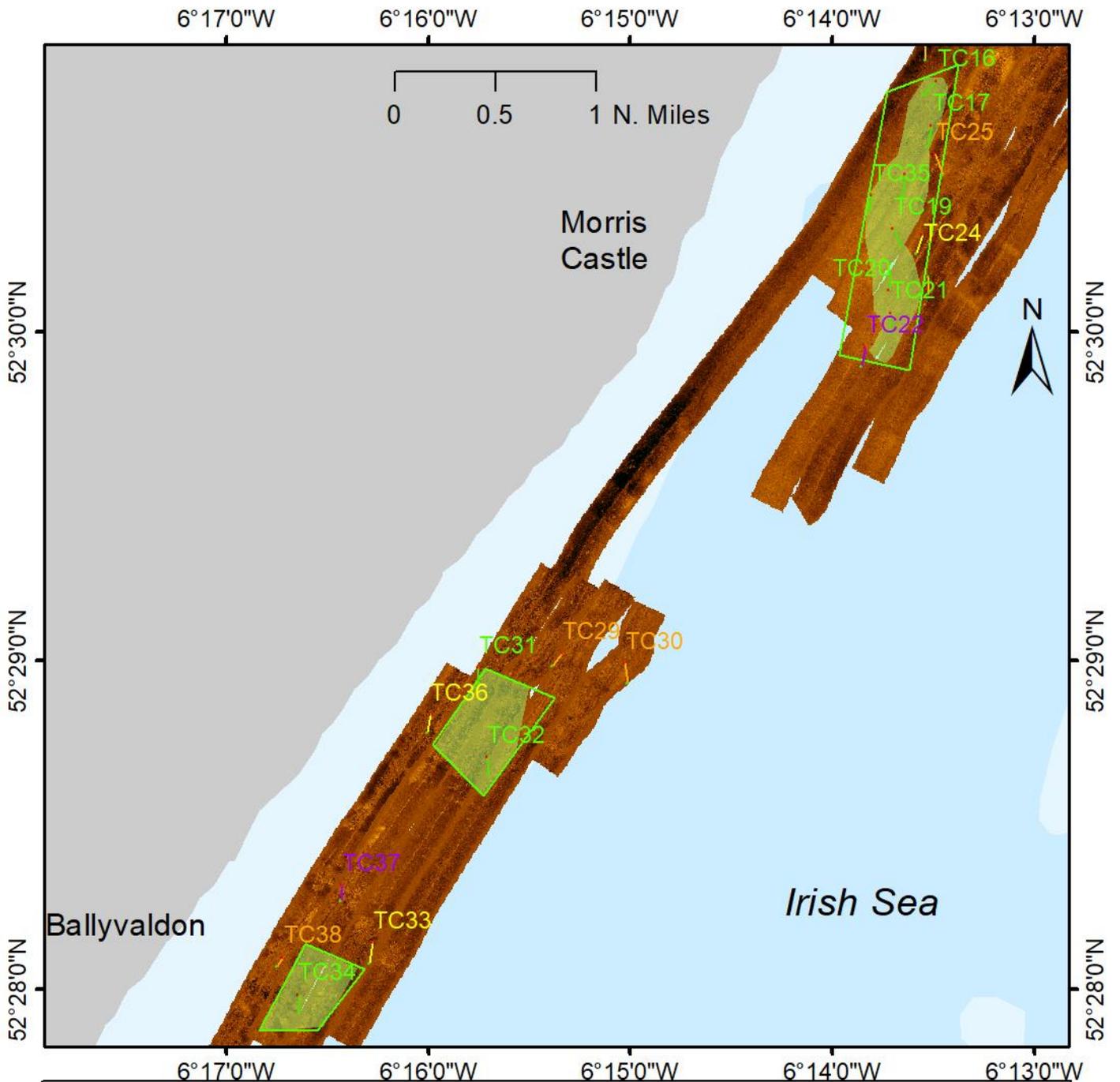
Latitude	Longitude
52 28.139221	-6 16.605061
52 28.064745	-6 16.316815
52 27.880938	-6 16.544495
52 27.878205	-6 16.837227

Table 4: Area coordinates (in Degrees, decimal minutes WGS84) from North to South:

- The settlement in the Rusk Channel is in a North/South orientation covering approximately 31 hectares

Latitude	Longitude
52 29.932426	-6 10.923368
52 29.925443	-6 10.642361
52 28.832457	-6 11.416564
52 28.830710	-6 11.083944

NOTE: The seed bed displayed on the attached map has been established following the side-scan sonar data verified by ground truthing. These coordinates are for each corner of a simplified polygon of the area of the settlement identified (the green boxes on the maps).



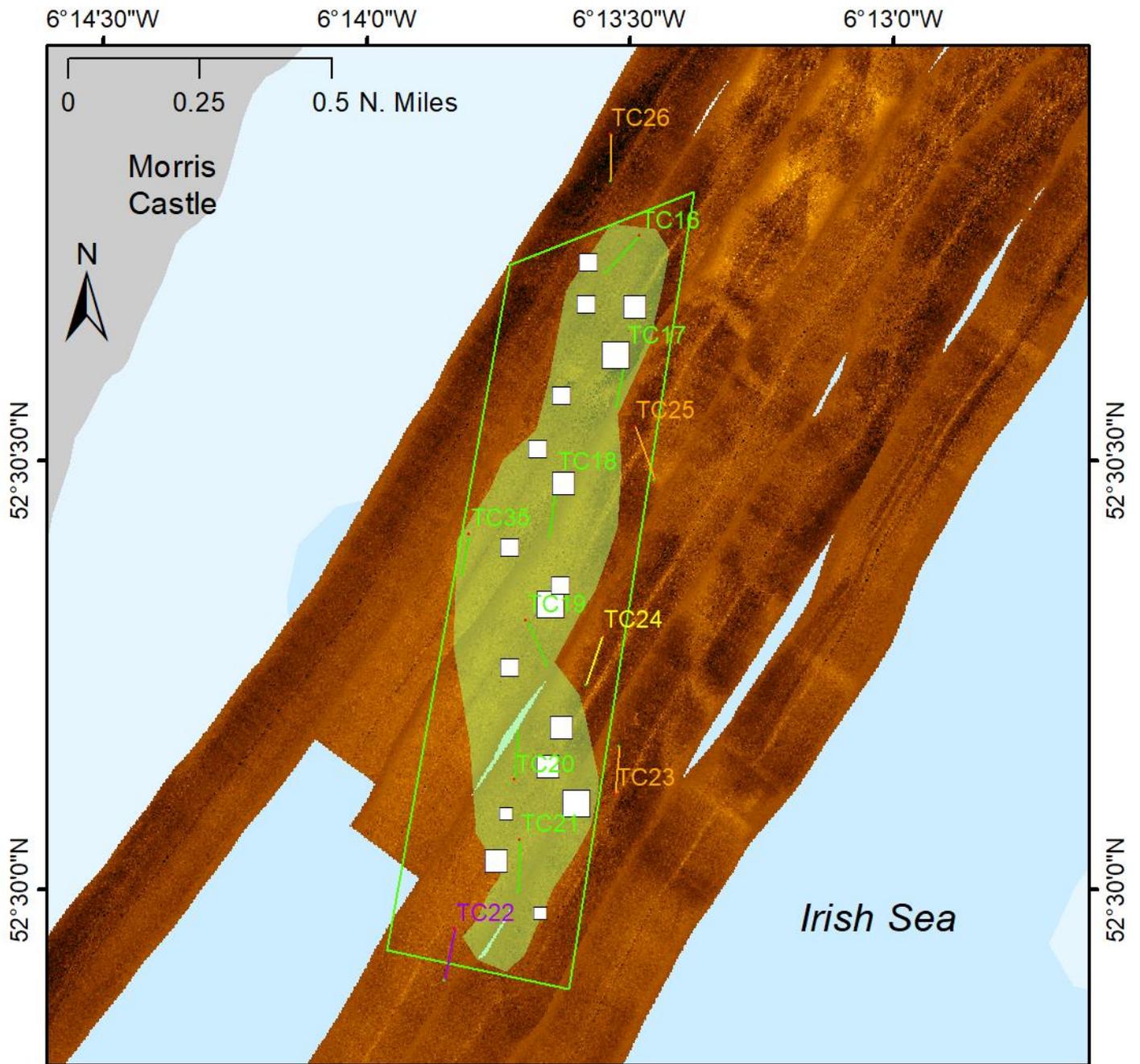
**Seed Mussel Survey
South of Cahore Head - July 2019**

- Side Scan Survey Extent
- Possible Seed Bed
- Tow End
- Tow Start
- Seed mussel
- Signs of seed mussel
- Other species only
- Stones/shell only



NOT TO BE USED FOR NAVIGATION
Map © Bord Iscaigh Mhara (BIM) 2019.
Created by Adam J. Andrews.
Projection: WGS 1984.





Seed Mussel Biomass Survey South of Cahore Head - July 2019

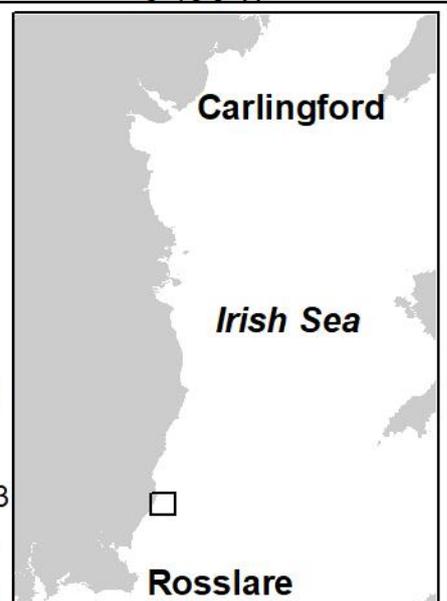
- Side Scan Survey Extent
- Possible Seed Bed
- Tow End
- Tow Start
- Seed mussel
- Signs of seed mussel
- Other species only
- Stones/shell only

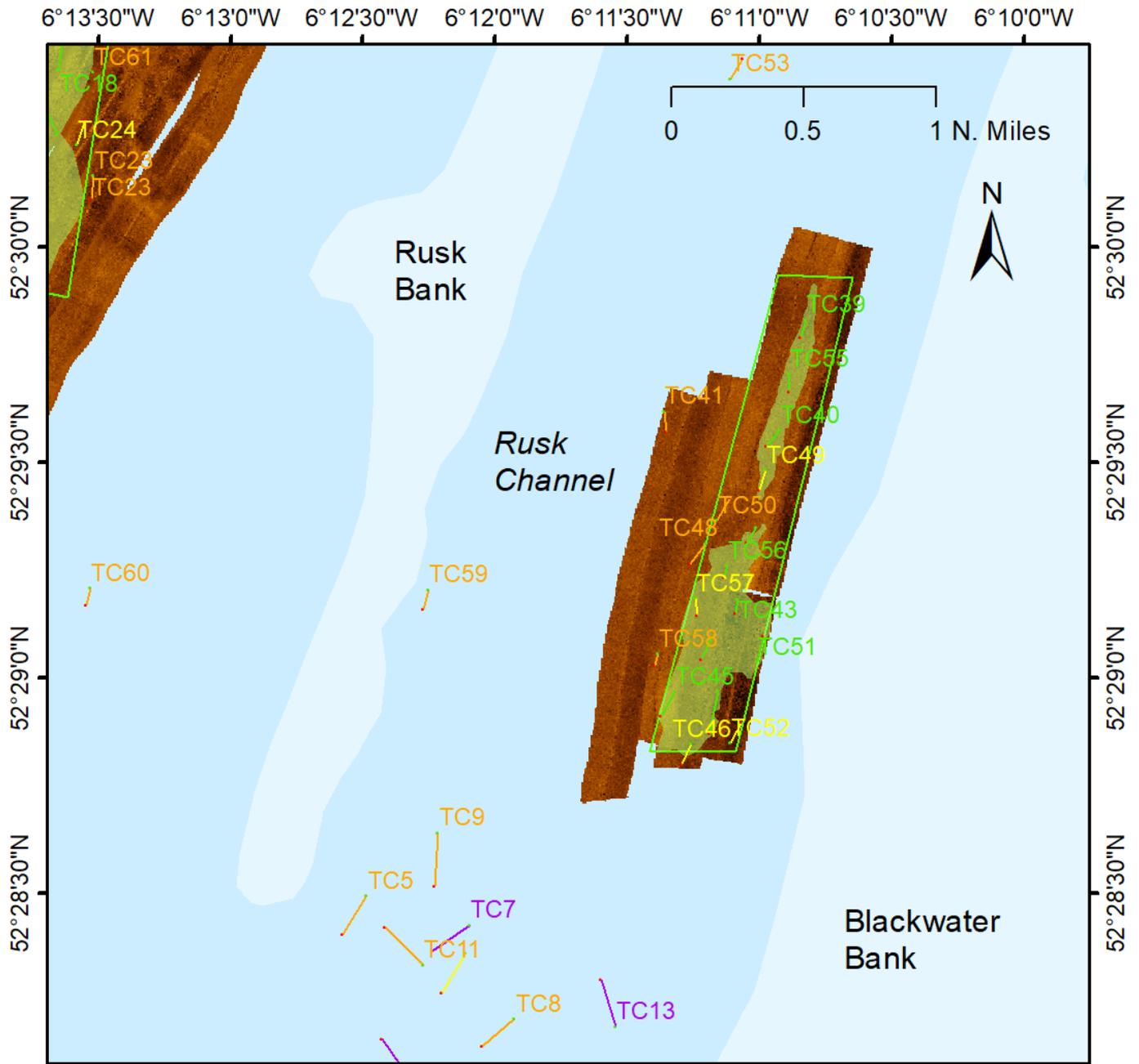


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Projection: WGS 1984.

Depth (m)	Biomass (kg)
-1	< 0.15
> -10	0.15 - 0.3
-10 to -20	0.3 - 0.5
< -20	0.5-0.85





Seed Mussel Survey Rusk Channel - July 2019

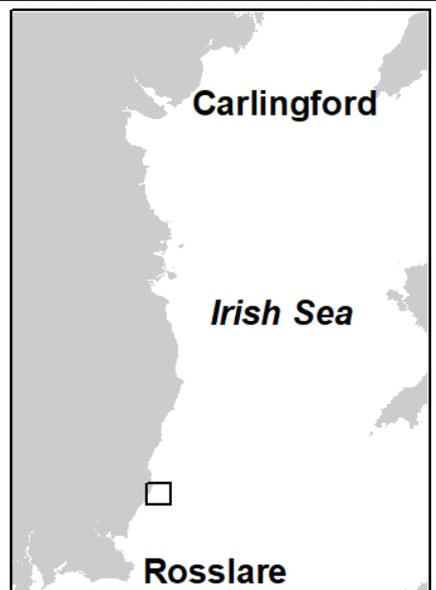
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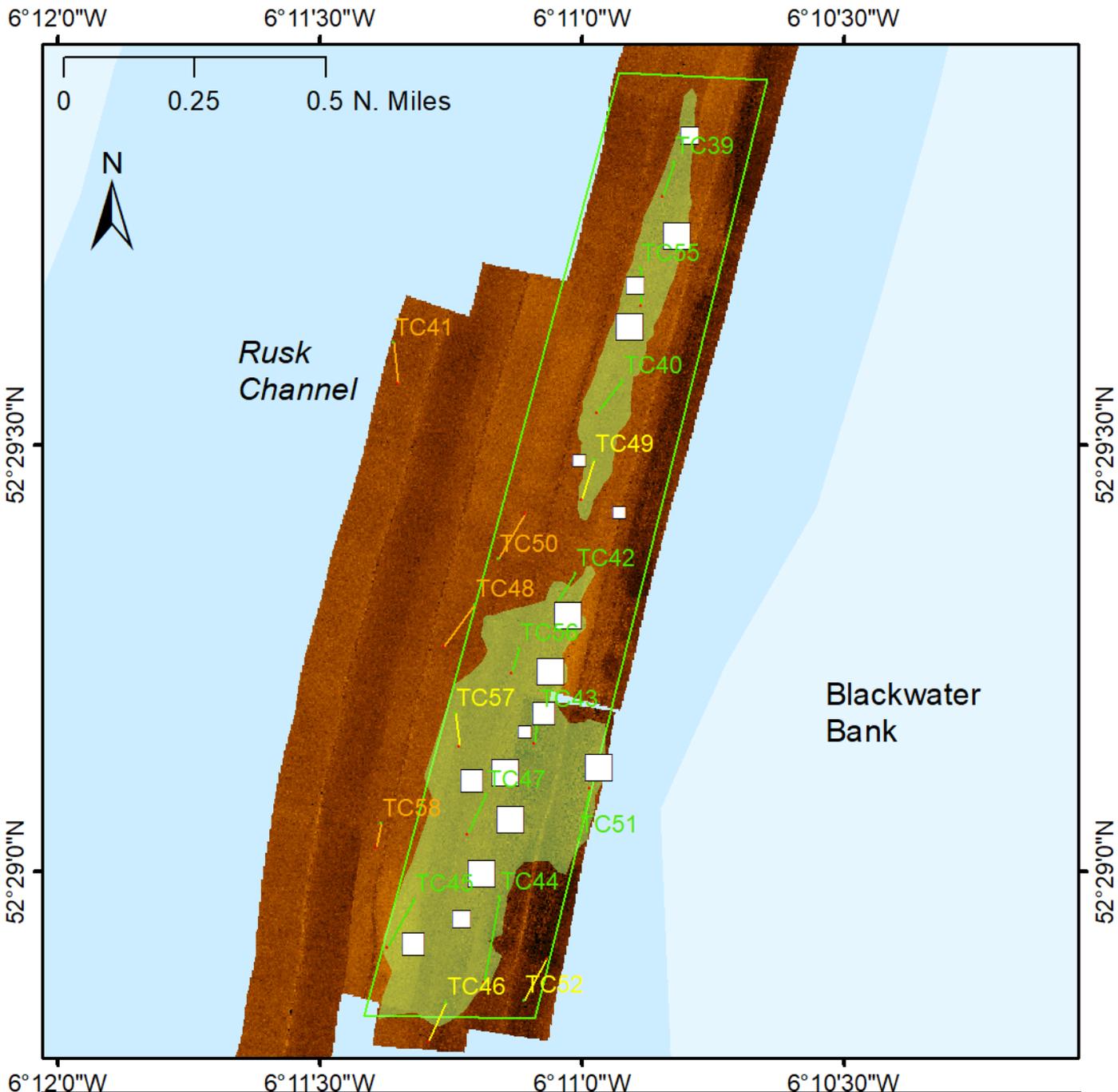


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 Created by Adam J. Andrews.
 Projection: WGS 1984.

Depth (m)

- 1
- > -10
- 10 to -20
- < -20





Seed Mussel Biomass Survey Rusk Channel - July 2019

- Side Scan Survey Extent
- Possible Seed Bed
- Tow End
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Depth (m)		Biomass (kg)	
	> -10		< 0.15
	-10 to -20		0.15 - 0.3
	< -20		0.3 - 0.5
	< -20		0.5-0.85

