



Bord Iascaigh Mhara  
Irish Sea Fisheries Board

## Seed Mussel Survey Report for the Wicklow Head Area – 12/07/12 to 10/08/12

Vessel: MV T'Burke (BIM), Skipper John Murphy, Survey Officer Nicolas Chopin

Equipment: 400 kHz side scan sonar, 1 meter dredge, Spyball underwater camera.

Area surveyed: From Jack's Hole to Six Mile Point on the shore to the 20 meters contour line (see Map 1).

### Survey summary:

Despite last year results from Wicklow Head (no seed and bare seabed), a full survey has been carried out this year. Historical seed locations, both North and South of the head, were checked, focusing on areas of the more recent settlements (mainly 2009 and 2010).

The side scan sonar was deployed from the southwest of the Horseshoe Reef to Ardmore Point/ Jack's Hole, extending East. The east side of the reef was also covered. No major settlement was observed; the seabed is still very rough and hard with large boulders. There is a slight improvement from last year; the ground is covered by a light layer of medium to coarse sand. The few marks located were investigated with the dredge and/or the underwater camera; three areas have been defined.

### Beds Coordinates (in Degrees, decimal minutes WGS84):

<u>Area 1</u>	Latitude	Longitude
	52° 56.782' N	6° 0.215' W
37 hectares	52° 55.929' N	6° 0.605' W
	52° 55.982' N	6° 0.800' W
	52° 56.790' N	6° 0.429' W

<u>Area 2</u>	Latitude	Longitude
	52° 55.971' N	5° 59.427' W
130 hectares	52° 55.039' N	5° 59.542' W
	52° 55.057' N	6° 0.181' W
	52° 55.981' N	6° 0.138' W

<u>Area 3</u>	Latitude	Longitude
	52° 54.999' N	6° 0.221' W
76 hectares	52° 54.375' N	6° 1.086' W
	52° 54.463' N	6° 1.346' W
	52° 55.139' N	6° 0.851' W

Unfortunately it was impossible to accurately define real borders of those settlement areas due to the nature of the seabed and the low density of the seed. These coordinates are estimates of the areas.

The grab could not be deployed successfully on the hard ground, but video footage showed that the seed is from patchy to very scattered in those three areas (see Map 2 in Area 2). The samples collected from the dredges showed good quality seed with little waste (from 15 to 30% mainly small stones and byssus). The mussels showed very good signs of growth too: from an average size of 14 mm (3, 500 pieces/kilo) in mid July to an average size of 20 mm (from 2,000 to 1,000 pieces/ kilo) in mid August. The current population is composed mainly of individuals measuring over 20 mm (for 47% of the samples).

A few starfish were observed on the video footage as well as in the dredges.

Without grab data and clear acoustic imagery it is difficult to give a proper tonnage estimation, nevertheless from the camera footage and the dredges content it is possible to estimate the approximate tonnage (for the 3 areas) at around 2,000 tonnes or less.

Nothing was found east of those areas (harder and rougher ground closer to the shore).

The area north of Wicklow was checked with no seed mussel being found.

Due to technical fault the side scan was not deployed further in Wicklow.

### **Bottom type:**

Rough and hard seabed, with very light sand cover, boulders and bare rocks.

### **Recommendations:**

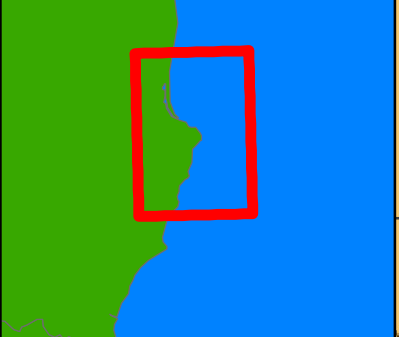
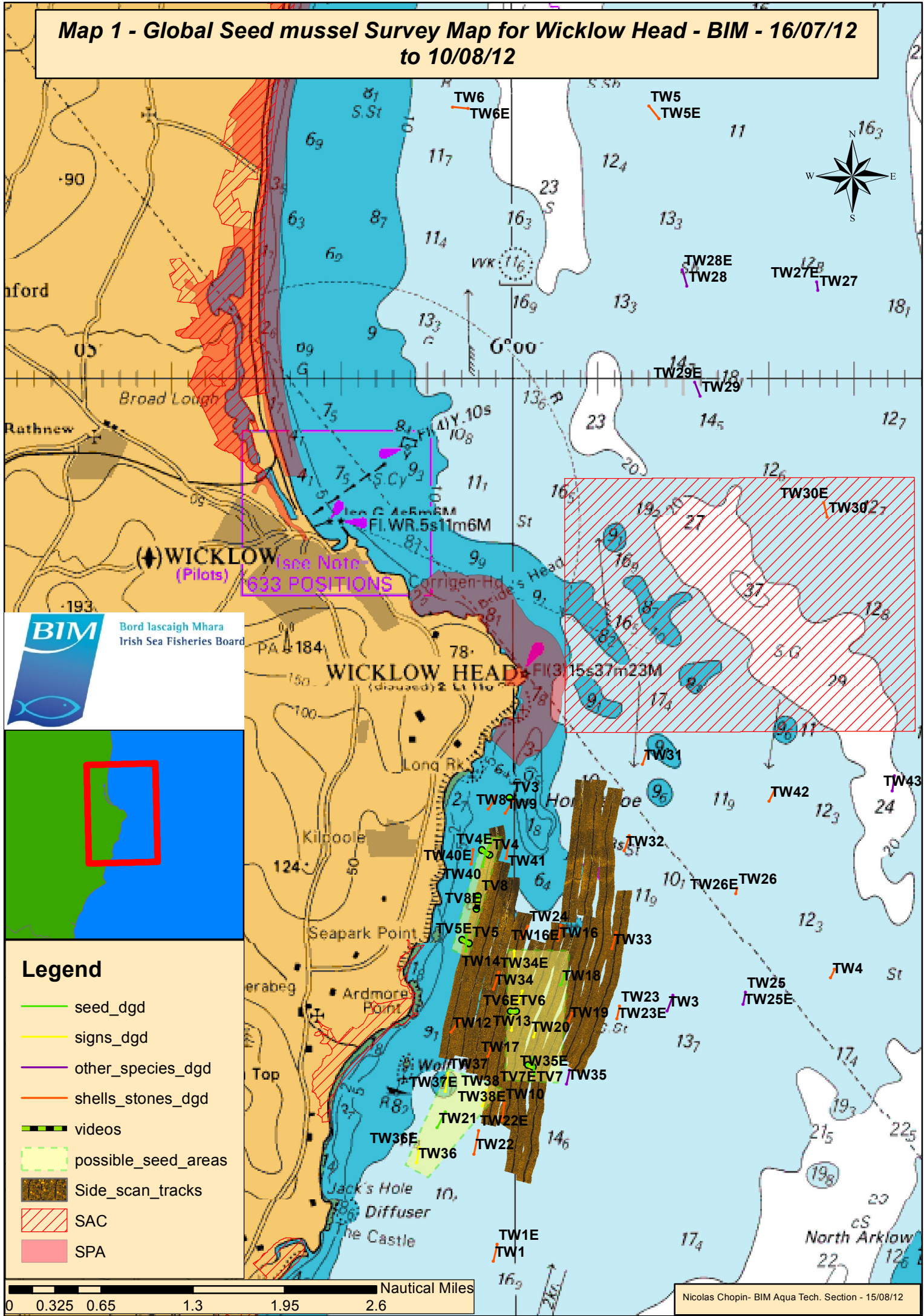
The area around Wicklow Head is slowly recovering after the 2010/2011 winter. The seed observed during the survey has settled mainly on rocks and boulders, only a few patches settled on softer seabed. Considering the estimated tonnage and the type of ground, fishing these areas could be difficult and time consuming and the returns quite limited.

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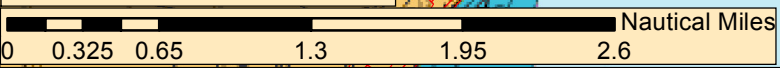
### **Notes for the maps:**

TW for tow Wicklow  
TV for video transect

**Map 1 - Global Seed mussel Survey Map for Wicklow Head - BIM - 16/07/12 to 10/08/12**



- Legend**
- seed\_dgd
  - signs\_dgd
  - other\_species\_dgd
  - shells\_stones\_dgd
  - videos
  - possible\_seed\_areas
  - Side\_scan\_tracks
  - SAC
  - SPA



**Map 2 - Possible Seed Mussel Bed Areas around Wicklow Head - BIM - 16/07/12 to 10/08/12**

