

2022

# Diurnal and tidal influence on the spatial distribution and surface activity of bottlenose dolphins (*Tursiops truncatus*) in the Shannon Estuary, Ireland

Wilson, R.

Wilson, R. (2022) 'Diurnal and tidal influence on the spatial distribution and surface activity of bottlenose dolphins (*Tursiops truncatus*) in the Shannon Estuary, Ireland', *The Plymouth Student Scientist*, 15(2), pp.102-126.

<http://hdl.handle.net/10026.1/20120>

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University of Plymouth

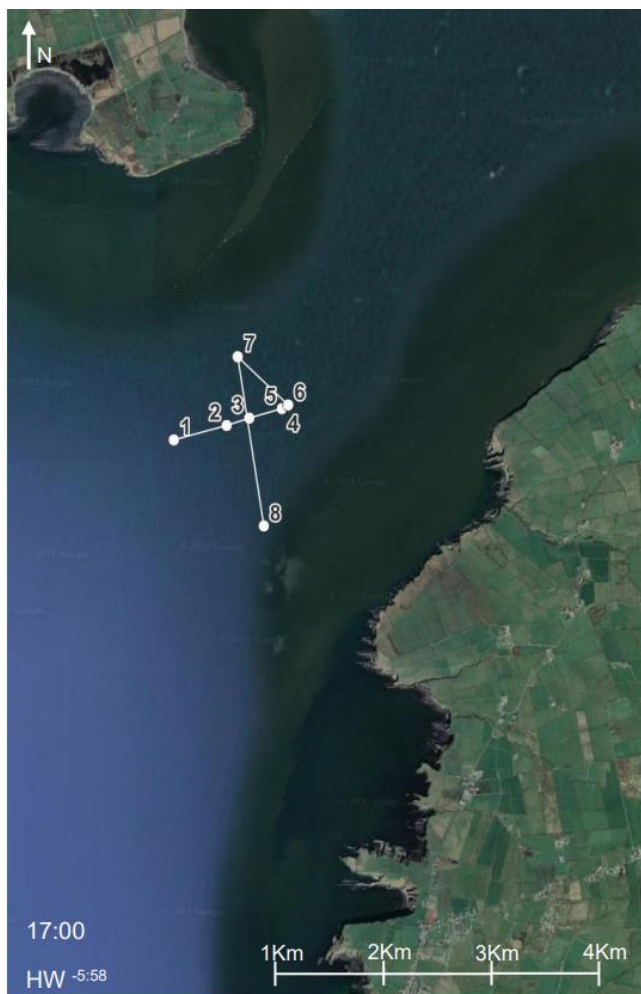
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## Appendices

N.B. All maps in this appendix were created using the Free and Open Source QGIS. Basemap: Googlemaps 2022.

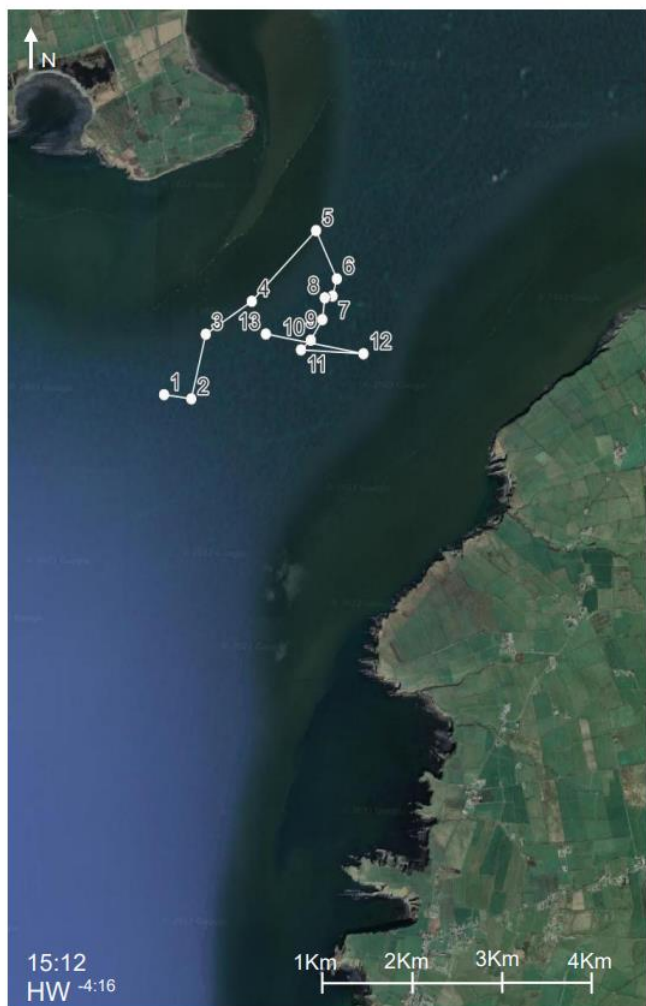
A) Tracks of all observed dolphin schools.



Track 13 5a. A total of 8 observations over 50 minutes.



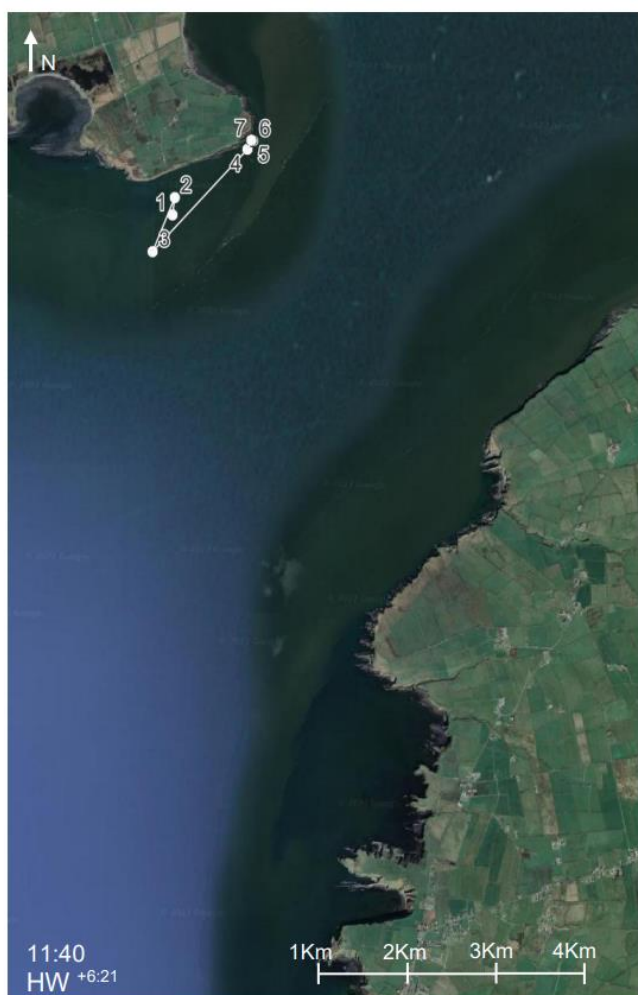
Track 22 7a. A total of 11 observations over 55 minutes.



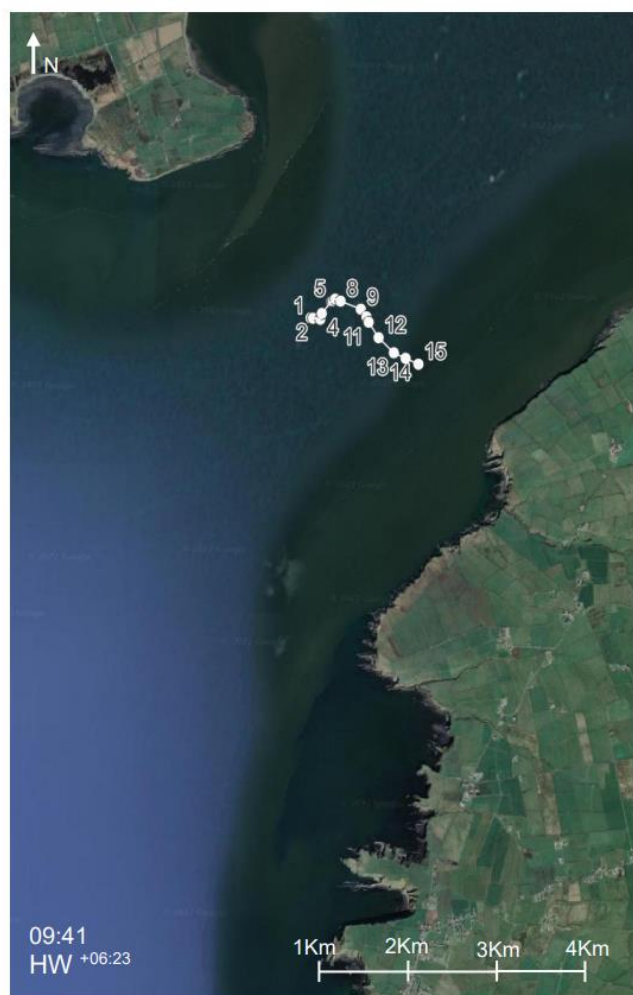
Track 25 1b. A total of 13 observations over 1 hour 3 minutes.



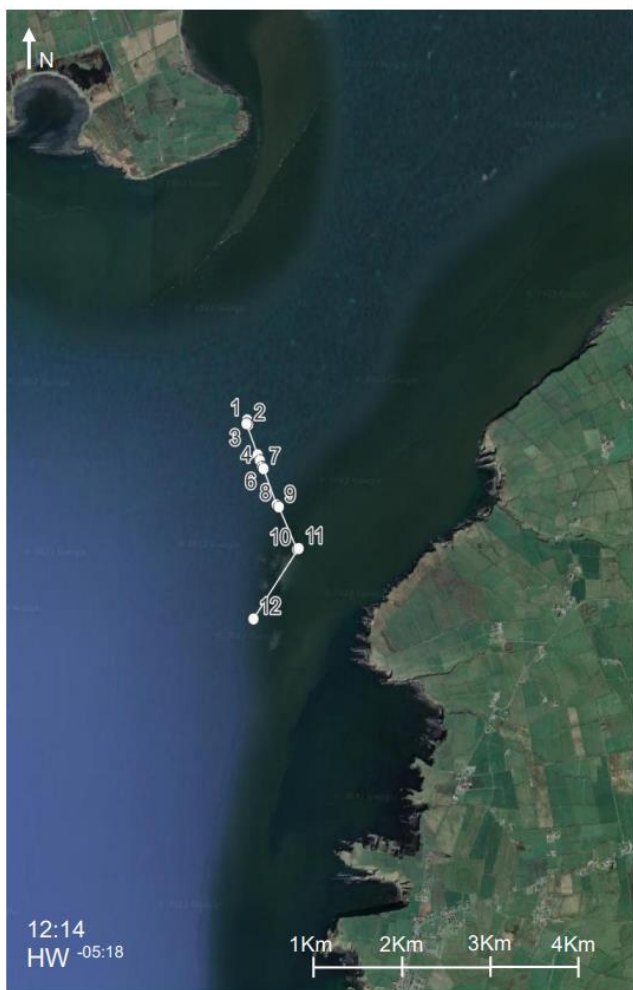
Track 44 7d. A total of 11 observations over 46 minutes.



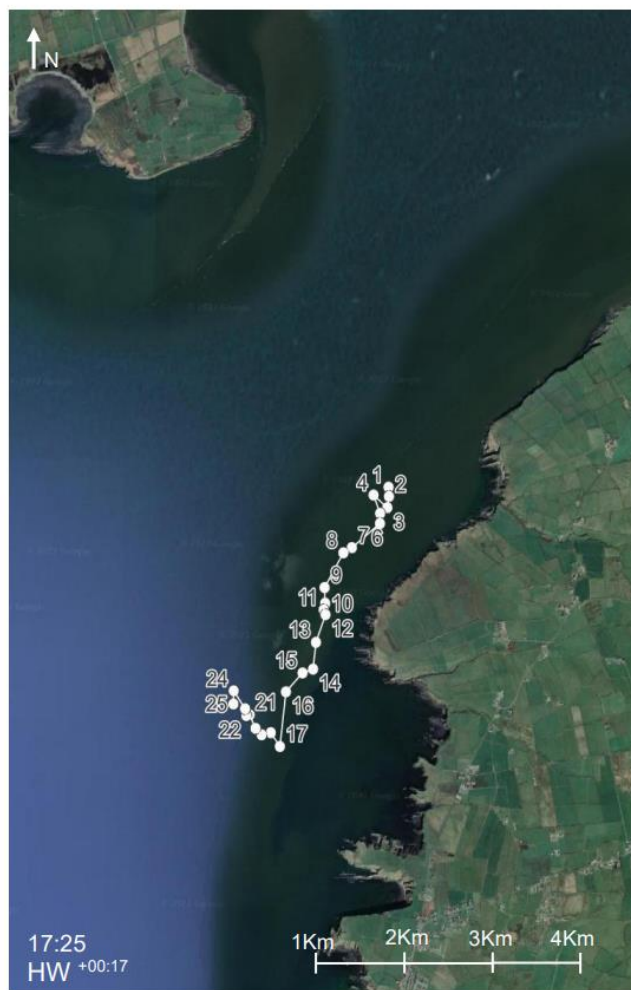
Track 52 3b. A total of 7 observation over 18 minutes.



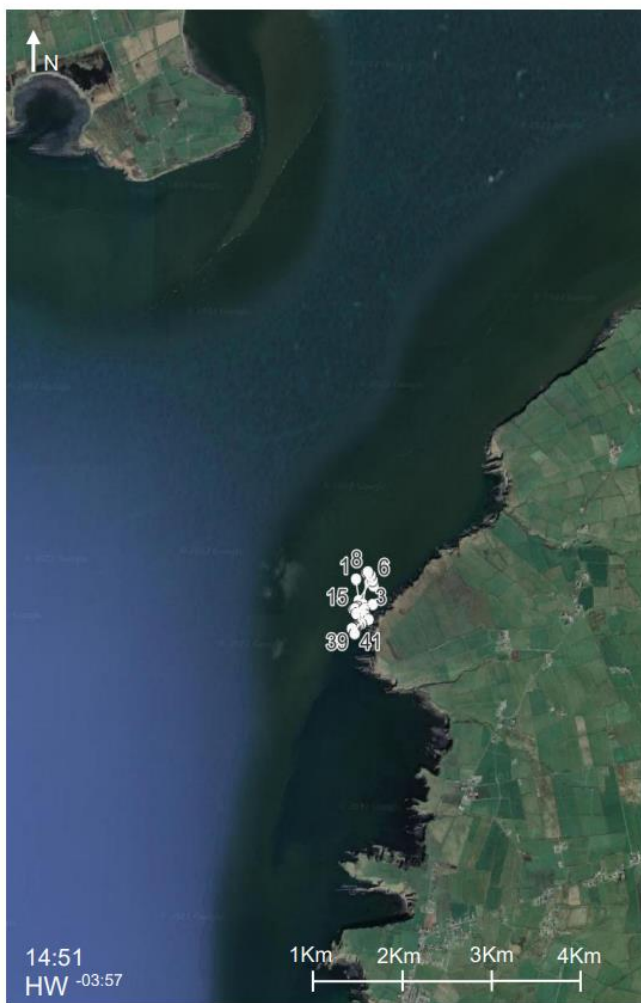
Track 63 1a. A total of 15 observations over 13 minutes.



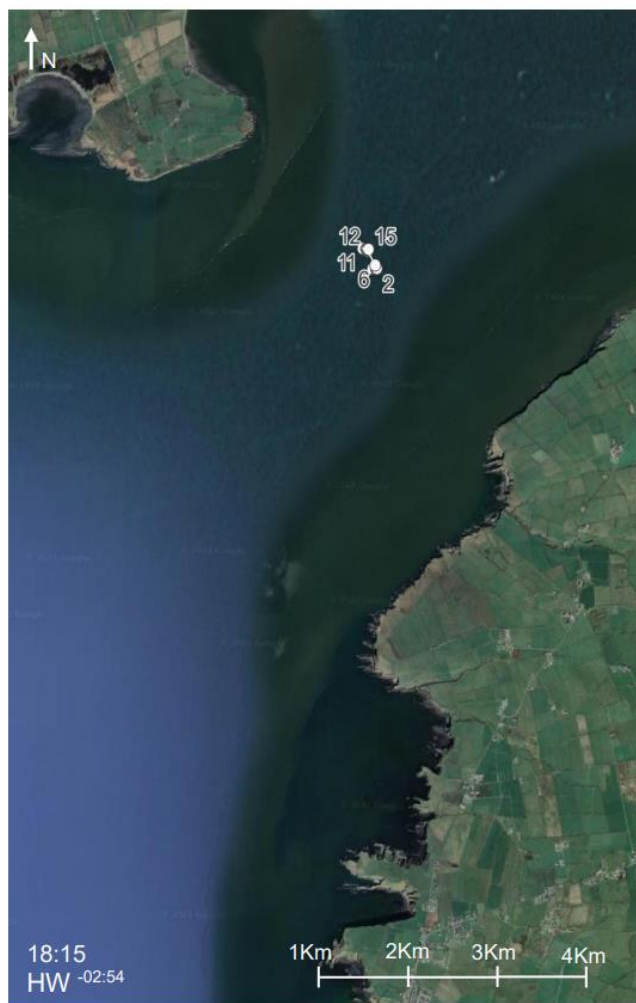
Track 64 3b. A total of 12 observations over 16 minutes.



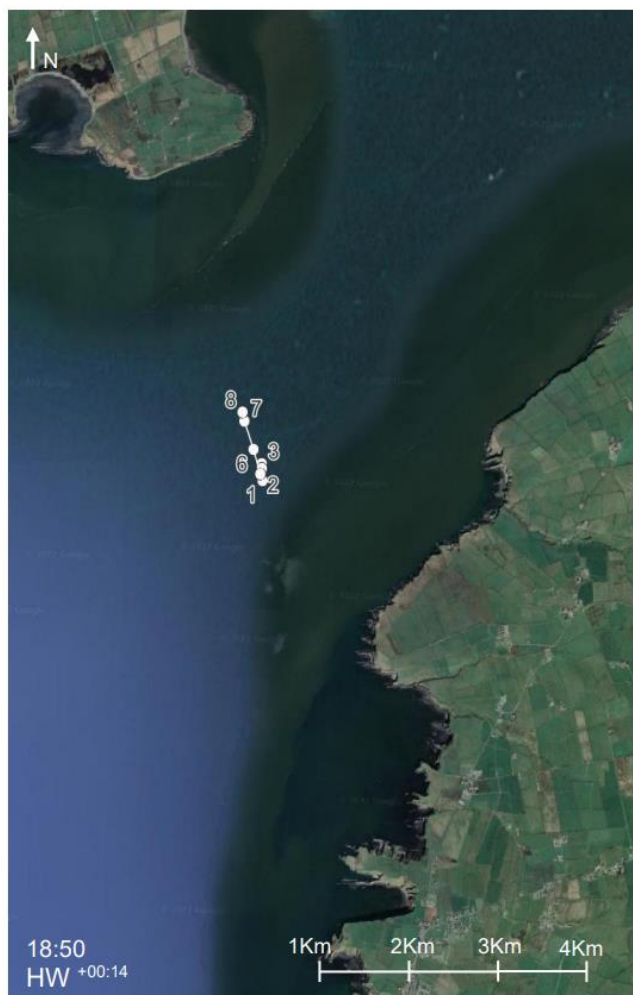
Track 70 3b. A total of 25 observations over 32 minutes.



Track 77 7a. A total of 47 observations over 37 minutes.



Track 72 11a. A total of 16 observations over 14 minutes.



Track 80 7a. A total of 9 observations over 9 minutes.

B) Illustration of the calculation of observed school angle and speed of travel, using school 19 3A's track as an example.

$\theta$  = the angle of travel of observed dolphin schools

$a$  = the difference in northing

$b$  = the difference in easting

In this example, to calculate the angle of travel of observed dolphin schools relative to north it would be  $90^\circ - \theta$

