

The following supplement accompanies the article

Effect of construction-related activities and vessel traffic on marine mammals

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For the alternative model structure, the Generalised Variance Inflation Factor (GVIF) was <2 for the global model for all four species, indicating that multicollinearity was not an issue (Fox & Monette 1992). The AR1 correlation structure was preferred for the global model for the respective alternative model structure for all four species (common dolphin $\Delta\text{QIC} = 9.12$; minke whale $\Delta\text{QIC} = 4.82$; harbour porpoise $\Delta\text{QIC} = 1.75$; grey seal $\Delta\text{QIC} = 5.3$).

Table S1: The confidence sets for the competing model structure for the GEE-GAMs for each of the four species; for continuous explanatory variables +/- indicate the direction of the relationship; the site with the greater occurrence rate is indicated (E = Erris Head, S = Slugga). The percentage of models retaining the explanatory variable of interest is rounded to the nearest whole number. The number of models retained from a possible 63 is provided. The goodness-of-fit metrics are provided for the overall best model. The Δ QICu value, which compares the best model herein with the best model from the competing model structure (Table 1), is also presented.

		Common dolphin	Minke whale	Harbour porpoise	Grey seal
Variables	Sea state	50 ^a (-)	100 ^a (-)	100 ^a (-)	100 ^a (-)
	High tide	50 ^a (-)	0	0	0
	Day-of-year	100 ^a	100 ^a	100 ^a	50 ^a
	Site	100 ^a (E)	50 ^a (E)	50 ^a (S)	50 ^a (E)
	Year	100 ^a	100 ^a	100 ^a	100 ^a
	Vessels	na	0	0	100 ^a (-)
	Construction-related activity	0	na	na	na
Model Selection	ΔQICu	10.53	1.16	2.49	1.11
	No. models retained	4	2	2	4
Goodness-Of-Fit	Presence/absence (%)	63 / 73	72 / 66	74 / 82	63 / 70
	AUC	0.72	0.75	0.84	0.71

^a Explanatory variable was retained within the best model

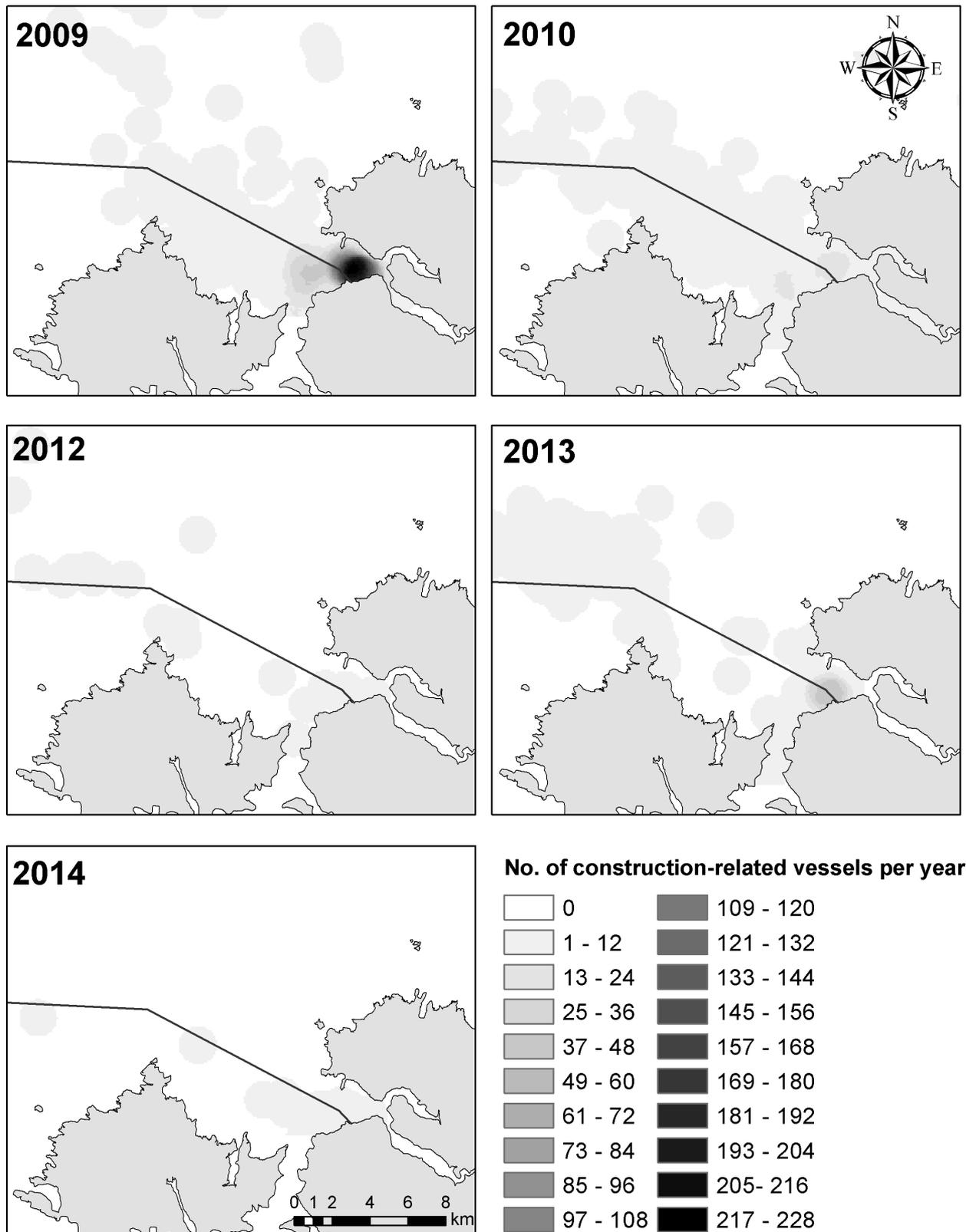


Figure S1: Density maps of vessels that were identified from shore-based surveys as assisting (e.g. support vessels transporting staff and materials) and/or being actively involved in construction-related activities. The black line represents the approximate path of the gas pipeline. There was no construction-related activity in 2011.