## Ship collision risks cable laying and pipeline laying vessels

The official procedure with a 'Notice to mariners' will be followed for the cable laying and pipeline laying activities, to warn commercial vessels in advance of the intended cable and pipeline laying activities.

Cable laying vessel(s) and pipeline laying vessel(s) are equipped with RADAR system(s) to monitored shipping activities in the area. AIS 24/7 active monitoring is in place in addition to the RADAR system(s). If required by the authorities, a guard vessel will be used. A guard vessel could support the cable/pipeline laying vessel in warning off ships on collision course.

If a vessel is on a collision course, the vessel will be warned off by radio to alter its course. As the pipeline and cable laying activity is a onetime activity with a duration of a few weeks, the risks of ship collision are low compared to the risk of ship collision of a fixed installation.

In case of an errant vessel, the coast guard would track the vessel and warn the cable/pipeline laying vessels. In case of an emergency – for example an errant vessel with a high probability of collision with the cable/pipeline layer - the pipeline or cable can ultimately be released to choose a safer course in order to prevent collision.

## Comparison old and new location

The new location of the N05-A installation is situated 26 minutes southwards and 4 minutes eastwards. The new location is further away from the Northern traffic lane (Terschelling-German bight) and slightly closer to vessels sailing from and to the Northern Deep-Water route and the approach to the Ems, as can be seen in the figure below. As such, the ship collision risks caused by vessels sailing on the Northern Deep-Water route and the approach to the Ems will contribute more and the ship collision risks caused by vessels on the Terschelling-German bight will have a lower contribution.

From the collision risk study performed by Marin in 2019 (ref. 32287-1), route bound vessels have a higher contribution to the ship collision risks due to the proximity to the shipping lanes.

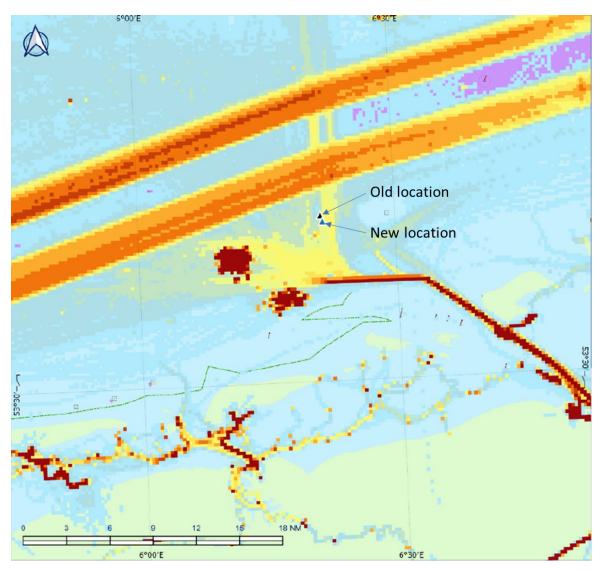


Figure 1. Snip from MARIN memo (ref. 32287.601) with the new and old location of the N05-A installation