MAJ2021-50. Archival verification and archaeological analysis of the construction area prior to the establishment of an energy island with associated wind farm in the North Sea.

Jan Hammer Larsen
Nordjyllands Kystmuseum.
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For centuries, the North Sea has been shrouded in fear and terror. The painting above depicts a ship stranded on a hungry fish. From a 13th-century manuscript. – Illustration from the book *Ved verdens ende: hvordan Nordsøens vikinger, handelsfolk og fromme mænd forandrede vores historie* (At the end of the world: how Vikings, merchants and pious men changed our history). Michael Pye. 2018, 1st edition. Kristeligt Dagblads Forlag.

The MAJ cooperation has received material concerning the establishment of a construction area in the North Sea covering roughly 1,000 square kilometres for an energy island and a wind farm. We have conducted an archaeological and archival verification of the area and have the following comments on the construction works in the North Sea.

Historical sea lanes.

The construction area is located on an international sea lane between the northern part of the Netherlands, Germany and Denmark (Skagen), which has been heavily trafficked by maritime transports since the Middle Ages.[1]

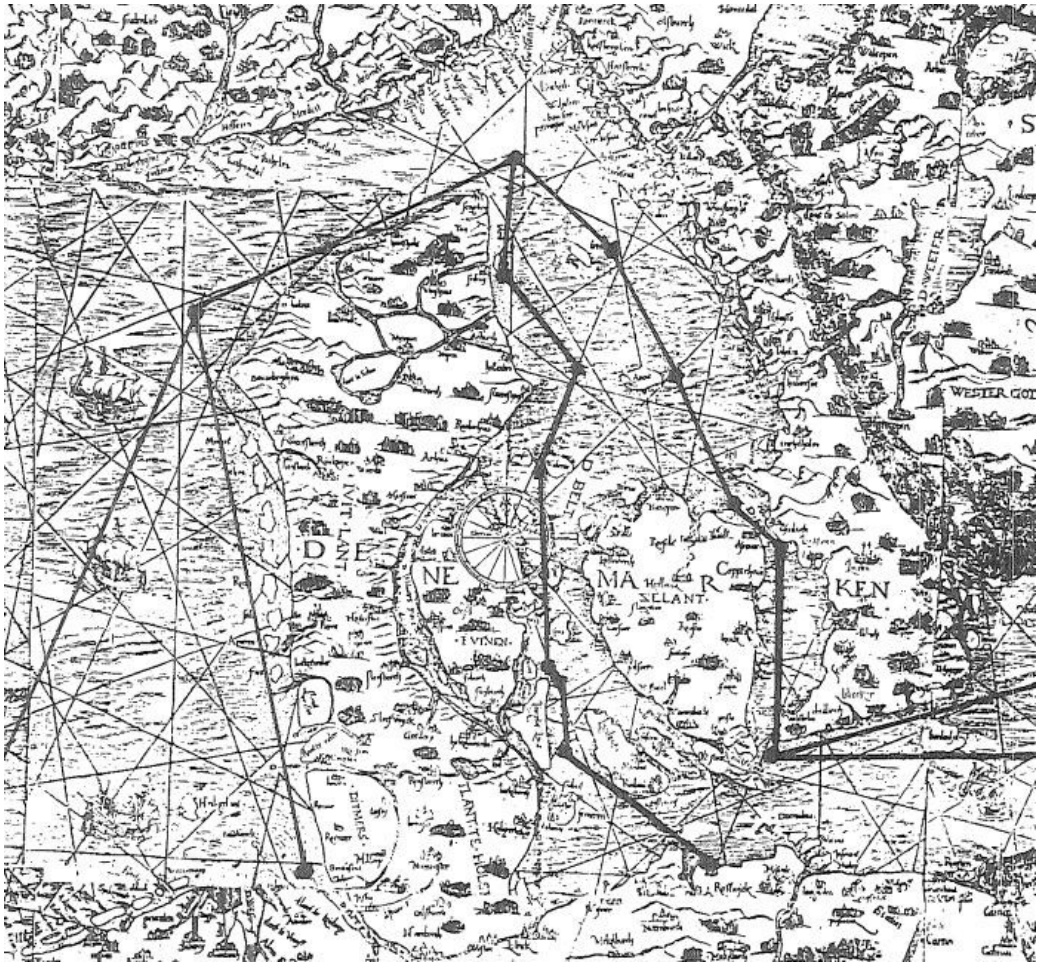

Figure 1: The sea lanes from Flanders to Skagen and from the Elbe to Skagen in the 1566 edition of the navigation manual processed by Cornelis-Anthonisz (Henningsen, p. 75).

Sailing directions have not changed significantly since the Viking Age and the Middle Ages. The same sea lanes are still in use to this day. This means that sunken ships and cargos may not have been registered because they occurred far from shore. In the event of strandings and shipwrecks near shore, all stranded goods were registered and sold, and the vessels were often declared wrecks.

This was not always the case at sea before industrialisation, when ships were lost "with all hands" without notification of this being received on land.

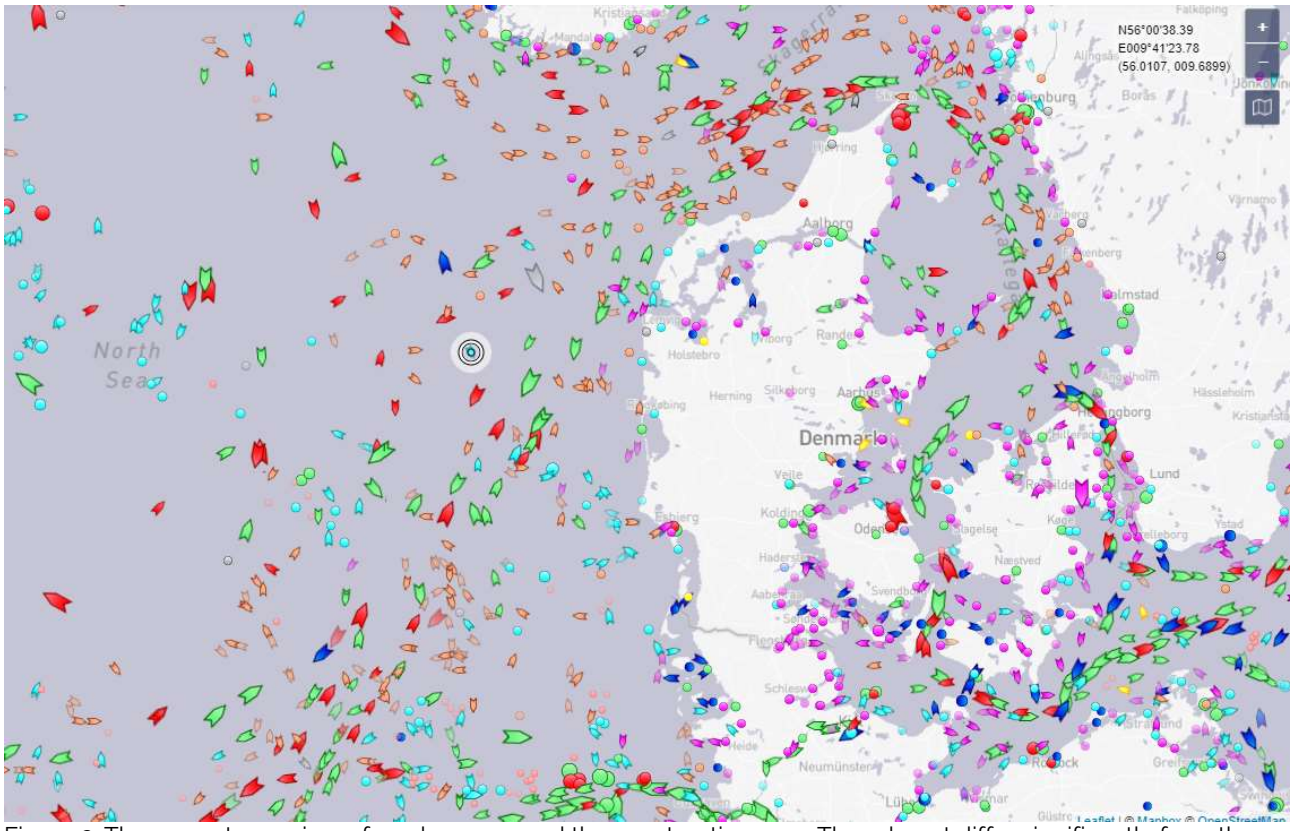

Figure 2. The current overview of sea lanes around the construction area. They do not differ significantly from the historical lanes.
Source: Marinetraffic.com. 31 August 2021.

Naval battles.

A large-scale naval battle was fought around the construction area. Whether other battles have occurred here is not mentioned in the sources, but the Battle of Jutland is known as one of the biggest naval battles in world history. It is described in detail and has been researched by Gert Andersen of the Seawar Museum in Thyborøn. The description below is available on their website.

"On 31 May 1916, the vast majority of ships in the Imperial German Navy's High Seas Fleet sailed out of Germany's North Sea ports to engage, if possible, smaller units of the British Royal Navy and defeat them.

The British Admiralty were aware that Germany had something in the works. Virtually all of the Britain's Royal Navy Grand Fleet departed from Scotland and the Orkney Islands north of Scotland, but neither of these two large fleets knew anything specific about their enemy's positions or intentions.

Altogether, the two fleets comprised at least 240 warships, staffed by approx. 104,000 sailors and 25 admirals. With their large guns, each of the many battleships could penetrate even the heaviest armour and were capable of destroying small towns in a short period of time, for example.

A neutral Danish steamer, the N J Fjord, was stopped on the North Sea by the foremost smaller ships of the German navy. The engine in the N J Fjord was stopped, which caused it to emit a large cloud of steam.

This steam cloud was observed by the foremost British ships, which were dispatched to investigate the matter, marking the first encounter of the Battle of Jutland between the British and German fleets. The N J Fjord left the battle area without being hit.

For the rest of the day and evening, the battle fluctuated back and forth, with the two fleets taking turns being in command of the situation.

That afternoon and evening, four large battleships exploded, resulting in the loss of more than 3,500 human lives. A total of 25 warships were sunk, and almost 9,000 sailors were lost. The fighting turned out to be nothing less than the biggest naval battle in world history, the Battle of Jutland. The thunder of guns was so intense that it could be heard about 100 kilometres away along the west coast of Jutland, from Hanstholm to Blåvand."[2]

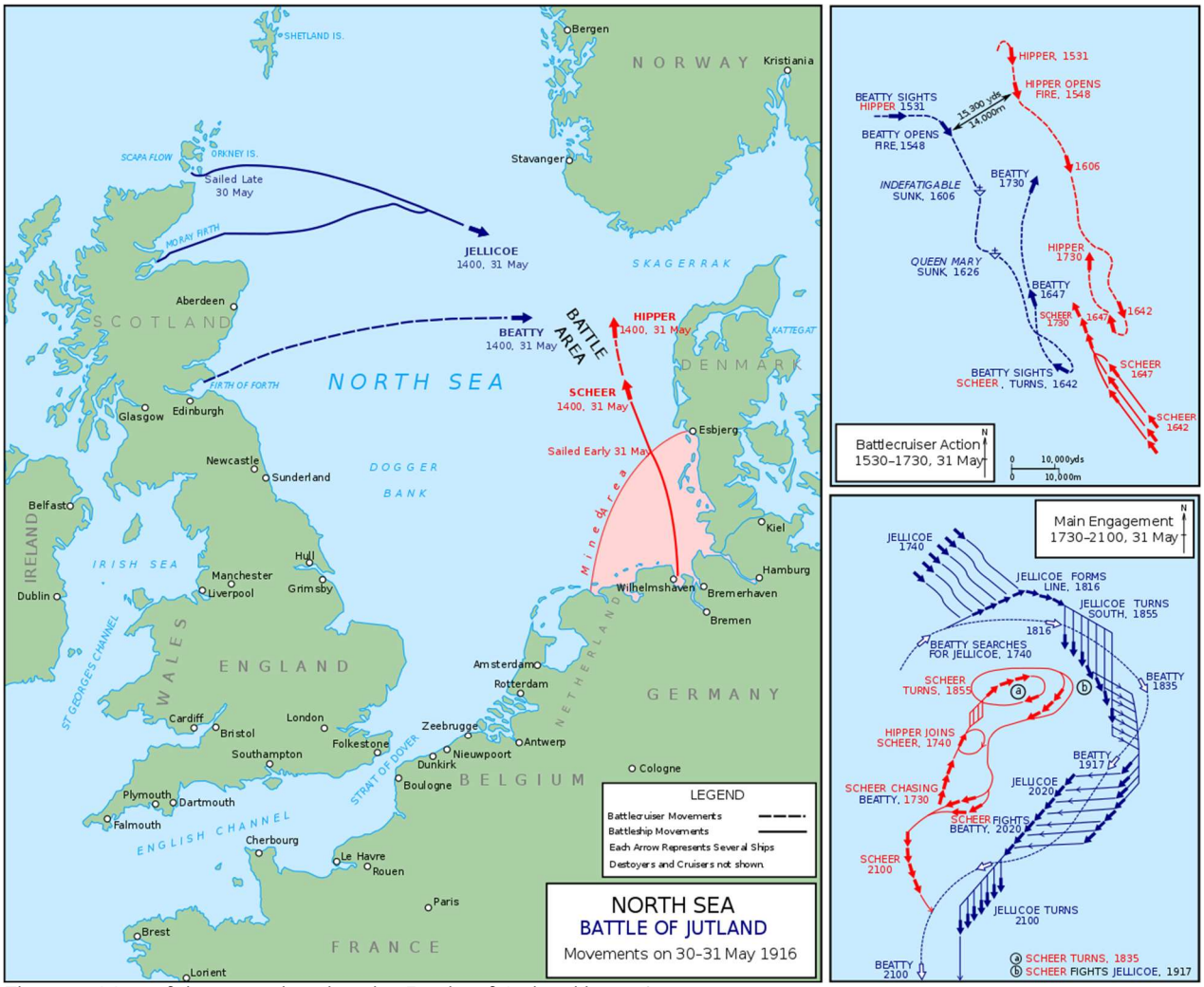

Figure 3. Map of the area showing the Battle of Jutland in 1916.
Source: https://en.wikipedia.org/wiki/Battle_of_Jutland#/media/File:Map_of_the_Battle_of_Jutland,_1916.svg

Therefore it is reasonable to assume that the remains of ships, ordinance or other cultural traces from this naval battle can be found in the construction area.

Registrations of cultural-historical traces in the area.

As there are no known Stone Age settlements in the construction area, these will not be included in this archaeological analysis. These will be assessed as part of the geoarchaeological analysis.

A search conducted in the Agency for Culture and Palaces' Finds and Ancient Monuments shows that four finds are registered in the area. The positions indicated in the database are somewhat inaccurate as these are usually set by fishermen and private individuals who do not have precise navigation instruments. Therefore, positions in the immediate vicinity of the area may actually be within the construction area. Also, the database contains only finds that are already known, which means that unknown wrecks and objects may still be in the area. On this basis, it is not possible to precisely verify the wreckage positions in the construction area.

The four positions in the area are registrations of 'seabed deposits'. There are no clear indications of outright shipwrecks or cargo, which could be protected by the provisions of the Danish Museum Act.

In connection with the retrieval of information for this analysis, the Seawar Museum in Thyborøn has submitted positions of shipwrecks in and around the construction area.

Wreck 94. 347304E - 6253253.N 56.23.950N - 6.31.550. 37 m. Unknown wooden wreck, cargo only.

Wreck. 93. 340611.E - 6263657N 56.29.420N 6.24.670E. 46m. Coaster sunk 1988.

Wreck 86. 348872.E – 6284050N 56.40.566N 6.31.998E. 39m. British WW2 submarine.

Wreck. 85 349894.E - 6284281.N. 56.40.710N 6.32.990E. 41m 2. Unknown wreck, only scrap iron left.

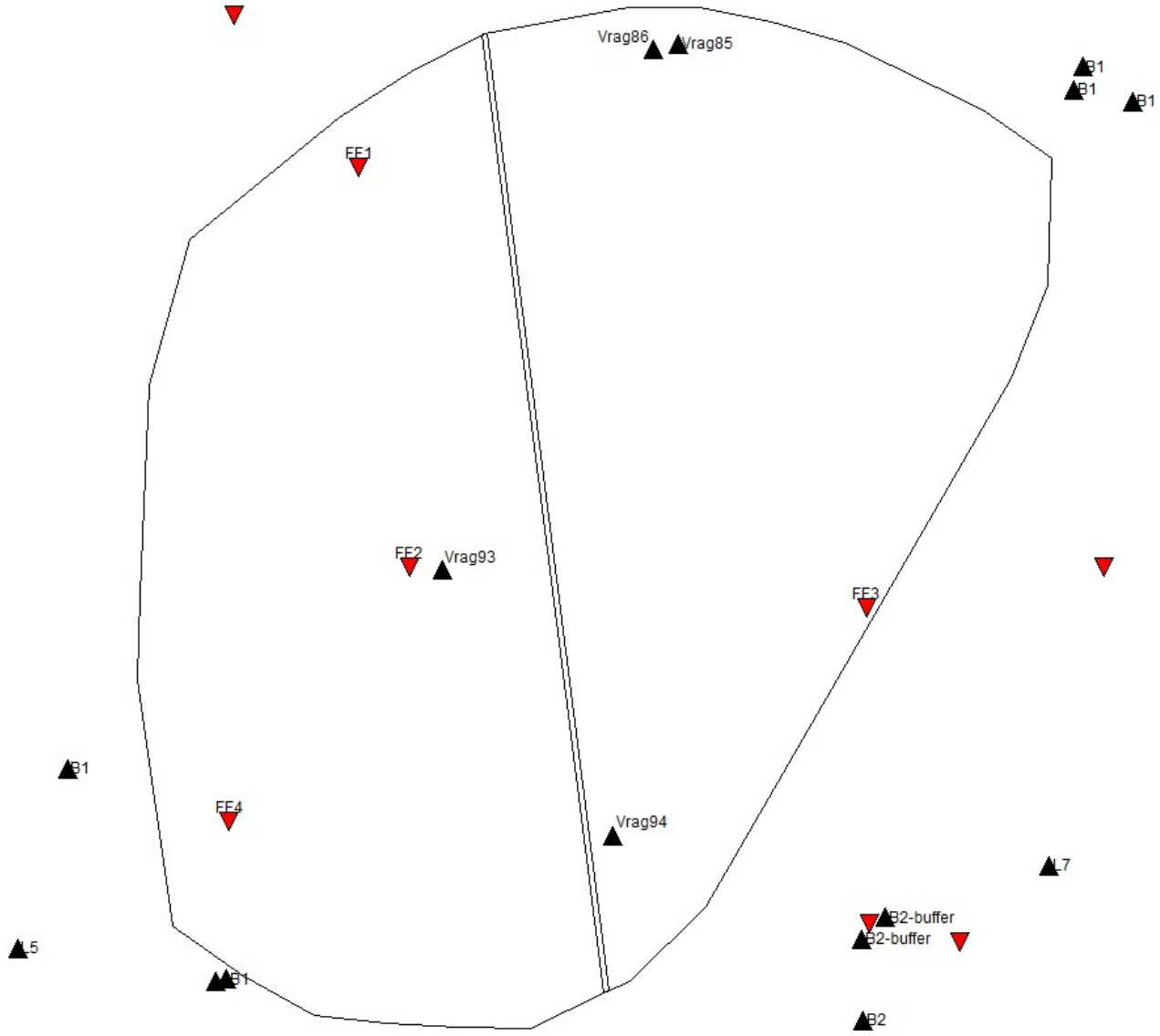

Figure 4. The construction area with registrations from the Agency for Culture and Palaces' Finds and Ancient Monuments (marked in red) and registrations of the Seawar Museum (marked in black).

The Agency for Culture and Palaces' Finds and Ancient Monuments has four registrations within the construction area. FF 1-4.

FF1.
System no. 179441 UTM 337.366 E – 6279.458N. Wreck, modern era.

FF2
System no. 178901. UTM 339329 E – 6236783 N. Wreck, modern era.

FF3
System no. 178263. UTM 357251E – 6262212 N. Wreck, modern era.

FF4.
System no. 178893. UTM 332258 E – 6253842 N. Wreck, modern era.

There is a discrepancy between the information found in Finds and Ancient Monuments and the registrations of the Seawar Museum. This discrepancy is clarified in the geoarchaeological analysis.

Conclusion

On the basis of the present cultural-historical information related to the construction area, there is reason to suspect that wrecks, cargos and other cultural-historical objects may exist within the area and that these are protected by the provisions of the Danish Museum Act.

No Stone Age settlements or other cultural traces from antiquity have been registered within the construction area. These will be assessed as part of the geoarchaeological analysis.

The construction area is situated in an important sea lane that has been used since the Middle Ages. Therefore the area may contain the remains of ships that have sunk, but have not been registered. There was a major naval battle in 1916 during which a great many ships were sunk. It is reasonable to assume that the remains of these ships may be within or around the area.

Moreover, eight points from the Agency for Culture and Palaces' Finds and Ancient Monuments and the Seawar Museum in the construction area are known, and the position of these will be specified in more detail through the geoarchaeological analysis.