

# Carica Milica



Starboard side of *Carica Milica* during sea trials  
Image courtesy of Tyne & Wear Archives and Museums (DS.DOX/4/PH/1/586/1)

## History of *Carica Milica*

The renowned shipbuilders William Doxford & Sons Ltd. completed the steamship *Carica Milica* in February 1928 in their Pallion Yard (number 586) on the banks of the River Wear here in Sunderland.

Sunderland shipbuilders constructed ships for companies all over the world. *Carica Milica* was destined to transport coal from Britain to Yugoslavia with a registered home port of Dubrovnik. At the time of her loss in 1939, *Carica Milica* was owned by Jugoslavenski Lloyd Ackionarsko Drustvo of Zagreb, Croatia and was captained by Milorad Miljević.

At the outbreak of the Second World War, Yugoslavia was a neutral state and *Carica Milica* was used to transport coal from the Tyne to Dubrovnik. Despite this neutrality, vessels travelling under a Yugoslavian flag were targeted by German forces in an effort to destroy as many cargo vessels as possible thus interrupting Britain's dependence on sea trade for the war effort. Losses of cargo vessels occurred at a scale that far exceeded those of other classes of shipping.

On the 18th of November 1939 laden with coal from Newcastle upon Tyne, *Carica Milica* struck a mine laid only that day by the German U-boat U-19 and sank approximately 8 km east of Orford Ness off the Suffolk coast. All 26 of the crew were rescued, however the ship was recorded as being the first Yugoslavian vessel lost during the war.

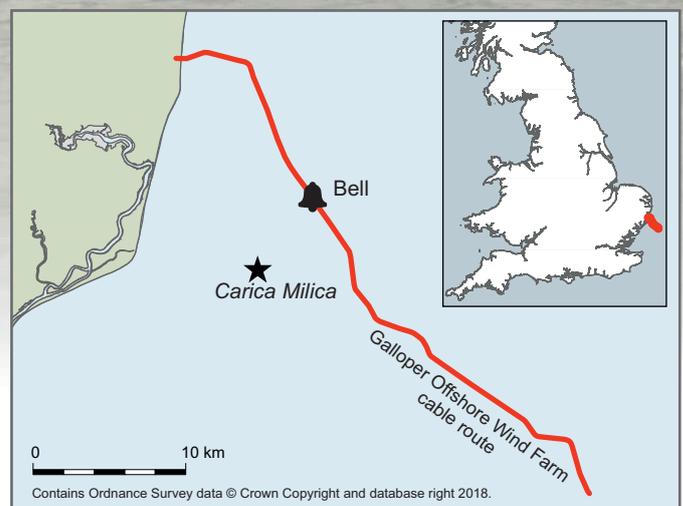
### Dimensions and Specifications

**Construction:** Steel steamship with two decks built by William Doxford & Sons Ltd.

**Length:** 129.54 m (425 feet)      **Draught:** 8.94 m (29.3 feet)  
**Beam:** 17.1 m (56.1 feet)      **Gross tonnage:** 6371 tons

**Propulsion:** Steam propelled ship equipped with a triple expansion three-cylinder steam engine reaching a speed of 569 HP. The machinery was built by S. Richardsons, Westgarth & Co., Middlesbrough.

This information has been obtained from the 1939–40 edition of Lloyd's Register of Ships, which was an essential guide for merchants and underwriters on the condition of ships they chartered or insured.



Location of *Carica Milica* wreck site and the bell

## Discovery and Recovery

As part of the pre-construction activities of Galloper Offshore Wind Farm, and particularly the cable route connecting it to the mainland, the wind farm developer investigated the seabed using geophysical surveys. These surveys identified 'anomalies' that could be damaged by, or cause damage during, the construction works for the wind farm.

Selected geophysical anomalies were examined further to determine their nature and extent. For instance they may be archaeological remains, unexploded ordnance (UXO), or even lost fishing gear. A remotely operated vehicle (ROV) was used to carry out this 'ground-truthing' exercise.

The ship's bell was discovered on the seabed during the ROV survey undertaken on the 13th of June 2016. The engravings identified from the video footage indicated the name of the ship from which it came, SS CARICA MILICA, along with its date of build, 1928.



Underwater ROV image of the bell  
(image courtesy of Nsea on behalf of Galloper Offshore Wind Farm)

The United Kingdom Hydrographic Office (UKHO) charts known wrecks and obstructions on Admiralty Charts used by mariners to ensure safe navigation. The UKHO has a charted location of *Carica Milica* some 5.9 km to the south-west of the discovery location for the ship's bell. The record describes the wreck site as being completely broken up and widely dispersed.



The recovered bell (Photo courtesy of James Fisher Marine Services)

So why are the bell and the wreck site located such a distance apart?

It is possible that when the ship struck the mine laid by U-19, damage was caused resulting in the loss of the bell overboard. However the majority of the ship did not immediately sink and continued to float until finally sinking almost 6 km to the south-west.

Alternatively, the bell may have come to be on the seafloor as a result of an isolated incident such as being lost during rough weather or as a result of loose fixtures and fittings.

Or perhaps the bell represents a displaced find, having been moved from *Carica Milica*'s wreck site by fishing or trawling activity. Movement caused by hydrodynamic processes (wave or tidal regimes) is another possibility although the distance of almost 6 km makes it less likely.

The bell was recovered on the 17th of August 2016 by James Fisher Marine Services and brought to Wessex Archaeology's office in Salisbury, Wiltshire for assessment and conservation.

In line with the Merchant Shipping Act 1995, the bell was reported to the Receiver of Wreck and was added to their database receiving the droit number 224/16.

## Conservation

As the bell was recovered from a marine environment, the first task for Wessex Archaeology's inhouse conservator was to gradually extract the salts that had built up within it. If the bell was dried without first removing the salts, the metal would start to corrode causing damage.

The bell was kept wet, and the conservator periodically tested the water it was stored in and replaced it with fresh water. Almost a year after starting this desalination process, the water surrounding the bell consistently maintained the same chloride level as tap water and consequently the bell was ready to be dried.



The bell being conserved (Photo courtesy of Wessex Archaeology)

With the salts removed, the bell was gradually air dried in a sealed environment. This process used silica gel, which reduces the relative humidity around the bell by absorbing water. This controlled method for drying prevents 'flash corrosion' which can occur when a metal object is dried too quickly.

The bell may still look 'wet', however this is due to a protective layer of wax that was carefully applied to its surface.

*Carica Milica*'s bell is made from brass with a stock attached by a copper or copper alloy screw. Marine concretion had built up on the surface of the stock and this was carefully removed by the conservator whilst it was still wet.

Engravings cast into the side of the bell read 'SS CARICA MILICA', '1928' and 'DUBROVNIK' indicating the name of the ship, the year the ship was completed and its first registered port. Black paint is still visible in the recesses of the lettering which would have made the engravings stand out. The numbers '586' are visible stamped onto the crown of the bell and these represent the yard number in Sunderland where *Carica Milica* was built.



Detail of one shipbuilder's yard number 586 (image courtesy of Wessex Archaeology)

### Acknowledgements

Wessex Archaeology would like to acknowledge the funding and generous support of Galloper Offshore Windfarm who organised the recovery of the bell, financed its conservation and its journey back to Sunderland along with the preparation of this display.

James Fisher Marine Services should also be commended on rediscovering and recovering this small bell so carefully.

Finally, Sunderland Maritime Heritage is gratefully acknowledged for accepting this special bell into their care, displaying it alongside their fantastic collection.



James Fisher  
Marine Services



wessex  
archaeology