

## **FACT BOX: Investigation in three phases**

The investigations in the Pit originally formed part of the international research project *Finding the Vasa Cannons*, which ran from 2018 to 2022 under the leadership of the Friends of the Vasa Museum. The project aimed to locate the Vasa's missing cannons, along with other parts of the ship that did not make it to the surface after the vessel was salvaged.

### **Phase 1: Geophysical mapping with high-resolution sonar**

The first step involved creating a detailed image of the seabed where Vasa sank, in collaboration with Professor Martin Jakobsson at Stockholm University and the research vessel *R/V Electra af Askö*. Using advanced multibeam sonar and sub-bottom profiling, the team was able to detect structures on both the seabed surface and in the underlying sediment. Shallow areas were further surveyed using the smaller vessel *Skidbladner*, and towed chirp sonar was deployed to search for objects that may be buried several metres deep within the sand. This phase was led by Professor Jakobsson.

### **Phase 2: Visual inspection using an ROV**

In the next phase, the Swedish Navy assisted with a survey using the naval vessel *HMS Belos*, which is equipped with a remotely operated vehicle (ROV). The ROV conducted a systematic search of the Pit, scanning it in two-metre-wide corridors. In total, 98 objects were observed and documented. Among them were several pieces of worked timber that had not been visible in the sonar imagery.

### **Phase 3: Diving at selected sites**

In the final phase, maritime archaeologists from Vrak conducted targeted dives at the most promising locations. These dives focused on carefully selected objects, allowing the archaeologists to examine their shape, construction and material up close. Among the discoveries was what is likely a part of the crow's nest from the Vasa's bowsprit.

### **A comprehensive overview through combined methods**

No single method alone could have produced the in-depth understanding of the Vasa shipwreck site that researchers now have. Geophysical mapping offered a broad overview of the area, the ROV survey enabled detailed visual identification, and the dives made it possible for archaeologists to verify the findings and uncover elements invisible to technology. Together, these methods provided a thorough picture of the site — both in terms of depth and detail.

This project stands out as a strong example of how advanced technology and maritime archaeology can work hand in hand to uncover the past.