

New Breakwater: the first caisson successfully positioned

24 May 2024



Genoa, 24 May 2024 - The Port of Genoa's New Breakwater unfolds along the Sampierdarena basin, opposite the landmark 16th century Lighthouse. The first of the over 90 caissons, set to form part of the initial 4 km of the large-scale maritime infrastructure facility and which, upon overall completion, will stretch along a 6 km coastline, was positioned at a depth of 25 metres.

The ceremony to commemorate this important milestone was officiated at the Port Authority headquarters of Palazzo San Giorgio by both the Minister and Vice-Minister for Infrastructure and Transport, Matteo Salvini and Edoardo Rixi, the Port Government Commissioner Paolo Piacenza, the acting President of the Region of Liguria Alessandro Piana, the Mayor of Genoa and Government Commissioner of the Breakwater Marco Bucci and Pietro Salini, the CEO of Webuild.

The concrete cellular caisson was built in the floating construction site positioned in the Port of Vado Ligure and, at 10,000 tons, measures 21.7 metres in height, 40 metres in length and 25 metres in width, although a number of the caissons to be assembled will be up to 67 m long, 35 m wide and 33 m high.

Creating a caisson is a complex procedure that requires on average 20 days with a working team of approximately 50 people. A temporary metal mould that reproduces the internal structure of the caisson under construction is positioned on a floating dock and filled with concrete. Upon the solidification of the concrete, the formwork is raised by a few metres and the process is repeated multiple times until the desired height is reached. The caisson is subsequently towed to the designated site where it is sunk under water by filling it with water and rock material, and completed on site, across the creation of a superstructure and a protection wall.

In parallel, other major works proceed on schedule: to date, over 1.4 million tons of gravel has been deposited on the bedrock and over 4000 giant underwater columns have been built. To boost production, the floating construction site in the Port of Vado-Ligure will soon be flanked by an additional floating dock, specifically, a large barge equipped to increase threefold the weekly construction of columns. In addition, the underwater search for unexploded ordnances along the seabed continues, on schedule to be completed by this summer.

Genoa's New Open-Sea Breakwater, set to rank as the deepest in Europe, is a unique sophisticated feat of engineering, designed to ensure safe access to the port by the ultra-large vessels, up to 400 metres in length, which require wider navigation channels and turning basins. The large-scale maritime infrastructure facility will concur to consolidate further the strategic role of the City-Port of Genoa in international trade. The project has been commissioned by the Western Ligurian Sea Port Authority to PerGenova Breakwater led by Webuild (40%), Fincantieri Infrastruttura (25%), Fincosit

(25%) and Sidra (10%), with currently over 230 people, direct and indirect, working on the construction of the breakwater (upon completion up to 1.000 people) and with over 130 companies contracted across the supply chain since works have commenced.

[Watch the live video](#) of the laying of the first caisson of the new Genoa breakwater.

VIDEO GALLERY