

MARSAXLOKK FISHING PORT

BATHYMETRIC SURVEY

The fishing port of Marsaxlokk regularly experiences wave conditions that are not comfortable for moored vessels. To improve the wave conditions in the northeast part of Marsaxlokk Bay and at the fishing port a new to build breakwater at Qretjen Point is being considered. Besides the Qretjen breakwater also some other alternatives are investigated.

For an accurate wave penetration study the local bathymetry is of evident importance. The bathymetry in Marsaxlokk Bay, and especially in the northeast part, is not up-to-date. For this reason Svašek Hydraulics has performed a bathymetric survey of a large part of the bay.

The bathymetric survey was carried with a dual frequency echo sounder with a build-in global positioning system (DGPS mode). The transducer of the echo sounder was mounted on the side of a small vessel at 0.55 meter below the water level. The survey was carried out from February 19th to 21st, 2018.

A large part of the surveyed lines concentrated from the breakwater close to the Enemalta Power plant towards the inner fishery port. These lines had a 10 meter separation. The survey lines from the power plant to Malta Freeport had a 25 meter separation.

The transducer used includes 33 KHz (low frequency) and 200 KHz (high frequency) depth measurements. The high frequency will mainly echo on the transition between fluid and non fluid, so it will also return echoes on loose silt layers. The low frequency will echo on more hard layers as sand.

The survey was post processed by referencing the water depths to mean sea level, eliminating incorrect echoes.

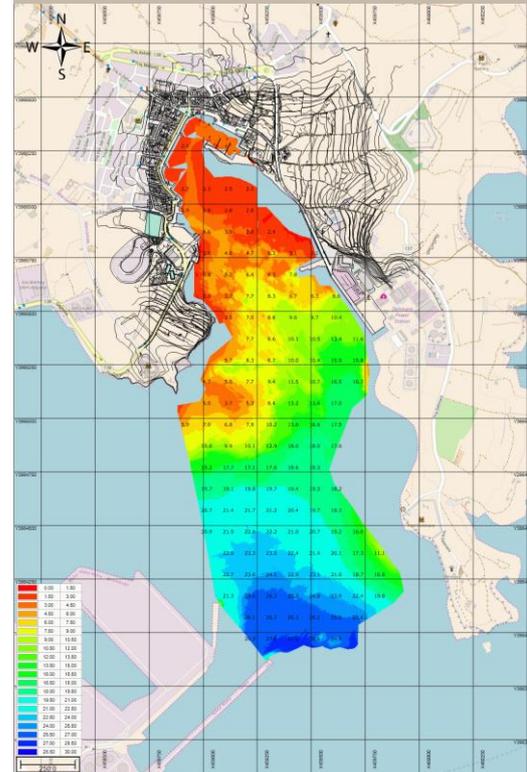
The bed level depths (high frequency) referenced to MSL are shown in the figure at the right. The difference between high and low frequency is an indication for possible silt layers. Only very small silt layer pockets were visible in the middle section of the survey area.

CLIENT
Transport Malta

LOCATION
Marsaxlokk Bay, Malta

DATE
2018

SERVICES
Bathymetric survey
Data processing



SVASEK
HYDRAULICS
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