

### Mediterranean Test site



Credit: FEM



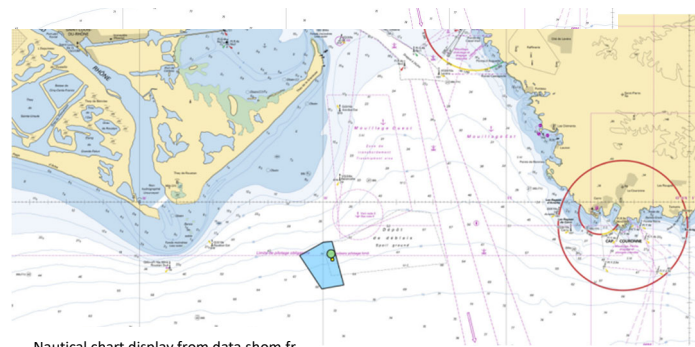
Credit: TSMetroise Mer

The Mistral test site is the only authorized Marine Renewable Energy test site dedicated to Floating Offshore Wind located in the Mediterranean Sea and is ideally located close to future commercial farms. The deployment of an environmental observatory coordinated by France Energies Marines is ongoing. Collected data (physical, chemical and biological) will support the development of floating wind arrays in the Mediterranean Sea. The site is also available for the evaluation of components and system behaviour in a representative Mediterranean environment. Site authorizations include a maximum 10MW export cable connection (not installed).

The deployment and instrumentation of the environmental observatory will progress sequentially. The first installed buoy is equipped with a weather station and an accelerometer and will soon be completed with a CTD sensor, biofouling coupons and a dynamometric shackle. A wave buoy will be installed in the fall of 2018. Additional instrumentation will be available in 2019. The data collected will support MRE R&D projects and will be available for future developers of wind farms in the Mediterranean Sea. The environmental observatory will also support the development of protocols and tools for environmental monitoring necessary for the conception, development and exploitation of future commercial floating wind farms. In addition, the site is available for the testing of MRE components and systems (lines and anchoring systems, corrosion protection, means for inspection, maintenance tools, etc.) as well as marine operations.

Interested developers will be supported locally by an array of skills and facilities available in the area (port of Marseille-Fos, etc.) to support the development and maintenance of their technologies.

France Energies Marines is the French reference institute for research and development on offshore renewable energies.



Nautical chart display from data.shom.fr

#### TEST SITE CHARACTERISTICS:

- Bathymetry: 50 m to 70 m
- Distance from coast: 5 km
- Area: 1.7 km<sup>2</sup>
- Sea floor type: sediments (sand/mud)
- Average wind speed: > 7 m/s
- Instrumentation: Instrumented buoy, wave buoy

#### MAIN ACTIVITIES ON MISTRAL TEST SITE:

- Provide environmental data for resource evaluation and system dimensioning;
- Study the environmental impacts of tested systems;
- Aid developers in the optimisation of system installations and operations;
- Study and develop new equipment and materials (underwater connections, instrumentation, etc.) in a known and instrumented environment;
- Support all aspects of R&D in the Marine Renewable Energy sector.