AMETS

ATLANTIC MARINE ENERGY TEST SITE

Ireland Ocean Energy Expertise

Key Facts

- Water Depth
  - Test Area A: 100m
  - Test Area B: 50m
- Technology Readiness: TRL7-9
- Export Capacity: (Planned) 10 MW
- 2 x Test Areas
  - Wave Energy Device
  - (Pending) Floating Offshore Wind Licence
- Test site area: 11.59km^2 includes 2 x berths and cable route corridor
  - Test Area A: 6.99 km^2
  - Test Area B: 1.52 km^2
- Typical Scale: Full Scale
- Mooring Substrate:
  - Test Area A: Sand
  - Test Area B: Sand/glacial till
- Distance to mainland (Annagh Head)
  - Test Area A: 12 km
  - Test Area B: 3 km
- Distance to closest quay facilities (km)
  - Test Area A: 14; 28; 130
  - Test Area B: 6; 23; 130
- Supporting infrastructure: (Planned) Shore Station and co-located office space

Contact

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Test Area A: Lat 54°15’39” Long -10°15’30”

Test Area B: Lat 54°13’17” Long -10°08’15”

Site Conditions

Site Conditions	Berth A	Berth B
Annual Mean Omnidirectional Wave Power Flux kW/m	60-70	60-70
Annual Mean Significant Wave Height (m)	3.2	2.9
Max Wave Height (50-year return period) (m)	16.7	-
Annual Wave Direction (°)	287	294
Max. Current Speed (10yr Max) (m/s)	2.46 Free surface 0.28 Seabed	-
Mean Wind Speed @ sea level (m/s)	8.8	-
Max Wind Speed @ sea level (m/s)	35.1	-

Observational Capacity

Permanently deployed instruments

Wave Monitoring	2x Datawell directional Waverider MkIII (Areas A&B) Measures wave height (for waves up to 30s); wave direction; water temperature
Wind Resource	Airmar 220WX anemometer on 2 special marks

Planned Export Cable Characteristics

Cable Route Location	From Belderra Strand, through Test Area B, to Area A.
Water Depth (m)	0m at shore to 50m (Test Area B), to 100m (Test Area A)
Cable Length	Up to 20km offshore
Power Capacity	Four subsea cables, 2 per Test Area (as per lease spec.)

Data Supports

Data file types	CSV; JSON; KML. Others on request
Access	Real time observatory data portal https://www.oceanenergyireland.com/testfacility/mayo/observations.html
Visualisation	Quick inspection running plots of the latest data available in the portal
Data Download	https://www.oceanenergyireland.com/Observation/Download.html

Ireland
Ocean Energy Expertise

Test, Validate, Innovate

Atlantic Marine Energy Test Site AMETS

Belmullet, County Mayo

- Full scale open ocean test site
- Suitable for offshore renewable energy devices at Technology Readiness Level (TRL) 7-9

SmartBay Test Site

Galway Bay, County Galway

- Intermediary scale offshore test facility
- Trial and demonstration of wave & floating wind prototypes
- Suitable for offshore renewable energy devices at Technology Readiness Level (TRL) 4-6

Lir National Ocean Test Facility

Ringaskiddy, County Cork

- Laboratory based test & validation facilities for offshore renewable energy technologies
- Physical (Wave tank) testing
- Electrical testing
- Numerical Modelling

For more information contact

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Supported by

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