Commissioners of
Irish Lights

CIL provide and maintain reliable, cost effective and efficient aids to navigation around the coast of Ireland. We operate in some of the most severe marine environments and our skills in this vital area have been built up over 200 years of service to the mariner. Safety of Navigation is dependent on the reliability of our equipment and services and we are proud to offer this level of service and reassurance to all our customers.

Lighthouses
CIL maintains 73 lighthouse structures around the coast of Ireland. Many are fitted with low energy new technology light sources enabling them to be powered from renewable energy sources.
8 helipads are strategically located to service the offshore lighthouses. High pressure fuelling facilities are available at Castletownbere and Blacksod helipads for search and rescue (SAR) operations.

Buoys
All buoys are solar powered with three supplemented by wave actuated generators. The buoys use LED lanterns for the navigational light. Buoys of primary navigational importance are fitted with an Automated Identification System (AIS). Met Hydro information may be transmitted from the buoy via the AIS unit.

e-Navigation
CIL have implemented AIS technologies for Aids to Navigation (AtoN) monitoring and traffic analysis. This service provides position, status and condition information in relation to AtoN while the traffic analysis plots traffic patterns. 3 DGPS stations form part of the GLA DGPS network of 14 stations and provide a GPS integrity and accuracy improvement service for waters within 50nm of the coast.

Dun Laoghaire Facility
A single integrated site at CIL Dun Laoghaire hosts the administration, marine, engineering and ICT services. The facility includes workshops, stores and a buoy yard fabrication and maintenance facility.

Commercial Services
CIL provides commercial contract services in a range of areas including chartering Granuaile for marine operations, buoy maintenance and property/tourism related activities.

Legend:
- ★ Lighthouse
- ⊛ Lighthouse & AIS
- ● Buoy
- ◉ Buoy & AIS
- ▮ Beacon
- Ⓗ Helipad
- ⦿ AIS Station
- ◯ Racon
- DGPS

Map labels: Inishtrahull, Tory Island, Fanad Head, Inishowen, Rathlin East, Rathlin West, Rue Point, Dunree, Buncrana, Aranmore, Ballagh Rocks, East Maiden, Blackhead (Antrim), Mew Island, Donaghadee, Rathlin O'Birne, Rotten Island, St John's Point, Portavogie AIS Station, Angus Rock, Lower Rosses, Metal Man Sligo, Oyster Island, St John's Point (Down), Eagle Island, Broadhaven, Black Rock (Sligo), Green Island, Vidal Bank, Haulbowline, Dundalk, Blacksod, Black Rock (Mayo), Achillbeg, Inishgort, Rockabill, Slyne Head, Howth, Baily, Muglins, Kish Bank, Cashla Bay, Eeragh, Straw Island, Black Head (Clare), Inisheer, Wicklow Head, Corlis Point Front, Corlis Point Rear (Querrin Quay), Scattery Island, Loop Head, Tuskar, Dunmore East, Hook Head, Ballinacourty, Inishtearaght, Mine Head, Cromwell Point, Valentia Directional Light, Youghal, Roches Point, Ballycotton, Skelligs Rock, Castletownbere Directional Light, Roancarrigmore, Bull Rock, Ardnakinna Point, Sheep's Head, Copper Point, Old Head of Kinsale, Galley Head, Mizen Head, Crookhaven, Fastnet

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Technology & Data Services

200 years delivering aids to navigation

Commissioners of Irish Lights

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Technology & Data Services

CIL data services can provide and/or facilitate the delivery of a range of services for Government, local authorities, mariners, industry, research institutions and the general public.

CIL's all island coastal network infrastructure consists of on/offshore sites and a range of platforms.

Access data from your mobile device anywhere anytime

Real-Time Data

Real-time marine environmental data can be captured from coastal and offshore environments providing research and monitoring services. This data can be used to identify the sources of marine pollutants and protect special areas of conservation.

CIL has connectivity at remote locations around the coast where we can offer high speed data connectivity using radio, mobile, satellite or fixed line networks.

e-navigation - Marine Traffic Data

Our coastal networks can provide real-time monitoring and historic data such as vessel track analysis. Shore based e-navigation services, including communication, data transfer, exact position verification, using CIL's Differential positioning system (DGPS) and marine spatial planning.

Networks

CIL has a shore based network of Automatic Identification System (AIS) base stations and an extensive AIS Aids to Navigation (AtoN) service. Many sites also have Remote Control and Monitoring System (RCMS) and DGPS is provided from three sites as part of the UK & Ireland DGPS network. We are currently upgrading our coastal communication network which will provide higher speeds from many on/offshore locations.

Connectivity options
• VHF/UHF Radio
• ADSL
• 3G/4G
• Wi-Fi
• Satellite

Benefits
• Remote location connectivity
• Real-time/historical data logging
• Secure and reliable service
• Reduced costs
• High integrity, reduced latency
• High speed with improved redundancy
• Failover communication options
• Disaster recovery facilities
• Historic track data

Environmental/Met-ocean data
• Real-time data feeds
• Foreshore data from Lighthouses
• Offshore data from Buoys
• Underwater data from subsea sensors
• Mobile app development
• Data portal
• Marine Meteorological, Hydrological and Oceanographic data
• Environmental monitoring and reporting
• Data virtualization with GIS

Services include:
• Smart navigation data buoys fitted with Met-Hydro sensors
• DGPS/AIS Precision position monitoring
• Synthetic and virtual AIS aids to navigation
• Communication solutions
• Remote Control and Monitoring System (RCMS)
• Video surveillance, web cam and imagery 360°
• Data logging and management
• Surveying and sampling
• Industry standard data formats
• Data management & validation
• Remote position monitoring of floating platforms/assets
• Provision of AIS safety messages to shipping to enhance the conspicuity of environmentally sensitive areas and alternative energy test sites

Stakeholders include:
• Marine Safety Authorities
• Shipping & Transport
• Ports & Harbours
• Academic Research Institutions
• Private Industry & SMEs
• Government/ Public Bodies
• Local Authorities
• Leisure/ Tourism
• Gas & Oil exploration
• Fishing/ Aquaculture
• Renewable Energy