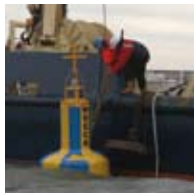


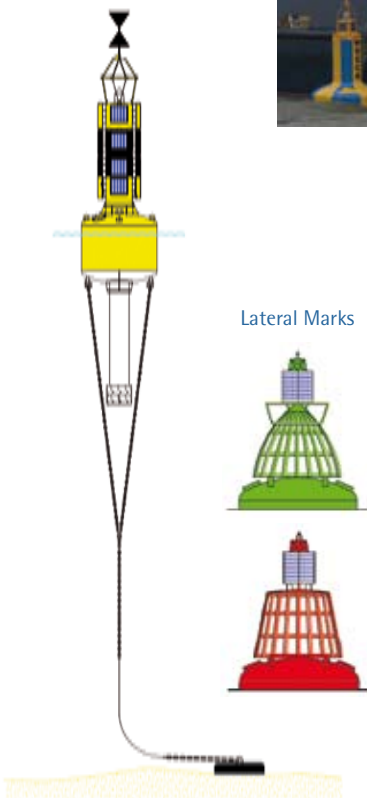


Trinity House

Buoys



Typical Class One buoy mooring arrangement



Lateral Marks

Trinity House maintains nearly 500 buoys, as well as performing the important role of inspecting those maintained by port and harbour authorities, utility companies and by oil/gas rig and wind farm operators.

Trinity House buoys are moored to the sea bed using a sinker constructed from cast iron with weights varying between 1 tonne and 8 tonnes. The sinker is placed on the Assigned Position (AP). The weight of the sinker and the length of chain used to moor the buoy depend on several factors including the type of buoy, depth of water, strength of tide and the exposure of the buoy.

Most Trinity House buoys have two mooring eyes to which shackles are attached to two pieces of chain forming a bridle. The bridle runs down to a swivel which allows the buoy to rotate and prevents the bridle from being twisted and dragging the buoy under the water. From the swivel, a length of chain (known as a riser) runs to a sinker on the sea bed.

Buoys are essential in providing the mariner with visual orientation and spatial awareness. They also provide hazard, channel and waypoint marking. Equipment can be added to buoys to provide additional services such as the transmission of AIS, meteorological and hydrological data.

Types of Buoys

Lateral Marks

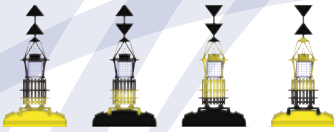
Used generally to mark the sides of well-defined, navigable channels. They are positioned in accordance with a Conventional Direction of Buoyage. They indicate the Port and Starboard hand sides of the route to be followed. They are coloured Red (Port Hand Marks) and Green (Starboard Hand Marks).

General Direction of Buoyage

Around the British Isles the General Direction of Buoyage runs North along the West coast and through the Irish Sea, East through the English Channel and North through the North Sea (the opposite in IALA system B, for example in the USA).

Cardinal Marks

From left to right: North Cardinal,
East Cardinal, South Cardinal,
and West Cardinal Class Two buoys



Isolated Danger Mark



Safe Water Mark



Special Mark



Emergency Wreck Buoy



Cardinal Marks

Used in conjunction with the compass to indicate the direction from the mark in which the deepest navigable water lies, to draw attention to a bend, junction or fork in a channel, or to mark the end of a shoal. The mariner will be safe if they pass North of a North mark, South of a South mark, East of an East mark and West of a West mark.

Cardinal Marks are also used for permanent wreck marking whereby North, East, South and West Cardinal buoys are placed around the wreck. In the case of a new wreck, any one of the Cardinal buoys may be duplicated and fixed with a Radar Beacon (RACON).

Isolated Danger Marks

Used to mark small, isolated dangers with navigable water around the buoy. Typically used to mark hazards such as an underwater shoal or rock. They are coloured Black and Red.

Safe Water Marks

May be used mid-channel, as a centreline or at the point where land is reached. These buoys (as the name suggests) indicate the presence of safe, navigable water all around the buoy. They may also indicate the best point of passage under a fixed bridge. These buoys are coloured Red and White.

Special Marks

Not primarily intended to assist navigation but are used to indicate a special area or feature, the nature of which is apparent by referring to a chart or Notice to Mariners. Special Marks are used in the marking of cables and pipelines, including outfall pipes and recreation zones. Data Buoys are also classed as Special Marks. They are coloured yellow.

Emergency Wreck Buoys

These buoys provide a clear and unambiguous means of marking new wrecks. This buoy is used as a temporary response, typically for the first 24 - 72 hours. This buoy is coloured in an equal number of blue and yellow vertical stripes and is fitted with an alternating blue and yellow flashing light.



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