

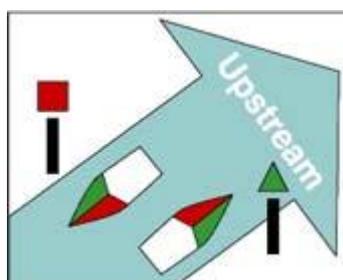


Buoyage

There are four types of marks you will see in use in the waterway which conform to the IALA System A. They are grouped as Lateral, Cardinal, Isolated Danger or Special marks. Although the collective term for these navigation aids is generally referred to as Buoyage, not all of the marks are floating buoys. Some navigation marks you will encounter within the waterway will be piles or beacons. They are the equivalent of road signs. It is important you know how to recognise them, what they mean and how they are used, particularly by the larger vessels using the waterway.

Lateral marks

These are used to indicate the port (left) and the starboard (right) sides of a navigable channels. The Direction of Buoyage is determined by the inward passage of vessels into Milford Haven. In the waterway, vessels heading upstream from the entrance at St Ann's Head will be travelling in the direction of Buoyage.

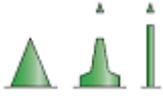


Port-hand marks



- coloured red
- basic shape is cylindrical (can) for buoy (and topmark when fitted)
- If lit, the light will be red and may have a flash sequence (given on chart).
- These marks would be on the port side of a vessel when travelling in the direction of buoyage.

Starboard-hand marks



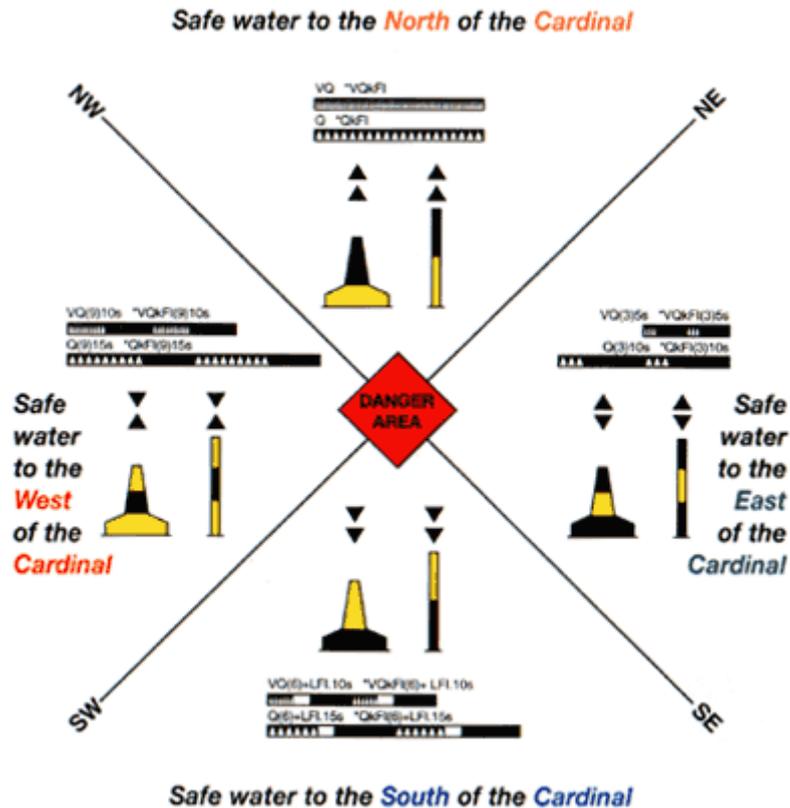
- coloured green (exceptionally, black may be used)
- basic shape is conical (and topmark when fitted)
- If lit, the light will be green and may have a flash sequence (given on chart).
- This mark would be on the starboard side of a vessel when travelling in the Direction of Buoyage.

When you are afloat remember that large commercial vessels can often only navigate safely within the marked channels. As your vessel will probably be more manoeuvrable you should ensure that you make your intentions clear and comply with Byelaw 22 as shown in the Leisure User Guide.

Cardinal marks

These are used to indicate the location of the best navigable water or to show the safe side on which to pass a danger (rocks, wrecks, shoals, etc) and to draw attention to a feature in a channel.

During daylight the most important feature of the Cardinal mark is the black double cone topmark and the four different arrangements that indicate the relevant direction of safe water from the mark. The black and yellow horizontal bands used to colour the Cardinal marks also indicates where safe water lies in relation to the mark.



At night Cardinal Marks are lit with a flashing white light. The flash sequence denotes the type of cardinal mark. On each mark one of two sequences will be used these are explained below. For the characteristics of particular marks you should study a chart of the waterway.

North cardinal mark –The North Cardinal Mark light will flash continuously either - VQ = Very Quick Flash or Q = Quick Flash.

East cardinal mark - Q(3) 10s (three quick flashes every 10 seconds) or VQ (3) 5s (three very quick flashes every 5 seconds)

South cardinal mark. – Q(6)+LFI 15s (six quick flashes followed by one long flash every 15 seconds) or VQ (6) + LFI 10s (six very quick flashes followed by one long flash every 10 seconds)

West cardinal mark – VQ(9) 10s (nine very quick flashes every 10 seconds) or Q(9) 15s (nine quick flashes every 15 seconds)

To assist in remembering cardinal marks, associate the number of flashes of each group with a clock face. That means that north is at twelve o'clock, east is at three o'clock, south is at six o'clock and west is at nine o'clock.

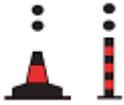
Special marks

These are used to indicate a special area or feature, the nature of which may be found by consulting a chart or sailing directions.



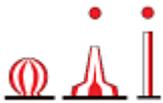
- The Special mark is always yellow, and the top mark is a single yellow X.
- If a light is fitted it will be yellow and may have any rhythm not used for white lights, for example, FIY, FI (4) Y.

Isolated danger marks



- These are on, or moored above, an isolated danger of limited extent that has navigable water all around it
- colours are red and black horizontal stripes
- mark is, when practicable, fitted with a double sphere, vertically disposed, black top mark
- If lit, the light will be white showing a group of two flashes.

Safe water marks



- These are used to indicate that there is navigable water all around the mark or indicate the start of a buoyed channel with port and starboard lateral marks.
- The shape of the buoy is spherical, pillar or spar
- It is coloured with red and white vertical strips
- The topmark, which is fitted when practicable to pillar and spar buoys, is spherical and red.
- If lit, an isophase occulting or single long flashing white light is exhibited.