

Week 14



1

Meteorology 2

Cloud Types and Low Pressure Systems



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Cloud Types

<u>Root Name</u>	<u>Description</u>
Cirrus	High wispy clouds
Stratus	Layers of flat clouds
Cumulus	Heaped or lumpy cloud
Nimbus	Rain or Snow bearing



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Cloud Types

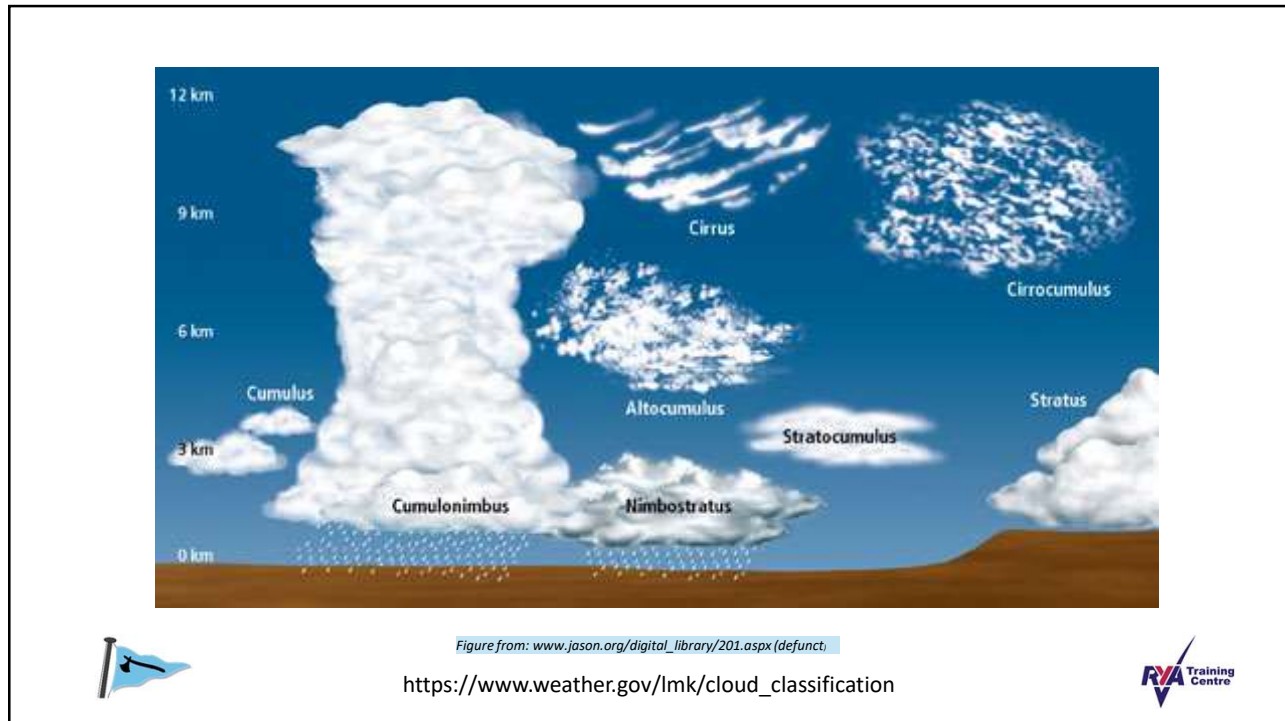
<u>Layer</u>	<u>Name</u>	<u>Height Band</u>
High	Cirrus Cirrostratus Cirrocumulus	>5000m
Medium	Altostratus Alto cumulus	2000 – 5000m
Low	Stratus Stratocumulus Nimbostratus Cumulus Cumulonimbus	<2000m From low level to tropopause ~ 12km



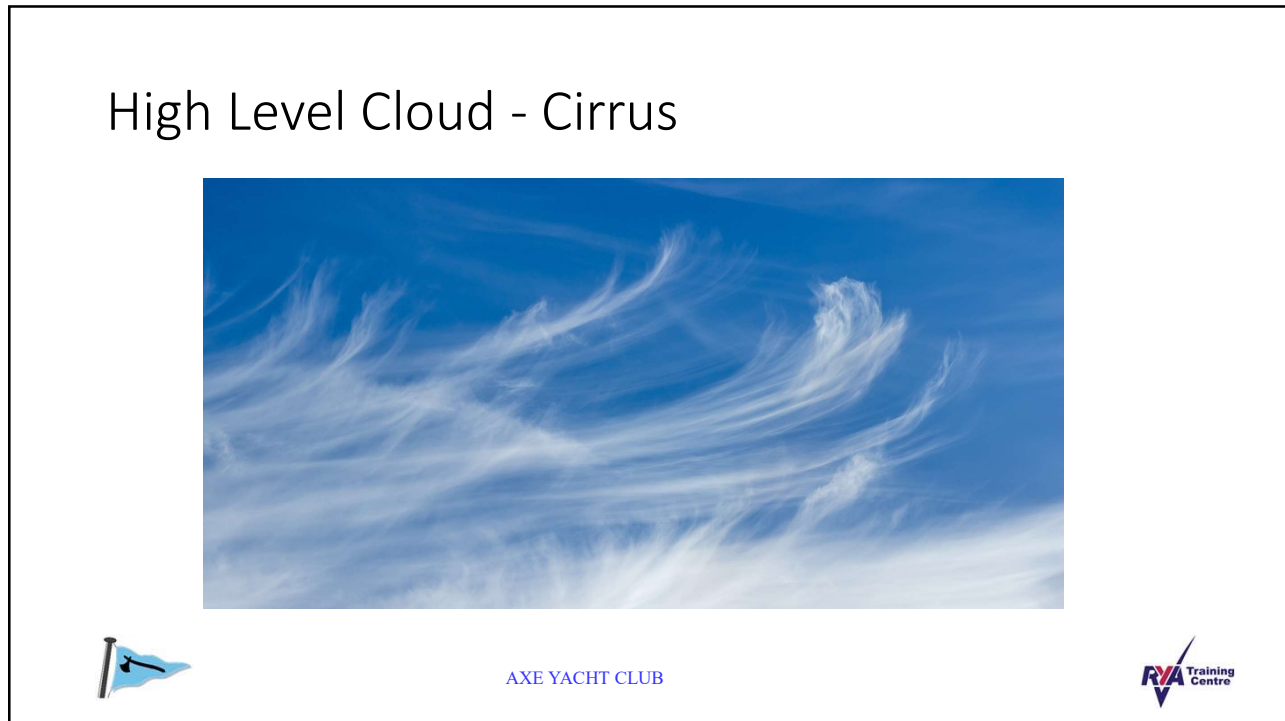
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Mid Layer - Stratus



<http://australiasweather.com/>
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Low Level - Stratus



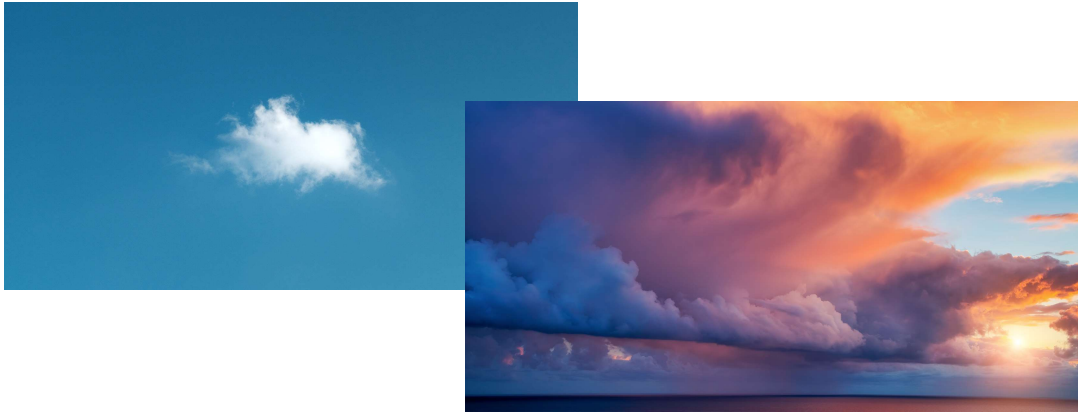
4 Warm sector low cloud and mist.

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Cumulus and Cumulonimbus



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Atmospheric Pressure

Atmospheric pressure is:

- Measured with a barometer
- Measured in *millibars (mb)*

Sailors are normally interested in how the pressure is changing.



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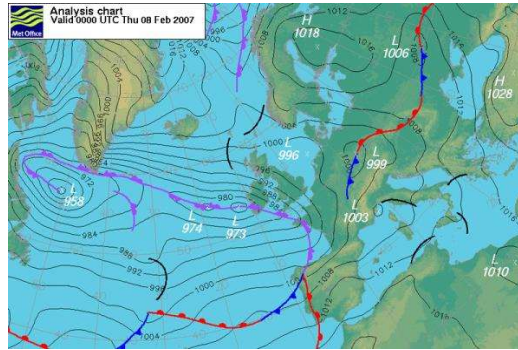


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Synoptic Weather Charts

Isobars are used to join points at the same atmospheric pressure (c.f. contour lines on OS maps).

Isobars are normally at 4mb intervals.

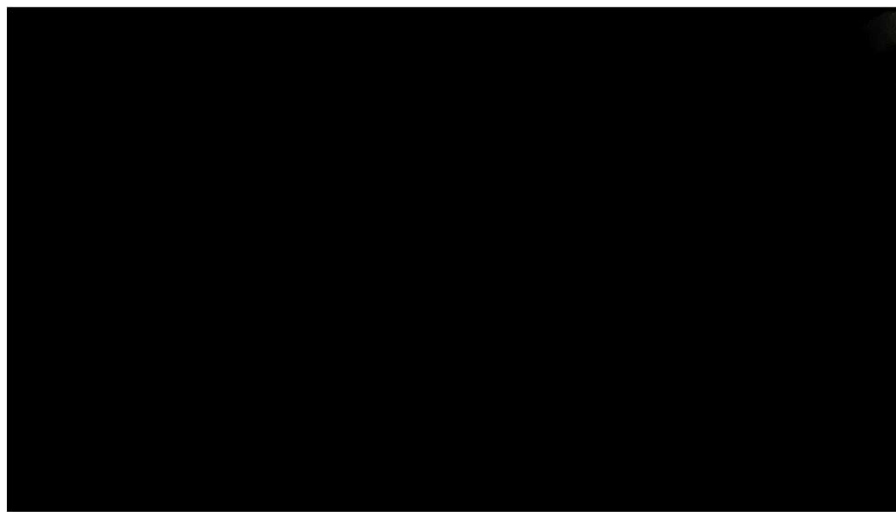


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Interpreting Synoptic Charts



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BUYS BALLOT'S LAW

Low Pressure

992	1000	1008	1016	1024	1032
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High Pressure

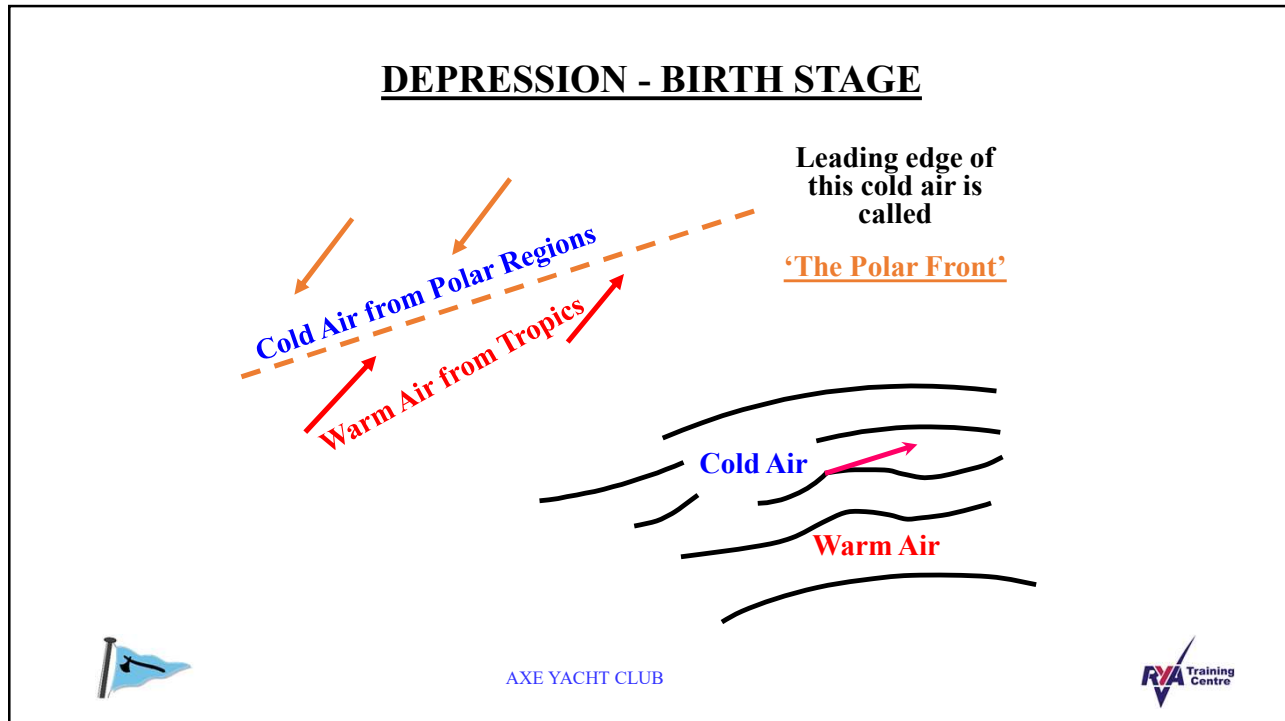
Buys Ballot's Law
 In the Northern Hemisphere,
 if you stand with your back
 to the wind, the
LOW PRESSURE
 area is to your left

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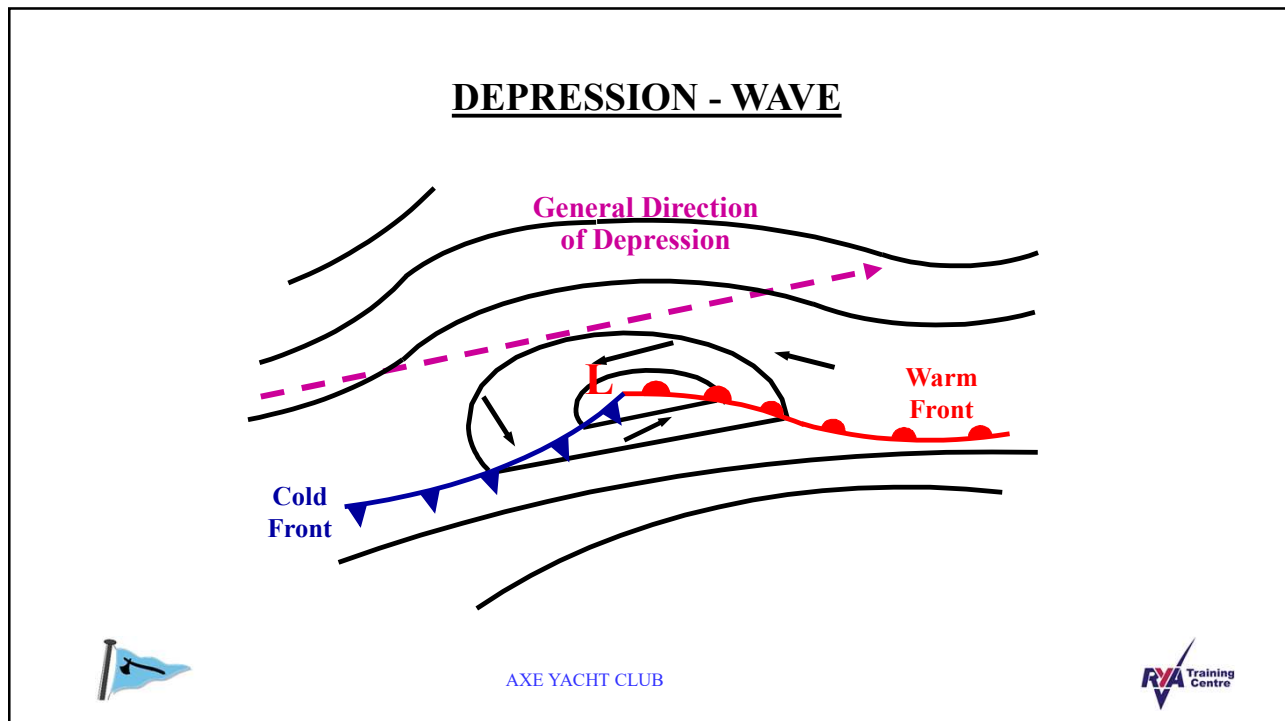
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Low Pressure Weather System

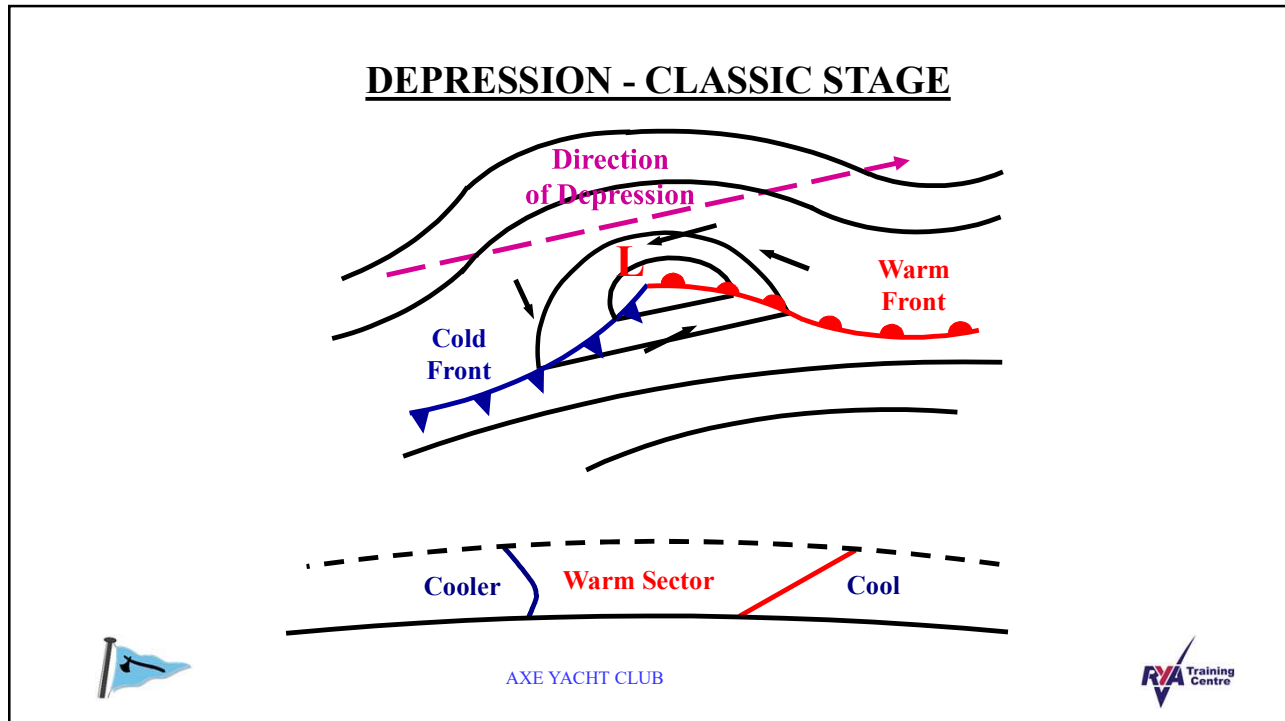
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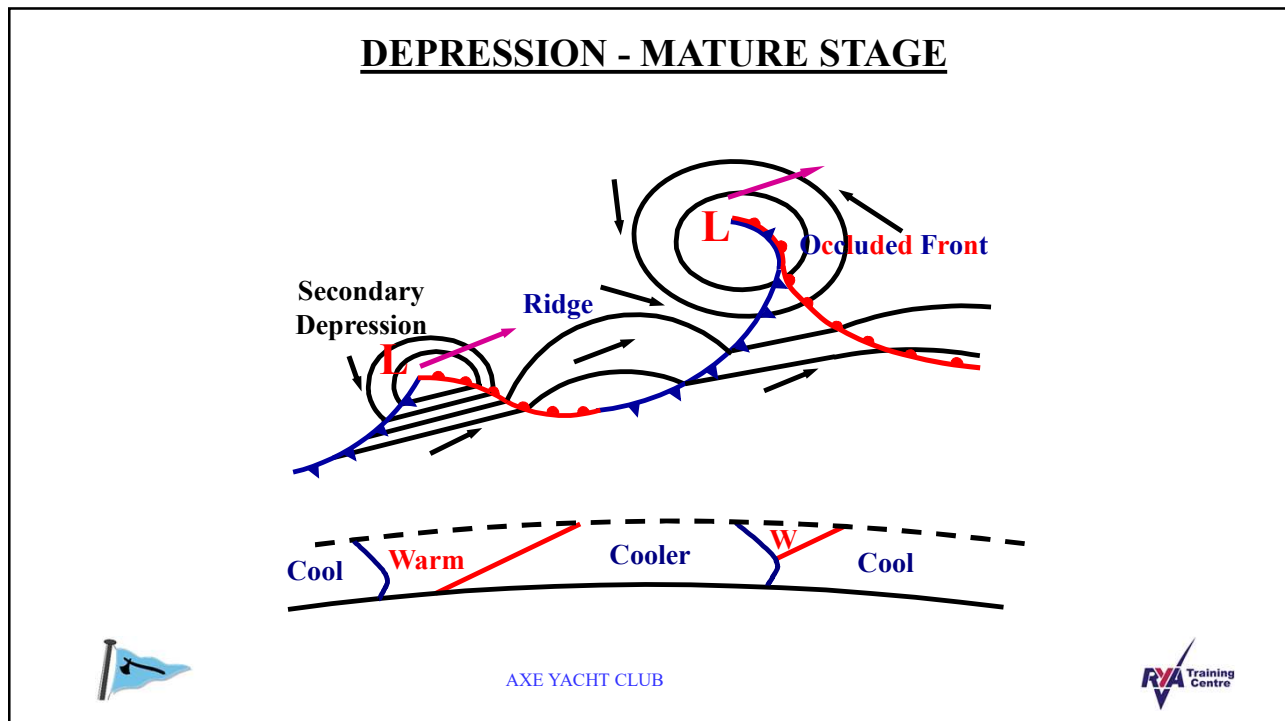
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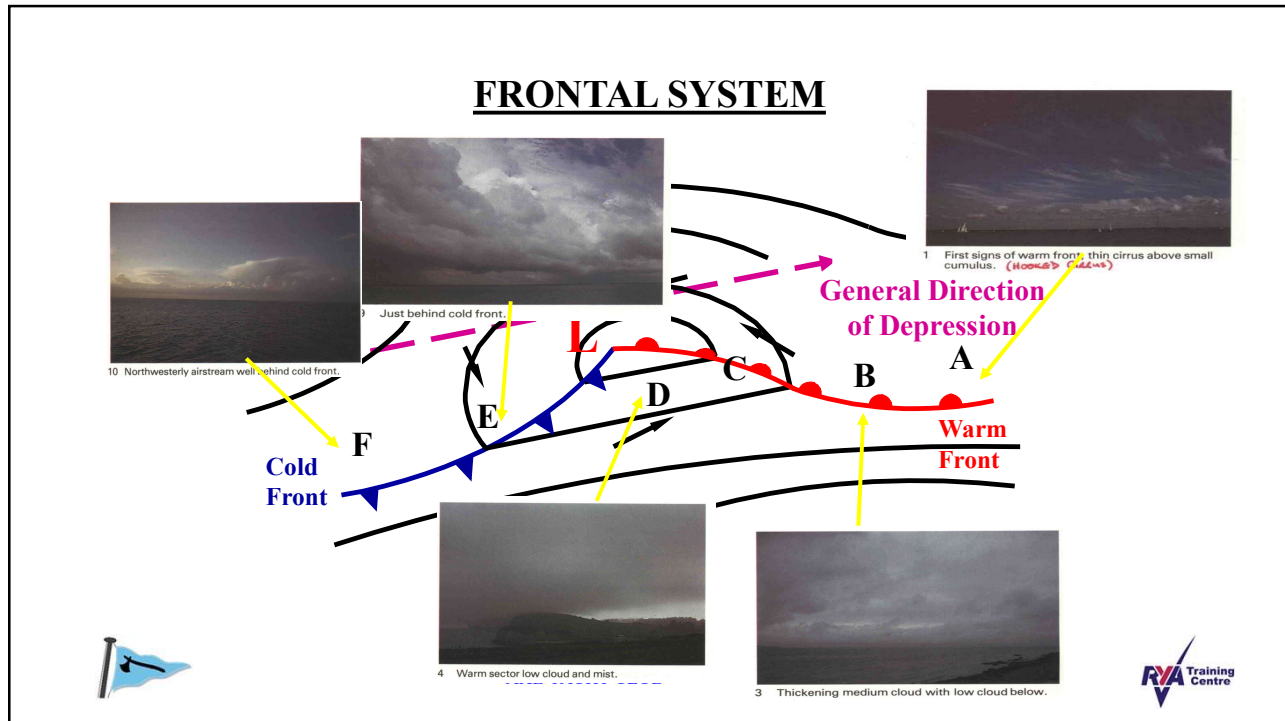
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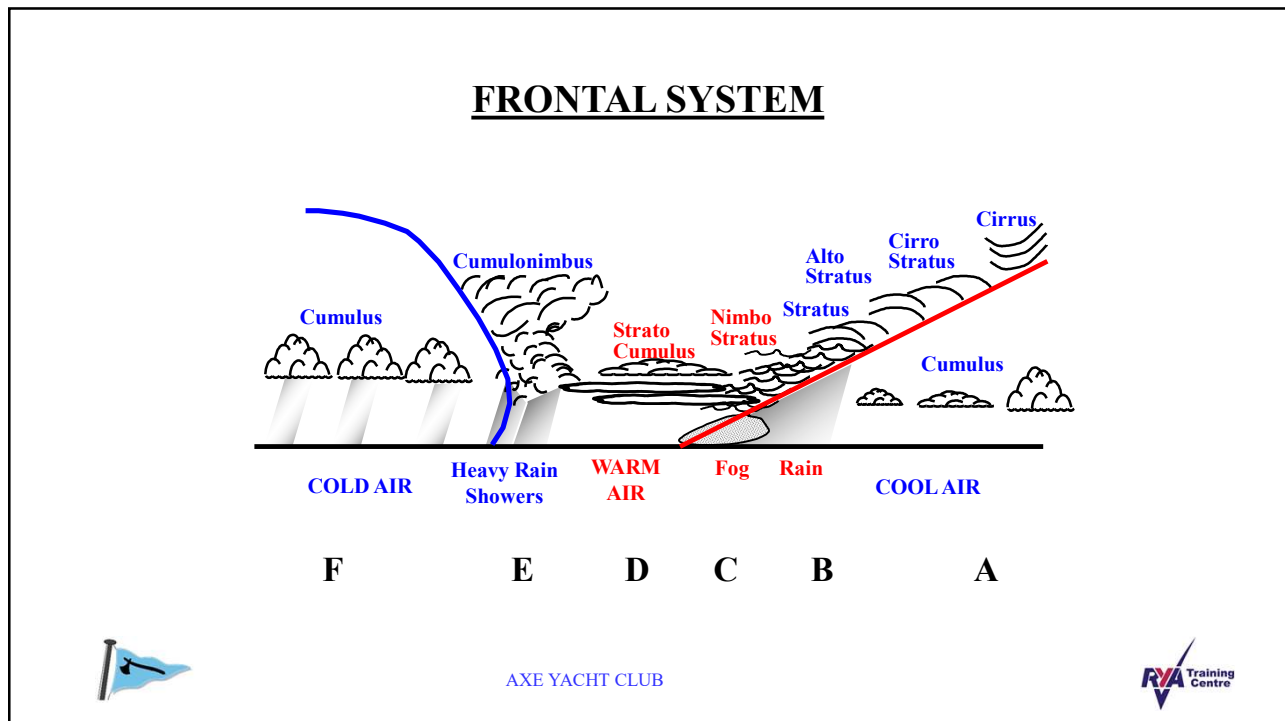
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Pilotage



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Programme



This Week

- What is Pilotage?
- A scenario to consider
- Pilotage Techniques

Next Week

- A local example
- Working up the Pilotage Plan for the scenario



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PILOTAGE

Navigation by the use of fixed marks, normally close to the shore.



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Pilotage Scenario

Setter
Hall
Marina



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NEED TO PLAN FOR

- Rocks
- Shoals and shallows
- Shipping Channels
- Harbour Byelaws
- Height of tide
- Tidal set and drift



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FROM THE ALMANAC OR PILOT

- Harbour Information
- Small craft channels
- Use of engine
- Speed limits
- Port Traffic Signals (TAN p3)
- Communications
- Berths and anchorages



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TECHNIQUES

- Buoyage
- Transits
- Bearings - ahead and astern
- Clearing Bearings
- Contours

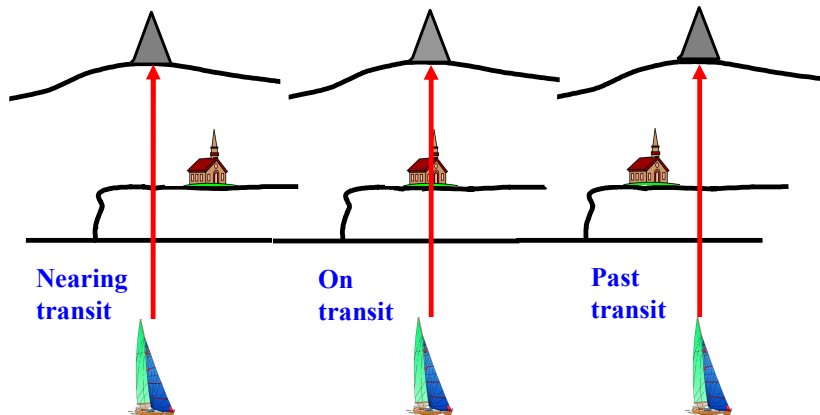


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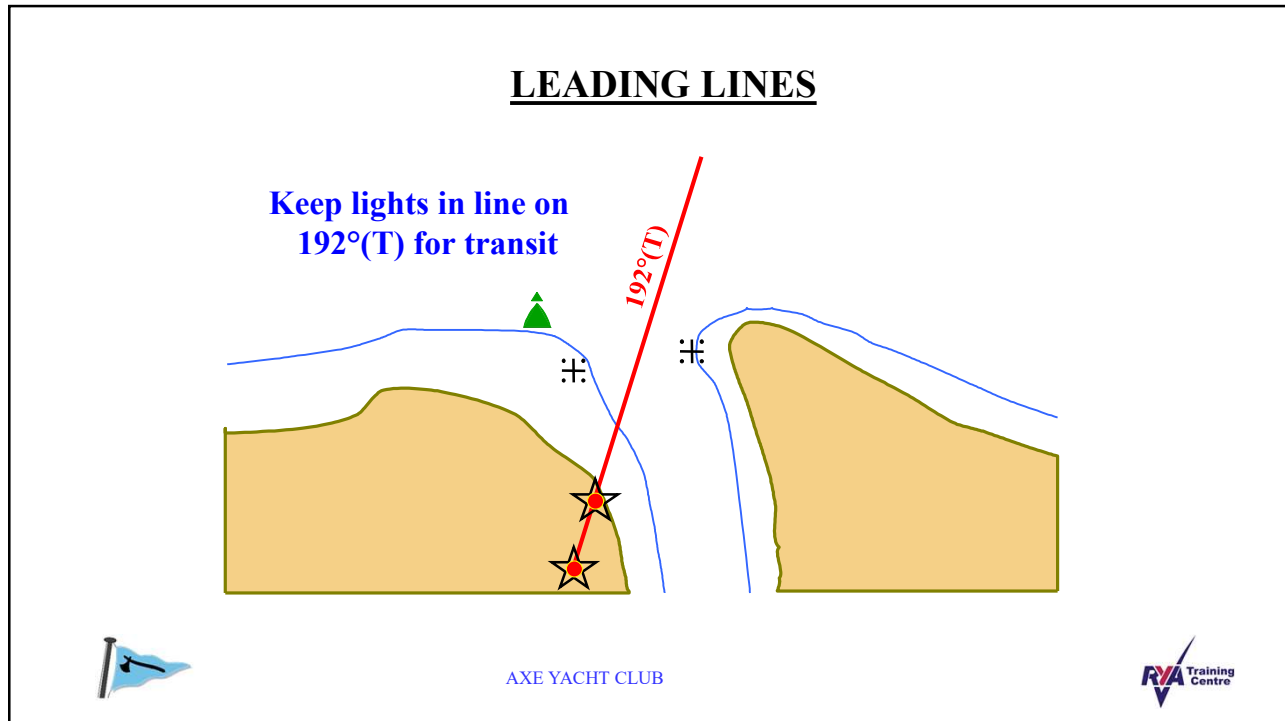
TRANSITS



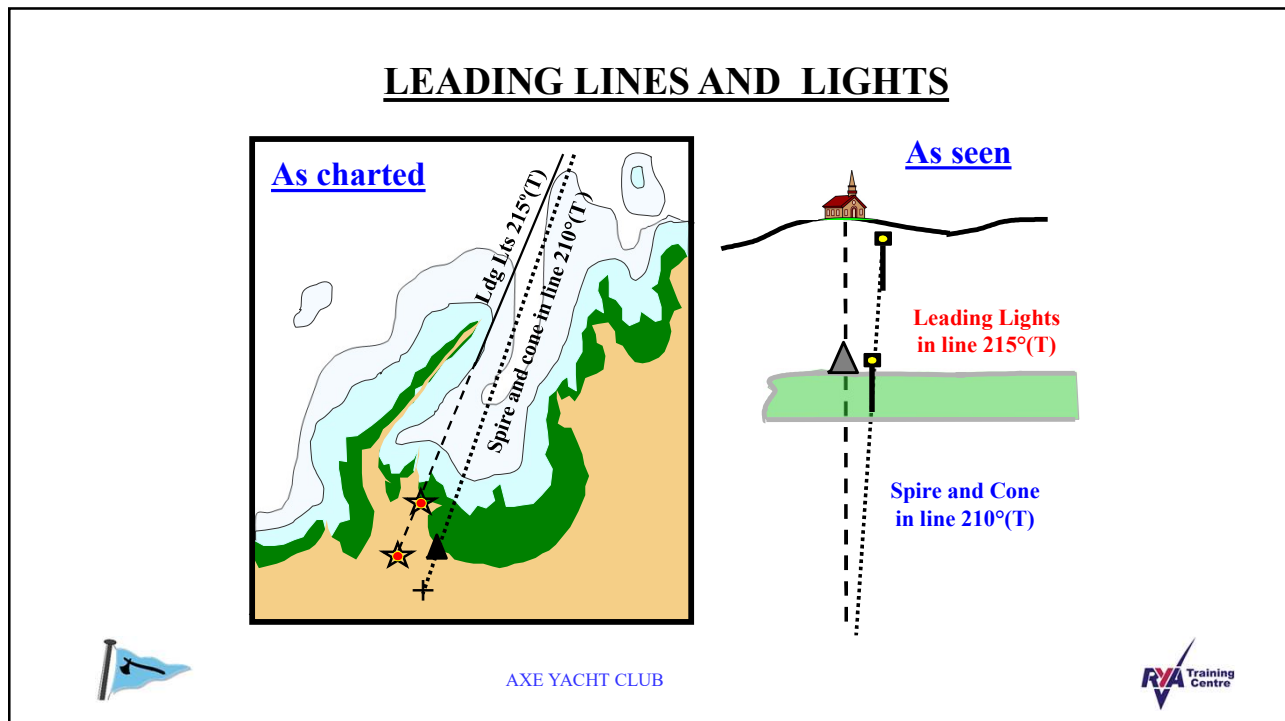
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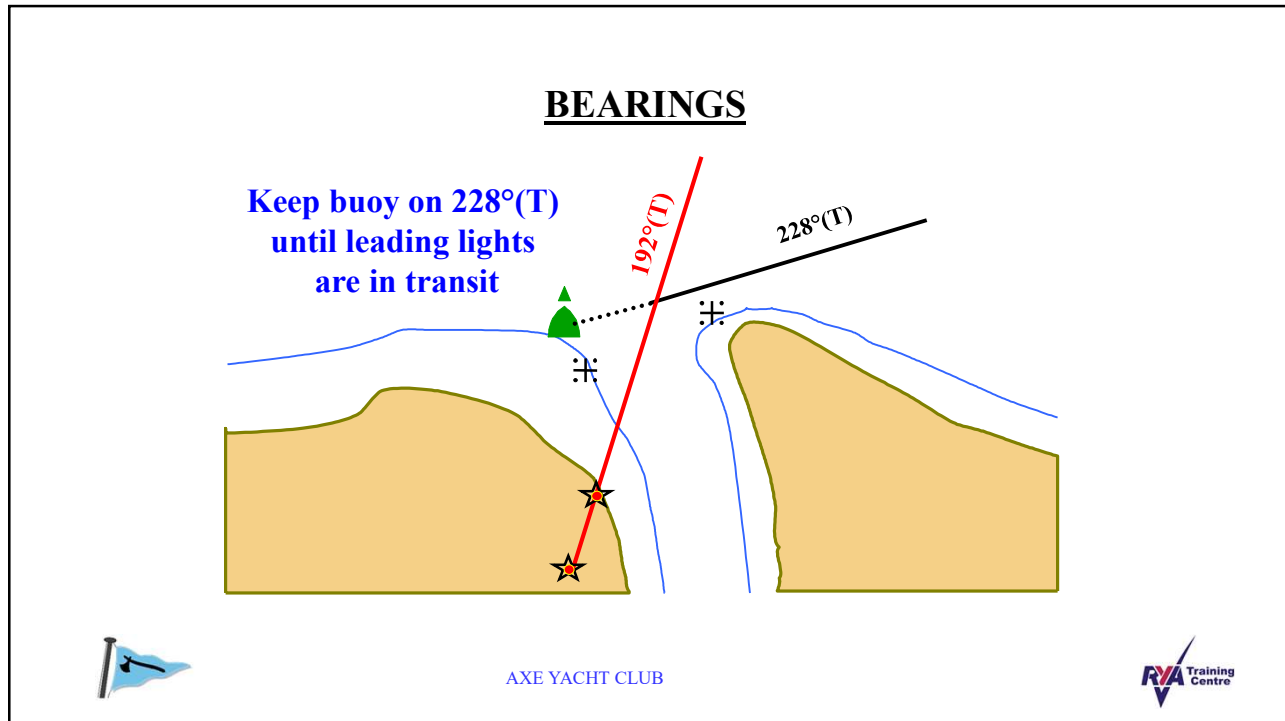
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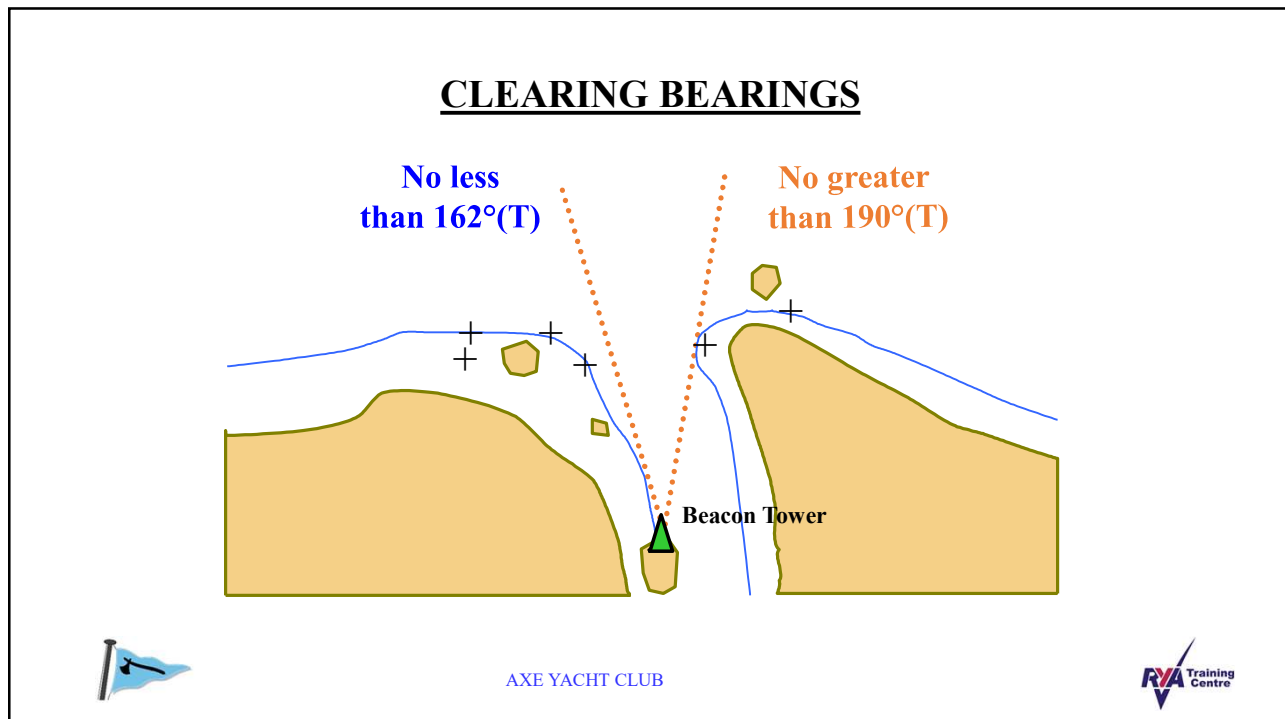
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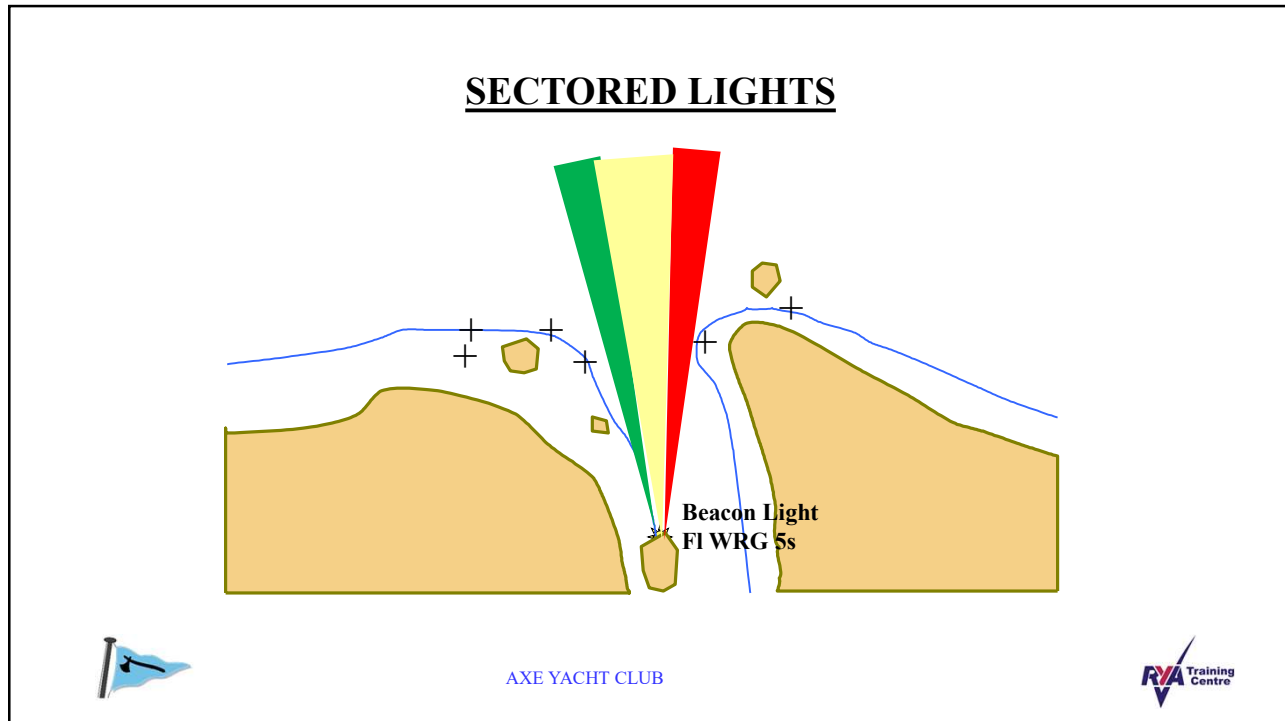
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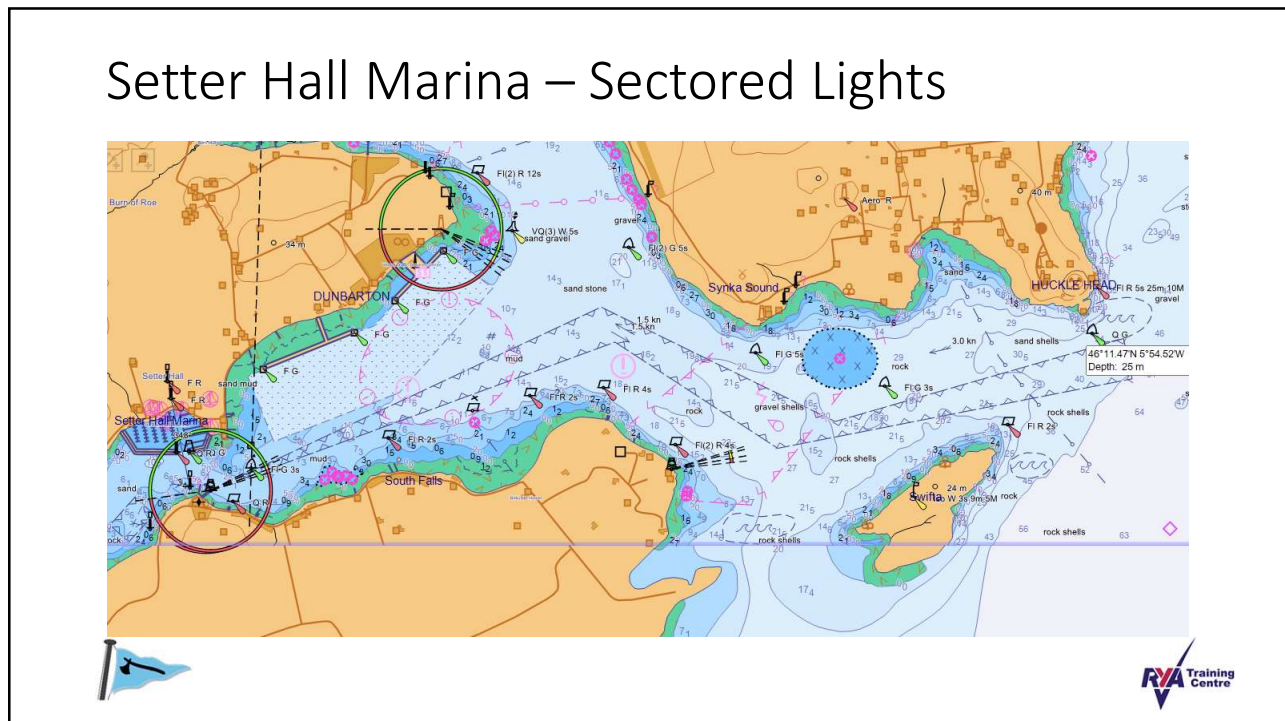
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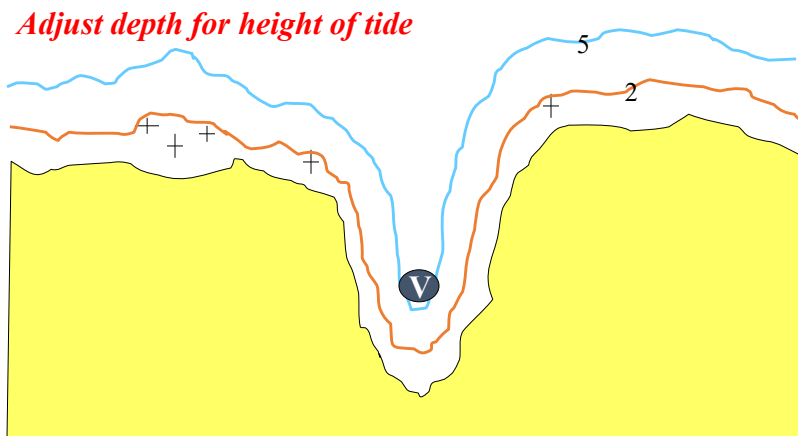


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CONTOURS



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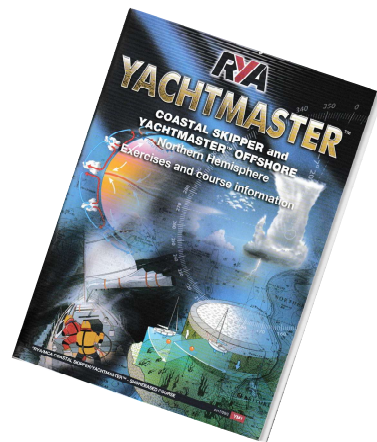
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Homework

Exercise:

“Course to Steers” p10

Complete for Wk 16 Feb 12



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