Lesson Plan – 4.8-1 Helm the SAR Unit	Date: 25/2/18 Mark Harker Cowes LAT / Helm

AIM:

To give crew a practical and theoretical understanding of helming the ILB

Training Afloat –

- Stop / Start / trim & tilt.
- Steering a course
- Maneuvering
- Emergency Steering (Comms / Safety / Hydraulics switch / Tiller)
- Communications
- Man Overboard (reducing speed / lookout / maneuvering / MOB Enav / SOP)
- MOB considerations - Comms / Weather / Sea state / Approach / Speed)

Training Shoreside –

- Hydrology (waves)
- Hull Types
- Propulsion systems
- Dangers of drive systems
- Controls and Alarms
- Considerations prior to changing course (lookout / confirm course / effects / comms)

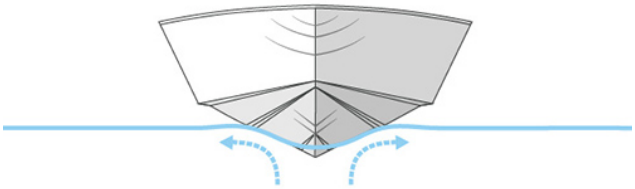
RNLI Training - Crew Seamanship Course Poole

Hydrology

Waves can be affected the their strength, the direction and the durations of the wave. When waves come into contact with headland , beaches and shoals this can affect the wave formation. The compression that arises from hitting or being funneled by these objects can increase the current ; cause overfalls, create steep breaking waves as well as wind over tide. Shoals or ledges such as Gurnard Ledge can cause breaking waves , increase the current and lead to wind over tide. Where as for beaches the effects of a wave coming into contact with the seabed can increase the wave height, the effect of the wave breaking (1.3 x the height of the depth). For shallow beaches where the depth change is more gradual will result in a smaller and gradual wave movement, aspose to on a steep beach drop where the change is sudden creating a 'dumping wave'. Consideration should also be given to beach rip currents and lateral currents.

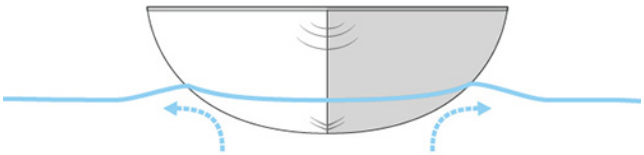
Hull Types and Propulsion systems

- Planing Hull - Better at higher speeds depending on good conditions. These will have a shallow V hull not suitable for rough conditions and larger waves. They do benefit from a twin engine for better turning



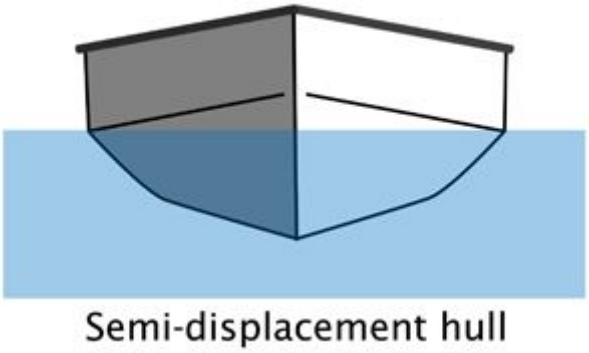
PLANING HULL

- Displacement Hull - the shape of these will result in reduced speed although they are good for sea keeping but liable to roll.



DISPLACEMENT HULL

- Semi-Displacement Hull - These are good at moderate speeds , but require much more power in order to improve speed compared to other hull types. the use of small rudders and a long keel will impact turning ability.



- Twin and Single screw - These are simple but reliable systems , liable to fouling and can be affected by aerated waters. Exposed propellers are easily damaged and a danger to people in the water.
- Jets - Excellent in shallow waters and good manoeuvrability though hard to get use to. they have a high pressure water system with the danger of moving parts and using a bucket system.
- Outboard motors - Simple steerable engines which can be easily accessed to be worked on or changed out. They do carry a risk of fuel fire risk.

Reference Material

SOP

Horizon Guidance -