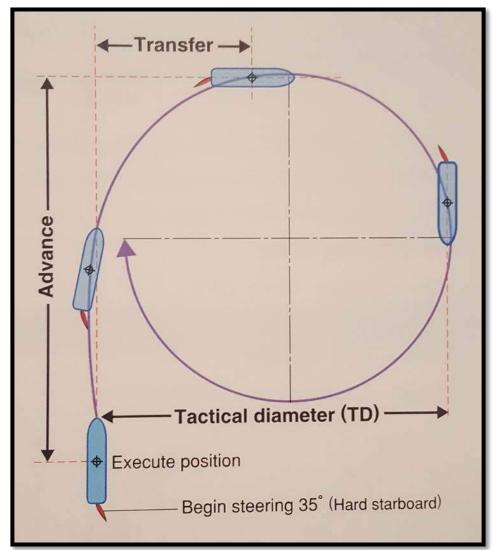


Piloting commercial vessels and recreational sailing on shared waterways.

Captain Andrew Shelverton – Marine Pilot
Tasmanian Ports Corporation Pty Ltd

Stopping distance & Turning path of a ship.





Stopping distance & Turning path of a ship.



Loaded tanker, 175 x 31 x 11.0m; Disp: 48,980T; Speed 13kts.

Q1. What Stopping Distance?

Q2. What Tactical Diameter?



Pilotage/ commercial vessels environment

- Regulation
- Regulators
- Port Company Tasports
- Ship Owners/ Charterers Vessel Masters'/ Ships Agents
- Commercial shipping
- Vessel characteristics Manoeuvring
- Conducting Pilotage



Regulators & Regulations

National - Australian Maritime Safety Authority (AMSA) -

- Navigational Safety & Adoption of Resolutions from the IMO
- National Act 2012, international conventions Australia a signatory
- Marine Order 30 Prevention of collisions, giving effect to COLREGS – International Regulations for Preventing Collisions at Sea
- Marine Order 21 Safety and Emergency Arrangements implements SOLAS Chapter V navigational requirements, Reg 34 voyage planning
- IMO Resolutions A.893(21) Guidelines for voyage planning

National - Australian Transport Safety Bureau - Incidents

- Transport Safety Investigation Act 2003
- Local Marine and Safety Tasmania (MaST)
 - Obligations under the Deed of agreement Functions/ Reporting



Regulators & Regulations

Marine and Safety Tasmania

- Marine and Safety Authority Act 1997
- Marine and Safety (Pilotage and Navigation) Regulations 2017

Notices to Mariners – AMSA/ MaST

- MN 2014/17 Sound Navigational Practices
- MN 2016/11 BRM and Expected actions of bridge teams in Aust Pilotage waters
- Local matters (MaST)

Deed of Agreement – MaST, Tasports and DPIPWE (Rep. Crown)

- Tasports engaged to perform navigation Functions
- Pilotage incident reporting

Accountability & Transparency



TasPorts

- Tasports' purpose is to facilitate trade for the benefit of Tasmania, through the commercial provision of infrastructure and services.
- Port Operator
- Appointed under a Deed of agreement with MaST and the Crown
 - Navigation Functions Pilotage/ Navaids
 - Pilotage provider for vessels > 35m, ON DEMAND.
 - Port Operator 15 Port Areas in Tasmania
- Commercial provider of Towage
- Responsible for Port/ Waterside security within regulated port zones



Commercial Pilotage in the Port of Hobart

Nyrstar

- Bulk carriers to 185m
- Chemical tankers

Incat

High speed catamarans

Prince of Wales Bay

Ferries

Selfs Point Oil Wharf

- Oil/ Gas/ Bitumen tankers to 185m
- Bunkering and refuelling Antarctic/ Aquaculture

Macquarie Point/ Princes Wharf

 Cruise (to 348m)/ Antarctic/ Container/ Bulk/ Break bulk/ Heavy lift/ Specialist/ Navy/ Super yachts.











International Regulations for Preventing Collisions at Sea, 1972

Rule 18 – Responsibilities between vessels

a) Except where Rule 9, 10, and 13 otherwise require, a power driven vessel underway shall keep out of the way of: NUC, Restricted, Fishing and Sailing

Rule 1 – Application

 (b) Nothing in these Rules shall interfere with the operation of special rules made by an appropriate authority for roadsteads, harbours, rivers, lakes or inland waterways connected with the high seas and navigable by seagoing vessels...



Marine and Safety Authority Act 1997

Reg 4. Marine and Safety Authority

establishes the Marine and Safety Authority

Reg 5. Jurisdiction of Authority

- The Authority has jurisdiction in and over –
- (a) the waters of all inland lakes, rivers and streams; and
- (b) coastal waters; and
- (c) any vessel; and
- (d) any marine facility under the control of the Authority.

Reg 6. General functions and powers

- (1) The functions of the Authority are as follows:
 - (a) to ensure the safe operation of vessels;
 - (b) to provide and manage marine facilities;
 - (c) to manage environmental issues relating to vessels.
- (2) The Authority has power to do anything necessary or convenient to be done in connection with the performance of its functions.



Marine and Safety Authority Act 1997

Reg 7. Delegation

 The Authority, by instrument in writing, may delegate any of its functions or powers, other than this power of delegation, to any person or body.

Reg 39. Regulations generally

(1). The Governor may make regulations for the purposes of this Act.

Reg 40. Regulations relating to safety

- The Governor may make regulations in relation to any of the following matters:
 - (d) pilots, pilotage and exemptions,
 - (e) navigational procedures



Marine and Safety (Pilotage and Navigation) Regulations 2017

Reg 29. Vessels under pilotage to have right of way

A person in charge of a vessel that is not under pilotage must give way to a vessel that is under pilotage.

Penalty: Fine not exceeding 50 penalty units.

Thus, a vessel under Pilotage is the **Stand on Vessel**.

Reg 71. Interference with navigation.

(3) MAST, by notice, may declare a specified area surrounding any vessel navigating, moored or at anchor to be a prohibited area for other vessels or persons.

Ref MaST NtoM M52-15 perpetual notice.



Recreational sailing & COLREGS

COLREGS Rule 17. Action by stand-on vessel.

Required actions of the Piloted vessel.

(a)(i) Where one of two vessels is to keep out of the way the other shall keep her course and speed.

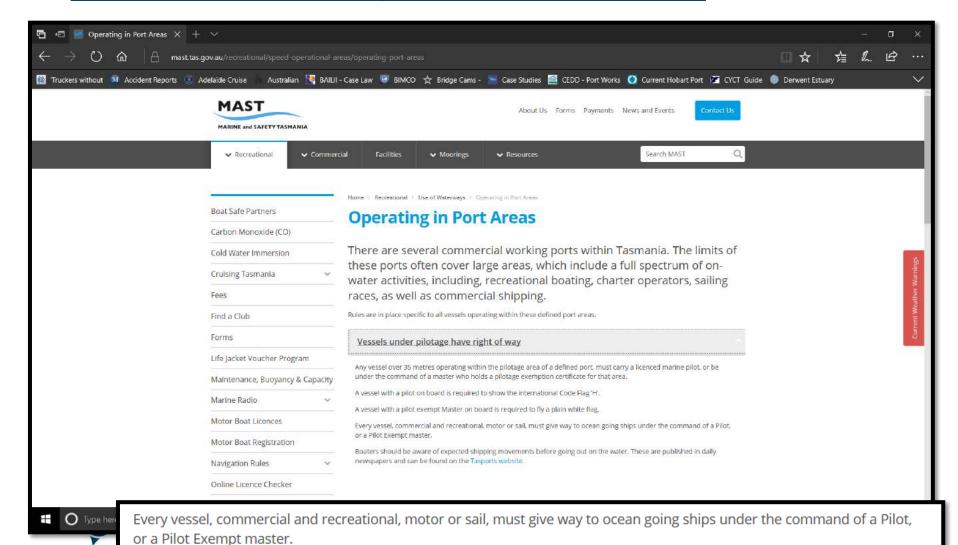
COLREGS Rule 16. Action by give-way vessel.

Required action of all other craft.

"Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear."



Marine and Safety Tasmania (MaST)



Big ships little

- When sailing keep a look of the headsail and main
- Larger ships at sea travel queroom: make yourself known
- If you can't see the bridge can't see you
- AIS is a handy tool when or
- If a ship is flying code flag Isignifies it is under pilotage you must keep clear at all ti
- During berthing operation ships' thrusters can create of Small vessels must keep w



Organising ac

- Contact Hobart VTS to in of the event
- Markers should not be plan Navigation Channel or clos
- Support craft must maint
 VME channel 12 at all time
- Markers must be remove
- Do not allow the event to Navigation Channel
- Do not start the event pilotage entering at
- Remind all pay pants in vessels und pilotage st

Big ships little boats

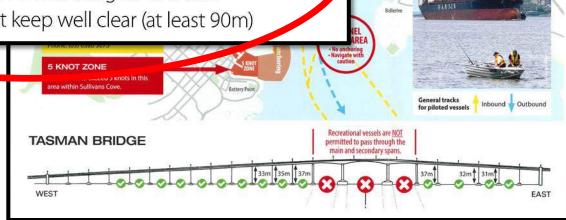
- When sailing keep a look out to leeward the headsail and main
- Larger ships at sea travel quickly give ye room; make yourself known with the VH
- If you can't see the bridge of a ship, the can't see you
- AIS is a handy tool when cruising
- If a ship is flying code flag H (right) it signifies it is under pilotage control and you must keep clear at all times
- During berthing operations, tugs or the ships' thrusters can create dangerous wash.
 Small vessels must keep well clear (at least 90m)

Organising aquatic events

- Contact Hobart VTS to inform them of the details of the event
- Markers should not be placed in the Main
 Navigetian Charmer of close to a commercial what
- Support craft must maintain a listening watch on VHF channel 12 at all times
- · Markers masses
- Do not allow the event to block the Main Navigation Channel
- Do not start the event if there is a vessel under pilotage entering the area
- Remind all participants involved in the event that vessels under pilotage still have right of way

to escort vessels out of the way of a

KEEP CLEAR OF LARGE VESSELS





Marine and Safety Tasmania (MaST)



MAST

MARINE and SAFETY TASMANIA making boating better

Waterway communication procedures within the Port of Hobart Relating to sailing events

Prior to a sailing event being held SAILING CLUBS

All yacht club organisers are to communicate with 'HOBART VTS' on VHF Ch.12 or by telephone on 63803013 and provide the following information prior to an event being held:

- Name of club and contact name and phone number
- Name of start/safety boat
- The VHF working channel and emergency channel which will be used and monitored
- The start time/scheduled finish time and the source detail of the proposed event
- Confirmation that the club will not impede commercial shipping zone at time of transit

When contacted, 'HOBART VTS' will then provide the following information to yacht club and event organisers:

- All proposed shipping movements within the port (note internet shipping schedule may sometimes not show all scheduled movements)
- Any other information which may affect the proceedings and running of the event

Vessel characteristics

- Dimensions Length, Beam, Draft, Windage (Shape)
- Propulsion Propellers/ Rudders/ Bow Thrusters/ Diesel or D/E
- Manoeuvring
 - Stopping
 - Turning
- Vessel condition
 - Loaded/ Ballast
- Responsive
 - Ability to operate propulsion astern subject to vessel speed
- Vessel design
 - Fwd/ Aft bridge Visibility from the Ship Bridge
 - Deck Cranes/ Gantry
- Pressure points around vessel Interaction Suction zones



Manoeuvring & Visibility

Vessel	Speed/ Condition	Stopping with Full astern	Advance	Tactical Diameter	Visibility under bow L/B
Diamond Princess - 288m	Full - 12kts	510	468	528	52
	Half - 8 kts	380			
Golden Princess - 290m	Half - 13kts	1000	520	680	50
Tanker - 127m	Full - 13kts	1850	482	463	151/288
	Half - 7kts	370	519	482	
Tanker (MR2) - 175m	L.Full	2352	550	482	159/307
	B.Full	2016	460	424	
Bulk Carrier - Large Handy 169m	L.Half - 9kts	1415	445	450	
	L.Slow -7kts	560			
	B.Half - 9kts	820	430	410	
	B.Slow - 7kts	350			

Distances in metres

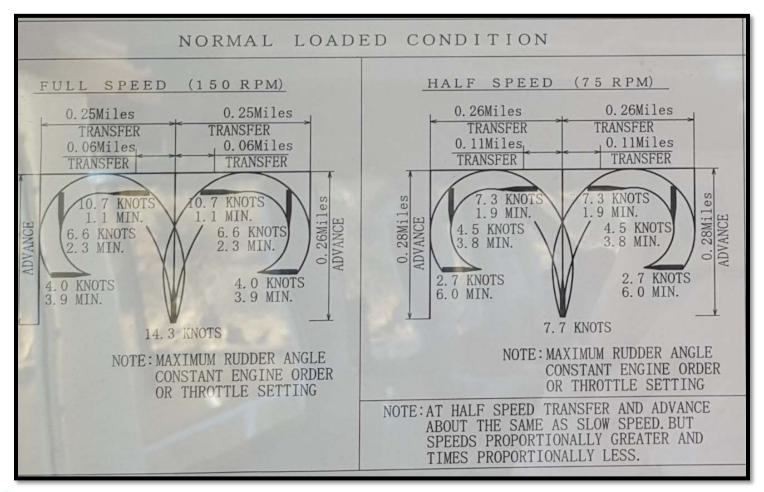


Stopping – Small tanker

CALL SIGN ZGGU2	_М. Т	Stolt	Satsuki	
OFF. NUMBER 747919	(NOTE : USI	NG ENGINES F	ULL ASTERN AN ON OF RUDDER.	D
ſ	(NOTE : USING ENGINES FULL ASTERN AND WITH MINIMUM APPLICATION OF RUDDER.) AHEAD TO ASTERN NORMAL LOADED COITION NORMAL BALLAST COITION TIME DISTANCE TIME DISTANCE			
3	NORMAL LOADED COITION		NORMAL BALLAST COITION	
	TIME	DISTANCE	TIME	DISTANCE
FULL SEA SPEED FULL SPEED HALF SPEED SLOW SPEED	7.8 Minutes	0.95 Miles	6.4 Minutes	1.10 Miles
FULL SPEED	Minutes	Miles	Minutes	Miles
HALF SPEED	1.5 Minutes	0.2 Miles	2.9 Minutes	0.19 Miles
SLOW SPEED	Minutes	Miles	Minutes	Miles



Manoeuvring - Small tanker

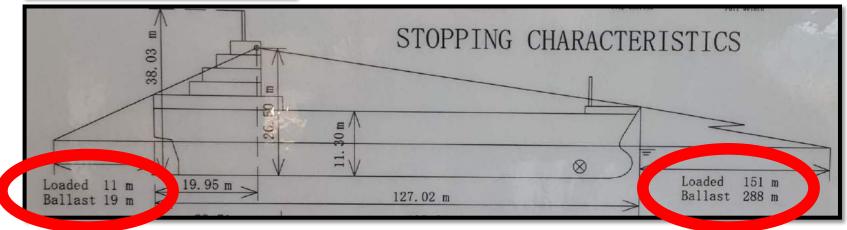




Bridge visibility – Small tanker







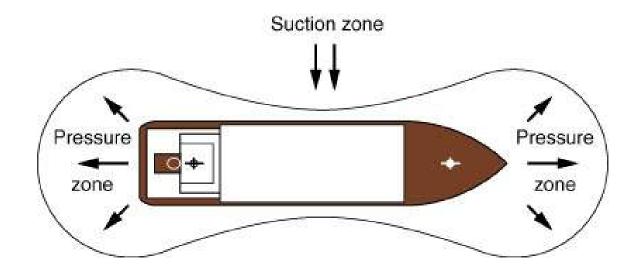


Mid sized Bulk Carrier - Same ship/ same day





Ship interaction



Getting too close to vessels can be hazardous!



How close is too close?



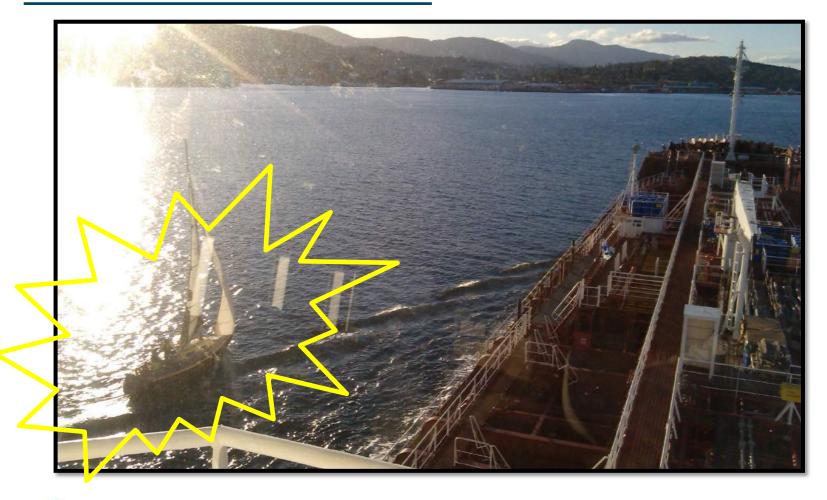


How close is too close?





How close is too close?





Conducting Pilotage

- Pilotage Passage Plan
 - Familiar courses, characterised by:
 - To/ From Pilot Boarding Ground
 - Mid river
 - Approaching berths
 - Maintaining sufficient UKC and distance from grounding lines, Draft up to 12m.
- Master/ Pilot Exchange
- Communications Standard Marine Navigational Vocabulary
- Steady course try to avoid bold and erratic alterations
- Safe speed appropriate to vessel type and conditions (weather/ traffic)



Typical passage plan – 1/2

Tasports Passage Plan-Port of Hobart Zone B

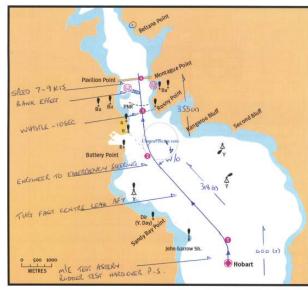
Vessel:		Pilots Name:		
Voice recording operational	Yes	No	Berth Arrival / Depart/ Shift:	
LOA (m):			Side To Berth:	
Beam (m):			Berth depth at LAT (m):	
Draft Fwd (m): visual or verbal check			Tide:	
Draft Aft (m): visual or verbal check			Current at m—N / S profiler:	
Air Draft (m): Bridge 44m > HAT, Wires 42.2m			Current at m—N / S profiler:	
Displacement:			Wind at Tasman Bridge:	
Thrusters:			Tug Forward:	
Main Engine Type:			Tug Aft:	

TASMAN BRIDGE CHECKLIST

Main Engine Checks	Steering Gear Checks		
ME / CPP tested Ahead and Astern:	Steering hard over each way:		
Telegraph and RPM counter:	Helm and rudder indicators:		
ME / CPP monitored in Bridge or Engine Room	Both steering motors running:		
Any defects, limitations, or issues with machinery systems. Confirm following immobilisation:	Ensure helmsman is experienced:		
Pilot will be notified of any issues to ME / CPP:	Bridge team to monitor helm & RPM indicators:		
Ensure no activities that could result in a loss of power are undertaken before bridge:	Engineer to provide a visual report and then standby in emergency steering 10min before bridge. Test communications to bridge:		
Advise ER of PNR and absolute need to main- tain engine & electrical power:	Will emergency power maintain steering:		
Emergency power is available within 45 sec:	Establish steering characteristics:		

Add	itional Checks		
English language to be used by Bridge Team:	Ship VHF and tug frequency:		
Pilot flag or lights (green over red):	Ship whistle:		
Principle means of nav: ECDIS/ Paper (Aus172)	Ships speed is consistent with escort tug:		
Position fixing: Automatic / OOW	Ship stern suitable for pushing:		
Ships cranes & hatch lids stowed:	Traffic plan agreed:		
Forward visibility acceptable:	Bridge team keep lookout, part. small craft:		
Vessels manoeuvring data checked:	Ships passage discussed with bridge team as per BRM principals, Any questions - ask any time:		
Anchors clear and Officer standing by for'd:	Does the Master have any questions for the pilot:		
Point of no return (PNR) * m / cables:	Visibility limit at PNR:		
Wind limit at PNR:	Bank effect % likelihood:		
Current limit at PNR:	Date / Time:		
Master's signature:	Pilot's signature:		

Chart 171 Approaches to Hobart

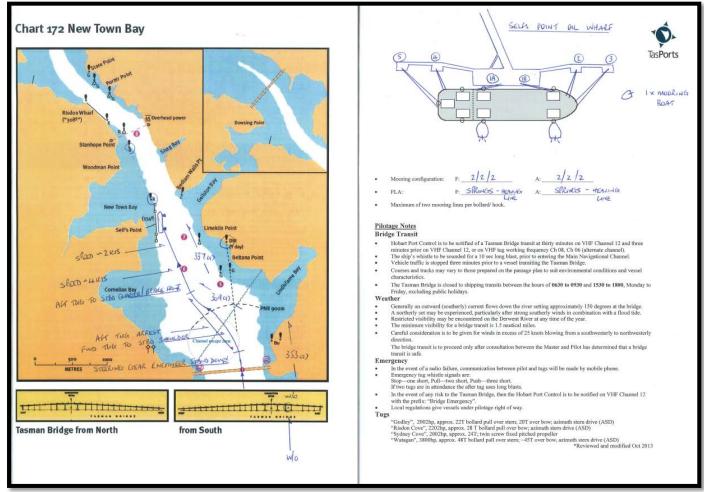


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Typical passage plan – 2/2



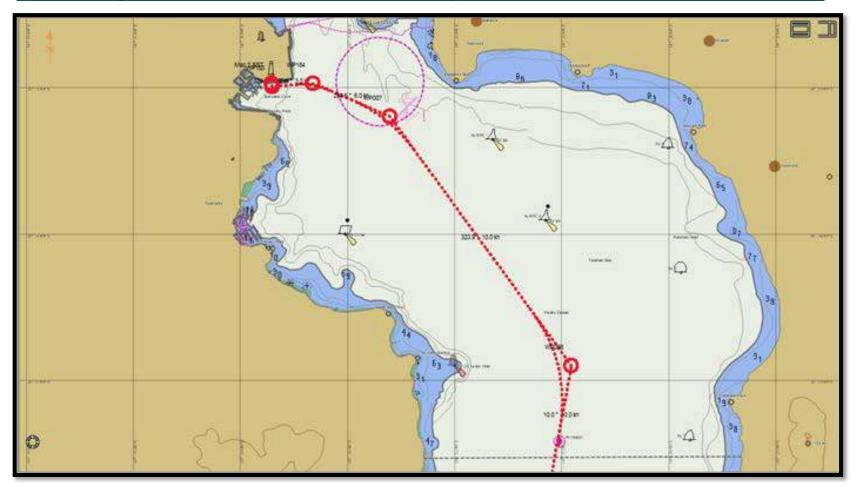


<u>Pilotage route – Tasman Bridge inbound</u>





Pilotage route - Cruise ship Mac 2-3 SST inbound



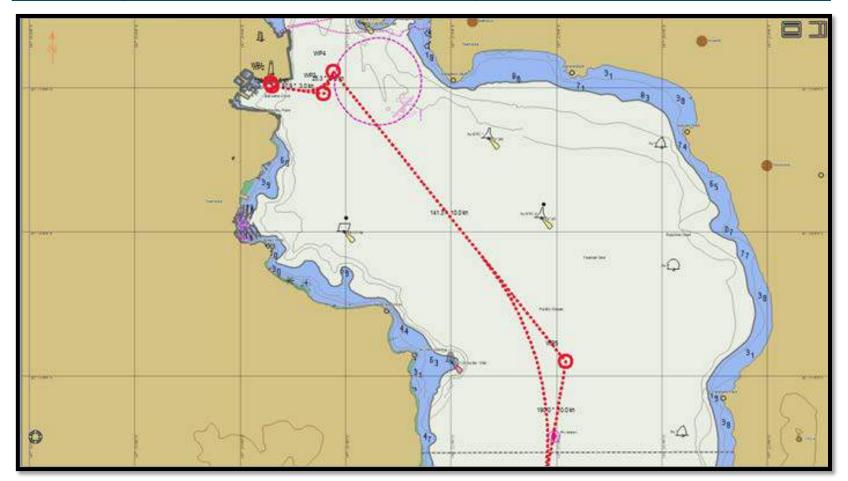


<u>Pilotage route – Tasman Bridge outbound</u>



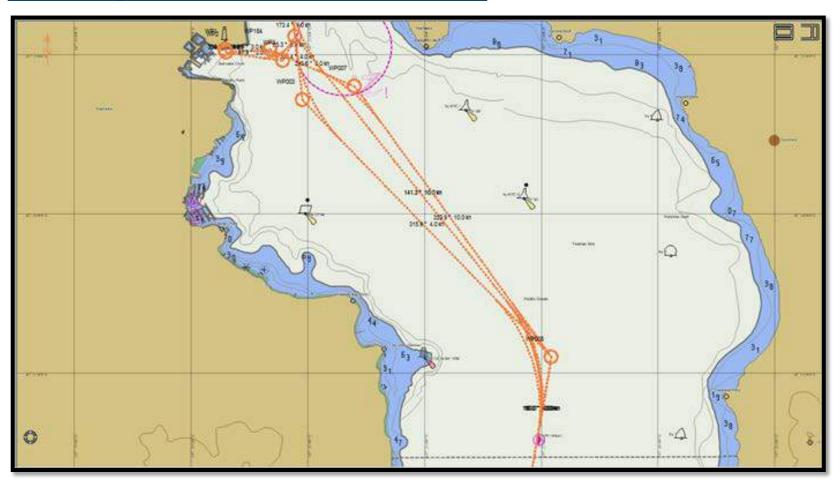


<u>Pilotage route – Cruise ship Mac 2-3 outbound</u>



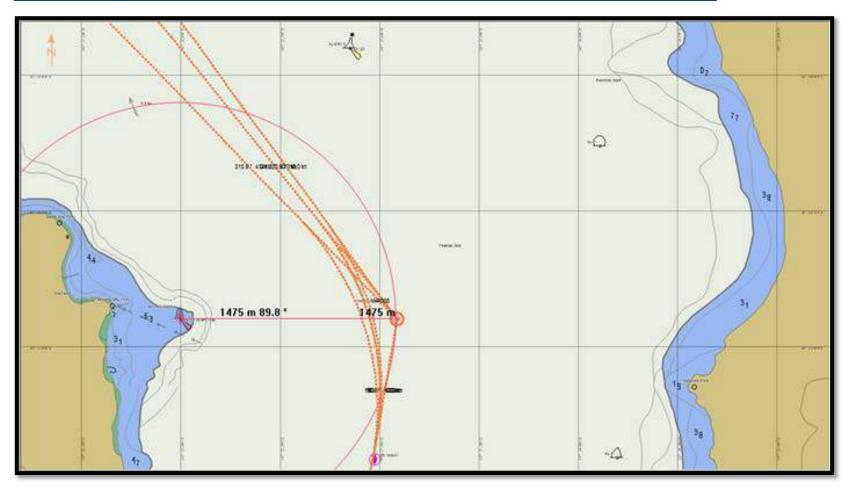


Pilotage routes - Combined



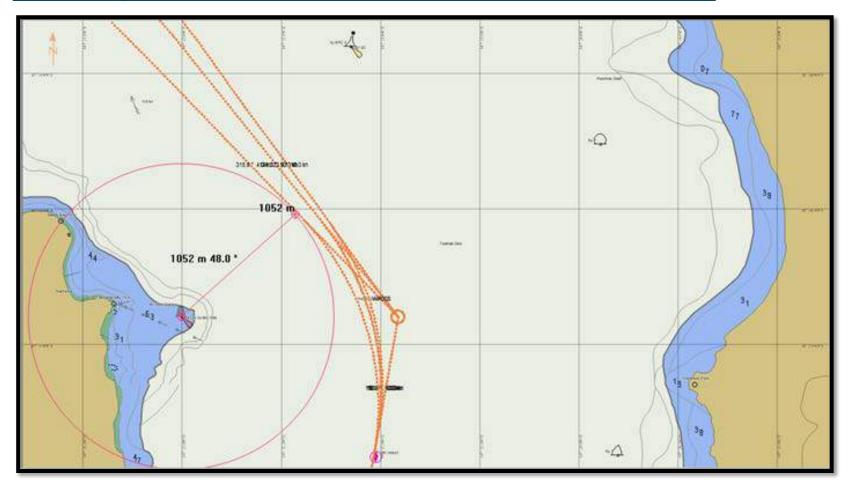


Pilotage routes – John Garrow Beacon 1



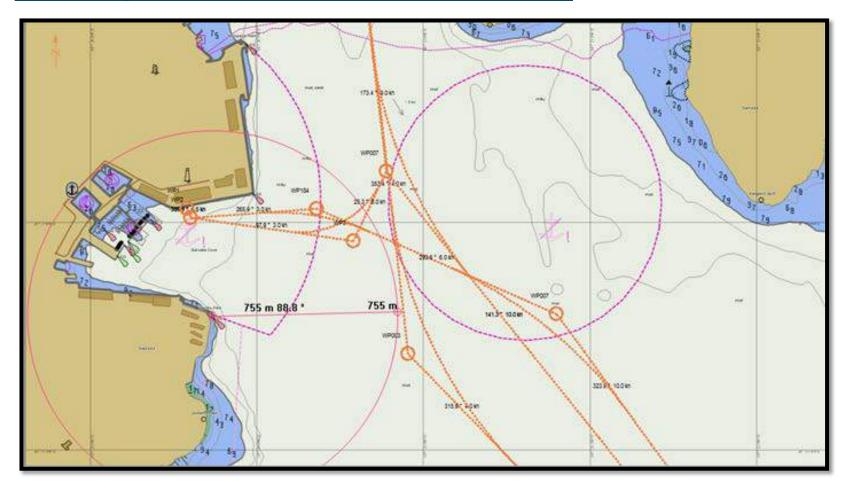


Pilotage routes – John Garrow Beacon 2



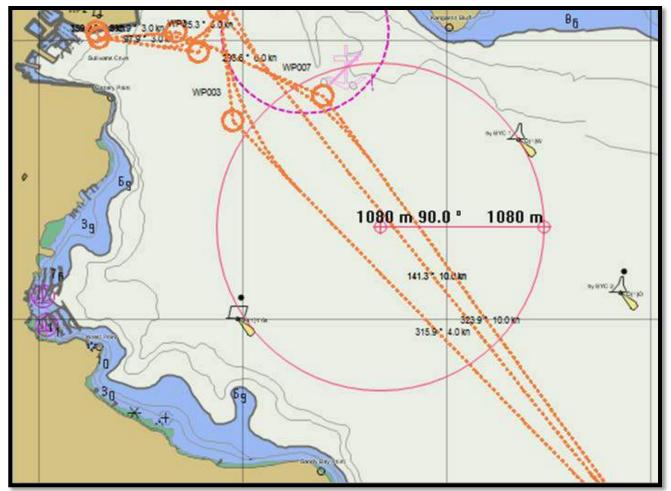


<u>Pilotage routes – Sullivans Cove</u>



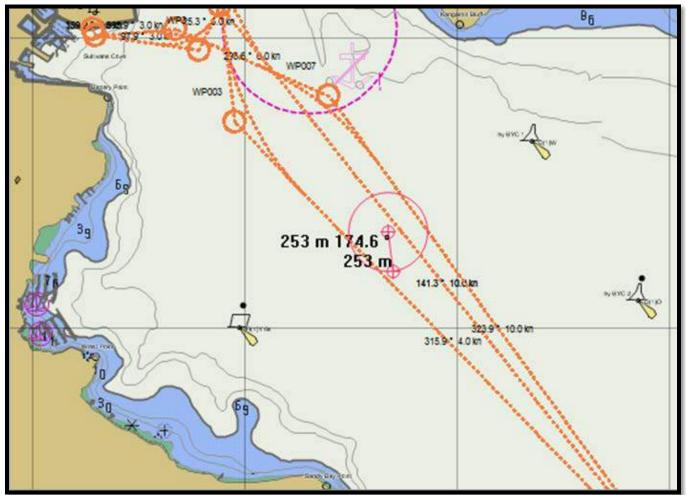


Pilotage routes – Mid river 1



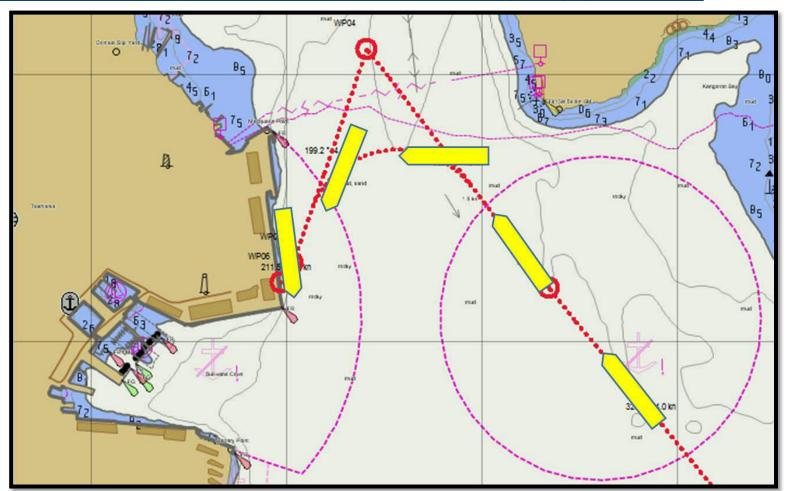


Pilotage routes – Mid river 2



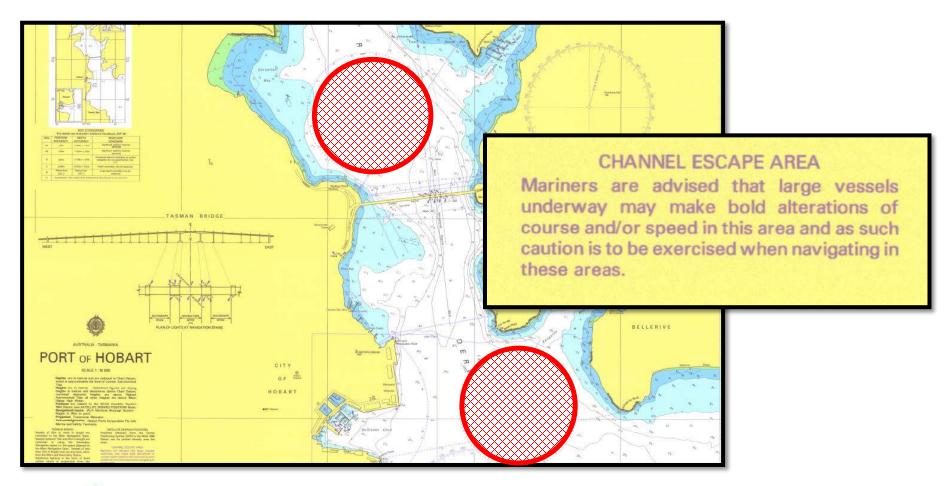


Mac 4-5 Cruise/ Container ship approach



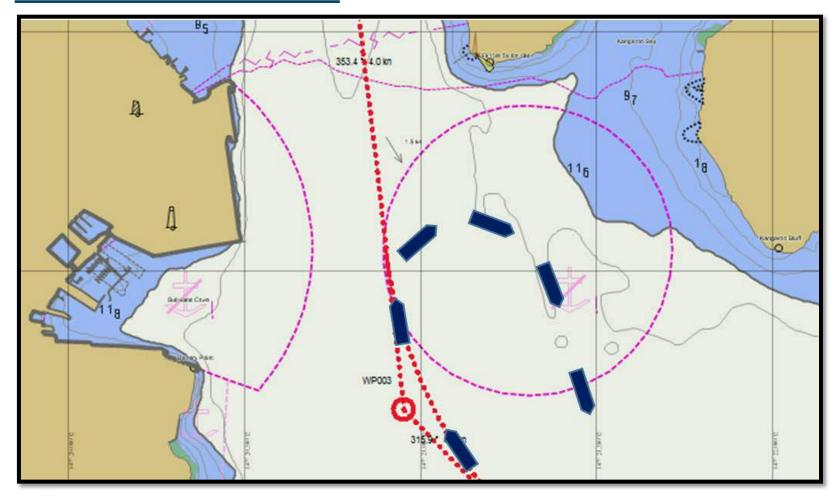


Tasman Bridge abort zones



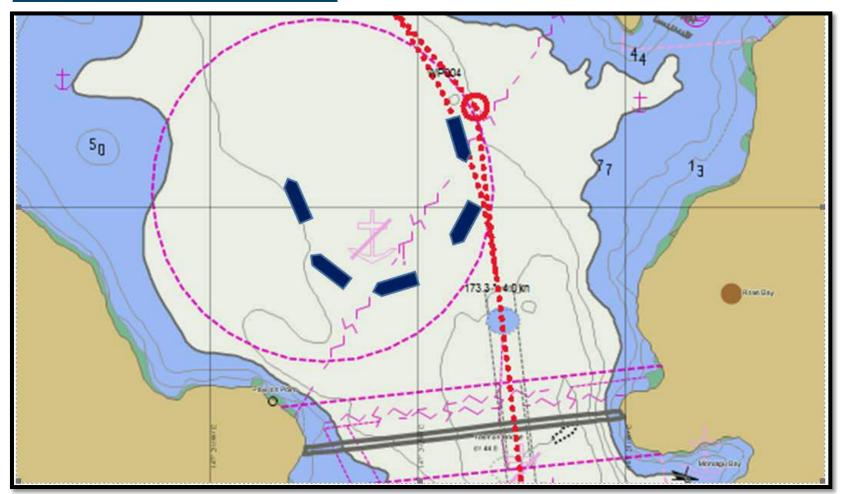


Northbound abort



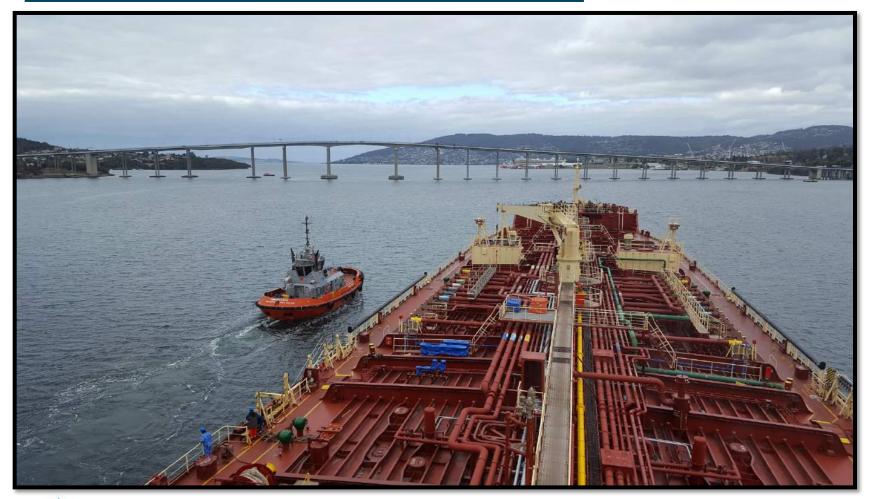


Southbound abort



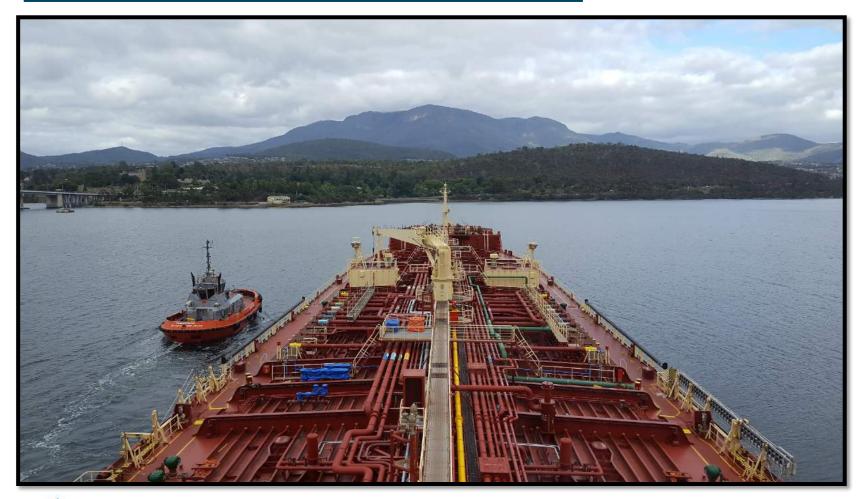


Maersk Marmara – 19 Feb 2018





Maersk Marmara – 19 Feb 2018





Maersk Marmara – 19 Feb 2018





Additional contingencies

- Weather outside of Tasman Bridge parameters
- Propulsion or equipment failure
- Steerage failure
- Tug failure



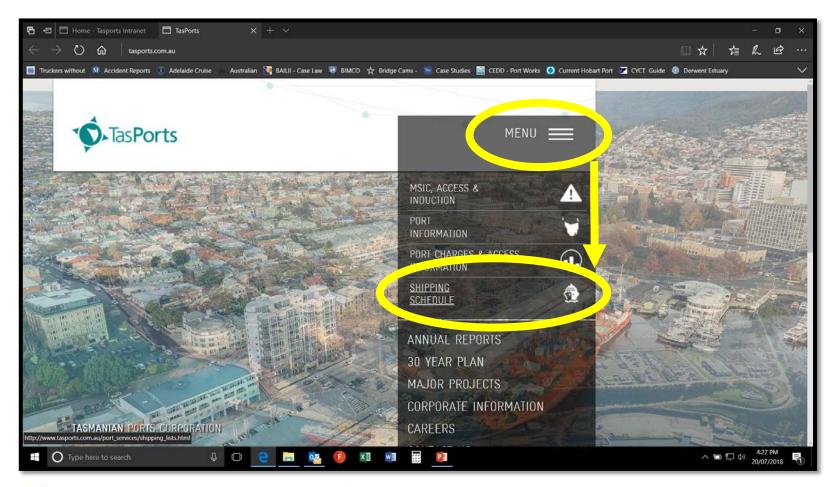
<u>Pilotage actions – Situational awareness to other waterways users</u>

- Shipping list Media/ Internet
- VHF calls VHF Ch12
 - Arrivals at Pilot boarding ground inbound
 - Pre departure from berth
 - During transit
 - Bold manoeuvres, ie off Sullivans Cove or Abort manoeuvres
- Manoeuvring whistle signals
 - Prior to departure Long blast (COLREGS R34(e))
 - Unsure of Intentions/ Actions 5 short rapid blasts (COLREGS R34(d))
 - Tasman Bridge warning 10 Sec blast (M&S(P&N) Regs 2017 s41(1))
- Presence of Tugs/ Pilot boat (escort)
- Pilot/ Pilotage exemption flag



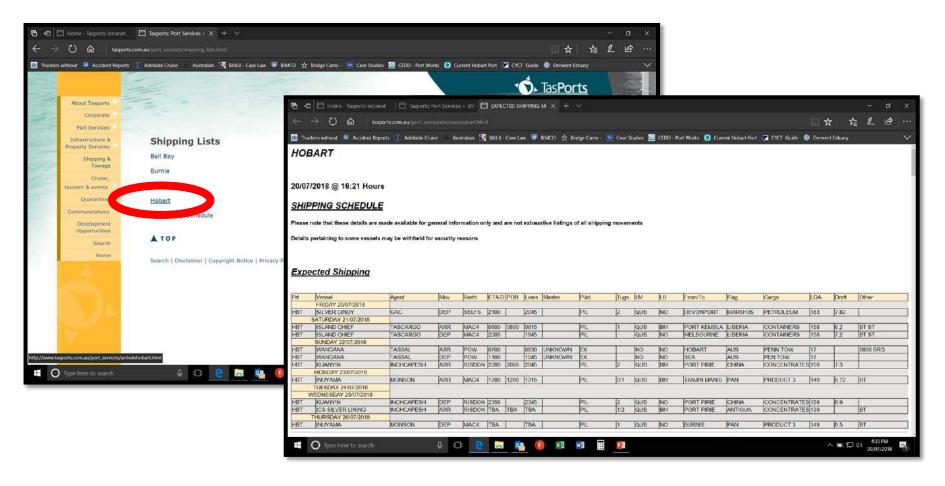
Tasports shipping schedule

(www.tasports.com.au)





Tasports shipping schedule





- For small craft not carrying VHF radio, the escort boat may convey a direction from the Pilot (an authorised officer) where earlier messages may not have been received, heard, or understood.
- Pilot boat escort is there for small craft safety!
- Follow their direction.

They are not your enemy.







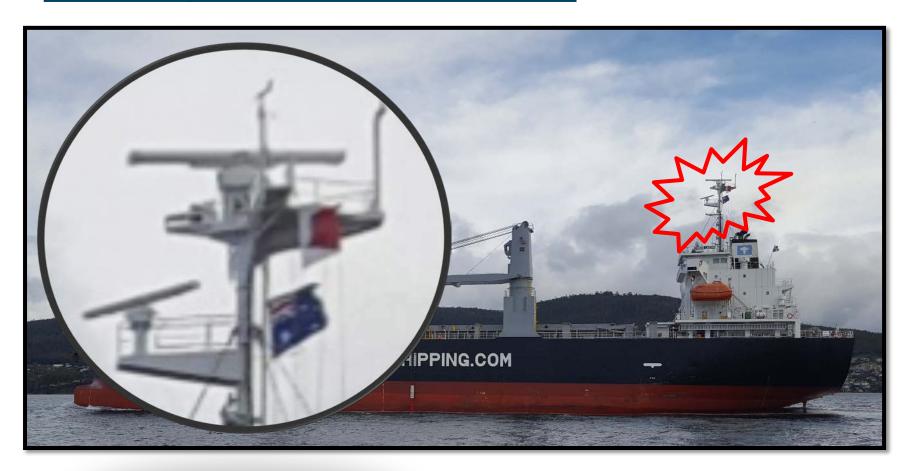






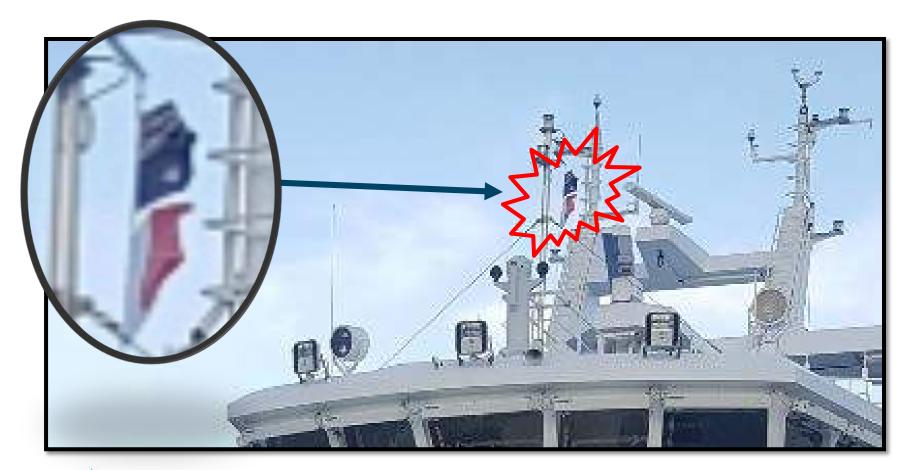


Pilot flag – avoid over reliance





Pilot flag – down wind of





Crossing ahead of a vessel under pilotage

What are your expectations if your yacht capsizes, or your engine fails?





Escort tug operations





Escort tug operations





Escort tug operations





Commercial shipping and recreational sailing - the risks

- Yacht capsize ahead of vessel.
- Yacht disappear under bow of vessel.
- Yacht affected by pressure or suction zones.
- Yacht collision with ship side.
- Yacht interacting with escort tug on tow line.
- Ship compelled to take avoiding action by bold manoeuvre.

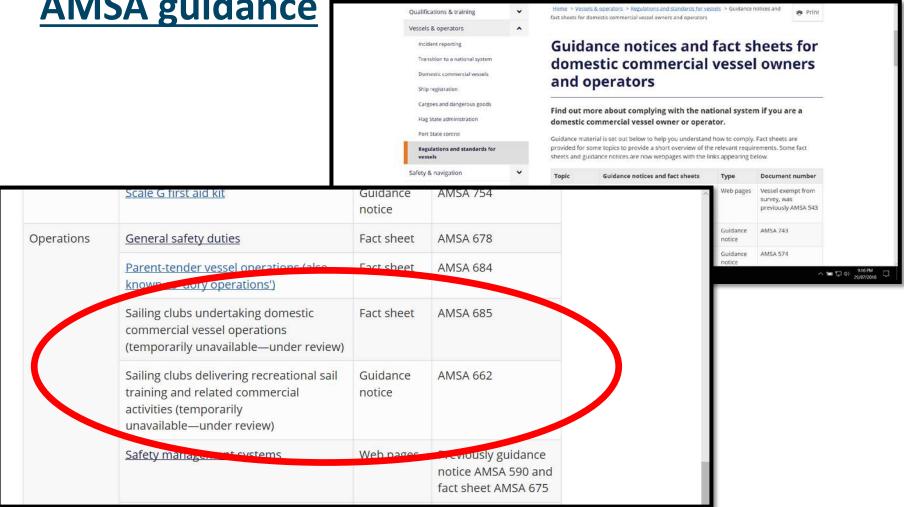


Considerations for sailing clubs

- Review on water risk assessments comprehensive, up-to-date, well promulgated.
- Sailing directions & Instructions to competitors
 - COLREGS Rule 16 <u>Action by give-way vessel</u> Take early and substantial action to keep well clear
- Training and induction of race officials
- Cognisant of relevant Notice to Mariners Exclusion zones Pilotage/ Berthing operations
- Pre race awareness shipping update contact Radio room/ VTS.
- Course setting with regard to pilotage routes (avoid impeding following areas)
 - Sullivans Cove approach/ departure/ berthing operations
 - Tasman Bridge Channel escape zones
 - North of Rosny Point
 - Proximity of PBG
- Plotting aids to assist course setting.
- Timing of race starts.
- Situational awareness VHF Ch 12 (radio etiquette)/ awareness (COLREGS: sight & sound).
- Avoid intimidating behaviour with piloted vessels.
- Follow direction of escort boat



AMSA guidance





Commercial pilotage and recreational sailing on shared waterways.

- Commercial pilotage and other waterway activities (including recreational sailing) are not mutually exclusive.
- There is a need to co-exist on shared waterways.
- We all need to be cognisant of:
 - the risks,
 - our rights,
 - and obligations.



Tasmanian Clubs Conference 2018

Thank you

