



SAFE • PROFESSIONAL • RELIABLE • EFFICIENT

Information for Merchant Ships

by

PSA Marine (Pte) Ltd - Pilotage Services Department

Revised in 2024

Nearly a third of the world's traded goods pass through Singapore and Malacca straits. [6]

At any one time, there are about 1,000 vessels in the Singapore port. [7]

Every 2-3 minutes, a ship arrives or leaves Singapore. [7]

Calling a port has its own challenges and they include but are not limited to: -

- ♦ heavy concentration of traffic and navigational hazards, and
- ♦ heavy workload during port-stay.

Arrival at Pilot boarding grounds near the busy waterways of Singapore Straits can test the skills of even seasoned seafarers.

A safe boarding arrangement is crucial for the safety of pilots and the vessels .

A Pilot who has climbed a sound ladder, well-rigged and attended by an officer and deck party will be in the right frame of mind to give his best attention to the safety of the vessel.[12]

This brochure covers: -

Safe Pilot Transfer

Correct procedures and methods of rigging and highlights of some common deficiencies encountered

Singapore Pilot Boarding Grounds

Information and recommendations from a Pilot's perspective to supplement your local knowledge and enhance your situational awareness

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Safe Pilot Transfer

Checklist

- ❑ Pilot Transfer Arrangement shall be prepared in accordance with SOLAS Regulation V/23 & IMO Resolution A.1045(27).
- ❑ Vessel from West arriving to Eastern Boarding Ground “A”, “B” or “C” – recommended to prepare pilot transfer arrangement on both sides.
- ❑ Pilot safe boarding speed shall be 4 knots or less.
- ❑ A responsible ship’s office shall in attendance at the pilot transfer point.
- ❑ Means should be provided to ensure safe, convenient and unobstructed passage for the pilot embarking on, or disembarking from, the ship between the head of the pilot ladder, or of any accommodation ladder, and the ship's deck; such access should be gained directly by a platform securely guarded by handrails.

Note:

Be reminded that pilots may, on grounds of personal safety, refuse to board unless a safe and satisfactory means of access to the vessel is provided. The safety requirements in respect of pilot ladders, must be in accordance with Regulation 23 of Chapter V of the Merchant Shipping (Safety Convention) Regulations (Cap 179, Rg11).

REQUIRED BOARDING ARRANGEMENTS FOR PILOT

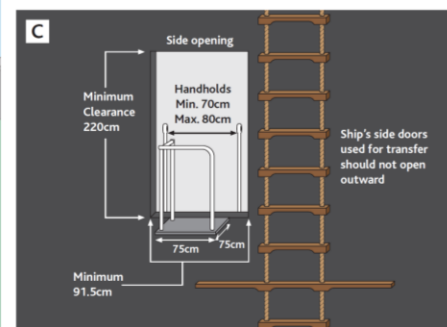
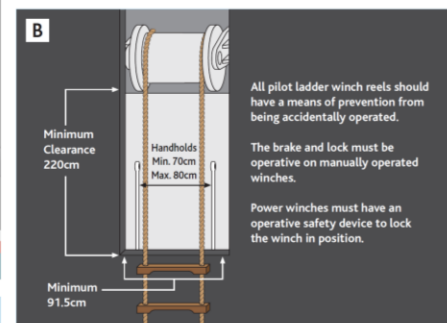
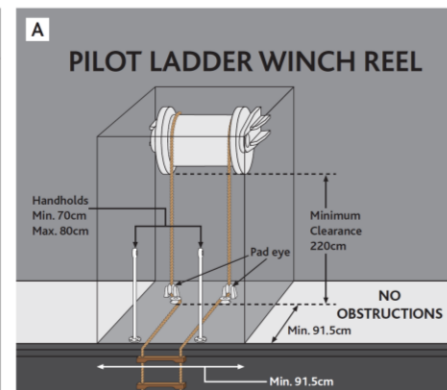
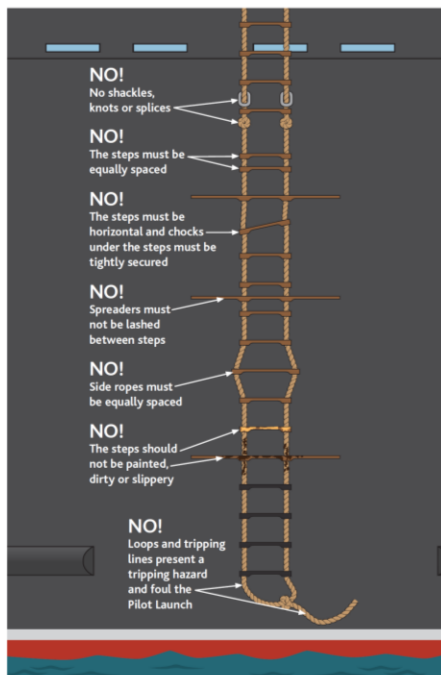
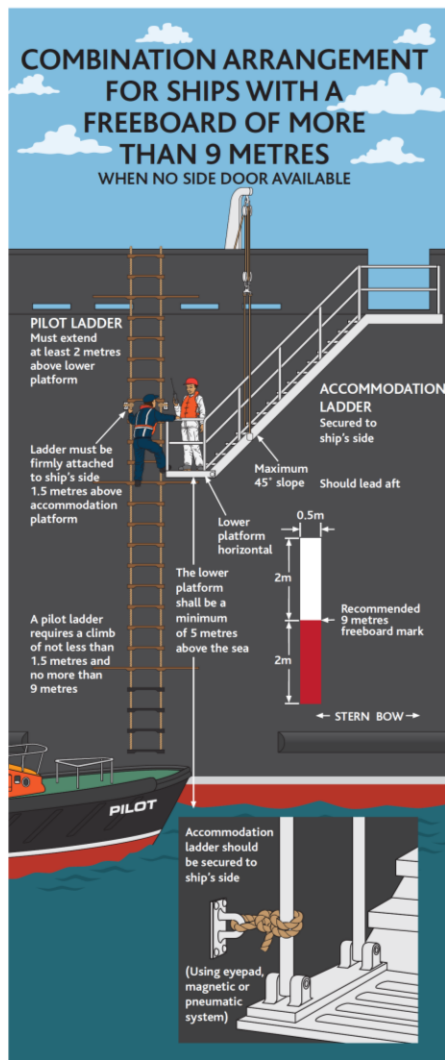
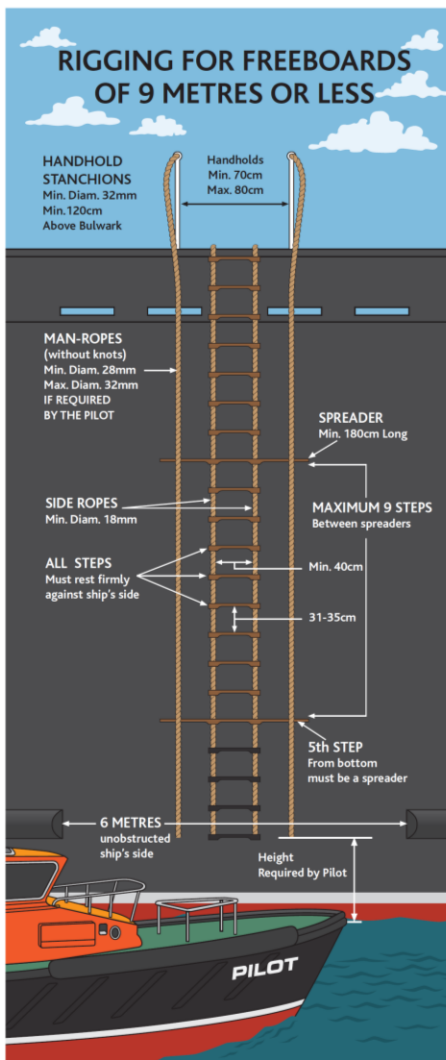


In accordance with SOLAS Regulation V/23 & IMO Resolution A.1045(27)

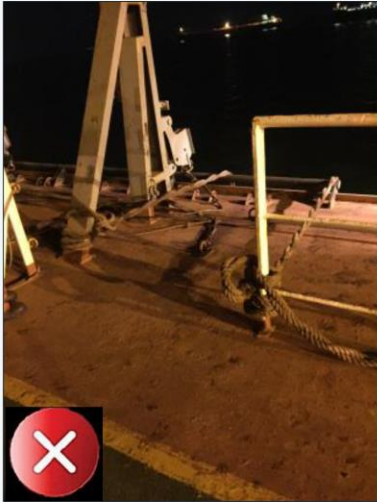
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This document and all IMO Pilot-related documents are available for download at: <http://www.impahq.org>



Common Deficiencies



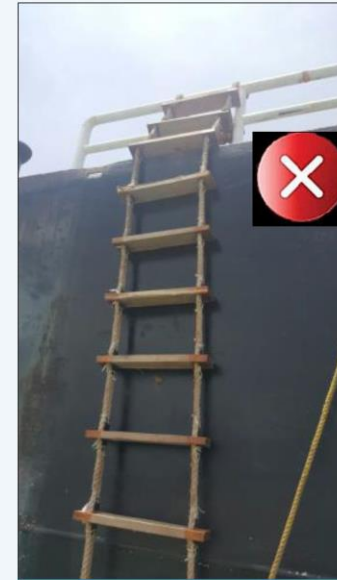
Pilot ladder should be secured to strong points on ship.

The strong points, shackles and securing ropes should be at least as strong as the side ropes.

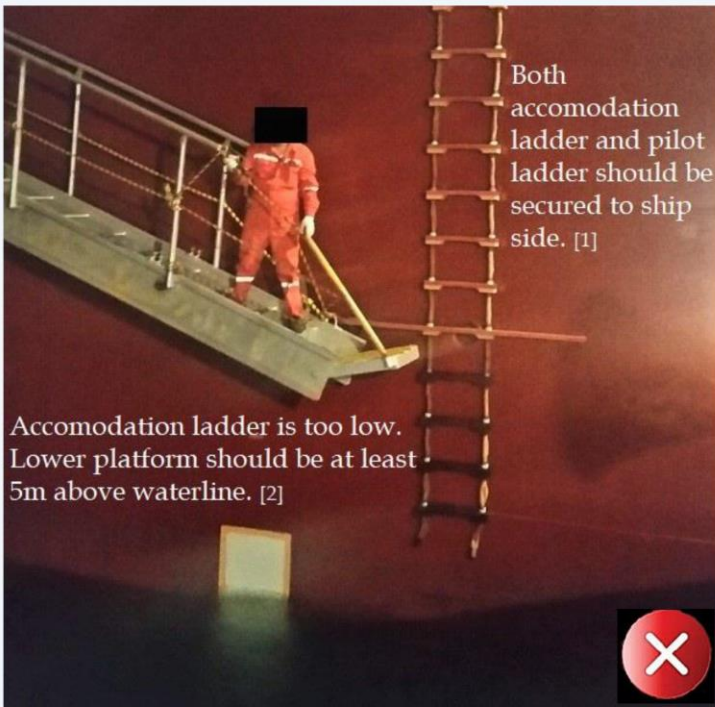
Breaking strength per side rope $> 24 \text{ KN}$. [2]



Retrieval line should not hinder pilot. [2]

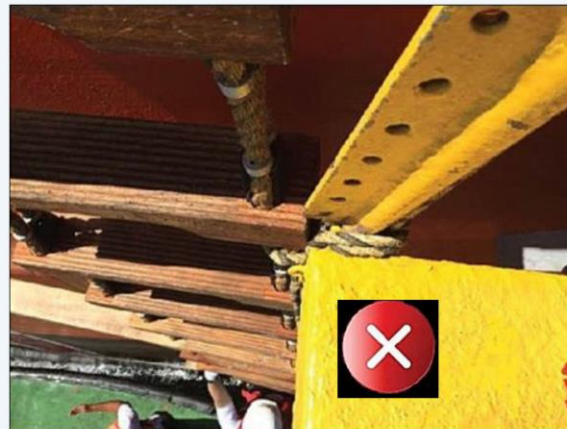


Safe, convenient and unobstructed access should be provided. [1]



Both accomodation ladder and pilot ladder should be secured to ship side. [1]

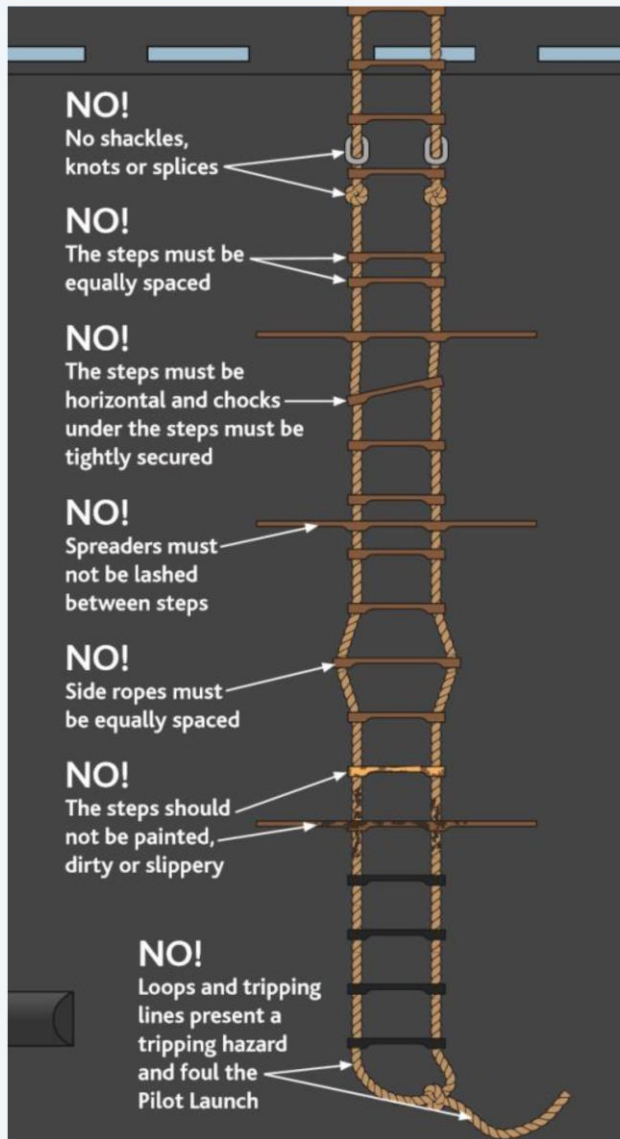
Accomodation ladder is too low. Lower platform should be at least 5m above waterline. [2]



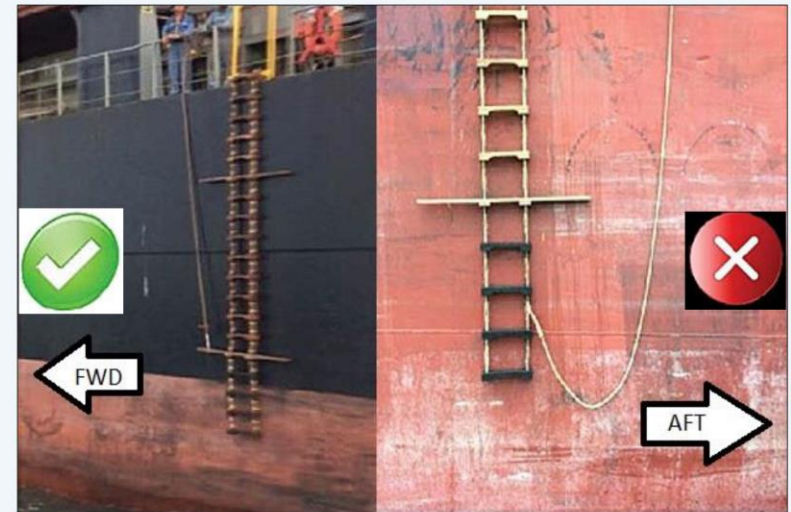
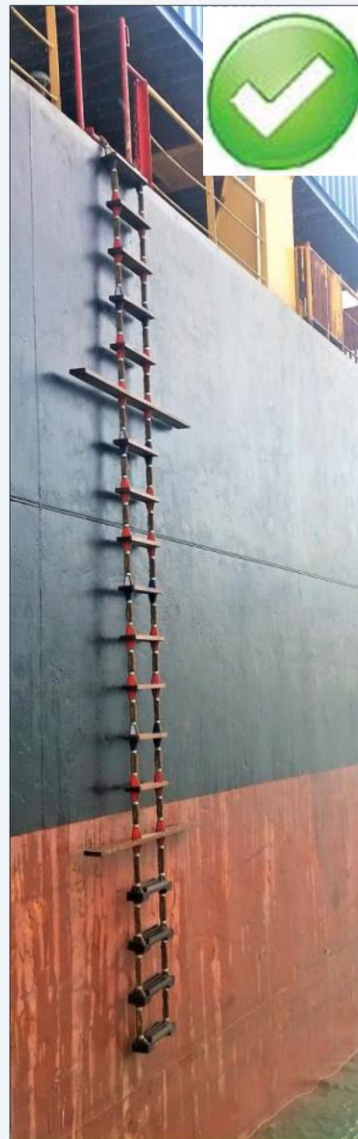
Horizontal distance between pilot ladder and lower platform should be between 0.1 and 0.2 m. [2] [8]

Pilot Ladder [1] [2]

Waterline to pilot access level $\leq 9\text{m}$

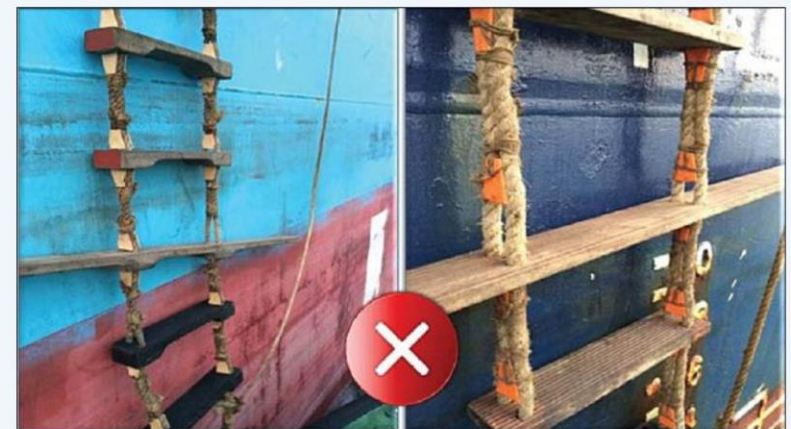


[3]



Retrieval line if used, should be fastened at or above the last spreader and should lead forward.

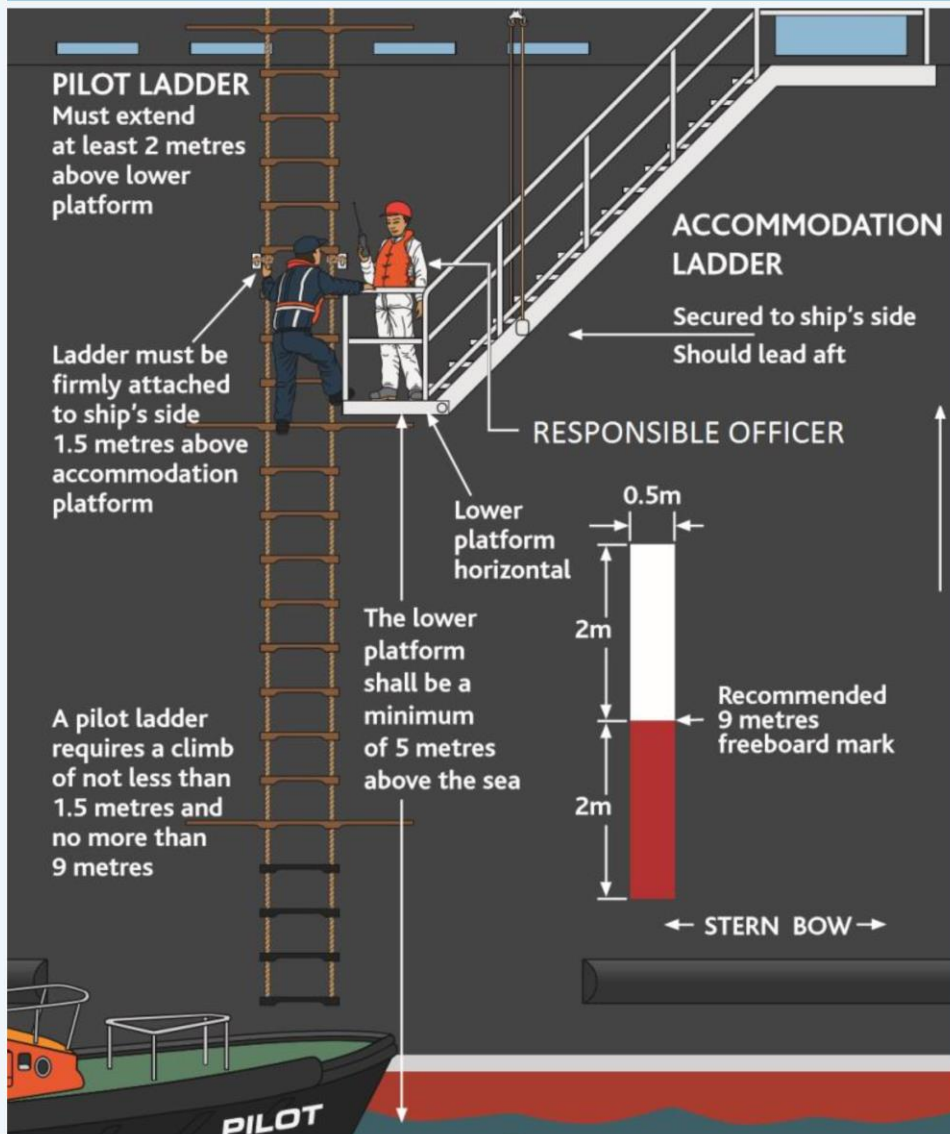
Retrieval line should not hinder the pilot nor obstruct safe approach of the Pilot boat. [2]



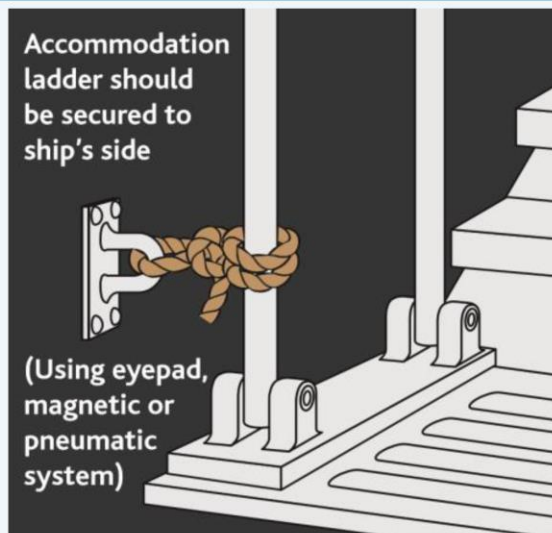
Steps should be horizontal and equally spaced. [2] [8]

Combination Ladder ^{[1] [2]}

Waterline to pilot access level > 9m

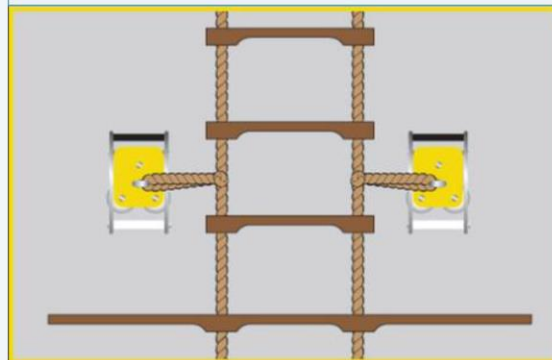


[3]



[3]

Pilot ladder also secured to ship's side 1.5m above lower platform. ^{[1] [3]}



(Using eyepad, magnetic or pneumatic system)

Examples

Pneumatic



Magnetic



Pilot Transfer by Accommodation Ladder [5]

(Only if requested by Pilot)

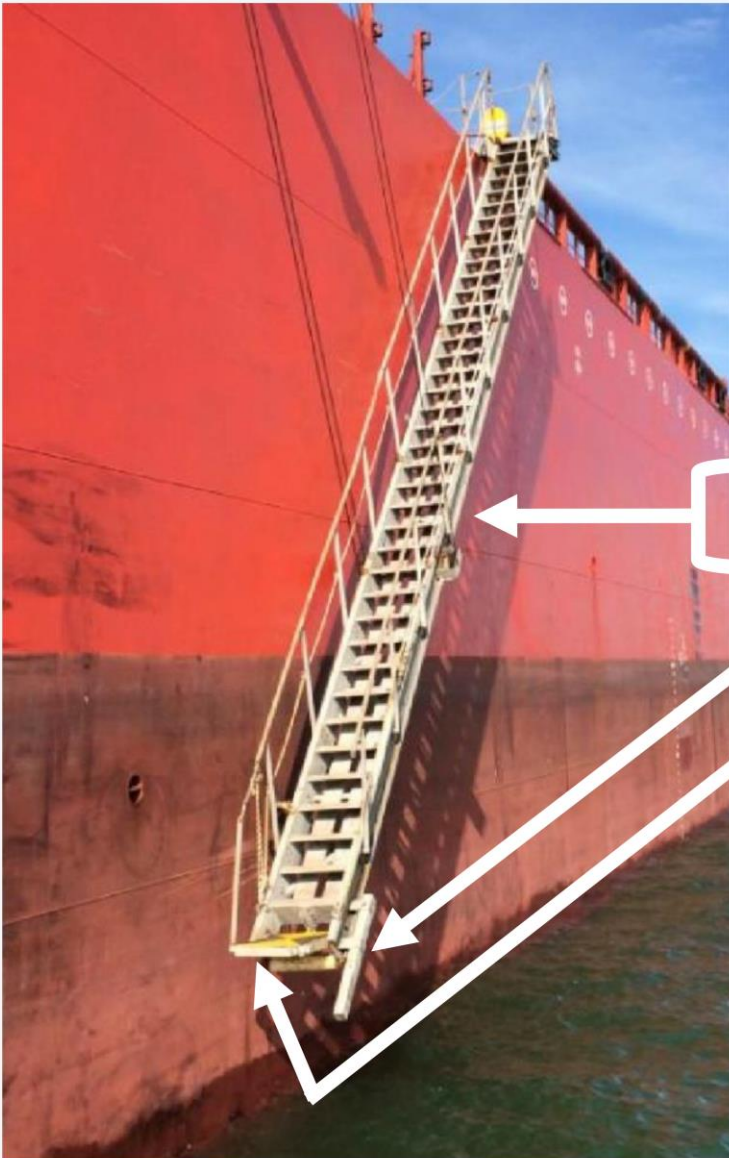
When vessel is underway, accommodation ladder shall not be used unless it is deemed necessary.

(If used when underway, vessel shall take all way off.)

Should the accommodation ladder be used;

- ✓ Ladder must be leading aft and rigged on the leeward side.
- ✓ Safe working angle specified by the manufacturer not to be exceeded.
- ✓ Fender at the lower platform to be extended.
- ✓ Lower platform should be horizontal.

If the arrangement is considered unsuitable by Pilot, pilot-transfer will be deferred until satisfactory corrections are made or pilot-transfer arrangement is rigged in accordance to SOLAS.



Pilot transfer arrangement for non-conventional vessel, craft, and vessel/craft engaged in line tow barge.

All non-conventional vessels/craft that require Pilotage service shall fulfil the following Pilot transfer arrangement requirements:

- a. Provide equipment and arrangements that comply with SOLAS Regulation V/23 and IMO Resolution A.1045(27) as reasonably practicable as possible;
- b. All arrangements used for Pilot transfer shall efficiently fulfil their purpose of enabling Pilots to embark and disembark safely;
- c. The equipment shall be kept clean, properly maintained, and stowed. The equipment shall be regularly inspected to ensure that they are safe to use; and
- d. The equipment shall be used solely for the embarkation and disembarkation of personnel.

For non-conventional vessel/craft engaged in line tow barge that requires Pilotage service shall fulfil the following requirements:

- a. Prior to the embarkation/disembarkation of Pilot, the tug towing the barge shall be alongside the leeward side. If unable to comply, the tug shall ensure that the barge is not making any headway. Please refer to Annex A for illustrations; and
- b. The tug and barge should stem the tidal current.

Note:

- *Non-conventional vessel* - Vessels/craft that are not covered under International Convention for Safety of Life at Sea (SOLAS) Regulation V/23 and “IMO resolution A 1045(27).
- *Pilotage Circular* - Pilot transfer arrangement for non-conventional vessel, craft, and vessel/craft engaged in line tow barge <https://www.psamarine.com/>

Pilot transfer arrangement for non-conventional vessel, craft, and vessel/craft engaged in line tow barge.

Additionally, the Master of the non-conventional vessel/craft is reminded to ensure strict compliance of, inter alia, the following existing measures:

- a. The access area shall be clear from obstacles;
- b. A responsible officer of the tug shall be in attendance and ready to assist the Pilot;
- c. Handhold or stanchions are on the tug for use by the Pilot;
- d. The access area shall have lightings positioned/shining on the overside and adequate illumination during hours of darkness; and
- e. Life-saving equipment such as self-igniting life buoy and heaving line is in the vicinity of the access area.

The Master of the non-conventional vessel/craft shall ensure that he has assessed the potential navigational hazards of the surroundings before the transfer of Pilot is being conducted. Examples of these potential navigational hazards include but not limited to the following:

- a. The engine limitation of the vessel/craft;
- b. Other ships in the vicinity;
- c. The environmental factors of wind and current; and
- d. The level of daylight / darkness

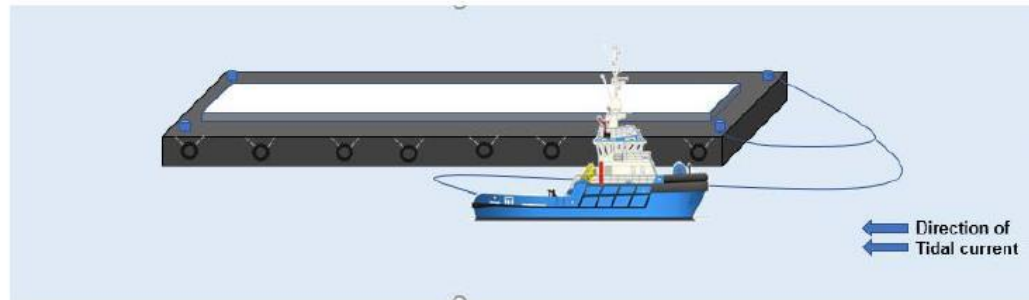
Note:

- *Non-conventional vessel* - Vessels/craft that are not covered under International Convention for Safety of Life at Sea (SOLAS) Regulation V/23 and “IMO resolution A 1045(27).
- *Pilotage Circular* - Pilot transfer arrangement for non-conventional vessel, craft, and vessel/craft engaged in line tow barge <https://www.psamarine.com/>

Annex A

Annex A: Illustration of transferring requirements if prior to the embarkation/disembarkation of Pilot, the tug towing the barge is unable to comply with being alongside the leeward side

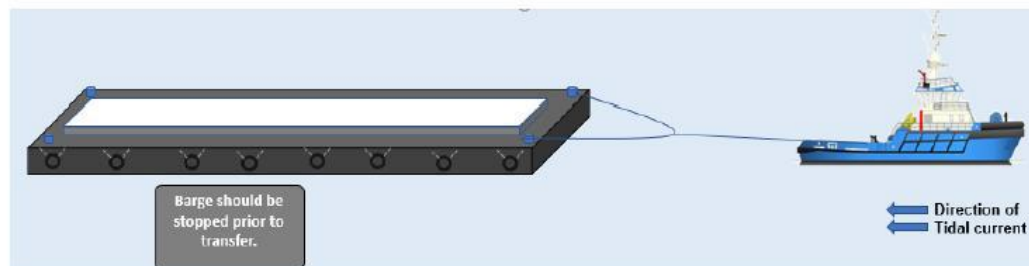
Tug on the side of the barge



Tug on the side of the barge



Tug in front of the barge




Singapore Pilot Boarding Grounds (PBG)

Useful Tips

- “Safe Passage in The Singapore Strait - Eastbound” <https://www.youtube.com/watch?v=GKPWyNIVXzw>
- “Safe Passage in The Singapore Strait - Westbound” <https://www.youtube.com/watch?v=YvJc8cLzQo4>
- Passage Plan - <https://www.psamarine.com/quick-links/ordering-our-services/order-pilotage-service/>
- Passage plan should include the following consideration:
 - Condition of tidal stream and prevailing winds.
 - The density of transit and crossing traffic in the Traffic Separation Scheme (TSS).
 - The density of departure and arrival traffic at the vicinity of the pilot disembarkation and boarding ground.
- Vessel shall at all times maintain a proper look-out by sight as well as by hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.
- Vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.
- Forward stations should be manned, and both anchors ready for emergency use.
- Vessel shall not enter the Singapore’s port limit without a pilot.

PBG Information [4]

Maximum of 3 vessels are allowed at each PBG within a window period of 15 min.



PWBGA	PWBGB	PGBG	PSBG	PEBGA	PEBGB	PEBGC	PJSB
01° 12.906' N 103° 36.073' E	01° 12.027' N 103° 39.481' E	01° 10.465' N 103° 46.887' E	01° 11.702' N 103° 49.666' E	01° 13.517' N 103° 53.447' E	01° 15.408' N 103° 56.956' E	01° 15.885' N 103° 57.834' E	01° 17.650' N 104° 06.393' E

Only with prior arrangement with Port Operations Control.

Only 1 vessel is allowed at each PBG within a window period of 15 min.
Vessels are required to maintain a minimum distance of 1 nm from the preceding vessel to the same PBG.

Chart Legend

Arrival Vessels enroute to PBG

Piloted Vessels - Intraport

Departure Vessels - Bound East or West

Generally
Expected
Traffic in Port

Easterly Tidal Stream

Westerly Tidal Stream

DG #

Pilot Disembarkation Ground #

Chartlets – Pilot Boarding Ground

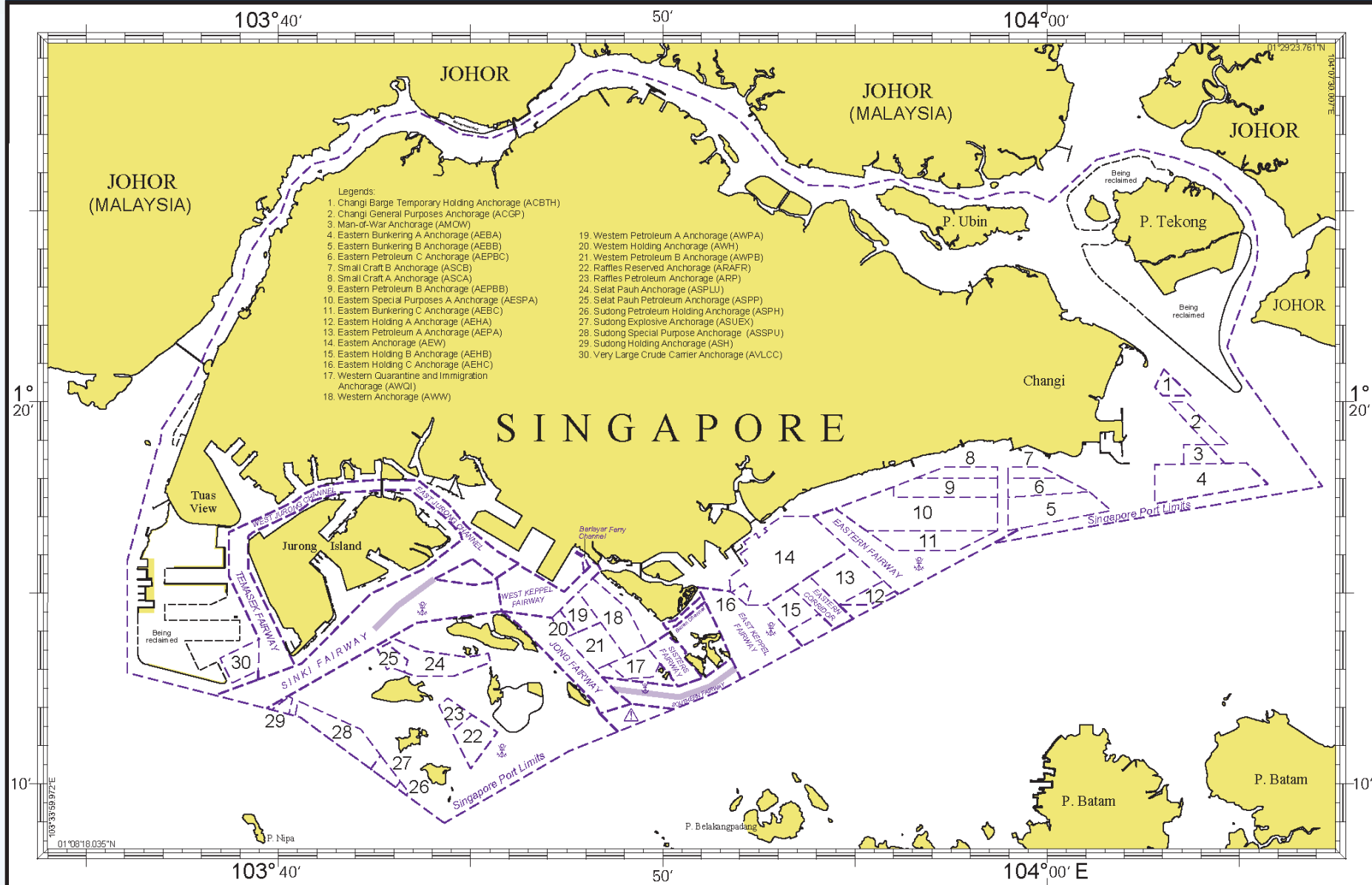


Chartlets – Pilot Disembarkation Ground



This map illustrates the Singapore Strait and surrounding regions, including Singapore, Johor (Malaysia), and parts of Sumatra. It is divided into three VTIS sectors: WEST, CENTRAL, and EAST. The map also shows various reporting points, including P. Iyu Kechil Light, Raffles Light, Bedok Light, Changi, Tanjong Setapa Light, and Horsburgh Light. Key waterways like the Malacca Strait, Selat Durian, Selat Riau, and the Singapore Channel are labeled. The map includes a legend for STRAITREP reporting points and a coordinate grid.

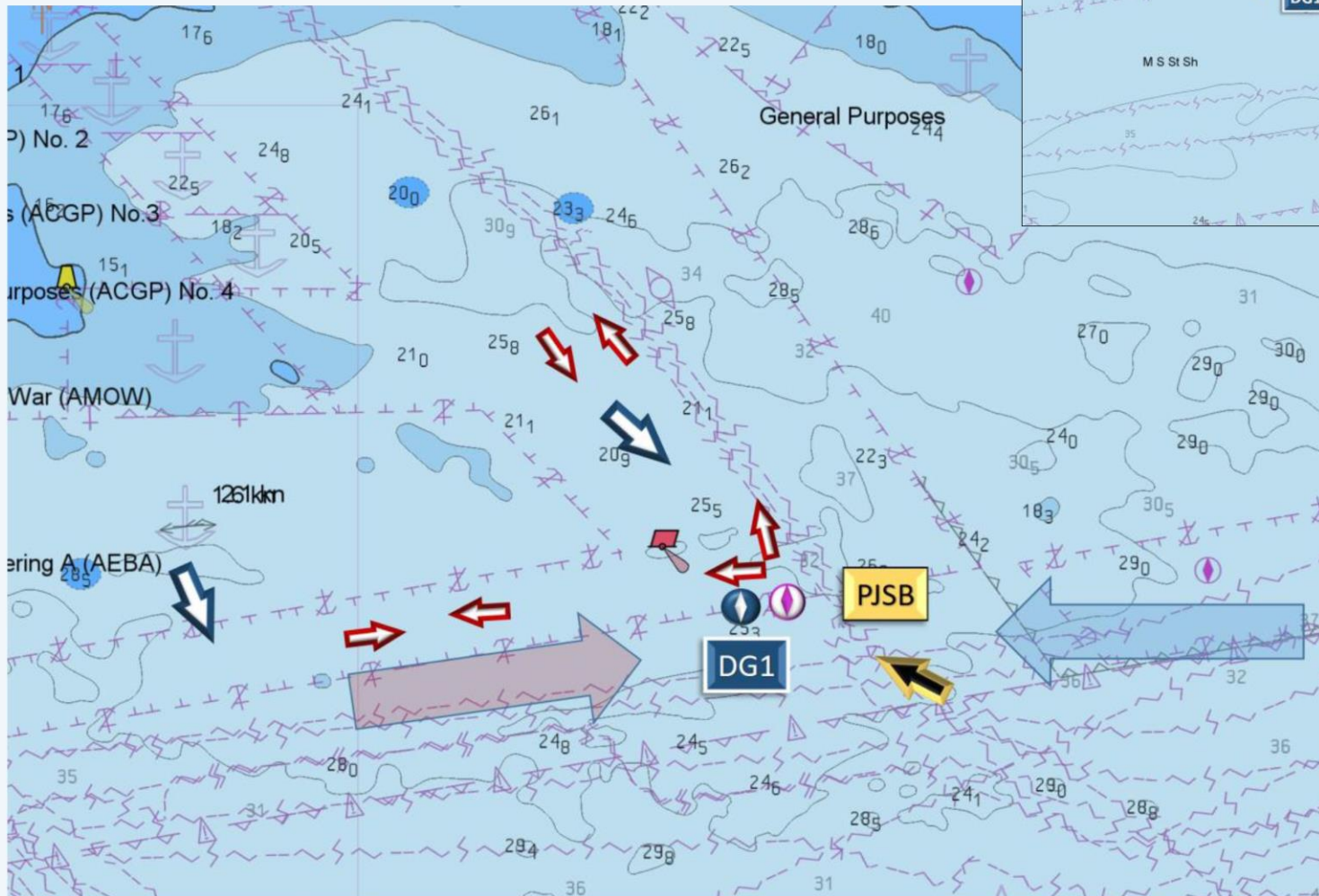
Anchorage and Fairways



East Johor Straits Boarding Ground (PJSB)

Expected Traffic: -

- ✓ Outbound traffic from East Johor Straits and Anchorages bound for TSS.
- ✓ Easterly intra-port traffic bound for East Johor Straits.



PEBGB and PEBGC



Eastern Boarding Ground “B”

(PEBGB)

This boarding ground is to be used by all tankers when proceeding to pick up pilots in the Eastern Sector. [4]

&

Eastern Boarding Ground “C”

(PEBGC)

This boarding ground is to be used by vessels arriving from east proceeding to eastern or western sector of the port, or as may be directed by the Port Master. [4]



Expected Traffic for PEBGB and PEBGC: - (See next page)

- ✓ Outbound traffic from Anchorages bound for TSS.
- ✓ East and west bound intra-port traffic (within port limits).

Eastern Boarding Ground "A" (PEBGA)

Expected Traffic: -

- ✓ Departure (Outbound) traffic from Container terminals and Anchorages towards TSS.
- ✓ East and westbound intra port traffic (within port limits).
- ✓ Arrivals from both East and West (crossing TSS) come to PEBGA.



Gusong Boarding Ground (PGBG)

For vessels arriving from east calling at the anchorages in Sudong Sector or Raffles Reserved Anchorage with prior permission from Port Master. [4]

Expected Traffic: - (see next page)

- ✓ Departure (DG7) traffic from Jong fairway towards TSS.

Recommendations: -

- ✓ Proceed with caution when approaching DG7 as outbound traffic is blocked from view by St John's Island.
- ✓ Proceeding in the lane of TSS does not give a vessel her right of way. When risk of collision is deemed to exist, Colregs apply.



Southern Boarding Ground (PSBG)

This boarding ground is to be used only through prior arrangement with Port Operations Control Centre. [4]

General Information: -

- ✓ TSS is the narrowest in this region. West bound lane is only 530m wide at its narrowest.

Expected Traffic: - (see next page)

- ✓ Departure (DG7) traffic from Jong fairway towards TSS.
- ✓ Intraport traffic in Southern Fairway.



PGBG and PSBG



Western Boarding Ground "A" (PWBGA)

For Vessels arriving from West. [4]

To Note:

- ✓ Many vessels may be found anchored west of PWBGA.
- ✓ Crossing westbound lane can take time. Arrive precautionary area in good time to find suitable opportunity to cross safely. Request assistance from VTIS if required.

Traffic expected: - (see next page)

- ✓ Vessels and barges in/ outbound from the anchorages west of PWBGA and project areas north of PWBGA
- ✓ Easterly traffic from Tanjung Pelepas to PWBGA.



Western Boarding Ground "B" (PWBGB)

For chemical and gas carriers bound for the Sudong anchorage and facilities located in western side of Singapore. [4]

Traffic expected: - (see next page)

- ✓ Inbound from PWBGA towards Sinki fairway and Sudong Anchorages.
- ✓ DG9: Departure (Outbound) traffic from Sinki and Temasek Fairway towards TSS.

Recommendation: -

- ✓ Avoid impeding safe passages of the above-mentioned traffic.
- ✓ Be aware of vessel's set due to tidal stream especially towards Sudong Holding Anchorage (ASH) or Rasu buoy.



PWBG A and PWBG B



References

1. The Maritime and Port Authority of Singapore (MPA)
 - Singapore Port Information <https://www.mpa.gov.sg/who-we-are/newsroom-resources/publications/singapore-port-information>
 - Pilotage - Access to vessels
 - Singapore Tide Tables
 - Singaporean Notices to Mariners
 - Marine Services <https://www.mpa.gov.sg/port-marine-ops/marine-services>
2. Regulation 23 of Chapter V of the Merchant Shipping (Safety Convention) Regulations (Cap 179, Rg11).
3. The International Standards Organization (ISO)
 - ISO 799-1:2019 - Ships and marine technology (Pilot ladders, Part 1: Design and specification).
 - ISO 799-2:2021 - Ships and marine technology (Pilot ladders, Part 2: Maintenance, use, survey, and inspection).
 - ISO 799-3:2022 - Ships and marine technology (Pilot ladders, Part 3: Attachments and associated equipment).