



Marine Notice 21/2013  
Supersedes 18/2012

## Sound navigational practices

This notice reaffirms navigational practices that should be followed by masters and navigating officers of ships in Australian waters. It complements other AMSA Marine Notices that address safety of navigation matters.

### Passage plans

Regulation 34 of Chapter V of SOLAS (*Safe navigation and avoidance of dangerous situations*) requires that before proceeding to sea, the master must ensure that the intended voyage has been planned. IMO Resolution A.893 (21) *Guidelines for voyage planning* provides more detailed advice on passage planning. AMSA Marine Order 21 implements these requirements in Australia.

Voyage and passage planning includes:

- **appraisal** i.e. gathering all information relevant to the contemplated voyage or passage;
- detailed **planning** of the entire voyage or passage from berth to berth, including those areas requiring a pilot;
- **execution** of the plan; and
- **monitoring** progress of the ship during the execution of the plan.

Passage planning should take into account the potential for reasonable unplanned diversions (due to change of commercial orders or emergencies) that may occur during passage.

Any changes made to the plan should be consistent with the IMO guidelines and be clearly marked and recorded. For Electronic Chart Display and Information Systems (ECDIS), the voyage or passage plan should be validated by the route-checking function of ECDIS using appropriate safety parameters.

If any charts required for the voyage are to be delivered via a boarding pilot, the master should ensure such charts are prepared for the voyage prior to the commencement of the pilotage. The intent to prepare such charts during the voyage must be reflected in the passage plan.

Unplanned shortcuts to save time and distance, or unplanned deviations from the passage plan to satisfy tourists or local customs, are dangerous practices and should be avoided.

The above requirements should be included in the ship's Safety Management System (see procedures under section 7 of the International Safety Management (ISM) Code).

AMSA's port State control inspectors routinely check for well-documented passage plans and evidence of adherence to such passage plans.

### Nautical charts and nautical publications

#### i) Requirements

Regulation 19 of Chapter V of SOLAS (paragraph 2.1.4) provides that all ships must have nautical charts and nautical publications to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage.

Regulation 27 of Chapter V of SOLAS provides that nautical charts and nautical publications (such as sailing directions, lists of lights, notices to mariners and tide tables) necessary for the intended voyage must be adequate and up to date.

#### ii) Nautical charts

##### a) Using appropriate charts

An appropriate chart is one of a suitable scale for the navigational task at hand, noting that the scale determines the level of detail that is provided.

Smaller scale charts are used to depict large areas. They are suitable for overall passage planning and ocean transit purposes. Small scale charts have reduced levels of detail on aids to navigation, dangers, coastal features and infrastructure (particularly where larger scale charts exist). Significant depth detail is omitted. This makes small scale charts

unsuitable for navigation in areas less than 30 metres deep, adjacent to the coast or near charted hazards. Small scale charts show the limits and identity of larger scale charts. Whether in paper or raster format, small scale charts are neither intended nor suitable for coastal navigation.

Large scale charts should be used when navigating closer to the coast, reefs and other offshore hazards. These charts cover smaller areas and have more detail to aid navigation. Generally, Australian charts provide continuous coverage at a scale of 1:150,000 or larger when navigating within 24 nautical miles of land or major offshore features (except in particularly remote areas).

For coastal navigation, including when navigating near charted hazards, the largest scale charts available must be used. This is vital, as some aids to navigation and dangers may not be included on small scale charts.

During port State control inspections, AMSA inspectors check for availability and use of the largest scale charts available, corrected with the latest applicable Notices to Mariners. Inspectors also check that the ship's Safety Management System ensures timely delivery of nautical charts and publications (including latest corrections) prior to the execution of a voyage plan.

When using ECDIS with Electronic Navigational Charts (ENC), navigating officers should be familiar with the methods for scrolling and zooming into charts, including determining the scale limits of displayed ENC data and associated warnings, including indications of inappropriate display scales. The update status of the loaded ENC should be known.

Australian (AUS series) paper and raster charts are available from chart agents worldwide. The series is also partially reproduced by the UK Hydrographic Office (UKHO) and covers major Australian shipping routes and commercial ports.

Mariners should refer to Australian charts AUS 5000 and AUS 5001 or the online Australian chart index at [www.hydro.gov.au](http://www.hydro.gov.au) for details of available AUS series charts. Mariners should not assume that chart coverage does not exist simply because it is not indicated in the British Admiralty chart catalogue or if the UKHO has not reproduced an AUS series chart.

The Australian (AU) series of ENC replicates the content of paper and raster charts on a grid-based scheme of 1, 10 and 30 degree squares; additionally, there are separate ENCs for each port. These are available in Australia through the AusENC service, internationally through the UKHO's Admiralty Vector Chart Service, as well as other services affiliated with the International Centre for ENC (IC-ENC). Details of available Australian ENC are at [www.hydro.gov.au](http://www.hydro.gov.au).

Full ENC coverage of the Australian charting area is now available, along with services to distribute and update these charts. The Australian Raster Navigation Chart service (which was established in 1997 as an interim solution) will be withdrawn by July 2014. Therefore, for Australian waters, ENC should be used and not raster charts.

#### b) Chart accuracy and reliability

The accuracy and reliability of a nautical chart depends on hydrographic and topographic surveys and other information, noting that charts are made up from diverse sources of supplied information of potentially widely differing quality.

All larger scale AUS charts carry a Zone of Confidence (ZOC) diagram, while ENC have a selectable layer containing Categories of Zones of Confidence (CATZOC). The ZOC diagram (or CATZOC layer) enables the mariner to assess the limitation of the hydrographic data from which the chart was compiled and the resulting degree of risk associated with navigating in a particular area. A more detailed explanation can be found in *Seafarers Handbook for Australian Waters (AHP 20)*.

### iii) Nautical publications

The *Seafarers Handbook for Australian Waters (AHP 20)* is published by the Australian Hydrographic Service. It provides information to assist ships to operate safely and in accordance with relevant maritime rules and regulations in Australian waters.

In addition to lists of lights, sailing directions and other recognised publications, all masters of ships operating in Australian waters are encouraged to carry and refer to the latest edition of AHP 20.

## Responsibility for safe navigation with a pilot embarked

Masters and watchkeepers remain responsible for the safe navigation of their ships, even when a port or coastal pilot is on board. The master should ensure that the bridge remains adequately manned and under the control of an appropriately certificated navigation officer who can ensure that the bridge team:

- supports the pilot by:
- maintaining a good lookout and situational awareness; and
- providing expertise in the use of bridge equipment and systems;
- continually monitors the pilot's actions and promptly seeks clarification as necessary and/or calls the master. The Officer of the Watch must take whatever action is necessary before the master arrives to maintain the safety of navigation; and
- discusses, agrees and communicates to the entire bridge team, any change to the ship's passage plan advised by the pilot. In case of any change, the original passage plan must be amended and documented; the amended passage plan must then be followed.

## Sound navigation practice

Sound navigational practice for masters and navigating officers includes:

- not overly relying on any one navigational aid;
- not relying solely on any Global Navigation Satellite System for navigation, particularly when navigation can also be conducted visually or by radar;
- wherever possible, using radar parallel index techniques to monitor the ship's track;
- predicting the track of the ship, taking into account set and drift;
- the use of soundings, clearing bearings and transits as cross-checks for position fixes and course alteration points;

- fixing the ship's position at frequent and regular intervals, including when a pilot is on board;
- ensuring that the ship has the latest Maritime Safety Information for the area by configuring the INMARSAT SafetyNET Enhanced Group Call (EGC) receiver correctly;
- awareness of human factors (e.g. fatigue) and Bridge Resource Management techniques; and
- cooperating with any available Vessel Traffic Service.

Owners and masters are reminded that personnel new to a ship are to be given proper familiarisation with their watch-keeping duties and with the ships' navigational equipment (see sections 6 and 7 of the ISM Code).

## Further information

Marine Orders: [www.amsa.gov.au](http://www.amsa.gov.au)

Australian charts and the *Seafarers Handbook for Australian Waters (AHP 20)*: [www.hydro.gov.au](http://www.hydro.gov.au)

IMO Resolution A.893 (21) Guidelines for voyage planning: [www.imo.org](http://www.imo.org)

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