

From: ENG Committee

To: ARM Committee

ARM17-6.2.6
(ENG17-13.1.2)
20 Oct 2023

LIAISON NOTE

General Overview of a Floating AtoN (previously as Navigational Requirements and Considerations for Establishment of Buoyage)

1 INTRODUCTION

At ENG16, ARM Committee was requested to provide their review and comment on the Navigation Requirements and Considerations of a draft guideline previously titled as Navigational Requirements and Consideration for Establishment of Buoyage). ENG WG1 thanks ARM Committee for their review and comments received in the Liaison Note.

ENG WG1 has relooked at the title of the document and has retitled it as “General Overview of a Floating AtoN” as a working title. The main purpose of this guideline is to provide an overview of the characteristic of a floating AtoN to a new user or inexperienced entity. The document looks to provide a brief description of the individual components of a floating AtoN, and other operational requirements for the lifecycle for deployment of a floating AtoN including responsibilities and relevant national requirements. This document seeks to point the reader to the existing IALA Guidelines and Recommendations for their further reading.

2 ACTION REQUESTED

The ARM committee is requested to:

Review and comment on the draft guideline available in the link provided below that will assist the reader in understanding the context of the document.

https://nextcloud.iala-aism.org/index.php/apps/files/?dir=/Committees/ENG/ENG17/WG1%20-%20Visual%20and%20Physical%20AtoN/Task%202.5.1%20Buoy%20Characteristics/04_Output%20Documents&fileid=257714

3 ANNEX A

Excerpt below from Navigational Requirements and Considerations section of draft guideline:

For the purposes of this guideline a high level assessment should be undertaken to assess what the appropriate AtoN requirement is i.e. a buoy or beacon. This guideline assumes the output and requirement would be a buoy.

3 Navigational requirements and considerations

The navigational requirements for any new AtoN will be evaluated by the Competent Authority and are directly related to SOLAS V Regulation 13 that states, Aids to Navigation should be provided where practicable and necessary as the volume of traffic justifies and degree of risk requires.

The Competent Authority will undertake a review of the proposed buoy deployment to evaluate its navigational significance and determine the minimum requirements for the specific site.

Documents to be aware of from the outset of this process are noted below and both are available on IALA Website:

- R1001 The IALA MARITIME BUOYAGE SYSTEM (MBS)
- IALA Navguide: Chapter 3 (Marine Aids to Navigation).

The Competent Authority evaluation will consider each of the following topics:

3.1 Purpose or reason for the buoy

The purpose or reason for a buoy deployment should be presented to the Competent Authority in the first instance for appraisal. The Competent Authority will then review the circumstances associated with the deployment and make recommendations. Factors that contribute to this include but not limited to:

- Buoy has been specified as a requirement of a Marine Licence or other project
- required to protect the Mariner/environment from a hazard to navigation
- required to mark the entrance to a channel/ harbour/ marina
- scientific device to evaluate meteorological/ oceanographic conditions or monitor flora/ fauna in the immediate sea area to the buoy
- whether the deployment is temporary or permanent, seasonal

3.2 Competent authority evaluation

The Competent Authority will evaluate the purpose/ reason of the buoy to determine if the proposed buoy mitigates the hazard to navigation, this will include but not limited to :

- assessment of the purpose or reasoning for the buoy
- to determine if the proposed buoy is fit for purpose or if a different AtoN (fixed/virtual) would be more appropriate; consideration of environmental and climatic conditions
- vessel traffic by, density, type and cargo; vessel activity by day/ night and seasonal variations (if a Navigational Risk Assessment, Lighting and Marking Plan, Emergency Response Co-operation Plan or contingency plan have been undertaken these will be reviewed)
- type of feature to be marked (dredged channel or area, obstruction, subsea scientific instrumentation, danger area etc)

- position of hazard in relation to the proposed buoy position
- within a channel/ waterway the number and spacing of buoys must be considered

3.3 Evaluation of existing system of AtoN within the area of interest

The Competent Authority will undertake a desk top review of the existing system of AtoN and local area features to inform the required characteristics of the proposed buoy along with any existing and new hazards (such as a new construction or obstruction), background lighting and other local factors will also be considered.

3.4 Features of the buoy as an AtoN

The buoy will be required to have specific characteristics that conform to IALA recommendations and guidelines and will be determined and specified by the Competent Authority using the following steps:

- whether the buoy is to be Lit or Unlit, will be determined from the vessel traffic evaluation and meteorological conditions
- characteristics (light flash character,
- range of light, colour of light, colour/shape of buoy body,
- focal plane height and synchronisation of/to any other AtoN within an area, topmark, symbols/ numbering), will be determined from the evaluation of the existing system of AtoN and the purpose of the buoy (refer to IALA MBS; Recommendation R1001 The IALA Maritime Buoyage System)
- additional AtoN requirements, such as AIS AtoN, Racon, sound signal, Radar reflector (active or passive) depend upon the navigational significance of the buoy and/ or meteorological conditions
- buoy (and additional AtoN) availability and reliability are derived from their navigational significance and are measured using IALA Categorisation (1,2 or 3) (refer to IALA Recommendation R0130 Categorisation and Availability Objectives for Short Range Aids to Navigation)

3.4.1 Additional features to be considered

There may be further additional features that can be fitted to the buoy that increase its conspicuity or reliability these include:

- The use of retroreflective material
- monitoring (position accuracy, light operation battery voltage/ charge, environmental sensors)
- Daytime conspicuity

3.5 Approval to Deploy

The Competent Authority may wish to issue an approval to deploy that officially authorises the AtoN and add the buoy to the national list of AtoN once it has been deployed. For buoys that are seasonal or in position for short durations notification can be given by other means, e.g. Notice to Mariners.

3.6 Buoy owner responsibilities

Buoy owners should be aware of their responsibilities, the list below highlights the minimum requirements:

- The deployment should be advertised to the Mariner by means of a Notice to Mariners
- The Notice to Mariners should be copied to the national Hydrographic Office responsible for charting to allow updates to be completed if required
- Throughout the lifetime of the buoy any outages or defects should have a Radio Navigation Warning and / or Notice to Mariners issued to advise the Mariner of the defect, any issued Notice to Mariners should be withdrawn once the buoy is fully operational
- Maintenance of the buoy should be undertaken, any period the buoy is removed from site for this purpose should be covered by a Notice to Mariners
- The buoy may be periodically inspected by the Competent Authority and will be expected to meet the required availability associated with the Category of the buoy and other fitted AtoN