



**Queensland Government**  
Maritime Safety Queensland

## Managing AtoN in Secondary Navigable Waters in Queensland

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 Document Approver: Paul G Brandenburg  
 Position: Principal Manager (Vessel Traffic Management)  
 Contact Officer: Andy C Bell  
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### Document History

Date	Action (approve/review)	Details of action
20/05/2010	Original version	Establishment of standard by Maritime Services Branch
19/03/2013	Review	Reflect Machinery of Government changes and include provisions for hazards in impoundments

## 1.0 Introduction

- 1.1 Section 105 of the *Transport Operations (Marine Safety) Act 1994* provides for the General Manager of MSQ to establish Aids to Navigation (AtoN) where it is desirable to ensure the safety of people, ships or property. This power has been formally delegated to the relevant RHM. From time to time, MSQ receives requests from the general boating community or external bodies to establish physical AtoN at the entrances to coastal rivers, creeks and bars as well the adjacent waters of the coastal rivers, creeks, bars and canal estates.
- 1.2 MSQ's priority is the maintenance of navigational safety in accordance with best practice and conforming, where possible, with international recommendations, guidelines and relevant Australian standards. In considering such requests, MSQ must be cognisant of the possible impact that could result from the establishment of AtoN in exposed locations or areas which may not always be navigable.

## 2.0 Purpose and scope of this standard

- 2.1 The purpose of this standard is to provide the framework for the establishment of AtoN in coastal creeks, rivers, bars and canal estates to ensure that the safety of vessel movements and the integrity of Queensland's system of AtoN are not compromised.

- 2.2 This standard supports MSQ's policy for Vessel Traffic Management (VTM) in Queensland.
- 2.3 This standard is aligned with the current MSQ Key Outcomes by providing a framework for the delivery of VTM, of which AtoN is one component, in Queensland which enhances the safety of ships movements, and consequently the prevention of marine pollution.
- 2.4 This standard applies to all areas of MSQ associated with the management, delivery and maintenance of MSQ's AtoN system or services.

### 3.0 Definitions

Terms, abbreviations and acronyms	Meaning
ANAMS	Aids to Navigation Asset and Maintenance System
AtoN	Any device or system, external to a vessel, which is provided to help a mariner determine position and course, to warn of dangers or of obstructions, or to give advice about the location of a best or preferred route. (Definition: IALA Navguide 2010 edition)
Canal	A system of man-made waterways adjacent to a coastal area and/or connecting to open waters.
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
Leading Lights	Leading lights indicate the safest route to sail in a channel and the adjustments in course necessary to attain that route.
Lowest Astronomical Tide (LAT)	The lowest level which can be predicted to occur under average meteorological conditions and any combination of astronomical conditions. This level of tide may not be reached every year and could be higher or lower as a result of significant natural events like storm surges.
MSQ	Maritime Safety Queensland
Navigable waters	Queensland waters with a natural minimum depth of at least 0.5m LAT and a width sufficient for safe navigation by all ship sizes and types that frequently using the area.
Official Anchorages	An area that is suitable for ships to lie to an anchor giving good and secure holding. Official anchorages are identified in MSQ's recreational boating safety navigational products.
Official Boat Ramps	A road which continues into bodies of water so that boats on trailers can be launched. Official boat ramps are established by State or Local Governments and Port Authorities for general use by the public and are identified in MSQ's recreational boating safety navigational products.
RHM	

	Regional Harbour Master
Secondary navigable waters	A coastal waterway with no facility for deep draft trading ships and includes rivers, lakes, creeks, canals and dams that form part of Queensland Waters as defined by the <i>Transport Operations (Marine Safety) Act 1994</i> . Generally, located within smooth and partially smooth waters as defined by the <i>Transport Operations (Marine Safety) Act 1994</i> and used by smaller Queensland registered and visiting recreational and commercially (passenger and fishing) ships.
Sector Lights	Sector lights display different colours and/or rhythms over designated areas to indicate the safe waters in a channel or area.
Through Channel	A navigable waterway route from one area or place to another.
Lateral Limits (of a navigation channel)	The side limits of a navigation channel which defines the safe navigable route

**4.0 Standard**

- 4.1 AtoN in secondary navigable waters are established to mark the lateral limits of navigable channels, identify and mark any dangers (predominately natural dangers), other obstructions such as wrecks and areas or features of importance to the mariner. The RHM may also consider the establishment of AtoN in secondary waterways to provide access to official boat ramps, known recreational areas, official boat clubs and official anchorages.
- 4.2 The establishment of AtoN in secondary navigable waters will only be considered where a natural minimum depth of 0.5 metres at Lowest Astronomical Tide (LAT) is available to enable safe vessel access at all times.
- 4.3 Secondary navigable waters which provide a through channel may be marked with AtoN where the natural minimum depth is less than 0.5 metres LAT. In areas where a natural minimum depth of 0.5 LAT is not available, AtoN may be established without lights so as to discourage night time navigation with signs advising mariners of the possible navigational hazard (ie. shoaling at low tide) established at each side of the navigational hazard. The relevant RHM should ensure appropriate navigational advice about this hazard is provided to the mariner through MSQ's Boating Safety Charts and Beacon to Beacon, including a recommendation not to navigate the area at night time.
- 4.4 The establishment of AtoN in dams, lakes and other inland waterways (impoundments) will be at the discretion of the RHM in consultation with the owner/manager of the impoundment.  
 As these impoundments are subject to fluctuations in water levels, potential hazards, such as submerged trees and other obstructions may present a possible risk or danger to the safe navigation/movement of vessels that frequent these waters.  
 In these instances MSQ will adopt a risk management approach to marking natural obstructions or potential hazards that may become exposed as a result of the impoundments varying water levels. In general these obstructions are not required to be marked with an AtoN. Potential hazards will be assessed on a case by case basis. Where the obstructions results in a hazard that is deemed a significant risk, MSQ will engage with the impoundment owner/manager to ensure the hazard is appropriately marked. MSQ will engage with the impoundment owner/manager to ensure they mark the hazard appropriately.  
 It is also the responsibility of the impoundments owner/manager to sufficiently mark or

identify any exclusion zones or restricted areas within their impoundments that are not to be accessed by the general public or recreational water craft.

- 4.5 The establishment of AtoN at the entrances to coastal bars or in areas of high/continual siltation or shifting banks will not be considered as there is a high degree of risk and danger to marine and navigational safety. In special circumstances, the RHM may consider the establishment of leading marks and/or sector lights to assist ships approach and navigate some coastal entrances.
- 4.6 MSQ does not support the dredging at the entrances to coastal rivers, creeks and bars, to provide all tide access to open waters, as the short term benefits are negated by the constantly changing nature of the sea bed.
- 4.7 Before establishing, upgrading/downgrading or withdrawing AtoN in secondary navigable waters the RHM must assess the navigational significance of the area and determine the level of service required based on the volume of traffic and the degree of navigational risk. The maritime community must be notified of the establishment, upgrade/downgrade, withdrawal or unavailability of all AtoN in secondary navigable waters through the issue of a Notice to Mariners. Refer to MSQ Procedure: Notices to Mariners.
- 4.8 The planned permanent removal of AtoN in secondary navigable waters may require prior community consultation. A briefing is to be prepared for the Executive Director (Maritime Services) who will decide if a formal public consultation process is required and whether the proposed withdrawal is supported. As determined by the Executive Director (Maritime Services), subsequent briefings to the General Manager and/or Minister for Main Roads, Fisheries and Marine Infrastructure may be required depending on the particular circumstance.
- 4.9 However, at times it may be necessary to remove AtoN in areas temporarily unsuitable for safe navigation (ie. dams and rivers during drought periods). In these circumstances the relevant RHM will remove AtoN and disseminate advice to mariners through the issue of a Notice to Mariners. Refer to MSQ Procedure: Notices to Mariners. If the area is likely to remain unsuitable for safe navigation beyond 28 days, the relevant RHM should consider the issue of a gazette notice under s.221 of the *Transport Operations (Marine Safety) Regulation 2004* to provide that the operation of a ship in the stated waters endangers marine safety.
- 4.10 All secondary navigable waters AtoN information including structure, light and marine sign details, position, land, tenure must be accurately recorded in ANAMS and maintained in accordance with adopted IALA reliability requirements.

## 5.0 Relevant documents and/or references

International Association for Marine Aids to Navigation and Lighthouse Authorities (IALA) - Recommendations, Guidelines and Manuals  
<http://www.iala-aism.org/>

Transport Operations (Marine Safety) Act 1994  
<http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/T/TranstOpMSA94.pdf>

Transport Operations (Marine Safety) Regulation 2004  
<http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/T/TranstOpMSyR04.pdf>

The current Maritime Safety Queensland Key Outcomes

Maritime Safety Queensland Documents:

- Standard: Managing AtoN in Queensland

## 6.0 Stakeholders

Stakeholder Area	Stakeholder Representative	Responsibility
MSQ	General Manager	Delivery of MSQ services
Maritime Services	Executive Director	Developing and maintaining standards, guidelines and procedures.
MSQ Regions	RHMs	Assessing the requirements for AtoN in secondary waterways and the day to day management and maintenance of AtoN in Queensland.

Attachments ->

# Marine Aids to Navigation – Establishment Flowchart

