

UKC Requirements for Port of Darwin

Regional Harbourmaster's Direction 01/2015

Version Control

Version	Date	Reason for Change
1.0	09/01/2015	Initial version
2.0	01/07/2015	Review – introduction of <i>Ports Management Act</i>
2.1	01/10/2015	Revision of MSB Minimum UKC

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1. TITLE

Regional Harbourmaster's Direction for Under Keel Clearance requirements for Port of Darwin.

2. REFERENCE LEGISLATION

- *Ports Management Act*
- *Marine Act*
- Technical and Safety Standards for Pilotage and Provision of Pilotage Services

3. SCOPE

This Regional Harbourmaster's Direction applies to every vessel >25m LOA within the gazetted port limits of Darwin.

4. PREFACE

This Regional Harbourmaster's Direction is issued pursuant to Section 21 of the *Ports Management Act*.

5. BACKGROUND

Under-Keel Clearance, or UKC, is the vertical distance between the lowest part of the ship's hull and the seabed. Maintaining a minimum UKC is essential for the safety of navigation.

Static UKC is the minimum clearance available between the deepest point on a vessel at rest in still water and the bottom.

$$\text{Static UKC} = (\text{Charted Depth of Water} + \text{Height of Tide}) - (\text{Static Deep Draft})$$

Dynamic factors such as squat, pitch, roll and heave effect a ship's draft and these need to be accounted for in any determination of minimum UKC.

Similarly, allowance needs to be made for inaccuracies in the determination of the depth of available water arising from predictions or measurements of tide height, bathymetry and prevailing meteorological conditions.

These dynamic and accuracy factors are used to determine an appropriate safety margin, and consequently a minimum UKC, for vessel navigation in various parts of the Port of Darwin.

Static UKC is easily calculable and so represents a convenient means of articulating the minimum UKC to be maintained for safe navigation while making way. The table below prescribes minimum Static UKC; these are set to account for dynamic and accuracy factors.

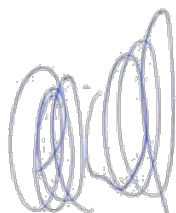
6. DIRECTION

The master of every vessel >25m LOA shall, except with the explicit permission of the Regional Harbourmaster, ensure that the following minimum Static UKC are met;

Where	Minimum Static UKC
Whilst underway in the outer Harbour (Area A)	2.0m
Whilst underway in the inner Harbour (Areas B,C,D,F [except as below])	1.5m
Whilst underway in the MOF Fairway	1.5m
Whilst underway in the MSB Fairway (Area G)	1.0m
Whilst underway in the Hudson Creek Fairway	0.5m
Whilst underway in the Sadgroves Creek Fairway (Area E)	0.5m
Passing through a lock	As directed by Lockmaster
Alongside (other than vessels designed to take the bottom)	0.5m

7. REVIEW STATEMENT

This direction will be reviewed biennially by the Regional Harbourmaster.



Captain Tony O'Malley
Regional Harbourmaster
01 October 2015