

DATE: 13 November 2024

SUBJECT: Container crane positioning during berthing and unberthing of vessels

This Harbour Master Instruction applies to Container Terminals - DP World and Patrick Terminals for the Port of Fremantle, FPA Vessel Traffic Services, Inner Harbour landside and Mooring teams.

The **purpose** of this instruction is to provide safe parameters for vessel manoeuvring and container crane safety and safety of personnel working at the terminals during vessel movements at the Inner Harbour container terminals and guidelines to achieve the same. The guidelines also provide for safe and efficient use of turning basins within the Inner Harbour.

The width of the Inner Harbour between North Quay and Victoria Quay is 425m, however the available swing diameter is 395m. To consistently achieve a safe outcome, this requires both container terminal operators to comply with these guidelines for crane positioning.

Container terminal operators will receive the following sheets every 6 hours daily - 0500 hours / 1100 hours / 1700 hours and 2300 hours.

- **Crane Positions Report** - This report provides container crane exclusion zones during berthing and unberthing of vessels at the container terminals
- **Berth Positions Report** - This report provides berth positions for all vessels scheduled to berth in the Inner Harbour during the next 48 hours.

Container Terminal operators are then responsible for the correct positioning of their container cranes prior to all vessel's berthing or unberthing based on the guidelines below. Terminal operators are required to provide to Fremantle Ports - VTS and Port services teams, a daily 24-hour contact number and operator name for any enquiries about crane positioning.

GENERAL REQUIREMENTS

- Positioning of container cranes in the shared zone during berthing and unberthing may be required by the Harbour Master's Office on a case-by-case basis. During such and rare occasions, the terminals are required to plan their cargo operations to avoid / minimise impact during vessel berthing / unberthing. Both terminal operators are therefore required to be fully familiar with the '**Crane Positions Report**' and '**Berth Positions Report**'.
- Container Terminal operators must position container cranes accordingly regardless of the terminal at which a vessel is berthing or unberthing (i.e., A vessel swinging off CT2 at DP world inbound for CT3 at Patricks).

SAFETY REQUIREMENTS DURING VESSEL BERTHING AND UNBERTHING.

- Container cranes **MUST NOT** be traversed along the nominated berth until the vessel is fully secured or clear of the berth. If cranes must be moved to allow access to mooring bollards, this should not occur until the vessel is in position alongside the nominated berth.
- Container cranes booms are to be maintained in the maximum raised position. This applies also to cranes at vacant adjacent container berths.

- Container cranes for the nominated berths should be unmanned during berthing or unberthing operations.
- During berthing, the container cranes must be in their nominated positions prior to a vessel passing the Inner Pilot Boarding ground for an inbound vessel, failing which the move will be cancelled, and all cancellation / delay charges shall be to the vessel / terminal account.

The Crane Positions Report is automatically generated based on the below safety parameters.

A. All vessels <310m (LOA) (arriving and departing) + vessels >310m (LOA) that are not turning.

The following rules apply for positioning container cranes outside the vessel footprint alongside.

- Container cranes are to be positioned no less than 20 metres clear of a vessel's bow and stern during berthing and unberthing.
- Container cranes are to be positioned clear of the allocated head and stern line bollards as per the '**Berth positions report**' during berthing and unberthing.

The following rules apply for positioning container cranes inside the vessel footprint alongside.

- Container cranes are to be positioned no less than 20 metres clear of the bridge (accommodation block).
- Container cranes must be positioned no less than 30% of the vessel's LOA from the bow and stern position during berthing and unberthing.

B. All vessels > 310m (LOA) turning on arrival or during departure

- For vessels >310m (LOA), the swing basin is **450m** for turning on arrival and **400m** for turning during departure.

Note: On the rare occasion, a **vessel swing basin footprint** may be different to the **vessel footprint alongside** the allocated berth (i.e., A vessel swinging off CT2 inbound for CT3). When this is the case, the cranes may be positioned within the vessel footprint alongside the allocated berth with the following requirements:

- The Berth Positions Report will provide this swing basin information in the remarks sections of the sheet.
- Container cranes are to be clear of the **vessel swing basin footprint** as per requirements above.

For positioning cranes within **vessel footprint alongside** the allocated berth refer to; *Requirements for vessels ≤ 310m (loa) + vessels >310m that are not turning on arrival or departure.*

These requirements which are currently implemented for familiarisation will be effective from 1 December 2024.



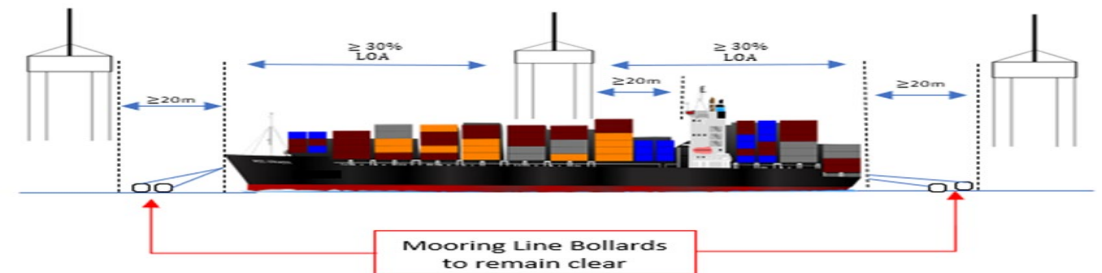
Capt. Savio Fernandes

Harbour Master

CRANE PARAMETERS GUIDE

For vessels with a length of 180m or less must not have more than one crane midships and the closest crane leg must be:

- no less than 30% of the vessel's LOA from the bow and stern positions
- no less than 20m clear of the bow, stern and bridge
- clear of the allocated head and stern line bollards

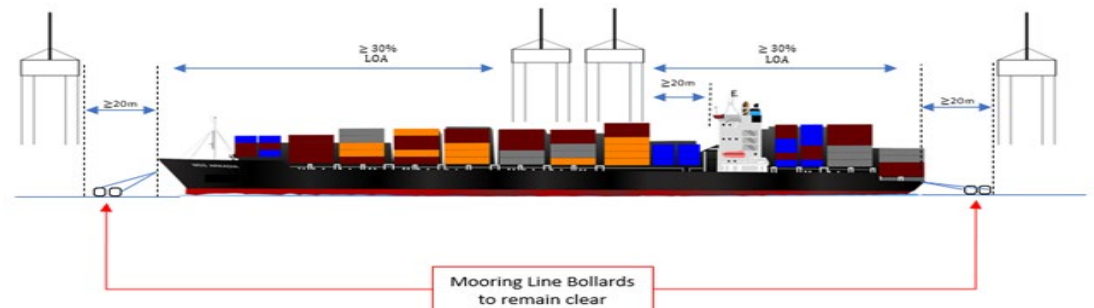


Note: Example Only. Calculations must be completed for each vessel.

< 180m LOA

For vessels with a length of 180m and less than 280m must not have more than two cranes midships and the closest crane leg must be:

- no less than 30% of the vessel's LOA from the bow and stern positions
- no less than 20m clear of the bow, stern and bridge
- clear of the allocated head and stern line bollards



Note: Example Only. Calculations must be completed for each vessel.

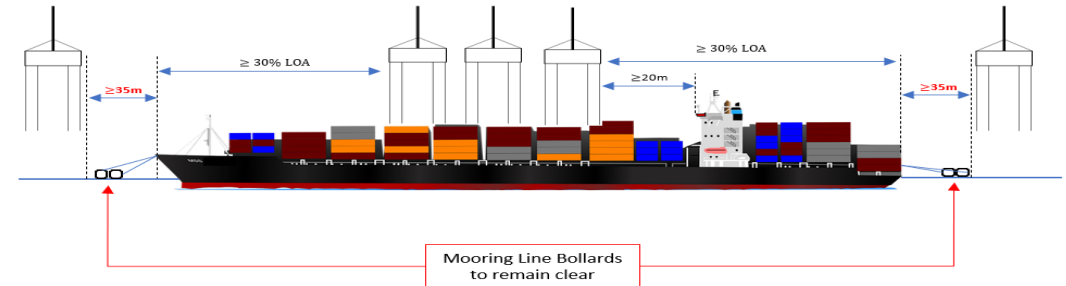
> 180m < 280 LOA

HARBOUR MASTER'S INSTRUCTION

11-2024

For vessels with a length of 280m and less than 350m less must not have more than three crane midships and the closest crane leg must be:

- no less than 30% of the vessel's LOA from the bow and stern positions
- no less than 20m clear of the vessel's bridge
- no less than 35m clear of bow and stern positions for vessels more than >310m
- clear of the allocated head and stern line bollards



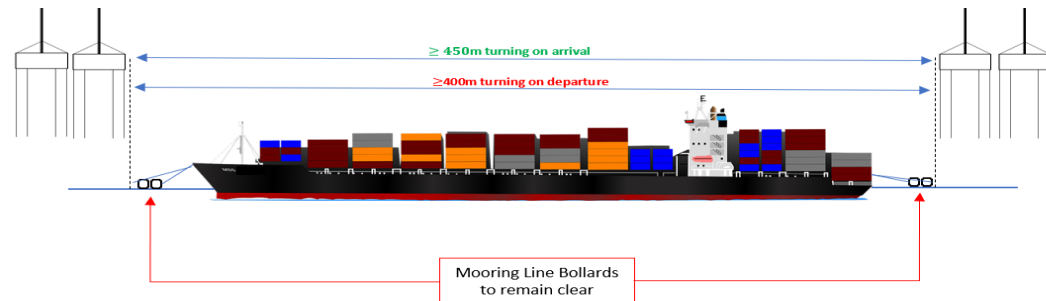
Note: Example Only. Calculations must be completed for each vessel.

> 280m < 350 LOA

> 310m < 350 LOA - NOT SWINGING

For vessels with a length of 310m or more and swinging must have no cranes in the the vessel swing basin footprint and the closest crane leg must be:

- no less than 20m clear of the vessel's bridge
- no less than 450m clearance for vessels turning on arrival.
- no less than 400m clearance for vessels turning on departure.
- clear of the allocated head and stern line bollards



Note: Example Only. Calculations must be completed for each vessel.

> 310m < 350 LOA - SWINGING