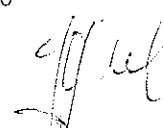


TNPA PORT OF DURBAN BERTHING GUIDELINES

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Approved :	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <hr/> Harbour Master </div> <div style="text-align: center;">  <hr/> Date </div> </div>

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1. OBJECTIVES

1.1 The objective of the guidelines is to ensure safe, efficient & orderly berthing of vessels such that the waiting time of vessels for a berth is minimized whilst optimizing the use of Port Infrastructure and improving vessel loading and unloading productivity.

1.2 To ensure that all port stakeholders have a common understanding of the operations in the port. **Where reference is made to the Ports Act, the Port Rules, Security Regulations, IMDG or other local or national legislation compliance to these sections are mandatory.**

1.3 Ensure safety, the interests of security, good order, protection of the environment and the effective and efficient working of the port as per the Port Rules

1.4 To provide the South African port system with a guiding document to develop berthing guidelines for each port.

2. DEFINITIONS

Definitions related the Berthing Guidelines document as listed below;

Act – National Ports Act. (Act no.12 of 2005)

Arrival – For port purposes & key performance measurement - time a vessel crosses the port limits or VTS limits

Berth – any area in the port designated by the port where a vessel can safely dock

TNPA Berth Planner – An employee of TNPA responsible for safe and efficient planning of vessels at the Port

COO – TNPA Chief Operations Officer

CHM – TNPA Chief Harbour Master

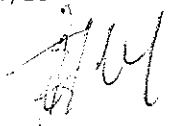
Departure – time when a vessel crosses the outer most breakwater leaving the port

Terminal Operator – a Licensed Terminal Operator operating a terminal within the port.

Terminal Berth Planner – An employee of a terminal operator responsible for safe and efficient berth planning of vessels at the designated terminal

Port Manager – TNPA employee responsible for the overall management of the port.

PSO – Port Security Officer



Harbour Master – A TNPA employee employed as the Harbour Master and mandated by the Ports Act of 2005 to ensure safety of navigation, in the interest of safety, security, good order, and protection of the environment and effective and efficient working of the port.

Senior Operations Manager – A senior TNPA employee responsible for operations in a port

ISPS – International Ship and Port Security

IPMS - Integrated Port Management System

Mooring – method of securing a vessel to a berth or off shore facilities (eg.SPM, MBM, CBM buoys – limiting movement

Shift – when a vessel moves from berth to another within port limits

Wind Bound – when the wind conditions are not conducive for the movement of vessels under Pilotage to either docking, shifting or sailing a vessel.

Weather Bound – when the weather conditions are not conducive for vessel movements under Pilotage.

UKC – Under Keel Clearance

Liner vessels – Vessels with regular calls at almost regular times.

Red Liners – vessel which require special permission and or times for entry due to size or type of cargo

SAMSA – South African Maritime Safety Authority


Key Commodities – Cargo that contributes significantly to the ports revenue.

Resource allocation – deployment of Pilots, Tugs, Work Boats, Pilot Boats, helicopters, Launches, Berthing Staff

Precinct – a cluster of terminals in designated areas of the port

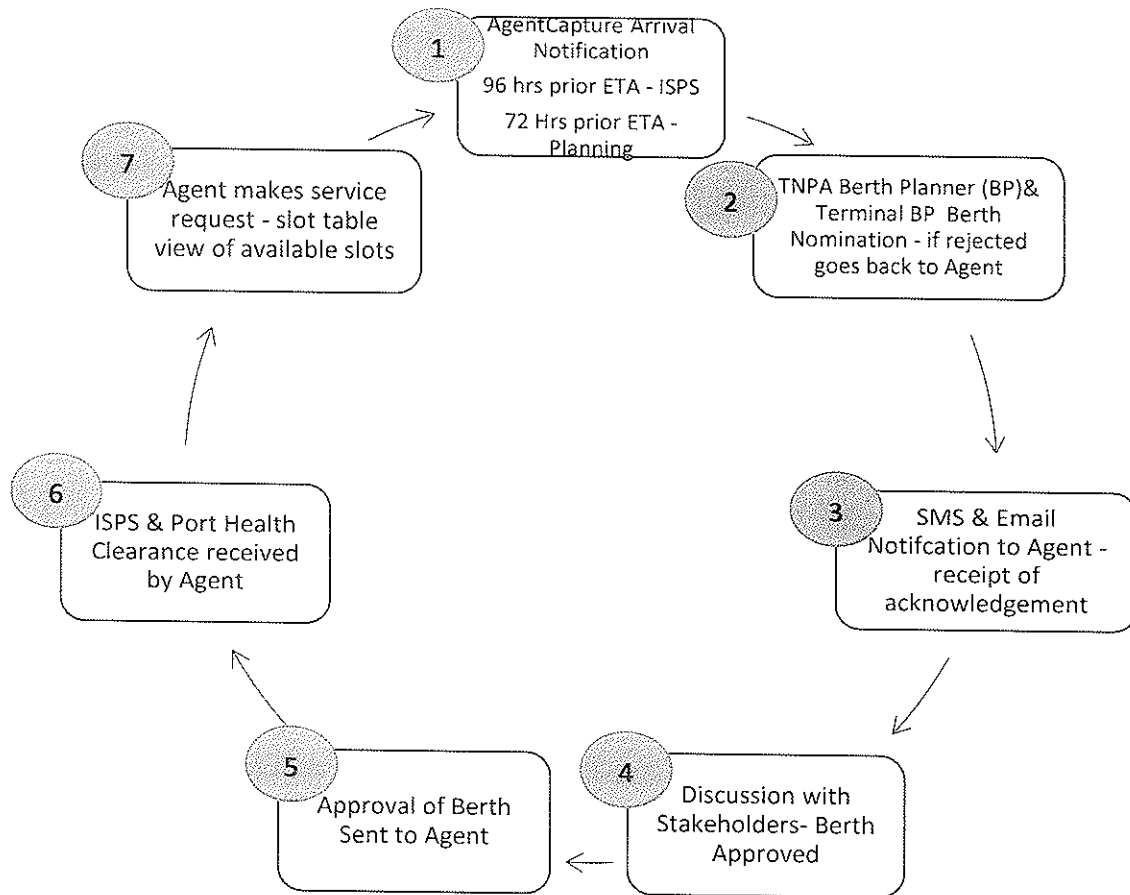
Tidal Vessel – Vessels which have a draft greater than the maximum permissible draft of the berth and require additional water to ensure a safe passage in or out of the port.

Vessel Agents – A registered representative of the vessel owners



3. Process Flows on IPMS

All vessel bookings will be done on IPMS using the slot system. The Slots will be available in the system visible to registered Users.



TNPA IPMS Process flow

Note that terminal notifications as required by the relevant terminal must be complied with in terms of terminal operating guidelines or systems.

4. ISPS CLEARANCE

All security regulated vessels must be ISPS cleared as per Maritime Security Regulations of 2004 prior to making a request for marine services on IPMS. The Security PSO office will also be required to clear coastal vessels to ensure no vessels enter the port without ISPS clearance.

In relation to off port limits vessels - all vessels arriving off port limits for any services or interaction with any crafts will require ISPS clearance.

5. INTERNATIONAL MARITIME DANGEROUS GOODS(IMDG)

All shippers, vessel agents and terminal operators will ensure compliance with the IMDG code and the South African Maritime Dangerous Goods Standards and Handling & Transport of Dangerous Cargoes - Procedures Manual.

Special attention shall be paid to the importing and exporting of **Class 1 Explosives**, which poses a significant risk to the port and port users. Class 1 Explosives will only be handled in designated areas in the identified ports and under strict conditions as specified by the SAPS Explosives inspector, SAMSA & the Harbour Master of the Port.

Class 7 refers to radioactive substances and also requires approval from the National Nuclear Regulator and will require special conditions for handling this class of cargo.

All persons handling dangerous goods or involved in the administration, planning or movement of dangerous goods must be appropriately trained as specified in the SAMSA Marine Notice no 28 of 2009 or any updated notices & amendments thereto.

The floating crane will be used to move Class 1 IMDG Cargo from the point berths to the container terminal.

No dangerous goods will be handled in berths where it is unsafe to be handled or transported.

6. RESOURCE ALLOCATION & ORDER OF WORKING

TNPA implemented Marine Operator Performance Standards (MOPS) in an effort to improve performance within the Marine Services Operations environment. In conjunction with Stakeholders the following measures were agreed to be MOPS key performance indicators.

- Slot Utilization
- Slot Efficiency
- Adherence to Requested time (in relation Marine Services, Terminal Operator, Shipping Lines and Weather delays).

- 6.1 In line with Marine Operator Performance Standards (MOPS) which aims to offer an equitable, efficient, reliable and predictable Marine Services to all Shipping Lines, the port declared a number of available slots per day. These slots are based on available resources and port configuration.

	1	2	3	4	5	6	7	8	9	10	11	12
Time Slot	06h00 08h00	08h00 10h00	10h00 12h00	12h00 14h00	14h00 16h00	16h00 18h00	18h00 20h00	20h30 22h00	22h00 24h00	00h00 02h00	02h00 04h00	04h00 06h00
Stream 1	1 st Vessel											
Stream 2	2 nd Vessel											
Stream 3	3 rd Vessel											

The no. of vessels that can be accommodated also depends on the movement type, sailing, docking,

Shifting, number of tugs required and the precinct at which the movement will take place.

- 6.2 As a general principle all vessels will be serviced based on bookings made on Integrated Port Management System (IPMS) slot booking system where first booked first served principle will apply and subject to the provisions of these guidelines and in compliance with the Ports Act and Port Rules.
- 6.3 A vessel, shall forfeit its booked slot, if it has not complied with all the requirements for its berthing as prescribed by the Port Rules and the terminal operating guidelines or systems.
- 6.4 The Harbour Master will consider inter alia the following factors in the interest of safety, security, good order, protection of the environment, efficiency and orderly working of the port in the allocation of resources:
 - 6.4.1 Vessels with emergencies
 - 6.4.2 Shipping Back log Recovery
 - 6.4.3 Tidal vessels
 - 6.4.4 Sensitive cargo vessels – e.g. Passengers
 - 6.4.5 Liner type vessels – time sensitive
 - 6.4.6 Key Commodities
 - 6.4.7 Weather conditions
- 6.5 The order of priority will be as follows;
 - 6.5.1 Passengers
 - 6.5.2 Foreign Navy
 - 6.5.3 Jobs of Special Nature (including Tug and Tow)
 - 6.5.4 Draft Restricted Vessels
 - 6.5.5 Container
 - 6.5.6 Car Carrier
 - 6.5.7 Tankers
 - 6.5.8 Bulk Carriers
 - 6.5.9 General Cargo vessels
 - 6.5.10 Other – non cargo working vessels
- 6.6 The following key commodities have been identified in the port: consider key commodities as definition
 - 6.6.1 Containers,
 - 6.6.2 Motor Vehicles
 - 6.6.3 Agricultural products



- 6.7 The movement must only be booked at the start of a slot. The IPMS will only provide agent with selected start times of slot as per port designated slot table. This is to ensure efficiency in managing vessel bookings
- 6.8 Thirty minutes will be allowed for marine services resources to be at the vessel and for the vessel to be ready. All marine delay calculation will only commence after thirty minutes from the requested time. The TNPA Tariff book is to be consulted for additional charges and application thereof.
- 6.9 After the 46th minute resources are to redeployed to next vessel awaiting service in which event the vessel will need to rebook services, alternatively resources to be kept at vessel subject to movement not impacting other shipping movements.
- 6.10 The Vessel Traffic Controller (VTC) /Senior Vessel Traffic Controller (SVTC) will be able to drag a vessel back if a move can be accommodated and there is spare time and this will not impact negatively or cause misalignment for future slots.
- 6.11 Start & End of Cargo times & Cargo volumes will be required at the completion of every vessel to complete vessel visit on IPMS.

7. ORDER OF PRIORITY BY BERTHS

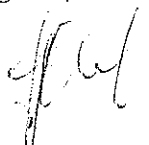
Berths operated by Licensed Terminal Operators will have rights to prioritize cargo working vessel calls to these berths. Any substitution must be approved by the TNPA Berth Planner or Deputy Harbour Master. Cargo working vessels will take priority over other vessels – e.g. lay bye, bunkers, repairs etc.

In the interest of safety, security, good order, protection of the environment and orderly working of the port the Harbour Master may berth another vessel at the berth allocated to a Licensed Terminal Operator in consultation with the terminal operator. Conditions of lease agreements and terminal license must be consulted to ensure that the terminal operator's rights are maintained.

7.1 Vessels will be berthed in order of their seniority subject to;

7.1.1 The vessel being ready to commence cargo handling operations

7.1.2 Sufficient cargo and / or cargo storage space being available to permit efficient cargo handling operations to take place. For cargo exports the required amount of cargo must be on the ground and the remainder of the cargo must be enroute such that the productivity of the berth is not affected as per the Lease agreement & terminal operating guidelines.



8. WEATHER OPERATIONAL LIMITS

	Port Area		Maximum Limits	
Wind Direction	Port Entrance		Pilot discretion	
Wind Speed	Port Entrance		Approx. 35-40 Kts	
Swell Height	Port Entrance		Approx. 3.5 – 4.0 metres	
Visibility	At least 0.5 miles – Pilot's discretion			
Vessel Type	Length	Breadth	Wind Speed	Swell Height
Containers			Approx. 35 -40 Kts	Approx. 3.5m
Car Carriers			Approx. 25 – 30 Kts	Approx. 3.5m
Island View	Min 122m Max 245m		Approx. 25 -30 Kts	Approx. 3.5m
Maydon Wharf	< 200m		Approx. 25 – 30 Kts	Approx. 3.5m
Bulk Carriers	>250m		Approx.20 -25 Kts	Approx. 3.5m
Dry Dock	340		<15 Kts –Approx.	Approx. 3.5m
Dead Ships			<15 Kts – Approx.	

Safe weather operating parameters for vessel types are approximate guidelines due to the variables in the maritime environment and subject to the prevailing weather conditions and pilot's discretion.

9. PORT AND BERTH DRAFT LIMITATIONS

- 9.1 All the berth depths and the maximum permissible draft of the berths – channels and basins are provided in Annexures attached for each port. These are guidelines for the ports and the updated information must be requested from the Harbour Master.

BERTH	TOP OF SCOUR DEPTH	MAX. PERM DRAFT		TOP OF SCOUR DEPTH	BERTH	MAX. PERM DRAFT
A	11.7	4.1		9.1	PIER 1 100	8.5
B	10.5	9.9		12.8	PIER 1 101	12.2
C	13.7	12.6		12.8	PIER1 102	12.2
D	13.7	12.6		12.8	PIER 1 103	12.2
E	13.7	12.0		12.8	PIER 1 104	12.2
F	13.7	12.6		12.8	PIER 1 105	12.2
G	13.7	12.6			PIER 1 106	
M	12.2	11.6		12.8	PIER 1 107	12.2
N	12.2	11.6		12.8	CROSSBERTH 108/109	12.2
O	12.2	11.6			CROSSBERTH 109	
P	10.9	10.3		12.8	CONTAINER TERM 200	12.2
Q	10.9	10.3		12.8	CONTAINER TERM 201	
R	10.9	10.3		12.8	CONTAINER TERM 202	12.2
MAYDON WHARF 1	14.5	11.6		12.8	CONTAINER TERM 203	12.2
MAYDON WHARF 2	14.5	11.6		12.8	CONTAINER TERM 204	12.2
MAYDON WHARF 3		9.3		12.8	CONTAINER TERM 205	12.2
MAYDON WHARF 4		9.3		12.8	ISLAND VIEW 1	12.2
MAYDON WHARF 5	9.9	9.3		13.5	ISLAND VIEW 2	12.2
MAYDON WHARF 6	9.9	9.3		12.8	ISLAND VIEW 3	12.2
MAYDON WHARF 7	9.9	9.3		10.6	ISLAND VIEW 4	10.0
MAYDON WHARF 8	10.6	10.0		13	ISLAND VIEW 5	12.4
MAYDON WHARF 9	9.9	9.3		13	ISLAND VIEW 6	12.4
MAYDON WHARF 10	9.9	9.3				
MAYDON WHARF 11	10.6	10.0		12.8	ISLAND VIEW 7	12.2
MAYDON WHARF 12		10.0		12.8	ISLAND VIEW 8	12.2
MAYDON WHARF 13	14.5	11.6		12.8	ISLAND VIEW 9	12.2
MAYDON WHARF 14	9.9	9.3		9.1	BCA 1	8.5
MAYDON WHARF 15	8.5	9.3		10.3	BCA 2	9.7
SHIP REPAIR JETTY WEST	8.5	7.8		9.1	BCA 3	8.5
SHIP REPAIR JETTY EAST	8.5	7.0		10.6	BCA 4	10.0

Minimum distances between vessels

Berth	Min. Distance between vessels
Tankers, High risk & end of quay	30m
Maydon Wharf/FPT	15 - 20m

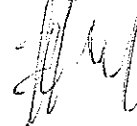
LIMITATIONS ON BERTHS

Berth	Min. Distance between vessels	Remarks
Island view berths	30m	Hazardous cargo in bulk
All other berths	20m	
Berth	LOA	Remarks
Island view 1,2 &3	122m (minimum)	One caisson only 122m
Island view 8-9	90m (min)	
NP 100	180m (min)	When a vessel in access of 180m LOA is berthed at NP100, then NP101 to be clear up to bollard no.5
Graving dock		Movement subject to mooring Winches of the drydock & of the vessel being operational
NP 108	340m (maximum)	<ul style="list-style-type: none"> If the LOA is between 321-340m then the following conditions will apply; 1) at least one side of the new pier basin has to be clear of ships, i.e. Either 105/107 or 200/202 will have to be clear.2) There might be a need for extra tugs and the ship will bear the costs as these longer vessels have a higher risk. Vessels that are between 300-320m LOA will be treated as normal

Island View Channel Restrictions		<p>Maximum wind: 20knots, daylight only and 2 tugs.</p> <p>No vessel is permitted to move in the Island view channel at any time without main engines.</p> <p>Daylight berthing vessels can be done at night but at pilot's discretion.</p>
IV4-IV9	+200m	<p>These vessels can be done at night but at pilot's discretion.</p> <p>Vessels 200m & over LOA are subject to daylight only but may be done at pilot's discretion at night, excluding vessels for dry dock.</p>
Maydon Wharf channel	200	<p>Vessels with obstructions that obstruct the view of the pilot's line of sight will be subjected to daylight berthing (ie Gearbulk).</p> <p>Vessels with a beam of more than 34m while bunkering in the MW channel will have to stop bunkering and the bunker barge is to move away if other vessel with a beam greater than 34m is in transit.</p> <p>Crane booms must be up and positioned in the center of the berth for docking and undocking.</p> <p>Docking and undocking of vessels when crane booms are down, is prohibited unless permission is granted by DHM's office.</p>

9.2 Daylight Only Movements

- 9.2.1 Vessels with exceeding a particular length or breadth as per port limitations.
- 9.2.2 Fishing vessels presenting language and or forward visibility problems
- 9.2.3 Double banking/de-coupling
- 9.2.4 No-main-engine movements
- 9.2.5 Towing immobilized vessels entering the port
- 9.2.6 Buoy Mooring- docking/undocking – as per port requirements
- 9.2.7 Dry dock, Floating dock & synchro-lift movements
- 9.2.8 Any vessel over 370m and beam greater than 50m



9.2.9 Vessels over 200m going up the Maydon Wharf Channel

9.3 TIDAL VESSELS GUIDELINES

There is increasing commercial pressure on the port to accommodate bigger vessels with deeper drafts.

The operating limits for the port gives the limit of these vessels at chart datum and an allowance given for tide.

Vessels wishing to berth, shift or sail at a draft above the maximum permissible draft of the berth are allowed to do so under inter alia the following conditions;

9.3.1 Vessel movement to be carried out during a rising tide

9.3.2 The vessel owner or designated representative to sign a letter of indemnity

9.3.3 Submission of a tidal calculation to the Harbour Master's office for approval

9.3.4 The under keel clearance at all states of tide must be not less than the Ports prescribed UKC.

9.4 **Factors to include in the passage planning of such vessels to include but are not limited to:**

9.4.1 Type of vessel/ maneuvering characteristics

9.4.2 Size of vessel

9.4.3 Wind conditions

9.4.4 Current at the bar

9.4.5 Visibility

9.4.6 Speed

9.4.7 Squat

9.4.8 Increase in draft due to list/rolling/heave

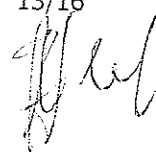
9.4.9 Type of bottom – sand, clay, mud or rock

9.4.10 Available tug assistance and bollard pull

Port	Berth	Min. Distance	Remarks
		Between vessels	
ALL PORTS	Tankers, High risk & end of quay	30m	PIANC recommends 0.15 x LOA
	Other vessels	20m	PIANC recommends 0.1 x LOA

10. MOORINGS

Moorings requirements will depend inter alia on the following; type of vessel, LOA, breadth, freeboard prevailing weather conditions, berth, bollard configuration - distance between bollards, bollard SWL. The minimum mooring lines to secure a vessel over 200m is 4 headlines & 2 spring lines forward. 4 stern line & 2 spring lines aft. Additional mooring lines



will be required to secure a vessel under special conditions – eg. Surge, High Swell, Strong Winds, etc. Larger vessels over 300m will require 6 Headlines Stern lines & 3 spring lines. The number of mooring lines could remain the same if the diameter of the lines are increased to withstand the holding forces.

Storm surge lines may be used only if safe to do so.

Special mooring arrangements need to be made with the Harbour Master for the Port of Durban for unconventional vessels. A mooring plan with wind calculations needs to be submitted to the Harbour Master for formal approval. Ports will indicate minimum mooring requirements – especially for high risk berths and request for mooring plan for approval by Harbour Master for high risk vessels – prone to wind or swell, surge conditions and also passing vessel traffic.

It is the master's responsibility to ensure that his vessel is secured & safe for cargo operations and the mooring lines are tended to during loading, discharge operations and adverse weather conditions.

The Harbour Master in consultation with the Master of the vessel will determine if a vessel needs to be evacuated from the port due to adverse weather conditions – all related costs are for the vessel's account. The following to be considered.

- ❖ Safety of Port
- ❖ Safety of the vessel & other vessels in port
- ❖ Availability & operating limits of resources
- ❖ Ensure cargo secured
- ❖ Prevailing weather conditions
- ❖ Letter of indemnity

11. PILOTS BOARDING ARRANGEMENTS

All Pilot boarding arrangements must comply with IMO and local port legislations taking into account marine notices issued by SAMSA. Each port will indicate Pilot boarding arrangements and requirements for boarding by Pilot boat & where available helicopter, Should the port guidelines be in conflict with local & international legislative requirements the later shall take precedence over the port guidelines.

	Pilot Boat	Helicopter
Limitations	Port of Durban	
Wind Speed	Approx. 35 - 40 knots	Approx. 35-40 kts
Swell Height	Approx. 3.5 -4 m	Approx. 5m

These guidelines are subjected to prevailing weather conditions and Pilots discretion.

Include visibility – need to be consistent in all ports – Pilot's discretion

12. ASSOCIATED COSTS FOR VACATING BERTH

Should a vessel make use of a berth to which another vessel has preference, such vessel shall vacate that berth, when required, at its own cost.

Should a non-working or unproductive vessel be required to vacate a berth due to circumstances beyond the control of TNPA, the costs associated therewith will be for the vessel's account.

Any surcharge applicable to the movement of such a vessel will be for the account of terminal or vessel requesting that service.

If the Harbour Master, for safety reasons, deems a shift to be necessary, the cost thereof will be for that vessel's account - this is subject to consultation with the relevant parties.

13. DISPUTE RESOLUTION

Should a dispute arise in the order of the berthing of a vessel, the involved parties will submit their concerns, in writing, to the Harbour Master. The Harbour Master will consider the matter and provide his/her decision.

14. AVAILABLE RESOURCES

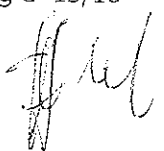
List all the Ports marine floating resources;

Port	Tugs	Work Boats	Pilot boats	Launches	Helicopter	Floating Crane
Durban	8	0	2	2	2	1
Total	8	0	2	2	1	1

The tugs in the Port of Durban bollard pull range from 30 – 70 tons

OPERATIONAL RESOURCES

Port	Tugs	Work Boats	Pilot boats	Launches	Helicopter	Floating Crane
Durban	5	0	1	2	1	1
Total	5	0	1	2	1	1



15. PRECINCTS

PRECINCT	BERTH	COMMODITIES
POINT	A – R	MPT, Auto, Grain
Bluff	BCA 4 – BCA1	Coal
ISLAND VIEW	IV1-IV9	Petroleum, Chemicals
	IV 10	Bunker Berth
DCT PIER 1	100-104	MPT
	105 to 107	Containers
DCT PEIR 2	108/109 – 205	Containers
MAYDON WHARFF	MW 1-4MW15	Bulk & MPT
	MW 4-8	
	MW8-12	
	MW12-15	
BAYHEAD	Dry Dock	Ship Repair
	Ship Repair 1	Ship Repair
	Ship Repair 2	Ship Repair
	Floating Dock 1	TNPA
	Floating Dock 2	EBH
	Floating Dock 3	DORMAC
	DORMAC	Repair quay