



# Wheatstone Marine Terminal Manual

ABU Marine Operations

**Document ID:** WS1-COP-00352

**Revision Date:** 20 Nov 2022

**Information Sensitivity:** Public

**Revision ID:** 9.0

**Next Revision Due:** 20 Nov 2027

**CONTROLLED DOCUMENT****Document Information**

Document Number	WS1-COP-00352	Revision	9.0
Document Author	Rahul Manglu	Department Owner	ABU Marine Operations

**Revision History**

Rev No.	Description	Date	Prepared By	Approved By
1.0	Issued for Use	28 Mar 2017	Kevin Daubner	John Codispoti Dave Acomb Michael Stogner
2.0	Issued for Use Minor change to section 4.7.2 LNG Carrier Presentation Flange Size.	26 May 2017	Neville Amaria	Dave Acomb
3.0	Issued for Use Minor update to dredged depths and other minor re-wording	27 Jul 2017	Kevin Daubner	Dave Acomb
4.0	Issued for Use	21 Sep 2017	Kevin Daubner	John Codispoti
5.0	Issued for Use ESD Pin Config added	09 Jan 2018	Kevin Daubner	John Codispoti
6.0	Issued for use Safety Zone Added	13 Jun 2018	Kevin Daubner	John Codispoti
7.0	Issued for use Vessel Tank Pressures added	10 Dec 2018	Kevin Daubner	John Codispoti
8.0	Issued for use.	27 Jul 2020	Kevin Daubner	Peter Waller Neville Amaria
9.0	Full Document Review. Re-organised and new content added to comply with OCIMF and Marine Terminals Onshore Standard.	20 Nov 2022	Rahul Manglu	Neville Amaria

**Approvals**

	Name	Signature / Date
Author:	Rahul Manglu	
Approved:	Wheatstone Marine Superintendent	
Approved:	Neville Amaria	

© 2022 by Chevron Australia Pty Ltd

This document contains proprietary information of Chevron Australia Pty Ltd. Any use of this document without express, prior, written permission from Chevron Australia Pty Ltd and/or its affiliates is prohibited.

## Key Contacts

- **Emergency Contacts**

<b>FOR THE PORT OF ASHBURTON</b>				
Call Sign: Ashburton VTS	VHF Ch 14	VHF Ch 16		
<b>Port of Dampier Vessel Traffic Service Centre</b>				
Landline 24/7	+61 8 9159 6556	Mobile	+61 42888 8800	

<b>FOR THE WHEATSTONE MARINE TERMINAL</b>				
Call Sign: Wheatstone Pilots	VHF Ch 68	VHF Ch 13		
<b>When vessel alongside, hot line phone direct to Control room</b>				
Marine Superintendent	+61 8 9184 7653	Security Ops Centre (24 hrs)	+61 8 9184 7444	

- **Terminal Address and phone number**

The WMT Berth is located at latitude 21 degrees 40.5 minutes south, longitude 115 degrees 00.4 minutes east.

Phone : +61 8 9184 7744 (24 hours) / +61 8 9184 7653 (Normal working hours)

[Wheatstone Marine Terminal – Australia.chevron.com](http://Wheatstone Marine Terminal – Australia.chevron.com)

- **Radio contacts(s)**

As per emergency contacts above. Note: Terminal controlled UHF Ch 6 is general working channel for storage and loading activities.

- **Port Authority** : Pilbara Port Authority.

Ashburton VTS : Ph-08 915 596 556 (24/7)

Email – [dampier.vts@pilbaraports.com.au](mailto:dampier.vts@pilbaraports.com.au)

VHF Channels 14 and 16

- **Agent Services**

As per instructions received from Lifters

- **Pilots**

Wheatstone Pilots operate on VHF Channel 68 as the primary contact and communications channel, with VHF Channel 13 being their backup channel.

## Contents

<b>Section 0 Introduction .....</b>	<b>8</b>
0.1 Purpose .....	8
0.2 Scope.....	8
0.3 Objective .....	8
0.4 Target Audience .....	9
0.5 Management Expectations .....	9
<b>Section 1 Emergency Procedures .....</b>	<b>10</b>
1.1 General .....	10
1.1.1 Wheatstone Marine Terminal Emergency Management Plan.....	10
1.1.2 LNG Carrier and Condensate Tanker Emergency Documents.....	11
1.1.3 Fire fighting equipment.....	11
1.1.4 Oil Spill response equipment .....	11
1.2 Oil spill and Vapour Release .....	11
1.3 Fire and explosions .....	11
1.4 Evacuation.....	12
1.5 Collision / damage to berth .....	12
1.6 Medical emergency .....	12
1.7 Security Breach .....	12
1.8 Person Overboard .....	12
1.9 Vessel breakout or drift along berth .....	12
1.10 Emergency Shutdown (ESD) .....	13
1.11 Incident notification policy .....	13
<b>Section 2 Health, safety and security policies .....</b>	<b>14</b>
2.1 Personal Protective Equipment (PPE) requirements .....	14
2.2 Terminal access control (including shore leave, visitors) .....	14
2.2.1 Safety Exclusion Zone .....	14
2.3 Vessel / Terminal security interface.....	14
2.3.1 The Port of Ashburton Authority.....	14
2.3.2 Port of Ashburton and WMT Security .....	15
2.4 Drug and alcohol policy .....	15
2.5 Smoking policy .....	15
2.6 Portable electronic equipment and naked lights (matches and lighters) .....	15
2.6.1 Radio, satellite and other fixed electronic equipment.....	16
2.6.2 Hot work.....	16
2.6.3 Openings .....	16
2.7 Repairs while alongside & main engine readiness.....	16
2.8 Provisions and stores (other crafts alongside).....	16
2.9 Safety data sheets (SDS) .....	17
2.10 Benzene and Hydrogen Sulphide (H <sub>2</sub> S) .....	17
2.11 Static accumulator .....	17
2.12 Emergency & Lifeboat drills.....	17
<b>Section 3 General Information .....</b>	<b>18</b>
3.1 Terminal location .....	18
3.2 Terminal layout .....	18
3.2.1 Wheatstone Marine Terminal (WMT).....	18
3.2.2 Ashburton Cargo Wharf (ACW) .....	18
3.2.3 WMT Marine Operations.....	19

3.3	Hours of operation .....	19
3.4	Local time.....	19
3.5	Vessel /shore communication policy .....	19
3.6	Language spoken.....	20
3.7	Vessel acceptance/clearance/vetting conditions .....	20
3.7.1	Conditions of Use.....	21
3.8	Useful telephone numbers .....	21
3.9	Environmental monitoring procedures .....	21
3.9.1	Tidal Information .....	21
3.9.2	Tidal Streams and Currents.....	21
3.9.3	Weather .....	21
<b>Section 4 Berth Information.....</b>		<b>23</b>
4.1	Berth description and parameters .....	23
4.1.1	Products handled .....	23
4.1.2	Berth criteria.....	23
4.1.3	Controlling depths.....	25
4.1.4	Water density.....	25
4.1.5	Maximum draft .....	25
4.1.6	Load rates .....	26
4.1.7	Maximum allowable working pressure (MAWP) .....	26
4.1.8	Marine loading arms.....	27
4.1.9	Vapour recovery .....	27
4.1.10	Safe working load of mooring components .....	28
4.1.11	Other relevant compatibility information .....	28
<b>Section 5 Pre-arrival communications.....</b>		<b>32</b>
5.1	Pre-arrival information exchange from terminal to vessel.....	32
5.1.1	WMT Regulations .....	32
5.1.2	Statutes and Regulations .....	32
5.1.3	Water depths and channel .....	33
5.1.4	Navigation Aids .....	33
5.1.5	WMT Swing Basin and Berth Pocket.....	34
5.1.6	Pilotage procedures.....	34
5.1.7	Anchorage .....	36
5.1.8	Tug requirements .....	36
5.1.9	Vessel and terminal limitations for berthing / unberthing .....	37
5.1.10	Minimum mooring requirements and mooring diagram .....	37
5.1.11	Line handling procedures .....	37
5.1.12	Berthing manoeuvres / approach speeds .....	39
5.1.13	Garbage and slops disposal procedures .....	39
5.2	Pre-arrival information exchange from vessel to terminal.....	40
5.2.1	Vessel Communications .....	40
5.2.2	Pre-Arrival Communications .....	40
5.2.3	Statutory Notices.....	40
5.2.4	Arrival Communications.....	41
5.2.5	Tendering Notice of Readiness (NOR) .....	41
<b>Section 6 Operational information.....</b>		<b>43</b>
6.1	Gangway and transverse space .....	43
6.2	Pre-transfer conference policy .....	43
6.3	Ship/Shore Safety Checklist and other documents .....	44
6.4	Ballasting Policy.....	44
6.5	Loading arm connection and disconnect/draining procedures.....	44
6.5.1	MLA Connection.....	44

6.5.2	Draining and Purge .....	44
6.5.3	MLA Disconnection .....	45
6.6	Cargo transfer policy and terminal manning requirements .....	45
6.6.1	Cargo Tank Environment .....	45
6.6.2	Terminal manning .....	47
6.6.3	Manifold access .....	48
6.7	Vapour recovery .....	48
6.7.1	LNG Vapour Return .....	48
6.7.2	Condensate Vapour Return .....	48
6.8	Crude Oil Washing (COW) .....	48
6.9	Safe operations requirements.....	48
6.9.1	Terminal operating limits .....	48
6.9.2	Low Wind Speed conditions .....	48
6.9.3	Non Standard Vessel Operations .....	49
6.10	Tank cleaning and tank entry policy .....	49
6.11	Inert gas systems policy .....	49
6.12	Surveyors / sampling and gauging .....	49
6.12.1	Sample Container Management .....	49
6.12.2	Wheatstone Marine Terminal Feedback .....	49
6.12.3	Port and Marine Service Charges .....	49
6.12.4	Cargo document Management .....	50
6.13	Bunkering policy .....	50
6.14	Environmental protection and pollution prevention .....	50
6.15	Potable water .....	50

## Tables

Table 3-1: VHF Channels .....	20
Table 3-2: Tidal Ranges .....	21
Table 4-1: Wheatstone Marine Terminal Overview .....	23
Table 4-2: LNG flow rate .....	26
Table 4-3: Condensate flow rates .....	26
Table 4-4: LNG and Condensate Loading Arm Vertical and Horizontal Envelopes.....	27
Table 4-5: ESD Link PIN Configuration .....	28
Table 4-6: LNG Carrier Presentation Flange Size - Raised or Flat Face .....	30
Table 4-7: Condensate Tanker Manifold Flange Size.....	31
Table 5-1: Mooring Line Load Limits .....	39
Table 5-2: Berth Design Criteria .....	39
Table 6-1: Cargo Tank Environment and Line Condition Requirements .....	46

## Figures

Figure 4-1: Presentation Flange Surface Finish Requirements.....	31
Figure 6-1: Gangway and Transverse Space .....	43

## Appendices

Appendix A	Nomination Form .....	51
Appendix B	LNG Carrier Pre-Arrival Notice Templates .....	52
Appendix C	Condensate Pre-Arrival Notices Templates .....	58
Appendix D	Conditions of Use .....	61
Appendix E	Maps and Diagrams.....	68
Appendix F	Terms, Acronyms and Abbreviations.....	72
Appendix G	General Arrangement and Operating Envelope for Marine Gangway .....	76
Appendix H	LNG Marine Loading Arm Operating Envelope .....	77
Appendix I	Condensate Marine Loading Arm Operating Envelope .....	79

## Appendix Tables

Appendix Table A-1: Nomination Form .....	51
Appendix Table B-1: Distribution List for Pre-Arrival Notices .....	52
Appendix Table B-2: Departure Notice from Port of Departure.....	52
Appendix Table B-3: Seven-Day ETA Notice .....	53
Appendix Table B-4: Five-Day ETA Notice .....	54
Appendix Table B-5: Three-Day ETA Notice .....	55
Appendix Table B-6: Two-Day ETA Notice .....	56
Appendix Table B-7: 24-Hours ETA Notice .....	57
Appendix Table C-1: Distribution List for Pre-Arrival Notices .....	58
Appendix Table C-2: Departure Notice from port of Departure .....	58
Appendix Table C-3: Five-Day ETA Notice.....	59
Appendix Table C-4: Three-Day ETA Notice .....	59
Appendix Table C-5: Two-Day ETA Notice .....	60
Appendix Table C-6: 24-Hours ETA Notice .....	60

## Appendix Figures

Appendix Figure E-1: Chart AUS 069 Port of Ashburton .....	68
Appendix Figure E-2: Approach to PBG(A) as required by PPA (Snapshot of AUS 743).....	69
Appendix Figure E-3: Jetty Layout .....	70
Appendix Figure E-4: Portable Electric System for Condensate Tankers .....	71

## Section 0 Introduction

The Wheatstone Port Facilities, known as the Wheatstone Marine Terminal (WMT), are located in the Port of Ashburton and come under the jurisdiction of the Pilbara Ports Authority.

The Wheatstone Project consists of two Liquefied Natural Gas (LNG) Trains, a domestic gas processing plant, Condensate processing facilities, supporting utilities, LNG and Condensate storage tanks, the Wheatstone Port Facilities, a Cargo Wharf (ACW) and other Shared Facilities.

Gas fields located off the northwest coast of Western Australia in the Carnarvon Basin supply feed gas to the Wheatstone Offshore Platform for processing and deliver it to the Wheatstone Project via subsea pipeline for processing and export via the WMT.

The WMT is a Non-first point of entry port as defined by the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF).

The WMT Operator is Chevron Australia Pty Ltd

### 0.1 Purpose

This manual has been developed to ensure the information required for safe and efficient marine operations, and safe LNG and Condensate transfer at the Wheatstone Marine Terminal is available to all parties. This manual is based on industry information promulgated by the Society of International Gas Tanker and Terminal Operators (SIGTTO), International Safety Guide for Oil Tankers and Terminals (ISGOTT), the Oil Companies International Marine Forum (OCIMF), and other industry and regulatory bodies.

### 0.2 Scope

This manual describes the various elements governing and controlling the safety of personnel, protection of the environment and the safeguarding of infrastructure within the Port of Ashburton. This manual specifically describes the general information, operational requirements, security arrangements, facilities and services of the following areas:

- Port of Ashburton pilot boarding ground
- The Wheatstone Marine Terminal
- Port and Marine Services associated with the transit, berthing and un-berthing of LNG carriers and Condensate tankers

This document does not describe Statutory and Regulatory requirements for obtaining entry approval into Australian waters. LNG carrier and Condensate tanker Masters must obtain this through their shipping agent.

### 0.3 Objective

The objective of this manual is to provide essential information and requirements to LNG carriers and Condensate tankers calling at the WMT.

Information is provided concerning the physical layout and description of the WMT to the users of the infrastructure. This includes LNG carrier and Condensate tanker information for communications, pilot boarding, channel transit, safe berthing, LNG and Condensate transfer operations, restrictions while in the Port of Ashburton, conduct of personnel, and safe un-berthing.



## **0.4 Target Audience**

This manual is intended for use by:

- Lifters and the Lifting Coordinator (LC)
- WMT Operator
- LNG carrier and Condensate tanker owners / operators
- LNG carrier and Condensate tanker personnel
- Other parties as appropriate e.g. shipping agents, government officials.
- Pilot Loading Master (PLM)
- Wheatstone Marine Superintendent
- Wheatstone Shipping Officer

## **0.5 Management Expectations**

Clear definition of the requirements for LNG carriers and Condensate tankers calling at the WMT are the Management System Expectations associated with this manual.

## Section 1 Emergency Procedures

### 1.1 General

#### 1.1.1 Wheatstone Marine Terminal Emergency Management Plan

LNG carrier and Condensate tanker Masters should access the PPA's Port of Ashburton Emergency Response and Marine Oil Pollution documents located on the PPA's website prior to arrival and be familiar with its content.

The PPA website: [Emergency Preparedness and Response](#)

Port of Ashburton's emergency response plan: [Port of Ashburton ERP](#)

The WMT's Emergency Management Plan interfaces with the PPA's Emergency Response documents.

An emergency notice – an instruction to the LNG carrier or Condensate tanker Master for fire or other emergency is provided to the LNG carrier or Condensate tanker Master by the PLM during the pre-loading meeting. Refer to **WS1-COP-00338** - Wheatstone - Instruction to Export Tanker Masters (Fire or Other Emergency).

#### In Emergency Event:

On-Board the Vessel	
1.	Initiate Vessel response
2.	Inform Terminal Central Control Room (CCR)
3.	Stop all operations immediately (ESD if required)
4.	Inform Pilot Loading Master (PLM) and standby Tug
5.	PLM will initiate shore response in accordance with the Terminal Emergency Response Procedures

#### NOTE:



Note

*It is recognised that during an emergency, these actions may take place consecutively and not necessarily in the order above. It is further recognised that the response actions will be aligned with the type and degree of severity, or potential severity of the emergency.*

At Other Locations (within the Port or Terminal)	
1.	The Vessel will be advised of an emergency within the Terminal or Port that may affect the vessel by the Terminal Central Control Room (CCR) or Pilot Loading Master (PLM)
2.	Stop all operations immediately (ESD if required) and prepare for disconnection
3.	Engines readied for use as soon as possible and standby Tug to be mobilised
4.	Crew to standby for operations
5.	The Terminal Central Control Room (CCR) or PLM will advise the Vessel of further requirements

#### NOTE:



Note

*It is recognised that the response actions will be aligned with the degree of severity or potential severity of the emergency.*

#### IMPORTANT NOTICE:



*The Terminal Emergency Response Procedures are immediately effective on any alarm being given.*

### 1.1.2 LNG Carrier and Condensate Tanker Emergency Documents

Emergency documents shall be provided as per the requirements of the ISGOTT Ship/Shore Safety Checklist, which shall be completed and verified before any cargo transfer operations take place. A copy of the ship's Fire Control Plan, General Arrangement Plan and updated Crew List shall be clearly marked and placed in an appropriate weather-proof receptacle on the vessel near the shore gangway. Fire Prevention/Fighting and General Safety Requirements.

### 1.1.3 Fire fighting equipment

The WMT will ensure that all fixed firefighting installations and portable equipment are in good condition and ready for immediate use at all times.

When not in use for pilotage duties, one tug with fire fighting capability will be fully manned and remain on standby in the tug pen while LNG carriers and Condensate tankers are alongside the berths. This tug can be called to attend the LNG carrier or Condensate tanker at any time.

The standby tug will maintain a 24 hour listening watch on VHF radio channel 68.

All firefighting equipment on board the vessel shall be in good condition and ready for immediate use.

Fire main system is to be pressurised at all times by the vessel whilst berthed.

The ship/shore international connection shall be located near the manifold with connecting flange and bolts ready for immediate use.

Additionally for LNG Carriers :

- Water spray deluge system shall be readily available for operation.
- Dry powder system shall be ready for immediate use and manifold monitors and valves correctly positioned for remote operation.
- The manifold water curtain must be fully operational during LNG transfer.

Additionally for condensate tankers:

- Fixed foam firefighting system shall be ready for immediate use.

### 1.1.4 Oil Spill response equipment

WMT maintains an on-site oil spill response capability (Tier 1). Equipment consists of:

- Containment boom
- Sorbent booms, pillows and granules
- Skimmers and pumps
- Spill response vessel
- Decontamination kit (PVC gloves and spill storage containers)

## 1.2 Oil spill and Vapour Release

Initiate response as per WS1-COP-00338 mentioned in section 1.1.1 above.

The PLM will co-ordinate with the vessel and shore based emergency services as to what resources the vessel requires to assist in the emergency response.

## 1.3 Fire and explosions

Initiate response as per WS1-COP-00338 mentioned in section 1.1.1 above.

The PLM will co-ordinate with the vessel and shore based emergency services as to what resources the vessel requires to assist in the emergency response.

#### **1.4 Evacuation**

Initiate response as per WS1-COP-00338 mentioned in section 1.1.1 above.

The primary means of evacuation from the vessel is via the shore gangway. In the event of fire or explosion this escape route is blocked, in preferential order, one of the following means of escape shall be available whilst an LNG carrier or Condensate tanker is moored at the berth as discussed and agreed between the LNG carrier or Condensate tanker Master and the PLM:

- (i) An outboard accommodation ladder, turned out and rigged ready for immediate lowering
- (ii) An outboard lifeboat lowered to the embarkation deck (unless it can be lowered fully-laden from the stowed position), ready for immediate launching
- (iii) A free-fall lifeboat (if fitted in lieu of a conventional lifeboat), ready for use as a safety boat having considered factors such as moorings, depth and fetch of water and obstructions

#### **1.5 Collision / damage to berth**

Initiate response as per WS1-COP-00338 mentioned in section 1.1.1 above.

The PLM will co-ordinate with the vessel and shore based emergency services as to what resources the vessel requires to assist in the emergency response.

#### **1.6 Medical emergency**

Initiate response as per WS1-COP-00338 mentioned in section 1.1.1 above.

The PLM will co-ordinate with the vessel and shore based emergency services as to what resources the vessel requires to assist in the emergency response.

#### **1.7 Security Breach**

Initiate response as per WS1-COP-00338 mentioned in section 1.1.1 above.

The PLM will co-ordinate with the vessel and shore based emergency services as to what resources the vessel requires to assist in the emergency response.

#### **1.8 Person Overboard**

Initiate response as per WS1-COP-00338 mentioned in section 1.1.1 above.

The PLM will co-ordinate with the vessel and shore based emergency services as to what resources the vessel requires to assist in the emergency response.

#### **1.9 Vessel breakout or drift along berth**

Initiate response as per WS1-COP-00338 mentioned in section 1.1.1 above.

The PLM will co-ordinate with the vessel and shore based emergency services as to what resources the vessel requires to assist in the emergency response.

### **1.10 Emergency Shutdown (ESD)**

Initiate response as per WS1-COP-00338 mentioned in section [1.1.1](#) above.

The PLM will co-ordinate with the vessel and shore based emergency services as to what resources the vessel requires to assist in the emergency response.

### **1.11 Incident notification policy**

In the event of an incident, at the earliest opportunity the Master is to forward to the PPA Harbour Master and WMT Marine Superintendent a summary of the incident which must contain at a minimum:

1. Time and date of the emergency
2. Nature of the Emergency
3. Action taken to address the emergency
4. Details of any injured person(s) and their current state of health
5. Details of any damage to the vessel including any restrictions in their ability to depart the berth
6. Any ongoing issues requiring further assistance or resources from the shore

In addition, any marine incident on board the vessel, is required to be reported to AMSA. Guidance on making an AMSA incident report is made available on AMSA website:

[Incident reporting -AMSA](#)

## Section 2 Health, safety and security policies

### 2.1 Personal Protective Equipment (PPE) requirements

All personnel entering WMT must be wearing appropriate personal protective equipment. As a minimum will consist of:

- Safety helmet / hard hat
- Safety eyewear
- Protective gloves
- Long sleeved clothing, high visibility (HI-Vis) and long pants or coveralls. Visitors without Hi-Vis clothing must wear some form of high-visibility identification (e.g. a vest) when entering applicable areas.
- Protective toe-capped, ankle-high boots
- Hearing protection (in designated areas)

Depending on nature of work and hazards present, additional protective gear may be required.

For condensate tankers, refer to section 2.10 for more details. Where an inhalation risk exists, a Type A (organic vapour) respirator to be worn.

### 2.2 Terminal access control (including shore leave, visitors)

The Port of Ashburton is in a remote location with very limited local amenities.

The Wheatstone Port Facilities is a Non-first point of entry port as defined by the Australian Government Department of Agriculture, Fisheries and Forestry. As such normal port facilities are not allowed or can not be provided within the port - crew change, storing, mechanical servicing, bunkering, medical appointments, survey etc.

#### 2.2.1 Safety Exclusion Zone

When a LNG carrier or Condensate tanker is alongside the WMT, a Safety Exclusion Zone will be in force.

This Zone has a radius of 250m centred on the Tankers Manifold and is in addition to the normal Security Zone. This zone encompasses the ACW breakwater structure and the LNG load-out facility. It is prohibited for a recreational vessel to enter the boating safety exclusion zone without permission. The extent of the boating safety exclusion zone is shown in the chartlet contained within the Port of Ashburton Handbook.

### 2.3 Vessel / Terminal security interface

#### 2.3.1 The Port of Ashburton Authority

The governing authority for the Port of Ashburton is the Pilbara Ports Authority (PPA).

Whilst the LNG carrier or Condensate tanker is in the Port of Ashburton, the PLM has a responsibility for the LNG carrier's and Condensate tanker's safe operations as defined in the relevant State and Commonwealth Acts. However, it is to be clearly understood that the overall responsibility for the LNG carrier's or Condensate tanker's safety and safe operation remains with the LNG carrier's or Condensate tanker's Master.

### 2.3.2 Port of Ashburton and WMT Security

The Port of Ashburton operates under the PPA's approved Port Security Plan (PSP).

The Port of Ashburton Harbour Master is the Port Security Officer (PSO).

The WMT is a port security zone, which operates under its own Port Facility security plan in conjunction with the PPA's PSP. The Wheatstone Marine Superintendent is the Port Facility Security Officer (PFSO).

The WMT area is a controlled area and is restricted to valid Australian Maritime Security Identification Card (MSIC) holders. Non-MSIC holders may enter the security zone only when accompanied by a valid MSIC holder.

Un-authorized access to a declared security zone is a breach under the "Commonwealth Maritime Transport and Offshore Facilities Security Act 2003".

## 2.4 Drug and alcohol policy

All personnel working within the Port of Ashburton Waters are subject to PPA's Drug and Alcohol policy.

[PPA fitness-for-duty-alcohol-and-drugs-procedure](#)

All personnel on Chevron Controlled Sites are personally responsible for complying with the company's policy as amended from time to time, for their own safety, the safety of others, and the protection of Chevron's property.

Unauthorized possession, distribution, purchase, manufacture or sale of any Controlled Substance or alcohol is prohibited on Chevron Controlled Sites.

Having a Positive Test for a Controlled Substance is prohibited whilst working on Chevron Controlled Sites or whilst carrying out Chevron business.

Having a Positive Alcohol Test is prohibited whilst working on Chevron Controlled Sites.

## 2.5 Smoking policy

The PLM shall confirm with the LNG carrier or Condensate tanker Master a maximum of two designated smoking rooms in the accommodation area before the commencement of LNG and Condensate transfer operations.

Smoking shall be restricted to designated rooms clearly identified for their intended purpose.

Designated rooms should be ventilated using either a positive pressure or total recirculation design. Direct access is not permitted with any hydrocarbon dangerous zone.

## 2.6 Portable electronic equipment and naked lights (matches and lighters)

Any portable electrical equipment (e.g. hand-held torches, radios, gas analysers), operated in gas dangerous zones, shall be certified for use in such atmospheres by an appropriate certifying body. Equipment should be maintained and operated so as to comply with original certification.

It is prohibited to bring into the WMT any equipment that is a potential ignition source. This includes matches, lighters and any form of electronic equipment (e.g. mobile telephones, cameras, media players, tablet or laptop computers). Requests to bring electronic equipment considered necessary for the transfer operation of LNG or Condensate shall be directed to the PLM or another delegate of the WMT.

### **2.6.1 Radio, satellite and other fixed electronic equipment**

Medium Frequency (MF) / High Frequency (HF) radio transmitting equipment shall be switched off and earthed while the LNG carrier or Condensate tanker is alongside the berth. The main radio transmitting aerials shall be earthed while the LNG carrier or Condensate tanker is at the berth.

Use of satellite communications equipment is permitted but shall be switched off in the event of an emergency, gas release or on the advice of the PLM.

Fixed VHF radio installations, including the AIS, shall be switched to low power – 1 Watt or less. If a low power option is not available the equipment shall be switched off.

Only handheld VHF or Ultra High Frequency (UHF) radios having an output of 1 Watt or less and complying with an applicable standard, are permitted to be used while the LNG carrier or Condensate tanker is at the berth.

LNG carrier and Condensate tanker radars shall not be operated while the LNG carrier or Condensate tanker is at the berth. However, LNG carrier and Condensate tanker radars may be operated after the completion of LNG or Condensate transfer operations, once all loading arms are disconnected, in preparation for departure.

Where essential maintenance and tests are required to an LNG carrier's or Condensate tanker's radar or communications equipment, the PLM shall be consulted. The precautions and recommendations set out in the International Chamber of Shipping's (ICS) Tanker Safety Guide and the Australian Standard The Handling and Transport of Dangerous Cargoes in Port Areas AS 3846-2005 shall be strictly adhered to.

### **2.6.2 Hot work**

Hot work involving sources of ignition or temperatures sufficiently high to cause the ignition of a flammable gas mixture on LNG carriers and Condensate tankers in the Port of Ashburton port limits is not permitted. This includes any work requiring the use of welding, burning or soldering equipment, blow torches, power-driven tools, hand/chipping tools, portable electrical equipment that is not intrinsically safe or contained in an approved explosion-proof housing and portable internal combustion engines.

### **2.6.3 Openings**

All external doors, port and similar openings should be closed during cargo operations. This will be verified prior commencing cargo operations.

## **2.7 Repairs while alongside & main engine readiness**

Repairs affecting a vessels ability to depart in an emergency are generally not allowed, however any special requests are to be made in writing at the earliest convenience ahead of a vessels arrival and are subject to approval by the PPA Harbourmaster and Wheatstone Marine Terminal.

Vessel's main propulsion system readiness is confirmed and agreed during pre-transfer conference.

## **2.8 Provisions and stores (other crafts alongside)**

Handling of Ship's Store from shore or seaside is currently not permitted for vessels alongside the Wheatstone Marine Terminal.



## 2.9 Safety data sheets (SDS)

The latest version of the LNG (or Condensate) will be shared with the vessel during pre-transfer conference. Terminal can provide this information prior vessel's arrival, upon request.

## 2.10 Benzene and Hydrogen Sulphide (H<sub>2</sub>S)

Wheatstone Condensate contains Volatile Organic Compound (Benzene, N-Hexane, Toluene, Ethylbenzene and Xylene) and vessels should take precautions to prevent exposure of their crew to Condensate liquids and vapours. Shore personnel will wear PPE when connecting and disconnecting Condensate Marine Loading Arms. Wheatstone cargoes do not contain hazardous levels of Hydrogen Sulphide (H<sub>2</sub>S).

Refer to Safety data sheet provided by the terminal for precautions.

## 2.11 Static accumulator

Wheatstone Condensate is a static accumulator cargo and plastic drums are not permitted to be used for catching drips during Condensate tanker QCDC connection/disconnection.

### 2.11.1.1 Insulation Flange

Insulating flanges are provided on the loading arms to avoid static accumulation and discharge at the LNG carrier or Condensate tanker's manifold. Bonding cables are not provided or supported at the WMT.

### 2.11.1.2 Closed loading

## LNG

All LNG loading operations are closed loading. Infrequent LNG purging operations allow vapours to be purged to atmosphere to a maximum of 5% HC by volume.

## CONDENSATE

Venting through mast riser is permitted during loading operations as there is no vapour return facility.

## 2.12 Emergency & Lifeboat drills

Emergency mustering or drills that do not impact safe cargo operations are permitted at the Terminal on request. Testing and/or lowering of lifeboats is not permitted alongside the Terminal.

## Section 3 General Information

### 3.1 Terminal location

The Port of Ashburton is located about 12 km west of the town of Onslow and 131 nautical miles West South West of the Port of Dampier in Western Australia's Pilbara region. The Port of Ashburton and the Port of Onslow share a common port boundary.

### 3.2 Terminal layout

The Port of Ashburton comprises of the Wheatstone Marine Terminal (WMT) and the Ashburton Cargo Wharf (ACW). The regulatory body for the Port of Ashburton is the Pilbara Ports Authority.



#### 3.2.1 Wheatstone Marine Terminal (WMT)

The WMT is situated in the Port of Ashburton, consisting of a single berth and piled jetty structure with an alongside dredged depth of 13.5 m. The berth is designed for LNG carriers and Condensate tankers of the following size ranges:

- LNG carriers: 125,000 to 215,000 cubic metre (m<sup>3</sup>) capacity and a maximum displacement of 147,000 Tonnes (MT)
- Condensate tankers: 80,000 to 120,000 Deadweight Tonnes (DWT) and a maximum displacement of 147,000 MT
- More detailed information for the berth can be found in Table 4-1

#### 3.2.2 Ashburton Cargo Wharf (ACW)

The ACW is situated in the Port of Ashburton, consisting of three berths protected by a curved breakwater, in addition to three pontoons which serve as pens for the WMT tugs and Pilot Boat.

The entrance to the ACW is via a short channel located on the south-east corner of the WMT swing basin.

More information on the ACW can be found in the [Port of Ashburton handbook](#).

### 3.2.3 WMT Marine Operations

Chevron Australia Pty Ltd (CAPL) has been appointed the WMT Operator.

The WMT operator, through the Wheatstone Marine Superintendent, is responsible to the PPA for all WMT marine activities and operations. The WMT operator's responsibility includes the operation of the WMT channel, navigational aids on the Jetty, pilotage and associated shipping activity, including safe LNG carrier and Condensate tanker transit, berthing, LNG and Condensate transfers and un-berthing of LNG carriers and Condensate tankers at the WMT.

### 3.3 Hours of operation

WMT and pilotage operations are carried out 24 hour/day, seven day a week basis, unless otherwise advised by Wheatstone Marine Superintendent, or via the LC.

### 3.4 Local time

The standard time zone for the Port of Ashburton is Australian Western Standard Time (AWST) which is Universal Coordinated Time (UTC) plus 8 hours.

### 3.5 Vessel /shore communication policy

The official radio channel for Ashburton VTS is VHF Channel 14. Ashburton VTS also keeps a watch on VHF channel 16. Ashburton VTS is manned 24 hours a day except in the event of an approaching cyclone or other emergencies (in which case port users will be advised of alternate contact details). Vessels operating within the Port of Ashburton shall maintain a continuous listening watch on VHF Channel 14 and 16 at all times.

Wheatstone Pilots operate on VHF Channel 68 as the primary contact and communications channel, with VHF Channel 13 being their backup channel. All vessels operating in port waters and the surrounding area are requested to keep these channels clear at all times.

**The WMT radio is not manned at all times. Radio communication with the ship will be instigated by the Pilot on the day of arrival, prior to the Required Arrival Time (RAT).**

**All other communications to and from the vessel shall be via the following email address: [wheatstone-marine-terminal@chevron.com](mailto:wheatstone-marine-terminal@chevron.com)**

**Table 3-1: VHF Channels**

VHF	User	Allocation	Comments
16	Maritime Calling and Distress	Calling	Internationally recognised general calling and emergency frequency
14	Ashburton Marine	Port Movements	Port of Ashburton VTS. Call Sign "Ashburton VTS"
68	Wheatstone Marine Terminal	Pilots and tugs	WMT Pilots and Tugs for pilotage and mooring operations Call sign "Wheatstone Pilots"
6	General Port Operations		General Working Channel
13	Wheatstone Marine Terminal	Pilots and tugs	Back up channel for pilotage and mooring operations

### 3.6 Language spoken

The working language for WMT is English. All verbal communication between vessel and terminal shall be conducted in English.

### 3.7 Vessel acceptance/clearance/vetting conditions

The Clearance Process used by the MF Operator is a systematic review of a LNG carrier or Condensate tanker and its technical operator's management system in order to assess marine risk to the Terminal.

This Clearance Process will commence on the receipt of the nominated LNG carrier or Condensate tanker's compatibility information pack. The lifting agreements for both LNG and Condensate state the requirements for proposal and nomination periods of vessels.

The Clearance Process consists of two parts:

1. Compatibility: Verification of the LNG carrier's or Condensate tanker's physical and dimensional fit and review of equipment to confirm that the LNG carrier or Condensate tanker can safely berth and load/transfer LNG or Condensate at the WMT
2. Vetting: Quality assessment of the LNG carrier or Condensate tanker and its owner / operator against defined safety, environmental and reliability standards

Only those LNG carriers and Condensate tankers that have been assessed as being operationally and technically suitable with all requirements of the Clearance Process will be accepted to berth at the WMT.

Once an LNG carrier or Condensate tanker has completed the Clearance Process' compatibility verification and been found satisfactory, the LNG carrier or Condensate tanker will be added to the MF Operator's compatibility register. The LNG carrier or Condensate tanker will not be required to undergo future compatibility verification if there are no changes to that LNGC's or Condensate Vessel's configuration (equipment/fittings/hull structure, etc.) which may impact compatibility. If there are changes, these are to be highlighted during the nomination process and relevant documents submitted for assessment to maintain compatibility determination for the vessel.

However, every LNG carrier and Condensate tanker nominated is required to be vetted as part of the Clearance Process on a voyage-by-voyage basis.

### 3.7.1 Conditions of Use

As a condition for each entry by an LNG carrier or Condensate tanker to the WMT, the LNG carrier or Condensate tanker Master shall sign the Conditions of Use (COU). It should be noted that no amendments or additional clauses can be made to the CoU.

The COU outlines the applicable conditions for the use of the WMT, including the provisions of port and marine services by the MF Operator.

The MF Operator will not permit an LNG carrier or Condensate tanker to proceed to berth if the LNG carrier or Condensate tanker Master has not signed the COU.

Refer to [Appendix D](#).

### 3.8 Useful telephone numbers

Refer to emergency contacts

### 3.9 Environmental monitoring procedures

Terminal receives weather updates from Bureau of meteorology, Australia and these are shared with the vessels when alongside.

#### 3.9.1 Tidal Information

The table below indicates the tidal ranges for the terminal and various locations nearby.

**Table 3-2: Tidal Ranges**

Area	HAT	MHWS	MLWS
Port of Ashburton	2.58m	2.14m	0.45m
Port of Onslow	3.0m	2.5m	0.6m
Thevenard Island	2.8m	2.4m	0.5m

#### 3.9.2 Tidal Streams and Currents

The table below indicates the Maximum tidal streams and currents for the various locations.

**Table 3.3 : Tidal streams and Currents**

Area	Flood	EBB
Port of Ashburton	East at 1.5 knots	West at 1.5 knots
Port of Onslow	East North East at 1.5 knots	West South West at 1.5 knots

#### 3.9.3 Weather

##### 3.9.3.1 Seasonal Pattern

In the Northwest of Australia, there are 2 distinct seasons.

Summer (November - April): characterised by prevailing winds from the south west quadrant, peaking in strength through the day and into the evening. There is generally a distinct lull in wind strength early in the morning. Days are generally hot with average monthly temperatures ranging from 20° Celsius at night and 37° Celsius by day. At the peak of the summer season, squalls accompanied by lightning are a frequent event.

Winter (May – October): characterised by prevailing winds from the east to south east peaking in strength in the morning and early afternoon then easing in the late afternoon. Strong easterly winds (greater than 20 Knots) will often blow for a number of consecutive days. Days are generally much cooler than the summer months with average monthly temperatures ranging from 13° Celsius at night to 26° Celsius by day.

Rainfall generally occurs in heavy short bursts with the exception of cyclonic events. Average monthly rainfall is highest during the months from January to July. The average monthly relative humidity ranges from 61 to 70 percent peaking around February.

### **3.9.3.2 Tropical Cyclones**

The official tropical cyclone season for the northwest of Australia is 1st November to 30th April with an annual average of 3 cyclone events in the area. Normally the cyclones originate from the Timor Sea and transit erratically in a south westerly direction.

LNG carrier and Condensate tanker Masters should access the PPA's cyclone contingency plan on the PPA's website prior to arrival and be familiar with its content.

#### [PPA Cyclone Response Plan](#)

The WMT's cyclone plan WS1-COP-00350 interfaces with the PPA's cyclone contingency plan. The WMT cyclone plan is available from the Wheatstone Marine Terminal website:

#### [Wheatstone Marine Terminal - Cyclone Procedure](#)

## Section 4 Berth Information

### 4.1 Berth description and parameters

WMT has a single berth that can accommodate LNG and condensate tankers.

Berth dimensions and details are provided in [Table 4-1](#) and [Appendix E](#)

#### 4.1.1 Products handled

WMT is a loading terminal handling below products

- Liquefied Natural Gas - LNG
- Condensate

#### 4.1.2 Berth criteria

**Table 4-1: Wheatstone Marine Terminal Overview**

Terminal Facility	Value
Pilot boarding ground location	As described on chart AUS64 (Lat 21 degrees 26.2 minutes South, Long 115 degrees 07 minutes East.)
Condensate tanker size range	80,000 to 120,000 DWT
LNG carrier capacity range	125,000 to approximately 215,000 m <sup>3</sup>
Maximum berthing displacement	147,000 DWT
Channel / Turning Circle	Consists of an approx. 4.5 nautical mile approach track from the PBG with an 8.6 nautical mile dredged channel (235 metres wide, declared depth of 13.5 metres LAT) 600 metre diameter turning circle dredged to 13.5 metres LAT Berth pocket dredged to -13.5 metres LAT (see also charts AUS 64, 69, & 743, AU5069P2, AU422115)
Channel Transit UKC	Channel transit UKC is to be determined using the following forms as applicable to the LNG carrier and Condensate tanker: WS1-COP-0293 - Wheatstone - UKC Calculation Sheet - Condensate tankers, WS1-COP-0294 - Wheatstone - UKC Calculation Sheet - LNG carriers
Channel transit wind speed limits	Chevron has conducted a study of wind affectibe various vessel classes (based on hull shape, wind profile, draft) and calculated operational wind limits ranging 17.5 Kts to 25 kts(10 minute average) based on vessel class, wind direction and tidal effects. This value will be shared during the MPX.
Channel Visibility minimum	1.5 Nautical miles
Maximum channel transit speed	Limited to a maximum of 7.5 knots, with the proviso that PLM remain empowered to incrementally increase their speed above this limit, sufficient to overcome any concerning leeway/set that they may experience. Refer also to WS1-COP-0293 - Wheatstone - UKC Calculation Sheet - Condensate tankers,



Terminal Facility	Value
	WS1-COP-0294 - Wheatstone - UKC Calculation Sheet - LNG carriers
Harbour assist tugs & support vessels	3 azimuth stern drive 80 tonne bollard pull tugs & 1 high speed pilot boat
Fender / capacity	4 Fentek SCN 2000 E1.9 conical fenders with 379 tonne capacity provided with low friction pad panels sized to produce maximum 140 kilopascal (kPa) hull pressure Top of panel @ LAT + 7.8 metres (m) Centreline of fender @ LAT + 5.1 m Centre of Panel @ LAT + 3.9 m Bottom of panel @ LAT + 0.0 m
Berthing velocity operational limit	0.10 metres per second (m/s)
Berthing velocity maximum limit	0.15 metres per second (m/s)
Berth orientation	Aligned with LNG carrier / Condensate tanker bow out (port side alongside) 150 / 330 degrees T
Berth structure type	Open Piled Trestle
Loading Platform	5 x FMC LNG loading arms @ 4 m centres installed at upper deck level (+18 m LAT) 2 x FMC Condensate Loading arms @ 4m centres installed at lower deck level (+ 13 m LAT)
Fender line at loading platform	Berthing line 3.5m off-loading platform face; Distance between breasting dolphins (BD 1 to 4) is 115 m
Breasting Dolphins (BD-1 to 4)	4 breasting dolphins, fitted with conical fenders and panels 7.8 m high by 4.8 m wide Dolphins equipped with double 150 tonne Safe Working Load (SWL) quick release hooks with mooring line load monitoring
Mooring Dolphins (MD1 to 6)	6 mooring dolphins per loading platform Dolphins equipped with triple 150 tonne SWL quick release hooks equipped with mooring line load monitoring
Laser docking system	Display boards located on breasting dolphins 2 & 3 (BD2 and BD3)
Lighting	Low level, low intensity lighting 1 light pole per mooring or breasting dolphin
Loading Wind Speed limits	For Condensate tankers , if the wind speed drops to an extent that dispersal of vapours from vessels mast riser is not sufficient, , loading will be reduced or suspended.. This is a health and safety at work precaution. 30 Knots sustained wind, Loading will stop 35 knots sustained wind, Disconnect loading Arms and remove gangway.
Condensate line loading arm flow rate	Using 1 16 inch loading arm – 3,000 m <sup>3</sup> /hour Using 2 16 inch loading arms – 6,000 m <sup>3</sup> /hour
Condensate Density @ 15°C	Ranges approximately between 0.7260 to 0.7350
Minimum required LNG carrier loading rate, 125,000 m <sup>3</sup> – 145,999 m <sup>3</sup>	Using 2 liquid arms 9,500 m <sup>3</sup> /hour Using 3 Liquid Arms 10,000 m <sup>3</sup> /hour



Terminal Facility	Value
Minimum required LNG carrier Loading Rate >146,000 m <sup>3</sup>	Using 2 liquid arms 10,000 m <sup>3</sup> /hour Using 3 Liquid Arms 11,000 m <sup>3</sup> /hour
LNG delivery pressure at manifold LNG density @ -160° Celsius	Not to exceed 350 kPa 453 kg/m <sup>3</sup>
Fuel Gas burning	Terminal has no restriction on gas burning and/or use of vessel's GCU and/or Reliquefaction unit whilst alongside.
Loading strainer	60 mesh (LNG carrier supplied) Strainer no finer than 60 mesh is required to be installed at vessel's vapour return manifold for maiden voyage or first loading after docking.

### 4.1.3 Controlling depths

Controlling depths alongside the Terminal and in the Port of Ashburton Channel is 13.5 metres. Any changes to this are published by Marine Notice by the PPA. The PPA require that all vessels maintain a static UKC of no less than 1.0 metres at all times when in Port waters.

### 4.1.4 Water density

As per the International Convention on Load Lines 1966, the Port of Ashburton is located within the South Indian Ocean Seasonal Tropical Zone. LNG carriers and Condensate tankers must comply as follows:

- Tropical Zone: 1st May –30th November
- Summer Zone: 1<sup>st</sup> December –30<sup>th</sup> April

The Port of Ashburton's water density is generally a consistent 1025 kilograms / cubic metre, however this can change following heavy rain.

### 4.1.5 Maximum draft

A UKC allowance of 1.0m or 10% of the draft, whichever is greater, shall be applied for all vessels when operating within the Port of Ashburton as a minimum.

However, UKC requirements of LNG carriers and Condensate tankers calling at the WMT have been determined through an extensive study and may be greater than the minimum requirement as per the Port of Ashburton Handbook.

The UKC requirements are in agreement with PIANC's guidelines for oil and gas terminals and are determined from the respective calculation sheets:

- WS1-COP-0293 - Wheatstone - UKC Calculation Sheet - Condensate tankers
- WS1-COP-0294 - Wheatstone - UKC Calculation Sheet - LNG carriers

The completed calculation sheets and UKC requirements will be confirmed with the vessel Master using *WS1-COP-00368 - Wheatstone Marine Operations - Pilotage - Master Pilot Exchange - WMT*.

#### 4.1.5.1 Arrival Draughts

LNG carriers and Condensate tankers shall operate at draughts within their normal operating parameters. To ensure manoeuvrability, the LNG carrier's or Condensate tanker's trim shall not exceed 0.015 multiplied by the Length Overall (LOA) [that is 1.5 percent of the LOA] and her propeller shall be fully immersed at all times.

PLMs will ensure that LNG carriers and Condensate tankers meet this requirement prior to boarding.

#### 4.1.5.2 Departure and Transit Draughts

This minimum WMT channel transit UKC shall be determined basis UKC calculations in this section and in consultation with the LNG carrier or Condensate tanker Master and PLM before commencing the planned transit.

#### 4.1.5.3 Alongside the Berths

A minimum UKC shall be maintained at all times by LNG carriers and Condensate tankers alongside the WMT berth.

This minimum UKC alongside the berth will be at least 1 metre as per the PIANC (Permanent International Association of Navigation Congresses) guidelines.

LNG carriers shall, as far as practicable, maintain an even keel whilst alongside the WMT berth.

LNG carrier and Condensate tanker freeboard shall be such that the manifold does not exceed the maximum envelope of the loading arms and the vessels deck goes no higher than the maximum allowable height of the gangway.

#### 4.1.6 Load rates

**Table 4-2: LNG flow rate**

Ships Size m <sup>3</sup> (cargo capacity)	Transfer using 3 liquid arms	Transfer using 2 liquid arms
125,000 – 145,999	Not less than 10,000 m <sup>3</sup> / hour	Not less than 9,500 m <sup>3</sup> / hour
146,000 and above	Not less than 11,000 m <sup>3</sup> / hour	Not less than 10,000 m <sup>3</sup> / hour

WMT loading facilities are capable of the safe and reliable transfer of LNG at a steady rate of not less than 9,000 m<sup>3</sup> per hour using two loading arms and 12,000 m<sup>3</sup> per hour using three loading arms when loading LNG of a density of 450 kg per m<sup>3</sup> against a back pressure of not more than 350 kPa.

**Table 4-3: Condensate flow rates**

Transfer through 2 Arms	Transfer Through 1 Arm
6,000m <sup>3</sup> / hour	3,000m <sup>3</sup> / hour

Each Condensate tanker shall be equipped for closed loading with an initial inert cargo tank atmosphere with a minimal positive pressure.

#### 4.1.7 Maximum allowable working pressure (MAWP)

Each LNG carrier shall have a backpressure at the delivery point not greater than 350 Kilopascals (kPa) when transferring LNG with a density of 450 kilograms (kg) per m<sup>3</sup> at the rates specified in [Table 4-2](#) and using one vapour return arm (maximum back pressure allowance to include the pressure drop caused by strainers which may be installed by the LNG carrier).

#### 4.1.8 Marine loading arms

The WMT berth is fitted with:

- 5 x 16" LNG loading arms:
- 3 for liquid service,
- 1 for vapour service, and
- 1 hybrid for either liquid or vapour service
- 2 x 16" Condensate loading arms

The LNG and Condensate loading arm operating envelopes are described in [Table 4-4](#)

**Table 4-4: LNG and Condensate Loading Arm Vertical and Horizontal Envelopes**

Vertical Limits Above LAT	Lower Limit (metres) above LAT		Upper Limit (metres) above LAT	
Berth (LNG)	17.9		27.9	
Berth (Condensate)	8.2		21.8	
See Appendix H and Appendix I				
Horizontal Limits	Distance from Spotting Line (fore or aft)			
	Pre Alarm	ESD 1 Trigger	ESD2 Trigger	Mechanical Limit
LNG and Condensate Arms	1.00 metre	1.80 metres	3.00 metres	4.60 metres
Also see Appendix H and Appendix I for all connection cases				

##### 4.1.8.1 Powered Emergency Release Coupling (PERC)

Each loading arm is fitted with a Powered Emergency Release Coupling (PERC). Activation of PERC is an ESD2 emergency activation. ESD2 primarily provides for loading arm mechanical protection.

The PERC automatically activates if the loading arms moves outside of its operating limits. ESD2 activation of the PERC can also be activated manually from the shoreside in an emergency.

**WARNING! : ESD2 activation can release a small amount of trapped LNG to atmosphere and it is very important that all personnel are safe and clear from the vessel's manifold.**

The PERC separates the loading arm between two emergency release ball valves.

A Quick Connect / Disconnect Coupler (QCDC) remains attached to the LNG carrier or Condensate tanker's manifold, whilst the main body of the loading arm lifts away.

##### 4.1.8.2 Quick Connect/Disconnect Coupler (QCDC)

Each loading arm has a hydraulic coupler, which clamps on to the LNG carrier's or Condensate tanker's manifold flange and allows for easy quick connection / disconnection.

#### 4.1.9 Vapour recovery

As per Section [6.7](#)

#### 4.1.10 Safe working load of mooring components

Terminal Mooring Hooks are rated at SWL 150 tonnes. Mooring Capstan's are rated to a starting line pull of 4 tonnes and a working line pull of 2 tonnes at 25 metres per minute. Capstan rotation is reversible.

Note, the Terminal is designed to remotely release mooring hooks for Vessel departure. This remote release is backed up with manual release mechanism where required.

#### 4.1.11 Other relevant compatibility information

##### 4.1.11.1 Ship to Shore Linked System (SSL)

The WMT is equipped with a Trelleborg SeaTechnik "ship-shore safety link system".

The WMT can accommodate fibre optic, electric or pneumatic SSLs including a Pyle-Miyaki adaptor for such equipped LNG carriers

The system consists of three independent ESD systems allowing for system backup if one system should fail, namely fibre optic, electrical and pneumatic.

This ship-shore link integrates the ship into the Terminal system and enables the ESD system to be activated by either the ship or the Terminal. The fibre optic and electrical links also provide telecommunications between the ship and shore. The pneumatic system only provides ESD functionality and does not support communications.

The PIN configuration is listed in [Table 4-5](#)

**Table 4-5: ESD Link PIN Configuration**

##### Electric System:

<b>Manufacture</b>	Seatechnik
<b>Connector Type</b>	Pyle National
<b>Shore-Ship (ESD)</b>	13 & 14
<b>Ship-Shore (ESD)</b>	15 & 16
<b>Hotline</b>	5 & 6
<b>Public Phone</b>	7 & 8
<b>Plant Phone</b>	9 & 10
<b>Mooring load Monitoring</b>	31, 32 & 33, 34
<b>Cable Length</b>	50 Mtr
<b>Connection Box Position</b>	Approx 14.7 m SSE of the shore vapor arm center / 6 m inboard of fender line

**Pneumatic System:**

<b>Manufacture</b>	Nitta Moore (Snaptite)
<b>Connector Type</b>	1/2 inch male
<b>Cable Length</b>	50 Mtr
<b>Connection Box Position</b>	Approx 12.9 m SSE of the shore vapor arm center / 6 m inboard of fender line
<b>Setpoint for Trip</b>	3.0 bar

**Optic System:**

<b>Manufacture</b>	Seatechnik
<b>Connector Type</b>	6 Pin
<b>Shore-Ship</b>	4 (ESD), 2 (Comms)
<b>Ship-Shore</b>	3 (ESD), 1 (Comms)
<b>Cable Length</b>	50 Mtr
<b>Connection Box Position</b>	Approx 17 m SSE of the shore vapor arm center / 6 m inboard of fender line

**4.1.11.2 Emergency Shutdown System**

The Terminal ESD system operates through the SSL and is compatible with the LNG carrier's system. An ESD can be activated manually by personnel on the LNG carrier, at various locations throughout the WMT including the Central Control Room (CCR) and automatically if the loading arms extend beyond the pre-set operations limits.

ESD 1: Closes shoreside valves and transfer pumps, LNG carrier's manifold valves, in a safe and controlled manner.

ESD 2: As for ESD 1 then separates the PERC

LNG and Condensate transfer operations are protected through an ESD system. For LNG carriers, the primary system may be either fibre optic or electric. In the absence of a primary system, a pneumatic system is provided as a secondary system. LNG carriers shall test their ESD system within 48 hours of tendering Notice of Readiness (NOR) and confirm this in the 24-hour ETA notice.

**4.1.11.3 Condensate Portable Electric System (PES)**

For Condensate tankers, which do not normally have linked ESD systems, a portable electrical phone / ESD link will be placed on board. This enables the Condensate tanker personnel to activate an emergency shutdown if circumstances demand. The phone link is a direct line to the WMT CCR which includes a PABX line and hotline.

The activation of the PES initiates the following:

- Closing of shore ESD valves
- Stopping WMT condensate transfer pumps

**4.1.11.4 Manifold Area**

Each LNG carrier and Condensate tanker shall have a manifold arrangement, compliant with SIGTTO and OCIMF recommendations as applicable, which is compatible with the WMT.

There should be sufficient space on the drip tray area of the Manifold to accommodate the support jacks on the QCDC of each arm to reduce loads directly applied on the LNG carrier's manifold and to transfer a part of the load to the LNG carrier's deck. Wooden spacers should be made available to place beneath the QCDC support jacks.

**4.1.11.5 Loading Arm Presentation Flange Compatibility****LNG Carriers**

Each LNG carrier shall present at the WMT with the LNG carrier's own short distance/spool pieces fitted to its liquid and vapour manifolds as detailed in this Manual and the applicable compatibility checklist.

LNG carrier's presentation flanges should conform to the American Society Of Mechanical Engineers (ASME) B16.5 Class 150.

The satisfactory condition of the sealing face of the LNG carrier's presentation flanges is critical to prevent leaks and must comply with Terminal requirements (see [Figure 4-1](#)) to ensure a cryogenic seal with the QCDC during loading.

As Quick Connect Disconnect (QC/DC) fittings are utilised, provision of bolt holes in the presentation flange is not mandatory.

Loading arm coupler O-rings will be renewed as required to ensure no leakage from the flanges between the loading arm and manifold. Under normal conditions, a liquid strainer no finer than 60 mesh (or dual flow strainer) should be provided by the LNG carrier and installed by the LNG carrier crew in each of the nominated liquid lines. LNG Carriers post dry dock will be required to put a suitable strainer in the Vapour return line, preferably 20 mesh but no finer than 60 mesh.

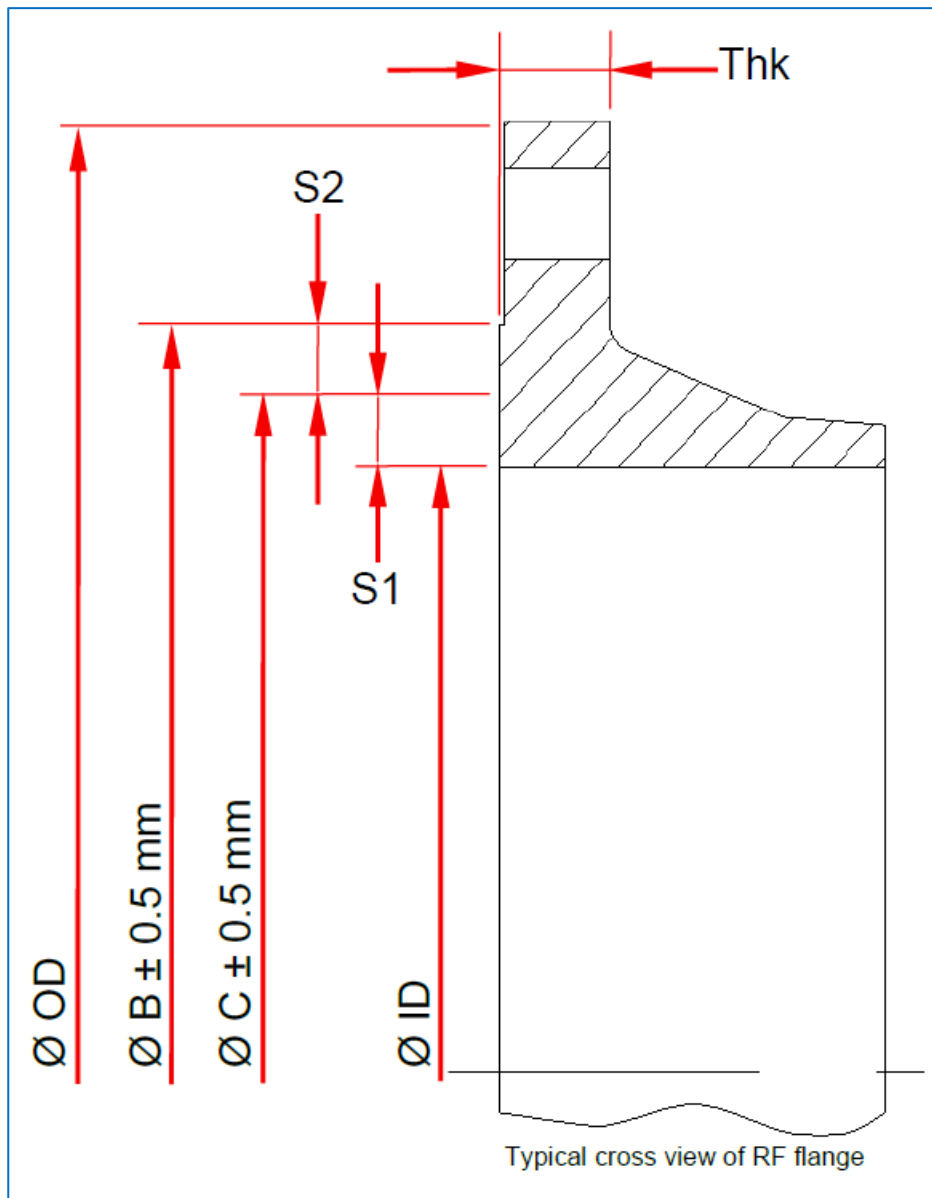
In exceptional circumstances, and subject to WMT operator's discretion, strainers no finer than 200 mesh may be provided by the LNG carrier and fitted to the nominated liquid lines for LNG transfer.

If damage is noted to a strainer or presentation flange prior to loading arm connection, then LNG transfer shall be delayed until the affected strainer or presentation flange is replaced.

WMT operator and the LNG carrier's Master or delegate shall jointly inspect the Short Distance Piece flange face and strainer before connection and again after disconnection of the QCDC. The PLM will record the details of any debris found in strainers post loading and inform the necessary parties for further investigation if warranted.

**LNG Carrier Presentation Flange Size****Table 4-6: LNG Carrier Presentation Flange Size - Raised or Flat Face**

Size (inches)	Thickness (millimetres)		Outside Diameter (millimetres)	
	Minimum	Maximum	Minimum	Maximum
16"	36.6	39.8	595.0	600.2
Primary Seal Surface Finish (S1)	0.4µm		ØC extending to 426mm min	
Secondary Seal Surface Finish (S2)	3.2 µm to 6.3 µm		ØB extending to 460mm min	



**Figure 4-1: Presentation Flange Surface Finish Requirements**

#### 4.1.11.6 Condensate Tanker Presentation Flange Size

**Table 4-7: Condensate Tanker Manifold Flange Size**

Size (inches)	Outside Diameter (millimetres)		Thickness (millimetres)	
	Minimum	Maximum	Minimum	Maximum
16	595.3	598.5	36.6	39.8

#### 4.1.11.7 Loading Arm QC/ DC Clearance

Each LNG carrier and Condensate tanker must ensure compatibility with the manifold recommendations set out by SIGTTO and OCIMF to ensure sufficient clearance around the ship manifold flange for connection of the loading arm QC/DC and space for the support jacks.

## Section 5 Pre-arrival communications

### 5.1 Pre-arrival information exchange from terminal to vessel

#### 5.1.1 WMT Regulations

The objective of this section is to provide the requirements for LNG carrier and Condensate tankers to enter the WMT.

#### 5.1.2 Statutes and Regulations

In the port limits of the Port of Ashburton, all vessels visiting the WMT, including their masters, owners, agents and contractors shall comply with all applicable laws, regulations, codes, rules, orders, notices, permits, licences, certifications, guidelines and manuals, including but not limited to:

##### 5.1.2.1 Commonwealth (Australian)

- Navigation Act 2012
- Australian Maritime Safety Authority (AMSA) Marine Notices and Marine Orders ([www.amsa.gov.au](http://www.amsa.gov.au))
- Biosecurity (Consequential Amendments and Transitional Provisions) Act 2015 and Biosecurity (Consequential Amendments and Transitional Provisions) Regulations 2016
- Environment Protection and Biodiversity Conservation Act 1999
- Protection of the Sea (Prevention of Pollution from Ships) Act 1983
- Maritime Transport and Offshore Facilities Security Act 2003 (MTOFSA) and Regulations 2003

##### 5.1.2.2 State (Western Australia)

- Marine and Harbours Act 1981
- Port Authorities Act 1999 and Regulations 2001
- Shipping and Pilotage Act 1967 and Regulations 1966
- Pollution of Waters by Oil and Noxious Substances Act 1987 and Regulations 1993
- Navigable Waters Regulations 1958
- Prevention of Collision at Sea Regulations 1983
- Environmental Protection Act 1986
- Wildlife Conservation Act 1950
- Conservation and Land Management Act 1984

##### 5.1.2.3 International and others

- International Convention for the Prevention of Pollution from Ships (MARPOL)
- International Ship and Port Facility Security (ISPS) Code
- International Convention for the Safety Of Life At Sea (SOLAS)
- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)
- United Kingdom Standard Conditions for Towage and Other Services (UKSTC1986) as amended by Australian Federal Law



- Company directives contained within their Safety Management Systems (SMS)
- Marine Terminal – Wheatstone Port Facilities Conditions of Use
- Port of Ashburton Handbook

### 5.1.3 Water depths and channel

- The Port of Ashburton LNG channel runs for 8.6 nautical miles (nm) in a direction of 193.7/013.7 degrees True with a width of 235 metres, which then opens up to a 600 m diameter swing basin
- The channel is dredged to a depth of 13.5 metres below Lowest Astronomical Tide (LAT).
- There is a set of green flashing leading lights and orange lead boards which indicate the centre of the channel.
- A snapshot of Chart AUS 743 has been included in [Appendix E Figure E-2](#), which indicates the preferred track for LNG carriers and Condensate tankers approaching from open waters, passing to the east and south of Taunton reef and thence south westerly to the PBG.
- When approaching and departing the Port of Ashburton, vessels must follow the recommended route aid down in the Port of Ashburton Handbook issued by the Pilbara Port Authority and follow all reporting requirements.
- The handbook is available on the Pilbara Port Authority web site: [Port Handbook - Pilbara Ports Authority](#)

### 5.1.4 Navigation Aids

The Port of Ashburton channel is marked by 10 pairs of beacons which are lit and sequenced in such a fashion as to indicate a runway effect.

The channel beacons, marks and lights used are compliant with the International Association of Marine Aids to Navigation and Lighthouse Authority (IALA) buoyage system "A".

#### 5.1.4.1 Charts and Nautical Publications

The LNG carrier and Condensate tanker Master shall verify that the following are on board the LNG carrier or Condensate tanker:

- Latest editions of paper or electronic charts AU5069P2, AU42114, AU422115, AUS 069, AUS 064, AUS 743, and any other chart covering the area, fully corrected to the latest Notice to Mariners
- Latest editions of 'Australia Pilot' Volume 1 (NP13), fully corrected to the latest Notice to Mariners
- Latest editions of 'Admiralty List of Lights' – Vol K (NP83), fully corrected to the latest Notice to Mariners
- Latest editions of 'Admiralty List of Radio Signals' (NP286-4), fully corrected to the latest Notice to Mariners
- Latest editions of 'Australian National Tide Tables' (AHP11) or local Tide Tables for the Port of Ashburton
- PPA – Port of Ashburton Port Handbook - refer to the PPA website [Port Handbook - Pilbara Ports Authority](#)

#### 5.1.4.2 Marine Notices

Marine notices are published by the PPA and are available on the PPA's website.

[Local Marine Notices - Pilbara Ports Authority](#)

#### 5.1.5 WMT Swing Basin and Berth Pocket

The WMT swing basin is located at the southern end of the Port of Ashburton channel and allows inbound LNG carriers and Condensate tankers to swing and berth either side to the jetty. The swing basin's dredged area limits are indicated by red beacons located to the east and green beacons located to the west.

The jetty is located on the south west corner of the swing basin and the berthing line is orientated in a direction of 150 / 330 degrees True.

Both the swing basin and the Berthing Pocket are dredged to 13.5m below LAT. Refer to the latest Marine Notices on the Pilbara Ports Authority website ([www.pilbaraports.com.au](http://www.pilbaraports.com.au)) for the latest declared depth information.

More information is included in [Table 4-1](#)

#### 5.1.6 Pilotage procedures

Pilotage is mandatory for all vessels greater than 35m in length entering Port of Ashburton waters.

All LNG carriers and Condensate tankers require a licensed Marine Pilot for channel transit and berthing operations within the Port.

The pilot boarding ground is situated in Port of Onslow waters, however, vessel routing to and from this PBG is controlled and monitored by the Port of Ashburton VTS. Participation in the VTS is mandatory.

The WMT Pilot Boarding Ground ("Ashburton PBG A") is located in position:

Latitude: 21 degrees 26.2 minutes South Longitude: 115 degrees 07.0 minutes East.

A dedicated Pilot Boat, or a nominated Escort Tug, will be used to transfer Pilots to and from LNG Carriers and Condensate tankers whilst they are underway. Pilots will disembark via the shore gangway once a vessel is all fast alongside the WMT.

WMT Pilots are licenced pilots, the issuing authorities being the Pilbara Ports Authority and the Western Australia Department of Transport.

Pilot boarding arrangements must comply with current International Maritime Organisation (IMO) Conventions and International Convention for the Safety of Life at Sea (SOLAS) regulations. LNG carriers and Condensate tankers must provide an adequate and safe lee for pilot transfer from the pilot boat or tug.

Once the LNG carrier or Condensate tanker formally notifies the LC and the WMT Operator that it is within 3 hours' arrival at the PBG, the assigned PLM shall then become the WMT operator focal point for all LNG carrier, Condensate tanker and WMT communications. This shall continue until the PLM departs the LNG carrier or Condensate tanker at the pilot boarding ground outbound.

After the PLM boards an LNG carrier or Condensate tanker and confirms the COU has been signed by the LNG carrier or Condensate tanker Master, the PLM shall engage with the LNG carrier's or Condensate tanker's Bridge team to conduct a Master Pilot Information Exchange (MPX) and review the passage plan. During this MPX, the PLM shall advise the Master and Bridge team of the importance of Bridge Resource Management principles (BRM) and the requirement to monitor the vessel's progress against the passage plan and to advise the PLM of issues or deviations from the plan.

Master / Pilot exchanges must be carried out as required by the following documents:

- *WS1-COP-0368 - Wheatstone Marine Operations - Pilotage - Master Pilot Exchange - WMT*
- *WS1-COP-0168 - Wheatstone Marine Operations - Pilotage - Passage Plan - Ashburton*
- *PBG(A) to Wheatstone Marine Terminal*

It is required that there is a passage plan for transit from the pilot boarding ground to the berth. The PLM will provide the passage plan and discuss it with the LNG carrier or Condensate tanker Master as part of the Master Pilot Information Exchange (MPX).

LNG carrier and Condensate tanker Masters are expected to advise the PLM of any relevant information about the LNG carrier or Condensate tanker, including manoeuvring characteristics, limiting conditions or deficiencies.

LNG carrier and Condensate tanker Masters must confirm pre-arrival manoeuvring checks (including testing of engines astern) have been completed. The PLM will verify during MPX that the engine has been tested astern, and if deemed necessary may request a repeat test of the engines astern prior to entering the channel.

LNG carrier and Condensate tanker Masters and/or the PLM shall take any action deemed necessary to avoid an unsafe situation. Such action shall be consistent with the established plans and procedures used by all parties including the LNG carrier and Condensate tanker's SMS and the WMT operator's plans and procedures as referenced in this document. However, the overall responsibility for an LNG carrier's and Condensate tanker's safety and safe operation remains with the Master.

The normal pilot boarding ground pick up and channel transit limits are shown in Table 4.1. Any other limiting conditions shall be determined by agreement between the PLM and the LNG carrier or Condensate tanker Master.

LNG carrier and Condensate tanker Masters are accountable to (i) AMSA as the lead maritime government agency; (ii) the Western Australia (WA) Department of Transport (DoT) as the coastal state authority,; and (iii) the PPA as the port governing authority, for compliance with all applicable marine notices, marine orders or legislation affecting the LNG carrier or Condensate tanker trading in Australian territorial waters and port limits.

LNG carriers and Condensate tankers providing NOR at the pilot boarding ground or its proximities must be fully operational and ready for cargo operations upon being made fast at the WMT berth. The LNG carrier or Condensate tanker should have no unidentified defects that could affect safety during transit to and from the berth or during LNG or Condensate transfer operations.

The PPA Harbour Master has overriding authority within the Port of Ashburton limits under the regulations. The Wheatstone Marine Superintendent is responsible for information exchange with all maritime government agencies.

The PLM shall use a Portable Pilot Unit (PPU) equipped with the latest versions of electronic charts for all pilotage operations.

The PLM assigned to LNG carrier or Condensate tanker may be accompanied by other authorised personnel.

LNG carriers and Condensate tankers are required to comply with the minimum UKC requirements as set by the governing port authority. UKC calculations will be completed by the PLM prior to start of channel transit or departure from berth.

### **5.1.7 Anchorage**

WMT does not have a designated anchorage. In case LNG carrier or Condensate tanker is required to anchor in an emergency, master to seek guidance from Ashburton VHF on VHF channel 14 or 16.

### **5.1.8 Tug requirements**

The WMT has 3 primary escort class azimuth stern drive tugs of 80 MT bollard pull which are available to accompany the LNG carrier or Condensate tanker between the northern end of the channel and the LNG berth and assist in the mooring/unmooring operation.

A standby tug of a suitable class is present in the port if one of the primary tugs is unavailable.

At least three tugs will be made fast to the LNG carrier or Condensate tanker for the entire channel transit.

#### **5.1.8.1 Marine Services Provider**

Svitzer Australia Pty. Ltd. is contracted to provide marine services to the WMT. They provide and maintain three ASD tugs of 80 tonnes bollard pull [two (2) with salvage capacity], one ASD tug of 60 tonne bollard pull acting as a retainer and one (1) pilot boat for assisting all LNG carriers and Condensate tankers calling at the WMT. Marine services may include but are not limited to:

Escorting LNG carriers and Condensate tankers between the Port of Ashburton pilot boarding ground and the WMT, acting under the direction of the PLM.

Assisting in berthing/un-berthing LNG carriers and Condensate tankers at the WMT acting under the direction of the PLM.

Providing standby duties while LNG carriers or Condensate tankers are berthed at the WMT.

Perform fire-fighting, lifesaving and other emergency response services required by the MF Operator, for the LNG carrier and Condensate tanker calling upon the WMT.

Maintaining and exercising the capacity to transfer PLMs to/from LNG carriers and Condensate tankers. If the pilot boat is unavailable, this service, may be provided by a tug.

Performing oil spill or hazardous material spill response and clean-up activities needed by the LNG carrier and Condensate tanker or by the MF Operator.

Conducting salvage as directed by the MF Operator only.

Implementation of any marine security requirements related to the Port of Ashburton, acting under the direction of the PPA Port Security Officer (PSO), the PLM, and/or the PPA Port Facility Security Officer (PFSO).

Performing such other related or ancillary tasks in the Area of Operations that may be requested by the MF Operator, provided it is in the safe capability of service provider vessels.

#### **5.1.8.2 United Kingdom Towing Rules**

All LNG carriers and Condensate tankers berthing at the WMT will use the services of the tugs provided by the marine services provider.

The marine services provider will use the internationally recognized towing standard United Kingdom Standard Conditions for Towage and Other Services (Revised 1986) as amended by Australian Federal Law.

## 5.1.9 Vessel and terminal limitations for berthing / unberthing

### 5.1.9.1 LNG Carrier Size Range

Each LNG carrier shall have a gross LNG tank capacity of at least 125,000 m<sup>3</sup> that is, designed, equipped and manned to safely and reliably transfer a full LNG cargo at a steady rate not less than the rates for the applicable LNG carrier size range, as set out in [Table 4-2](#)

Each LNG carrier shall have a loaded displacement of not more than 147,000 tonnes and a Length Overall (LOA) between 270 m and 315 m unless otherwise determined to be compatible with the WMT by the Clearance Process conducted by the WMT Operator.

### 5.1.9.2 Condensate Tanker Size Range

Each Condensate tanker shall have a gross tank capacity of at least 108,000 m<sup>3</sup> which is designed, equipped and manned so as to safely and reliably accept loading of a full cargo at a steady rate not less than 5,000 m<sup>3</sup> / hour using 2 loading arms.

Each Condensate tanker shall be in the size range 80,000 DWT to 120,000 DWT, have a maximum loaded displacement of 147,000 tonnes and a LOA of between 230m and 260m unless otherwise determined to be compatible with the WMT by the Clearance Process conducted by the WMT Operator.

There is no Condensate vapour return to shore.

It should be noted that Condensate tankers may be draught restricted by the WMT Under Keel Clearance (UKC) requirements and calculation.

### 5.1.10 Minimum mooring requirements and mooring diagram

Each LNG carrier and Condensate tanker shall be equipped with adequate facilities for mooring and unmooring designed in accordance with the recommendations of the OCIMF and SIGTTO, and capable of complying with the computer based mooring analysis used in the Clearance Process.

The PLM will supply LNG carriers and Condensate tankers with a copy of the agreed mooring plan taken from the computer-based mooring analysis study prior to arrival alongside at the WMT berth.

The LNG carrier or Condensate tanker Master, the mooring team, and the PLM shall review this Clearance Process approved mooring plan and shall agree on the final mooring plan prior to the LNG carrier or Condensate tanker proceeding to the berth. Any deviation from these plans shall be agreed by the above taking into consideration the weather prognosis for the LNG carrier's or Condensate tanker's anticipated time alongside the berth in compliance with the computer-based mooring analysis as a minimum.

Confirmation that an LNG carrier's and Condensate tanker's mooring equipment required for the mooring configuration is present and in good working order shall be provided in the Estimated Time of Arrival (ETA) notices described in [Appendix B](#) and [Appendix C](#).

### 5.1.11 Line handling procedures

For ease and efficient mooring operations an "Endless Loop" arrangement shall be used to pass lines to the mooring hooks. The Terminal will receive a ship's heaving line and attach it to the Terminal messenger line (One Forward and one Aft). The ship's crew will then be requested to retrieve the messenger back on board and attach the messenger to ship's mooring line(s). The heaving line is to remain attached to the messenger line. The Terminal will then heave the mooring line(s) back to the appropriate mooring hook. Once secure on the hook the vessel can retrieve the messenger by the still attached heaving line to connect to the next Mooring line. This process continues until the last mooring line



is made fast. Only then can the ships heaving line be removed from the shore messenger and retrieved back to the ship.



Small jockey ropes shall be fitted to all mooring line tails for ease of handling by the Wheatstone Marine Terminal personnel.

Jockey ropes shall be thoroughly inspected by the LNG Ship and Condensate Vessel crew prior to arrival. If deterioration is found during the visual inspection, then the jockey rope is to be replaced.

All jockey ropes should be replaced at the same time as the mooring line tails.

Jockey ropes shall be a minimum of twenty-six (26) millimetre diameter polypropylene rope or a HMSF rope of equivalent minimum breaking load.

The working end of a made-up jockey rope on a mooring line tail should be approximately one half (0.5) metre shorter than the length of the mooring line tail to facilitate proper landing of the mooring line tail eye onto the quick release mooring hook by the Terminal personnel.

Typical finished length for the jockey rope is approximately five decimal three (5.3) metres with two (2) soft eye splices as depicted below.

The inboard or outboard mooring line of each set of mooring lines (set of two) should be marked with a distinctive coloured tag to allow for ease of identification by the shore mooring team (eg. coloured tape wound around a section of the mooring line).

The LNG carrier or Condensate tanker Master should ensure adequate mooring lines are provided and properly tended to whilst moored alongside.

Prior to landing the gangway, connecting the loading arms and commencing LNG or Condensate transfer operations, the LNG carrier or Condensate tanker Master and PLM shall agree that the LNG carrier or Condensate tanker is adequately and securely moored.

Should any concerns arise, regarding the mooring integrity (in particular with respect to mooring lines bearing an uneven load/tension) then the PLM shall inform the LNG carrier or Condensate tanker Master.

LNG or Condensate transfer operations will be stopped if there are any concerns with regard to the mooring integrity particularly if the LNG carrier or Condensate tanker fails to take adequate measures to adjust moorings.

Mooring line load/tension monitoring equipment will be provided at the WMT if a vessel does not have a compatible mooring monitoring system compatible with the SSL.

When adjusting moorings, the LNG carrier or Condensate tanker crew shall take care not to inadvertently move the LNG carrier or Condensate tanker out of a position as this could compromise the gangway or loading arms and possibly initiate an ESD.

Mooring ropes on bitts are prohibited.

Differently constructed mooring lines to the approved Optimoor study are not to be accepted.

#### 5.1.11.1 Mooring Line Load Monitoring and Limits

On completion of mooring operations, the mooring line tensions must be monitored and recorded on the hour. For this purpose, if a vessel does not have a dedicated mooring line monitoring system available through the Ship/Shore link, a laptop will be provided to the vessel by the Terminal for this purpose.

Mooring line tension alarm limits are preset and are seen in the [Table 5-1](#). Minimum and maximum mooring line tensions are also designated which too are seen in the [Table 5-1](#).

If for any reason a vessel can not maintain the mooring line tensions within the specified limits, the PLM must be informed immediately. The PLM will attend the vessel for further investigation.

It should be noted that the LNG and Condensate loading arms have pre-determined limits of travel. If these limits are exceeded, there is a set escalation to protect the environment, the terminal infrastructure and the vessel. This escalation is as follows:

- (i) Initially a pre-alarm will sound;
- (ii) If the vessel moves further out of position, an ESD1 activates which shuts down all loading pumps, compressors and loading arm/vessel manifold isolation valves; and
- (iii) If the vessel continues to move further out of position, an ESD2 activates and the loading arms will separate from the vessel.

To this end, only one mooring line should be adjusted at a time with the vessel's position monitored throughout the operation.

**Table 5-1: Mooring Line Load Limits**

Permissible Range (metric tonne)	Minimum Alarm (metric tonne)	Pre-alarm (metric tonne)	Maximum Alarm (metric tonne)
10 – 30	8	35	40

#### 5.1.12 Berthing manoeuvres / approach speeds

In order to ensure an even distribution of berthing forces, PLMs will endeavour to land the LNG carrier or Condensate tanker on all fenders simultaneously when coming alongside at a maximum operational berthing velocity of 10 centimetres/second with minimal head or stern way.

**Table 5-2: Berth Design Criteria**

Maximum Berthing Displacement (metric tonnes)	Maximum Designed Berthing Velocity (centimetres/ second)
147,000	15

#### 5.1.13 Garbage and slops disposal procedures

WMT does not have garbage or Slop reception facility.

## 5.2 Pre-arrival information exchange from vessel to terminal

### 5.2.1 Vessel Communications

All vessels calling at the WMT will be required to observe the mandatory reporting system as defined by the individual lifting instructions and laid out in the respective Lifting Agreements. These requirements are in addition to the ETA information that is stipulated from the PPA. Agents should also be aware of requirements that the Department of Transport may put in place for vessels calling at Wheatstone having to transit the Port of Onslow waters.

### 5.2.2 Pre-Arrival Communications

As per the Lifting Agreements for both LNG and Condensate, the following notices are to be sent to the WMT operator and Wheatstone LC.

#### **Notice of LNG Carrier and Condensate Tanker Movements**

The Master of each LNG carrier and Condensate Tanker shall give the WMT operator and LC, by facsimile or electronic mail, the following notices, which comply with the requirements in Appendix B (LNG Carriers) or Appendix C (Condensate Tankers):

- Departure Notice
- Seven-Day Notice
- Five-Day Notice
- Three-Day Notice
- Two-Day Notice
- 24-Hour Notice

The Master of an LNG carrier or Condensate Tanker shall promptly notify the LC and the WMT operator of any change to information previously provided.

### 5.2.3 Statutory Notices

#### **5.2.3.1 Australian Customs and Border Protection Service**

Prior to arrival at the WMT, LNG carrier and Condensate tanker Masters are required to submit mandatory documentation through their agent or operator to satisfy Australian customs and border protection service.

For further information on the documentation required to be submitted, contact your agent or operator and refer to the following website: [Australian Border Force - Cargo reporting](#)

#### **5.2.3.2 Department of Agriculture, Fisheries and Forestry**

Prior to arrival at the WMT, LNG carrier and Condensate tanker Masters are required to submit mandatory documentation through their agent or operator to satisfy the DAFF:

For further information on the documentation required to be submitted, contact your agent or operator and refer to the following website: [DAFF website](#)

#### **5.2.3.3 Modernised Australian Ship Tracking and Recording System Reporting**

For Australia to fulfill its international obligation to carry out Search and Rescue (SAR) activities, LNG carriers and Condensate tankers are required to participate in Modernised Australian Ship Tracking and Recording System Reporting (MASTREP).

Refer to the website for more information: [MASTREP - AMSA](#)



## 5.2.4 Arrival Communications

When within VHF radio range of the Port of Ashburton, all LNG carriers and Condensate tankers are required to monitor VHF radio channels 16 and 14 for information regarding the movement of other vessels transiting the port. "Ashburton VTS" is the call sign of the monitoring VTS.

LNG carriers and Condensate tankers are to advise Ashburton VTS 4 hours prior to arriving at the Port of Ashburton port limits of their ETA at port limits and other relevant information (e.g. ETA at pilot boarding ground/intention to anchor/security level).

The PLM ("Wheatstone Pilots") will contact the LNG carrier or Condensate tanker via VHF radio on channel 14 on the day of their Required Arrival Time (RAT) prior to the pilot boarding. They may request a switch to Channel 68 (Working Channel) prior to conducting the Pilot transfer.

It should be noted that the WMT does not monitor VHF radio 24/7 and Ashburton VTS cannot address pilotage issues - boarding arrangements, boarding time etc. The vessel must wait until the Pilot has established communications before this information can be confirmed verbally. In all cases, arriving vessels will be sent, by email, their RAT and pilot boarding instruction and arrangements at least 24 hours before their RAT.

## 5.2.5 Tendering Notice of Readiness (NOR)

### 5.2.5.1 LNG Carrier

The Master of each LNG carrier shall tender NOR when the LNG carrier:

Has arrived at the pilot boarding ground (inbound), or such other point located at or proximate to the Port of Ashburton as may be advised by the WMT operator

Has received all necessary port clearances and is able to receive LNG for loading / transfer and, if relevant, purging or cooling.

The NOR shall be delivered by the Master of the LNG carrier to the WMT operator by facsimile or electronic mail. In addition, the NOR may be handed to the PLM after the PLM has boarded the LNG carrier, in which case, the PLM shall countersign for receipt on behalf of the WMT operator.

A NOR is effective:

For an LNG carrier giving its NOR on its Required Arrival Time – at the RAT

For an LNG carrier giving its NOR after its RAT– when the PLM boards the LNG carrier, following WMT operator's notice to the LNG carrier that the WMT is ready to receive that LNG carrier for loading; and

For an LNG carrier giving its NOR before its RAT – the earlier of the RAT or when the PLM boards the LNG carrier, following the WMT operator's notice to that LNG carrier that the WMT is ready to receive the LNG carrier for loading.

### 5.2.5.2 Condensate Tanker

The Master of each Condensate tanker shall tender NOR when the Condensate tanker:

Has arrived at the pilot boarding ground (inbound), or such other point located at or proximate to the port as advised by the WMT operator,

Has received all necessary port clearances; and

Is able to receive Condensate for loading.

The NOR shall be delivered by the Master of the Condensate tanker to the WMT operator by facsimile or electronic mail. In addition, the NOR may be handed to the PLM after the PLM has boarded the Condensate tanker, in which case, the PLM shall countersign for receipt on behalf of the WMT operator.

A NOR is effective:

For a Condensate tanker giving its NOR within the Two Day LDR (Loading Date Range), at the time 6 hours after the NOR is tendered, or when such Condensate tanker is "all fast alongside" the berth, whichever is earlier;

For a Condensate tanker giving its NOR after the Two Day LDR, when such Condensate tanker is "all fast alongside" the berth; and

For a Condensate tanker giving its NOR before the Two Day LDR, 06:00 of the first day of such Two Day LDR or when such Condensate tanker is "all fast alongside", whichever is earlier.

## Section 6 Operational information

### 6.1 Gangway and transverse space

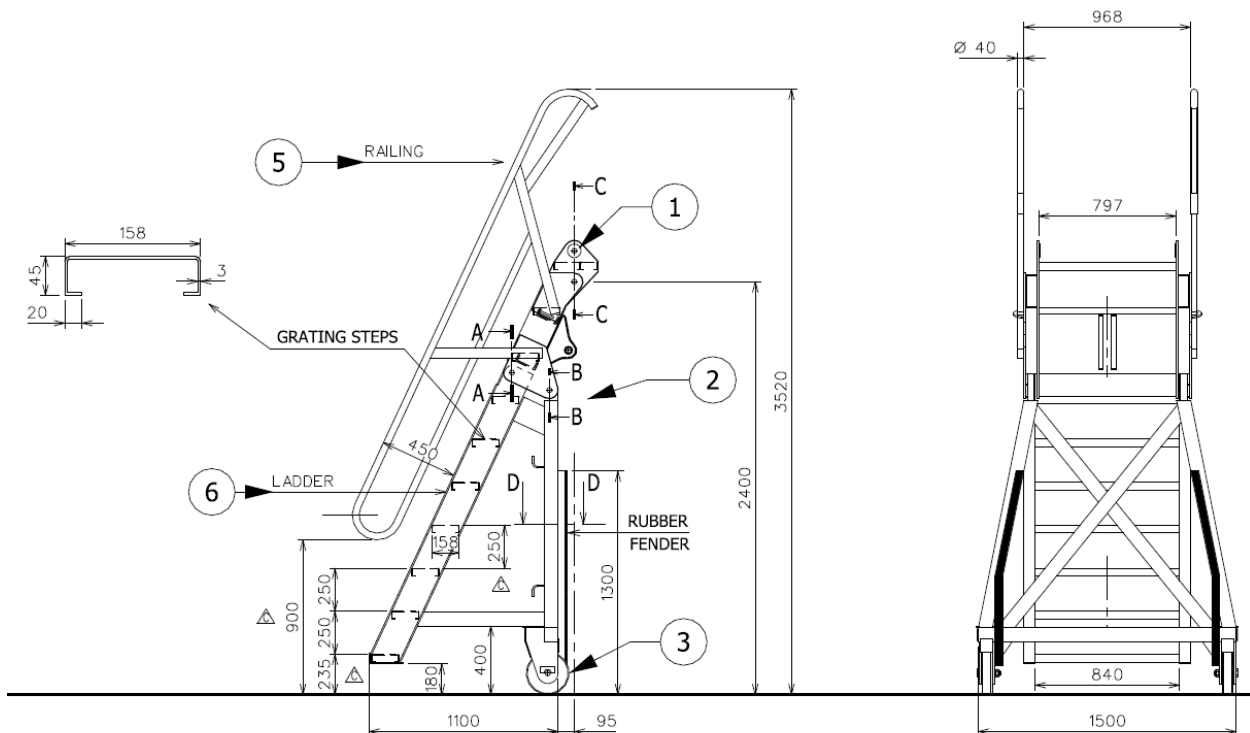
The berth is equipped with a pedestal mounted telescopic, self-tread-levelling gangway. The gangway base will form a footprint of 1.5m fore and aft and 1.135m athwartships as shown in [Figure 6-1](#).

The gangway is located on the south corner of the loading platform deck. When moored port side to, the tower it is approximately 22m aft of the LNG vapour manifold and 38m aft of the centre of the Condensate loading arms.

The position on the LNG carrier or Condensate tanker will be pre-determined in the Clearance Process.

The LNG carrier or Condensate tanker crew are required to keep this area clear when landing the gangway on board. The gangway shall touch down on the deck in a safe and unobstructed area.

Once the gangway is landed on the deck, the control is placed in freewheel mode allowing the gangway to follow the LNG carrier and Condensate tanker's motion.



**Figure 6-1: Gangway and Transverse Space**

Maximum Gangway height above LAT is 23.4 metres.

Minimum Gangway height above LAT is 7.2 metres

Also see [Appendix G](#)

### 6.2 Pre-transfer conference policy

A pre-loading conference will be held between the LNG carrier's or Condensate tanker's personnel and WMT representatives to discuss the loading operation and highlighting the

safety precautions and emergency procedures required at the WMT. As a minimum, the Master and Chief Officer of the vessel must attend this meeting.

### **6.3 Ship/Shore Safety Checklist and other documents**

Once the LNG carrier or Condensate tanker is secured alongside the berth, the PLM will conduct a safety check in the presence of the Master's nominated representative to confirm the suitability to commence loading at the WMT.

The relevant Ship-Shore safety checklist (SSSC) will be completed and signed by the PLM and responsible officer prior to commencing any LNG or Condensate transfer operations and prior to the opening of any of the LNG carrier's or Condensate tanker's valves. However, loading arm manifold connections may be allowed as these connections are checked as part of the SSSC.

Checks will be repeated periodically, and the checklist will be initialled with the time of the check to verify continued compliance.

Warm and, where necessary, cold ESD testing and verification will be satisfactorily completed prior to the commencement of LNG transfer operations. In absence of a cold ESD test, a cold stroke of the ship's ESD valves will be conducted prior to commencement of ramp up to loading rates.

ESD testing and verification will be satisfactorily completed prior to the commencement of Condensate transfer operations.

Refer to *WS1-COP-00333 - Wheatstone - Ship Shore Safety Checklist*

### **6.4 Ballasting Policy**

Vessel must comply with ballast management as per the Biosecurity mandatory requirements of the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF). For DAFF requirements and forms, master to contact their shipping agent. There is no facility to treat ballast water at the terminal. Only ballast that is eligible for discharge, as declared in the vessels Biosecurity Status Document (BSD) can be discharged at the Terminal during loading.

### **6.5 Loading arm connection and disconnect/draining procedures**

#### **6.5.1 MLA Connection**

Terminal's Storage and loading team is responsible for connecting the MLAs to the manifold presentation flanges. All unauthorised personnel are to remain clear of the manifold area while the MLAs are being manoeuvred. The hydraulically operated MLAs can move unexpectedly and should be treated as a suspended load. No person shall stand underneath or beside the MLA while it is being manoeuvred to or from the vessel's manifold to avoid accidental contact or falling ice (during LNGC disconnection).

#### **6.5.2 Draining and Purge**

##### **LNG**

LNGC crew and terminal's Storage & Loading team are responsible for the safe liquid draining and nitrogen purging of the loading arms. Completion of purge is verified by gas meter reading before disconnection is allowed to proceed. Detailed procedures will be discussed by the PLM during pre-transfer meeting.

## **Condensate**

The PLM and terminal's Storage & Loading team are responsible for safe loading arm liquid draining to condensate tanker tanks. PLM provides oversight where required with particular focus on his/her and crew safety.

### **6.5.3 MLA Disconnection**

The PLM shall verify that the MLAs are fully drained prior the MLA disconnection operation can commence. All pressure must be removed from the MLA's prior to opening the QCDC.

Post disconnection, the manifold presentation flange face shall be inspected by the vessel crew, S&L Team and the PLM for damage or any other anomalies. If damage is noted, it should be determined if the damage was pre-existing or as a result of the loading operation.

The MLA QCDC flange face shall be inspected by the vessel crew, S&L Team and the PLM for damage or any other anomalies prior to fitting the blank. If damage is noted, it should be determined if the damage was pre-existing or as a result of the LNG loading operation.

For LNGs, if debris is found during inspection of the manifold strainers, samples will be taken and/or photographs taken (if suitable camera is available and/or if strainer can reasonably be transported outside gas-danger zone).

## **6.6 Cargo transfer policy and terminal manning requirements**

Loading procedures will be agreed at the pre-loading Conference and will be governed by the LNG carrier's or Condensate tanker's cargo manual, loading plan and WMT requirements. The PLM is there in an advisory role only. The responsibility for all loading operations remains with the vessel's Master and delegates.

A cargo loading plan shall be prepared by the LNG carrier or Condensate tanker Master and presented to the PLM for discussion and review at the pre-loading conference.

The cargo loading plan shall be subject to agreement between the LNG carrier or Condensate tanker Master and the PLM prior to commencing LNG and Condensate transfer operations.

### **6.6.1 Cargo Tank Environment**

An LNG carrier arriving with LNG "heel" on board, or a Condensate tanker, shall arrive with cargo tanks in a condition in accordance with the requirements in [Table 6-1](#).

**Table 6-1: Cargo Tank Environment and Line Condition Requirements**

Condition	LNG carrier	Condensate tanker
Hydrocarbon content	> 95% by volume	
Oxygen content	<5% by volume	<8% by volume
Hydrogen Sulphide	N/A	Maximum 5 parts per million
Tank Pressure	To arrive with stable tank pressures that are within the safe operating limits of the vessel's MARVs settings. Arriving with cargo tank pressures in excess of 12 Kpa will require prior agreement with the terminal.	Minimum IG pressure for gauging
LNG inert gas dew point	at least -40° Celsius within the entire cargo system (including cargo tanks, cargo pipelines and cargo machinery)	N/A
Carbon Dioxide and other inert gases	<1% by volume	N/A
Ships Cargo Loading Lines	The Terminal require LNG vessels to arrive with their cargo loading lines empty and in warm condition. Lines will be cooled down by terminal supplied LNG as part of the preloading Marine Loading Arm and ships cargo line cooldown process	N/A

An LNG carrier arriving from the builder's yard or refit should arrive with the cargo system gas-free, inerted and at ambient temperature.

LNG carrier's cargo systems may be inerted with generated inert gas or pure nitrogen.

LNG carriers inerted with inert gas or pure nitrogen are required to perform gas-up operation and achieve hydrocarbon content in excess of 95% in cargo system, prior proceeding to cool-down operation.

Before an inerted LNG carrier can direct tank vapour to shore, tank content shall be purged through the LNG carrier's venting systems to atmosphere using LNG vapour until the hydrocarbon content reaches a maximum of 5% by volume. Thereafter, tank vapour must be sent to the terminal via the vapour return line.

If venting to atmosphere is not possible, prior communication with the WMT Operator is to take place to ensure an acceptable procedure has been agreed to allow the purging of the cargo tanks.

The purge or gas-up operation is considered complete when the hydrocarbon content, as measured at the top of the cargo tank filling port exceeds 95% by volume, and the carbon dioxide content is less than 1% by volume, including all associated cargo pipelines and systems.

The PLM may witness all cargo system gas tests taken to confirm these requirements are met. The PLM may request to witness additional cargo system gas tests.

At the completion of the gas up and purging operation the PLM, the WMT CCR operator and the LNG carrier's Master shall consult and agree the LNG carrier is in all aspects ready for the commencement of LNG tank cool down.

Upon completion of the LNG Carrier's tank cool down operation (when the LNG Carrier declares itself cold and ready to load), the LNG loading operation will commence.

## 6.6.2 Terminal manning

### 6.6.2.1 Wheatstone Marine Superintendent

The Wheatstone Marine Superintendent is Chevron's senior marine operations representative at the WMT and the first point of contact for the PPA, Wheatstone LNG Plant Person in Charge (PIC) and the Lifting Co-ordinator (LC) in all matters of marine operations.

The Wheatstone Marine Superintendent is responsible for the management of the WMT marine operations team, compiling the daily schedule and Simultaneous Operations (SIMOPS) plan, and for communication with the PPA, PIC and LC for all marine required changes to the Specific Delivery Schedule (SDS), which may be requested by the WMT operator.

The Wheatstone Marine Superintendent is also responsible for the day-to-day management of the tugs and pilot boat Marine Services Agreement (MSA) and for raising all work requests for planned and unplanned / unscheduled maintenance of marine and ship-shore facilities and equipment.

The Wheatstone Marine Superintendent, or his/her designate, will be responsible for the allocation of PLMs to cover all LNG carrier and Condensate tanker movements within the Port of Ashburton requiring compulsory pilotage. In determining PLM allocations, the following considerations shall be among those taken into account:

1. Pilot licence endorsement held
1. The PPA schedule and requests
2. Compliance with ABU-COP-0188 ABU - Pilotage - Fatigue Management Guideline
3. Pilot training requirements and experience
4. Rotational cycle of PLMs
5. Any simultaneous operations at or near the Port of Ashburton and WMT (SIMOPS)
6. Port traffic management

The PLM allocation shall be arranged to ensure there is no impact on operational requirements of the SDS and will be subject to review should operational requirements dictate a change is required to avoid any potential delays. Any proposed changes to allocations of PLMs is to be reviewed thoroughly by the Wheatstone Marine Superintendent, or his/her designate, to ensure all considerations above and potential impacts are identified, particularly with respect to LNG carrier and Condensate tanker passage plan preparations and the continuity of communications.

### 6.6.2.2 Pilot Loading Master (PLM)

The PLM has a dual role to act as the Pilot for navigation of vessels within the Port and Loading Master during LNG and Condensate loading processes. The Loading Master role assumes the responsibility of the onboard Terminal representative for all LNG carriers and Condensate tankers using the WMT.

The PLM is responsible for ensuring that the requirements regarding the safe mooring of LNG carriers and Condensate tankers and LNG and Condensate transfer are observed while the LNG carriers and Condensate tankers are alongside the berth.

The PLM is a licensed Pilot and has a responsibility to the PPA and Wheatstone Marine Superintendent for ensuring that the WMT Manual requirements are observed.

The PLM's loading responsibilities may be undertaken by a fully trained Loading Master (LM), who is typically a PLM in training, but may also be someone who does not hold a Pilot licence for the Port.

The PLM or LM is authorised to sign and receive or issue documents as the WMT operator representative, on behalf of the WMT.

PLMs and LMs shall operate within Chevron's Fatigue Risk Management System.

### **6.6.2.3 Shipping and Marine Communications Officer**

The WMT Shipping and Marine Communications Officer (SMCO) is primarily responsible for producing the documentation associated with LNG and Condensate cargo shipments and facilitating buyer representatives and cargo surveyors whilst on site. The WMT SMCO, in cooperation with the PLM team, also manages all WMT LNG carrier and Condensate tanker administration and communications for the Wheatstone Marine Terminal on behalf of the Wheatstone Marine Superintendent.

### **6.6.3 Manifold access**

Manifold access arrangements during LNG and Condensate transfer operations will be agreed as part of ship/shore meeting and according to the LNG carrier's or Condensate tanker's Safety Management System (SMS).

Note: the manifold area is normally considered a no-go area for all personnel crew and WMT personnel during liquid cargo transfer operations. The manifold area can be monitored from a safe area, usually a catwalk near the manifold and/or by CCTV.

## **6.7 Vapour recovery**

### **6.7.1 LNG Vapour Return**

LNG vapour return to shore is via one vapour arm and fixed pipeline.

LNG carriers should have their High Duty (HD) compressors ready for use at all times during the loading for vapour pressure management.

At times, the vessel may be requested to reduce the volume of vapour being returned to shore to prevent the shore vapour system venting to the marine flare due to high pressure within the shore system.

LNG vapour arm return flow rate will be monitored and is not to exceed 40,191 m<sup>3</sup>/hour.

### **6.7.2 Condensate Vapour Return**

There is no vapour recovery for condensate.

## **6.8 Crude Oil Washing (COW)**

Not applicable to scope of operations at WMT.

## **6.9 Safe operations requirements**

### **6.9.1 Terminal operating limits**

Refer to [Table 4-1](#)

### **6.9.2 Low Wind Speed conditions**

If during loading Condensate tankers, the wind speed drops to an extent that dispersal of vapours from vessels mast riser is not sufficient, or a health risk is determined, loading will be reduced or suspended until sufficient dispersal of such vapours can be assured. Wheatstone condensate vapours contain BTEX and thus may constitute a health hazard if vapour is not dispersed properly. This will be undertaken by the PLM in consultation with the Master of the vessel or his representative.



### 6.9.3 Non Standard Vessel Operations

The following vessel operations are not permitted at the Wheatstone Marine Terminal. This list is not exhaustive and a request for any non-standard operation must be submitted to the WMT for approval at least 72 hours prior to arrival:

- Cargo/Spray Pump Testing
- High Level Alarm Testing
- Non-standard Cooldown (LNG vessels only)
- Non-Standard Loading (e.g. internal LNG/condensate transfers)
- Routine Main/Auxiliary Engine repairs/maintenance which affects mobilisation of the vessel in case of an emergency

### 6.10 Tank cleaning and tank entry policy

WMT does not permit tank cleaning or tank entry on vessels while moored alongside.

### 6.11 Inert gas systems policy

Vessels fitted with Inert Gas system should ensure the system is operational.

The PLM must verify that the cargo tank atmosphere is suitably inerted to Terminal requirements and that the oxygen content of the tanks on arrival is below 8% by volume. Where there is any doubt, the PLM will verify by gas meter measurement with a duty officer prior to connecting MLA's.

### 6.12 Surveyors / sampling and gauging

#### 6.12.1 Sample Container Management

WMT is equipped with an Auto-sampling and analysing system for LNG. Terminal is responsible for the operation and verification of this system. If requested by a lifter, a sample of LNG vapour may be placed on board the LNG carrier prior to departure, with prior agreement with terminal.

Samples of Condensate will be placed on board the Condensate tanker prior to departure.

A receipt for samples will require signature from the LNG carrier or Condensate tanker Master.

#### 6.12.2 Wheatstone Marine Terminal Feedback

If requested, or required to highlight any issues during the vessel's stay at the WMT, the PLM or LM will provide feedback to the LNG carrier or Condensate tanker, and in all cases comply with Chevron Marine Assurance (PAVIS) Terminal feedback reporting requirements post departure.

#### 6.12.3 Port and Marine Service Charges

As per the Wheatstone Port Facilities Conditions of Use, each LNG carrier and Condensate tanker will be charged a fee for Port Services by the WMT Operator.

These charges will be fixed annually. Such fees will be advised to All Lifters before the commencement of each year.

Port charges will also be payable by the LNG carrier or Condensate tanker to the PPA pursuant to the Port Authorities Act 1999 (WA) and associated regulations.

#### **6.12.4 Cargo document Management**

Depending on circumstances, cargo documentation for LNG carriers and Condensate tankers at the WMT can either be (i) an Early Departure Procedure (EDP) by which the LNG carrier's or Condensate tanker's Master authorises in writing the LNG carrier's or Condensate tanker's representative to sign cargo documents on behalf of the LNG carrier's or Condensate tanker's Master; or (ii) a full suite of cargo documents in accordance with the Documentary Instruction from the Lifter is presented to the vessel's Master for signing prior to departure from WMT.

#### **6.13 Bunkering policy**

WMT does not have provisions to supply bunkers to vessels.

#### **6.14 Environmental protection and pollution prevention**

Any pollution incident must be reported immediately to the PLM, PPA and AMSA. Copy of the current PPA Oil Spill Contingency plan can be accessed using link: [Pilbara-ports-west-marine-pollution-contingency-plan](#)

AMSA reporting is mandatory and MARPOL reports must be submitted in the prescribed reporting format available on the AMSA website using link: [Mandatory MARPOL pollution reporting](#)

Vessel overboard suction/discharge valves connected to the cargo system are to be secured prior to commencement of cargo operations. This does not include openings connected with ballast and machinery cooling.

#### **6.15 Potable water**

WMT does not have provision to supply potable water to vessels.

## Appendix A Nomination Form

**Appendix Table A-1: Nomination Form**

LNG carrier / Condensate tanker Nomination Form	
LNG carrier/ Condensate tanker Name:	
International Maritime Organization (IMO) Number:	
RAT:	
Loading Date (Start):	
SLV:	
LC Lifting Number:	
Vetting Docs:	

## Appendix B LNG Carrier Pre-Arrival Notice Templates

**Appendix Table B-1: Distribution List for Pre-Arrival Notices**

Distribution List for Pre-Arrival Notices		
Lifting Coordinator Attention: Marine Interface Co-Ordinator Perth Australia	E-mail	<a href="mailto:Wheatstone-lifting-notice@chevron.com">Wheatstone-lifting-notice@chevron.com</a>
WHS MF Operator Attention: Wheatstone Marine Superintendent Port of Ashburton Australia	E-mail	<a href="mailto:wheatstone-marine-terminal@chevron.com">wheatstone-marine-terminal@chevron.com</a>

### **Departure Notice from Port of Departure**

The Departure Notice will be sent to the WMT operator and LC immediately upon departure from port of departure or repair dock.

**Appendix Table B-2: Departure Notice from Port of Departure**

Departure Notice of Port of Departure	
AA	LNG carrier's name and call sign
BB	Date (dd/mm/yy) and hour of departure [Full Away On Passage (FAOP)] from port of departure (or dry-dock/repair port anchorage or lay-up en route to Port of Ashburton)
CC	ETA at Port of Ashburton [pilot boarding ground - Local Time / Greenwich Mean Time (GMT)] including earliest possible ETA
DD	LNG carrier's voyage number, Lifting number and/or cargo number
EE	Heel quantity on departure (Units: m <sup>3</sup> )
FF	Estimated quantity of LNG to be loaded/transferred, including any LNG required to purge and cool LNG carrier's tanks to the required loading temperature to permit continuous loading of LNG (Units: m <sup>3</sup> )
GG	Estimated time required for the purging and/or cool down based upon the date the LNG carrier is scheduled to commence loading/transferring LNG
HH	The arrival and expected departure draught (forward & aft) of the LNG carrier (Units: metres).
II	Any operational deficiencies that may affect the LNG carrier's operating performance or acceptance to load/transfer LNG
JJ	Any other relevant operational information as required in the port and terminal operating manuals

Note: If this ETA changes by an amount equal to or greater than 12 hours after sending this Notice, the LNG carrier's Master will promptly give notice of the corrected ETA to LC and WMT operator. This applies until Seven-Day Notice of Arrival is given. Similarly, if any of the conditions stated in FF through JJ change, then the message shall be re-transmitted, with the appropriate amendments made.

**Seven-Day ETA Notice**

The Seven-Day ETA Notice will be sent 168 hours prior to the ETA set out in the Departure Notice (unless the Departure Notice was issued less than 48 hours previously), confirming or amending the LNG carrier's then ETA.

**Appendix Table B-3: Seven-Day ETA Notice**

Seven-Day ETA Notice	
AA	LNG carrier's name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
CC	Earliest possible ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
DD	LNG carrier's voyage number, Lifting number and/or cargo number
EE	Heel quantity at present (Units: m <sup>3</sup> )
FF	Estimated quantity of LNG to be loaded/transferred, including any LNG required to purge and cool LNG carrier's tanks to the required loading temperature to permit continuous loading/transferring of LNG (Units: m <sup>3</sup> )
GG	Estimated time required for the purging and/or cool down based upon the date the LNG carrier is scheduled to commence loading/transferring LNG
HH	The arrival and expected departure draught (forward & aft) of the LNG carrier (Units: metres).
II	Any operational deficiencies that may affect the LNG carrier's operating performance or acceptance to load/transfer LNG
JJ	Any other relevant operational information as required in the port and terminal operating manuals

Note: If this ETA changes by more than 6 hours after sending this Notice, the LNG carrier's Master will promptly give notice of the corrected ETA to LC and WMT operator. This applies until Two-Day ETA notice is given. If a Departure Notice has not been issued, the Seven Day ETA Notice shall be sent 168 hours prior to the RAT. Similarly, if any of the conditions stated in FF through JJ change, then the message shall be re-transmitted, with the appropriate amendments made.

**Five-Day ETA Notice**

The Five-Day ETA Notice will be sent 120 hours prior to the ETA set out in the Departure Notice (unless the Departure Notice was issued less than 48 hours previously), confirming or amending the LNG carrier's then ETA.

**Appendix Table B-4: Five-Day ETA Notice**

Five-Day ETA Notice	
AA	LNG carrier's name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
CC	Earliest possible ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
DD	LNG carrier's voyage number, Lifting number and/or cargo number
EE	Heel quantity at present (Units: m <sup>3</sup> )
FF	Estimated quantity of LNG to be loaded/transferred, including any LNG required to purge and cool LNG carrier's tanks to the required loading temperature to permit continuous loading/transferring of LNG (Units: m <sup>3</sup> )
GG	Estimated time required for the purging and/or cool down based upon the date the LNG carrier is scheduled to commence loading/transferring LNG
HH	The arrival and expected departure draught (forward & aft) of the LNG carrier (Units: metres).
II	Any operational deficiencies that may affect the LNG carrier's operating performance or acceptance to load/transfer LNG
JJ	Any other relevant operational information as required in the port and terminal operating manuals

Note: If this ETA changes by more than 6 hours after sending this Notice, the LNG carrier's Master will promptly give notice of the corrected ETA to LC and WMT operator. This applies until Two-Day ETA notice is given. If a Departure Notice has not been issued, the Five Day ETA Notice shall be sent 120 hours prior to the RAT. Similarly, if any of the conditions stated in FF through JJ change, then the message shall be re-transmitted, with the appropriate amendments made.

**Three-Day ETA Notice [72 Hours]**

The Three-Day ETA Notice will be sent 72 hours prior to the ETA set out in the Five Day Notice.

**Appendix Table B-5: Three-Day ETA Notice**

Three Day ETA Notice	
AA	LNG carrier's name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
CC	Earliest possible ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
DD	LNG carrier's voyage number, Lifting number and/or cargo number
EE	Heel quantity at present (Units: m <sup>3</sup> )
FF	Estimated quantity of LNG to be loaded/transferred, including any LNG required to purge and cool LNG carrier's tanks to the required loading temperature to permit continuous loading/transferring of LNG (Units: m <sup>3</sup> )
GG	Estimated time required for the purging and/or cool down based upon the date the LNG carrier is scheduled to commence loading/transferring LNG
HH	The arrival and expected departure draught (forward & aft) of the LNG carrier (Units: metres).
II	Any operational deficiencies that may affect the LNG carrier's operating performance or acceptance to load/transfer LNG
JJ	Any other relevant operational information as required in the port and terminal operating manuals

Note: If this ETA changes by more than 6 hours after sending this Notice, the LNG carrier's Master will promptly give notice of the corrected ETA to LC and WMT operator. This applies until the Two-Day ETA notice is given. If a Departure Notice has not been issued, the Three-Day ETA Notice shall be sent 72 hours prior to the RAT. Similarly, if any of the conditions stated in FF through JJ change, then the message shall be re transmitted, with the appropriate amendments made.

**Two -Day ETA Notice [48 Hours]**

The Two-Day ETA Notice will be sent 48 hours prior to the ETA set out in the Three Day Notice [72 Hours].

**Appendix Table B-6: Two-Day ETA Notice**

Two-Day ETA Notice	
AA	LNG carrier's name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
CC	Earliest possible ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
DD	LNG carrier's voyage number, Lifting number and/or cargo number
EE	Heel quantity at present (Units: m <sup>3</sup> ); individual LNG tank temperatures (Units: degrees Celsius) and individual LNG tank pressures (Units: kPa)
FF	Estimated quantity of LNG to be loaded/transferred, including any LNG required to purge and cool LNG carrier's tanks to the required loading temperature to permit continuous loading/transferring of LNG (Units: m <sup>3</sup> )
GG	Estimated time required for the purging and/or cool down based upon the date the LNG carrier is scheduled to commence loading/transferring LNG
HH	The arrival and expected departure draught (forward & aft) of the LNG carrier (Units: metres).
II	Any operational deficiencies that may affect the LNG carrier's operating performance or acceptance to load/transfer LNG
JJ	Any other relevant operational information as required in the port and terminal operating manuals

Note: If this ETA changes by more than 4 hours after sending this Notice, the LNG carrier's Master will promptly give notice of the corrected ETA to LC and WMT operator. This applies until 24 hours ETA notice is given. Similarly, if any of the conditions stated in FF through JJ change, then the message shall be re-transmitted, with the appropriate amendments made.



**24-Hours ETA Notice**

The 24-Hours ETA Notice will be sent 24 hours prior to the ETA

**Appendix Table B-7: 24-Hours ETA Notice**

24-Hours ETA Notice	
AA	LNG carrier's name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
CC	Earliest possible ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT)
DD	LNG carrier's voyage number, Lifting number and/or cargo number
EE	Heel quantity at present (Units: m <sup>3</sup> ); individual LNG tank temperatures (Units: degrees Celsius) and individual LNG tank pressures (Units: kPa)
FF	Estimated quantity of LNG to be loaded/transferred including any LNG required to purge and cool LNG carrier's tanks to the required loading temperature to permit continuous loading/transferring of LNG (Units: m <sup>3</sup> )
GG	Estimated time required for the purging and/or cool down based upon the date the LNG carrier is scheduled to commence loading/transferring LNG
HH	The arrival and expected departure draught (forward & aft) of the LNG carrier (Units: metres).
II	Any operational deficiencies that may affect the LNG carrier's operating performance or acceptance to load/transfer LNG
JJ	Any other relevant operational information as required in the port and terminal operating manuals
KK	Confirmation that the LNG carrier ESD system has been tested and is operational
LL	Confirmation that Statutory Port Clearance has been received

Note: If this ETA changes by more than 2 hours after sending this Notice, the LNG carrier's Master will promptly give notice of the corrected ETA to LC and WMT operator. Similarly, if any of the conditions stated in FF through KK change, then the message shall be re-transmitted, with the appropriate amendments made.

## Appendix C Condensate Pre-Arrival Notices Templates

**Appendix Table C-1: Distribution List for Pre-Arrival Notices**

Distribution List for Pre-Arrival Notices		
Lifting Coordinator Attention: Marine Interface Co-ordinator Perth Australia	E-mail	<a href="mailto:Wheatstone-lifting-notices@chevron.com">Wheatstone-lifting-notices@chevron.com</a>
WMT operator Attention: Wheatstone Marine Superintendent Port of Ashburton Australia	E-mail	<a href="mailto:wheatstone-marine-terminal@chevron.com">wheatstone-marine-terminal@chevron.com</a>

### **Departure Notice from Port of Departure**

The Departure Notice will be sent to the WMT operator and LC immediately upon departure from port of departure.

**Appendix Table C-2: Departure Notice from port of Departure**

Departure Notice from Port of Departure	
AA	Condensate tanker name and call sign
BB	Date (dd/mm/yy) and hour of departure FAOP from port of departure or lay-up en route to Port of Ashburton)
CC	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT) including earliest possible ETA
DD	Condensate tanker voyage number, Lifting number and/or cargo number
EE	Estimated volume of Condensate to be loaded
FF	The arrival and expected departure draught (forward & aft) of the Condensate tanker (Units: metres).
GG	Any operational deficiencies that may affect the Condensate tanker's operating performance or acceptance to load Condensate
HH	Any other relevant operational information as required in the port and terminal operating manuals

**Five-Day ETA Notice [120 Hours]**

If required, the Five-Day ETA Notice will be sent 120 hours prior to the ETA set out in the Departure Notice confirming or amending the Condensate tanker's then ETA.

**Appendix Table C-3: Five-Day ETA Notice**

Five-Day ETA Notice	
AA	Condensate tanker name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT) including earliest possible ETA
CC	Condensate tanker voyage number, Lifting number and/or cargo number
DD	Estimated volume of Condensate to be loaded
EE	The arrival and expected departure draught (forward & aft) of the Condensate tanker (Units: metres).
FF	Any operational deficiencies that may affect the Condensate tanker's operating performance or acceptance to load Condensate
GG	Any other relevant operational information as required in the port and terminal operating manuals

**Three-Day ETA Notice [72 Hours]**

The Three-Day ETA Notice will be sent 72 hours prior to the ETA set out in the Departure or Five Day Notice as the case may be.

**Appendix Table C-4: Three-Day ETA Notice**

Three-Day ETA Notice	
AA	Condensate tanker name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT) including earliest possible ETA
CC	Condensate tanker voyage number, Lifting number and/or cargo number
DD	Estimated volume of Condensate to be loaded
EE	The arrival and expected departure draught (forward & aft) of the Condensate tanker (Units: metres).
FF	Any operational deficiencies that may affect the Condensate tanker's operating performance or acceptance to load Condensate
GG	Any other relevant operational information as required in the port and terminal operating manuals

**Two-Day ETA Notice [48 Hours]**

The Two-Day ETA Notice will be sent 48 hours prior to the ETA set out in the Three Day Notice [72 Hours].

**Appendix Table C-5: Two-Day ETA Notice**

Two-Day ETA Notice	
AA	Condensate tanker name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT) including earliest possible ETA
CC	Condensate tanker voyage number, Lifting number and/or cargo number
DD	Estimated volume of Condensate to be loaded
EE	The arrival and expected departure draught (forward & aft) of the Condensate tanker (Units: metres).
FF	Any operational deficiencies that may affect the Condensate tanker's operating performance or acceptance to load Condensate
GG	Any other relevant operational information as required in the port and terminal operating manuals

**24-Hours ETA Notice**

The 24-Hours ETA Notice will be sent 24 hours prior to the ETA set out in the Two Day Notice [48 Hours].

**Appendix Table C-6: 24-Hours ETA Notice**

24 Hours ETA Notice	
AA	Condensate tanker name and call sign
BB	ETA at Port of Ashburton (pilot boarding ground - Local Time/GMT) including earliest possible ETA
CC	Condensate tanker voyage number, Lifting number and/or cargo number
DD	Estimated volume of Condensate to be loaded
EE	The arrival and expected departure draught (forward & aft) of the Condensate tanker (Units: metres).
FF	Any operational deficiencies that may affect the Condensate tanker's operating performance or acceptance to load Condensate
GG	Any other relevant operational information as required in the port and terminal operating manuals
HH	Confirmation that the Condensate tanker is fully inerted and tank atmospheres are <8% O2 and <5ppm H2S
II	Closing time of remote operated manifold valves where fitted
JJ	Confirmation that Statutory Port clearance has been received

Note: If this ETA changes by more than 4 hours after sending this Notice, the Condensate tanker's Master will promptly give notice of the corrected ETA to LC and WMT operator. Similarly, if any of the conditions stated in FF through GG change, then the message shall be re-transmitted, with the appropriate amendments made.

## Appendix D Conditions of Use

### WHEATSTONE PORT FACILITIES CONDITIONS OF USE

#### BETWEEN CHEVRON AUSTRALIA PTY LTD (as agent for and on behalf of the Joint Venturers) and the VESSEL INTERESTS

#### 1. DEFINITIONS AND INTERPRETATION

##### 1.1 Definitions.

In these Conditions of Use unless a contrary intention appears evident in the text:

**"Company"** means the operator from time to time of the Wheatstone Port Facilities under the MF JOA.

**"Company Personnel"** means the directors, officers, employees, agents and Contractors of the Company, including without limitation the Port Representative (but not when acting in his capacity as a pilot).

**"Company Property"** means any plant and equipment owned by or under the care and control of the Company.

**"Condensate"** means a mixture of liquid hydrocarbons extracted from Natural Gas composed principally of pentanes and heavier hydrocarbons.

**"Conditions of Use"** means the terms and conditions of this Agreement.

**"Government"** means the government of Australia, Western Australia, and any relevant local government authority in Australia that has legal authority over the Parties or all or part of the Wheatstone Port Facilities and the DPA Port Facilities.

**"Joint Venturers"** means the relevant joint venturers from time to time having an interest in the Wheatstone Port Facilities pursuant to the MF JOA, as amended, and the successors in interest of those joint venturers or the assignee of any interest of those joint venturers.

**"Joint Venturers' Personnel"** means the directors, officers, employees, agents and Contractors of the Joint Venturers.

**"LNG"** means Natural Gas in a liquid state at or below its point of boiling and at or near atmospheric pressure.

**"Master"** means the person so designated in the ship's register on board the Vessel.

**"MF JOA"** means the agreement entitled Wheatstone Project – Multi-User Facilities Joint Operating Agreement entered into between the parties to that agreement.

**"Natural Gas"** means a naturally occurring mixture of one or more hydrocarbons which normally exist as a gaseous state at 101.325kPa absolute and at a temperature of 15° Celsius and may naturally contain one or more impurities including mercury, sulphur, hydrogen sulphide, mercaptans, nitrogen, helium, carbon dioxide and other gases.

**"Port"** means that part of the Port of Dampier gazetted at Onslow and any land, water or seabed that is owned by, vested in or controlled by the DPA at Onslow from time to time.

**"Port and Terminal Operating Manuals"** means such rules, procedures, facilities, guides and/or operations manuals issued from time to time by the Company or any applicable Government relating to or in connection with activities in or around the Port.

**"Port Representative"** means the loading master (being the person who supervises loading operations at and around the Port), the port facility security officer(s) and any other person nominated by the Company.

**“Port Services”** means permitting access to the Port and all and any services (with or without goods or other property) of any description (whether compulsory or voluntary) provided or performed (whether or not for consideration) by or on behalf of the Joint Venturers at or on or about the Port and its approaches and/or the Vessel, directly or indirectly in connection with the loading of LNG or Condensate from the Wheatstone Port Facilities, including pilotage, pilot transportation, towage, navigation, berthing, mooring, loading, communications, watch or other services, assistance, direction, advice, instruction or other conduct whatsoever (save that towage, pilotage and pilot transportation are the responsibility of Vessel Interests when those services are being provided to the Vessel).

**“Third Party”** means any person other than the Vessel Interests, the Vessel Personnel, the Company, the Company Personnel, the Joint Venturers and the Joint Venturers’ Personnel but does not include the Master, pilot, officers and crew of any Vessel.

**“Vessel”** means any vessel in the Port and its approaches for the purpose of loading LNG or Condensate from the Port or otherwise using Port Services.

**“Vessel Interests”** means, jointly and severally, the Vessel, her owners, charterers (time, voyage, demise or otherwise), operators, managers and Master, and the owners of cargo and/or bunkers aboard the Vessel.

**“Vessel Personnel”** means the respective directors, officers and employees (including Master, pilot, officers and crew), agents and Contractors of each of the Vessel Interests, and all persons employed engaged or present on a Vessel authorised by the Company to use the Wheatstone Port Facilities.

**“Wheatstone Port Facilities”** means the LNG and Condensate loading jetty (or all of them) and all associated loading facilities, cranes and other equipment or facilities, owned or controlled by, and operated on behalf of, the Joint Venturers.

## 1.2 Interpretation.

(A) In the Conditions of Use:

- (1) where the context permits, the singular includes the plural and the plural includes the singular;
- (2) a week is 7 consecutive Days;
- (3) a Day is 24 consecutive hours;
- (4) words importing a gender include every gender;
- (5) direction includes any agreement, approval, authorisation, certificate, decision, demand, determination, direction, explanation, instruction, notice, notification, order, permission, rejection, request or requirement which the Company may make, give or issue pursuant to the Conditions of Use;
- (6) month means a calendar month;
- (7) person includes any association of persons either incorporated or unincorporated; and
- (8) reference to the word include or including is to be construed without limitation.

(B) In the Conditions of Use, performance of an obligation of any kind by the Vessel Interests must be carried out at the Vessel Interests’ cost unless the Conditions of Use state otherwise.

(C) If the Company makes any payment; or incurs any cost of any kind or otherwise incurs any liability in meeting any obligation of the Vessel Interests pursuant to the Conditions of Use, the payment so made or the cost so incurred becomes a debt then due and owing by the Vessel Interests to the Company.

(D) Where the Conditions of Use, expressly or impliedly:

- (1) allow the Company a discretion as to whether or not to do any act or thing of any kind, or as to how it may be done; or

- (2) confer on the Company a power of determination, or a right of opinion, satisfaction, or the like, that discretion, power, or right is absolute unless the Conditions of Use state otherwise.

(E) The Company enters into the Conditions of Use as agent for and on behalf of each of the Joint Venturers severally and these Conditions of Use will be read and construed accordingly. Notwithstanding the above:

- (1) The Vessel Interests agree to deal with the Company in relation to the due performance of the Conditions of Use; and
- (2) The Company is entitled to enforce the Conditions of Use on behalf of all Joint Venturers. For that purpose, the Company may commence proceedings in its own name to enforce all obligations and liabilities of the Vessel Interests and to make any claim which any Joint Venturer may have against the Vessel Interests.

(F) Tug masters, ship pilots and the crews of tugboats and pilot boats used to convey ship pilots to or from the Vessel are considered as Vessel Personnel from the time of their departure from the normal place of berth or place of waiting to provide ship towage services or ship pilotage services or to render assistance to a Vessel until they complete or discontinue providing those services and have returned to their normal place of berth or place of waiting.

(G) If the Vessel Interests comprise more than one person or body corporate, the Conditions of Use bind each such person or body corporate (together with their respective successors and permitted assigns) jointly and severally and will be read and construed accordingly.

## **2. PERFORMANCE OF PORT SERVICES**

2.1 The provision of the Port Services and the performance of any Port Services is undertaken by the Company (and the Joint Venturers) in consideration of, and accepted by the Vessel Interests, upon and subject to the terms and conditions set out in these Conditions of Use.

2.2 The Company must charge the Vessel Interests for the provision of the Port Services and the performance of the Port Services. Vessel Interests must pay for the Port Services charged.

## **3. CONDITIONS OF USE**

3.1 The Vessel Interests must, when using the Wheatstone Port Facilities, conduct all operations safely and expeditiously, and must vacate the Wheatstone Port Facilities as soon as practicable after the provision of Port Services are completed. The Vessel Interests must, and must ensure that all Vessel Personnel, observe all statutory requirements and regulations as well as any rules or procedures issued by the Company from time to time, including the Port and Terminal Operating Manuals.

3.2 The Company may withhold the commencement of, suspend or terminate the provision of the Port Services and require the removal of any Vessel from the Port or the Wheatstone Port Facilities, or take any other action the Company considers appropriate (by direction of the Port Representative or other authorised representative), where:

- (A) in the opinion of the Company such action is required for the safety of the Port or the Wheatstone Port Facilities, the Vessel, the Company Personnel, the Joint Venturers' Personnel, the Vessel Personnel or any other vessel or Third Party;
- (B) there is any breach of the Conditions of Use, the Port and Terminal Operating Manuals, or any statutory requirements and regulations;
- (C) there are defects in the Vessel or the Vessel's equipment, manning or operations which, in the reasonable opinion of the Company, present a hazard to Wheatstone Port Facilities or operations relating to the Wheatstone Port Facilities, the Company Personnel, the Joint Venturers' Personnel or any Third Party;
- (D) the Vessel fails to use satisfactorily the available Wheatstone Port Facilities and thereby, in the opinion of the Company, constitutes an unacceptable constraint on the Company's operations;

(E) weather, safety or security conditions are outside, or are likely to be outside, what is in the opinion of the Company normal operating limits.

3.3 The Company, the Company Personnel, the Joint Venturers and the Joint Venturers' Personnel (in whatever capacity they may be acting) are not liable for any costs, losses, damage or liability incurred by the Vessel or the Vessel Interests as a result of a refusal to load all or part of a nominated cargo, delay or suspension of loading, or a requirement to vacate the Wheatstone Port Facilities or other action arising from Section 3.1 or Section 3.2 of this Wheatstone Port Facilities Conditions of Use, and the Vessel Interests release the Company, the Company Personnel, the Joint Venturers and the Joint Venturers' Personnel from such costs, losses, damage or liability.

3.4 In all circumstances the Vessel Interests remain solely responsible for the safety, condition, operations and proper navigation of the Vessel and her appurtenances and cargo, including pilotage, towage, navigation, berthing, mooring and unmooring, manoeuvring, connecting and disconnecting of hoses (excluding hard loading arms), ballasting, prevention and control of pollution or contamination, pollution or contamination remediation, and safety.

3.5 All Company Personnel and Joint Venturers' Personnel employed or contracted in connection with the performance of the Port Services are supplied upon the condition that the presence of those personnel in or about the Port or the Vessel and otherwise in connection with the performance of Port Services in no way relieves the Vessel Interests of any obligation, responsibility or liability in connection with the safety, security, condition, operations or proper navigation of the Vessel or its appurtenances and cargo.

3.6 The Company and the Joint Venturers make no warranty or representation (express or implied) as to the safety or suitability or otherwise of the Wheatstone Port Facilities or the Port Services or the Port or its approaches.

3.7 If the Vessel or part of the Vessel sinks, becomes a constructive loss, or otherwise becomes, in the opinion of the Company, an obstruction or danger to any part of the Wheatstone Port Facilities, the approaches to it, or any subsea installations related or connected to it, or to the Port, and the Vessel Interests fail for any reason to remove that obstruction or danger within the time required by the Company or a competent authority, the Company or such competent authority may take all necessary action to remove the obstruction or danger at the sole risk, cost and expense of the Vessel Interests and that cost and expense, and any loss or damage suffered by the Joint Venturers, will be recoverable from the Vessel Interests by the Company as a debt presently due, owing and payable to the Joint Venturers.

#### **4. RIGHT TO BOARD**

4.1 The Port Representative has the right at any time to board and remain on board any Vessel alongside the Wheatstone Port Facilities to ensure the Conditions of Use and the Port and Terminal Operating Manuals are being observed. The Master must, on request, immediately produce any certificate or other documents reasonably requested by the Port Representative for inspection for the purposes of this Section 4.1.



## 5. LIABILITIES AND INDEMNITIES

5.1 In this Section 5, claim means any claim, right, action, proceeding, demand or entitlement of any kind and includes a right, proceeding, demand or entitlement to be compensated or indemnified (in whole or in part) for or by way of loss, obligation of indemnity or contribution, damage, expense or liability however arising (whether in contract, tort, under statute or otherwise).

5.2 In consideration of the provision of the Port Services, the Vessel Interests: (i) release each of the Company and the Joint Venturers from, and indemnify each of the Company and the Joint Venturers against, any claim arising out of or in connection with the performance of the Port Services; and (ii) indemnify the Company and the Joint Venturers in respect of any loss, damage, expense or liability suffered or incurred by the Company or the Joint Venturers however arising out of or in connection with the performance of the Port Services, for:

- (A) loss of or damage to the Wheatstone Port Facilities and its approaches and any property of the Company or the Joint Venturers, except where caused by the sole fault of the Company or the Joint Venturers;
- (B) loss of or damage to the Vessel (including its appurtenances), or any property owned or supplied by the Vessel Interests, irrespective of cause including negligence and breach of duty (whether statutory, contractual or otherwise) of the Company or the Joint Venturers and including removal of wreckage;
- (C) loss of or damage to any property or cargo on board the Vessel, irrespective of cause including negligence and breach of duty (whether statutory, contractual or otherwise) of the Company or the Joint Venturers, except where caused by the sole fault of the Company or the Joint Venturers;
- (D) personal injury (including death or disease) to, or loss or damage to the property of any Third Party, except where caused by the sole fault of the Company or the Joint Venturers;
- (E) breach of or non-compliance by the Vessel Interests or Vessel Personnel with any statute, regulation, by-law or order or other lawful requirement of any public, municipal or other government authority, except where caused by the sole fault of the Company or the Joint Venturers;
- (F) the escape of any liquid or non-liquid pollutant, toxic or waste material that is or has been disposed of, charged, seeped, spilled, blown out or leaked during the performance of the Port Services:
  - (1) from the Wheatstone Port Facilities or any Company Property or property of the Joint Venturers, to the extent caused by the Vessel Interests or Vessel Personnel; or
  - (2) from the Vessel, except where caused by the sole fault of the Company or the Joint Venturers.

5.3 The Company and the Joint Venturers are solely responsible for claims brought by the Company Personnel or the Joint Venturers' Personnel, or any member of the family or dependents of the Company Personnel or the Joint Venturers' Personnel arising out of or consequent upon the personal injury, loss of or damage to property of, or death of, the Company Personnel or the Joint Venturers' Personnel, or their family members or dependents regardless of any fault on the part of the Vessel Interests or the Vessel Personnel, and the Company and the Joint Venturers must indemnify and hold the Vessel Interests and the Vessel Personnel harmless if any Company Personnel, Joint Venturers' Personnel, or any family member or their dependents or the executor, administrator or personal representative of any of them, brings such a claim against the Vessel Interests or Vessel Personnel.

5.4 The Vessel Interests are solely responsible for claims brought by the Vessel Personnel or any member of the family or dependents of the Vessel Personnel arising out of or consequent upon the personal injury, loss of or damage to property of, or death of, the Vessel Personnel or their family members or dependents regardless of any fault on the part of the Company, the

Joint Venturers, the Company Personnel or the Joint Venturers Personnel, and the Vessel Interests must indemnify and hold the Company, the Joint Venturers, the Company Personnel and the Joint Venturers' Personnel harmless if any Vessel Personnel or any family member or their dependents or the executor, administrator or personal representative of any of them, brings such a claim against the Company, Joint Venturers, Company Personnel or Joint Venturers' Personnel.

5.5 No amount will be recoverable by the Company or the Joint Venturers from the Vessel Interests under Section 5.2 of this Wheatstone Port Facilities Conditions of Use if an incident which was the proximate cause of the damage or loss concerned resulted from an act of war, hostilities, civil war insurrection (which expressions will not include unconnected acts of sabotage) or act of God including earthquake, volcanic eruption, tidal wave, lightning or cyclone (provided the proximate cause of the damage did not result from an accident, breakdown or loss of or damage to a Vessel, or its plant, equipment, material or facilities), and provided in any such case the Vessel Interests acted reasonably in the circumstances to protect the Company Property or the property of the Joint Venturers, from damage or loss.

5.6 The Vessel Interests must, upon request, provide to the Company at all times sufficient evidence that the Vessel's P&I Association has agreed to cover the Vessel Interests as a member of the P&I Association against the liabilities and responsibilities provided for in this Section 5 of this Wheatstone Port Facilities Conditions of Use in accordance with its rules including waivers of subrogation.

5.7

(A) Company's and Joint Venturers' total aggregate liability to the Vessel Interests in respect of an incident giving rise to a claim under this Section 5 of this Wheatstone Port Facilities Conditions of Use is limited to US\$150,000,000.00; and

(B) the Vessel Interests' waive their rights under the Convention on Limitations of Liability for Maritime Claims, 1976 and under Australian law. The Vessel Interests' total aggregate liability to the Company and the Joint Venturers in respect of an incident giving rise to a claim under this Section 5 of this Wheatstone Port Facilities Conditions of Use is limited to the higher of the following:

(1) US\$150,000,000.00;

(2) such limitation of liability amount provided for under any new law or convention applicable to LNG or Condensate carrying Vessels; or

(3) such amount as the members of the International Group of P&I Associations provide coverage for as a matter of normal practice in the LNG or Condensate shipping industry.

## 6. LIEN

6.1 The Company will have a lien on a Vessel, and her cargo, freight and appurtenances for all salvage, debts, losses or damages or other claims arising out of Vessel's use of Port Services.

**7. APPLICABLE LAW**

7.1 The Conditions of Use are governed by and will be construed according to the law in force in the State of Western Australia, Australia and the parties unconditionally submit to the exclusive jurisdiction of the courts of that State and courts competent to hear appeals from those courts, provided that the Company or the Joint Venturers may enforce or seek security in any court of competent jurisdiction. Part 1F of the *Civil Liability Act 2002 (WA)* is excluded from operation with respect to any dispute, Claim, action or other matter whatsoever brought by any party against another arising out of or in connection with the Conditions of Use.

**8. AUTHORITY AND EXECUTION**

8.1 The signatory to this document on behalf of the Vessel Interests warrants that it has the authority to bind each of the Vessel Interests and the Vessel Personnel and must notify these Conditions of Use to those persons.

8.2 The Vessel Interests signify their acceptance of these Conditions of Use by execution of this document (and if so may be by execution in counterparts, which when taken together will constitute the whole document) or by acceptance of the Port Services or by causing the Vessel to enter the Port and its approaches.

DATED the \_\_\_\_\_ day of \_\_\_\_\_

Issued by authority of the Company

by:

\_\_\_\_\_

(Original signed – sent electronically)

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signed for and on behalf of the Vessel Interests

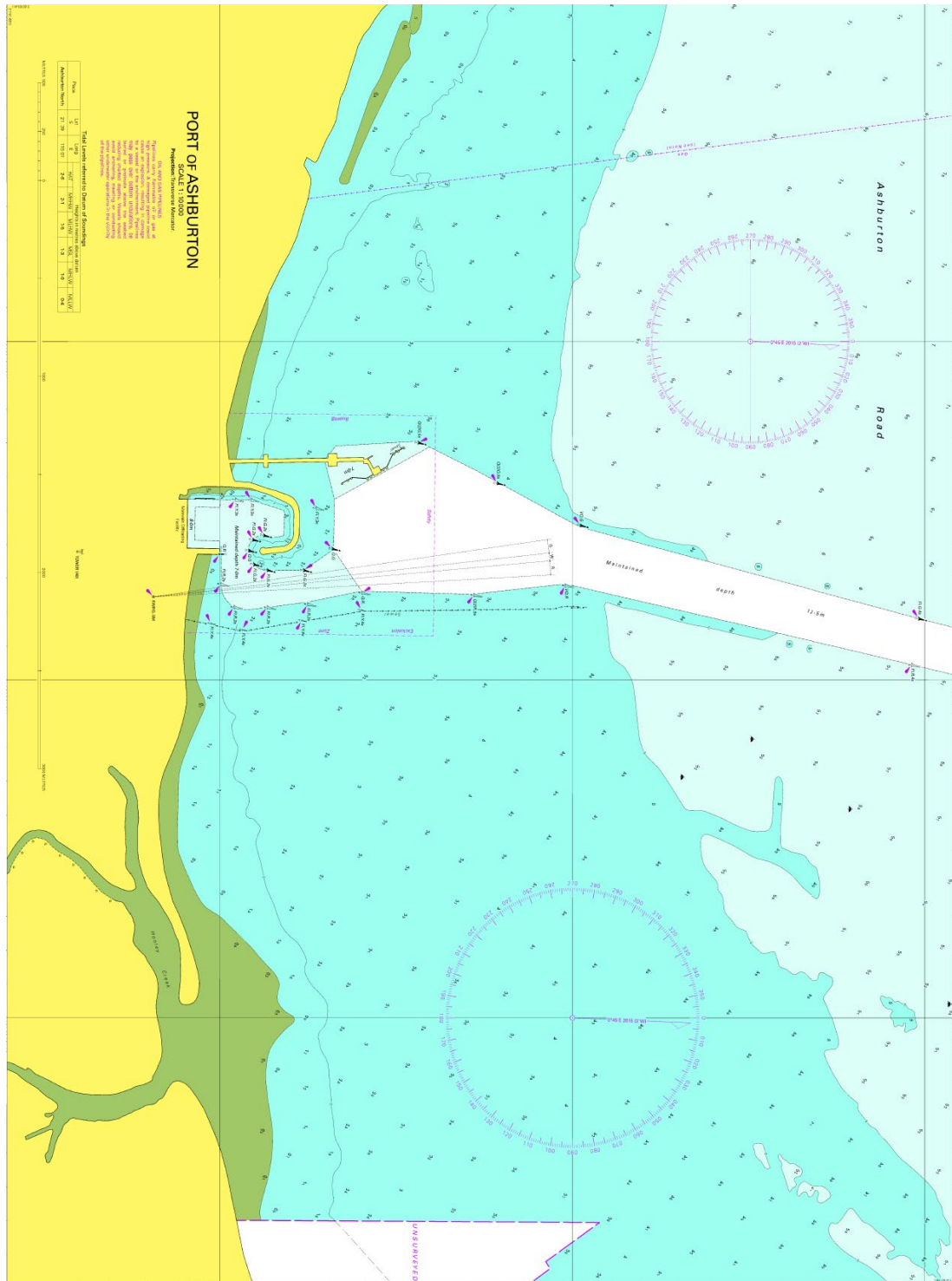
by:

\_\_\_\_\_

Name: \_\_\_\_\_

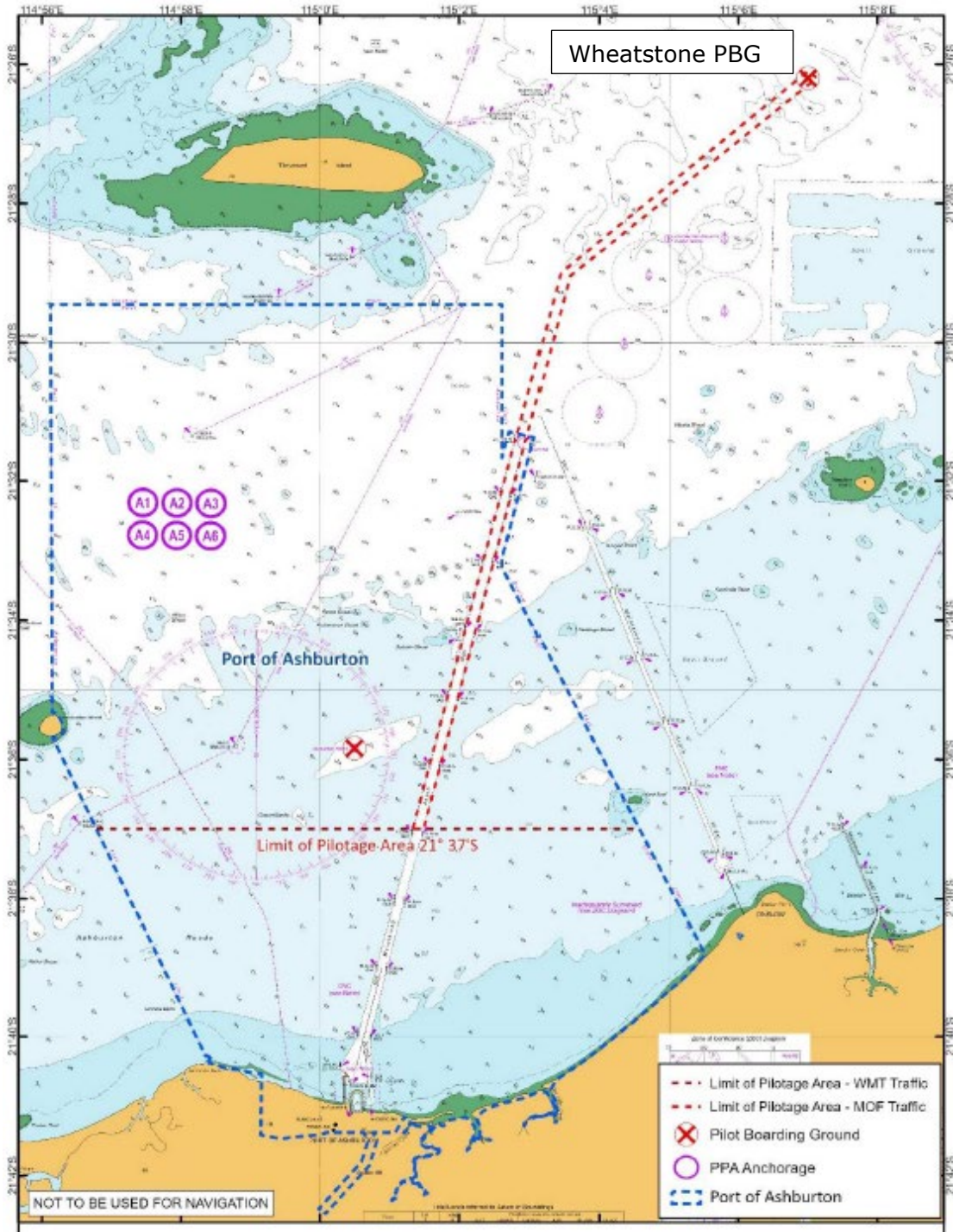
Title: \_\_\_\_\_

# Appendix E Maps and Diagrams

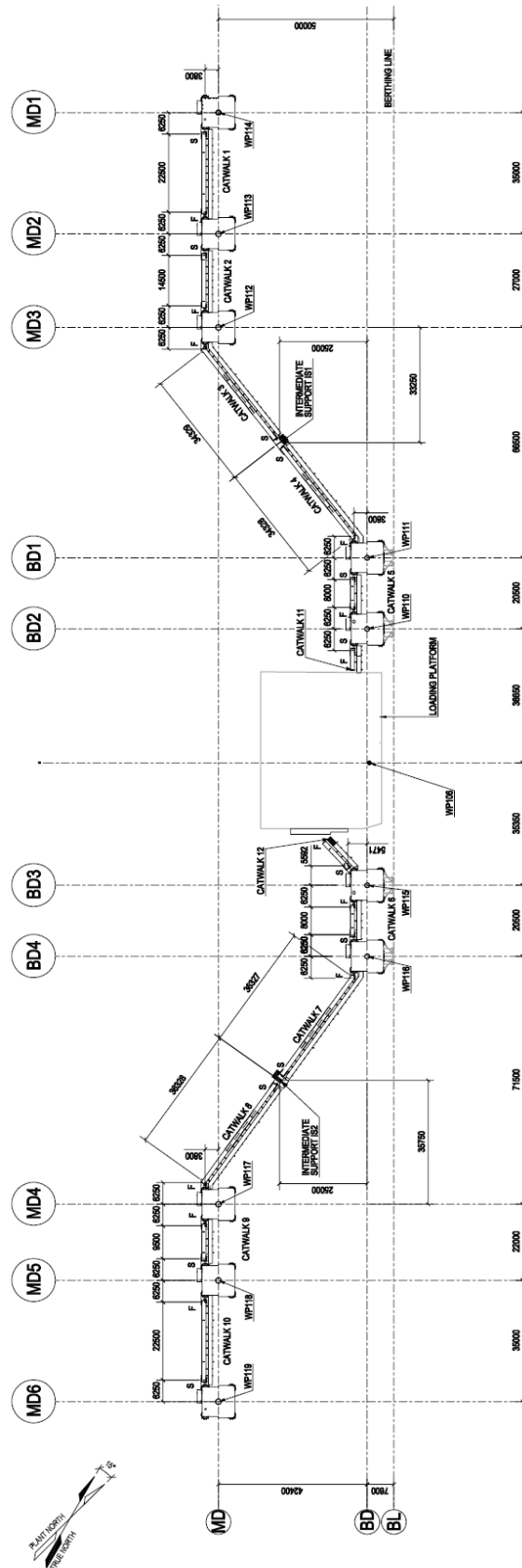


**Appendix Figure E-1: Chart AUS 069 Port of Ashburton**





**Appendix Figure E-2: Approach to PBG(A) as required by PPA (Snapshot of AUS 743)**



Appendix Figure E-3: Jetty Layout



**Appendix Figure E-4: Portable Electric System for Condensate Tankers**

**Appendix F Terms, Acronyms and Abbreviations**

Acronym/Abbreviation	Meaning
ABU	Australasia Business Unit (Chevron Australia)
ACW	Ashburton Cargo Wharf
AIS	Automatic Identification System
AMSA	Australian Maritime Safety Authority
Area of Operations	The Port of Ashburton and adjacent navigable areas within 30 nautical miles of the Port of Ashburton pilot boarding ground
ADP	Annual Delivery Programme
ASME	American Society Of Mechanical Engineers
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CCR	Central Control Room
CEO	Chief Executive Officer
Chevron Australia	Chevron Australia Pty. Ltd. a company existing under the laws of Australia
COLREGS	International Regulations for the Prevention of Collision at Sea 1972
Condensate Lifting Agreement	Wheatstone Condensate Lifting Agreement
Condensate tanker	Any vessel proposed by a Lifter for the transportation of its Condensate (irrespective of whether such vessel is used to carry other products) which vessel meets the WMT operator Clearance Process requirements
COU	Wheatstone Project Facilities Conditions of Use
CTMS	Custody Transfer Measurement System
DAFF	Department of Agriculture, Fisheries and Forestry
Departure Notice	Notice from the LNG carrier and Condensate tanker of its departure from the port of departure, dry-dock, repair port or other point of departure en route to the Wheatstone Marine Terminal
DOS	Declaration of Security
DoT	Department of Transport (WA)
DWT	Deadweight Tonnes
EDP	Early Departure Procedure
ETA	Estimated time of arrival
ERC	Emergency Release Coupler
ESD	Emergency Shut Down
FAOP	Full Away on Passage
FI	Flashing
G	Green
GHG	Green House Gas
GMT	Greenwich Mean Time
GRT	Gross Registered Tonnage
HAT	Highest Astronomical Tide
HF	High Frequency
HMSF	High Modulus Synthetic Fibre



Acronym/Abbreviation	Meaning
IALA	International Association of Lighthouse Authorities
ICS	International Chamber of Shipping
IMDG	International Maritime Dangerous Goods Code
IMO	International Maritime Organization
ISPS	International Ship and Port Facility Security Code
ISSC	International Ship Security Certificate
kPa	Kilopascal
Knots	Nautical miles per hour
kW	Kilowatt
LAT	Lowest Astronomical Tide - chart low water datum - the lowest tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions
LED	Light Emitting Diode
LDR	Loading Date Range, which commences at 00:00:00 hours on the first day of the loading date range and ends 23:59:59 hours on the last day of the loading date range
Lifter	Each party to the LNG Lifting Agreement or Condensate Lifting Agreement
LC	Lifting Coordinator appointed by the Lifters to facilitate communications and coordinate activities under the LNG Lifting Agreement and the Condensate Lifting Agreement
LM	Loading Master
LNG	Liquefied Natural Gas
LNG carrier	Liquefied Natural Gas Ship; any vessel proposed by a Lifter for the transportation of its LNG which vessel meets the WMT operator Clearance Process requirements
LNG Lifting Agreement	Wheatstone LNG Lifting Agreement
LOA	Length Overall
NM	Nautical Mile
M	Metre
mm	Millimetre
m <sup>3</sup>	Cubic Metre
MARPOL	International Convention for the Prevention of Pollution from Ships
MASTER	The person so designated in the Ship's Register on board the LNG carrier and Condensate tanker
MASTREP	Modernised Australian Ship Tracking and Recording System
MCAZ	Marine Controlled Access Zone
MCO	Marine Communications Operator
MEG	OCIMF's Mooring Equipment Guidelines
MEMS	Mooring Load and Environmental Monitoring System
WMT Operator	Chevron Australia Pty Ltd in its capacity as operator under the Wheatstone Project – Multi-User Facilities Joint Operating Agreement

Acronym/Abbreviation	Meaning
MHWN	Mean High Water Neaps
MHWS	Mean High Water Springs
MLWN	Mean Low Water Neaps
MLWS	Mean Low Water Springs
MNL	Marine Navigation Levy
MSL	Mean Sea Level
MTOFSA	Maritime Transport and Offshore Facilities Security Act, 2003
NMERA	National Maritime Emergency Response Division Arrangements
NOR	Notice of Readiness
NOx	Nitrogen Oxides
NRT	Net Registered Tonnage
OCIMF	Oil Companies International Marine Forum
ODS	Ozone-Depleting Substance
OTS	Office of Transport Security
PABX	Private Automatic Branch Exchange
PEC	Pilot Exemption Certificate
PERC	Powered Emergency Release Coupling
PES	Portable Electronic System
PIANC	Permanent International Association of Navigational Congresses
PIC	Person in Charge
PBG	Pilot boarding ground - equal to pilot station; area where pilot is embarked / disembarked.
PLM	Pilot Loading Master
PFSO	Port Facility Security Officer; the responsible person ashore for ensuring terminal security under the Maritime Transport and Offshore Facilities Security Act (MTOFSA) and the ISPS
POLREP	Marine Pollution Report (DoT)
Terminal	Wheatstone Marine Terminal
PPA	Pilbara Ports Authority
PSL	Protection of the Sea Levy
QC/DC	Quick Connect Disconnect
QPAR	Quarantine Pre Arrival Report
QRH	Quick Release Hook
RCC	Rescue Coordination Centre Australia
RFL	Marine Navigation (Regulatory Functions) Levy
RAT	The Required Arrival Time and date specified in the applicable SDS for a LNG carrier and Condensate tanker to arrive at the Pilot station (inbound)
SAR	Search and Rescue
MSDS	Material Safety Data Sheet
SIGTTO	Society of International Gas Tanker and Terminal Operators

Acronym/Abbreviation	Meaning
SIMOPS	Simultaneous Operations
SIRE	OCIMF Ship Inspection Report Programme for the inspection of oil tankers, combination carriers, shuttle tankers, chemical tankers and gas tankers
SDS	Specific Delivery Schedule: developed by the Lifting Coordinator showing the 90 day forward plan for LNG and Condensate lifting
SMC	Safe Manning Certificate
SMS	Safety Management System
SOLAS	International Convention for the Safety of Life at Sea
SOx	Sulphur Oxides
SSL	Ship to Shore Linked System
Standard Cargo	A cargo of Condensate within the range of 98 000 m <sup>3</sup> to 108 000 m <sup>3</sup>
STCW	Standards of Training Certification and Watchkeeping Code 1995
Transporter	The owner or operator of an LNG carrier or Condensate tanker, including any person contracted by a Lifter or its LNG or Condensate buyer to provide or operate an LNG carrier or Condensate tanker.
UHF	Ultra High Frequency
UHMW-PE	Ultra High Molecular Weight Polyethylene
UKC	Under Keel Clearance
UKSTC1986	United Kingdom Standard Conditions for Towage and Other Services 1986
VHF	Very High Frequency
Vessel	Has the same meaning as the definition in the Australian Navigation Act 2012 Part IV
Vessel Interests	Means jointly and severally, the vessel, her owners, charterers (time, voyage, demise or otherwise), operators, managers and Master, and the owners of cargo and/or bunkers aboard the vessel
VIQ	OCIMF SIRE Vessel Inspection Questionnaire
VOC	Volatile Organic Compound
WA	Western Australia
WMT	Wheatstone Marine Terminal







