

Dangerous Goods and Cargoes Policy Frances Bay Mooring Basin

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| Contact details | Small Ship Scheduler; 08 8922 0617; smallships.scheduler@nt.gov.au |
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| Acronyms | |
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| The following acronyms are used in this document | |
| Acronyms | Full form |
| ADG Code | Australian Dangerous Goods Code |
| AMSA | Australian Maritime Safety Authority |
| DG | Dangerous Goods |
| DIPL | Department of Infrastructure, Planning and Logistics |
| ETA | Estimated Time of Arrival |
| ETD | Estimated Time of Departure |
| FBF | Frances Bay Facilities, refers to Fisherman's and Raptis Wharves and Hornibrooks Wharf |
| FBMB | Frances Bay Mooring Basin |
| IBC | intermediate bulk containers |
| IMDG Code | International Maritime Dangerous Goods Code |
| IMO | International Maritime Organisation |
| MHBs | Materials hazardous only in bulk |
| NEQ | Net Explosives Quantity |
| N.O.S | not otherwise specified |
| PG | Packing Group |
| PSN | Proper Shipping Name |
| UN | United Nations |

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1 Introduction

1.1 Legislation, Codes, Standards and Recommendations

The following documents were reference in developing this policy:

International

- IMO Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas
- International Maritime Dangerous Goods (IMDG) Code

National

- AS 3846-2005 The Handling of Dangerous Cargoes in Port Areas
- The Australian Dangerous Goods (ADG) Code
- The Australian Code of Transport of Explosives by Road or Rail (2009)
- *Work Health and Safety Act 2011*

Northern Territory

- *NT Dangerous Goods Act*
- *NT Marine Act*
- *Ports Management Act*

Nothing in this policy relieves the consignor (shipper) or anyone else involved in the handling of Dangerous Goods or Cargoes of their responsibility under international, Commonwealth and the Northern Territory legislation and requirements. Notification to Department of Infrastructure, Planning and Logistics does not relieve a consignor of their obligation to notify the competent authority or the other relevant authority or organisation and does not constitute approval by the competent authority to ship a dangerous good or cargo.

1.2 Purpose

The purpose of this policy sets out the requirements for the safe handling and transporting of dangerous goods and cargoes at Frances Bay Mooring Facilities.

1.3 Scope

This policy applies to the transport and handling of Dangerous Goods and Cargoes when booked to use, and tied onto facilities of Department of Infrastructure, Planning and Logistics (illustrated in Figure 1). It should be noted that any vessel travelling inside the Gazetted Port of Darwin area has to comply with the rules and regulations outlined in the Dangerous Goods and Cargoes Policy of The Port of Darwin (Refer to Figure 2).

Where a discrepancy between the DIPL and Port of Darwin policies exists, the more stringent of the two will uphold. At any time, the General Manager of Operations or the Regional Harbour Master may implement special conditions on any vessel on FBF carrying or holding dangerous goods.

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Figure 1. Illustrates Fisherman's and Raptis Wharves and Hornibrooks Wharf. Any vessel tied onto one of these wharves, falls under DIPL rules and regulations.

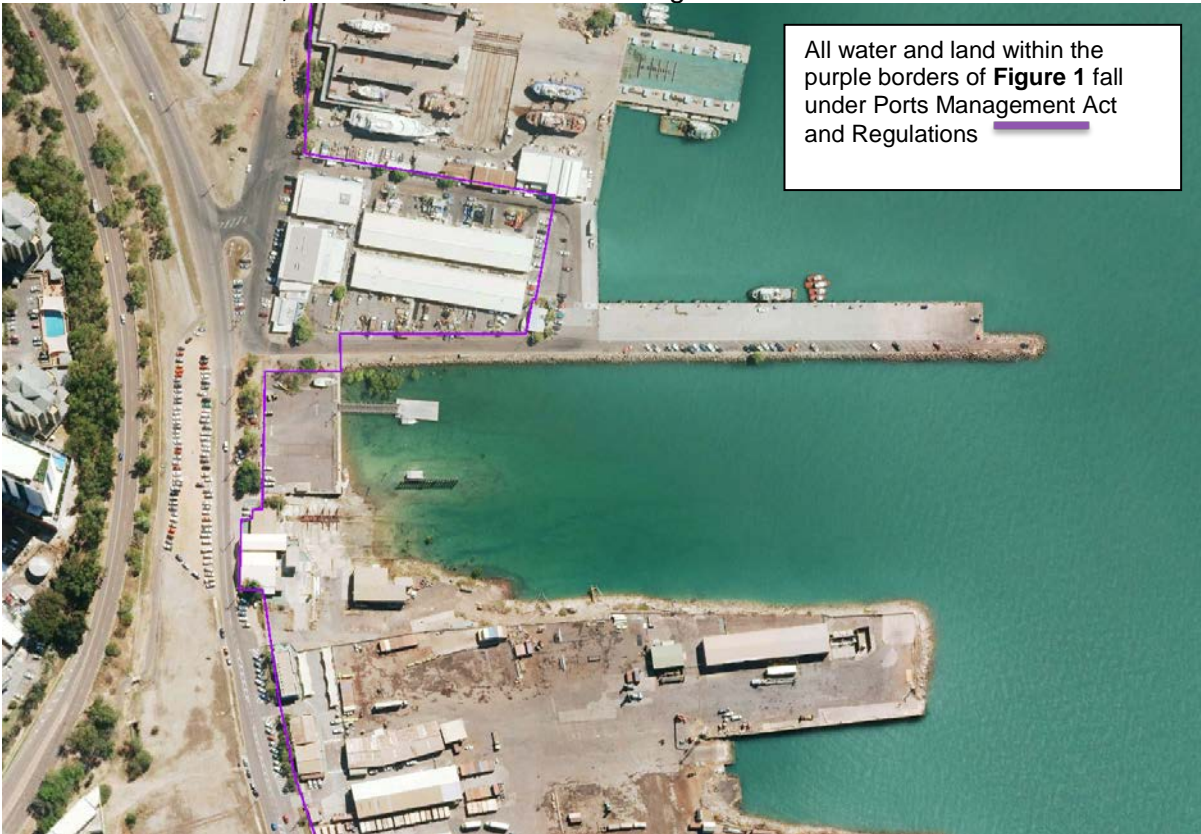


Figure 2. Boundary of the Port of Darwin



1.4 Prohibited Dangerous Goods

There are nine classes of dangerous goods. Loading/Unloading of dangerous goods cargo is restricted to Fisherman's and Raptis Wharves and Hornibrooks Wharf depending on the IMDG Code, UN Number and PSN.

No dangerous goods cargo will be permitted on FBF until notification for transporting dangerous goods in Darwin Port has been lodged with Darwin Port (dangerousgoods@darwinport.com.au).

1.5 Definitions

Bulk is defined as cargoes that are intended to be carried without any intermediate form of containment, in a cargo space that is a structural part of the ship, or in a tank permanently fixed in or on a ship.

This definition is derived from AS 3846-2005 "The Handling of Dangerous Cargoes in Port Areas".

Dangerous Cargoes are defined in accordance with AS 3846-2005 "The Handling of Dangerous Cargoes in Port Areas". Any of the following cargoes, whether packaged, or in bulk containers, or in bulk, and within the scope of the following are Dangerous Goods to which this policy applies:

- a) Oils covered by Appendix I of MARPOL 73/78;
- b) Gases covered by the code for the construction and Equipment of Ships Carrying Liquefied Gases in Bulk;
- c) Noxious liquid substances or chemicals, including wastes, covered by the codes for construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and Appendix II of MARPOL 73/78;
- d) Dangerous Goods, hazardous and harmful substances, materials and articles including environmentally hazardous substance (marine pollutants) and wastes, covered by the International Maritime Dangerous Goods Code (IMDG Code); and
- e) Solid bulk materials possessing chemical hazards and solid bulk materials hazardous only in bulk (MHBs), including wastes, covered by the Code of Safe Practice.

The term "dangerous cargoes" includes any empty, uncleaned packaging (e.g. tank-containers, receptacles, intermediate bulk containers (IBCs) or bulk containers).

Dangerous Goods are defined as substances and articles that:

- a) satisfy the UN test and criteria for determining whether they are dangerous goods;
- b) are listed in the ADG Code; or
- c) are determined to be dangerous goods by the competent authority.

International Maritime Dangerous Goods Code (IMDG Code) is a uniform international code for the safe transport of dangerous goods or hazardous material upon a vessel by sea.

Net Explosives Quantity (NEQ) is defined as the mass of explosive material contained in an explosive substance without packaging or casings.

Ordinary Berth is defined as a berth where ships with general cargo operate, and which is not nominated as a special berth.

Proper Shipping Name (PSN) the most accurate name in the UN Dangerous Goods list used to identify the goods (article, substance, mixture or waste) and its associated hazards, being transported. This is usually identified on shipping documents and packaging.

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Packing Group is defined as one of the three hazard groups to which dangerous goods (excluding classes 1, 2, 6.2 and 7) are assigned in the IMDG Code in decreasing order of hazard as follows:

- I. High Danger
- II. Medium Danger
- III. Low Danger

Protected Place is defined as the following:

- a) A dwelling, place of worship public building, school or college, hospital, theatre or any building or open area in which persons are accustomed to assemble, whether within or outside the port area;
- b) A factory, workshop, office, store, warehouse, shop or building where people are employed that is outside the boundary of the site where the dangerous goods or cargoes are handled; or
- c) A vessel lying at a berthing facility.

Special Berth is defined as a berth sufficiently separated, controlled and specifically designated for handling dangerous cargoes.

Ship's Stores mean materials which are on board a ship for the upkeep, maintenance, safety, operation or navigation of the ship (except for fuel and compressed air used for the ship's propulsion machinery or for the fixed auxiliary equipment), or for the safety or comfort of the ship's passengers or crew. Materials which are intended for use in commercial operations by a ship are not considered to be ship's stores.

Ship (in the context of this DG policy) means any seagoing or non-going water craft used for the transport of dangerous cargoes.

Vehicle is defined as a truck, car or train whilst moving under its own power, transporting dangerous goods.

UN Number (UN) under the United Nations system, is the four digit numbers that identify dangerous goods, hazardous substance and articles in the framework of international transport.

2 Notifications

2.1 Required Notification

Notification for transporting dangerous goods in Darwin Port is to be lodged within (48) hours to Darwin Port (dangerousgoods@darwinport.com.au) and carbon copy (cc) to the Small Ship Scheduler at SmallShips.Scheduler@nt.gov.au

Notification is not required for ship's stores.

2.2 Failure to notify

If the required notification is not provided, vessels may be refused berthing and asked to depart the facility immediately.

2.3 Packaged Dangerous Goods

For packaged dangerous goods the following must be provided on the form in Appendix A:

- The Name and Lloyds / IMO Number of the ship (if applicable)
- ETA of dangerous goods into port limits
- Name of Agent, contact name and telephone number
- Number and type of packages
- Proper Shipping Name / correct technical name
- IMDG Code Classification and any subsidiary risk classification
- UN Number (where applicable)
- Packaging group (where applicable)
- Flash Point (if applicable)
- Quantity
- The condition of the dangerous cargo
- Any known defect that may adversely affect the safety of the wharf area, ship or environment
- Marine pollutant (where applicable)
- Date and times of the cargo operations

If a UN Number of Packaging is allocated in the IMDG Code it must be provided in the application.

When applying for Class 1 and Class 1.4 dangerous goods, the following shall be included:

- UN Number
- Proper Shipping Name
- Division Number
- NEQ
- Compatibility Group

For Bulk Dangerous Goods or Cargoes the following must be provided on Appendix B:

- The name and Lloyds /IMO Number of the ship
- ETA of dangerous goods into port limits
- Name of Agent, contact name and telephone number
- Proper Shipping Name/ correct technical name
- UN Number
- IMDG Code Classification and any subsidiary risk classification, with Packaging Group or MARPOL NLS category and flash as appropriate
- Quantity of cargoes to be unloaded/ loaded and those left on board
- For solid bulk danger cargoes, a certificate of manufacture
- The condition of the dangerous cargo and any known defect in the cargo containment handling system, equipment or instrumentation that is related to the bulk cargo and that could lead to an abnormal hazard
- Any know defect that adversely affect the safety of the wharf area, the ship or the environment.

3 GENERAL PRECAUTIONS FOR HANDLING DANGEROUS GOODS AND CARGOES

This section outlines the minimum general precautions required for the handling of Class 1 Dangerous Goods at FBF.

3.1 Marking and Packaging

All dangerous goods and cargoes delivered to or from the wharf area shall be packaged, marked, labelled and placarded in accordance with the IMDG code. Where the dangerous goods or cargoes are to be loaded on to a ship, or barge; their packaging shall comply with IMDG Code.

3.2 Stowage and segregation

Dangerous goods and cargoes whilst within the FBF must be segregated as follows:

- Whilst loaded on a ship in accordance with IMDG Code
- Whilst stored within the FBF in accordance with AS 3846
- Whilst loaded on a truck in accordance with the ADG Code

3.3 Trained Personnel

All personnel involved in the transport and the handling of dangerous goods or cargoes must be trained to the appropriate level as specified in the IMDG Code and by AMSA.

3.4 Handling

All dangerous goods must be handled in a safe and efficient manner. Personnel must wear appropriate personal protective equipment at all time when undertaking any tasks relating to the handling of the dangerous goods and cargo.

3.5 Emergency Plan

The vessel loading, unloading or transiting shall have an Emergency Plan for dealing with dangerous situations arising from handling or transporting dangerous goods. The plan needs to be submitted to the Small Ships Scheduler for review prior to berthing. At the time of berthing the Wharf Supervisor will liaise with the operational or site manager to ensure safety compliances are in place.

Where appropriate a spill kit shall be immediately available whilst the dangerous goods or cargo is within the wharf area. The kit has to be available for inspection by the Wharf Supervisor prior to unloading or loading of dangerous goods and cargoes.

3.6 Safety Management System

A Safety Management System is a documented system of policies, procedures and records that focuses on the management of risk (both identification and controls) in relation to operational and personnel safety.

AS3846 requires the Master to provide a Safety Management System that outlines a management framework for safely undertaking potentially hazardous activities and management of any associated risk, minimizing the likelihood of incidents, managing occupational health and safety, and assisting in the protection of people, property and the environment.

The plan needs to be submitted to the small ships scheduler along with the application form prior to berthing.

3.7 Road Transport

Transport of dangerous cargoes to or from the wharf areas by road must be in accordance with the ADG Code and the Dangerous Goods Safety (Road and Rail Transport of Non-Explosive) Regulations 2007.

3.8 Maintenance Activities

No maintenance repairs or hot works is permitted within the exclusion zone unless stipulated in the safety management system and approved by the Wharf Supervisor.

3.9 Signals

All vessels carrying dangerous goods or cargoes whilst within the wharf limits shall fly flag B.

4 Class One Explosives



4.1 Introduction

Class 1 comprises:

1. Explosive substances, except those which are too dangerous to transport or those where the predominant hazard is one appropriate to another class.
2. Explosive article, except devices containing explosive substances in such quantity or of such a character that their or accidental ignition or initiation during transport shall not cause any effect external to the device either by projection, fire, smoke, heat or loud noise.
3. Substances and articles not mentioned above which are manufactured with the view to producing a practical, explosive or pyrotechnic effect.

Class 1 is divided into six divisions based on the risk posed as follows:

- Division 1.1 – Explosives with a mass explosion hazard.
- Division 1.2 – Explosives with a projection hazard but not a mass explosion hazard.
- Division 1.3 – Explosives with a fire hazard and either minor blast or projection hazard or both but not a mass explosion hazard.
- Division 1.4 – Explosives that present no significant hazard.
- Division 1.5 – Very insensitive substances that have a mass explosion hazard.
- Division 1.6 – Articles containing very insensitive explosives.

Explosives substances not covered by the IMDG Code shall not be conveyed through the port area.

4.2 Berth Limits

The following berth quantity and time limits apply to all packaged and break-bulk dangerous cargoes.

Table 1 - Berth limits for Class 1 Dangerous Goods

| Berth | Maximum Separation Distance | Maximum NES Division 1.1,1.5 and 1.6 | Maximum NEQ Division 1.2 | Maximum NEQ Division 1.3 | Maximum NEQ Division 1.4 |
|-------------------|-----------------------------|--------------------------------------|--------------------------|--------------------------|--------------------------|
| Fisherman's Wharf | 20m | 40kg | Nil | 2060kg | 250 000kg |

4.3 Time Limits

Minimising the time the dangerous goods and cargo is stored on the wharf will contribute towards minimising the risk associated with the handling of dangerous goods for the wharf and surrounding area. All practicable efforts need to be made to ensure dangerous goods only remain on the wharf for the minimum time period required.

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The following time limits apply for load and unload of all Class 1 cargoes

Table 2 – Time limits for load and unload of all Class 1 cargoes

| Time limit | Class and Packing Group (PG) | Comments |
|------------|--|--|
| 2 hours | Class 1 Explosives (except Division 1.4s) | Vessels to leave the facility within 2 hours of being loaded onto the vessel |
| 12 hours | Class 2.1 Flammable Gases Class 2.3 Toxic Gases Class 3 PG I Flammable Liquids Class 4.1 PG I Flammable Solids Class 4.2 PG I Substances liable to spontaneous combustion Class 4.3 PG I Substances which in contact with water emit flammable gases Class 5.1 PG 1 Oxidizing Substances Class 6.1 PG I Toxic Substances Class 8 PG I Corrosive Substances | Where the quantity exceed 500 kg. (If quantities are less than 500kg then the consignee may apply in writing for the dangerous goods to remain within a restricted zone for up to 5 days dependant on operational requirement). |
| 5 days | All dangerous goods of Class 2, 3, 4, 5, 6, 8 or 9 other than those mentioned above | A nominal period of 5 days may be extended to green line dangerous goods depending on the operational requirements of the wharf. |

Division 1.4 cargo must leave the facility within 12 hours of being loaded onto the vessel.

Where the dangerous goods are to be loaded in bulk the time limits apply (for transit cargo) on completion of unloading.

4.4 Handling and Transport Requirement

The following precautions must be observed when handling Class 1:

- The separation distance shall be clearly marked with appropriate bollards / fencing and signage. Access to the exclusion area restricted to authorised personnel only
- Explosives shall be handled in a safe, efficient and secure manner.
- Explosives shall be unloaded as soon as reasonably practicable.
- Smoking is prohibited on the ship on the berth, except in safe areas. Appropriate signage shall be displayed.
- Adequate and appropriate firefighting equipment shall be available immediately and throughout the period of the transfer.
- Explosives not classified in accordance with the IMDG Code shall not be handled within the FBF.
- Road vehicles carrying explosives shall remain at least 100 metres apart.
- Forklifts used in the handling of explosives shall not be petrol powered, must be fitted with spark arresters, where appropriate and shall be inspected before use to ensure they are free from leaks.

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- Unattended vehicles shall not be within the separation distance or 20 metres of explosives (whichever is greater).
- Explosives shall not be handled during an electrical storm.
- When more than 100 kg NEQ of explosives is handled, other than Division 1.4, a consignee's representative shall be present and have access to expert technical advice in the event of an incident.

NOTE: Class 6 and Class 7 dangerous goods, the movement, handling or storage is prohibited on FBF.

4.5 Vessel Requirements

The following precautions must be observed when handling Class 1 dangerous goods:

- Class 1 of all divisions shall not be brought onto a berth for loading until the ship is ready to receive them and shall be the last cargo loaded prior to departure.
- Class 1 of all divisions shall not be unloaded from a ship unless the means of transport by which they are to be removed from the FBF is ready to receive them and must be the first cargo discharged.
- Class 1 shall not remain within the port area for more than 2 hours (with the exception of Division 1.4 on application)
- The vessel's engine and ancillary equipment must be mobile at all times to allow for a quick departure from the berth.
- Class 1 shall be stowed and segregated in accordance with the requirements of the IMDG code whilst on board a vessel.
- Whilst handling Class 1, with the exception of Division 1.4, adequate and appropriate firefighting equipment shall be immediately available on the vessel. Fire hoses shall be rolled out and ready for immediate use.
- Bunkering shall not take place within the separation distance and on the vessel loading or unloading explosives during the handling of explosives.
- Repairs involving hot works, engine repairs are prohibited on the vessel or on the berth while explosives are being handled.

4.6 Scheduling Vessels

For vessels loading or unloading explosives, adjacent vessels are to be berthed so that the accommodation quarters are as far away from the Class 1 as practicable.

4.7 Ordinary Berths

All berths shall be considered ordinary berths.

Class 1 Divisions 1.1, 1.2, 1.3, 1.4 and 1.5 shall be separated from other ships accommodation spaces and bunkering vessels in accordance with the requirements in Table 3.

Class 1 Division 1.6 shall be separated from protected places, other ships' accommodation spaces and bunkering vessels in accordance with the requirements in Table 3. A reduction in separation distance to main roads will not be permitted.

Class 1 Division 1.4S is not restricted in the quantity that can be handled or remain on board a ship as transit cargo.

4.8 Mixed Consignments

Where the NEQ of transit cargo exceeds the limit in Table 3, or the separation distance to adjacent ships' accommodation cannot be maintained, a special berth is required. By contacting the Small Ships Scheduler an allocation of a special berth for the vessel can be made.

Table 3 – Separation Distance Table

| NEQ kg | Separation Distance in metres | | | |
|-----------|-------------------------------|-----|-----|-----|
| | Division | | | |
| | 1.1,1.5,1.6 | 1.2 | 1.3 | 1.4 |
| 25 | 10 | 50 | 10 | 10 |
| 50 | 25 | | | |
| 100 | 33 | | | |
| 200 | 52 | | | |
| 300 | 68 | | | |
| 400 | 82 | | | |
| 500 | 95 | | | |
| 1000 | 150 | | | |
| 1500 | 191 | | | |
| 2000 | 240 | | | |
| 2500 | 257 | 220 | 37 | |
| 3000 | 284 | 225 | 92 | |
| 4000 | 350 | 235 | 105 | |
| 5000 | 380 | 245 | 110 | |
| 7500 | 424 | 265 | 125 | |
| 10000 | 480 | 280 | 140 | |
| 15000 | 546 | 300 | 158 | |
| 20000 | 610 | 320 | 175 | |
| 25000 | 650 | 340 | 186 | |
| 30000 | 689 | 340 | 199 | |
| 40000 | 762 | 360 | 218 | |
| 50000 | 820 | 375 | 240 | |
| 75000 | 940 | 400 | 273 | |
| 100000 | 1040 | 410 | 300 | 20 |
| 150000 | 1180 | | 345 | |
| 200000 | 1300 | | 375 | |
| 250000 | 1400 | | 405 | |