PORT DEVELOPMENT GUIDELINES

Appendix D
Health and Safety
Technical Standards

PILBARA PORTS

TABLE OF CONTENTS

1. APPLICATION OF THIS DOCUMENT

This document outlines Pilbara Ports' technical standards for health and safety and applies to all port development works undertaken on Port tenure by proponents and is to be read in conjunction with the Port Development Guidelines (PDG) Application Guide.

2. DEFINITIONS

For information on definitions and acronyms refer to the PDG - Application Guide.

3. LEGISLATION AND REGULATIONS

Proponents and their contractors or person conducting a business or undertaking (PCBU) must comply with all work health and safety (WHS) Laws, Acts, Regulations, standards, WorkSafe approved Codes of Practice and any other requirements. Proponents must ensure all relevant risk assessments are completed, and standards relevant to the project are met.

The proponent and its contractors are to ensure that WHS Management Plans (WHSMP) are developed and implemented. These plans must meet the requirements of all current WHS legislation, for example, the *Work Health and Safety Act 2020* (Western Australia) and *Work Health and Safety (General) Regulations 2022*.

WHSMP will need to be submitted with your construction application. For more information on management plans refer to the PDG Application Guide.

Proponents may be required to have in place WHS management systems that comply with AS/NZS 45001:2018, Occupational Health and Safety Management Systems. The requirement for a WHS management system is based on risk exposure and complexities of the development.

4. TECHNICAL STANDARDS

These technical standards provide proponents with information that will assist to address the performance criteria in relation to work health and safety.

The technical standards are designed to complement, rather than override, accepted Australian Standards or legislation. If there is any inconsistency between the technical standards and/or and State/Commonwealth legislation, the following order of precedence applies: (1) Commonwealth legislation; (2) State legislation; (3) these technical standards.

Proponents are responsible to ensure all relevant information taken from this guide are up to date and must refer to the Australian WHS Regulations, Acts, Codes of Practice, guides and standards that are relevant to the project. The information in the technical standards is not an exhaustive list. For information on other work safety standards refer to the Safe Work Australia website, or Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) website.

Some components in these technical standards may not be applicable to your development or operations. If you are unsure about the applicability of a specific technical standard, please contact the Port Development team.

4.1 Work Health and Safety Management Plan (WHSMP)

A construction WHSMP must contain:

- Specific site location.
- Description of the construction works, including the types and schedule of works.
- Details of the developer/contractor, and other key groups or individuals who may be associated with the project.
- List of site contacts, including mobile phone numbers.
- Summary of key issues based on risk assessment.
- Key management measures to control WHS issues.
- Performance criteria to assess management controls.
- Monitoring, recording, and reporting procedures.
- Revision of management controls procedures, if required.
- Emergency response.
- Incident response including reporting protocols.

Also refer to the PDG Application Guide for more information on management plans.

4.2 Safe Work Method Statements

A Safe Work Method Statement (SWMS) is a document that sets out the following:

- Identify the work that is high risk construction work.
- Specify hazards relating to the high risk construction work and the risks to health and safety.
- Describe the measures to be implemented to control the risks.
- Describe how the control measures are to be implemented, monitored, and reviewed.

Proponents that carry out high risk construction have additional WHS duties, these include requirements to prepare, keep, comply with, and review SWMS for the work. The proponent and/or its contractors must prepare and/or obtain a SWMS (from any subcontractor) before high risk construction work on a construction project starts.

Copies of SWMS are to be submitted with your construction application to support your WHSMP and compliance with WHS legislation.

4.3 Anhydrous Ammonia Emergency Response Plan

Proponents conducting works in and around the Port of Dampier must be familiar with the Pilbara Ports' Anhydrous Ammonia Emergency Response Plan, and may be requested to develop and submit their own anhydrous ammonia emergency response plan to Pilbara Ports.

4.4 Asbestos containing material (ACM)

All proponents must have an asbestos management plan in line with relevant Acts, standards, and regulations relevant to the project, and submitted with your development and construction application. Asbestos use has been prohibited since December 2003. However, you may still find asbestos in older buildings and products such as:

- Fibrous cement sheeting, external cladding, and vinyl tiles.
- Flue pipes, drains, gutters, roofs, and roof insulation.
- Electrical insulation, switchboards, and meters.
- Brakes, clutches, and gaskets.

Only a licensed asbestos assessor can be used to identify asbestos or ACM. Proponents removing ACM must inform themselves of and meet all legal requirements for asbestos removal. Contact Pilbara Ports to request a copy of the Pilbara Ports' Asbestos Management Plan.

4.5 Cyclone response plan

A cyclone response plan must be established for your development and must reflect the findings of a risk assessment. The proponent must ensure that its cyclone response plan:

- References the mandated governance role of Pilbara Ports over the port, is consistent with the Pilbara Ports' Cyclone Response Plan for the respective port and acknowledges that Pilbara Ports has ultimate sanction on port closure.
- The plan is to include details of the proponent's commitment to ensuring clear lines of 24-hour communication between Pilbara Ports and the proponent prior to, during, and post a cyclone event.

The proponent must also incorporate individual cyclone response plans for each of its contractors and sub-contractors (if they are operating distinct to the proponent's cyclone response plan) upon commencement of their operations within the port and thereafter as requested by Pilbara Ports.

Cyclone tie down methodologies and implementations must comply with the Australian Standards Pilbara wind region D zone – 100 km within the coastline.

The cyclone response plan is to comply with all relevant Acts, Regulations, WorkSafe approved Codes of Practice, standards, other relevant documents and approvals in line with the development. Proponents can also refer to the relevant port's plan on the Pilbara Ports' website.

4.6 Demolition work

Demolition work means to knock down or dismantle a structure, or part of a structure, that is load bearing or related to the physical integrity of the structure. A structure is a fixed or moveable, temporary or permanent constructed object, for example buildings, sheds, towers, storage tanks, etc.

Proponents shall ensure the following is met:

- Requirements met to hold demolition licence to carry out Class 1 and 2 demolition work.
- Ensuring that workers have the relevant licence to perform demolition work. Demolition work can involve disturbing asbestos and explosives and such work may require workers to have the relevant licence.
- Notifying the relevant WHS regulator at least five (5) days before:
  - demolition of a structure, or a part of a structure that is load bearing or otherwise related to the physical integrity of the structure, that is at least six (6) metres high;
  - demolition work involving load shifting machinery on a suspended floor; or
  - demolition work involving explosives.

Obtain a copy of the asbestos register from the person with management or control of the workplace and check the asbestos register before work begins.

If there is no register, a competent person must inspect the structure for asbestos. Any asbestos which demolition work may disturb must be removed before demolition work can begin.

Proponents must prepare and submit their SWMS to Pilbara Ports as part of the construction application, as demolition work constitutes high risk construction work.

4.7 Demarcation and barricading

Proponents must have a system in place that defines the requirements for demarcating and barricading hazards.

Prior to the execution of any work a risk assessment must be carried out in accordance with the Pilbara Ports' Hazard Management Procedure to identify demarcation and barricading requirements. When demarcating or barricading an area, it is important to make the size of the area appropriate for the task or hazard.

Wherever practicable, demarcation tape or barricading must be used to separate a temporary hazard or hazardous situation from other activities. If the use of demarcation tape or barricading is not practicable, signage and warnings must be used to warn all personnel who might enter the area. Demarcation tape may be wrapped around a barricade to identify the level of control.

For more information refer to the Demarcation and Barricading Procedure located on the Pilbara Ports' website.

4.8 Electrical safety

All electrical work must conform to the *Electricity Act 1945* (WA) and any other relevant statutes or regulations in WA.

Proponents must ensure that only licensed or registered electricians carry out electrical work. Requirements for electrical work on high voltage equipment after switching, isolation, short circuiting and earthing are specialised requirements. Only competent electrical workers who have received appropriate training and have the required authority in high voltage electrical work are permitted to work on high voltage electrical equipment.

Proponents shall:

- Regularly inspect, test and tag certain electrical equipment.
- Not use such equipment until tested, unless it is new, unused and has no obvious damage.
- Use residual current devices (RCD).
- A competent person must perform electrical inspections and testing. They will be a licensed or registered electrician or a licensed electrical inspector.

If it is reasonably practicable for an RCD to be provided, the RCD must have a tripping current that does not exceed 30 milliamps for socket outlets not exceeding 20 amps.

Proponents that hire out electrical equipment, must ensure a competent person inspects and tests it before each hire and every three (3) months.

4.8.1 Managing risks of solar power systems

Solar installation work and installation of photovoltaic (PV) systems is also construction work. You must be a licensed or registered electrician to undertake solar or PV systems installation. Solar installation poses further risks on top of electrical risks from working:

- Near overhead electric lines and equipment.
- At height – risk of falls from roof or through ceiling space.
- In ceiling spaces – risk of exposure to asbestos, extreme heat, energised electric lines.
- Outdoors – exposure to ultraviolet radiation, heat, wind, and other weather.

Construction work on or near energised PV systems is high risk construction work where there is a risk of falling more than two metres. This work requires copies of the SWMS to be submitted to Pilbara Ports prior to work commencement identifying the following:

- Managing overhead and underground electric line risks.
- De-energise lines and equipment if possible.
- Identify line voltage and insulation.
- Consult with workers, electricity supply authorities, and PCBUs.
- Decide safe approach distances and work zones.

Overhead lines:

- Assess line visibility, height, sway, and sag.
- Consider site conditions, including weather, ground, and traffic.

Underground lines:

- Identify line locations, for example repairing potholes.
- Use insulated hand tools.

4.8.2 Operating environments

The nature and frequency of inspection and testing depends on factors such as the nature of the electrical equipment, how it is used and its operating environment.

The WHS Regulations have specific requirements for electrical equipment used in a 'hostile operating environment'. A hostile operating environment is a term used to describe an environment where electrical equipment is exposed to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span.

This includes conditions that involve exposing the electrical equipment to moisture, heat, vibration, mechanical damage, corrosive chemicals, and dust. Examples include wet or dusty areas, outdoors, workplaces that use corrosive substances.

Inspecting and testing electrical equipment for construction and demolition sites:

- AS/NZS 3012 - Electrical installations - Construction and Demolition Sites applies in relation to the inspection and testing of electrical equipment on construction and demolition sites (including record keeping requirements).

- As a rule, electrical equipment connected by a plug and socket that is used on construction and demolition sites should be inspected and tested at least once every three months. More frequent testing may be required as indicated by a site-specific risk assessment.

4.8.3 High voltage electrical work

Requirements for electrical work on high voltage equipment after switching, isolation, short circuiting and earthing are specialised requirements. Only competent electrical workers who have received appropriate training and have the required authority in high voltage electrical work are permitted to work on high voltage electrical equipment.

4.8.4 High voltage installation management plan

Proponents that have a high voltage electrical installation should prepare an installation safety management plan for their workplace and submit the plan with their construction application. The plan should address the risks associated with the operation and maintenance of the high voltage installation.

This plan may include a single line diagram for the installation, showing all switches and circuit breakers and their identifying labels or numbers, and site-specific operating rules covering all aspects of operating the high voltage installation, including procedures for arranging isolation of the installation from the local electricity network, such as:

- Procedures for identifying hazardous areas including any confined spaces associated with the installation.
- Competency requirements for persons who may be permitted to operate or work on the high voltage installation, including appropriate requirements for re-training, re-testing, and re-accreditation.
- Induction procedures for new contractors.
- Regular inspection and maintenance programs to ensure the installation remains serviceable and safe.
- Procedures for ensuring there is no extension or alteration of the installation without permission from the local electricity supply authority.
- Procedures for the safe handling of insulating oils and other substances that may be required for maintenance or repair.
- Procedures to include warning signs to ensure no parts of the high voltage installation (for example underground cables and high voltage overhead powerlines) are damaged by heavy vehicles or other mobile plant, for example mobile cranes.

4.8.5 Electrical work regulations

The *Electricity (Licensing) Regulations 1991* (Regulations) require electrical contractors to certify certain types of electrical installing work carried out in WA. Depending on the type of work one or more of the following may be required:

- Preliminary notice.
- Notice of completion.
- Electrical safety certificate.

An electrical contractor intending to carry out any notifiable electrical installing work or cause any notifiable electrical installing work to be carried out must submit a preliminary notice to the relevant electricity network operator before the proposed electrical installing work is commenced (Regulation).

Some exemptions are provided in the Regulations:

- If the electrical installation will not be connected to an electricity network operator's system, the notice must be sent to Building and Energy.
- An electrical contractor who carries out any notifiable electrical installing work or causes any notifiable electrical installing work to be carried out must submit a notice of completion to the relevant electricity network operator within three (3) days of completion of the work (Regulation 52).

All electrical wiring shall meet AS/NZS 3000 – Electrical Installations (known as the Wiring Rules). As stipulated in AS/NZS 3000: Wiring Rules clause 2.6.2.2.2, Type AC RCDs must not be installed in Australia from 1 May 2023. This change is due to the increased use of electronics, solar energy generation and other similar products with a high direct current (DC) waveform component.

Only Type A, Type B or Type F RCDs may be installed from 1 May 2023. Type A RCDs are the most suitable replacement designed to operate on both residual sinusoidal alternating current and residual pulsating direct currents. This requirement also applies to builders' power pole supplies as they are regarded as an installation, and electronic components used by the building industry are plugged into these poles.

4.9 Emergency response plan

Proponents must ensure that an emergency response plan (ERP) is established. The ERP is to reference the mandated governance role of Pilbara Ports over the port and is consistent with Pilbara Ports' ERP for the respective port.

Proponents must:

- Provide general information on the format and content of an ERP that is acceptable to Pilbara Ports.
- Put in place an emergency plan before construction can commence. The plan must contain instructions on what to do in an emergency. This includes but not limited to fire, explosion, medical emergency, rescues, incidents with hazardous chemicals, bomb threats, armed confrontations, and natural disasters, etc.

The ERP is to include details of the proponent's commitment to ensure clear lines of 24-hour communication between Pilbara Ports and the proponent prior to, during and post an emergency event.

The emergency plan must include:

- An effective response to an emergency.
- Evacuation procedures.
- Notifying emergency services.
- Medical treatment and help.
- Effective communication.
- Testing emergency procedures.
- Information, training, and instruction to relevant workers about doing the emergency procedures.

Proponents are to be familiar with Pilbara Ports' site-specific guides. For more information refer to the Pilbara Ports' website.

4.10 Excavation work

Excavation work is to make an excavation or to fill, or partly fill, an excavation. Excavation work includes the removal of soil or rock from a site to form an open face, hole or cavity. This includes trenches, shafts and tunnels. The use of star pickets and survey pegs deeper than 0.15m are also considered excavations.

Excavation work can involve demolition, asbestos removal, explosives and/or high-risk construction work. Proponents to complete Pilbara Ports' Excavation Permit application form on the website before commencing excavation works.

All plans must be submitted to Pilbara Ports and approved in consultation with Pilbara Ports' Mapping and Data team for notifications of intended works.

4.11 Firefighting equipment

The land must be serviced with firefighting resources to a standard that would be expected of the new development.

Department of Fire and Emergency Services (DFES) must be consulted regarding the suitability of the proposed firefighting system. The proponent should implement any alterations proposed by DFES.

Buildings may require a fire water reticulation main to be provided in accordance with the National Construction Code. Depending on the size and scale of the development, a Fire Engineering Brief and/or a Fire Safety Engineering Report may be required to be completed by the proponent for assessment and endorsement by DFES.

Access for fire trucks and other emergency vehicles must be considering in the design of driveways and roads. Pilbara Ports must be considered and consulted during the design.

The proponent must ensure firefighting equipment standards are in place that reflects the size, complexity and nature of their activities and stored substances.

Fire hydrants and other required firefighting resources must be provided in accordance with DFES requirements.

4.12 Fire safety and fire protection strategy

The proponent must provide its fire safety and fire protection strategy to Pilbara Ports for review and approval.

The proponent's proposed new facilities may introduce the need for a review of any existing fire safety and fire protection systems and/or installation of new or expanded systems for the prevention, detection and extinguishment of fires on port land or facilities, or on vessels at berth.

If Pilbara Ports considers that the risk to safety of personnel, asset protection or business continuity is likely to be increased by any new infrastructure or alteration to existing infrastructure, the proponent will be required to engage a specialist fire safety consultant to carry out a fire safety engineering assessment and deliver a fire safety and fire protection strategy.

The fire safety and fire protection strategy must include:

- A preliminary scope of work for the proposed fire safety and fire protection system(s).
- Preliminary basis of design documents as appropriate for the proposed fire safety and fire protection system(s).
- Conceptual layouts for the system(s) and proposed locations of firefighting equipment.
- Defined access routes for emergency vehicles and first responders.
- Locations of muster points and/or safe areas.
- Method of integration of the proposed system(s) with any existing system(s).
- Any other provisions necessary for the effective and efficient mitigation of the risk of fire and its consequences.

Proponents must also consult with boundary leaseholders in development of their fire protection strategies.

4.13 Hazardous substances and dangerous goods

Transportation, storage, handling, use and disposal of hazardous chemicals must not pose a threat to health, safety, the environment, any adjoining land users, common access areas or personnel, and must comply with all local, State and Commonwealth legislation and/or requirements.

Proponents must ensure a site specific hazardous substances and dangerous goods procedure is in place that reflects the size, complexity and nature of substances and goods to be used.

The dangerous goods procedure is to manage the following for any development where hazardous chemicals are to be transported, stored, handled, used or disposed a risk assessment must be undertaken. Safe systems of work, such as policies, procedures, manifests, signage and training, must be implemented commensurate with the risk assessment outcomes.

- All hazardous chemicals must be transported, stored (including segregation), handled, used and disposed of in accordance with relevant legislation (e.g. *Dangerous Goods Safety Act 2004* (WA), *Dangerous Goods Safety (General) Regulations 2007*, Australian Standards, Codes of Practice, guidance notes or other relevant requirements.
- Where dangerous goods and cargoes are handled within the port area, the following division of codes and standards must be applied.
  - Where the dangerous goods are on a vessel, the requirements of the International Maritime Dangerous Goods (IMDG) code shall apply. When the vessel is in the port area, the requirements for notification and segregation in AS3846 shall apply, in addition to the IMDG Code requirements.
  - Where the dangerous goods are under hook and being discharged or unloaded, the requirements of AS3846 shall apply.
  - Where the dangerous goods are loaded on a truck and not under hook, the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) shall apply, unless the truck is stationary for more than 15 minutes.
- A manifest/register detailing the name, class, packaging group, subsidiary risks, other classification(s), maximum storage quantities and locations for all hazardous chemicals approved for use (including safety data sheets) must be provided to Pilbara Ports at commencement of works/operations and periodically updated as required.
- Proponents must ensure that hazardous chemical transport, storage (including segregation), handling, use and disposal does not adversely impact surrounding land users, common access areas or personnel.
- Provision must be made for appropriate emergency response (e.g. firefighting and first aid equipment).
- Provision must be made for potential spills to be bunded and retained on site for removal and disposal by approved means, so that any spills do not escape into the groundwater, stormwater systems, or any adjacent tidal waters or waterways. This must include the provision of stormwater storage and discharge/removal.
- Fuelling of vehicles and equipment must comply with the relevant regulations and standards. It must be undertaken on impervious surfaces at locations away from drainage systems, and precautions must be in place to ensure spills will not escape into groundwater, storm water systems or any adjacent tidal waters or waterways.

The proponent is responsible for ensuring:

- requirements under Schedule 1 of the *Environment Protection Regulations 1987* are complied with, where applicable;
- reporting the site to the Department of Water and Environmental Regulation (DWER) as having a prescribed activity under the *Contaminated Site Act 2003* (WA) as amended, where applicable; and
- appropriate licence(s) are held commensurate with the quantities, type and nature of hazardous chemicals stored within the site/lease area.

Copies of all hazardous chemical storage licences must be submitted to Pilbara Ports (upon commencement of operations) and kept up to date thereafter as appropriate.

For more information refer to the relevant Port Handbooks, or the following procedures on the Pilbara Ports' website:

- Hazardous Substances and Dangerous Goods (Minor Quantities) Procedure
- Port of Ashburton Dangerous Goods Permit Form
- Port of Ashburton Plant and Equipment Fuelling Procedure
- Port of Dampier Dangerous Goods Permit
- Port of Dampier Plant and Equipment Fuelling Procedure

4.14 International ports/biosecurity

Developments must not contravene any DAFF (biosecurity) or Australian Border Force requirements.

Developments must comply with all requirements of DAFF (biosecurity) and Australian Border Force.

For more information refer to relevant Port Handbooks on the Pilbara Ports website, and if relevant the Pilbara Ports' Port of Dampier - Biosecurity Incident Response Procedure.

4.15 Lightning preparedness and response plan

The proponent must ensure a site-specific lightning preparedness and response operational procedure is developed and included in the construction application. The procedure is to be maintained for the duration of the construction.

For more information refer to the Pilbara Ports Lightning Preparedness and Response Plan.

Document amendment table

VERSION	PREPARED BY	DATE	AMENDMENT DETAILS
PDG V2.0	Pilbara Ports	5/7/2024	Replaces PDG V1.6, 6/7/2020

Document owner

The Developments Manager is responsible for the Port Development Guidelines.

Date approved: 5/7/2024 **Review date:** 5/7/2026
Version: 2.0 **Approved by:** Developments Manager

Corporate office
Level 5, 999 Hay Street
Perth WA 6000

Dampier office
Mof Road
Murujuga (formerly the Burrup Peninsula)
Dampier WA 6713

Port Hedland office
The Esplanade
Port Hedland WA 6721

1300 100 772
www.pilbaraports.com.au
port.development@pilbaraports.com.au

PILBARA PORTS