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## 1. OBJECTIVE

The objective of this procedure is to outline the requirements for safely working at heights and prevention of falls from one level to another. Sections 1-12 of this procedure detail the general framework and principles for working safely at heights. Other more detailed information underpinning sections 1-12 is located from Section 13 onwards. Personnel are encouraged to read the Model Code of Practice: Managing the risk of falls at workplaces.

## 2. SCOPE

This procedure applies to:

- A person conducting a business or undertaking (PCBU), and all workers working for a PCBU, for or on behalf of Pilbara Ports on a Pilbara Ports site or Pilbara Ports controlled works.
- A vendor's worker may work under their own company's working alone procedures if formally agreed. See Section 9.
- Pilbara Ports tenants are required to meet the intent of this procedure, by putting systems in place to manage risks associated with working at heights.

## 3. ROLES AND RESPONSIBILITIES

| ROLE | RESPONSIBILITIES |
|---|---|
| Managers, Port Manager and Supervisors | Ensure personnel under their control are aware of, understand and comply with the requirements of this procedure.<br>Work collaboratively with employees to identify, approve, and where required, provide additional support. |
| Permit Holders | Complete and submit the Working at Height Permit for approval.<br>Ensure all conditions of the permit are complied with and persons meet their working at height. |
| Permit Authorisers | Review and approve Working at Height Permits, reviewing the associated risk assessment. |
| Employees and Contractors | Comply with the requirements of this procedure. |
| Visitors | Comply with all reasonable instructions given by your escort. |

## 4. RISK ASSESSMENTS

Prior to the commencement of any work, a risk assessment must be carried out in accordance with the Hazard Management Procedure. Adequate protection against falling from height risks shall be implemented within the risk assessment, if it is reasonably practicable to do so in the following order of precedence:

### 4.1 Fall Prevention Devices

When work cannot be performed on the ground or from a solid construction, you must minimise the risk of a fall by providing a fall prevention device, if it is reasonably practicable to do so. Figures A to D below are examples of fall prevention devices. Refer to the *Code of Practice Managing the risk of falls in the workplace* for more information.

*Figure A: Perimeter scaffold with fully decked working platform, guardrails, mid-rails and toe-boards*

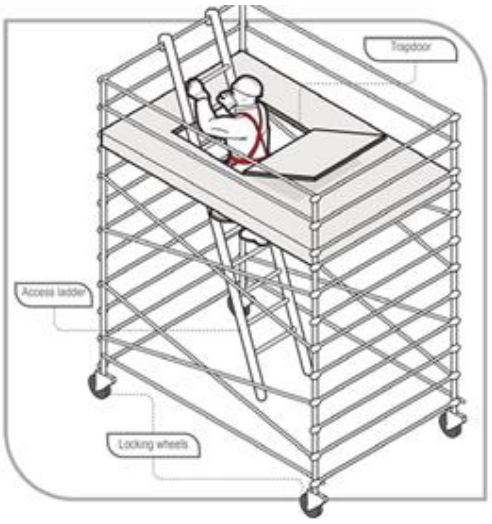


*Figure B: Mobile scaffold with access ladder and trapdoor*

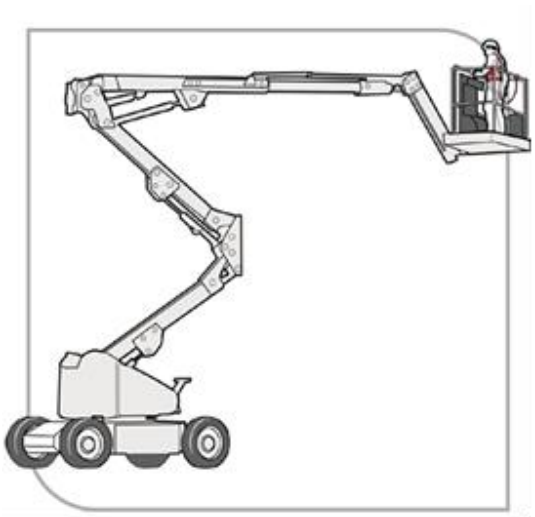

*Figure C: Boom-type elevating work platform*

*Figure D: Scissor-lift elevating work platform*

### 4.2 Work Positioning System – Restraint Technique

If it is not reasonably practicable to provide a fall prevention device in section 4.1, you must minimise the risk of a fall by providing a work positioning system – restrain technique, if it is reasonably practicable to do so. See Figure E for examples of restraint techniques. Refer to the *Code of Practice Managing the risk of falls in the workplace* for more information.

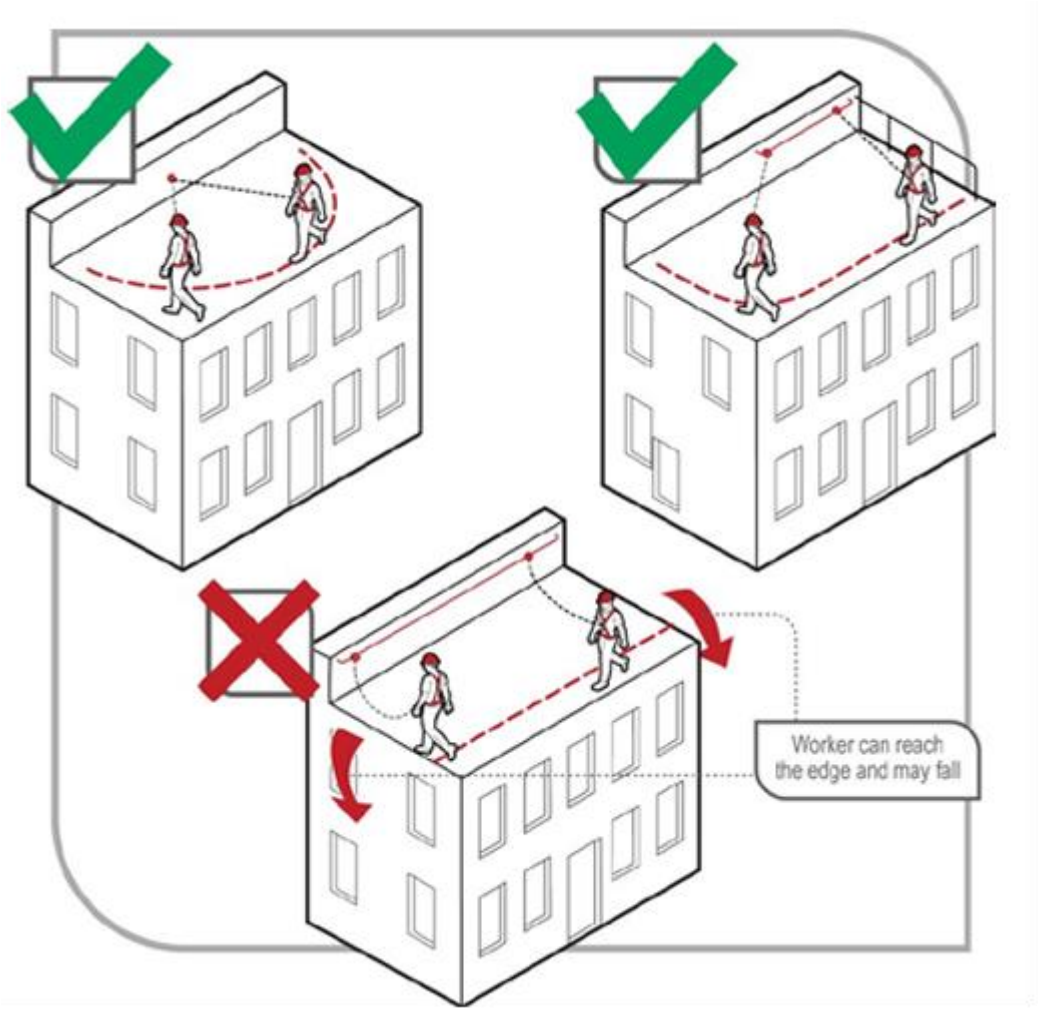


*Figure E: Restraint technique options*

### 4.3 Fall Arrest Systems

If it is not reasonably practicable to provide a work positioning system – restraint technique in section 4.2, you must minimise the risk of a fall by providing fall arrest system, if it is reasonably practicable to do so. Refer to the *Code of Practice Managing the risk of falls in the workplace* for more information.

Working at height in the hours of darkness using a fall arrest system must be avoided wherever practicable. While conducting the risk assessment, it is important to determine the control measures required for the job as per detailed above.

## 5. WORKING AT HEIGHT PERMIT

An approved Working at Height Permit is required when:

- there is a risk of a fall from one level to another,
- a fall injury prevention system is used, or
- when determined by a risk assessment.

The approved Working at Height Permit must be issued before work commences.

### 5.1 Permit Authorisation

The Permit Holder must complete all details of the Working at Height Permit and submit to the Permit Authoriser with the relevant risk assessment. The Permit Authoriser must review the permit details and ensure that it is completed correctly. The permit must be reviewed and approved by the Permit Authoriser, once they are satisfied with the permit details, before work can commence. Refer to Section 6.4 for more information on the Permit Authoriser.

### 5.2 Permit Currency

Each permit must be valid for the duration of the associated risk assessment (no greater than seven consecutive day or night shifts). Where the working at height activities is required to carry over from day shift to night shift or vice versa by different workgroup, the oncoming workgroup must conduct a new risk assessment and apply for a new permit accordingly.

### 5.3 Permit Issue and Transfer

The permit must be approved by the Permit Authoriser and accepted by the Permit Holder before any person can work at height. The Permit Authoriser and Permit Holder cannot be the same person.

A permit may also be transferred from one Permit Holder to another eligible person, who would become the Permit Holder.

### 5.4 Permit Log Extension Sheet

A Working at Height Permit Log Extension Sheet is available to be attached to a permit, when all available space has been used on the working at height log and spotter log.

### 5.5 Permit Close Out

A Permit Holder can return a permit to the Permit Authoriser under three conditions:

- **Not completed** – working at height works incomplete, and the area is not yet safe to return to normal operations,
- **Completed** – working at height works are complete and the area has been made safe to return to normal operations, or
- **Cancelled** – working at height works were not undertaken under this permit.

Prior to returning a permit, the Permit Holder must inspect the work area to confirm all person/s, equipment and material have been removed. If any equipment or materials are present, or the work area is otherwise in a condition unable to be returned to service, this must be noted on the permit before returning to Permit Authoriser.

### 5.6 Lost Working at Height Permit

In the event the permit is lost, the Permit Holder must:

- advise the workgroup that the permit has been lost and request them to exit the work area and not re-enter,
- install adequate signage prohibiting any unauthorised entry to the work area, and
- carry out a thorough search for the permit, including contacting all persons who may have had control of the permit since the time it was issued.

A new permit may be raised once a Permit Authoriser is satisfied the existing permit is lost and not likely to be found. The permit must be clearly marked to indicate it is a replacement permit.

## 6. TRAINING, COMPETENCY AND DUTIES

All personnel involved in activities where a permit is required, must meet the requirements below, as relevant.

### 6.1 Working at Height Worker

The working at height worker must:

- complete and be deemed competent in a nationally recognised course for working safely at heights. This training must have been completed within the last two years and as such be renewed at two yearly intervals,
- not conduct working at height without a permit having been issued to the Permit Holder,
- comply with all controls on the permit and the associated risk assessment,
- hold a valid high-risk work license (HRWL)[1] when required to carry out work identified as high risk by WorkSafe. The worker must hold a HRWL for the class of work they are completing, e.g. Boom-type Elevated Work Platform (WP) or basic scaffolding (SB). Personnel who are a passenger only in boom-type elevated work platforms (EWP) must have completed and be deemed competent in a nationally recognised course for working safely at heights. They do not need to hold a HRWL WP,
- complete the working at height log for each task shift they work (whatever comes first), and
- understand their role in the emergency response plan and respond to an emergency accordingly.

### 6.2 Spotter

The spotter must:

- complete and be deemed competent in a nationally recognised course for working safely at heights. This training must have been completed within the last two years and as such be renewed at two yearly intervals,
- be appointed and monitor personnel working at height,
- be in continuous contact with the personnel working at height, by either visibly or by verbal communication (portable communication, such as mobile phones or 2-way radio, is acceptable.),

[1] Refer to https://www.worksafe.wa.gov.au/high-risk-work-licence for more information.

- complete the spotter log for each task shift they work (whatever comes first), and
- understand their role in the emergency response plan and respond to emergency accordingly.

A spotter may perform other duties when spotting an EWP or scissor lift once the plant has been placed in emergency stop, provided that:

- they can maintain regular visual contact of personnel working inside the basket,
- they stay within the work area,
- they can promptly respond in an emergency, and
- the other duties are associated with the task they are spotting for.

When conducting spotting duties for persons operating an EWP, the spotter must hold a valid HRWL WP.

### 6.3 Permit Holder

The Permit Holder must:

- complete and be deemed competent in a nationally recognised course for working safely at heights. The training must have been completed within the last two years and as such be renewed at two yearly intervals,
- complete all the relevant details of the permit,
- sign on as the Permit Holder,
- submit a completed permit and attachments to the Permit Authoriser for review and approval,
- ensure all conditions of the permit are complied with,
- ensure working at height logs and spotter logs are completed and kept up to date, and
- ensure persons meet their working at height duties and comply with all controls on the permit and the associated risk assessment.

The Permit Holder can hold other roles associated with the working at height but cannot be the Permit Authoriser.

### 6.4 Permit Authoriser

The Permit Authoriser must:

- complete and be deemed competent in a nationally recognised course for working safely at heights. The training must have been completed within the last two years and as such be renewed at two yearly intervals,
- be appointed by their relevant Pilbara Ports Business Unit Manager or delegate to approve working at heights and issue permits,
- review the associated risk assessment, and review permit details and ensure they are completed correctly.

The Permit Authoriser can hold other roles associated with the working at height but cannot be the Permit Holder.

## 7. ISOLATION OF SERVICES

Prior to any person working at height, all potentially hazardous services connected to the area where work is to occur must be isolated as per the requirements of the Isolation and Tagging Procedure.

## 8. EMERGENCY PREPAREDNESS

### 8.1 Emergency Response

An emergency response plan must be developed, prior to work commencing, with consideration for the following:

- assessment of work area to deem as safe prior to commencing response,
- possible incidents and injuries that could occur whilst undertaking the task,
- emergency equipment and first aid facilities required for each potential incident and injury,
- external emergency services that may be required and how to contact them,
- the role each person will play within the work group during a response,
- the training and competency of personnel in implementing the response plan and the use of relevant emergency equipment, and
- personal protection for personnel within the response team.

Consideration for response plans must be referenced in the risk assessment as a control.

### 8.2 Suspension Trauma

When developing response plans consideration must be given for suspension trauma, which may occur when a person has an arrested fall.

When a person is suspended and caught in an upright, vertical position and the harness straps cause pressure on the leg veins, blood flow to the heart may be reduced and result in fainting, restriction of movement or loss of consciousness, all within a few minutes.

Suspension trauma can lead to renal failure and eventually death, depending on a person's susceptibility. The condition may be worsened by heat and dehydration.

A quick rescue of personnel suspended in a full body harness is vital. Personnel should be capable of conducting a rescue of a fallen worker and be familiar with rescue equipment and plan.

### 8.3 Emergency Contact

| EMERGENCY COMMUNICATION | |
|---|---|
| **Emergency Contact** | **Emergency Contact Phone Number / Radio Channel** |
| Emergency Services (fire, police, ambulance) | 000 |

| EMERGENCY COMMUNICATION | |
|---|---|
| Security Gatehouse Port Hedland East – operates 24 Hours | (08) 9173 9043<br>0418 424 359 (Patrol Mobile) |
| Security Gatehouse Utah – operates 24 Hours | (08) 9173 8911<br>0417 412 950 (Patrol Mobile) |
| Port Hedland Vessel Traffic Services Centre – operates 24 Hours | Landline: (08) 9173 9030<br>Mobile: 0438 303 708<br>Mobile: 0427 842 740<br>VHF Radio: CH12 / CH16 |
| Security Gatehouse Dampier – operates 24 Hours | (08) 9159 6584 |
| Security Gatehouse Ashburton – operates 24 Hours | (08) 9181 2601<br>0407 301 936 (Patrol Mobile) |
| Dampier/Ashburton Vessel Traffic Services Centre – operates 24 Hours | Landline: (08) 9159 6556<br>Mobile: 0428 888 800<br>VHF Radio: CH11 / CH16 |

## 9. CONTRACTORS AND VISITORS

Personnel are permitted to work under their own company's fall prevention management systems in the following cases:

- You are a Pilbara Ports authorised Principal Contractor and/or conducting works on behalf of an authorised Principal Contractor under a Contracted Works Agreement, have exclusive possession of the work area and approved to work under your own Health and Safety Management System and/or that of the Principal Contractors.
- You are a contractor working on or maintaining Navigational Aids (AtoN) not owned or maintained by Pilbara Ports where VTS and the Harbour Master have been notified of such works.
- Work or services undertaken on Pilbara Ports tenanted exclusive lease areas whereby lease holders have engaged work within that exclusive leased area.

## 10. RECORD KEEPING

All records must be managed in accordance with the Record Keeping Plan.

## 11. REFERENCES

AS 1418.1 Cranes, Hoists and Winches – Safe Use Requirements

AS 1418.10 Cranes, Hoists and Winches - Mobile elevating work platforms

AS 1418.17 Cranes (including hoists and winches) – Design and construction of workboxes

AS 1657 Fixed Platforms, Walkways, Stairways and Ladders - Design, Construction and Installation

AS 1892.1 – Portable Ladders – Metal

AS 2359 Powered Industrial Trucks

AS 2550.1 Cranes, Hoists and Winches - Safe use requirements

AS 2550.10 Cranes, Hoists and Winches – Mobile elevating work platforms,

AS/NZS Fall Arrest Systems and Devices 1891 series

AS/NZS 1891.4 Industrial Fall Arrest Systems and Devices – Selection, Use and Maintenance

AS/NZS 1892 – Portable Ladders series

AS/NZS 4488.2 Industrial Rope Access Systems – Selection, use and maintenance

Pilbara Ports Demarcation and Barricading Procedure

Pilbara Ports Hazard Management Procedure

Pilbara Ports Record Keeping Plan

Pilbara Ports Working On, Over, In or Near Water Procedure

Pilbara Ports Working at Height Permit

Pilbara Ports Working at Height Permit Log Extension Sheet

Pilbara Ports Authority to Work Procedure and Form

## 12. DOCUMENT OWNER

The Health and Safety Manager has overall responsibility for this procedure.

## ADDITIONAL INFORMATION

### 13. DEFINITIONS

| TERM | DEFINITION |
|---|---|
| Anchorage | A secure point for attaching a lanyard, lifeline or other component of a travel restraint system technique or fall arrest system. Anchorages require specific load and impact capacities for their intendent use. |
| Boom-Type Elevating Work Platform | A telescoping device, hinged device, or articulated device or any combination of these used to support a platform on which personnel, equipment and materials may be elevated to perform work. |
| Catch platform | A temporary platform located below a work area, generally constructed of scaffolding components. |
| Competent person | In relation to the doing of anything, means a person who has acquired, through training, qualification and experience, the knowledge and skills required to do that thing competently. |
| Energy Absorber | A device that reduces deceleration force imposed when a fall is suddenly arrested and correspondingly reduces the loadings on the anchorage and the person's body. The energy absorber may either be a separate item or manufactured as part of the lanyard. |
| Fall Arrest System | Plant or material designed to arrest a fall |
| Fall from height | Where a person falls from one level to another. |
| Fall injury prevention system (FIPS) | A system designed to prevent or arrest a person's fall from one level to another and minimise the risk of injury or harm. |
| Free Fall | Any fall or part of a fall where the person falling is under the unrestrained influence of gravity over any fall distance, either vertically or on a slope on which it is not possible to walk without the assistance of a handrail or hand line. |
| Lanyard | An assembly consisting of a line and components which will enable connection between harnesses and an anchorage point and will absorb energy in the event of a fall. |
| Permit Issuer | A Pilbara Ports representative who authorises and issues permits.<br>The Permit Issuer may also be known as the Permit Authority. |
| Permit Holder | A person involved in the task who accepts the permit from the Permit Authoriser and ensures all details on the permit are implemented. |
| Height Safety Equipment Inspector | A person who has been deemed competent in a course in line with AS/NZS 1891.4 for inspecting and tagging height safety equipment. |
| Mobile Elevating Work Platform (MEWP) | Is any device (telescoping, articulating, or any combination of these) that is capable of running over a supporting surface without the need for fixed runways and/or vertical or horizontal restraining connections to lift personnel, equipment and materials to and from workplaces located above a support surface. |
| Pilbara Ports Controlled Works | Works that are under the control of Pilbara Ports.<br>Whether the worker is working under the control of Pilbara Ports will need to be decided on a case-by-case basis. To give some guidance of works that would be considered as Pilbara Ports controlled works are: |

| TERM | DEFINITION |
|---|---|
| | • Contractor travelling between Pilbara Ports port locations where that travel is part of the works required by Pilbara Ports.<br>• Contractor working on a Pilbara Ports owned residential property.<br>• Transport driver moving product where the driver is under the supervision of Pilbara Ports or a Pilbara Ports contractor.<br><br>Examples of works that are not under the control of Pilbara Ports are:<br>• Truck driver delivering goods to Pilbara Ports from a warehouse where the driver is not under the supervision of Pilbara Ports or its contractor.<br>• Vendor travelling from their place of accommodation to a Pilbara Ports site.<br>• Worker doing activities not related to work (person going offsite for lunch, for an appointment, undertaking personal studies). |
| Restraint Line | The line securing workers to a point of anchorage which is used to prevent a person from reaching a point from which he or she could fall. |
| Safety net | A net used to limit the distance of fall of personnel or objects by catching them before they reach the next level. |
| Safety mesh | Galvanised steel mesh securely fixed beneath roofing to prevent personnel falling from one level to another. |
| Solid construction | Means an area:<br>• with a surface that is structurally capable of supporting workers, materials and any other loads applied to it,<br>• provided with barriers around its perimeter and around any openings from or through which a person could fall,<br>• with an even and readily negotiable surface and gradient, and<br>• with a safe means of entry and exit. |
| Spotter | The person whose sole duties are to control the restricted area, observe personnel at height, and raise the alarm in the event of an emergency. |
| Supervisor | For the purpose of this procedure, means a person who is supervising a work group who is conducting work at height. |
| Static Line | A horizontal or substantially horizontal line to which a lanyard may be attached and which is designed to arrest free fall. |
| Work at height | Any situation where a person is at risk of falling from one level to another and sustaining an injury. |
| Work Positioning System | Any plant or structure, other than temporary work platform, that enables a person to be positioned and safely supported at a location for the duration of the relevant work being carried out. |

## 14. ACCESS AND EGRESS

Where personnel are required to work in areas where there is the risk of falling from one level to another, a safe method for people to get to and from and move around that work area must be provided. This should consider the tools and equipment which people will be required to carry to, from and around the work area and areas where plant is being used. Where an EWP is used for access and egress to a work area, the conditions Appendix A of this procedure must be followed.

## 15. EDGE PROTECTION

Edge protection is used to reduce the risk of a person falling from one level to another. Whenever practicable, edge protection must be installed to any edge such as that of a scaffold, fixed stair, landing, suspended slab, bunker, formwork or falsework, where a person is at risk of falling two or more metres.

Edge protection must:

- be constructed to withstand a force of 0.55kN (approximately equivalent to 55kg) applied at any point of it. If edge protection is to be used on roofs with pitches exceeding 15 degrees from the horizontal, the edge protection should be able to withstand the added impact forces,
- have top rails between 900mm and 1100mm above the working surface, and
- have mid rails and toe boards. Wire mesh infill panels incorporating a toe board may be used instead of the mid rail. Where a toe board is not practicable, a bottom rail which prevents personnel from falling and a drop zone erected to control dropped objects in accordance with Section 14 are required.

### 15.1 Difference Degrees of Roof Slope

With different degree of roof slopes, the guard rail systems should incorporate the following:

- a top rail, mid rail and toe (fender) board, when roof slopes are between 0 degrees to 15 degrees from horizontal,
- a top rail, mid rail, bottom rail and toe board, when roof slopes are between 15 degrees and 35 degrees from horizontal. The bottom rail should be fitted midway between the mid rail and the roof,
- a top rail, mid rail, bottom rail and toe board and infill mesh panel to mid rail height, when roof slopes are between 35 degrees and 45 degrees, and
- where roof slopes exceed 45 degrees, the slope is unsuitable to work on without a support system, such as a fall arrest / fall restraint system or a scaffold catch platform to prevent injury.

## 16. FALL INJURY PREVENTION SYSTEMS

Where there is a risk falling two or more metres or deemed appropriate by risk assessment, a fall injury prevention system (FIPS) must be used. All FIPS must comply with the relevant Australian Standard.

### 16.1 Restraint Systems

Wherever practicable, a restraint system must be used over a fall-arrest system. Restraint systems are designed to limit horizontal movements from an anchorage point or a horizontal life line or life rail, so that the user is totally restrained from reaching a position where either a free fall or limited free fall is possible.

A restraint system compromises an anchorage point(s), static line or restraint line of appropriate strength and length, and a harness. All restraint equipment and anchorages must be fall-arrest rated to prevent falls in failed situations. As a

minimum, the restraint line must have a personal energy absorber attached to it or have integral energy absorbing properties rated to the relevant Australian Standard. For further information regarding anchorage points refer to section 4.3 and 4.5 of this procedure.

When using the restraint system personnel must ensure:

- they can maintain secure footing without having to tension the restraint line and without the aid of any other hand hold or lateral support,
- the static lines are fitted with an industrial shock absorber when required, and
- the restraint system manufacturer's tag identifies compliance to the relevant Australian Standard.

### 16.2 Fall Arrest Systems

Fall arrest systems are designed to arrest a fall and must only be used instead of a restraint system if any of the following situations apply:

- the user is required to reach a position where either a free fall or limited free fall is possible to carry out the task,
- the user has a restraint line that can be adjusted in length so that a free fall position can be reached,
- there is a danger of the user falling through the surface (e.g. unsecured or brittle roofing material),
- the slope is over 15 degrees, or
- there is any other reasonably likely misuse of the system which could lead to a free fall.

Personnel must consider additional hazards which can be introduced when using a fall suppression system, such as a swing down, swing back and suppression trauma.

### 16.3 Anchor Points

All permanently fixed anchor points must be inspected by a competent person at not less than six monthly intervals. In addition, all persons must visually inspect anchor points prior to use.

Anchorages must meet load bearing capacities and be inspected in accordance with the relevant Australian Standard.

All impaired anchorages must be:

- tagged to indicate it is not to be used, and
- not used after repair until it is inspected by a competent person who can confirm that it is safe to use.

### 16.4 Alternative Anchor Points

In situations where fixed anchor points are not available, alternative anchor points may be sought. Alternate anchor points may only be used if assessed as suitable following a risk assessment and all legislative requirements are met.

### 16.5 Maintenance of Fall Injury Prevention Systems

All equipment must be maintained, with inspections and examination of all components by a competent person at regular intervals to ensure continued efficiency and durability.

#### 16.5.1 Inspection Frequencies

All fall injury prevention system equipment must comply with the below inspection schedule, as a minimum, unless otherwise specified at more regular frequencies by the manufacturer.

| ITEMS | INSPECTOR | FREQUENCY |
|---|---|---|
| Personal equipment including:<br>harnesses,<br>lanyards,<br>connectors,<br>fall-arrest devices including common use devices | Competent personnel | Before and after each use |
| Harnesses,<br>lanyards,<br>associated personal equipment,<br>fall-arrest devices (external inspection only), ropes and slings | Height Safety equipment inspector | 3 monthly |
| Anchorages—drilled-in type or attached to timber frames Anchorages—other types | Height Safety Equipment Inspector | 6 monthly |
| Fall-arrest devices—full service | Height Safety Equipment Inspector | 12 monthly or more frequently dependent on manufacturers recommendations |
| Horizontal and vertical lifelines - steel rope or rail | Height Safety Equipment Inspector | 12 monthly or more frequently dependent on manufacturers recommendations |
| Horizontal or vertical lifelines fibre rope webbing | Height Safety Equipment Inspector | 6 monthly |
| All items of personal and common use equipment | Height Safety Equipment Inspector | Upon entry or re-entry into service |
| All items which have been stressed as a result of a fall. | Height Safety Equipment Inspector | Before further use |

All equipment must be inspected within two weeks of its inspection due date. Equipment used under harsh conditions, e.g. in wet, dusty, abrasive, or corrosive environment, must be inspected more frequently as determined by risk assessment.

### 16.5.2 User Inspection

All personnel must inspect all personal and common use equipment before and after each use. Inspection must be by sight and touch, include the opening of any equipment where access is provided, to ensure that internal components are in satisfactory condition. This requirement includes the opening or removal of temporary rope or line protectors, to enable rope to be properly inspected. Operation of the locking mechanism on fall-arrest devices must also be checked.

### 16.5.3 Testing and Tagging

Each item of equipment mentioned in the above table, inspected by a height safety equipment inspector, must have a service tag that records the last date it was fully serviced and the date by which the next service is due.

Equipment inspected at 3-monthly intervals must comply with the RGBY tagging system as follows:

| RED | GREEN | BLUE | YELLOW |
|---|---|---|---|
| DEC – FEB | MAR – MAY | JUN – AUG | SEP – NOV |

Contractors and licensees can follow their own colour coding schedule, but they must be on a 3 – monthly basis.

### 16.5.4 Equipment Register

All inspections, other than user inspections, must be documented in accordance with the relevant Australian Standard.

To ensure the traceability of maintenance records, an equipment register must be kept for each item of equipment mentioned in the above table, and include the following details:

- manufacturer's, supplier's or installer's name and address,
- manufacturer's batch number,
- serial or identifying number,
- year of manufacture,
- location equipment is stored / location of installation,
- details of recommended connections to harnesses,
- type of anchorage line to be used,
- suitability and limitations on various usages,
- date of purchase,
- date first put into service, and
- dates and details of inspections and services.

Documents relating to the maintenance and service history of each item of equipment must be freely available to all persons for the life of the item.

**16.5.5 Hot Works and the Protection of Fall Injury Prevention Systems**

Personnel conducting hot work activities, whilst using a fall injury prevention system, are required to control the risk of damage from hot particles and sparks. Items such as fire-retardant harnesses and lanyards, lanyards with a cable wire core or fire-retardant blankets must be used to provide protection.

## 17. SCAFFOLDING

Scaffolding systems must be designed, constructed, erected, and maintained in accordance with the relevant Australian Standard.

Formal inspections must be carried out and records are maintained for scaffolds, in accordance with the relevant Australian Standard.

### 17.1 Scaff Tag System

A Scaff tag system must be employed from the time scaffold erection activities commence.

The competent person/certified scaffolder must place a Scaff Tag card holder in a prominent place on the scaffold with the words “Do Not Use Scaffold” clearly visible, as soon as practicable after commencing erection of the scaffold.

On completion of the scaffold erection, and following modifications to and inspections of scaffold, the competent person / certified scaffolder must complete the green side of a Scaff Tag and place it in the Scaff Tag card holder with the completed green side facing outwards. This indicates the scaffold is safe for use, provided the tag has been filled in within the last 30 days.

Modifications to a scaffold must only be carried out by a competent person/certified scaffolder. Prior to modifying a scaffold, the competent person/certified scaffolder must:

- remove the Scaff Tag from the card holder,
- fold the Scaff Tag in half so the yellow side is facing out, and
- replace the folded Scaff Tag in the upper half of the card holder so “Do Not Use Scaffold” is clearly visible.

Personnel must inspect the Scaff Tag prior to utilising any scaffold. Where a Scaff Tag is not in place, or the scaffold has not been inspected in the last 30 days, the scaffold must be marked “Do Not Use Scaffold”, and the matter reported. The scaffold must be inspected by a competent person/certified scaffolder, and a Scaff Tag attached, prior to the scaffold being put back into service.

## 18. MOBILE WORK PLATFORMS

Elevated work platforms and personnel carrying devices can be used as temporary platforms to access work areas and provide protection for personnel working at height.

The mobile work platforms described in this section must not be utilised in circumstances where the wind speed exceeds the manufacturer's recommendations or twelve metres per second (23 knots) where the manufacturer has not specified. Where plant is not fitted with a device for measuring wind speed, personnel must contact the relevant Vessel Traffic Service Centre to verify wind speeds.

### 18.1 Scissor Lift Type Elevated Work Platform

Scissor type elevated work platforms (also known as scissor lifts) are not defined as high risk and therefore not subject to a Working at Height Permit, and the use of harnesses is not mandatory.

Whilst working in a scissor lift it should not be manoeuvred along the ground whilst elevated, due to the risks posed by the 'leverage factor' – where centimetres at ground level can translate to metres of sudden/unintended movement at the platform level. Where it is not practicable to lower the platform to traverse the ground, the associated risks must be recorded in the risk assessment, and a spotter assigned to observe the workers overhead.

### 18.2 Boom-Type Elevated Work Platform (EWP)

Boom type elevated work platforms (EWP) must be inspected, operated and maintained in accordance with the manufacturer's instructions, or where this is not practicable, in accordance with the relevant Australian Standards.

To prevent falls whilst working from an EWP, the operator must:

- be trained and competent in the operation of the EWP and hold a National High Risk Work Licence (WP Class), and
- use the platform on a solid level surface unless designed for rough terrain.
- All personnel engaged in the activity must:
- be trained and competent in the use of fall arrest equipment and response procedures,
- wear a safety harness and lanyard assembly to provide fall arrest in the event of component failure in accordance with AS 1418.10. The lanyard must be as short as possible and attached directly to the designated anchor point and not the handrail, and
- if used to access a work area, ensure the conditions set out in Section 5.9 of AS 2550.10 Cranes Hoists and Winches – Safe Use – Mobile elevating work platforms, are met.

All work undertaken on an EWP must have a spotter to monitor persons and equipment whilst working at height, who must be appropriately trained, competent and licensed in accordance with Section6.2.

Refer to the Working On, Over, In or Near Water Procedure for further guidance when using an EWP over water.

### 18.3 Workboxes

Workboxes must be inspected, operated and maintained in accordance with the manufacturer's instructions, and where this is not practicable, in accordance with the relevant Australian Standard.

To prevent falls whilst working from a workbox immediately above land, personnel must wear a safety harness and lanyard assembly in accordance with AS 1418.17. The lanyard must be as short as possible and attached directly to the designated anchor point and not the handrail.

Workboxes should only be used as a last resort, that is, where other safer options are not available.

Refer to Working On, Over, In or Near Water Procedure for further guidance when using a workbox over water.

### 18.4 Forklift Trucks

Forklifts fitted with personnel carrying devices (i.e. work boxes) can provide a safe means of raising personnel to an elevated work area. Personnel carrying devices must be engineer-designed and constructed in accordance with the relevant Australian Standard and used in accordance with their design parameters.

To prevent falls whilst working from a personnel carrying device fitted to a forklift, the personnel must:

- ensure the parking brake is set, the controls are in neutral, the mast is vertical, and all controls are ideally immobilised except lift and lower,
- ensure the work box is securely fitted to the forklift,
- always remain in the personnel carrying device,
- not use any other device to gain additional height,
- close the safety gate when in an elevated position, and
- wear a safety harness and lanyard assembly in accordance with the relevant Australian Standard. The lanyard must be as short as possible and attached directly to the designated anchor point and not the handrail.

## 19. LADDERS

Ladders may be used in work activities without the need for fall protection or a Working at Height Permit, provided the following requirements are met:

- when ascending or descending a ladder, both hands and feet must be used, the person must always face the ladder and maintain three points of contact, moving one rung/step at a time,
- ladders comply with the relevant Australian Standard, and
- leaning or stretching away from the ladder is not necessary to perform the task.

### 19.1 Fixed Ladders

Fixed ladders must be installed in accordance with the relevant Australian Standard.

The angle of slope should be between 70 degrees and 75 degrees to the horizontal, and the ladder should be no greater than 6 metres in length. In no case may the ladder overhang the person climbing the ladder.

If the angle is more than 75 degrees, or the distance between levels is greater than 6 metres, a safe system of work to prevent falls should be provided such as a permanent fall-arrest system. Where such a system is not installed, the ladder must be risk assessed, and suitable controls implemented.

Where a user could fall more than 6 metres a ladder cage or other type of enclosure should be fitted to prevent a sideways fall from the ladder. Ladder cages must not be relied upon as the only means of fall prevention. Response plans must consider limitations imposed by ladder cages.

### 19.2 Portable Step Platform Ladder

Requires the use of both hands, a step platform ladder must be used wherever practicable. Where it is not practicable, the hierarchy of controls must be considered to reduce the risk to as low as reasonably practicable.

Step platform ladders should only be used if:

- the height of the work is compatible with the height of the platform,
- there are guard rails around three sides of the platform,
- the guard rails are inspected for damage prior to confirm they have not been damaged,
- the step platform ladder is unable to move whilst personnel are working on it, and
- the step platform ladder complies with the relevant Australian Standard.

### 19.3 All Other Portable Ladders

Personnel must only be permitted to work from portable ladders, where:

- a spotter is used where the user's feet are positioned more than 2 metres above the ground,
- when traversing, the user must always have two feet and one hand, or one foot on the ladder,
- when working from the ladder the user must maintain 3 points of contact.

Where these requirements cannot be met, such ladders may only be used for access and egress to a work area with appropriate edge protection.

When using either a single or extension portable ladder, personnel must ensure that:

- the distance from the ladder base to the base of the support wall is as close to 25% of the working length of the ladder as practicable. Where the ratio is smaller, additional controls must be considered and documented,
- the ladder is located on a firm footing and secured into position to prevent slipping or sideways movement,

- if being used to approach a platform, the ladder protrudes at least 900 mm beyond the landing for the platform,
- the ladder is not suspended from a parapet hook. Where risk assessment determines additional protection is necessary, fall arrest systems must be considered, and
- all portable ladders meet the minimum requirements set out in the relevant Australian Standard.

Portable ladders should only be used where the use of safer systems is not reasonably practicable.

## 20. HOLES AND OPENINGS

All holes and openings where there is a risk of a person falling through must be protected as follows:

- holes or openings in concrete floors must, where practicable, be protected with embedded wire mesh and covered with material of adequate strength to prevent personnel or things entering or falling through,
- holes or openings in any other type of (non-concrete) floor must be covered with material of adequate strength to prevent entry by objects or persons and be fixed securely to the floor,
- holes or openings covered with wire mesh must be installed in accordance with specifications outlined further in the *Work Health and Safety Regulations 2022*,
- the wire mesh covering must not be used as a work platform and may only be removed when installing services. Only the part of the wire mesh that allows access for installation can be removed and the area must be demarcated. In addition, wire mesh must also be covered to prevent things falling through, and
- all hole and opening covers must be sign posted with the words “DANGER – HOLE BENEATH”.

## 21. GRID MESH AND CHECKER PLATE

Where grid mesh or checker plate panels have become dislodged and there is a risk of personnel falling through, barricading must be erected in accordance with the PILBARA PORTS Demarcation and Barricading Procedure to restrict access until repairs are complete.

Access to areas with missing panels must be restricted to people conducting the repair work.

Grid mesh and checker plate flooring must be securely fixed, in accordance with the manufacturer’s specifications, to a supporting structure.

## 22. BRITTLE OR FRAGILE SURFACES

Brittle or fragile surfaces may include those made from asbestos, cellulose cement roof sheets, glass, fibreglass, acrylic or other similar synthetic moulded or fabricated material used to sheath a roof or in a roof.

Surfaces identified as potentially brittle or fragile must be inspected to assess their integrity and must be sign posted at all access points with “DANGER – FRAGILE ROOFING – USE WORKING PLATFORM”.

All personnel required to work on brittle or fragile roofing must:

- be informed that the roof is wholly or part brittle or fragile, and
- be provided with a safe working platform and safe access.

Where it is not possible to provide a safe working platform or any other means to prevent personnel from falling through fragile or brittle roofing, management must ensure that:

- safety mesh is securely fixed directly over the top or directly underneath the brittle or fragile areas,
- barriers are securely fixed and adequately maintained around the brittle or fragile areas to prevent access, or
- personnel are attached by harness to an approved anchor point.

## 23. CEILING SPACES

When working in ceiling spaces consideration must be given to the risk of falling through plasterboard and from manholes during access and egress. Personnel must ensure they only step on beams and maintain three points of contact when manoeuvring around the ceiling space. Where practicable and deemed by risk assessment additional controls must be put in place to reduce the risk of fall. All power is to be isolated before entering ceiling spaces.

## 24. FREIGHT

Personnel undertaking work involving the transport of freight must consider prevention of falls when accessing and egressing vehicles and plant, handling oversized cargo, and loading and unloading, before commencing work.

Safe systems of work must be developed, with the aim of carrying out as much work as possible at ground level.

Engineering controls must also be considered to provide safe access and egress to vehicles and plant. Engineering controls include but are not limited to steps, permanent access ladders, walkways, loading gantries, guard rails and slip resistant surfaces or coatings that render the surface trip or slip free.

## 25. INDUSTRIAL ROPE ACCESS SYSTEMS

Where all other methods of access are deemed unsuitable, industrial rope access systems may be used by a competent person to gain access to a work area by vertical suspended ropes (abseiling).

All industrial rope access equipment must be used, inspected, maintained, and stored in accordance with the relevant Australian Standard.

## 26. CONTROL OF OBJECTS AT HEIGHT

When conducting work at height control measures must be taken to prevent objects from falling to ensure the safety of personnel below. Such control measures may include but are not limited to:

- the use of tool lanyards, attached by a karabiner to the equipment loop on a harness or a suitable structure, when using tools at height,
- laying drop mats over grid mesh and surfaces with opening where objects may fall through,
- use of plastic or metal containers to hold items at height (not cardboard),
- use of controlled methods to mobilise tools and materials to the work area, i.e. davit/overhead crane or pulley system,
- installation of toe or kick boards on scaffolding and platform structures,
- installation of catch platforms beneath working platforms, and
- installation of safety nets or mesh beneath working platforms, grid mesh, fragile roofing and other structures where objects may fall from height.

Where there is a potential for objects to fall from height, barricading and signage must be erected in accordance with the Pilbara Ports Demarcation and Barricading Procedure to delineate personnel from drop zones. Consideration must be given to the distance tooling may deflect off structures when dropped, and the exclusion zone determined by risk assessment.