

# Roof Safety Report

381 Scarborough Beach Road, WA 6017

Prepared By: Safemaster Safety Products Date: 26 April 2018

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Should you have any difficulty in understanding anything outlined within this report then you should immediately contact the inspector and have the matter explained to you. If you have any questions at all or require any clarification then contact the inspector prior to acting on this report.

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Signed for and on behalf of Safemaster Safety Products:

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James Townsend (Inspector)

### **DOCUMENT STATUS & DISTRIBUTION RECORD**

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CLIENT	BUILDINGS INSPECTED	SYSTEMS INSPECTED
381 Scarborough Beach Road, WA 6017	381 Scarborough Beach Road, WA 6017	Anchor Points Signage Hatch Handrail Ladder Stair Static Line Mechanical Platform Roof Walkway

## **DATE OF INSPECTION** 26/04/2018

### INSPECTORS

James Townsend

### REPORT REVIEWED BY

Richard Wilkinson (Service Manager) Titus Sivewright (Sales Representative)

### DESCRIPTION

Safemaster Safety Products, a working at heights and compliance consultancy, and system design/ manufacture/install/certification provider has been commissioned by 381 Scarborough Beach Road, WA 6017 to carry out an audit, inspection and recommendations for safe access.

This report is presented in relation to a comprehensive working at heights audit and inspection carried out by Safemaster's team of competent inspectors on 18<sup>th</sup> April 2018, which includes obtaining documentation ahead of the inspection, inspecting all existing access, checking policies and procedures at site level, and interviewing 381 Scarborough Beach Road, WA 6017 representatives on site.

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# **1. METHODOLOGY**

# **1.1 INSPECTION METHODOLOGY**

The audit has been carried out by Safemaster's team of competent inspectors to evaluate the height safety system on 381 Scarborough Beach Road, WA 6017.

The audit and inspection is based on:

- Risk Assessment- Hierarchy of Control
- Safemaster Blueprints
- Occupational Health & Safety Regulations 1996
- Managing the Risk of Falls at the Workplace
- AS/NZS 1891 (Series)- Industrial Fall Arrest Systems and Devices
- AS/NZS 1657-2013 'Fixed Platforms, Walkways, Stairways and Ladders- Design, Construction and Installation'

The inspection was conducted on all plant rooms, with careful visual examination of all existing working at heights, including photographical documentations of various potential hazards (refer to section 2.1 Finding & Recommendations).

# **1.2 RISK ASSESSMENT**

### HAZARD IDENTIFICATION

In performing the hazard identification at 381 Scarborough Beach Road, WA 6017 the following activities have been identified as possibly exposing workers to falls:

- General maintenance of the Roof, A/c units, Switches, Motor and Panels
- Work on sloping or slippery surface where it is difficult to maintain balance
- Other tasks requiring workers to access the work at height

### **RISK ASSESSMENT & CONTROL**

In performing the risk assessment and risk control, it is clear that the elimination risk control strategy is not practical as the needs for maintenance or repairing the building are unavoidable. The risk for workers exposed to significant fall hazards has been assessed as **high**.

As control measures, 381 Scarborough Beach Road, WA 6017 has made effort to implement a permanent roof safety system to manage the risks of workers falling from height to as low as is reasonably practicable.

The permanent equipment to provide and maintain a safe system of work, includes:

- Fall prevention system (Handrail system) to prevent a person falling any distance, or where this is not practicable,
- An Access system (Permanent ladders and Stairs, Walkway, Platform, Signage) to allow a person to gain access to a work area safely and,

 A Fall arrest system (Anchorages) to stop a falling person under safe conditions by limiting the distance and/or force of the fall, as it is not reasonably practicable to provide a fall prevention/ work positioning system.

### **HIERARCHY OF CONTROL**

### HAZARD IDENTIFICATION & RISK ASSESSMENT

Identify the hazards (eg a fall) and assess the like hood and consequence of each

### •

ELIMINATION

Eliminate the need to access the fall-risk area, e.g. by relocating plant or items requiring inspection or maintenance

SUBSTITUTION Provide alternative means of access to the point or item which avoids the risk of fall

### ▼

### ISOLATION

Barricade or enclose the fall risks so that it cannot be reached

### FALL PROTECTION

Provide personal protective equipment which either prevents a fall or reduces the risk or severity of a fall or, in the event of a fall, minimizes the risk of injury

# 2. AUDIT & INSPECTION

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
01	Building: General Stores Location Reference: <mark>L01</mark> Task: Restrict access to the roof				1					
		Brittle roof sections are present (Non-trafficable roof)	Trips, Slips and Falls	Restrict Access	High	"Warning-Keep Off- Brittle and Fragile Roof" signs to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.57
02	Building: General Stores Location Reference: <mark>LO1</mark> Task: Access to the A/c units									
		No safe access to the A/c units	Trips, Slips and Falls	N/A	Low	Supply walkway to the A/c units	Low	Client advised	Outsta nding	-

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
03	Building: General Stores Location Reference: <mark>L01</mark> Task: Access to the A/c units									
		Non-complaint walkway installed (Roof sheet been used as walkway)	Trips, Slips and Falls	Awareness induction	Med	Existing walkway to be removed and new walkway to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 3.2.3
04	Building: General Stores Location Reference: <mark>L01</mark> Task: Access to the roof									
		Gap between mid rail and roof is greater than required maximum and toe board is missing	Trips, Slips and Falls	Awareness induction	Med	Additional handrail including toe board to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 6.2.1.4

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
05	Building: General Stores Location Reference: <mark>LO2</mark> Task: Access to the roof									
	E GOOD GU	Un-even rungs are present and no slip resistance on rungs	Trips, Slips and Falls	Awareness induction	Med	Existing ladder to be removed and new ladder including anchor strop to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 7.4.3.1 & 7.4.3.2
06	Building: General Stores Location Reference: <mark>L02</mark> Task: Access to the roof									
		Top rung not levelled with landing, landing is less than required minimum, bottom rung height is less than required minimum and handrail projecting towards the user	Trips, Slips and Falls	Awareness induction	Med	Existing ladder to be removed and new ladder to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 7.4.3.3, 7.3.6, 7.4.3.4 & 7.4.8.5

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
07	Building: General Stores Location Reference: <mark>L03</mark> Task: Access to the A/c units									
		No safe access to the A/c units	Trips, Slips and Falls	N/A	Low	Supply walkway to the A/c units	Low	Client advised	Outsta nding	-
08	Building: General Stores Location Reference: <mark>L03</mark> Task: Access to the roof									
		No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest anchor to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
09	Building: General Stores Location Reference: <mark>L04</mark> Task: Access to the A/c units									
		No safe access to the A/c units	Trips, Slips and Falls	N/A	Low	Supply walkway to the A/c units	Low	Client advised	Outsta nding	-
10	Building: General Stores Location Reference: <mark>L04</mark> Task: Access to the roof									
		No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest anchors to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
11	Building: General Stores Location Reference: LOS Task: Access to the roof				1					
		Sharp edges on ladder stiles	Trips, Slips and Falls	Awareness induction	Med	Handrail including rung caps to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 5.6
12	Building: General Stores Location Reference: <mark>L06</mark> Task: Access to the roof									
		No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest anchors to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
13	Building: General Stores Location Reference: <mark>L07</mark> Task: Access to the A/c units									
		No safe access to the A/c units	Trips, Slips and Falls	N/A	Low	Supply walkway and handrail to the A/c units	Low	Client advised	Outsta nding	-
14	Building: General Stores Location Reference: <mark>L07</mark> Task: Restrict access to the roof									
		Brittle roof (Non-trafficable roof)	Trips, Slips and Falls	Restrict Access	High	"Warning-Keep Off- Brittle and Fragile Roof" signs to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.57

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
15	Building: General Stores Location Reference: <u>L09</u> Task: Access to the roof									
		No height safety and safe access system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest anchors and access ladder to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 & 3.55 AS/NZS 1657- 2013 3.1.4
16	Building: General Stores Location Reference: <mark>L10</mark> Task: Access to the roof									
		No safe access to the roof	Trips, Slips and Falls	Awareness induction	Figh	Ladder access bracket, anchor strop, landing platform to be installed and top anchor post to be replaced	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55 AS/NZS 1657- 2013 3.1.4

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
17	Building: General Stores Location Reference: <mark>L11</mark> Task: Restrict access to the roof									
		Brittle roof (Non-trafficable roof)	Trips, Slips and Falls	Restrict Access	High	"Warning-Keep Off- Brittle and Fragile Roof" signs to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.57
18	Building: General Stores Location Reference: <mark>L11</mark> Task: Access to the roof									
		No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest anchors to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
19	Building: General Stores Location Reference: <mark>L12</mark> Task: Access to the roof									
		Non-complaint ladder is present	Trips, Slips and Falls	Awareness induction	Med	Existing ladder to be removed and new ladder to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 7.4
20	Building: General Stores Location Reference: <mark>L13</mark> Task: Access to the roof									
		No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest anchors, anchor strop, ladder access bracket and sign to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
21	Building: General Stores Location Reference: <mark>L16</mark> Task: Access to the roof									
	NATU.	No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest static line, anchor strop, ladder access bracket and sign to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55
22	Building: General Stores Location Reference: <mark>L17</mark> Task: Access to the roof									
	impressions Subactive Suba	No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest static line, anchor strop, ladder access bracket and sign to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
23	Building: General Stores Location Reference: <mark>L18</mark> Task: Access to the roof									
		Non-complaint ladder is present	Trips, Slips and Falls	Awareness induction	Med	Existing ladder to be removed and new ladder to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 7.4
24	Building: General Stores Location Reference: <mark>L19</mark> Task: Access to the A/c units									
		Bracings protruding over the walkway path	Trips, Slips and Falls	Awareness induction	Med	Additional walkway sections to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 3.1.4

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
25	Building: General Stores Location Reference: <mark>L19</mark> Task: Access to the roof									
		No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest anchors to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55
26	Building: General Stores Location Reference: <mark>L20</mark> Task: Access to the roof									
		No height safety system installed	Trips, Slips and Falls	Awareness induction	High	Fall arrest static line, anchor strop, ladder access bracket and sign to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.55

No	Photo of Hazard	Details of Hazard	Details of Risk	Existing/ Immediate Control Measure	Curre nt Risk Level	Proposed Permanent Solution	Resid ual Risk Asse ssme nt	Details of Action Taken	Status	Reference
27	Building: General Stores Location Reference: <mark>L08</mark> Task: Access to the roof		1	1						1
		Non-complaint ladder is present	Trips, Slips and Falls	Awareness induction	Med	Existing ladder to be removed and new ladder to be installed	Low	Client advised	Outsta nding	OH&S REGULATIONS 3.7 AS/NZS 1657- 2013 7.4



# **3.1 DEFINITIONS**

Anchorage	A secure point of attachment on a rigid structure for attachment of a working line, safety line, fall arrest device or other elements of a rigging system. Anchors must be capable of withstanding a load of 22kN in the direction of load without failing
Body Containment Device	A device designed to contain the body of a worker and to distribute forces resulting from an arrested fall to minimise the injury. They consist of a full body harness together with associated components such as lanyard and personal energy absorber. Alternatively, body containment devices may be used to restrain individuals from falling where use is solely restricted to fall-restraint
Competent person	A person who has, through a combination of training, education and experience, acquired knowledge and skills enabling that person to correctly perform a specified task. Ref: AS1891 Section 2.2.11
Connector	A device used to couple (connect) components of a personal fall protection system or positioning device system. The connector may be an independent component (such as a karabiner) or an integral component (such as buckle or D-ring sewn into a garment) of the system. P.P.E. Connectors must be drop forged or made of equivalent materials; they must have a corrosion-resistant finish and all surfaces and edges must be smooth to prevent damage to other parts of the system
Contractor	For the purposes of this document, a contractor includes any and all sub- contractors and employees of the main contractor and as defined in the Workplace Health & Safety Act (2011) and Regulations (2011)
Free-fall/Fall Arrest	A fall or the arrest of a fall, where the fall distance before the fall-arrest system begins to take any loading is in excess of 600mm either vertically or on a slope on which it is not possible to walk without the assistance of a handrail or handline
Limited Free- Fall/Limited Fall- Arrest	A fall or the arrest of a fall, occurring under the Free-Fall/Fall Arrest conditions previously described, except that under reasonable foreseeable conditions the fall distance shall not exceed 600mm
Restrained Fall/Restrained Fall Arrest	A fall or the arrest of a fall, where the person suffering the fall is partially restrained by a device such as a pole strap, or is sliding down a slope on which it is not possible to walk without the assistance of a handrail or handline
Roof	The exterior top surface of a building
Type 1 rope grab fall arrester	A fall arrest device which travels along an anchorage line and when loaded, locks to the line
Type 2 fall arrest device	A fall arrest device from which a spring-loaded anchorage line pays out, and which locks when loaded and releases when the load is removed
WHS	Workplace Health & Safety Act (2011) and Regulations (2011)

# **3.2 AUSTRALIAN STANDARD REFERENCES AND OH&S REGULATIONS 1996**

### AS 1657:2013

### 3.1.4 Change in level

Where the level of a walkway above an adjacent walkway or floor is 300 mm or less, access from one level to the other may be gained without the provision of an intermediate step.

Where the change of level is greater than 300 mm but does not exceed 450 mm, a minimum of one intermediate step shall be provided. Access between adjacent levels where the difference exceeds 450 mm shall be in accordance with the requirements of Section 7 or by means of a sloping walkway complying with Section 5.

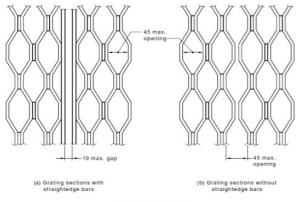
### **3.2 MATERIALS**

### 3.2.3.4Grating and expanded metal

For grating and expanded metal flooring, the smallest dimension of any opening shall not exceed 45 mm and the area of any opening shall not exceed 5000 mm2. Any gap between adjacent made-up sections of grated floor shall not exceed 10 mm. The gap may be of any length.

Where straightedge bars are not fitted, the size of any opening at the joint between adjacent panels shall not exceed the requirements for openings in the grating, as given in Figure 3.1.

NOTE: For trafficable areas below a platform or landing, see Clause 4.5.



DIMENSIONS IN MILLIMETRES

FIGURE 3.1 CLEARANCES BETWEEN ADJOINING PANELS OF GRATING

### 3.3.4 Floors

All floors shall be evenly laid. Any variation in height between adjacent boards or plates shall not exceed 5 mm. NOTE: This does not apply to cleats on sloping walkways (see Clause 5.3.3).

### **4.4 GUARDRAILING**

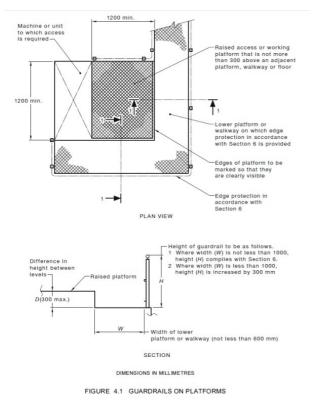
Guardrailing complying with Section 6 shall be installed on exposed sides of platforms and landings except for the following:

- (a) At the points of access from a stairway or ladder.
- (b) Where there is a permanent structure not more than 100 mm from the edge of the platform or landing capable of providing at least the equivalent protection to guardrailing.
- (c) On the sides and edges of a platform, the level of which is not greater than 300 mm above that of an adjacent platform or floor, provided—
  - (i) the smallest dimension of the upper platform is not less than 1200 mm; and
  - (ii) the distance from any edges of the unprotected upper platform to the protection
  - on the edge of the lower platform is not less than 1000 mm.

Where it is not possible to apply the requirement of Item (c)(ii) above, the minimum height of the protection at the edge of the lower platform shall be increased by 300 mm.

The unprotected edges of such platforms shall be marked so that they are clearly visible in their surroundings.

NOTE: Figure 4.1 illustrates guardrail details in relation to platform configurations



### 4.6 TOEBOARD

Where an object could fall from a platform or landing onto an area to which access by persons is available, a toeboard complying with Clause 6.1.2 shall be provided.

NOTE: This requirement need not apply where there is a permanent structure within 10 mm of the edge of the platform or landing.

### 5.1.3 Width

The following requirements apply:

(a) The clear width of a walkway without edge protection shall be not less than 600 mm.

(b) Where guardrails are installed on both sides of a walkway, the clear width between any elements of the guardrailing shall be not less than 550 mm.

(c) Where a fixed structure is present on one or both sides of the walkway and is within a 100 mm distance from the walkway, the clear width measured between the structure and the inside surface of any guardrail, or between the two structures, shall be not less than 600 mm.

NOTE: If the fixed structure is at shoulder height, the likely contact parts of the structure should be painted with a contrasting colour to highlight the possible contact surface.

### 5.4.1 Provision of guardrailing

Guardrailing complying with Clause 6.2.1 shall be installed on all sides and ends of a walkway except in the following situations:

(a) At the points of access from a stairway or ladder.

(b) Where there is a permanent structure not more than 100 mm distant from the edge of the walkway, capable of providing protection at least equivalent to that of guardrailing.

(c) On the sides and ends of a walking surface that is not more than 300 mm above an adjacent area upon which it is safe to step or stand without risk of falling, and—

(i) the slope of the walkway perpendicular to the direction of travel (cross-slope) does not exceed 3°;

- (ii) the angle of slope of the adjacent area is less than 12°; and
- (iii) the width of the area adjacent to the walkway is greater than 2000 mm (see Note 1).

### 7.3.6 Landings

Any landing at a point of access to the ladder and any intermediate landing on the ladder shall be designed and constructed in accordance with the requirements of Clauses 4.2 and 4.3 and the following:

- (a) The minimum length of the landing shall be not less than 900 mm, measured horizontally from the front of the ladder.
- (b) The width of the landing shall be not less than the width of the ladder or 600 mm, whichever is the greater.
  - (c) The landing shall have minimum headroom of 2000 mm.

(d) Every access landing shall provide standing space of not less than 600 mm clear of cross-traffic, door swing or any other structure.

### 7.4.3.1 General

The surface of rungs shall be slip resistant (e.g. corrugated, serrated, knurled, dimpled or coated with a slip-resistant material). Rungs shall be securely connected to the stiles and shall not rotate.

### 7.4.3.4 Variation of bottom rung/tread spacing

The distance between the bottom rung/tread and the bottom landing shall be not less than 90% and not greater than 100% of the rung/tread spacing (see Figure 7.5).

### NOTES:

- 1 This distance should be measured at the ladder centre-line where the landing has a cross-slope (see Figure 7.5).
- 2 Where possible, the distance between the landing and the first rung/tread should be equal to the rung/tread spacing.

C7.4.3.4The allowable variations given in this Clause and the rung/tread spacing tolerances referred to elsewhere in this Standard are not equivalent; the tolerance is a manufacturing allowance and is not intended to be cumulative. The allowable variation is a dimension that may be varied intentionally by the design.

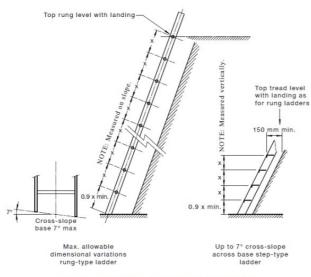


FIGURE 7.5 VARIATION OF RUNG/TREAD SPACING

### 7.4.8.4Ladder landing

The angle of the slope of the top landing shall not exceed 3° in any direction. NOTE: For the cross-slope of bottom landings, see Clause 7.4.3.5.

The foot of the ladder shall rest on, or terminate above, the landing. NOTE: For the required dimensions of landings, see Clause 7.3.6.

Where the ladder provides access to a landing, the landing shall be level with the top rung. The landing shall extend to the top rung, or there shall be a gap of not less than 50 mm and not greater than 100 mm between the top rung and the landing. NOTE: See Figure 7.11(a).

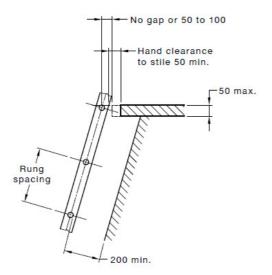
Ladder landings shall extend forward to at least the projected line of the rear of the stile. NOTE: See Figure 7.11(b).

### 7.4.8.5 Handrails

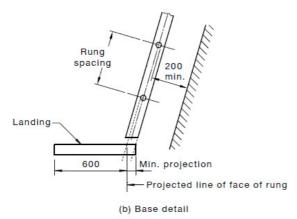
Handrails mounted on stile extensions and projecting towards the user shall not be used (see Note 1). Handrails mounted on stile extensions and projecting away from the user may be used as an aid to access.

NOTES:

- 1 This requirement is to discourage users from moving their centre of gravity further away from
- the rungs by gripping the handrails. 2 Guidance on handrails projecting from
  - Guidance on handrails projecting from stile extensions is given in Appendix I.



(a) Top rung level with landing



DIMENSIONS IN MILLIMETRES

### FIGURE 7.11 TYPICAL GAP BETWEEN LANDING AND LADDER

### **OH&S REGULATIONS 1996**

### 3.7. Access to and egress from workplace, duties of employer etc. as to

A person who, at a workplace, is an employer, the main contractor, a self-employed person or a person having control of access to the workplace must, where practicable, ensure that the means of access to and egress from the workplace-

a. enable persons to move safely to and from the workplace; andb. are at all times kept free of obstructions.Penalty: the regulation 1.16 penalty.

### 3.11. Warning signs

Without limiting any other requirement of these regulations for the display of signs, if, in an area of a workplace there is a hazard which may not be readily apparent to a person working in or entering the area then a person who, at the workplace, is an employer, the main contractor, a person having control of the workplace or a person having control of access to the workplace must ensure that-

a. a sign relevant to each hazard is displayed to persons in or entering the area; and b. the sign complies, and is used in accordance, with AS 1319. Penalty: the regulation 1.16 penalty.

### 3.55. Edge protection

1. A person who at a workplace, is an employer, the main contractor, a self-employed person or a person having control of the workplace must ensure that edge protection that complies with sub-regulation (5) is provided and kept in place whenever there is a risk that a person could fall 2 or more metres from the edge of-

a. a scaffold, fixed stair, landing or suspended slab at the workplace; or b. formwork or falsework at the workplace. Penalty: the regulation 1.16 penalty.

2. A person who, at a workplace, is an employer, the main contractor, a self-employed person or a person having control of the workplace must ensure that either-

a. edge protection that complies with sub-regulation (5) is provided and kept in place whenever there is a risk that a person could fall 3 or more metres from an edge at the workplace other than an edge referred to in sub-regulation (1); or

b. a fall injury prevention system is provided and in operation whenever there is a risk that a person could fall 3 or more metres from an edge at the workplace other than an edge referred to in sub-regulation (1). Penalty: the regulation 1.16 penalty.

- 3. When a fall injury prevention system that is designed to be attached to a person is provided in accordance with sub-regulation (2)(b), a person who is at risk of falling from the structure must use the system. Penalty: the regulation 1.15 penalty.
- 4. When a fall injury prevention system that is not designed to be attached to a person is provided in accordance with sub-regulation (2)(b), a person who is at risk of falling from the structure must ensure, before the person ascends the structure, that the system is in operation. Penalty: the regulation 1.15 penalty.
- 5. Edge protection must have
  - a. a top rail
    - i. positioned not less than 900 mm and not more than 1100 mm above the working surface; and ii. that is capable of withstanding a force of 0.55 kN applied to any point of the guard rail system;
  - and b. either
    - i. a mid rail and a toe board; or

ii. a toe board and a mesh panel that comprises wire that is not less than 3 mm in diameter and apertures not greater than 75 mm x 50 mm and that fills the space between the top rail and the toe board.

### 3.57. Brittle or fragile roofing, duties of employer etc. as to work on

1. A person who, at a workplace, is an employer, the main contractor, a self-employed person or a person having control of the workplace must ensure that if a person is required to work on or from a roof at the workplace where brittle or fragile material forms the whole or any part of the roof then-

a. the person to work on or from the roof is informed that the roof is wholly or in part brittle or fragile, as is relevant to the

case; and b. the person to work on or from the roof is provided with a safe working platform and safe access way; and

- c. the person to work on or from the roof is trained and instructed on
  - i. the precautions to be taken; and
  - ii. how and where to access the roof; and
  - iii. how and where to gain access to the working platform or access way referred to in paragraph(b); and

d. to the extent practicable, a warning notice bearing the words "DANGER – FRAGILE ROOFING – USE WORKING PLATFORM" is placed at each place where a person who is to work on or from the roof is to access the roof. Penalty: the regulation 1.16 penalty.

2. Without limiting regulation 3.1, if at a workplace brittle or fragile material forms the whole or part of a roof that is to be removed, a person who, at the workplace, is an employer, the main contractor, a self-employed person or a person having control of the workplace must before the roof is removed-

a. identify which areas of the roof are made of a brittle or fragile material; and

b. assess the stability of the structure that supports the roof and the soundness of the roof.

Penalty: the regulation 1.16 penalty.

3. A person who, at a workplace, is an employer, the main contractor, a self-employed person or a person having control of the workplace must ensure, if a person is required to work on or from a roof at the workplace where brittle or fragile material forms the whole or any part of the roof and there is a risk that that person might fall through the roof, and if there is no other practicable means of preventing the person falling through the roof, that-

a. non-corrosive safety mesh that is capable of preventing a person falling through the roof is securely fixed directly over the top of, or directly underneath, the brittle or fragile areas; or

b. barriers are securely fixed and adequately maintained around the brittle or fragile areas.

Penalty: the regulation 1.16 penalty.

4. A person must not remove a notice referred to in sub-regulation (1) without the authority of the person who caused the notice to be placed.

Penalty for a person who commits the offence as an employee: the regulation 1.15 penalty. Penalty in any other case: the regulation 1.16 penalty.

# **3.3 SAFE WORK PROCEDURE**

### **1. OBJECTIVE**

Building management shall maintain documented procedures for identifying, evaluating and controlling hazards due to persons engaged in Industrial Roof Access.

### 2. SCOPE

This procedure shall apply to all building employees, contractors, and employees of contractors. It should be read in conjunction with the following references.

### **3. GENERAL REQUIREMENTS**

All persons required to work at height shall first be authorised by a person with appropriate responsibility.

### 4. WORK PLANNING

- Work Location, Timing and Purpose The location and purpose of any proposed work at height shall be identified and an appropriate risk assessment performed, including an assessment of environmental conditions.
- Overhead Work

Where there is any possibility that an object or person may fall to where a person may be located below, appropriate measures shall be taken to control the risk, (e.g. all hand tools secured by lanyard, exclusion zones below etc).

• Provision for Rescue

All work at height that involves a risk that a person may fall or suffer other trauma shall include an assessment of the method of rescue in the event of an incident occurring, and must therefore be performed by a minimum of two people.

• Training and Supervision

Appropriate induction, supervision, instruction and training shall be provided for any employee accessing a roof area or working at height. In particular, adequate supervision and control measures that minimise the risk of misuse of the system shall be put in place.

• Roof Access/Egress

Any employee required to work on the roof shall only gain access by use of the permanent access ladders as marked on the Roof map.

### 5. ROOF WORK

Workers exposed to falls during roof work or window maintenance shall be protected by one of the following means of fall-prevention, which appear in general order of preference:

- Edge Protection
- Scaffold
- Elevated Work Platforms
- Fall-Restraint System / Rope Suspension System

Workers shall select the most appropriate method of fall prevention, such that a total restraint system is always used as a minimum. Such a system may require use of secondary or diversion anchorages and the use of drop lines, rope-grab devices and roping techniques to avoid pendulum or swing-back effects.

At no time shall a worker place himself/herself in a location which exposes him/her to a fall, (e.g. within three metres of any unprotected edge), without first assembling and attaching to an appropriate anchorage.



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