



UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA

**UOW SAFE@WORK**

# Roof Safety Survey BUILDING 32

Version 4



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# 1 Introduction

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The following document outlines the Roof Safety Survey (RSS) for Building 32 of the University of Wollongong located at Wollongong Campus Northfields Avenue Wollongong NSW 2522.

## 2 Purpose

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This RSS is to be used as a general guideline to provide awareness and control measures for site personnel and contractors when accessing various roof areas. Personnel must make an assessment prior to accessing the roof. Should there be any potential for falls, all personnel must ensure the necessary fall prevention systems are utilised and operated in a “fall restraint” working mode. All ends users of Fall arrest equipment must be trained to a level of national recognition. All work practices and systems operations must be identified and documented in the risk assessment and safe work method statement.

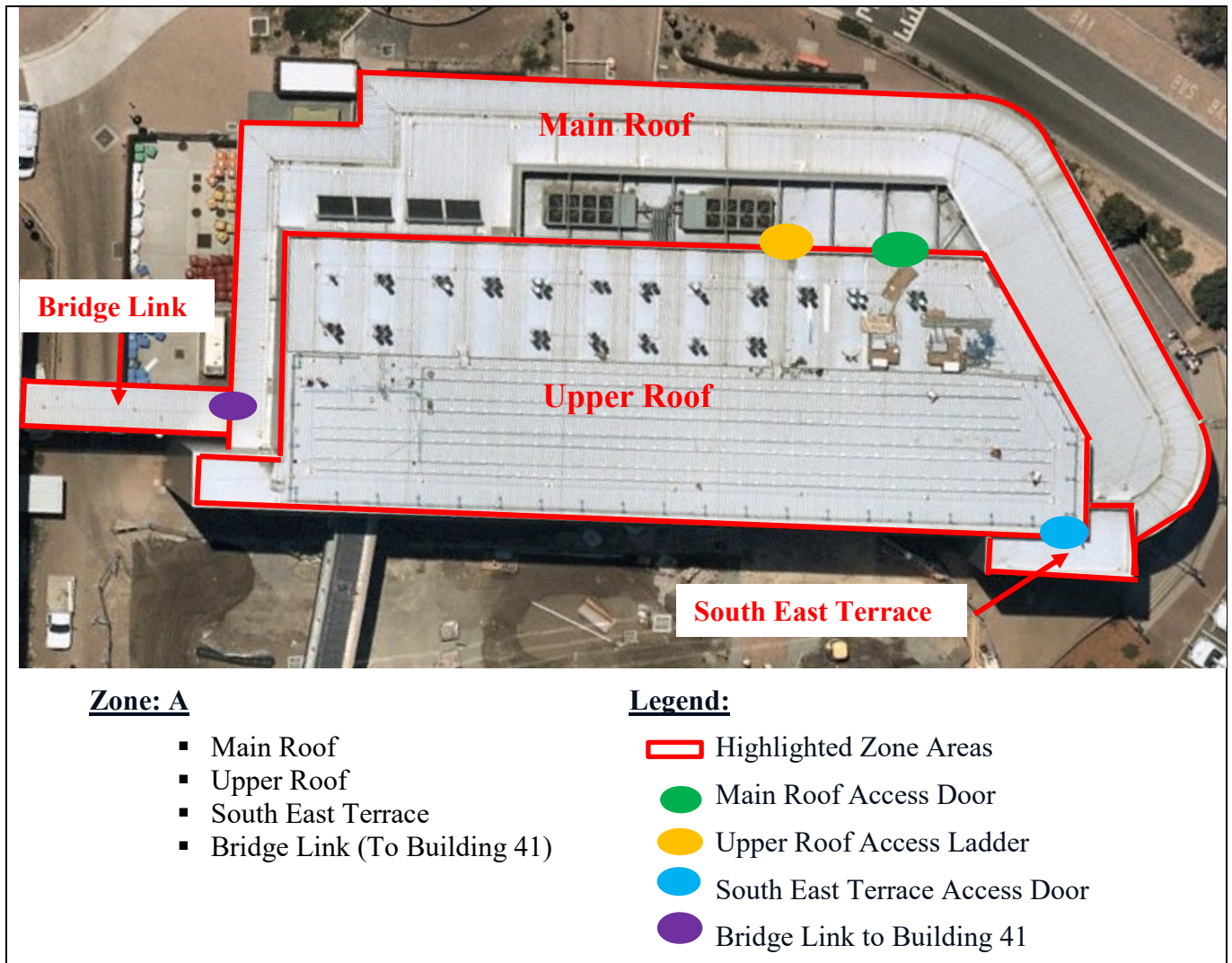
## 3 Disclaimer

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This document should be used as a general guide for roof access purposes only. Items detailed within this document were in situ at the time of inspection and may change. End users must use caution and evaluate the conditions as suitable to themselves.

Riverlands Roofing and Waterproofing (Louey Models Pty Ltd) accepts no responsibility for the actions of persons accessing these areas and or legislative compliance of fittings and fixtures of the site.

## 4 Building 32 Roof Area Aerial Photo Zone Layout



# 5 Risk Management

## 5.1 Risk Matrix

This risk assessment matrix below must be used reviewing in context with the University’s [Risk Management Guidelines](#).

Step 1 – Consider the Consequences		Step 2 – Consider the Likelihood		Step 3 – Calculate the Risk					
What are the consequences of this incident occurring? Consider what <u>could reasonably</u> have happened as well as what actually happened. Look at the descriptions and choose the most suitable Consequence.		What is the likelihood of the consequence identified in step 1 happening? Consider this without new or interim controls in place. Look at the descriptions and choose the most suitable Likelihood.		1. Take step 1 rating and select the correct column 2. Take Step 2 rating and select the correct line 3. Circle the risk score where the two ratings cross on the matrix below.  H = High, M = Medium, L = Low					
CONSEQUENCES		LIKELIHOOD							
Consequence	Description	Likelihood	Description	LIKELIHOOD	CONSEQUENCES				
					Minor	Moderate	Major	Severe	
<b>Severe</b>	Death or extensive injuries	<b>Almost Certain</b>	Is expected to occur in most circumstances		<b>Almost Certain</b>	M	M	H	H
<b>Major</b>	Medical treatment	<b>Likely</b>	Will probably occur in most circumstances		<b>Likely</b>	L	M	H	H
<b>Moderate</b>	First aid treatment	<b>Possible</b>	May occur at some time		<b>Possible</b>	L	L	M	H
<b>Minor</b>	Injury report, no treatment	<b>Unlikely</b>	May occur, but probably never will	<b>Unlikely</b>	L	L	M	M	

## 5.2 Risk Control

Risk control is a method of managing the risk with the primary emphasis on controlling the hazards at source. For a risk that is assessed as “high”, steps should be taken immediately to minimize risk of injury. The method of ensuring that risks are controlled effectively is by using the “hierarchy of controls”.

The Hierarchy of Controls are:

Order No.	Control Type	Example
Firstly	Eliminate	Removing the hazard, eg taking a hazardous piece of equipment out of service.
Secondly	Substitute	Replacing a hazardous substance or process with a less hazardous one, eg substituting a hazardous substance with a non-hazardous substance.
Thirdly	Isolation	Isolating the hazard from the person at risk, eg using a guard or barrier.
Fourthly	Engineering	Redesign a process or piece of equipment to make it less hazardous.
Fifthly	Administrative	Adopting safe work practices or providing appropriate training, instruction or information.
Sixthly	Personal protective equipment	The use of personal protective equipment could include using gloves, glasses, earmuffs, aprons, safety footwear, dust masks.

For more information on risk management visit:

<https://www.uow.edu.au/about/services/safe-at-work/whs-framework>

### 5.3 Contractors Risk Assessment

The below tables have been populated by the University with known hazards that may be applicable for roof work.

All contractors are required to establish their own risk assessment and SWP/SWMS/etc specific to each task they perform, taking into account hazards that may not have been identified by the University.

Assessment of Hazards						
Hazard No.	Description of Activity/ Service Item	Description of Hazard (What has potential to cause injury or damage to property/environment?)	Current Controls (What is in place today that controls the risk? List any control measures already implemented)	Risk rating (With <u>current</u> controls in place)		
				Consequence	Likelihood	Risk

Risk Control						
Hazard No.	Additional Control Description (What should be done in the future to control the risk? What can be done to eliminate or further reduce the risk?)	Control Type (Elimination, Substitution, Isolation, Engineering, Administration, PPE)	Person Responsible	Risk rating (With <u>additional</u> controls in place)		
				Consequence	Likelihood	Risk

## 6 Roof Safety Survey Building 32

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### 6.1 Building 32 General Information

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*Note: Before commencing any work obtain Roof Permit from Facilities Management Division*

#### Building:

University of Wollongong Campus Building 32

#### Description:

Multi storey low pitched mainly metal roof with a concrete section for some services. Other services include solar panels, solar hot water, air conditioning units, roof ventilation and fume cupboard exhaust stacks.

#### SafetyNet Risk Assessment Reference Number:

- UOW01631

#### Roof Access:

##### **Main Roof Access:**

- Access to the main roof is via the ground floor lobby lift to Level 3. Take the internal fire stairs to the top and locate the Plant room door marked (B32). Locate Main roof access door on the northern side of the plant room which has a metal fixed step ladder leading out to an external plant room services area.

##### **Upper Roof Access:**

- Access to the Upper Roof is via the external plant room services area, a fixed ladder is installed leading up to the Upper Roof area.

##### **South East Terrace Roof Access:**

- Access to the Lower Eastern roof is via the Plant room.

##### **Bridge Link to Building 41:**

- Access to the Bridge Link is via EWP only. **Currently the safety systems installed on the Bridge Link is not certified and must not be used.**

#### Signage:

- Various restricted areas

#### Compliance Plates:

- Data Plate for Lifelines & Anchor point data tags

#### Height of Building:

- Multi storey

#### Pitch:

- < 5 degrees

**Roof Construction:**

- Metal/Concrete

**Structural Integrity:**

- Sound

**Vegetation:**

- Yes (North Western & Southern ends have trees growing over the roof area)

**Fall Arrest System:**

System	Certification Status	Certification By
Various Anchor Points	Current	Riverlands Roofing
Horizontal Lifelines (Manufacture’s User Manual in link below) <a href="https://documents.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow236364.pdf">https://documents.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow236364.pdf</a>	Current	Riverlands Roofing

*(End users must follow manufacturer’s instructions and use compatible attachments)*

**Services:**

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> Gutters          | <input checked="" type="checkbox"/> Fume Cupboards   | <input type="checkbox"/> Fiberglass Skylights             |
| <input checked="" type="checkbox"/> A/C Units        | <input type="checkbox"/> Telco Towers                | <input checked="" type="checkbox"/> Pipework              |
| <input type="checkbox"/> Ducts                       | <input checked="" type="checkbox"/> Satellite Dishes | <input type="checkbox"/> Cooling Tower                    |
| <input checked="" type="checkbox"/> Roof Ventilators | <input type="checkbox"/> Antenna                     | <input checked="" type="checkbox"/> Roof Top Solar Panels |

**Existing Safety Systems:**

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> Horizontal Lifelines | <input type="checkbox"/> Vertical Lifelines  | <input checked="" type="checkbox"/> Walkway |
| <input checked="" type="checkbox"/> Anchor Points        | <input checked="" type="checkbox"/> Handrail | <input type="checkbox"/> Parapets           |

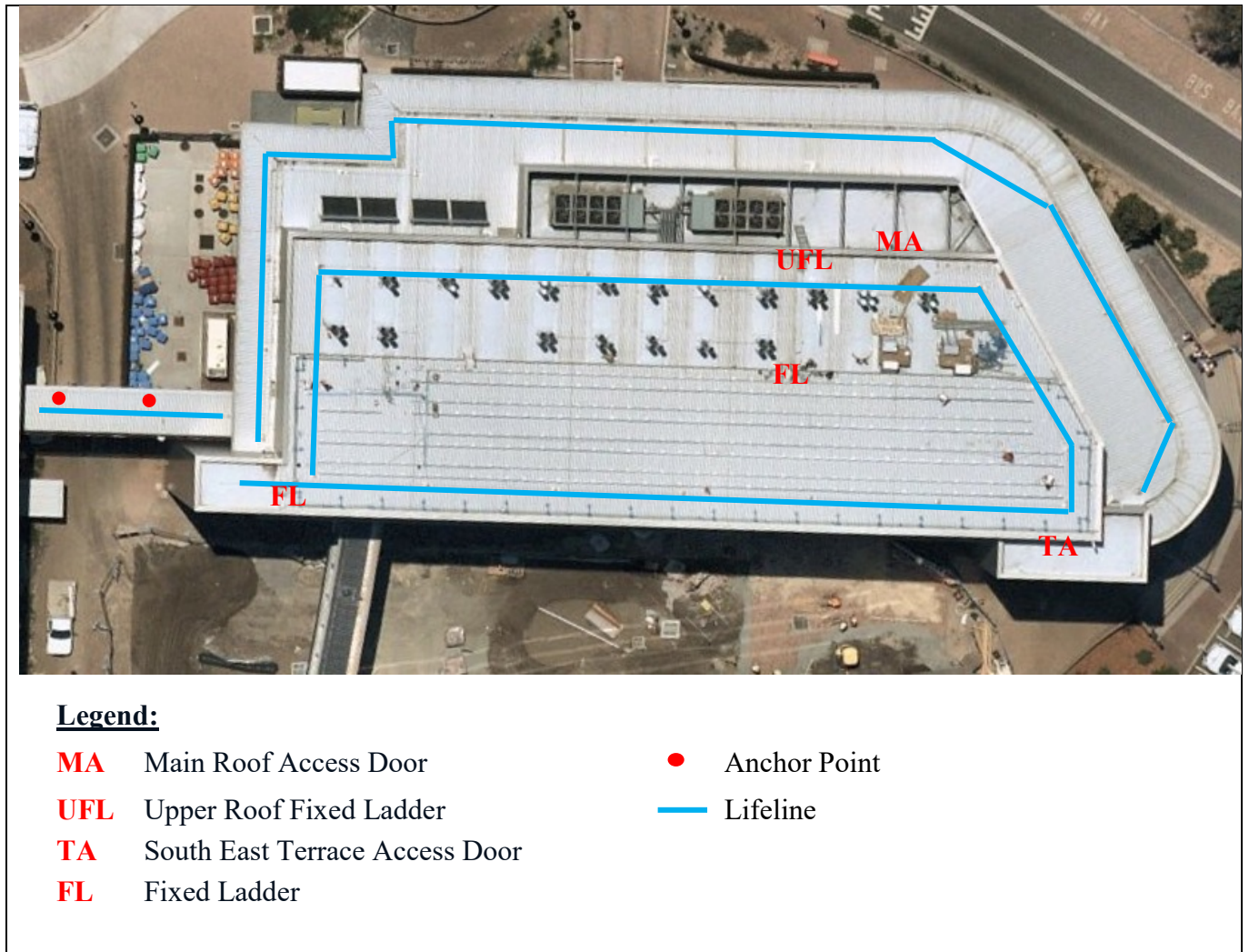
**Work Activity & Frequency:**

- Clean gutters/routine maintenance – 6 months
- Service A/C plant- monthly




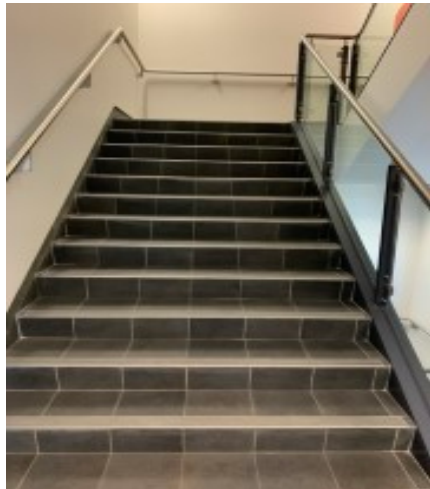







## 6.2 Building 32 Safety Systems Aerial Photo Layout

The following aerial photo indicates access points and safety systems layout.



## 6.3 Building 32 Roof Photos

### Main Roof

		
<p>Main Roof access is via the ground floor lift to Level 3</p>	<p>Main Roof access take the internal fire stairs to the top</p>	<p>Main Roof access is via the Plant room access door (B32)</p>
		
<p>Main Roof access Plant Room area with exposed pipework</p>	<p>Main Roof access Plant Room area Caution high voltage switch boards</p>	<p>Main Roof access Plant Room area Roof access door with fixed ladder &amp; handrail</p>
		
<p>Main Roof access external Plant Room services area with Air conditioning units</p>	<p>Main Roof access external Plant Room services area with upper roof access ladder</p>	<p>Main Roof area with Lifeline Certification by Riverlands Roofing Status Current)</p>



Main Roof area with solar hot water system



Main Roof area with lifeline  
(Certification by Riverlands Roofing Status Current)



Main Roof area with lifeline  
(Certification by Riverlands Roofing Status Current)

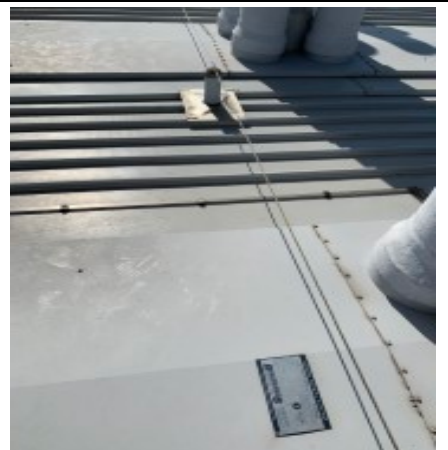
Upper Roof



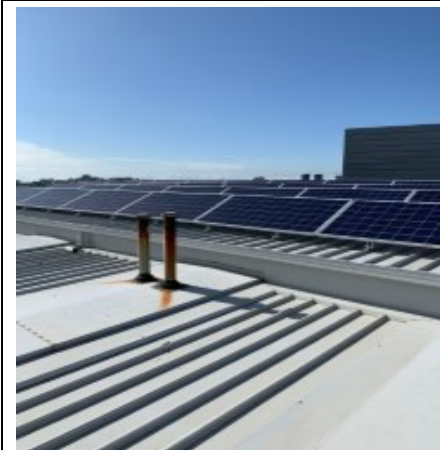
Upper Roof fixed access ladder



Upper Roof lifeline and fume cupboard exhaust stacks  
(Certification by Riverlands Roofing Status Current)



Upper Roof lifeline  
(Certification by Riverlands Roofing Status Current)



Upper Roof area with solar panels



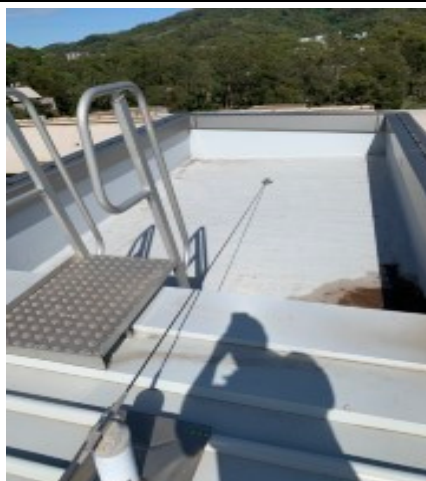
Upper Roof area with solar panels and fixed ladder



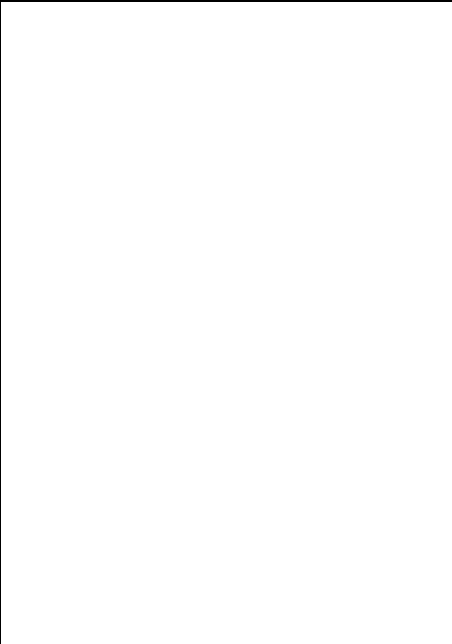
Upper Roof area with solar panels



Upper Roof area with solar panels and lifeline (Certification by Riverlands Roofing Status Current)



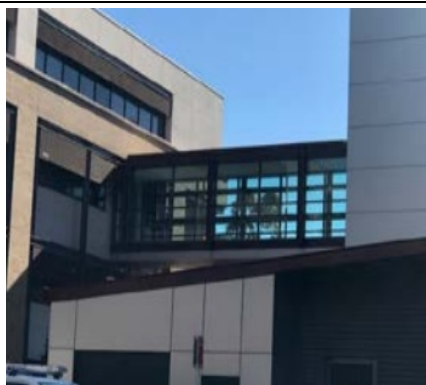
Upper Roof area with fixed ladder and lifeline (Certification by Riverlands Roofing Status Current)



South East Terrace & Bridge Link



South East Terrace Access Door access via the plant room



Bridge Link to Building 41 only accessible by EWP Lifeline & Anchor points Currently not Certified & must not be used



Bridge Link to Building 41 only accessible by EWP Lifeline & Anchor points Currently not Certified & must not be used

## 7 Program Evaluation

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Conditions that might warrant a review of the guidelines on a more frequent basis would include:

- changes to the roof
- change in the relevant legislation or Australian Standards
- organisational needs or WHS Committee concern.

## 8 Related Documents

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- [Managing the Risk of Falls Guidelines](#)
- [Working at Heights Rescue Plan](#)
- [Roof Access Permit](#)
- [Roof Access Procedure](#)

## 9 References

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### 9.1 Legislation

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- [NSW Work Health and Safety Regulation 2017 Part 4.4 Falls](#)
- [NSW Public Health Regulation 2012](#)
- [Public Health Amendment \(Legionella Control\) Regulation 2018](#)

### 9.2 Australian Standards

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- AS 1657: Fixed platforms, walkways, stairways and ladders - Design, construction and installation
- AS 1891.1: Industrial fall-arrest systems and devices - Harnesses and ancillary equipment
- AS 1891.2: Industrial fall-arrest systems and devices - Horizontal lifeline and rail systems
- AS 1891.3: Industrial fall-arrest systems and devices - Fall-arrest devices
- AS 1891.4: Industrial fall-arrest systems and devices - Selection, use and maintenance
- AS 2210.1: Safety, protective and occupational footwear - Guide to selection, care and use
- AS 3666: Air-handling & Water Systems for Buildings - Microbial Control
- AS 4994.1: Temporary edge protection - General requirements
- AS 4994.2: Temporary edge protection - Roof edge protection - Installation and dismantling
- AS 5532: Manufacturing requirements for single-point anchor device used for harness-based work at height
- AS 2550.10 – 2006 Crane, Hoists and lifting equipment. section 5.9

### 9.3 Codes of Practice

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- [Managing the Risk of Falls at Workplaces \(SafeWork NSW\)](#)
- [NSW Guidelines for Legionella Control in Cooling Water Systems](#)

# 10 Version Control Table

Version Control	Date Released	Approved By	Amendment
1	November 2012	Manager WHS	New document
2	March 2014	Manager WHS	Revision following recertification
3	January 2018	Manager WHS	Revision and update
4	October 2020	Manager WHS	Document recreated by GO from Riverlands Roofing. All information reviewed/updated.

# 11 Appendix A: Sample Images

Before contractors use any Fall Arrest System (lifeline or Anchor point) users must complete the following:

- Locate the fall arrest systems data plate or data tag.
- Validate that the system is current and that a yearly certification has been completed.
- Complete a personal visual & physical inspection of the system.
- Users must never exceed the MAX LOAD or USERS of the system.



Fall Arrest System Data Plate



Anchor Point Data Tag