Roof Safety Survey
BUILDING 6
Version 4
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1 Introduction

The following document outlines the Roof Safety Survey (RSS) for Building 6 of the University of Wollongong located at Wollongong Campus Northfields Avenue Wollongong NSW 2522.

2 Purpose

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

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 6 Roof Area Aerial Photo Zone Layout

Zone: A

- Lower North Roof
- Lower South East Roof
- Lower South West Roof
- Upper Roof
- Gantry Level 2
- Gantry Level 3
- Bridge Link to Building 35
- Bridge Link to Building 3
- Smart Engineering

Legend:
- Highlighted Zone Areas
- Lower North Roof Access Door
- Lower South East Roof Access Door
- Lower South West Roof Access Door
- Upper Roof Access Door
- Gantry Level 2 & 3 Access Door
- Smart Engineering Ground Floor Access Door
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.

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

For more information on risk management visit: [https://www.uow.edu.au/about/services/safe-at-work/whs-framework](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

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

### Risk Control

<table>
<thead>
<tr>
<th>Hazard No.</th>
<th>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?)</th>
<th>Control Type (Elimination, Substitution, Isolation, Engineering, Administration, PPE)</th>
<th>Person Responsible</th>
<th>Risk rating (With additional controls in place)</th>
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</table>
6  Roof Safety Survey Building 6

6.1  Building 6 General Information

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

Building:
University of Wollongong Campus Building 6

Description:
Multi storey low pitched metal roofs of various heights, three internal mezzanine areas with anchors embedded into the concrete that require to be load tested, services include cooling tower with chemicals, solar panels, air conditioning units, antenna, ducts exhaust stacks, fume cupboards and roof ventilation.

SafetyNet Risk Assessment Reference Number:
- UOW 01885

Roof Access:

Lower North Roof Access:
- Access to the lower north roof is via the fire safety stairs door located on the south western side of Level 3. Take the fire stairs up to the level 4 Plant room access door (RP1). The lower north roof direct access door is located in the middle of the northern side of the plant room.

Lower South East Roof Access:
- Access to the lower south east roof is via the fire safety stairs door located on the south western side of Level 3. Take the fire stairs up to the level 4 Plant room access door (RP1). The lower south east direct access door is located in on the south eastern side of the plant room.

Lower South West Roof Access:
- Access to lower south west roof is via the physics lab level 3, room 314 located in the middle on the southern side of the building. The roof access door is within the 314 amenities corridor. A fixed ladder and landing lead to direct roof access.

Upper Roof Access:
- Access to the Upper roof is via the fire safety stairs door located on the south western side of Level 3. Take the fire stairs up to the level 4 Plant room access door (RP1). The upper roof is accessed via the cooling tower access doors. Direct access to the upper roof area is via the fixed staircase located within the cooling tower area.

Gantry Level 2 Access:
- Access to the gantry is via the level 2 kitchen area located on the western side of the building. Ensure that the user is connected to the anchor point embedded into the concrete before connecting to the raptor rail system

Gantry Level 3 Access:
- Access to the gantry is via the level 3 kitchen area located on the western side of the building. Ensure that the user is connected to the anchor point embedded into the concrete before connecting to the raptor rail system
Smart Engineering Mezzanine (1, 2 & 3) Access:
- Access to the smart engineering area is via the ground floor eastern end of the building.
  1. Access to Mezzanine 1 is via a fixed step system from ground floor.
  2. Access Mezzanine 2 is via the lift to Level 1, use walkway on the right of the lift to find door Mezzanine Store (1S4) door.
  3. Access to Mezzanine 3 is via the lift to Level 1, the Mezzanine 3 double doors are directly outside the lift area.

Bridge Link to Building 35 Access:
- Access to the building 35 bridge link is from building 35.

Bridge Link to Building 3 Access:
- Access to building 3 bridge link is from building 3.

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 Mezzanine areas

Structural Integrity:
- Sound

Vegetation:
- No

Fall Arrest System:

<table>
<thead>
<tr>
<th>System</th>
<th>Certification Status</th>
<th>Certification By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various Anchor Points</td>
<td>Current</td>
<td>Riverlands Roofing</td>
</tr>
<tr>
<td>1. Raptor Rail System</td>
<td>Current</td>
<td>Riverlands Roofing</td>
</tr>
<tr>
<td>2. Horizontal Lifelines SALA Evolution Lifeline</td>
<td>Current</td>
<td>Riverlands Roofing</td>
</tr>
<tr>
<td>(Manufacture’s User Manual in link below)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(End users must follow manufacturer’s instructions and use compatible attachments)
Services:
- Gutters
- A/C Units
- Ducts
- Roof Ventilators
- Fume Cupboards
- Exhaust Stacks
- Satellite Dishes
- Antenna
- Glass Skylights
- Pipework
- Cooling Tower
- Roof Top Solar Panels

Existing Safety Systems:
- Horizontal Lifelines
- Anchor Points
- Vertical Lifelines
- Handrail
- Walkway
- Parapets

Work Activity & Frequency:
- Clean gutters/routine maintenance – 6 months
- Service A/C plant- monthly
6.2 Building 6 Safety Systems Aerial Photo Layout

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

**Legend:**
- **NA** Lower North Roof Access
- **EA** Lower South East Roof Access
- **WA** Lower South West Roof Access
- **UA** Upper Roof Access
- **GA** Gantry Level 2 & 3 Access
- **AA** Smart Engineering Ground Floor Access
  - **M1** Mezzanine 1 Access Ladder
  - **M2** Mezzanine 2 Access Door
  - **M3** Mezzanine 3 Access Door
- **B35** Bridge Link to Building 35 Access
- **B3** Bridge Link to Building 3 Access
- **M1** Anchor Point
- **SALA Evolution Lifeline**
- **RAPTOR Rail System (On Gantry)**
6.3 Building 6 Roof Photos

Building Access

<table>
<thead>
<tr>
<th>Building 6 Facade</th>
<th>Building 6 main entry steps</th>
<th>Building 6 main lift</th>
</tr>
</thead>
</table>

Lower North Roof

<table>
<thead>
<tr>
<th>Access to the Lower North Roof is via Level 3 west end of building fire stairs door</th>
<th>Fire stairs up to level 4 plant room access door</th>
<th>Level 4 plant room goto the middle of the northern side of the plant room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower North Roof access door with fixed ladder</td>
<td>Lower North Roof with solar panels</td>
<td>Lower North Roof with solar panels</td>
</tr>
</tbody>
</table>

Hardcopies of this document are considered uncontrolled please refer to UOW website or intranet for latest version
Lower North Roof with solar panels

Lower North Roof with glass skylight

Lower South East Roof

Access to the Lower South East roof is via Level 3 west end of building fire stairs door

Fire stairs up to level 4 plant room access door

Level 4 plant room goto the south east side of the plant room

Lower South East roof access door with fixed ladder

Lower South East roof with access door

Lower South East roof with lifeline (Certification by Riverlands Roofing Status Current)
Lower South West Roof

Lower South West roof access via Level 3 room 314 Physics lab

Lower South West room 314 Physics lab roof access door

Lower South West roof access fixed ladder & roof access door

Lower South West roof area

Lower South West roof with lifeline (Certification by Riverlands Roofing Status Current)

Lower South West roof area
Upper Roof

Upper Roof access via Level 3 west end of building fire stairs door

Fire stairs up to level 4 plant room access door

Level 4 plant room goto the middle of the northern side of the plant room

Upper Roof Cooling tower access door

Cooling tower with fixed ladder access

Upper roof fixed staircase to upper roof area

Upper roof area with lifeline (Certification by Riverlands Roofing Status Current)

Upper roof area with solar panels & roof ventilation

Upper roof area with antenna satellite dish
<table>
<thead>
<tr>
<th>Upper roof area with fume cupboard stacks</th>
<th>Upper roof area with lifeline &amp; solar panels (Certification by Riverlands Roofing Status Current)</th>
</tr>
</thead>
</table>

### Smart Engineering (Mezzanine 1, 2 & 3)

<table>
<thead>
<tr>
<th>Smart Engineering entry via the ground floor south eastern end of the building</th>
<th>Ground floor area</th>
<th>Mezzanine 1 – Ground floor up fixed stair case to mezzanine area</th>
</tr>
</thead>
</table>

| Mezzanine 1 – Anchor embedded into the concrete (anchor being load tested) (Certification by Riverlands Roofing Status Current) | Mezzanine 1 – upper storage area with fixed ladder cover | To access Mezzanine 2 & use Ground floor lift to level 1 |
Mezzanine 2 – Level 1 use walkway

Mezzanine 2 – Level 1 Access door (1S4)

Mezzanine 2 Level 1 area

Mezzanine 2 Level 1 area

Mezzanine 3 Level 1 Access door directly in front of lift

Mezzanine 3 Level 1 area with anchor embedded into the concrete (Certification by Riverlands Roofing Status Current)

Mezzanine 3 Level 1 area with anchor embedded into the concrete (Certification by Riverlands Roofing Status Current)

Mezzanine 3 Level 1 area

Mezzanine 3 Level 1 area
<table>
<thead>
<tr>
<th>Buildings Gantry Level 2 &amp; 3</th>
<th>Level 2 Gantry access door with anchor <em>(Certification by Riverlands Roofing Status Current)</em></th>
<th>Level 2 Gantry anchor attached to harness before connecting to rail system <em>(Certification by Riverlands Roofing Status Current)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 2 Gantry rail system <em>(Certification by Riverlands Roofing Status Current)</em></td>
<td>Level 3 Gantry access door with anchor <em>(Certification by Riverlands Roofing Status Current)</em></td>
<td>Level 3 Gantry rail system <em>(Certification by Riverlands Roofing Status Current)</em></td>
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<tr>
<td>Gantry rail system with connection to harness (Certification by Riverlands Roofing Status Current)</td>
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<td></td>
</tr>
<tr>
<td><strong>Bridge Links</strong></td>
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</tr>
<tr>
<td></td>
<td>Bridge Link to Building 35 with lifeline (Certification by Riverlands Roofing Status Current)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bridge link to building 3 with lifeline (Certification by Riverlands Roofing Status Current)</td>
<td></td>
</tr>
</tbody>
</table>
7 Program Evaluation

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

- Managing the Risk of Falls Guidelines
- Working at Heights Rescue Plan
- Roof Access Permit
- Roof Access Procedure

9 References

9.1 Legislation

- NSW Work Health and Safety Regulation 2017 Part 4.4 Falls
- Public Health Amendment (Legionella Control) Regulation 2018

9.2 Australian Standards

- 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: Crane, Hoists and lifting equipment. section 5.9

9.3 Codes of Practice

- Managing the Risk of Falls at Workplaces (SafeWork NSW)
- NSW Code of Practice for the Control of Legionnaires' Disease (NSW Health)
## 10 Version Control Table

<table>
<thead>
<tr>
<th>Version Control</th>
<th>Date Released</th>
<th>Approved By</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>November 2012</td>
<td>Manager WHS</td>
<td>New document</td>
</tr>
<tr>
<td>2</td>
<td>March 2014</td>
<td>Manager WHS</td>
<td>Compliance update</td>
</tr>
<tr>
<td>3</td>
<td>January 2018</td>
<td>Manager WHS</td>
<td>Revision and update</td>
</tr>
<tr>
<td>4</td>
<td>December 2020</td>
<td>Manager WHS</td>
<td>Document recreated by GO from Riverlands Roofing. All information reviewed/updated.</td>
</tr>
</tbody>
</table>
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](image1)
![Anchor Point Data Tag](image2)