Roof Safety Survey

BUILDING 40

Commerce Research Centre

Version 3
1 Introduction

The following document outlines the Roof Safety Survey (RSS) for Building 40 Commerce Research Centre 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 40 Roof Area Aerial Photo Zone Layout

Zone: A
- Main Access Roof
- North Wing Roof
  - North Wing Balcony (A) (North Facing)
- North East Lower Roof (Balcony Access)
- South Wing Roof
  - South Wing Balcony (A) (North Facing)
  - South Wing Balcony (B) (South Facing)
- West Lower Roof

Legend:
- Highlighted Zone Areas
- Main Access Roof Door
- North Wing Roof Access Ladder
  - North Wing Balcony (A) Access
  - North Wing Roof Access Ladder
  - North East Lower Roof (Balcony Access)
  - South Wing Roof Access Ladder
    - South Wing Balcony (A) Access
    - South Wing Balcony (B) Access
- West Lower Roof Portable Ladder Access
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>Consequence</th>
<th>Description</th>
<th>Likelihood</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe</td>
<td>Death or extensive injuries</td>
<td>Almost Certain</td>
<td>Is expected to occur in most circumstances</td>
</tr>
<tr>
<td>Major</td>
<td>Medical treatment</td>
<td>Likely</td>
<td>Will probably occur in most circumstances</td>
</tr>
<tr>
<td>Moderate</td>
<td>First aid treatment</td>
<td>Possible</td>
<td>May occur at some time</td>
</tr>
<tr>
<td>Minor</td>
<td>Injury report, no treatment</td>
<td>Unlikely</td>
<td>May occur, but probably never will</td>
</tr>
</tbody>
</table>

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:

<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>
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<tr>
<td>Fourthly</td>
<td>Engineering</td>
<td>Redesign a process or piece of equipment to make it less hazardous.</td>
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<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
### 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>
</tr>
</thead>
<tbody>
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<td>Consequence</td>
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</tbody>
</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>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td>Consequence</td>
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</tbody>
</table>
6 Roof Safety Survey Building 40

6.1 Building 40 General Information

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

Building:
University of Wollongong Campus Building 40 Commerce Research Centre

Description:
Multi storey low pitched metal and concrete roof areas with concrete balconies, services include solar panels, air conditioning units, satellite dish and roof ventilation.

SafetyNet Risk Assessment Reference Number:
- UOW 01658

Roof Access:

Main Access Roof Access:
- Access to the Main Access Roof area is via the buildings internal fire stairs located on level 1. The Main Access Roof door is at the top of the stairs on level 4.

North Wing Roof Access
- Access to the North Wing Roof is via a fixed ladder located northern side of the Main Access Roof area.

North Wing Balcony (A) Access:
- Access to the North Wing Balcony is via the offices located on the northern side of the North Wing located on level 2.

North East Lower Roof Balcony Access:
- Access to the North East Lower Roof Balcony and services area is via the School of Accounting Economics & Finance department. Direct access to the balcony is via office room 326 sliding door. Users must climb over the parapet and railing to reach the North East Lower Roof and services area.

South Wing Roof Access
- Access to the South Wing is via a fixed ladder located southern of the Main Access Roof area. A fixed ladder is installed to give access to the South eastern section of the roof that contains solar panels.

South Wing Balcony (A) Access
- Access to the South Wing Balcony (A) is via the offices located on the northern side of the South Wing Located on level 2.

South Wing Balcony (B) Access
- Access to the South Wing Balcony (B) is via the offices located on the southern side of the South Wing Located on level 2.

West Lower Roof Access
- Access to the West Lower Roof area is by portable ladder. A portable ladder bracket is installed and located at ground level on the western side of the building.
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 (Trees growing over the roof area)

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>
</tbody>
</table>
| Horizontal Lifelines SALA SAYFGLIDA & SAYF8  
(Manufacture’s User Manual in link below) | Current              | Riverlands Roofing     |
|                                     |                      |                        |

(End users must follow manufacturer’s instructions and use compatible attachments. More specifically, the connection system for horizontal lifelines Sayf8 or Sayfaglida 12 must use the ss130 shuttle device)

Services:

- Gutters
- A/C Units
- Ducts
- Roof Ventilators
- Fume Cupboards
- Telco Towers
- Satellite Dishes
- Antenna
- Fiberglass 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 40 Safety Systems Aerial Photo Layout

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

**Legend:**

- **MA** Main Access Roof Access Door
- **NA** North Wing Roof Access Ladder
- **NB** North Wing Balcony Access (*Balcony Office Door*)
- **EA** North East Lower Roof Access (*Balcony Office Door*)
- **WG** North East Lower Roof Window Gartry’s
- **SA** South Wing Roof Access Lader
- **SB-a** South Wing Balcony (A) Access (*Balcony Office Door*)
- **SB-b** South Wing Balcony (B) Access (*Balcony Office Door*)
- **WA** West Lower Roof Portable Ladder Access

- Anchor Point
- Lifeline
### 6.3 Building 40 Roof Photos

**Main Access Roof**

<table>
<thead>
<tr>
<th>Photo</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Building 40 entrance" /></td>
<td>Building 40 entrance</td>
</tr>
<tr>
<td><img src="image2" alt="Building 40 Level 1 fire stairwell" /></td>
<td>Building 40 Level 1 fire stairwell</td>
</tr>
<tr>
<td><img src="image3" alt="Main Access Roof access door at top of fire stairwell" /></td>
<td>Main Access Roof access door at top of fire stairwell</td>
</tr>
<tr>
<td><img src="image4" alt="Main Access Roof access door with air conditioning units" /></td>
<td>Main Access Roof access door with air conditioning units</td>
</tr>
<tr>
<td><img src="image5" alt="Main Access Roof area with anchor points Certification by Riverlands Roofing Status Current" /></td>
<td>Main Access Roof area with anchor points Certification by Riverlands Roofing Status Current</td>
</tr>
<tr>
<td><img src="image6" alt="Main Access Roof area Caution users must be attached to the anchor points to access this area" /></td>
<td>Main Access Roof area Caution users must be attached to the anchor points to access this area</td>
</tr>
<tr>
<td><img src="image7" alt="Main Access Roof area (South facing)" /></td>
<td>Main Access Roof area (South facing)</td>
</tr>
<tr>
<td><img src="image8" alt="Main Access Roof area (North facing)" /></td>
<td>Main Access Roof area (North facing)</td>
</tr>
</tbody>
</table>
North Wing Roof & Balcony

North Wing Roof access ladder

North Wing Roof area with services & Lifeline (Certification by Riverlands Roofing Status Current)

North Wing Roof with air conditioning unit and walkway

North East Lower Roof & Window Gantry

Access to the North East Lower Roof is via the School of Accounting Economics & Finance department

Direct access to the balcony is via office room 326

North East Lower Roof balcony access via office 326 sliding door
<table>
<thead>
<tr>
<th>North East Lower Roof balcony area</th>
<th>North East Lower Roof access point users must climb over parapet &amp; railing</th>
<th>North East Lower Roof area with services including air conditioning units, ducts &amp; Fiberglass Skylight</th>
</tr>
</thead>
<tbody>
<tr>
<td>North East Lower Roof with handrail around edge &amp; window gantry top (Caution do not walk on Gantry)</td>
<td>North East Lower Roof window gantry with overhead lifeline (Certification by Riverlands Roofing Status Current)</td>
<td>South Wing Roof &amp; Balconies</td>
</tr>
<tr>
<td>South Wing Roof access ladder</td>
<td>South Wing Roof raised services area with air conditioning units</td>
<td>South Wing Roof area with walkway, handrail &amp; lifeline (Certification by Riverlands Roofing Status Current)</td>
</tr>
</tbody>
</table>
South Wing Roof area with anchor point *(Certification by Riverlands Roofing Status Current)*

South Wing Roof area with walkway and fixed ladder to eastern end of the south wing

South Wing Roof area with solar panels (east facing)

West Lower Roof

West Lower Roof portable ladder access (western side of the building garden area) Ladder Bracket installed

West Lower Roof Anchor points on roof area *(Certification by Riverlands Roofing Status Current)*
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
- NSW Public Health Regulation 2012
- 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 Guidelines for Legionella Control in Cooling Water Systems
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>January 2016</td>
<td>Manager WHS</td>
<td>Revision and update</td>
</tr>
<tr>
<td>2</td>
<td>October 2020</td>
<td>Manager WHS</td>
<td>Document recreated by GO from Riverlands Roofing. All information reviewed/updated.</td>
</tr>
</tbody>
</table>

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](image1)

![Anchor Point Data Tag](image2)