# Roof Safety Survey

## GENERAL INFORMATION

**CAMPUS:** Wollongong Campus  
**BUILDING:** Communications Centre (20)

**DESCRIPTION:** Building consists of single storey original pentagon shaped lecture theatre with metal roof and two storey office building added later. Additional awning added to the north and south eastern sides have horizontal lifeline and Anchor points. Ladder and vertical lifeline to access Office roof.

**RISK ASSESSMENT #** UOW01613

**ROOF ACCESS:** Two access points  
1) From offices Level 2 beside stairs onto landing  
2) From lecture theatre Via stairway in foyer to plant room - ladder through locked hatchway to centre of roof - ladders to various roof areas  
3) Awnings Access to Awnings with portable ladders at ladder bracket locations

**SIGNAGE:** Danger - No Access to Roof without a Buildings and Grounds Roof Access UOW Permit to work; Caution - Trip Hazard; Caution - Low Headroom

**COMPLIANCE PLATES:** Various located adjacent to fall arrest systems - refer map

**SAFE WORK AREA:** Within handrail services areas on walkway/landings above lecture theatres

**ROOFING SYSTEM:** SALA “SAYFGLIDA & SAYF8” LIFELINE.  
SALA “LADSAFE” VERTICAL LIFELINE.

**TYPICAL ANCHORS**  
LAD-SAF® DETACHABLE CABLE SLEEVE

**HEIGHT OF BUILDING:** Two Storey Offices, single storey Lecture Theatres  
**PITCH:** 25 degrees towards centre  
**ROOF CONSTRUCTION:** Metal & Concrete Core  
**STRUCTURAL INTEGRITY:** Yes

**VEGETATION:** Nil

**ADJOINING ROOFS:**  
- Gutters: Yes  
- A/C Units: Yes  
- Satellite Dishes: Yes  
- Antenna: Yes

**SERVICES:**  
- Exhaust Fans: Yes  
- Skylights Domes: Yes  
- Ducts: Yes  
- Glass Skylights: No  
- Roof Ventilators: No  
- Pipework: Yes  
- Fume Cupboards: No  
- Cooling Tower: Yes  
- Telco Towers: No

**EXISTING SAFETY ITEMS:**  
- Horizontal Lifelines: Yes  
- Handrail: Yes  
- Anchor Points: Yes  
- Walkway: Yes  
- Vertical Lifelines: Yes  
- Parapets: Yes

**WALKWAY & LANDINGS:**  
- Parapets: Yes  
- Walkway: Yes  
- Handrail: Yes  
- Horizontal Lifelines: Yes

**FREQUENCY:**  
- Gutters / Routine Maintenance: Every 6 weeks  
- Service A/C Plant: Monthly  
- Cooling Tower Maintenance: Monthly

Note: Before commencing any work obtain Roof Permit from Facilities Management Division
## Building 20 Roof Safety Assessment

### Risk Assessment

**Risk Assessment / Task Location**

**BUILDING 20**

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**Note:** The hazards identified do not include hazards that related to specific work tasks. These should be identified in the Safe Work Method Statement (SWMS) of the contractor.

<table>
<thead>
<tr>
<th>Hazard Identification</th>
<th>Risk Assessment &amp; Control Measures</th>
<th>Risk Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What is the Activity/Service Item</strong></td>
<td><strong>What are the potential Hazards</strong></td>
<td><strong>What is the Risk Level</strong></td>
</tr>
<tr>
<td>Access to Roof via plantroom door</td>
<td>Low Headroom on platform</td>
<td>M</td>
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<tr>
<td>Access to upper roof via Climbing Access Ladder</td>
<td>Falling</td>
<td>H</td>
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<tr>
<td>Access to Roof</td>
<td>Unauthorised access</td>
<td>M</td>
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<tr>
<td>Access to Roof and service platform via Fixed ladders</td>
<td>Falls from ladder</td>
<td>M</td>
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<tr>
<td>Gutter Maintenance on Roof and Awnings</td>
<td>Falling</td>
<td>H</td>
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<tr>
<td>Roof Plant Maintenance greater than 2m from roof edge</td>
<td>Refer to SWMS for contractor</td>
<td>M</td>
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<tr>
<td>Roof Plant Maintenance within 2m from roof edge</td>
<td>Falling &amp; Refer to SWMS for contractor</td>
<td>H</td>
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<tr>
<td>Antenna Maintenance</td>
<td>Falling and Refer to SWMS of contractor</td>
<td>H</td>
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<tr>
<td>Air Conditioning Maintenance</td>
<td>Atmospheric contamintions; Legionnaires Disease from A/C Units</td>
<td>M</td>
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<tr>
<td>Skylights</td>
<td>Falling near or through skylight</td>
<td>H</td>
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<tr>
<td>General</td>
<td>Trip Hazard - Roof Sheeting</td>
<td>M</td>
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<tr>
<td>General</td>
<td>Trip Hazard - Horizontal Lifeline or Anchor Points</td>
<td>M</td>
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<tr>
<td>General</td>
<td>Environmental Hazards - Spiders, Wasps, and other insects</td>
<td>M</td>
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<tr>
<td>General</td>
<td>Weather Trips/Slips - Wet Roofs</td>
<td>H</td>
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<tr>
<td>General</td>
<td>Weather - Windy Condition</td>
<td>H</td>
</tr>
<tr>
<td>General</td>
<td>Weather - Hot Conditions</td>
<td>M</td>
</tr>
</tbody>
</table>
Reference Documentation

Legislation
NSW Work Health and Safety Regulation 2011 Part 4.4 Falls
Public Health (Microbial Control) Regulation 2000

Australian Standards
AS 1657 - 2013 : Fixed platforms, walkways, stairways and ladders - Design, construction and installation
AS 1891.1 - 2007 : Industrial fall-arrest systems and devices - Harnesses and ancillary equipment
AS 1891.2 - 2001 : Industrial fall-arrest systems and devices - Horizontal lifeline and rail systems
AS 1891.3 - 1997 : Industrial fall-arrest systems and devices - Fall-arrest devices
AS 1891.4 - 2009 : Industrial fall-arrest systems and devices - Selection, use and maintenance
AS 2210.1 - 2010 : Safety, protective and occupational footwear - Guide to selection, care and use
AS 3666- 2011 : Air-handling & Water Systems for Buildings - Microbial Control
AS 4994.1 - 2009 : Temporary edge protection - General requirements
AS 4994.2 - 2009 : Temporary edge protection - Roof edge protection - Installation and dismantling
AS 5532 - 2013 : Manufacturing requirements for single-point anchor device used for harness-based work at height

Code of Practice
Safe Work Australia - Managing the Risk of Falls at Workplaces
NSW Health Department Code of Practice for the Control of Legionnaires' Disease

UOW Documentation
Managing the Risk of Falls Guidelines
Thermal Comfort Guidelines
UOW Roof Access Permit
UOW Roof Access Certificate

Other
SALA - Fall Arrest and Height Safety Systems - Fall Protection Manual
WorkCover - Safe Working at Heights Guide 2006
Building 20 Roof Safety Assessment

P - location of compliance plate
A - location of access to roof
L - location of ladder
B - ladder bracket
O - Skylight - Fragile roof

Horizontal Lifeline
Safe Roof Work Area
View south from office access

View of central air conditioning services from office access

A/C below platform

Looking back at door to Lecture theatre plantroom

Access door from Offices

Anchor point on outer roof

Access ladder to roof from Lecture theatre plantroom

Ladder to Office Roof
Skylight above lecture theatres
Fall Restraint system above western landing
Fixed Ladder down to access Lecture Theatre access door
View north - east from office access
Roof above offices
Walkway and handrail around central services
SAFE USE OF SALA “SAYFGLIDA & SAYF8” LIFELINE.

1. TYPICAL LIFELINE.

2. ATTACHMENT OF SHUTTLE

3. SHUTTLE IN CLOSED POSITION.

4. CORRECT ORIENTATION
1. TYPICAL LIFELINE.

2. ATTACHMENT OF SHUTTLE

3. SHUTTLE IN CLOSED POSITION.

4. CORRECT ORIENTATION

SALA SAYFLINK SHUTTLE  part # SS130

- Slide the locking pin / attachment point into the slot on the safelink and open the mouth (the attachment point must be facing you or the mouth will not open.)
- Place the safelink over the cable and close the mouth.
- Slide the locking pin back to the original position and lift the locking pin / attachment point.
- Connect the hardware from the lanyard or rope grab to the hole in the locking pin / attachment point to prevent the locking pin from falling into the slot and the mouth opening.
SAFE USE OF SALA “LADSAFE” VERTICAL LIFELINE.

Sala “Ladsafe” is a vertical fall arrest system mounted to fixed ladders. The system is identified as a 10mm vertical cable system. A system data plate is generally mounted close to the system or ladder

REFER TO MANUFACTURERS INSTRUCTIONS
GUIDE LINE ONLY

This operation manual should be considered a guide only. All persons using the equipment listed in this manual must be competently trained. “The Installer” installs systems only and does not manufacture the systems. End users to enquire with “the manufacturer” (Bullivants) at their own discretion. Always follow manufacturers instructions.

TYPICAL ANCHORS
1.0 APPLICATIONS

1.1 PURPOSE: The LAD-SAF detachable cable sleeves will arrest the fall of personnel while climbing a fixed ladder. The detachable cable sleeve is not intended to be used for material handling.

NOTE: The installer and user must ensure the ladder meets all applicable local, state, and federal standards, including ANSI A14.3.

1.2 LIMITATIONS: The LAD-SAF detachable cable sleeves must be used with a DBI-SALA approved ladder safety system. Use only 3/8 inch diameter solid core cable with the detachable cable sleeve.

The detachable cable sleeve must be directly connected to an approved full body harness with the attached 2000112 carabiner. See Figure 1. Do not use connection devices other than the 2000112 carabiner, available from DBI-SALA.

NOTE: ANSI A14.3 and OSHA 1926.1053 states that the length of connection between the carrier and attachment point must not exceed 9 inches.

2.0 SYSTEM REQUIREMENTS

2.1 COMPATIBILITY OF COMPONENTS AND SUBSYSTEMS: This equipment is designed for use with DBI-SALA approved components and subsystems. The use of non-approved components and subsystems may jeopardize compatibility of equipment and could affect the safety and reliability of the complete system. Contact DBI-SALA if you have questions about compatibility of equipment.
3.0 OPERATION AND USE

3.1 CONNECTING THE DETACHABLE CABLE SLEEVE TO THE CARRIER CABLE:

**WARNING:** In situations where a fall hazard exists, use a back-up fall arrest system, such as a lanyard, to protect against a fall.

**Step 1.** Ensure the sleeve is correctly positioned relative to the carrier cable. The "up" arrow on the sleeve must be pointing to the ascending direction. The detachable safety sleeve includes a gravity stop to reduce the possibility of installing the sleeve upside-down. See Figure 1.

**Step 2.** Rotate the locking lever and pivot handle to its full upright position. This will draw back the cable shoe to allow insertion of the carrier cable into the sleeve housing. The locking lever is on both sides of the detachable cable sleeve for right or left hand operation. See Figure 2.

**Step 3.** Hold the sleeve upright and place the upper roller onto the cable. See Figure 3.

**Step 4.** Push back the upper roller extension and insert the cable through the slot on the side of the sleeve. Position the cable in the sleeve recess. Release the handle to lock the sleeve on the cable. Ensure the locking lever is in the locked position before use. See Figure 4. Figure 1 shows the locking lever in the locked position.

![Figure 2](image1.png) ![Figure 3](image2.png) ![Figure 4](image3.png)

3.2 CONNECTING THE DETACHABLE CABLE SLEEVE TO THE HARNESS: Connect the sleeve to the full body harness attachment point designated for ladder climbing. When connecting the detachable cable sleeve to the harness ensure the connection is compatible in size, shape, and strength. For 6116509 models, use the 2000112 carabiner supplied with the sleeve. Do not substitute with other connectors. Do not use other connecting devices such as a short lanyard, chain, link, or clevis. Connection between the sleeve and full body harness may be done before or after the sleeve has been installed onto the carrier cable. When connecting ensure the carabiner gate is fully closed and locked.

ASCENDING: To ascend the ladder climb up normally. The detachable cable sleeve will follow the climber. The cable is snapped out of the cable guides as they are encountered. Reconnect cable into cable guides after passing each cable guide. Do not remove the climbing sleeve from the cable to pass the cable guides.

DESCENDING: To descend the ladder, climb down smoothly in a normal position. Allow the sleeve to "lead" the climber down. Climbing down out of position (leaning back excessively) will cause the sleeve to lock on the cable. If the sleeve locks, move upward slightly to release the sleeve and continue to descend the ladder.

When climbing is completed remove the sleeve from the cable by rotating the locking lever and pivoting handle to its full upright position. The sleeve can now be removed from cable and properly stored.

Ensure all hazards are addressed to provide climber safety. Hazardous environments or conditions include, but are not limited to; power lines, heat or flame, explosive gases, physical obstructions, and climbers ability and health. If a fall occurs the employer must have a rescue plan and the ability to implement it. After a fall the detachable cable sleeve must be inspected by a competent person other than the user. See section 5.0 of this manual for inspection steps.
4.0 TRAINING

4.1 TRAINING: It is the responsibility of the user and purchaser of this equipment to assure they are familiar with these instructions, operating characteristics, application limits, and the consequences of improper use of this equipment. Users and purchasers of this equipment must be trained in the correct care and use of this equipment.

**IMPORTANT:** Training must be conducted without exposing the user to a fall hazard. Training should be repeated on a periodic basis.

Step 1. Don a full body harness and attach to detachable cable sleeve.

Step 2. Ascend the ladder to approximately three feet. With both hands and feet on the climbing structure flex knees in a quick sitting motion to simulate a fall. This will activate the sleeve.

Step 3. Repeat Step 2. After the sleeve locks, move upward to unlock the sleeve.

Step 4. Descend the ladder and detach from the sleeve.

5.0 INSPECTION

5.1 FREQUENCY:

- **Before Each Use** inspect the detachable cable sleeve according to sections 5.2 and 5.3.

- **Formal Inspection:** A formal inspection of the detachable cable sleeve must be performed at least annually by a competent person other than the user. The frequency of formal inspections should be based on conditions of use or exposure. See sections 5.2 and 5.3. Record the inspection results in the inspection and maintenance log in section 8.0.

- **After a Fall** a formal inspection of the detachable cable sleeve must be performed by a competent person other than the user. Record the inspection results in the inspection and maintenance log in section 8.0.

5.2 INSPECTION GUIDELINES:

- Inspect the handle and cable shoe for bends, cracks, and deformities. All fasteners must be securely attached. Operation of handle and cable shoe must be free and smooth. Springs must be secure and of sufficient strength to pull handle down.

- Inspect the locking lever for smooth operation, ensuring it springs back into its locked position when released.

- Inspect the sleeve body for wear on the inside where the cable passes through.

5.3 If inspection reveals an unsafe or defective condition remove the detachable cable sleeve from service and destroy or contact an authorized service center for repair. Record the results in inspection and maintenance log in section 8.0 of this manual.

6.0 MAINTENANCE, SERVICING, STORAGE

The LAD-SAF sleeve may be cleaned using commercial parts cleaning solvents and rinsed with warm, soapy water. Light machine oil may be applied to moving parts if required. Do not use excessive oil, or allow oil to contact cable clamping surfaces.

Additional maintenance and servicing procedures must be completed by an authorized service center. Authorization must be in writing.

Store the detachable cable sleeve in a cool, dry, clean environment, out of direct sunlight. Avoid areas where chemicals vapors exist. Thoroughly inspect the sleeve after extended storage.

7.0 TERMINOLOGY

AUTHORIZED PERSON: A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard (otherwise referred to as “user” for the purpose of these instructions).

RESCUER: Person or persons other than the rescue subject acting to perform an assisted rescue by operation of a rescue system.

CERTIFIED ANCHORAGE: An anchorage for fall arrest, positioning, restraint, or rescue systems that a qualified person certifies to be capable of supporting the potential fall forces that could be encountered during a fall or that meet the criteria for a certified anchorage prescribed in this standard.
# 8.0 Inspection and Maintenance Log

<table>
<thead>
<tr>
<th>INSPECTION DATE</th>
<th>INSPECTION ITEMS NOTED</th>
<th>CORRECTIVE ACTION</th>
<th>MAINTENANCE PERFORMED</th>
</tr>
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<tbody>
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WARRANTY

Equipment offered by DBI-SALA is warranted against factory defects in workmanship and materials for a period of two years from date of installation or use by the owner, provided that this period shall not exceed two years from date of shipment. Upon notice in writing, DBI-SALA will promptly repair or replace all defective items. DBI-SALA reserves the right to elect to have any defective item returned to its plant for inspection before making a repair or replacement. This warranty does not cover equipment damages resulting from abuse, damage in transit, or other damage beyond the control of DBI-SALA. This warranty applies only to the original purchaser and is the only one applicable to our products, and is in lieu of all other warranties, expressed or implied.