Roof Safety Survey

GENERAL INFORMATION

CAMPUS: Wollongong Campus
BUILDING: SMART Infrastructure Facility (6)
DESCRIPTION: Modern 4 storey building with metal roof - plantroom occupies the upper floor - balcony areas on second and third floors and large atrium area covered by glass skylights on the interior.

RISK ASSESSMENT #: UOW01885

ROOF ACCESS:
1) Level 2 West
   Small unmarked window cleaning access door behind Room 208 beside kitchen area - onto exterior walkway - anchor points installed on floor inside door and on rail system to glass structure

2) Level 2 East
   Glass doors on Eastern end of building open onto terrace area - parapet 1200 mm. System links to Building 3. Horizontal lifeline

3) Level 3 West
   Small unmarked window cleaning access door behind Room 208 beside kitchen area - onto exterior walkway - anchor points installed to floor, rail system to glass structure

4) Level 3 South West
   Door at end of southern corridor beside rooms 314I & 314H - up short parapet onto landing to exterior door to roof above second floor - horizontal lifelines and parapet varying from 1200 - 150 mm.

5) West bridge link
   System link to Building 35 accessible only from building 35

6) Level 3 East
   Glass doors on Eastern end of building open onto smaller terrace area - parapet 1200 mm

7) Stair 1 to plantroom
   Leads to plantroom on fourth floor for access to roof proper.

8) Stair 2 to plantroom
   Leads to plantroom on fourth floor for access to roof proper.

9) Stair 3 to plantroom
   Leads to plantroom on fourth floor for access to roof proper.

10) Lift 1 to plantroom
    Leads to plantroom on fourth floor for access to roof proper.

11) Roof Access North beside Stair 3
    In plantroom - climb four rung ladder onto landing to open door - to access solar panels and other services on northern side.

12) Roof Access South East
    Through doors into courtyard where cooling towers are located - stairs lead up to short handrailled walkway to access upper roof and services - horizontal lifelines around building edge - no protection from edge of cooling tower courtyard

13) Roof via RP3 Cooling Tower
    Walkway to access upper roof and services - horizontal lifelines around building edge - no protection from edge of cooling tower courtyard

14) Service corridor on level 3
    Access to upper area of Atrium - 1200 mm balustrate

15) Highbay/ Mezzanine
    The mezzanine level is located in the workshop area. East end. The mezzanine is used for storage. These areas are generally accessed by SMART staff. The anchors are located on the concrete floor and must be attached to prior to removal of the handrail. There are sections of handrail that can be removed in order to forklift or move materials using bridge crane to the mezzanine floor. It should be also noted the Handrails must be re-instated prior to disconnection from the systems

SIGNAGE:
Danger - No Access to Roof without a Buildings and Grounds Roof Access UOW Permit to work.

COMPLIANCE PLATES:
Compliance plates are located on the access doors leading to the roof and access doors from plant room and kitchen areas and on the wall adjacent to the roof of walkovers between Buildings 3 and 35

SAFE WORK AREAS:
None on roof - balcony areas only and enclosed cooling tower plant

ROOFING SYSTEM:
Sala Evolution Lifeline
“RAPTOR” RAIL SYSTEMS.
TYPICAL ANCHORS

HEIGHT OF BUILDING:
4 Storey

PITCH:
< 5 degrees

ROOF CONSTRUCTION:
Metal Roof

STRUCTURAL INTEGRITY:
Sound

VEGETATION:
No

ADJOINING ROOFTOPS:
 Nil

SERVICES:

<table>
<thead>
<tr>
<th>Gutter</th>
<th>A/C Units</th>
<th>Exhaust Fans</th>
<th>Ducts</th>
<th>Roof Ventilators</th>
<th>Fume Cupboards</th>
<th>Telco Towers</th>
<th>Satellite Dishes</th>
<th>Antenna</th>
<th>Skylights Domes</th>
<th>Glass Skylights</th>
<th>Pipework</th>
<th>Cooling Tower</th>
<th>Solar Dishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

EXISTING SAFETY ITEMS:

<table>
<thead>
<tr>
<th>Horizontal Lifelines</th>
<th>Anchor Points</th>
<th>Vertical Lifelines</th>
<th>Handrail</th>
<th>Walkway</th>
<th>Parapets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

WORK ACTIVITY DETAILS:

<table>
<thead>
<tr>
<th>Clean Gutters / Routine Maintenance</th>
<th>Service A/C Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>TBA</td>
</tr>
</tbody>
</table>

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

## RISK ASSESSMENT

### BUILDING 6

**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>List any Control Measures already Implemented</strong></td>
</tr>
<tr>
<td>Access to Roof Unauthorised access</td>
<td>M</td>
<td>All access points to roof are locked and made secure so are not accessible by unauthorised persons; signage</td>
</tr>
<tr>
<td>Access to Roof via plantroom door Climbing stairs to access south and north side roofs</td>
<td>M</td>
<td>Step access to roof</td>
</tr>
<tr>
<td>Access to upper roof via stair - cooling tower Fall</td>
<td>H</td>
<td>Compliant stair access with handrails</td>
</tr>
<tr>
<td>Gutter Maintenance on Roof and Awnings Falling</td>
<td>H</td>
<td>Horizontal Lifeline &amp; Anchors Installed</td>
</tr>
<tr>
<td>Access to roofs from Buildings 3 &amp; 35 bridge links Falling</td>
<td>H</td>
<td>Horizontal Lifeline &amp; Anchors Installed</td>
</tr>
<tr>
<td>Roof Plant Maintenance greater than 2m from roof edge Refer to SWMS for contractor</td>
<td>M</td>
<td>Safe Work Procedure</td>
</tr>
<tr>
<td>Roof Plant Maintenance within 2m from roof edge Falling &amp; Refer to SWMS for contractor</td>
<td>H</td>
<td>Horizontal Lifeline &amp; Anchors Installed</td>
</tr>
<tr>
<td><strong>Fume Cupboard Maintenance</strong></td>
<td>Fume Cupboard Emissions</td>
<td>M</td>
</tr>
<tr>
<td><strong>Glass Roofs</strong></td>
<td>Falling near or through skylight</td>
<td>H</td>
</tr>
<tr>
<td><strong>Antenna Maintenance</strong> Falling and Refer to SWMS of contractor</td>
<td>H</td>
<td>Anchor Points Installed</td>
</tr>
<tr>
<td><strong>General</strong> Trip Hazard - Roof Sheeting</td>
<td>M</td>
<td>Safe Work Procedure</td>
</tr>
<tr>
<td><strong>General</strong> Trip Hazard - Horizontal Lifeline or Anchor Points</td>
<td>M</td>
<td>Signage &amp; System is visible</td>
</tr>
<tr>
<td><strong>General</strong> Weather Trips/Slips - Wet Roofs</td>
<td>H</td>
<td>Safe Work Procedure, do not work on wet roof</td>
</tr>
<tr>
<td><strong>General</strong> Weather - Windy Condition</td>
<td>H</td>
<td>Safe Work Procedure, do not work in high wind conditions</td>
</tr>
<tr>
<td><strong>General</strong> Weather - Hot Conditions</td>
<td>M</td>
<td>Thermal Comfort Guidelines</td>
</tr>
<tr>
<td><strong>General</strong> Climbing ladder</td>
<td>M</td>
<td>Maintain 3 points of contact; Signage; and Working at Heights Guidelines - Working from Ladders</td>
</tr>
<tr>
<td><strong>General</strong> Environmental Hazards - Spiders, Wasps, and other insects</td>
<td>M</td>
<td>Appropriate PPE and insect repellent and Pest control as required</td>
</tr>
</tbody>
</table>

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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 2243.8 - 2006 : Safety in Laboratories - Fume Cupboards
AS 2243.9 - 2009 : Safety in Laboratories - Recirculating Fume Cabinets
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 6 Roof Safety Assessment

A - location of access to roof
P - location of compliance plate
- Horizontal lifeline
- Safe Roof Work Area
Solar panels and fall restraint on northern side

View of atrium and landing

Stairs from plantroom up to roof

Ladder & landing & gate to Roof Access North

Interior view of skylight

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