IRATA Safety Bulletin, from the desk of IRATA Technical Co-ordinator

Observations on a rope access incident reported issued by the Australian Rope Access Association.

The intention of this document is to comment on only the facts as stated in the report.
The Association may wish to add to this Bulletin when further verifiable information is received.
GL= IRATA guidelines on the use of rope access method for industrial purposes
GR= general requirements for the certification of personnel engaged in industrial rope access methods

INCIDENT ANALYSIS	
Observations	**Recommended good practice by IRATA Guidelines & General Requirements**
5 level 1 technicians on site with no supervisor	GL 5.2 The work is properly managed and supervised by competent persons and the workers are regularly monitored to ensure they continue to work in a safe manner. Workers are thoroughly trained in accordance with IRATA requirements GL 7.1 Level 1:- a technician who is able to perform a limited range of rope access tasks under the supervision of a level 3. GL 12.3.1 One member of the work team must be qualified as an IRATA Level 3 supervisor
The communication system worked, but inadequate checking led to the accident.	GL 12 A risk assessment [JSA] and method statement describe job requirements. Pre-work briefing ['tool box talk'] includes adequate communication, exclusion zone below, special precautions such as deviations or rope protection etc.
Pre-work checking of equipment: - The rope should have been checked for damage prior to, or at very least as it was fed over the edge. Mid-rope knots pose extra problems in rescue situations and should be avoided if possible.	GL 12.3.2.2 At the beginning of each working day and at other times as appropriate (e.g. when the suspension equipment is relocated during the day), the supervisor should visually check that all the anchors and ropes (wire and textile) and structures and packings used to support them are satisfactory. .
No check that ropes reached the bottom. This was the single most crucial failing; if this had been done the incident would not have occurred.	GL 12.7 No mention of exclusion zone at the bottom, into an apparently public area. GL 12.3.1.3 A ground person could at least check the rope reached bottom, without excessive slack becoming snagged.
A crane lifting sling was used for the deviation. The dimensions were not given, but likely to be of high strength, though the strength of the steelwork anchor also needs to be considered	GL 12.3.3.8 Wide deviations including an angle of over 120 degrees cause a multiplication of the load on both deviation sling and anchor. GR mentions consequence of failure and possible double anchorage may be appropriate.

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The rope protector moving with the rope and getting jammed in the deviation karabiner was a major factor in the incident. Attaching a rope protector to the structure is usually better than to the rope. If it was tied to the structure it may have stayed in place on the sunshade. The sunshade edge was close enough to have the protector attached within hand reach from the parapet.	Rope protector attached by a knot to the rope, rather than to the structure.
No supervisor with visual check of whole system top to bottom. “The section from the sunshade to the second diverting karabiner was missed, hence the slack rope in the system”	GL 12.3.2.2 as above, when the suspension equipment is relocated during the day; the supervisor should visually check that all anchors and ropes are satisfactory.
When the rope was lowered, the operators rigging appear not to have looked over the parapet to see that the ropes were running over the unprotected edge on the sunshade. This suggests inexperience of basic rigging checks, or supervision. If the missing protector had been noticed, it could have alerted them to the problem below. If this incident had not happened, perhaps there could have been another incident with the rope being cut on the sunshade edge.	GL 12.3.3.3 Ropes should be rigged so as to avoid running over sharp edges, particularly of steelwork, stone, concrete or masonry, or hot surfaces. Where this cannot be done, the rope should be suitably protected. This should ensure that the radius of any bend is at least twice the diameter of the rope. Such precautions could include the use of packings, rollers or other types of rope protector. If the rope was to be lowered with a rope protector attached by a knot, the protector would no longer be protecting the rope as it went over edge of the sunshade. The report mentions that the protector could have been attached to the structure, so that a lowered rope could pass through.
Getting off mid-descent, allowing a rope to be lowered causes potential problems getting on again, as the previously unloaded rope stretches. It is possible for the tech to drop several metres, unless the rope can be tensioned as he gets on. This is difficult unless there is a suitable anchor on the ledge for the tech to attach to. If operator A had been attached to an anchor on the ledge as he loaded the rope with his body weight rather than just pulling by hand, the rope may have un-jammed safely	

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