Environment, Health & Safety

LESSONS LEARNED

Incident ID	AUST.CI.BUI.NSW.2.2.POTENTIAL.060624.00183663	Incident Date	07/06/2024
Incident Circumstance	Fall of Materials – Façade Glass Stitch Plate	Workplace Activity	Façade Installation
Operation	Martin Place Metro – North Tower	Issued By	Andrew Hereth

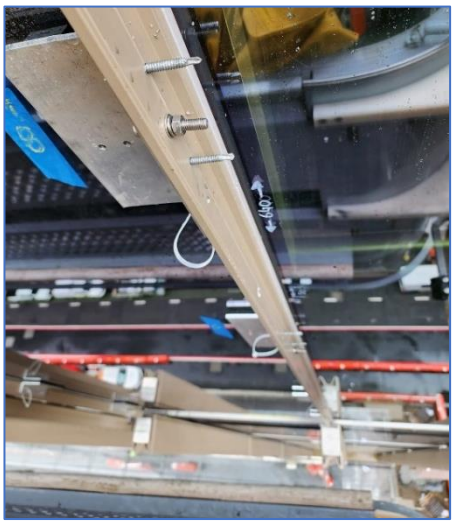
Description of Incident

On the morning of the 7th of June 2024, a temporary façade stitch plate dislodged from its mechanical fixing and fell from level 7 to the street below.

The stitch plates are used to temporarily secure the replaced glass façade panel in place until the permanent structural sealant has cured. The stitch plates were installed approximately 8 days prior to the event, with no works being undertaken on the facade at the time of the event.

The incident investigation identified that pilot holes should have been drilled through the 8 mm aluminium mullion fin extension and it was unclear if this requirement was implemented during installation. It was found that the screws sheared at the head post installation and the most likely cause was over-torquing of the screws when affixing the stitch plate. This could have occurred due to lack of an adequate sized pilot hole, over-torquing the screw fixing, or a combination of both.

Splice Plate to secure glass panel



M8 Bolt fixing installed as a secondary measure

Key Learnings

Design & installation procedures for temporary façade fixings must consider:

- The capacity of each stitch plate,
- The tethering of stitch plates during installation and removal,
- The restraint or tethering of the fixing types and tools themselves,
- The type of fixings used and specific considerations including:
  - The capacity of the fixings in relation to the design,
  - The thickness of materials of the stitch plate and the thickness of the façade elements,
  - The engineering review to determine if pilot holes are required,
  - The potential impacts/risk of the fixings if they are over-torqued,
  - Where unique elements are included in the temporary design, the suitability of the typical fixing detail should be reviewed, and
  - Use of bolts for unique and specific circumstance should be considered, including tethering controls for loose components.

GMR Reference

GMR 4.2 – Fall of Materials
GMR 4.17 – Failure of fixings or fittings

Date of Issue – 28/06/2024