



Upgrading Ageing Roof Gentries on a Major Regional Shopping Centre

Charlestown Square on Pearson Street in Charlestown, NSW is one of the Hunter region's largest shopping centres, owned by GPT. Running east to west through the centre of the building is a vaulted roof with two sets of glazed elements on either side of the peak, requiring regular access for cleaning and maintenance.

The Challenge: Bringing Ageing Gentries Up to Current Standards

When GPT engaged Vertimax, the existing roof gantry system had fallen short of current safety standards and was no longer fit for purpose.

The centre's vaulted roof is served by a pair of gentries, one operating to the north of the roof peak and the other to the south. Both had been retrofitted with battery-operated long travel systems at some point in their operational life, but a number of issues had accumulated over time.

- **Limited access points:** Operators could only get on and off the gentries at a small number of fixed locations, creating problems for day-to-day operation and emergency rescue procedures.
- **Non-compliant glass access:** The existing setup no longer met current standards and best practice for working at height to access the glazed roof elements.
- **No glass replacement capability:** The gentries had no provision for glass change activities, limiting what building maintenance teams could carry out from the roof.
- **Ageing and non functioning electrical and mechanical systems:** The existing electrical and travel drive systems were non functioning and not fit for purpose on either gantry, requiring a complete strip-out and replacement to meet current requirements.

The Vertimax Solution: Factory Refurbishment and Full System Upgrade

Early in the project, a detailed inspection uncovered structural design flaws in the original gentries that could not be safely or practically rectified with the equipment still on the roof. Vertimax made the decision to crane both gentries off the roof and transport them to our Melbourne factory for the upgrade works. Once there, each gantry was stripped back to its main structural members, cleaned, and inspected before the rebuild began.

All mechanical and electrical upgrades were designed in-house by our engineering teams and carried out by our own fabrication, fitting, and electrical trades. New powered long travel drives with variable frequency drives replaced the battery-operated system. New access platforms and stairs were installed throughout, along with a complete electrical overhaul covering powered reelers, new control stations, emergency stops at multiple locations, onboard power outlets, and adjustable task lighting. Each gantry was also fitted with two glass handling systems, one for glass replacement within the gantry footprint and one for outboard replacement. New power outlets were installed along both sides of the roof, with the building's power system work carried out by a subcontractor with specific experience in the centre's electrical infrastructure.

To provide safe access to the roof while the main gentries were removed, Vertimax designed, factory-tested, and installed specialist temporary rolling gentries for the duration of works. The rail system on the roof was also surveyed, straightened, and partially refurbished as part of the scope. Both gentries were fully load- and function-tested in the factory before being craned back onto the roof for final commissioning.

The Result: Two Fully Upgraded Gentries, Built and Tested In-House

Charlestown Square now has two gentries rebuilt to current safety standards, with compliant working at height access, full glass replacement capability, and a modernised electrical system throughout.

By completing the design, fabrication, installation, and testing under one roof, Vertimax was able to deliver both units to a known standard before they returned to site. GPT has a roof access system that is safe to operate, code-compliant, and capable of handling glass replacement work for the years ahead.