



POST TENSIONING &
STRUCTURAL SOLUTIONS



DATA SHEET

Contract Number:
B25-019

Ultimate Heliport Phase 2

Building

PROJECT OVERVIEW

- **Client:** Ultimate Heliport (Pty) Ltd
- **Main Contractor:** JC van der Linde & Venter Projects
- **Project Engineers:** Pure Consulting (Pty) Ltd
- **Specialist Subcontractor:** Post Tensioning & Structural Solutions (PTS-S).

Ultimate Heliport Phase 2 is designed to accommodate up to 40 helicopters and will serve as a base for a wider range of comprehensive aviation services in Johannesburg. Located near the Mall of Africa and adjacent to the N1 Highway, this phase expands the existing facility with additional hangars and state-of-the-art flight simulators. It is also the first purpose-built heliport for helicopters in South Africa.

The structure comprises four office levels of reinforced concrete post-tensioned slabs, together with a new helipad level formed by a suspended reinforced concrete post-tensioned slab. The helipad level is supported and strengthened by a series of reinforced concrete post-tensioned beams.

PTS-S SCOPE

Design, supply, and install the post-tensioning (PT) systems for the project using a bonded multi-strand flat slab PT system for the four office levels, together with a combination of bonded multi-strand flat slab post-tensioning for the helipad/hangar slab and bonded multi-strand civil PT systems incorporated within the supporting beams. This integrated solution delivered the structural capacity and performance required to accommodate the significant loading demands of the helipad and hangar while maintaining an efficient structural design.

A bonded PT system is grouted after stressing, fully bonding each tendon along its length to provide individual corrosion protection and long-term durability. Loads are transferred through the bond rather than relying solely on end anchorages, improving structural redundancy so that localized damage to a single strand does not compromise the entire tendon. Bonded PT also enhances crack control and post-cracking performance, enabling thinner slabs, longer spans with fewer columns, and reduced concrete and reinforcement quantities, resulting in greater structural efficiency and cost savings.

PROJECT TIMELINE

- Construction Start: September 2025
- Completion: January 2026

