

Gatwick Pier 3 Bearing Replacement

CLIENT: Morgan Sindall Infrastructure

LOCATION: UK

YEAR OF COMPLETION: Ongoing

The Pier 3 Passenger Link Bridges were built in 2003/04 and comprise three steel bridge structures between the South Terminal and satellite core supported by two intermediate towers. Each span is 57m long and carries two levels of access walkways to/from the aircraft stands at the Satellite Core from the main South Terminal building. The link bridges are each supported by two steel circular hollow section catenaries on either side of the bridge, at 8.86 m centres, spanning between the core structures.

The elastomeric bearings supporting each of the link bridges had deteriorated and needed to be replaced however no temporary jacking points had been incorporated into the original design. We developed a design for the bearing replacement involving the installation of additional permanent jacking plates at each bearing location.

As part of this commission, we undertook a full global analysis of the link bridges and intermediate towers in order to derive the temporary jacking loads that needed to be catered for during the bearing replacement. We also prepared temporary works design for temporary ramps and compression member bracing.

KEY FACTS:

- Bearing replacement scheme
- New permanent jacking points
- Derivation of jacking loads

