



Glasgow Central Interlocking Renewal

Project

Glasgow Central
Interlocking Renewal

Client

Transport Scotland

Location

Glasgow, UK

Start Date

2003

End Date

2009

Duration

72 months

Contract Value

£74m

Services Provided

Signalling, train control and
telecoms, feasibility design,
programme management

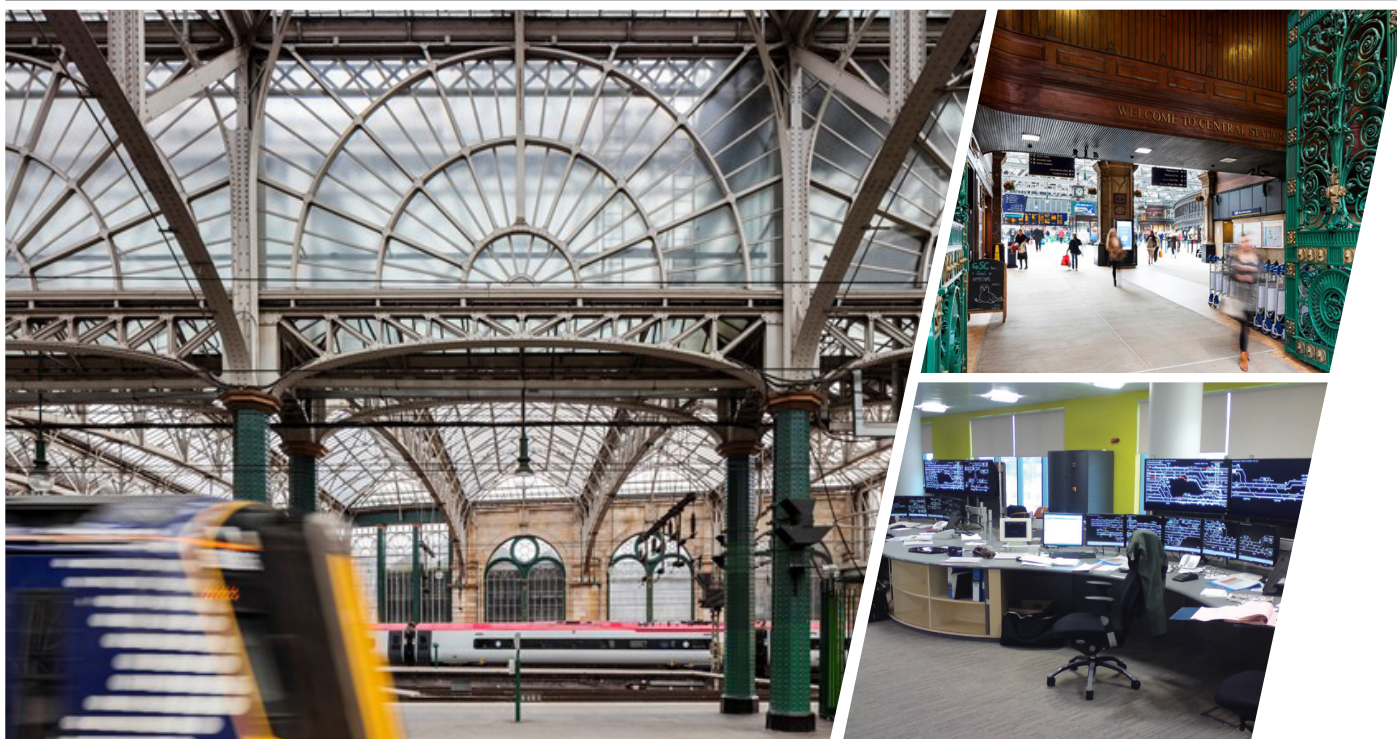
Background

Glasgow Central is the busiest station in Scotland. Its track layout makes very good use of the cramped approaches, allowing access from any one of the eight running lines to or from any of the 14 platforms.

To maximise capacity at busy periods, trains are routinely terminated and turned round one behind the other at the same platform, calling for smart timetabling – and even smarter operation on the part of signallers.

The Glasgow Central power box was opened at the beginning of 1961, originally with a Westinghouse One Control Switch (OCS) panel. In the early 1970s, this was replaced with a GEC Entrance-Exit (NX) panel when the control area was extended as part of the West Coast electrification to Scotland. The original Westinghouse interlocking was retained. Therefore, this signalling equipment was approaching the end of its working life.

The entire Glasgow Central route relay interlocking, together with that at Cook Street, was replaced with two new WESTLOCK® Interlockings. They were housed and controlled within the new West of Scotland Signalling Centre (WSSC) which was built to accommodate this and future re-signalling projects.



Scope of Works

The scope of the works on this renewal included:

- ▶ replacing the signal interlocking system at Glasgow Central and Cook Street with WESTLOCK® interlockings (renewal of 289 Signalling Equivalent Units (SEU's))
- ▶ providing a GE Modular Control System (MCS) Visual Display Unit (VDU) Signalling Control System (VSCS) at WSSC
- ▶ recontrolling an additional 482 SEUs onto the VSCS controlled from 8 existing relay rooms
- ▶ renewing lineside signalling and telecoms equipment and associated structures where appropriate in the renewed interlocking area
- ▶ installing telecommunications transmission systems, voice recorders, a new telephone concentrator and Global System for Mobile communications – Railways (GSM-R)
- ▶ removing central carriage sidings 4 & 5 and providing stairway and lift to track level via assigned archway to facilitate inspection and maintenance
- ▶ upgrading the east end of the Smithy Lye through line to passenger status
- ▶ upgrading low voltage power distribution and various plant systems to accommodate the new signalling system
- ▶ providing suitable green zone access at Clyde Place/Bridge Street/Eglinton Street.

Key Project Outputs

The key outputs of the project were:

- ▶ renewing the signalling system with a modern, economical, flexible and expandable solution that facilitates known growth plans
- ▶ providing a control system capable of enabling the future migration of Paisley, Cathcart and Motherwell control areas
- ▶ providing infrastructure that can be readily and easily maintained within the standard maintenance regime.