



Tottenham Court Road Station Upgrade London Underground, Ltd.

Location: London, United Kingdom

Date: 2008 – 2011

Structure: Concourse Tunnel, Cross Passages,
Escape Tunnels, Stub Tunnels
Interchange Tunnel

Length: Concourse Tunnel: 34.5 feet
(10.5 meters) Wide, 35.5 feet
(10.8 meters) High; Cross
Passages
16.5 feet (5 meters) Wide, 20
feet (6 meters) High

Cross-Section: Escape Tunnels: 16.5 – 20 feet
(5 – 6.5 meters) Wide, 19 – 20 feet
(5.8 – 6 meters) High

Geology: Fill, Terrace Gravels, London Clay
Lambeth Group

Cost: Estimated US \$176 Million

Client: Halcrow Group Limited

Owner: London Underground, Ltd. (LUL)



Figure 1. Excavation and Primary Lining completed for new Central Line over-bridge. (Courtesy of London Underground Ltd.)

Independent Category 3 Design Check of SCL / NATM Tunnels:

The Tottenham Court Road Station is being upgraded to increase capacity so as to better accommodate current and future commuter needs. At the same time, the upgrade will minimize passenger journey time and improve the quality of access within the station. The upgrade will include a new concourse tunnel, escape tunnels, cross passages, interchange tunnel, and connector stub tunnels.

Gall Zeidler Consultants (GZ) performed a Category 3 Independent Design Check of the Sprayed Concrete Lining / New Austrian Tunneling Method (SCL / NATM) for the project. The check included evaluating the geotechnical conditions and design parameters, construction sequences, excavation and support details, construction details, numerical analyses, waterproofing details, monitoring proposals and a review of the designer's hazard and risk assessments.



Figure 2. Interior of Tottenham Court Road Station.