

## Western Rail Link to Heathrow Network Rail

**Location:** London, UK

**Date:** 2019 - ongoing

**Structure:** New railway line - TBM / SCL / Cut & Cover tunnels, shafts, cross passages, adits and retained cut.

**Length:** 6.5 km

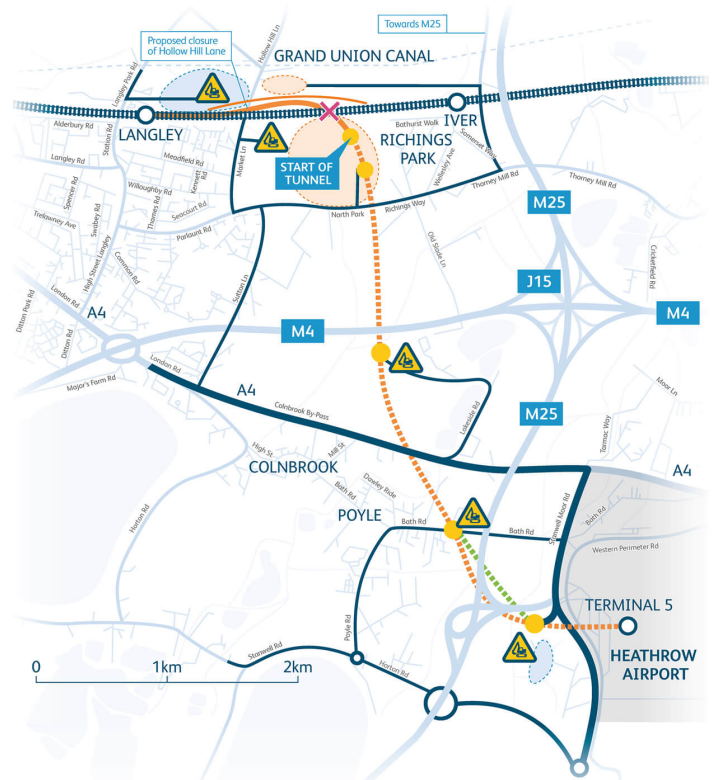
**Cross-Section:** Tunnels - TBM (6.5m ID), SCL (6.8m ID), C&C (10-28m wide by 7.2-8.7m high)

**Geology:** Superficial deposits of 5-10m thick, underlain by Tertiary sediments (London Clay and Lambeth Group) of 40-50m thick. TBM / SCL tunnels are wholly constructed in heavily overconsolidated London Clay.

**Cost:** Est. £ 900m

**Client:** Network Rail

**Owner:** Network Rail



### KEY TO PROPOSALS

- RAIL EXTENSION
- ▭ TUNNEL
- NEW LINES ON EMBANKMENT
- ▭ POTENTIAL CHANGE TO PATH OF TUNNEL
- ▭ ACCESS ROUTES TO COMPOUNDS
- ACCESS BUILDING
- ▭ MAIN COMPOUNDS
- ⚠ SMALLER SITE COMPOUNDS (Indicative only)
- ▭ FLOOD STORAGE AREA
- ✕ NEW RAILWAY INTERSECTION BRIDGE
- ▭ EXISTING HEATHROW BOUNDARY
- EXISTING STATION

Figure 1. Proposed Route Alignment.

### Consultancy Services for Tunnels and Underground Structures to Network Rail:

The Western Rail Link to Heathrow is a new two-track rail line from Langley Station on the Great Western Main Line to an end-on connection with the existing Heathrow Express line at the west end of Heathrow Terminal 5 Station. The structures along the route include retained cut (400m), C&C tunnel (500m), twin bored TBM tunnel (4km) and two temporary shafts that will be used to recover the TBMs. The final 160m-long section of the tunnel will be an open face excavation with SCL which connects into existing stub tunnels at Heathrow Terminal 5 Station. Within the alignment of the bored tunnels two intervention/ventilation shafts, eight cross passages and four ventilation adits will also be constructed. The TBM tunnels pass beneath the M4 and M25 Motorways. The proposed line-speed is 75 mph.

The scope of consultancy services of Gall Zeidler Consultants (GZ) to Network Rail comprises of review of the Approval-in-Principle design, producing contract requirements for tunnels and underground structures, pre-qualification/tender assessment and development of Geotechnical Baseline Report to assist their project procurement process.