

MSCPW at Heathrow – Multi storey Car Park

Heathrow, LONDON - UK

Monitoring of the existing station platforms, during the piling works for the new western multi storey car park at Heathrow

As part of the continuing extension and development work at Heathrow Airport, a new multi-storey car park has been constructed above the existing CTA building and the Heathrow express platforms at terminal 3. This involved an extensive system of piles installed around the station platform and running tunnels.

Following the successful completion of the T5 monitoring scheme, SolData were appointed to carry out the installation and monitoring to the Heathrow Express station and concourse at terminal 3

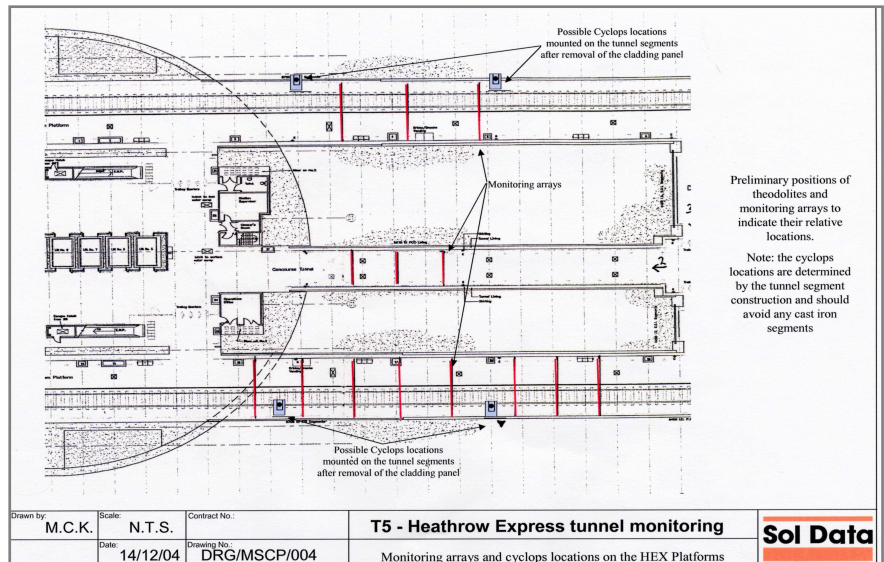
A comprehensive monitoring system including two Cyclops and 140 prisms monitored in real-time at specific monitoring arrays along the station platforms and both tracks. These real-time movements were monitored and recorded on the Geoscope software.

Both of these instruments were driven by a computer installed in the baggage area and linked to the instruments by a data cable running along the tunnel lining.

Another computer was installed in the contractor's control room and linked to the baggage area computer via a modem. This allowed the monitoring engineer and contractor to assess and review movements of the tunnel in real-time.

A remote alarm system was installed within the Heathrow Express control room and linked to the monitoring engineer's PC via a phone line. This alarm system would activate a flashing warning light if triggers were breached, allowing the control room staff to stop train movements immediately to ensure passenger safety.

As well as monitoring the structural movements and displacements of the tunnel, the Geoscope software also calculated thousands of rail specific movements such as cant, twist and longitudinal deformation.



OWNER :	BAA – NETWORK RAIL
CONSULTANT :	MOTT MACDONALD LTD
PROJECT DURATION :	JAN 2005 – MAY 2006
SCOPE OF WORKS :	
<ul style="list-style-type: none"> • Installation of 2 Automated Cyclops with 140 PRISMS. • 32 levelling studs. • Real-time monitoring, alarms and reporting. • Calculation of structural movements and rail specific movements; cant, twist, longitudinal deformation etc... 	