Phase 2 of the £3.3Bn Channel Tunnel Rail Link program incorporates extensive tunneling under existing infrastructure in London. Nuttall, Wayss, Freytag and Kier JV who are the main contractor on CTRL250 subcontracted Mabey Support Systems and Test Consult to monitor an area near Dagenham and Barking in East London.

This particular project focused upon the impact of two 7.2m diameter tunnels that were to be bored under a section of rail, and under an associated bridge and ramp down to a major freight terminus. A predicted 60mm to 65mm of movement was to be measured and fed back to a control system operating hydraulic jacks. As a result of any detected movement the pressure in the jacks was to be increased automatically to maintain the height of the bridge and ramp.

GeoMoS was installed to operate the Leica TCA2003 instruments and to provide the detected movement from each prism. An SQL query was generated every five minutes, twenty-four hours a day for a period of 5 months to generate the required information for the jacking system.

SMS messaging was used to inform the operators of any excessive movement and data was published to a website for general viewing.