



CROSSRAIL C305 EASTERN RUNNING TUNNELS

THE PROJECT

CET were commissioned by Dragados-Sisk to provide on-site materials testing support for the Crossrail project. The Eastern Running Tunnel contract (C305) comprised the construction of three twin-bore tunnels drives, using tunnel boring machines (TBM), associated launch shafts and one of the largest mined caverns in Europe; all beneath the busy streets of London.

The contract included the use of a spray concrete lining for the cavern and the manufacture of pre-cast concrete tunnel segments at a plant in Kent.

Dragados-Sisk Joint Venture (DSJV) originally awarded the sub-contract to CET in May 2012. The contract to sample and test the TBM grout, concrete and associated aggregates was extended to include sampling and testing of TBM arisings to establish flow moisture point values and the testing and sampling of groundwater to determine chemical properties.

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CET'S APPROACH

CET infrastructure established a UKAS accredited laboratory on-site at DSJV's Limmo Peninsula in London and another at the concrete segment factory in Kent.

A dedicated team of technicians delivered all in-situ and laboratory testing from these facilities; providing geo-technical services 24 hours a day, 7 days a week.

On-site facilities included:

- Concrete coring and sawing
- Compressive and tensile strength testing
- Rapid FMP testing
- Grout compliance testing
- On-site reporting and analysis

In addition to our UKAS testing accreditation, we hold key ISO certificates for every aspect of our business. Our quality accreditations include ISO9001, 14001, 18001 and 27001.

We are a member of the British Safety Council and hold accreditations from SafeContractor, CHAS, Constructionline and Link-Up.

KEY BENEFITS

Being able to provide accredited materials testing services in-situ has yielded significant benefits over the two year duration of the contract.

DSJV have been able to make informed, time-critical decisions thanks to the rapid turnaround of tests – including IMSBC classification of tunnel arisings and early movement of test panels.

Confidence in the quality and accuracy of the test data came from a continuity of engineering staff and our adherence to UKAS accredited procedures.

Early identification of unexpected site conditions and the provision of accurate test data and expert, interpretive advice helped to reduce project delays.

“CET has provided a very professional, reliable and flexible testing service that has enabled us to progress confidently with our works. Their approach has allowed us to adapt quickly to programme changes and prevailing site conditions.”

Mark Aldman, DSJV Materials Engineer