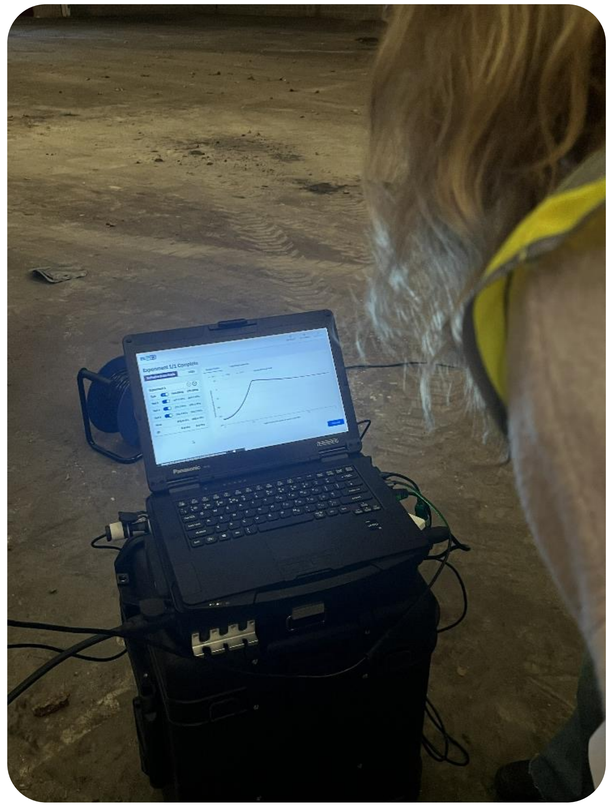
STEEL TESTING INNOVATION

UK2026

Unlocking steel reuse through rapid, non-destructive testing to reduced embodied carbon.

Sandberg Technician operating the PLX Indenter on site.



WSP Engineer reviewing live stress strain results on site.

- WSP collaborated with Plastometrex to trial the PLX-Portable system, enabling **rapid, non-destructive verification of structural steel properties** to unlock reuse.

- Demonstrated on live WSP projects including a historic refurbishment and a SEGRO warehouse, **the technology**, which was operated by Sandberg technicians, provided **accurate, in-situ grade confirmation** comparable to traditional methods **without damaging members**.

  Results are **available immediately** after testing.

- By removing a critical barrier to reuse, uncertainty in material properties, the project supports circular construction, accelerates decision-making and enables significant embodied carbon savings.

The PLX-Portable system uses **Profilometry-Based Indentation Plastometry (PIP)** to drive reliable stress-strain information from a small surface indentation.

Indenter

This module houses and controls the indenter head, recording both the applied load and measured displacement. It creates up to 5 evenly spaced indents on a surface, enabling users to gather comprehensive material data.

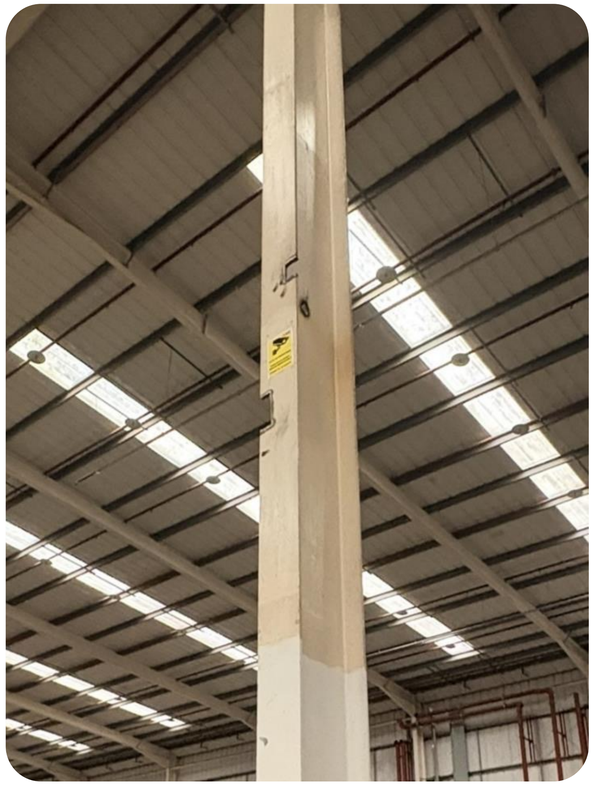
Optical Scan

Utilising red-light interferometry, the optical profilometer device captures the full 3D profile of residual indents, providing fast and accurate measurements.

Software

The bespoke software connects directly to the testing equipment. This software guides users through test procedures, ensures data robustness, and stores all test results locally.

Indents made by PLX Portable on site.



Traditional tensile testing coupons extracted.