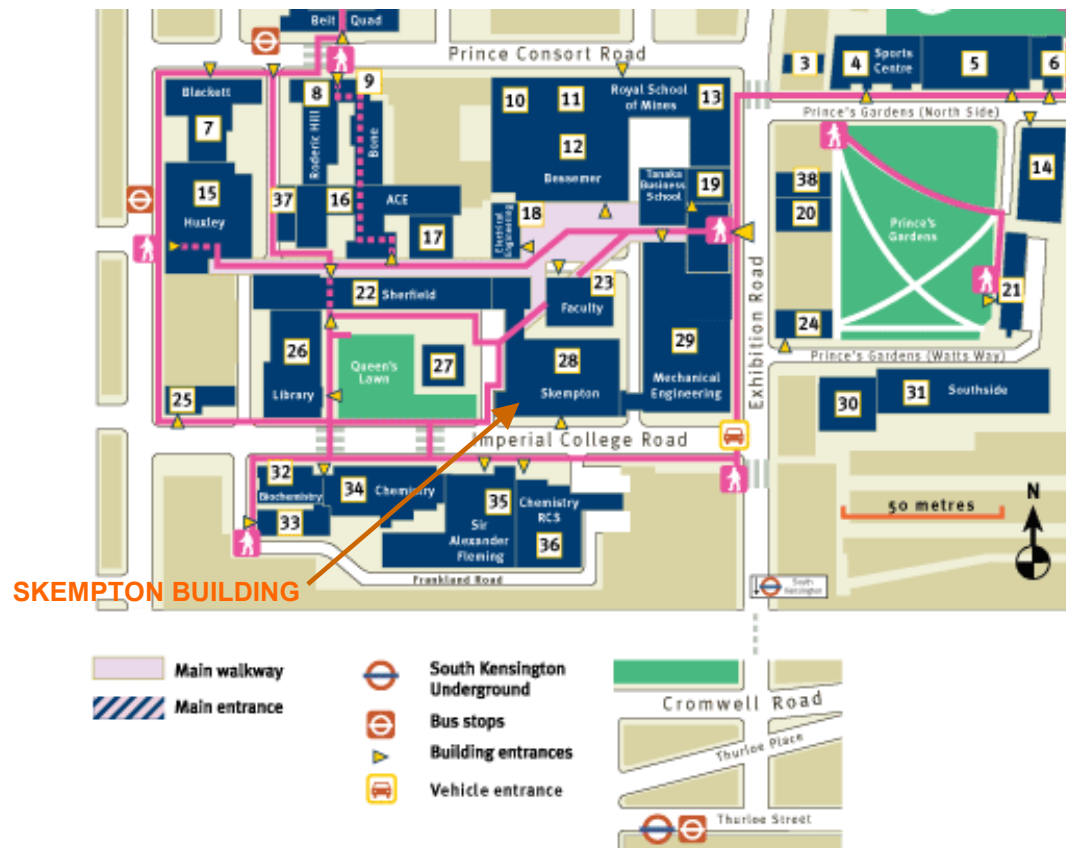


Department of Civil & Environmental Engineering

The Department is recognised worldwide as a leading provider of education at undergraduate and postgraduate levels, and as an international centre of excellence in research. We are based in South Kensington, a prime location in the centre of London, with easy access to libraries, museums, the Professional Institutions, Westminster, airports and railway stations.



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Structures Laboratories Department of Civil & Environmental Engineering



The recently refurbished laboratories of the Structures group boasts new state-of-the-art test facilities and equipment

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Formwork preparation and casting



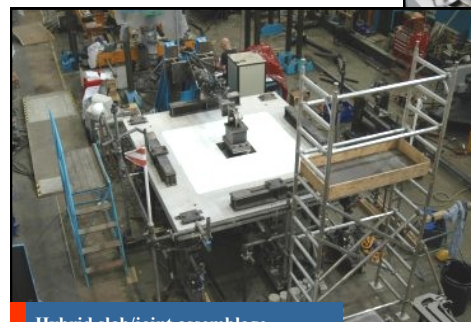
Elliptical hollow section tests

Our new Structures Testing Lab includes a recent £14 M investment in infrastructure and equipment to provide a prestigious facility in the UK university sector for research into engineering structures.

- £1.9 M investment in new servo-hydraulic test equipment including static, dynamic and impact loading with high speed capabilities.
- Controlled concrete preparation, casting and curing facility.
- New workshop area and equipment.

Structural Lab testing facilities:

- Controlled-rate uniaxial load testing up to 10MN.
- Bi-axial testing of material and structural specimens.
- High rate uniaxial testing of material and structural specimens by impact and rapid hydraulic systems.
- Controlled cylindrical triaxial testing of materials at up to 700 MPa radial stress.
- Cyclic/fatigue testing of large and small scale components.
- Material creep testing.
- Fixing technology for concrete and masonry structures.
- A range of instrumentation and data acquisition systems.
- Manufacture and testing of material and structural specimens, including beams, column, slabs, connections and test frames.
- Controlled environmental specimen conditioning.



Hybrid slab/joint assemblage

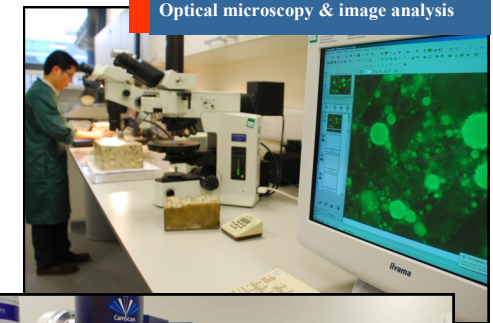


Elevated temperature test in a rig



Mechanical and formwork preparation areas

Concrete Durability Group labs house state-of-the-art facilities for investigating all aspects of concrete degradation. Research aims to develop more effective methods for the design, life assessment and repair of concrete structures and is usually based on establishing a better understanding of deterioration processes.



Optical microscopy & image analysis



Scanning electron microscopy & X-ray microanalysis

Concrete Durability Group capabilities include:

- Simulated/accelerated environmental exposure.
- Assessment/monitoring of corrosion and concrete deterioration.
- Measurement of the pore structure and mass transport properties of concrete.
- Advanced micro-structural imaging including optical microscopy, fluorescence microscopy, scanning electron microscopy and laser confocal microscopy and expertise in image analysis and 3D visualisation.
- Compositional analysis of cement and concrete using energy dispersive X-ray spectrometry and micro X-ray fluorescence spectrometry.
- Computer-based modelling of transport and deterioration.