

Jon Knights Materials Consulting Ltd

Materials technology services for civil engineering and construction



Introduction

A vital step in the design and construction of any structure, or the repair and rehabilitation of existing structures, is the selection, specification and application of appropriate materials, taking into account its intended use, the environment in which it is situated and the expected service life.



To do this requires an understanding of both the process of using the materials, and their behaviour during construction and through the life of the structure.

Control of these factors influences the performance of the materials employed and the way they are incorporated into the design and construction process, which ultimately affects the 'in-service' performance of the structure itself.

About

Jon Knights is an independent consultant with 20 years specialist knowledge and experience of the requirements and behaviour of materials in the built environment, with particular specialism in concrete and materials technology.



Jon has extensive expertise in all areas of concrete technology, specialising in the following aspects of concrete technology, applied to major projects in the UK and overseas:

- *Mix design and development, testing and specification of concrete, materials and workmanship*
- *Construction quality assurance and supervision*
- *Concrete production / construction advisory services*
- *Durability design strategies*
- *Assessment and design of control for early age thermal cracking*
- *Condition assessment of RC structures: diagnosis, repair, leak sealing and waterproofing, residual life and asset management strategies*
- *Forensic engineering investigation and expert witness services*

Application

This expertise is a differentiator in projects, and the specialist skills offered can often benefit your project technically, save costs early on in project design and development, in the long-term and mitigate further cost over-runs for existing commissions, summarised by the following:

- **key technical inputs on projects** - materials technology advice, durability design and protection, early thermal assessment, specification, materials selection, CQA
- where a **technical edge** is necessary, for example, for bid purposes - tender designs; - understanding durability design, construction methods and buildability of concrete structures
- **concrete construction advisory and investigation** - concrete technology advice, construction process, condition survey, waterproofing and repair, forensic investigation
- **training** - basic to advanced level concrete and materials technology courses: short course, lunchtime seminars, full or part days, delivered at your office locations



Contact

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Add value to your projects.