

# Research update

**Mott MacDonald leads a Partners in Innovation research project aimed at enhancing whole life performance of car parks**

**Ashley Johnson of Mott MacDonald and member of the Institution's Research Panel writes:**

**Park Life**

A Partners in Innovation (PII) research project entitled 'Enhancement of whole-life performance of existing and future car parks' was awarded to Mott MacDonald in January 2001. Funding from the Department of the Environment, Transport and the Regions (DETR) will be matched by Industry with support from Institutions.

The project aims to address the relatively poor performance and premature deterioration of some multi-storey car parks in the UK. The topic led to questions in Parliament on the issue and recent incidents involving cars demolishing edge barriers – an 'automatic' car plunged four storeys from a multi-storey car park on 22 November 2000.

Concerns about the safety of car parks expressed by the Standing Committee on

Structural Safety (SCOSS) and the failure at Pipers Row in 1997, have highlighted the need for improved guidance on the inspection and repair of existing structures. Improvements are also needed to give better whole life cycle costs and sustainability in new construction and maintenance of the existing car park stock.

In response to these concerns the Institution of Structural Engineers (IStructE) has relaunched its Task Group on Car Parks to revise the 1984 edition of 'Design recommendations for multi-storey and underground car parks'. The Institution of Civil Engineers (ICE) has set up a National Steering Committee on the inspection of multi-storey car parks in order to provide guidance to operators of existing car parks and to engineers and contractors who undertake work on them.

The aims of the PII project are to provide rig-

orous analysis of car park performance and to inform the development of guidance by the IStructE and ICE. Current best practice will be reviewed based on the wealth of experience of the project partners. The potential for improved whole life performance from innovative technology in materials, design and construction practice will also be investigated based on international research and commercial innovation world-wide. The project will also produce more specific information on the detailed application of the principles to be set out in the guidance documents. This will be published to make it more widely available to the car park industry, probably through the Building Research Establishment (BRE), the British Car Parking Association and others concerned with repair and maintenance.

The research project will be undertaken in close collaboration with a steering committee comprising car park owners, operators, engineers and contractors. If you have information to offer on the performance of car parks contact the PII Project Director, Ashley Johnson: (email: raj@mm-croy.mottmac.com or Berenice Chan at the Institution: chan@istructe.org.uk).

The revision to design recommendations for multi-storey and underground car parks which will incorporate preliminary findings from the PII project is due to be published late 2001 or early 2002.

## The Institution of Structural Engineers



**REPORT**

### **Subsidence of low-rise buildings (2nd edition)**

Originally published in March 1994, the 1st edition of this guide has been the authoritative reference on the subject, and has led to many improvements in the way claims are handled, both procedurally and technically. The 2nd edition is being published to reflect current procedures and contains more comprehensive advice on tree management.

While primarily aimed at Structural Engineers, the Guide is written for a wide readership including Mortgage Lenders, Consulting Engineers, Property Valuers, Insurers, Builders, Solicitors, Surveyors, Loss Adjusters, Local Authorities and property owners.

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