



# CLEGG IMPACT SOIL TESTER

*(The Clegg Hammer)*

*Newsletter*

No. 17

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## THE SECOND DECADE

This newsletter is to briefly highlight some of the things that have been happening in addition to road, earthworks and trench reinstatement testing in the second decade since the first paper on the Clegg Impact Soil Tester was presented by Dr Clegg at the 8th ARRB Conference in Perth, Western Australia in 1976.

### A.S. DRAFT STANDARD:

Further to ASTM approval in 1995 (D 5874), our submission for an AS standard on Impact Value is under review by their CE/9 subcommittee. The latest draft is on the agenda for April 1997. If it meets approval at that meeting the next steps are a public comment period and then back to the committee. If all goes well then the expected time-frame for publishing is next year.

### FLEXIBLE PAVEMENT EVALUATION:

A large Australian shire in New South Wales has recently conducted tests with the Heavy Hammer (20 kg) and Standard Hammer (4.5 kg) on over 30 streets in conjunction with a Falling Weight Deflectometer (FWD) device. This data was sent to us for evaluation. The data, along with some received from a consultant in Western Australia of a similar nature, is being analysed and will be presented in an upcoming Newsletter and, in more detail, in an upcoming Technical Note.

### BEARING PRESSURE:

Another identified possible area of use for Impact Value is that of bearing pressure for shallow foundations. There is a Technical Note in the works on this subject as well.

### AIRSTRIPS & LANDING ZONES:

We have received comments about use on unsealed airstrips by the Australian Air Force and also by shire councils and private companies. Apparently, the Australian Army has been using the Hammer in a similar manner and also for parachute drop zones!

### LAND SPEED RECORD ATTEMPT:

A report dated February 1994 stated that consultants for track preparation for the Aussie Invader Team's attempt on the world land speed record used various strength test techniques including the Clegg Hammer for evaluation of the salt lake bed location in Australia and then marked a centre line to guide the driver.

### TURF SURFACE HARDNESS:

Turf organisations in Australia and South East Asia have been testing with one or some combination of the three smaller Hammers (0.5, 2.25 and 4.5 kg models) following on from work by organisations in the UK, US and New Zealand on turf hardness (or firmness), especially in regard to participants' safety - including racehorses - and for testing of uniformity. Reports from the UK are that there are several draft standards regarding testing with the 0.5 kg "Light" Clegg Hammer on sports surfaces such as artificial bowling greens and soccer fields. A UK turf institute which uses the Hammer reported that the Clegg Impact Test and ball rebound resilience give more useful assessment of surface conditions than penetrometer measurements. Following on from the concept of turf hardness, a top golf greenskeeper in the UK was reported as saying that one of the key ways he checks his greens is by the firmness he feels underfoot. With this in mind, it seems that the 0.5 kilogram Clegg Hammer is an ideal instrument to use as the basis of a standard worldwide for checking firmness of golf greens. There are greenskeepers in several countries already utilising the test.

It is imagined that the above topics may or will become the subject of subsequent Newsletters and/or Technical Notes. To aid us in this regard, we would welcome any comment or information or references you may have or know about or other ideas or uses of the Clegg Impact Soil Tester. (Other thoughts so far for additional topics for Newsletters or Technical Notes: Specifications; Multi-layer Analysis, Playgrounds.)

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*These Newsletters report on activities in the field of soil impact testing and are designed to increase awareness, awaken interest and encourage discussion. Your contributions are most welcome.*

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