

“Only A Snapshot In Time” – The Importance Of Educating The Legal Profession On Skid Resistance Issues

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ABSTRACT

At the International Friction Conference of May 2005 in New Zealand, the author presented a paper on the expectations placed upon road authorities with respect to the management of skid resistance by those pursuing third party claims against the authority (ie. the Claimant/Plaintiff and their legal representatives).

The paper concluded that it was in the best interests of highway practitioners to make the effort to educate their legal representatives of both ‘sides’ and ultimately those in the courtroom (should proceedings not settle early and run their course) of the often complex issues surrounding a skid resistance related loss of control incident.

The author has seen nothing in the 3 (three) years since delivering his previous paper in New Zealand, that has convinced him that the legal profession in general has raised its level of understanding of skid resistance issues or that skid resistance related cases are decreasing rapidly in number. Therefore, he believes that there remains value in re-stating and reinforcing (including through recent case study) within this updated paper a number of the messages presented in May 2005.

1. INTRODUCTION

In May 2005, this author wrote [with reinforcement made by the author in 2008 in bold]:

*“Because of the complexity of, and interrelating concepts relating to, surfacing related incidents (eg. where it has been alleged that the skid resistance on a curve was inadequate and this caused an initial loss of control) the author considers that it is **unreasonable to assume that the public, media and legal profession will possess any knowledge of the key technical concepts and/or be able to readily grasp them.***

*Whilst the above could be seen to place the road authority ‘engineer’ in a position of strength, it can often be a problem if the ‘lay-person’ **mis- or over-interprets any available data** (such the results from say a recent SCRIM survey), leading to dispute, and ultimately to on-going suspicion between the parties bringing the action and the road authority.*

Accordingly, the author strongly recommends that the above be mitigated by:

- *adopting an **open approach** and **taking time to ‘educate’ the other parties** in the workings of the local strategy, e.g. providing **explanatory text** relating to why a specific location was not subject to routine skid resistance testing, and/or*
- *ensuring that any data or information supplied is **accompanied by unambiguous, explanatory notes showing how the data has been interpreted and used by the road authority. Notes on key concepts and issues can be prepared in advance** and retained as a standard resource for use as required. Development and provision of an accurate chronology of actions, decisions and communications should also be considered.”*

The author stands by the above text and believes that practitioners would also be well advised to refer legal professionals on both sides of an action to Austroads document AP-G83 (January 2005) – Guidelines In The Management Of Road Surface Skid Resistance, where Section 2 provides useful background into the limitations of skid resistance and surface texture measurement, viz:

“Limitations of Measurement

Despite the obvious advantages of measuring skid resistance and surface texture, the techniques and equipment used do have a number of generic limitations.

The first, and perhaps most important, of these limitations is that measurement of these characteristics can only provide a “snapshot in time” for a very specific

and limited location or position, i.e. the reading obtained relates to the particular position at which it was measured at the exact time it was measured, and the test equipment by which it was measured in its state of calibration at that time [emphasis in original document]”

This is a key concept to understand, as the temptation to the legal profession is to apply an ‘ageing’ result to a in-situ road surface at the time of an incident, or to retrospectively apply a recently obtained result to a road surface some considerable time in the past, often with significant implications.

Skid resistance results are nearly always presented as an average for a pre-set length (typically 10m or 100m) so as to allow the comparison of road sections for maintenance management purposes. Averages simply cannot be related to an exact spot or position on the road surface, despite the best efforts of certain members of the legal profession. It is similarly frequently forgotten that even when drilling down into the raw data behind an average cannot ensure that the test result is truly indicative of a precise point on the road surface.

The Austroads guide is consistent with the above, stating:

*“Despite the apparent technological complexity of the equipment used, much of the test equipment was originally only intended to be a tool for practitioners to allow **broad comparisons** [author’s emphasis] between lengths of road on a road authority network in any one year, or at a particular site over a number of years”*

The guide continues:

“With nearly all the pieces of test equipment used to measure skid resistance, correction factors (such as for road surface temperature, test speed) are applied to the raw data and, therefore, should be applied in an informed and disciplined manner.

Careful controls and defined test methods and procedures are essential for all tests and test equipment to minimise sensitivity to operator influence.....

Linking data to locations along a network can also be a source of error, e.g. failure to correctly flag a start point can misplace data by metres with considerable consequences, and therefore controls are required.

Relating the test results to actual road user experience may be difficult because many of the factors that influence the road user are deliberately controlled during standard test procedures. An example of this is the water depth placed on the surface during a skid resistance test. This is controlled during testing, but in real life depends upon rainfall intensity and the effectiveness of the carriageway surface drainage. Therefore, the standardised

measurement obtained does not necessarily provide a true indication of the range of road user experience encountered.....”

It is the author's experience that members of the legal profession can be apt to view skid resistance as a 'black and white' exact science, especially when seeing some of the modern, complex equipment used in action, often involving laser measurement for texture and the adoption of satellite GPS systems.

The author has detected a general misperception by the legal profession that the different types of skid resistance measurement equipment all measure the same characteristic, which, as practitioners know, is far from reality. Those within the legal profession that do grasp that the different pieces of equipment used actually measure slightly different characteristics and give different outputs, then tend to feel obliged for reasons largely misunderstood to try and adopt conversion or correlation formula to the data format they have, which often involves conversion of results available to those that might have come from a SCRIM machine, or as is often the case, those that might have resulted from Police friction testing techniques.

2. INTERVENTION OR INVESTIGATION ?

It is the author's experience that perhaps the most frequently encountered misconception in skid resistance-related cases is in the application of Investigatory Levels (ILs), which are often incorrectly viewed as being a 'black and white' indicator of the safety of road surface.

The author wrote in May 2005:

“Taking time to explain the correct application of ILs and a typical overall objective with respect to the management of skid resistance, viz. comparing sites across an entire network rather than trying to provide definitive values at highly specific locations on the network, has been found to be helpful in nipping misinterpretation in the bud”

Once again, the author has seen nothing in the last 3 (three) years to suggest that time spent educating the legal profession in this regard would be wasted time. The author has also found that such an education process is best done outside of the hostile environment of the courtroom, rather than during cross-examination. Indeed the author suggests that every minute spent productively on preparing good quality, well considered, explanatory notes in advance of legal proceedings is absolute 'gold' if it ultimately avoids, or cuts short the length of, time spent in cross examination.

Notwithstanding the above, the author does recognize the interest in some circles in the future development of Intervention Levels for skid resistance or alternatively, the development of Investigatory Level ranges for each site category. Future Austroads work in this area will be observed by the author with interest.

3. MAKING LIFE EASY ?

In his aforementioned paper, the author wrote:

“.....providing data and information promptly when it is requested.....ultimately demonstrates efficiency, consideration and discipline in data storage & archiving and, most importantly, a will to co-operate in the proceedings (“we have nothing to hide, be it good or bad”).....any perception of an obstructive or stubborn approach to the provision of data creates suspicion and mistrust, which can often be damaging in the long-term conduct of a claim or case”

In addition, the author has on-going experience that assembling and providing skid resistance data in a readily understandable format (ideally visual, such as colour coded GIS maps) is beneficial.

Road authority use of road section numbering and/or section chainages can also confuse members of the legal profession, often leading to the risk of skid resistance test results being assigned to the wrong location in the ground. The provision of explanatory notes (eg. clarifying start chainages, and points of interest etc) or the adoption of a visual format can greatly assist in this area.

It should also be remembered that the skid resistance of a road surface is unlikely to be the only focus of a post-crash investigation and any subsequent legal action. Associated data, e.g. crash statistics, or seal and resurfacing history for the location (including the rationale behind any surfacing operations and how they are positioned within a prioritized listing of work), is likely to be required to enable a location chronology to be established.

The author remains convinced that an open and effective communication exchange between the legal representatives on both sides will always pay dividends. Any conscious decision by road authority engineers not to pass on, or some how edit or in the worst case, adversely influence, factual information that might be perceived as prejudicial to the road authority's case, is certainly not recommended.

The best approach is very definitely to work with the authority's legal representatives and provide everything, letting the representative make 'the call' as to what evidence will be relied upon. Building up a positive relationship with the legal representative working on your behalf is paramount and helps with the on-going 'education' of those representatives, eg. with regard to the authority's strategies and practices. This can be particularly useful, with a tangible example of the worth being; the road engineer may have knowledge that a skid resistance test had been undertaken at a location a few weeks before an incident, but that the processed data was unlikely to have been available to the authority at the time of the incident and, therefore, could not have been considered as part of a highway management strategy around that time. Without such knowledge, the legal representative may simply have issued the data, noting that the date of test preceded the date of the incident.

4. CLOSING THOUGHTS

The author encourages practitioners to re-consider any reluctance they may have in 'educating' the legal profession with regard to skid resistance concepts and issues. This is because he has consistently found that the efforts in this area ultimately pay dividends, with the returns often a greater amount of information taken at face value, reduced cross-examination times, and even theoretically, a reduction in the number of alleged surfacing related incidents resulting in a claim (or ultimately in the worst case, from reaching the courtroom).

The views expressed within this paper are those of the author and do not necessarily reflect the views of the ARRB Group.

Whilst every effort has been made to ensure that the material presented in this paper is relevant, accurate and up-to-date, the author cannot accept any liability for any error or omission.

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