CIHT Dubai Evening Seminar (Online)
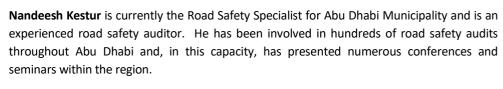
David George & Nandeesh Kestur	Planning, Executing and Responding to Road Safety Audits

About the Speakers

David George is currently the Road Safety Specialist for Al Ain City Municipality & has specialised in road safety engineering since 1996. He has led teams on thousands of road safety audits in UK, Europe and Middle East, as well as writing, developing and presenting a range of road safety training courses, speaking at various national conferences, and appearing on UK national television on road safety issues. David is a past Vice-Chair of SoRSA.

Nandeesh Kestur is currently the Road Safety Specialist for Abu Dhabi Municipality and is an experienced road safety auditor. He has been involved in hundreds of road safety audits throughout Abu Dhabi and, in this capacity, has presented numerous conferences and seminars within the region.

Presentation

This was the Dubai Group's third seminar held on an online platform. The meeting was organised on Zoom and was attended by 191 participants, including many coming from outside Dubai, including as far afield as UK, USA, India and Australia. The technology, presentation and management online were a great success and demonstrates the value of a virtual format for future CIHT Dubai events.

This presentation was focused on the Road Safety Audits (RSA) in the UAE. The origins and guiding principles of RSA as an independent check on the planning and design of a road scheme were presented with the aim of reducing the risk and severity of accidents and asking "who can be hurt and why?" The presentation with the following areas of focus:

- Road Safety Audit Definition
- Why do we do Road Safety Audits?
- Standards of Road Safety Audits
- Commissioning Road Safety Audits
- Responding to Road Safety Audits
- Common problems
- Dealing with conflicts
- Design team response and exception reporting.

Road Safety Audit is an independent evaluation of a scheme by road safety experts to reduce the chances of a road traffic collision occurring and if one does occur, how to reduce the severity of that collision. This aims to prevent major accidents, deaths and injuries on the road. The crash history in the seven Emirates for 2017 and 2018 was presented as well as fatal accidents in Abu Dhabi from 2009 to 2019.

Relevant standards were outlined, including TR-540 Abu Dhabi Road Safety Manual and Dubai Road Safety Audit Manual, as well as overseas frameworks such as UK, Ireland, Australia and South Africa.

The speakers then explained the four RSA stages as follows:

1. Stage 0 – Planning/Concept Design
2. Stage 1 – Preliminary Design
3. Stage 2 – Detailed Design
4. Stage 3 – Completion (Depending on the scheme this may be pre-opening, post opening or both)
5. Stage 4 – Monitoring 12/36 months post completion.

The issues identified in each stage should be resolved before starting the next. Design stage audits are especially important to prevent prohibitive expenditure or variations later on.

The composition and remit of a Road Safety Audit Team were outlined, how Audits should be commissioned and the qualifications and experience for the Audit Team Leader (ATL). The importance of a site visit, over and above a desktop review, was emphasised and in particular how site conditions can change over time.

Once an RSA is conducted a report will be produced with the details of potential road safety issues. Each problem should have a proportional and viable recommendation to remove or mitigate it. Much of the time, the issue is how people will use the scheme, rather than design standards, and most road accidents are caused or exacerbated by road user behaviour. The position and design of roadside infrastructure is also a key factor in determining the severity of an accident and whether people are killed or injured in the event of a collision.

When the Design Team receives the RSA Report, they need to produce the response. The Design Team Response (DTR) should note the issues identified and recommendations made, propose actions in response and advise the Client to the scheme on next steps. The DTR is supposed to be for the Client, not the Audit Team, and the Client should make the final decision on the way forward.

A sample of the Decision Tracking Form was presented and a number of examples were described. A range of common problems and mistakes were presented, such as handling disagreements between the Design Team and Road Safety Audit Team, as well as conflicts between the scheme developer or owner, and the local highway authorities.

It was emphasised that RSA should aim at long-term solutions and the Design Team and Audit Team should work together in the interests of safety of all road users. The repetition of the same problems across Audits may suggest the need for a modification to design standards, procedures of processes.

Finally, details of the Society of Road Safety Auditors (SoRSA) were presented, including the four grades of membership and the requirements for Auditor to receive and maintain accreditation.

Questions and Answers

1.	Will the client or the designer face legal consequences if they do not follow the Road Safety Auditors' recommendations (if it has zero crashes and problems reported)? Are there legal implications of ignoring the Road Safety Audit recommendation?	There are legal consequences in ignoring the Road Safety Audit recommendations in UK and it is mentioned in the Road Safety Audit Manual. Currently there are no legal implications in UAE, that the speakers are currently aware of, for ignoring the Road Safety Audit recommendations, but schemes may ultimately fail to be approved by the highway authorities and practitioners should still observe and follow good practice, having the ultimate safety of road users in mind.
2.	Regarding Vehicle Restraint Systems, does the road safety auditor refer to the Design Guide (TR-512) or some other guide? Are the designers are using old systems, as per old instructions and not as per the Design Guide and what is the RSA point of reference?	Speed Restraint Systems should be as per TR158 of the Abu Dhabi Roadside Design Guidelines or equivalent. Vehicle Restraint Systems are one of the most important elements in Road Safety Audit. Road Safety Auditors are able to give feedback into the standards for improving the same. Auditors will be looking into the design, but also how road users are likely to behave. Crash barriers in Abu Dhabi are tested for up to 100 Kph, but in reality vehicles may travel at speeds of 120 Kph or in excess, so scheme designs need to account for this.
3.	Are Road Safety Audit recommendations in line with Road Geometric Standards like AASHTO, AD-QCC manuals?	Road Safety Audit recommendations may be complaint or non-compliant with respect to geometrical standards. If a non-compliant design at one location will solve the Road Safety Audit problem, then the Road Safety Auditor will recommend that option. The focus is on ultimately safety.
4.	How much can Intelligent Transport Systems (ITS) help in improving Road Safety?	ITS can help in the road safety. For example, VMS information on accidents and speeds before an accident black-spot will alert a driver and encourage them to slow down before reach the location. ITS can also help improve the data and analysis of road crashes.
5.	If the Client makes the final decision on a design, a private organisation (e.g. a developer) may have a different objective than a Highway Authority. How does this work in the UAE?	This can be a problem since the developer may be looking to minimise costs and maximise their return. In such cases in Abu Dhabi, a conflict may be discussed between a representative of the developer and the local highway authority with the aim of coming up with a mutually acceptable way forward. If Road Safety Audit is done before or at the design stage of a scheme, all considerations can be taken into account in making changes and a safe solution can be adopted which is more likely to be ultimately approved.
6.	How does a Road Safety Auditor assess safety of a scheme under rainfall events?	Micro and macro texture on the Road surfaces are not very important in UAE since they give better skid resistance during dry periods which make up the majority of the time. Positive cambers are also preferred at roundabouts to improve safety despite creating a drainage problem at the time of rainfall since the rainfall days in the UAE are very less.
7.	Is there any Government protocol for rating the roads based on safety standards? For example, star rating for roads using IRAP (International Road Assessment Programme)	There is no current Government protocol for rating the roads in UAE based on the safety standards.

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