

Case Study:

How Laser Scanners Improved Road Incident Reconstruction



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United Kingdom Collision Investigator Specialist Describes How the Switch to Laser Scanners Has Improved the Accuracy of Road Incident Reconstruction

Pete Davey has extensive experience in both the private and public sides of public safety analytics. He is currently the Managing Director at Viewpoint Investigative Services, Ltd., and previously served as a Police Constable and Forensic Collision Investigator in the Avon and Somerset Constabulary for over 17 years, 12 of which were within the Road Traffic Unit.



His team made the switch to the FARO® Focus Laser Scanner in 2018, along with FARO® SCENE and FARO® Zone 3D software, and he recently shared his experience working in road incident investigation and his impressions of laser scanner capabilities.

Q | *What has been the biggest challenge working in road collision investigation?*

A | "The biggest problem is dealing with roads that are open. There's always traffic so the busy roads are obviously quite hazardous for our team.

That's partly why we went down the laser scanning route. Before, we had to go on the road to identify points for the total stations surveying equipment whereas now we can do everything from the footpath, so we have less reason to go on the road."

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Q | *What was your first introduction to laser scanning?*

A | “I knew about laser scanning from being in the police but it was a relatively new thing when I was leaving. Then a couple of years ago we were asked for a specific job to laser scan a vehicle in a scene. It started out that we were going to rent the equipment to do it, and then things progressed when we got in touch with FARO and we ended up buying the Focus[™] 70 Laser Scanner.

We use it for every scene now. I’m quite into technology advancements so I was quite keen anyway because it was a new shiny toy to play with but some of the other guys in the office were reluctant because they had always used total stations and they’d worked. Everyone knew what total stations did and what they produced.

Then over two or three months, my colleagues started to use the scanner and soon realized that ‘Hang on a minute moment; this is a completely different level of equipment.’ So even those who are reluctant to change soon realized the benefits, which is why we had to go for the second scanner because the first one was in use all of the time.”



Q | *What were your initial impressions of the Focus Laser Scanner?*

A | “I remember the first time I took it out, I thought I was wasting my time because I was just standing still while the scanner did the work. That was completely alien to me because, with every other device we’ve ever used, you are constantly having to do things, whereas with the scanner you literally push a button and a few minutes later it’s finished.”

Q | *Was that strange to get used to at first?*

A | “Yeah, you might think you’re being lazy but the amount of data you’re capturing is a billion times better than before when you were busy. I’ve now learned to use my time in other ways when it’s scanning so it’s just a question of changing your mindset.”



Q | *How do laser scanners compare to the tools you were using before?*

A | “We were using a total station before and all that produces is a number of points in space. You draw line to line to make things look like a road surface in a 2D format but they’re just lines. If someone didn’t know what they were looking at, you would identify it’s a road, but I think it’s quite hard to comprehend any form of scaling and what it actually is showing you.

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With the laser scanner, it's much more like a photograph, and most people can relate to a photograph and identify objects within it. They can relate in terms of size to gain perspective into how far away things are from each other."

Q | **Were there any specific features that really stood out to you?**

A | "Yes, we wanted to make sure that the person viewing the data can understand what we're saying by showing them the pictures we're showing them. And when you compare the total station to a scanner, there's no competition there."

Q | **How have the laser scanners helped improve your documentation processes?**

A | "The tell-tale sign is that we now get asked to be a part of the initial inquiry from insurance companies. They want this laser scanned, and they would like the view shown from inside the vehicle and things like that, which we would have never had before without the scanners. I suppose the result is the product that we're producing is more valuable for the people who are receiving it."

Case in point, the local police force responsible for the collision investigation for this area contacted us to ask how we're doing it because they knew we were doing it differently and wanted their team on board.

I know when I was in the police and we started looking at scanning, the court didn't have the ability to show this type of information. But you can now transmit from your laptop onto the screen in court so it's becoming much easier to do.

I think scanning will be more and more prevalent in courtrooms. We only produce our scans. We don't produce 2D stuff for courts anymore."



Laser scanners are quickly becoming the new standard for scene investigation and analysis in public safety.

Q | **How was the transition to SCENE and Zone software?**

A | "With the scanning, the data is initially processed in FARO SCENE, and it's very straightforward. You plug a memory card in and it automatically identifies that it has transferred the file across. It's very simple to use, which is quite important for some of the other guys here."

Then we put it into FARO Zone, which is where we do the animation and the reconstruction of things, and that is also very simple to use. I'm sure it's capable of a lot more than we use it for but the bits we use it for are very straightforward and simple."



Is your team interested in trying out a laser scanner for road accident investigation?

Sign up for a personalized virtual demonstration to see the benefits of FARO Focus Laser Scanners firsthand.

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