

# TRANSCRIPT

## ROAD SAFETY COMMITTEE

### Inquiry into motorcycle safety

Melbourne — 18 October 2011

#### Members

Mr A. Elsbury

Mr T. Languiller

Mr J. Perera

Mr M. Thompson

Mr B. Tilley

Chair: Mr M. Thompson  
Deputy Chair: Mr T. Languiller

#### Staff

Executive Officer: Ms K. Jenkins

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#### Witness

Mr P. Varnsberry, motorcyclist, and independent consultant on standards development of motorcycle clothing and other protective equipment.

**The CHAIR** — I welcome the committee's next witness, Mr Paul Varnsberry. I will just go through the protocol and inform you that your statements here today have the benefit of parliamentary privilege and will be recorded by Hansard. There will be no independent recording of statements made today. The committee is the beneficiary of 68 submissions to date, and we have had the opportunity to ask further questions as to many of those.

We understand in your case, Paul, you have been in Australia and serendipitously you have the opportunity to be before us today. We are very grateful for your time. It may be helpful if you just give a brief summation of your expertise in the field before moving through your submission, following which we would be pleased to ask a number of questions.

**Mr VARNSVERRY** — Okay. That is all covered in my submission, Chair. I would like to say I am grateful for the opportunity to address this committee. I have prepared a written statement, and while that is running there is some video footage of essentially the history of the standards of motorcycle clothing, from initial research through to the tests that I have conducted in Europe in these days.

**Video shown.**

**Mr VARNSVERRY** — My name is Paul Varnsberry. I am a lifelong motorcyclist. Between 1983 and 1993 I was the owner of one of the United Kingdom's leading manufacturers of protective clothing for motorcyclists. Since 1996 I have operated as an independent technical consultant and adviser to industry and institutional organisations, as an expert witness and a published author and speaker on standards development for motorcycle clothing and other forms of protective clothing and equipment. Commercially I assist manufacturers with design, development, prototyping, testing, certification and verification of protective clothing and equipment.

I am currently assisting the Transport Accident Commission here in Victoria with a work program focused on delivering at its conclusion better information to motorcyclists regarding the status and the merits of competing products in the marketplace. I am also engaged in a similar project which the George Institute in Sydney is administering on behalf of the Motor Accidents Authority of New South Wales. These work programs are continuations and intensifications of activities in Australia in which I have been involved since 2003.

With regard to my pro bono activities, I am the British Standards Institution's principal technical expert on motorcyclists protective clothing. I was privileged to be appointed the leader of the project group responsible for finalising European standards EN 13595 parts 1 to 4. I advise the Association of Chief Police Officers of England and Wales working group on protective clothing for police motorcyclists.

I have previously chaired the European standards committee for sports protection and retain the chair of the British Standards committee responsible for standards covering riot protection, including ballistic and stab protection, worn by the police and other peacekeeping forces.

I have been involved in the development of standards for motorcyclists' protective clothing since 1984, initially working with colleagues to develop technical regulations for the governing body for motorcycle sport in the United Kingdom; then as a member of both the British and European standards committees, forming their standards for motorcyclists' protective clothing. My belief has always been that the motorcycling consumer should be provided with independent guidance which will enable them to understand the differences between competing products in the marketplace.

Standards are just one mechanism by which this might be achieved. There are in total nine European standards, prepared under a mandate issued by the European Commission, covering motorcyclists protective clothing and equipment, consisting of limb protectors, back protectors, jackets, trousers and one and two-piece suits, gloves, boots, and stone shields. Two further standards are under preparation.

Products meeting these standards carry a presumption of conformity with the requirements of European legislation covering personal protective equipment. The limb protector and back protector standards, EN 1621-1 and EN 1621-2 respectively, assess the impact energy attenuation of components and materials when a mass is dropped onto the test sample, such that it is impacted with a specified force. Two further parts of the EN 1621 series of standards, covering chest protection and inflatable body protectors, are currently under development. The EN 1621 standards for impact protectors and back protectors have, in my view, become established as the

de facto international standards for these products. Impact protection conforming to these standards is being marketed across the globe and is available in stores here in Melbourne.

The European standard for motorcyclists protective clothing, EN 13595, has its foundations in research produced by Dr Roderick Woods of Cambridge University and has been peer reviewed by the American Society for Testing and Materials. This standard assesses the critical characteristics for motorcyclists garments, including impact abrasion protection and burst strength of seams and fasteners. So far as I have been able to identify to date, somewhere between 22 and 25 companies have secured approval for their garments against the requirements of EN 13595. This list includes a Melbourne-based manufacturer of motorcyclists protective clothing. I am aware that there are other manufacturers or distributors who are either presently engaged in their own testing and approval projects or are seriously contemplating them.

The glove and footwear standards, EN 13594 and EN 13634 respectively, follow similar assessment procedures and tests to those for garments. Boots conforming to EN 13634 are readily available and on sale here in Melbourne. Finally, EN 14021 is a standard which specifies stone shields for off-road motorcycling.

The European standards have been welcomed by individual motorcyclists, riders groups and sections of the motorcycle industry here in Australia and have been referenced in research which has been published by Dr Liz de Rome, who I understand will be addressing this committee at a future date.

From my meetings and conversations with members of all interest groups, including numerous conversations during the course of last weekend, when I attended the Australian Motorcycle Grand Prix, I am aware of their support for establishing a committee under the auspices of Standards Australia to investigate how the European standards might be fast-tracked into Australian standards. Furthermore, at least two Australian test facilities are drawing up business cases for manufacturing test apparatus to the specifications set out in the European standards, ready to respond to any demands placed on them to service product development projects from industry, as well as supporting a star-rating scheme such as it is expected may result from the conclusions of the TAC and MAA projects. I would therefore respectfully suggest that this committee give consideration to writing formally to the chairman or CEO of Standards Australia, requesting that the formation of such a committee is instigated as a matter of priority.

The provision of information with approved products to explain how they have been tested to a standard varies enormously and it might not always provide the type or extent of information a consumer needs in order to make an informed purchase. This would appear to run counter to the objectives of the Competition and Consumer Act 2010. Where motorcyclists' clothing is concerned, a star-rating system with the standards at its heart offers the opportunity to present the motorcycling consumer with details of the protective performance of clothing in tests, along with other key aspects which might influence a motorcyclist's decision. The Peter Vulcan Award-winning research paper, *Are Stars Better Than Standards?*, sets out an approach which would achieve this. It is hoped that, through direct consultation with riders, the work programs which the TAC and MAA are presently engaged in will endeavour to identify what that additional information could consist of.

In the invitation I received to address the committee, I was asked to share my views on the issue of whether there should be a legislative requirement for motorcyclists to wear protective clothing. I support encouraging motorcyclists to wear protective clothing through the provision of information, and not imposition by compulsion. Newcomers to motorcycling may require education about why they should wear protective clothing, combined with guidance on how to identify suitable products. I am aware that this is being done through a TAC advertising campaign. The motorcycle industry and the media also have a role to play, but the messages from all concerned must be consistent. A further incentive for motorcyclists to wear clothing which has been independently verified as a suitable safety product might be achieved by removing GST from the retail price.

The good work performed during the past eight years by interested parties here in Australia has created an environment of positive and constructive collaboration towards improving standards of clothing and providing the consumer with good advice. This has been confirmed in my conversation with members of all interest groups. Talk of compulsion creates the risk of a significant and potentially irretrievable retrograde situation, where that goodwill would evaporate and the consequence would be confrontation.

The European legislation defines what constitutes protective clothing, but the reality is that often it can be extremely difficult and sometimes impossible for even the expert eye to differentiate between protective and other clothing without resorting to destructive inspection and laboratory analysis. I suspect that the relevant authorities would experience even greater difficulties in recognising the differences in, for example, a roadside check. Consequently any talk at this time of compulsion would, in my opinion, be seriously premature, highly counterproductive and immensely damaging. The ducks are not even swimming on the pond; even less are they ready to be lined up. Quite frankly, if there is anything that will undo all the progress of the past eight years, it is injudicious suggestions of compulsion.

In conclusion, my recommendation to this committee is that it support the excellent work which has been conducted uniquely and is continuing in Victoria through the TAC and note the parallel MAA initiative in New South Wales, in respect of both of which I should perhaps mention my involvement. A star-rating system founded on Australian standards which replicate the European standards should continue to be pursued, I trust with the endorsement and support of this committee and its members. Please nurture the goodwill from industry and riders towards making improvements in rider safety by ensuring that they are fully engaged in the process and their views and experience are listened to. Thank you once again for providing me with this opportunity and privilege to address this committee.

**The CHAIR** — Thank you very much, Paul. Are you a motorcycle rider yourself?

**Mr VARNSVERRY** — I am so, lifelong.

**The CHAIR** — If you were to advise motorcyclists to wear three pieces of protective clothing, what would they be?

**Mr VARNSVERRY** — If we take out the helmet — the helmet is a mandatory requirement in most countries, so that is a given — everything else: a suit, either one-piece, two-piece or jacket and trousers; and boots and gloves, which should be sturdy and robust.

**Mr LANGUILLER** — What about boots?

**Mr VARNSVERRY** — Yes, boots are included.

**Mr LANGUILLER** — We talked about scooters and mopeds and so on and so forth. Would you include in your recommendations that group of riders? It appears that they might be different, with speed and size — ccs — and so on.

**Mr VARNSVERRY** — In which case the demands placed on the clothing and then the rigours of the test would reflect that particular level of risk, as they already do in the European standard. The European standard has two levels of performance, level 1 and level 2. Level 1 may be appropriate for scooter riders at low urban speeds; level 2 would perhaps be for riders out on the highways.

**The CHAIR** — We have just partially observed a presentation of stress testing of particular products and materials. Could you verbally take us through some of the chief observations that you would make in relation to that material?

**Mr VARNSVERRY** — Yes. The initial test you saw with the mannequin being dropped from the back of a moving vehicle — that coverage was Dr Woods's initial tests on the disused runway to assess the different characteristics of clothing commonly used by motorcyclists. Some clothing, as you would have seen from some of the video footage, did not fare too well in that test. It was completely destroyed; it suffered catastrophic failure. But from those tests it was possible to identify clothing which would potentially protect in an impact with and a slide along the road surface and that which might not. From that situation it was necessary to bring the testing indoors to have repeatable, consistent laboratory testing free of the inconsistencies or variations in temperature, humidity and conditions of the road surface.

That takes us on to the further footage in the video, which was the indoor test — the Cambridge machine, which is a moving abrasive belt. The sample is mounted onto a holder and dropped onto the moving belt. A start wire is cut, which starts a timer. When the sample is abraded through, a stop wire is cut, which is located behind the sample. That gives you a reference for the abrasion resistance in terms of that particular material construction.

The other test we saw was the burst test. It is an international standard device, slightly modified to deal with the thicknesses present in some motorcycle clothing. The sample is locked securely in place. Water is pumped behind the sample so it distends into the airspace in the chamber. The pressure is recorded at which the seam or material or the zip fails. That is the other essential test I referenced in my statement. There are a number of other tests as well, but those are the key ones that you observed in the video footage.

**The CHAIR** — Earlier today Mr Elsbury pointed out that the fashion colours for motorcycle equipment range extensively between grey and black. I was just wondering, in terms of the European experience, what colours are being put out into the marketplace that might have higher levels of visibility?

**Mr VARNSVERRY** — Every colour imaginable. There are riders who choose black for personal choice or for fashion reasons or because it is what they have always worn or for practicality, and there are riders who are wearing multicoloured suits. All of them are being catered for, and it is their choice what they choose to wear.

**The CHAIR** — In volume of sales or the take-up by, for example, bike riders, Melbourne has the imported colours from Italy, pretty much. That culture has not traversed to the motorcycling fraternity at present. Are there are some drivers who are conscious of the colour that they have on the road, and therefore there is a high take-up in percentage terms?

**Mr VARNSVERRY** — I think, again, individuals will have individual reasons for picking a particular style and colour scheme of garment. It may even just come down to that being the suit that fits them best when they are in the shop, and they are prepared to maybe tolerate the colour scheme. It may not be their first choice, but they are happy with the garment. All these variables are there in the purchasing environment. People will either match the bike or they will go for practicality. Someone whose bike has a component of black in its colour scheme may feel that a black suit, as well as matching the bike, also offers that practicality. There is no simple answer to your question; I cannot give you that, because I do not believe it exists. There are too many variables out there.

**Mr ELSBURY** — I was just wondering also, with regard to the garments that people use on their bikes, whether or not you believe a fluorescent or reflective material would be of any benefit whatsoever for the safety of a rider?

**Mr VARNSVERRY** — I cannot quote the research, because I am a practitioner rather than an academic, but I can certainly point to people who have worn fluorescent clothing and have still had near misses or actual accidents. It is not infallible. I think that is the key phrase: 'not infallible'. There is possibly a better chance of being seen, but that counts on the driver looking in the first place, and I refer to the previous speaker. That is not always the experience.

**Mr ELSBURY** — So, should I go on a bike, it does not matter whether I have a hot pink leather jacket —

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**The CHAIR** — I think it would, actually!

**Mr ELSBURY** — It would not be that much of an advantage to have a different colour. That is what I am saying.

**Mr VARNSVERRY** — Depending on how much of an exhibitionist you want to be, I am sure — —

**Mr ELSBURY** — Well, it is definitely not going to be red, Telmo!

**Mr VARNSVERRY** — There may well come a point where everyone would stop and stare, and other drivers would be having collisions because they were not paying attention to where they were going, but, again, there are studies which I do not have information about stored in my head or available to me. I am sure you can find people far better versed than I am in that particular area who can give you data. All I can talk about is what I see out on the highways in the UK and what I have seen in stores here. I am looking at how it performs as much as how it looks.

**Mr PERERA** — If we want to get a view on modern protective gear with the latest designs, where should we look?

**Mr VARNSVERRY** — Every manufacturer's website. A lot of the clothing that is imported into Australia comes from European manufacturers. It is not always made in Europe; it is sometimes made quite a lot closer to here. On their website you will find their designs. The Italians have a real flair for producing outlandish, garish, adventurous — however your tastes are — designs. They really do. There are a lot of other companies around the world that produce more rudimentary designs and cater for a particular market. Not everyone wants to wear those particular race-replica suits, shall we say. Other people want something that fits in more with general road riding, but the choices are out there.

**Mr TILLEY** — Paul, thank you for giving us your time.

**Mr VARNSVERRY** — You are welcome.

**Mr TILLEY** — I try not to close my eyes with some of the comments of my colleague up there about how some clothing might look. Can you advise the committee about some of the clothing available that equals the British standard? I really have no idea. Is it something like a denim fabric that has something woven into it which fits that or is it all leather?

**Mr VARNSVERRY** — Firstly, it is a European standard rather than just a purely British standard. There are many different types of clothing that have been put through the tests. In the early days it was all leather clothing, largely driven by the procurement process for the police but also taken up by a number of civilian riders as well who wanted to buy clothing made to a standard, which was available for the first time. There has been a lot of work put into developing textiles solutions that defeat European standards tests, and when I say 'defeat' I mean 'pass'. I have worked on a number of them. I have worked on single-layer, multilayer and aramid-reinforced denim solutions. There are four different textiles solutions to meet the requirements of the standard. The standard will test whether clothing passes the standard — whether it is safe clothing to wear on motorcycles in the event of an accident. It does not discriminate between leather or textile or what the textile is.

**Mr TILLEY** — Thanks, Paul. Just as a supplementary on that, do you have any views, in terms of injury reduction, on airbag suits, such as the D-air suit made by Dainese?

**Mr VARNSVERRY** — I do not think there is enough of a take-up of that product yet. I do not believe there is a sufficient number on the market for any meaningful data to come out of it. That much I will say; I am not a researcher and academic in that respect, but instinctively I feel that that is the answer. It is too early days. That product has been in development for years and years, and I have not seen any significant number on the road. In fact I do not know anyone who owns one.

**Mr LANGUILLER** — Why do you think that is?

**Mr VARNSVERRY** — It could be a number of factors. I do not even know if it is commercially available — I will be honest with you. I have seen a derivation of it used on the MotoGP rider suits to reduce and prevent damage to the clavicle — the collarbone. I have seen inflatable back protectors. I actually work on inflatable body protectors for horseriders, but in terms of motorcycling it is not a product that so far has made any significant — no pun intended — impact that I am aware of.

**The CHAIR** — A number of our witnesses this afternoon have commented upon the desirability of there being no mandatory clothing scheme, so to speak. We will be taking evidence from a surgeon shortly. I am not sure what his perspective might be in relation to the other end. Are you able to anticipate what a road trauma surgeon's view on clothing may be?

**Mr VARNSVERRY** — In my work on standards I get to speak to a number of surgeons as well as racetrack doctors. I work with them on the standards committee for motorcyclists clothing. I am sure they would say they would like to prevent every single injury that occurs. That would be their ultimate objective, but I think if they are realistic and pragmatic they will accept that that is never going to happen.

I am sure we have all heard about the seemingly innocuous incident that occurred that resulted in a fatality. How did that happen? There was not a mark on him. Then we have seen the wrecked vehicle, completely totalled, that has rolled several times and someone walks away unscathed. Real-world accidents are chaotic and unpredictable, and I think if you start striving to achieve the ultimate, you let the best be the enemy of the good. I think we have to sit back and take a common-sense view. We can actually, with protective clothing, reduce or

prevent some injuries. That is all you will ever do; you will not prevent them all. There are injuries that the clothing cannot prevent, such as striking solid objects at speed, rotational forces or twisting, bending forces. That is established, it is accepted, and it is referenced in the European standards.

I come back to the point I made earlier in that I think riders need to be educated. They need to be encouraged and, if they can be, assisted through the removal of GST for clothing that meets a certain status. I am completely against compulsion because I do not believe it will deliver what those who may advocate it believe it will.

**Mr LANGUILLER** — Just in relation to the GST, is there any jurisdiction that you are aware of where that may apply?

**Mr VARNSVERRY** — Certainly when we have tried it in the UK we have gone to the transport department and they have said it is a Treasury matter. We have gone to Treasury and they have said it is a transport matter. So we play tennis, and I do not think the game has yet ended.

**Mr LANGUILLER** — Can I just make a further observation, if I may, through the Chair? In Italy, France and Spain, and so on, I have seen thousands of women riders wearing high heels — and here too in Melbourne — and men wearing thongs. My observation is that it is probably not terribly safe. Is there any research or any evidence that may suggest it is worth encouraging those riders not to wear these things, or otherwise? I concur with the notion that we need to develop policy based on research and scientific evidence and so on. Anecdotally it appears to me to be potentially dangerous, but is that the case?

**Mr VARNSVERRY** — The only research I am aware of is being conducted, prepared and compiled here in Australia, and I think you are hearing from Dr Liz de Rome later in your series of meetings.

**Mr LANGUILLER** — Not in Europe?

**Mr VARNSVERRY** — No, it is happening here in Australia. We have the standards and it is almost as if the standards are a full stop. What is happening here in Australia with the TAC and MAA initiatives is actually adding value to the European standards in a way that is meaningful to riders. I think if you can make it work here and you can inform those motorcyclists why they should wear robust clothing, then you are actually stealing a march on the rest of the world, and I say that sincerely.

**Mr LANGUILLER** — What is the standard in Europe in relation to the wearing of high heels and thongs and so on? Is there any?

**Mr VARNSVERRY** — No. I think thongs means something different over here?

**Mr ELSBURY** — Yes, they are flip flops.

**Mr VARNSVERRY** — Yes, I do know that. It was embarrassing the first time it was mentioned.

**Mr TILLEY** — We have certainly take into account the uptake by self-regulation, education and the market. We just heard from the previous witness, Holly Black, in relation to motor scooters and mopeds. Would the same apply to motorcycles as it would to mopeds? We are talking about the mopeds travelling under 50 kilometres an hour, because we learnt during Holly's evidence that she does not believe it should apply to that category.

**Mr VARNSVERRY** — I think here is perhaps where a star rating system with input from Holly, and obviously from members of her clientele, would be very beneficial because there needs to be an understanding of what it is they are seeking from clothing, what needs to be done to reduce injuries and where within a star rating scheme that particular demand would sit. It would probably be at the lower end of the star rating scale. The rigours through which the products are put would be reduced. We assume the rigours through which they are put on the highway would be proportionately reduced in many circumstances, whereas for a rider travelling at high speeds out of the city they would perhaps be encouraged not by any form of coercion from the administrators of the scheme but by their own desire for knowledge and to find a product that best suits their purposes. They would be encouraged towards the higher end of the scale.

**The CHAIR** — Paul, I will arrange for our executive officer to liaise with you further regarding experts that you have encountered in your own fields of work that may be of assistance to us in our inquiry. What has been your own technical background prior to moving into manufacturing safety clothing?

**Mr VARNSVERRY** — You said it was serendipitous that I happened to be here in Melbourne at this time for this meeting. It was also serendipity that got me involved in the manufacture of motorcycle clothing. I worked for one of the UK's two leading manufacturers initially and then set up my own company for 10 years making premium-quality motorcycle clothing. It is what I have done virtually since college.

**The CHAIR** — What is your college background?

**Mr VARNSVERRY** — That was actually in the field of distribution and it was just a complete change from distribution. I come from a motorcycling family. My great grandfather rode motorcycles in the pioneer days. I think it is in the genes. My grandfather and my father rode motorcycles as well and it follows on naturally, shall we say. There were always bikes around.

**Mr PERERA** — Scooters or big bikes?

**Mr VARNSVERRY** — I have ridden both, mainly big bikes, although my grandfather in his later years had a scooter to commute to and from work. I think across the family we have had them all: British bikes, Japanese bikes and even a German one or two.

**Mr TILLEY** — So you are a lifelong rider with an extensive family history. Are you a leather or a Kevlar man?

**Mr VARNSVERRY** — I am a lifelong rider with two advanced motorcycling qualifications. I used to manufacture leathers, but the garments I wear now are textile because I helped to develop for the UK police a textile garment that is genuinely on a par with the very best leather suits, and it is also all weather. I have ridden it in from minus 8 to 40 degrees Celsius, and it is an extremely comfortable suit to wear. That is a very specialist suit.

**Mr TILLEY** — Is it available in Victoria?

**Mr VARNSVERRY** — I do not believe it is.

**Mr LANGUILLER** — Is it lighter or heavier, cheaper or more expensive?

**Mr VARNSVERRY** — Unfortunately if we get away from the price for a moment, because you can pay a premium for accredited safety clothing, there is this little barrier in the way of producing the magic T-shirt called the laws of physics. We have not yet managed to produce a single-layer cotton or whatever garment that defeats the motorcycle tests. They all fail far too soon and the result would be injured riders. Generally when we are testing that sort of product for court cases that is what we uncover.

**The CHAIR** — Thank you very much for your time.

**Mr VARNSVERRY** — It was my pleasure.

**The CHAIR** — We will arrange for you to get a copy of the transcript to make any typographical corrections and it will be posted on the Web.

**Mr VARNSVERRY** — Thank you, Chair, and committee members.

**Witness withdrew.**