### **ROAD SAFETY COMMITTEE**: Inquiry into Motorcycle Safety 2011

# Submission by Emeritus Professor Marcus Wigan (www.mwigan.com)

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### Personal background from which this submission is drawn

This is covered in <a href="www.mwigan.com">www.mwigan.com</a>, but the key items selected for this submission with their relevance include (amongst other inputs and outcomes in motorcycling) will provide a basis for assessing the provenance of the views expressed in this submission. It is a diverse background ranging from direct participation in motorcycle sport at World Championship level to academic research on transport and safety issues. I have an intensive research and community background in many different fields. I have picked out some of the major items related to this Inquiry.

If requested, I would be pleased to appear before the Committee to give verbal evidence and respond to Committee concerns and issues.

1. 1978-79 Expert Advisor to the House of Representatives Joint Standing Committee on Road Safety in Canberra for the bicycle and motorcycle phases of their inquires over two parliaments in the late 1970's (Chair Bob Katter)

Current issues affected: Some of the outcomes to which my participation made a critical positive difference included the recommendation to form a Government Consultative Committee with riders (subsequently implemented and still active); antilock and linked braking system to be promoted for motorcycles (an invited SAE paper on braking standards resulted, and this issue is still being promoted with limited action 30 years later), successful action on helmet standards to enhance their specification and re establish their credibility in the community.

2. 1976-2011: Research on motorcycles, bicycles and pedestrians as transport modes (rather then simply as 'safety problems'.) Extensive refereed publications on both powered and unpowered vulnerable road users and vehicles

A number of these are directly downloadable from www.mwigan.com

3. 1980-89: Service as Chairman of two series of Australian Standards Committees addressing and significantly uprating helmets and eye protection for vehicle users, and negotiation of the revisions required for the 2063 general purpose helmet standard to be revived as a usable bicycle helmet Standard. Targeted research on childrens and other helmets and their requirements initiated through the Federal Government, and utilised.

- 4. 1980-2009: Service on the Ministerial Advisory Committee and Councils for Bicycles and for Motorcycles. This contributed substantially to the research and Standards program of the State Bicycle Committee and to the appropriate inclusion of transport in the current Victorian Motorcycle Transport and Safety Strategy.
- 5. 2000-2005: Major reports on Motorcycles as Transport and the Role of Motorcycles in Victoria<sup>1</sup>, plus all but one of the full range of VicRoads Motorcycle Notes<sup>2</sup> for traffic engineers and consultants covering relevant safety issues.
- 6. 2000-04: Substantial input to the UK IHIE Guidelines for Motorcycles (endorsed by the UK DoT), and research partner in delivering the Motorcycles and Congestion component of the UK Government research program on motorcycles and safety.
- 7. 2008-2011: Supervision and publishing Phd work resulting in a simulation model that has allowed both the risk choices made by motorcycles in lane filtering and the capacity effects of motorcycles in traffic<sup>3</sup> to be simulated verified and understood (Imperial College London), this is a unique and invaluable new safety capability.
- 8. 2009: Partnered with SKM to examine the options for shared use of road space and lanes by motorcycles and other traffics for VicRoads<sup>4</sup>

<sup>&</sup>lt;sup>1</sup> WIGAN, M. R. 2000. *Motorcycles as transport: Volume 1 - Powered two wheelers in Victoria*. Melbourne Australia: Vicroads on behalf of the Motorcycle Advisory Council by Oxford Systematics. At http://www.vicroads.vic.gov.au/NR/rdonlyres/48FF487F-9A0C-4057-A29F-B462165E05AB/0/oxford2000vol1\_1f.pdf, and WIGAN, M. R. (2000). Motorcycles as transport: Volume 2 - Appendices to Powered two wheelers in Victoria. Melbourne Australia: Vicroads on behalf of the Motorcycle Advisory Council by Oxford Systematics at http://www.vicroads.vic.gov.au/NR/rdonlyres/5AD69E40-F948-44B3-BDA1-17F654A1DB3A/0/oxford2000vol2\_2f.pdf VicRoads (2000). Motorcycle Advisory Council Workshop. Motorcycle Notes 1 at http://www.vicroads.vic.gov.au/NR/rdonlyres/AB5D6248-4D5F-4859-B982-DA5CA71FF439/0/tr1999044.pdf VicRoads (2000). Consultation for Motorcycle Measures. Motorcycle Notes 2 at http://www.vicroads.vic.gov.au/NR/rdonlyres/322B0D1B-A200-4B56-BDF1-B16D96700D13/0/tr1999056.pdf VicRoads (2000). Loose Surfaces and Motorcycles. Motorcycle Notes 3 at http://www.vicroads.vic.gov.au/NR/rdonlyres/E9A40513-5DB7-4BCA-BC60-7EBE5A1988B0/0/tr2000067.pdf VicRoads (2000). Road Markings and Slippery Surfaces. Motorcycle Notes 4 at http://www.vicroads.vic.gov.au/NR/rdonlyres/7B593947-433B-4001-9130-DBCB73838E2C/0/tr2000068.pdf VicRoads (2000). Designing for the Unexpected. Motorcycle Notes 5 at http://www.vicroads.vic.gov.au/NR/rdonlyres/9357B1C0-A7A1-42A7-BCF5-E4D443F65AEB/0/tr2000077.pdf VicRoads (2000). Designing for Motorcycle Clearances. Motorcycle Notes 6 at http://www.vicroads.vic.gov.au/NR/rdonlyres/876BE43A-F2F1-4ACA-B8A7-F63BABDF099A/0/tr2000080.pdf VicRoads (2001). Provision of on Road Motorcycle Parking. Motorcycle Notes 7 at http://www.vicroads.vic.gov.au/NR/rdonlyres/CB3A5EDE-217D-428E-9613-786767166A2F/0/tr2001104.pdf VicRoads (2001). Motorcycle Signage. Motorcycle Notes 8 at http://www.vicroads.vic.gov.au/NR/rdonlyres/20ACC651-A990-40AD-8092-CD19A6F47D6D/0/tr2001105.pdf VicRoads (2003). Clear Zones and Roadside Hazards. Motorcycle Notes 9 at http://www.vicroads.vic.gov.au/NR/rdonlyres/28872A00-374E-4744-B7F6-47BC0251BF6F/0/TR2001128.pdf VicRoads (2003). Hazard Detection and Anticipation. Motorcycle Notes 10 at http://www.vicroads.vic.gov.au/NR/rdonlyres/8B431C25-D91C-4BFC-8BE4-62BC8F0D1387/0/TR2002143.pdf VicRoads (2004). Characteristics of Motorcycle Crashes. Motorcycle Notes 11 at

http://www.vicroads.vic.gov.au/NR/rdonlyres/D4B70981-8C3A-42F8-85A1-8637A51EDC47/0/TR2002162.pdf 
<sup>3</sup> Tzu-Chang, L., Polak, J., Bell, M. G. H. & Wigan, M. R. Year. *The Passenger Car Unit values of motorcycles at the beginning of a green period and in a saturation flow. In:* 12th World Conference on Transport Research (WCTR),, July 13th 2010 2010 Lisbon, Portugal. 17.

<sup>&</sup>lt;sup>4</sup> The following reports are not available publicly as yet: McPherson, C., Daff, M., Eady, J. & Wigan, M. R. 2010. Road space management of bus lanes. Melbourne Victoria: SKM Consulting in association with Oxford Systematics for VicRoads. And McPherson, C., Daff, M., Eady, J. & Wigan, M. R. 2010. Road space initiatives for motorcycles. Melbourne Victoria: SKM Consulting in association with Oxford Systematics for VicRoads.

- 9. 1980's-2011: 20 years of active service and contributions to the US National Science Foundation Transportation Research Board Committees on Motorcycles (and also those on Bicycles and Freight Transportation Data) led to my appointment to each by the TRB as Emeritus Member.
- 10. 1956-2011: At a personal level, I have ridden scooters and motorcycles continuously since 1956 with as yet no road crash: that is 55 active riding crash free years including 25 years of motorcycle journalism and road testing....
- 11. Service with off road motorcycling included Executive Councillor of the Hartwell Club in Victoria, Technical Advisor to the Autocycle Union of Australia (the then governing body of motorcycle sport) and the honour of instigating the layout and initial phases of the Broadford track at what is now the Victorian State Motorcycle centre. Please note: I have no background on off-track off-road motorcycling

This background is given to demonstrate a balanced, wide ranging and high professional quality and substantive community contribution in this area of transport (as part of a wide range of modes with similar levels of engagement and outcomes). In all cases a policy, research and evaluation framework has been pursued, with considerable effort to maintain and improve sound evaluation methods for time, safety, risk, evaluation of life and to encourage on the ground takeup of these findings.

It is from this context of balanced transport and safety issues, and solid professional and rider community experience, that I now address the issues raised by this Parliamentary Committee.

# Some Key overarching issues that the Committee is commended to address

# 1. Governance and engagement

The mechanisms for engaging the motorcycle community (which includes full Professors of Transport and many other highly qualified parties in different pertinent fields) are weak, and the levels of expertise and data sources available and engaged in this area are weak, ill coordinated, discontinuous and framed solely as 'safety' issues when government investment is applied.

This meant that until the 1978 HORSCORS report<sup>5</sup> there was no consultative mechanism at all at the national level, and after then only one on safety issues.

While this is and has been invaluable, the lack of balance has steadily led to a perception that motorcycles are a 'safety problem', and not a mode of transport with special positive feature and safety vulnerabilities. This bias has led to the near total lack of any continuous data collection or expertise, or indeed and resources for university and professional teaching, to give a rounded picture of the motorcycle modes, and the inevitable stereotyping of motorcycles in solely safety (cost) terms, with cumulatively negative results on both perceptions of the mode and the necessarily increasingly defensive reactions of the riders, unsupported by a balanced government investment in manpower, skills and consultation to encompass the full range of transport and safety issues in connect.

Motorcycle safety has until very recently been addressed and resources in a safety only professional context. Significantly biasing the balance of different factors involved, and progressively distorting the relationships between riders and official bodies as this stance become the only one to which professional advice could be secured: a balanced an integrated approach is now essential to secure the well as safety overall gains that both riders and the rest of the community would wish to see emerge.

It is salient to point out that when I started working with bicycles they too were treated solely as a safety problem, and not as a mode of transport<sup>6</sup>. The balanced investment in information, encouragement, evaluation, engineering and education has steadily corrected this imbalance. At both a national and a state level bicycles are now (2011) treated as full partners in the range of transport modes, with their own needs and vulnerabilities. Safety and transport have both benefitted, and the same could reasonably be expected if a fraction of the investment in cycling was to

<sup>&</sup>lt;sup>5</sup> Australia: House of Representatives: ADVISORS: P.W.Milne & M.R.Wigan 1978. *Motorcycle and bicycle safety. Report of the Standing Committee on Road Safety of the House of Representatives*, Canberra, AGPS.

Wigan, M. R. 1984. Bicycle ownership use and exposure participation and activity patterns in Melbourne, Australia. *Transportation Research A*, 18, 379-398. See the also the complementary document for motorcycles: WIGAN, M. R. 2002. Motorcycles as a full mode of transportation. *Transportation Research Record*, 39-46.

be applied to powered two wheelers in a similarly balanced manner encompassing both tradeoffs and adjustments - and based on real data.

As pointed out in the Roles of Motorcycles report that I wrote to VicRoads in 2004<sup>7</sup>, Intelligent Transport Systems (ITS) offers both gains and vulnerabilities for powered two wheelers, electric, hybrid, fuel cell and electrically assisted powered two wheelers... and also for data acquisition (albeit with privacy concerns)

The lack of a continuing government skill set other than in safety is no longer a wise or productive approach, and as has been done for bicycles, expertise in a wider range needs to be established on a continuing basis to secure the very real benefits that powered two wheelers (which of course include electrically assisted or powered 'bicycles', as the distinction is simply an artificial – and rather problematic -legal construct)

Issues of mobility and access are rarely properly considered when treating vulnerable modes, or indeed vulnerable persons, as just one example of the issues neglected by a solely safety focus.

**Recommendation 1.** Establish motorcycle transport competencies within government, and support the development of academic skills in tertiary institutions (not necessarily only universities) to provide a continuing knowledge base that encompasses both safety and transport, planning and mobility, traffic and analysis: clearly in collaboration with existing speciality units in safety (as these are the only ones currently in existence). This initiative should include a freely accessible Institutional Repository<sup>8</sup> to make these materials genuinely discoverable and accessible.

The sharing of data, studies and analysis is a basic tool of contestable evidence based policy<sup>9</sup>, an emergent necessity for the changing relationships between government and the increasingly expert community.

**Recommendation 2:** Establish better forms of governance and accountability for consultative engagement with the users of motorcycles and powered bicycles, and thus enhance the cost effectiveness and impact of safety messages by government instrumentalities.

Wigan, M. R. 2004. Review of the role of motorcycles on our road system. Melbourne: Oxford Systematics with input from Motorcycle Safety Services as a report to VicRoads also at http://www.mwigan.com/mrw/Downloadable\_Publications\_files/05%2007%20MCROLESFinalREPORT5a.pdf

<sup>&</sup>lt;sup>8</sup> if such details are of interest I can give examples of how this works and contributes to better decisions and wider engagement. Two are given here: I have created such tools for freight and railways systems in the past, one of which was picked up by the European Union: see <a href="https://www.reorient.org">www.reorient.org</a> for a limited access to parts of one of these systems. Similarly I created a metadatabase of bicycle data sources in the early 1990s, and recommended the creation of the current US National Bicycle and Pedestrian Documentation Centre in the US as part of my TRB Bicycle Committee activities]

Obetails not given here, but part of my activities as a Partner at GAMUT, the Volvo Centre of Excellence at the University of Melbourne in the Governance and Management of Urban Transport: relevant papers are cited at www.mwigan.com

**Recomendation 3:** Focus on the information provision aspects of safety and motorcycle transport and movement. (typical examples: Make GIS data freely available in an up to date real time form for speed limit information and advice, encourage and demonstration trials of head up displays to reduce look away risks in speed controlled areas etc)

The remainder of this submission expands on areas specified by the Committee.

### Formulation of consultative processes related to motorcycle safety

While the Committee is constrained to safety, the real need is for a proper basis for a transparent and accountable process for the mode of powered two wheelers as a whole, as a solely safety function leads to strange distortions and reductions of credibility with the user groups concerned.

This lesson was learned by the UK Advisory Committee of Motorcycling, in whose research program I participated, in both transport and risk perception aspects, as well as in the creation of the UK IHIE Guidelines for motorcycle traffic engineering<sup>10</sup>.

There is no multidisciplinary focus for motorcycle specific transport, traffic, safety, data and documentation: no place where all parties can go to secure this basis for informed consultation and communication. There needs to be.

A similar recommendation that I made to the US TRB for one part of this was later taken up the in the documentation resource centre for bicycle information, and the database of databases of bicycle information I created for Australia.

The governance of the mechanisms available for consultation suffer from a lack of transparency and credibility with the users of this mode. As a result most consultation responses are reactive rather than constructively proactive.

In some cases the information generated and presented in reports is actually wrong, and presented in a negative light to riders. This may surprise the Committee so I will give two brief examples

- 1. The embarrassingly rude and pointed presentation of the NTC (National Transport Commission) proposals to remove filtering provisions in the National Road Rules, where the introduction was explicitly insulting to the riders of motorcycles.
- 2. In a report on ITS and motorcycles claims were made that the riders consulted had no experience of linked brakes or antilock systems<sup>11</sup>... as one

<sup>10</sup> http://www.motorcycleguidelines.org.uk/

 $<sup>^{11}</sup>$  "Cairney and Ritzinger (2007) interviewed riders to assess their views and likely acceptance of a number of motorcycle safety technologies. Many riders were negative towards braking

of those in that consultation this is simply untrue, and explicitly stated that I had experience while in the interview...

These examples, trivial though they might appear, and probably due simply to the professional limitations of the parties concerned, contribute substantially (and possibly even correctly) to the often encountered, untrusting and cynical attitudes of motorcycle riders to current forms of consultation.

It is necessary, but unfortunate to have to cite real examples as in general the community in unaware of such examples of sheer lack of knowledge of the rider communities, which are strongly affected by media stereotyping.

### • Transport context within which motorcycles and motorcyclists operate (a)

The proper evaluation of all different modes of transport requires user costs, fuel, emissions, noise, road space, parking space, recycling costs as well as safety.

Such evaluations are hard to find, and, for example, in many safety evaluations travel time is discounted (although especially for freight movements, it is a key factor in community productivity and economic contributions in aggregate).

Similarly the use of willingness to pay valuations of life and safety are often casually inserted (looking very much like a casual afterthought) as the full justification of a safety (often a restrictive measure with the transferred costs to the users uncosted), without any probabilistic reliability testing of the projected safety savings, economic effects, or indeed any examination of the appropriateness of the willingness-to-pay (WTP) valuation used. Having used such robustness testing approaches in a range of research and policy tasks (examples: work for Treasury of pricing data on identifying the greatest areas of vulnerability in freight planning), and knowing the limitations of the data being used in most motorcycle safety proposals, this is sometimes a matter of substantial unease on my part.

# $\bullet$ Motorcyclist attitudes and choices of themselves and of others towards them (c ,d)

- Rider safety on and off areas designated as roads (e)
- Rider training governance and attitudes of providers and the consequences (f)

technologies such as ABS, brake assist and linked braking, concerned that their own skills would be undermined by such automation and that they would limit skill development in new riders. *They did note, however, that none of the respondents had actually experienced any of these technologies*". p22. of Symmonds, M. accessed on 5-9-11 at http://users.monash.edu.au/~msymmons/research/RSD%200560%20-%20Review%20of%20MC%20countermeasures.pdf

### • Countermeasures (g)

One example only: the demonstrated lethality of wire proper barrier posts (as distinct from wires) illustrates the importance of clear zones around roads. Motorcycles and their riders can dissipate the kinetic energy that makes rises in speed at which events occur so dangerous (a square law applies) by three factors:

- 1. Separate from the motorcycle (reduces the mass that has to be decelerated)
- 2. Have fewer dangerous items such as trees, posts etc to collide with
- 3. Wear clothing with a friction capacity that can allow deceleration of the (much lighter) rider-only in the space then available

These points are fully consistent with Vision Zero, as advocated by Professor C Tingvall (ex Director of MUARC) who recently advised that the best test of Vision Zero for road safety was its application to motorcycles.... as the clear zones design factor makes so clear.

#### New initiatives to reduce injuries and crashes

There is often confusion about the difference between reducing crashes and reducing injures. Reducing crashes (ie collisions between hard objects and a motorcycle or rider) and reducing injuries (ie reducing the severity of such impacts if they occur). The last section covered the reduction of crashes by removing items (WRB posts for example) to collide with, and the injury reduction available by reducing the kinetic energy of the impacts by separation from the much heavier machine.

In other countries this has been recognised, and in the case of wire rope barrier posts requirements have been instituted to have protective buffers on such posts as a routine issue. This is not enough (although Victoria has not yet followed this), as tree and utility pole clearances also need a careful review.

Analysis of where motorcycle rider injuries could have been avoided by better enforcement of clear zone standards on trees, barriers and road furniture would be desirable.

### • Appropriateness of a special earmarked levy (TAC) (i)

When the TAC levy was put forward, a substantial user resistance to a fresh advisory committee reporting solely to TAC for this purpose was demonstrated, and the Chief of Staff of the TAC minister was persuaded that a fresh committee was not needed, as VMAC was well set up and had the brief for the task of advising on the application of these earmarked funds to motorcycle safety. Concerns were expressed at some of the potential organisational involvements in a fresh committee, in view of the narrow and unrepresentative span of policy

considerations that had been demonstrated by them to date. The recommendation that VMAC be the relevant committee was then duly accepted

This for the very first time provided actual funds for the motorcycle mode to be addressed with informed user guidance, and this had immediate benefits, discussed later.

However the appropriateness of a special levy on those already contributing in a no-fault scheme is basically flawed, and opens the way to undermining both the actuality and credibility of the large shared insurance pool on which no fault systems are based (and which have proved to be very effective and economic way of extending coverage in an even wider remit than just road transport, in New Zealand).

The basic problem is that the TAC legislation ensures that non-contributing vehicles, especially bicycles, are fully covered in road traffic incidents, yet make no vehicle based contributions at all: yet have similar involvement rates<sup>12</sup>. Motorcyclists contribute substantially, and until strong representations were made, multiple times for multiple machines owned by the same person.

This contributes strongly to the lack of credibility of TAC in dealing with powered (as distinct from the uncharged human powered and of course the lighter<sup>13</sup> electrically powered, vehicles on road). This is both inequitable as it undermines the no-fault basis for the TAC legislation, and severely limits the positive impact of communications and media campaigns designed to influence rider behaviour due to the assumptions of non equitable treatment, whether intended or not.

Once the levy was subject to VMAC oversight, there was at least some accountable use of funds specifically for motorcycles. In view of the major importance of bicycles and motorcycles as public safety problems, it is unfortunate that very few other projects on motorcycle safety were reported to VMAC as was required by its constitution, leading many to draw the conclusion that little if anything was done and the levy was the sole source of funds applied constructively to motorcycle safety. No equivalent of a continued and balanced application of the widely accepted  $4Es^{14}$  of bicycling was evident, and the general omission of good quality Evaluation was also apparent.

<sup>14</sup> Encouragement, Education, Engineering, Enforcement

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<sup>&</sup>lt;sup>12</sup> as generally publicly quoted in Victoria by official bodies, 34x for bicycles and 37x claimed by TAC for motorcycles, over cars: this is not the place to query the statistical bases of these figures, which all too clearly need greater attention due to the continuing poor travel exposure data and confusions between on and off road machines made: I restrict myself at this specific point in my submission to the comparable relative severities of involvements of these two broadly similar modes

<sup>13 &</sup>lt;200W rated powered two wheelers in Victoria are deemed to be 'Bicycles' and as such are exempt from the stringent licensing and other requirements applied to 'motorcycles' (ie PTWs >200w), and as bicycles have full access to designated 'bicycle' paths and to legal support for traffic filtering and [in some cases] use for mobility on footways.

With the abolition of VMAC as a Ministerial Advisory Council, and its replacement with an in house Advisory Committee for VicRoads, with stringent confidentiality requirements of all parties invited to participate<sup>15</sup>, there is no longer any public or transparent accountability for the application of TAC levy funds.

It is clear that the parliamentary Inquiry must make recommendations to make the TAC levy funds accountable and transparent to the user communities under these new arrangements, or the credibility of the levy will fade yet further (and thus further damaging the safety messages sent by TAC at considerable expense) – and there is a real danger of the funds being used in general work in the instrumentalities if even the limited oversight of VMAC is not replaced in a credible manner including transparent accountability.

While the levy clearly makes a mockery of the no-fault legislation on which TAC is based, once accountability and user involvement was set up(VMAC) significant and widely respected gains were made in some areas, highlighting the practical and policy value of informed and transparent user participation

### • The effectiveness of this levy (j)

The active participation of VMAC as a Ministerial Advisory Council with the accountability of VicRoads to it for input and use of the Levy funds made some advances in that for the first time achieved some useful user oriented moves with user support.

The current lack of any such transparency in the use of levy funds especially accountability for the 'other motorcycle safety projects in the four agencies that the levy was supposed to **add to, rather than replace** them *suggests that the levy is no longer politically or ethically viable in its present form.* 

There is still no independent committee of experts which can act on steering committees, audit the use of TAC levy funds, and provide an even handed bridge between motorcycle users and the research and policy areas in government and consultants retained (and of course thereby constrained) by government.

This might be a mechanism to overcome the current perceptual and indeed genuine governance issues involved in the levy if it is to continue

# • Ways of enhancing government links with nongovernment stakeholders (K+i)

The initial VMAC Initiative in 1999 appeared to be a positive move, as no broadly based Advisory Council had previously existed in the State. It included both user

<sup>&</sup>lt;sup>15</sup> Thereby ensuring that consultation with the membership of the user parties invited could be done.

<sup>&</sup>lt;sup>16</sup> It must be noted that the probity issues involved in the VMAC constitution were never resolved after I personally raised them, and the issue of probity protection for the participants have became entirely moot when no form of public transparency was provided for in the recent replacement Advisory Committee.

parties (such as the MRA Victoria and the Victoria Motorcycle Council); lobby representatives (such as MUARC, RACV, and VACC), civil service departments (such as VicRoads, TAC and the Victoria Police) and single Independent Research Member (myself).

At the initial meeting it was advised that the Council was to bring together the work on motorcycles in Police, TAC, Ministry of Transport and VicRoads areas. It was put forward that copies of all reports and specifications of all motorcycle related projects by these bodies would therefore be provided to the VMAC members. This did not occur.

The advice on the use of ATC Levy funds was of some concern.

While this process was on a number of occasions perceived to have been exploited by the official side, with examples ranging from general traffic lights to a major IT cost for simply catering for LAMS machines to be included in the registration database, a series of valuable initiatives were indeed achieved: most notably the motorcycle black spot treatments. Within substantial governance limitations, the combination of VMAC+TAC levy funds did demonstrate the value of an earmarked fund with public accountability in an area very poorly treated and underinvested in by the public service previously.

After nearly a decade the **transport** component of a strategy<sup>17</sup> was finally put out, nearly ten years after a major report on Motorcycles as Transport had been commissioned (for which I was the author). Even so many of the areas left neglected were still ignored in this document, including some that the UK Advisory Committee on Motorcycling had pinpointed and commissioned work on and reported in this long gestation period (I was an author and partner in the resulting UK project on motorcycles and congestion, and of the published papers on mode choice and forecasting that resulted).

The inherent conflicts in the constitution of the VMAC were evident from the beginning. The user representatives were unable to consult with their constituent bodies – a matter that became acute once the TAC funding was under VMAC. Finally after pressing for a proper probity policy to ensure that all members of VMAC could operate transparently and properly, I was left with no option but to resign from it on ethical grounds

The governance of powered two wheelers (and the overlaps with deemed human powered two wheelers) really requires a public accountable and independent centre with resources to hold and provide data, documents and steering committee, audit and with the professional credibility to generate and maintain professional and community trust by all parties.

Powered two wheelers are a mode of transport, as are bicycles, and a solely safety strategy is a fundamentally flawed and one sided treatment (se 4Es of bicycling)

The governance issues for the TAC levy would also be addressed by such an initiative.

Current developments in Advice to Government instrumentalities have, I have been advised, depend on a terms of reference that offer only a tightly controlled and limited ability of user representatives to consult with their constituencies, and no alternate channels have been provided for: VMAC at least had access to the Minister for example. These contestable consultative or representative channels appear to no longer exist, and thus a two part advisory and independent review and resource council would appear to be essential for the continuing credibility of all parties that choose to become involved.